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*Technical Specification*

**Universal Mobile Telecommunications System (UMTS);  
LTE;  
User Equipment (UE) conformance specification;  
Part 3: Abstract test suites (ATSS)  
(3GPP TS 34.123-3 version 7.3.0 Release 7)**

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## Foreword

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## Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

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- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

---

## Introduction

The present document is part 3 of a multi-part conformance test specification for UE. The specification contains a TTCN2 design frame work and the detailed test specifications in TTCN for UE at the Uu interface.

3GPP TS 34.123-1 [1]: "User Equipment (UE) conformance specification; Part 1: Protocol conformance specification".

3GPP TS 34.123-2 [2]: "User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".

**3GPP TS 34.123-3: "Abstract Test Suite (ATS)" (the present document).**

---

# 1 Scope

The present document specifies the protocol conformance testing in TTCN for the 3GPP User Equipment (UE) at the Uu interface.

The present document is the 3<sup>rd</sup> part of a multi-part test specification, 3GPP TS 34.123. The following TTCN test specification and design considerations can be found in the present document:

- the overall test suite structure;
- the testing architecture;
- the test methods and PCO definitions;
- the test configurations;
- the design principles, assumptions, and used interfaces to the TTCN tester (System Simulator);
- TTCN styles and conventions;
- the partial PIXIT proforma;
- the TTCN.MP and TTCN.GR forms for the mentioned protocols tests.

The Abstract Test Suites designed in the document are based on the test cases specified in prose (3GPP TS 34.123-1 [1]).

The present document is valid for UE implemented according to 3GPP Release 1999, 3GPP Release 4, 3GPP Release 5, 3GPP Release 6 or 3GPP Release 7.

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# 2 References

The following documents contain provisions, which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.
  - For a Release 1999 UE, references to 3GPP documents are to version 3.x.y, when available.
  - For a Release 4 UE, references to 3GPP documents are to version 4.x.y, when available.
  - For a Release 5 UE, references to 3GPP documents are to version 5.x.y, when available.
  - For a Release 6 UE, references to 3GPP documents are to version 6.x.y, when available.
  - For a Release 7 UE, references to 3GPP documents are to version 7.x.y, when available.

- [1] 3GPP TS 34.123-1: "User Equipment (UE) conformance specification; Part 1: Protocol conformance specification".
- [2] 3GPP TS 34.123-2: "User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".
- [3] 3GPP TS 34.108: "Common test environments for User Equipment (UE) conformance testing".
- [4] 3GPP TS 34.109: "Terminal logical test interface; Special conformance testing functions".

- [5] 3GPP TR 21.905: "Vocabulary for 3GPP specifications".
- [6] 3GPP TS 23.003: "Numbering, addressing and identification".
- [7] 3GPP TS 23.101: "General UMTS architecture".
- [8] 3GPP TS 24.007: "Mobile radio interface signalling layer 3; General aspects".
- [9] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core network protocols; Stage 3".
- [10] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
- [11] 3GPP TS 24.012: "Short Message Service Cell Broadcast (SMSCB) support on the mobile radio interface".
- [12] 3GPP TS 25.214: "Physical layer procedures (FDD)".
- [13] 3GPP TS 25.224: "Physical layer procedures (TDD)".
- [14] 3GPP TS 25.301: "Radio interface protocol architecture".
- [15] 3GPP TS 25.303: "Interlayer procedures in connected mode".
- [16] 3GPP TS 25.304: "User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode".
- [16a] 3GPP TS 25.306: "UE Radio Access capabilities"
- [17] 3GPP TS 25.321: "Medium Access Control (MAC) protocol specification".
- [18] 3GPP TS 25.322: "Radio Link Control (RLC) protocol specification".
- [19] 3GPP TS 25.323: "Packet Data Convergence Protocol (PDCP) specification".
- [20] 3GPP TS 25.324: "Broadcast/Multicast Control (BMC)".
- [21] 3GPP TS 25.331: "Radio Resource Control (RRC) protocol specification".
- [22] 3GPP TS 27.005: "Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE-DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS)".
- [23] 3GPP TS 27.007: "AT command set for 3G User Equipment (UE)".
- [24] 3GPP TS 27.060: "Packet domain; Mobile Station (MS) supporting Packet Switched services".
- [25] 3GPP TS 33.102: "3G security; Security architecture".
- [26] 3GPP TS 51.010-1: "Mobile Station (MS) conformance specification; Part 1: Conformance specification".
- [27] ETSI TR 101 666 (V1.0.0): "Information technology; Open Systems Interconnection Conformance testing methodology and framework; The Tree and Tabular Combined Notation (TTCN) (Ed. 2++)".
- [28] ITU-T Recommendation X.691 (1997) "Information technology - ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)".
- [29] ISO/IEC 8824 (all parts): "Information technology - Abstract Syntax Notation One (ASN.1)".
- [30] IETF RFC 2507: "IP Header Compression".
- [31] 3GPP TS 45.002: "Multiplexing and multiple access on the radio path".  
3GPP TS 05.02: "Digital cellular telecommunications system (Phase 2+); Multiplexing and multiple access on the radio path".



- [32] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".  
3GPP TS 04.60: "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".
- [33] 3GPP TS 44.064: "Mobile Station - Serving GPRS Support Node (MS-SGSN) Logical Link Control (LLC) layer specification".
- [34] 3GPP TS 23.038: "Alphabets and language-specific information".
- [35] 3GPP TS 23.040: "Technical realization of Short Message Service (SMS)".
- [36] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".
- [37] ETSI ETR 141: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; The Tree and Tabular Combined Notation (TTCN) style guide".
- [38] ETSI TR 101 101: "Methods for Testing and Specification (MTS); TTCN interim version including ASN.1 1994 support [ISO/IEC 9646-3] (Second Edition Mock-up for JTC1/SC21 Review)".
- [39] ITU-T Recommendation X.680: "Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [40] 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".
- [41] ISO/IEC 9646 (all parts): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework".
- [42] 3GPP TS 44.006: "Mobile Station - Base Stations System (MS - BSS) Interface Data Link (DL) layer specification".
- [43] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".  
3GPP TS 04.18: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".
- [44] 3GPP TR 25.925: "Radio interface for Broadcast/Multicast Services".
- [45] ITU-T Recommendation O.153: "Basic parameters for the measurement of error performance at bit rates below the primary rate".
- [46] IETF RFC 1144: "Compressing TCP/IP headers for low-speed serial links".
- [47] ITU-T Recommendation V.42bis: "Data compression procedures for data circuit-terminating equipment (DCE) using error correction procedures".
- [48] ITU-T Recommendation V.44: "Data compression procedures".
- [49] 3GPP TS 44.008: "Mobile radio interface layer 3 specification".  
3GPP TS 04.08: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification".
- [50] 3GPP TS 24.080: "Mobile radio interface layer 3 supplementary services specification; Formats and coding".
- [51] 3GPP TS 29.002: "Mobile Application Part (MAP) specification".
- [52] ITU-T Recommendation Q.773: "Signalling System No. 7 - Transaction Capabilities Formats and Encoding".
- [53] ITU-T Recommendation X.880: "Information Technology - Remote Operations: Concepts, Model and Notation".

- [54] IETF RFC 3095: "RObust Header Compression (ROHC): Framework and four profiles: RTP, UDP, ESP, and uncompressed".
- [55] 3GPP TS 34.022: "Radio Link Protocol (RLP) for circuit switched bearer and teleservices".

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## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 34.123-1 [1] apply.

### 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TS 34.123-1 [1], 3GPP TS 24.008 [9], 3GPP TS 25.331 [21] and TR 101 666 [27] apply.

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## 4 Requirements on the TTCN development

A number of requirements are identified for the development and production of TTCN specification for 3GPP UE at Uu interface.

1. Top-down design, following 3GPP TS 34.123-1 [1], 3GPP TS 34.108 [3] and 3GPP TS 34.109 [4].
2. A unique testing architecture and test method for testing all protocol layers of UE.
3. Uniform TTCN style and naming conventions.
4. Improve TTCN readability.
5. Using TTCN-2++ (TR 101 666 [27]) for R99, Release 4, Release 5 and Release-6, avoid the use of the TTCN 2 features TTCN 3 does not support.
6. TTCN specification feasible, implementable and compilable.
7. Test cases shall be designed in a way for easily adaptable, upwards compatible with the evolution of the 3GPP core specifications and the future Releases.
8. The test declarations, data structures and data values shall be largely reusable.
9. Modularity and modular working method.
10. NAS ATS should be designed being independent from the radio access technologies.
11. Minimizing the requirements of intelligence on the emulators of the lower testers. Especially the functionality of the RRC emulator in the TTCN tester should be reduced and simplified, the behaviours should be standardized as the TTCN RRC test steps in the TTCN modular library.
12. Giving enough design freedom to the test equipment manufacturers.
13. Maximizing reuse of ASN.1 definitions from the relevant core specifications.

In order to fulfil these requirements and to ensure the investment of the test equipment manufacturers having a stable testing architecture for a relatively long period, a unique testing architecture and test method are applied to the 3GPP UE protocol tests.

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## 5 ATS structure

The total TTCN specification for the UE testing is structured in a number of separate layered ATSs. The number of ATS being produced corresponds to the number of the 3GPP core specifications referred. The separation of ATSs reduces the size of ATSs. The layer-specific test preambles and test data can be confined to one test suite and parallel development of test suites can be facilitated. The separation of ATSs enables also easily to follow the evolution of the core specifications.

- NAS ATSs:
  - 1) GSM MAP L3 ATS including MM, CC, GMM, SM test groups;
  - 2) SMS ATS;
  - 3) A-GPS ATS
- AS ATSs:
  - 1) RRC ATS including Singlecell and multicell test group;
  - 2) RLC ATS;
  - 3) MAC ATS;
  - 4) BMC ATS;
  - 5) PDCP ATS;
  - 6) RAB ATS;
  - 7) IR\_U ATS;
  - 8) HSD\_ENH ATS (Rel-5 or later);
  - 9) HSU\_ENH ATS (Rel-6 or later);
  - 10) MBMS ATS (Rel-6 or later);
  - 11) HS-ENH ATS (Rel-7 or later).

### 5.1 Modularity

The modular TTCN approach is used for the development of the 3GPP ATS specification work. Three modules, BasicM, RRC\_M and L3M are installed.

### 5.1.1 Module structure

The module structure is shown in figure 1.

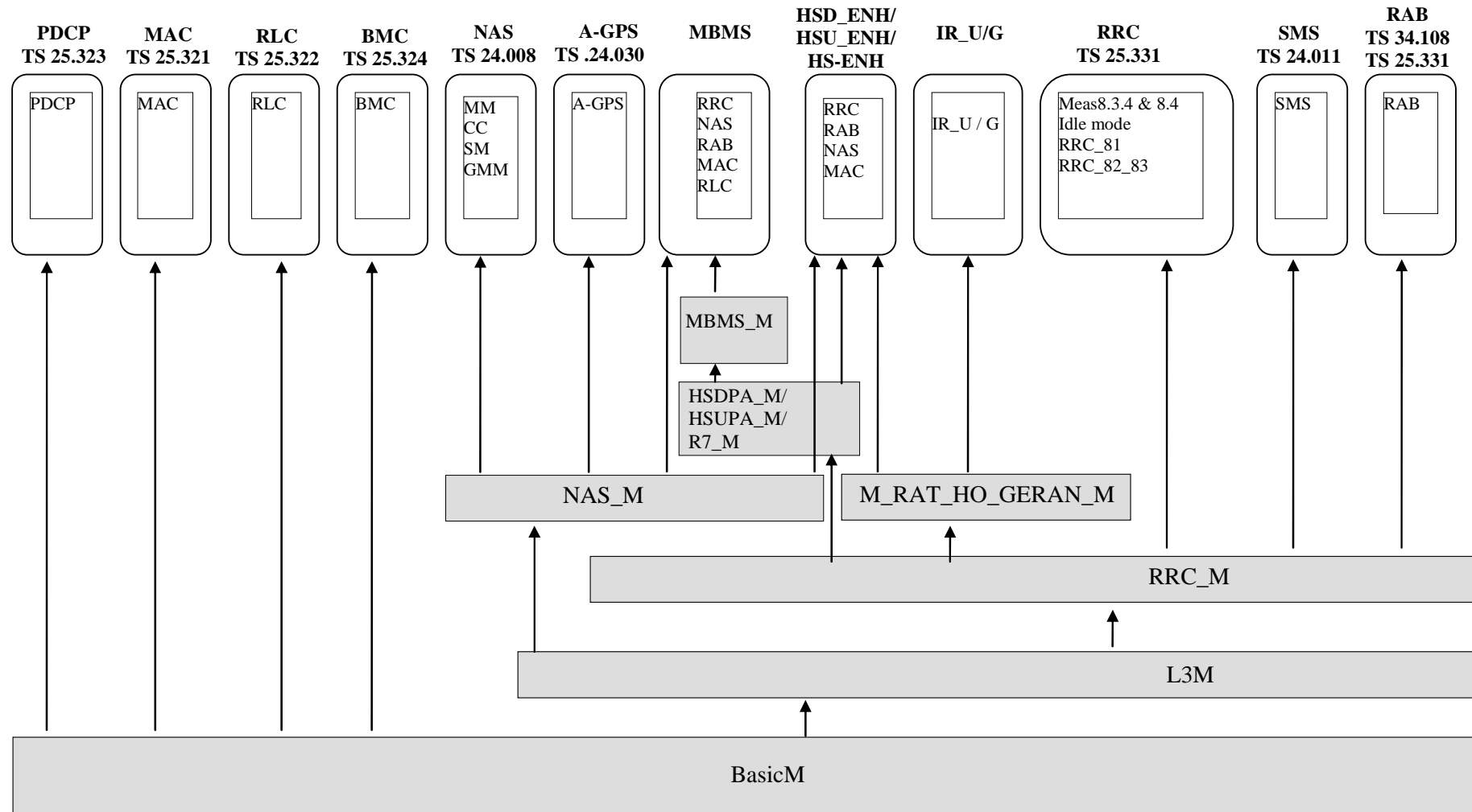


Figure 1: Module structure

The BasicM (**B**asic **M**odule) is a minimum module commonly for the layer 2 and layer 3 testing. The L3M (**L**ayer **3** **M**odule) contains all the items to be shared by the RRC, NAS, SMS, RAB, IR\_U/G, A-GPS, HSD\_ENH, HSU\_ENH and MBMS ATs. NAS is applied to the NAS, A-GPS, HSD\_ENH, HSU\_ENH, MBMS ATs and HS\_ENH. The RRC\_M is a module containing common object for RRC, RAB, IR\_U/G, SMS, A-GPS, HSD\_ENH, HSU\_ENH, MBMS ATs and HS\_ENH.

## 5.1.2 Contents of the modules

The BasicM module includes objects related to the RRC, the layer 2 and the physical layer. It includes also all test steps needed by the layer 2 and layer 3 test cases for configurations and all objects related to the definition of the steps:

- Common test steps and default test steps defined as generic procedures in 3GPP TS 34.108 [3];
- RRC declarations related to the steps: types, timers, PDU types, ASP type, PCOs, TSOs, constants;
- Related ICS and IXIT parameters needed for testing and respectively defined in 3GPP TS 34.123-2 [2] and the present document;
- Defaults constraints based on the default message contents defined in 3GPP TS 34.108 [3];
- MMI PCO and ASPs;
- All TTCN objects related to the SS configuration, e.g. PCOs, declaration of the components.

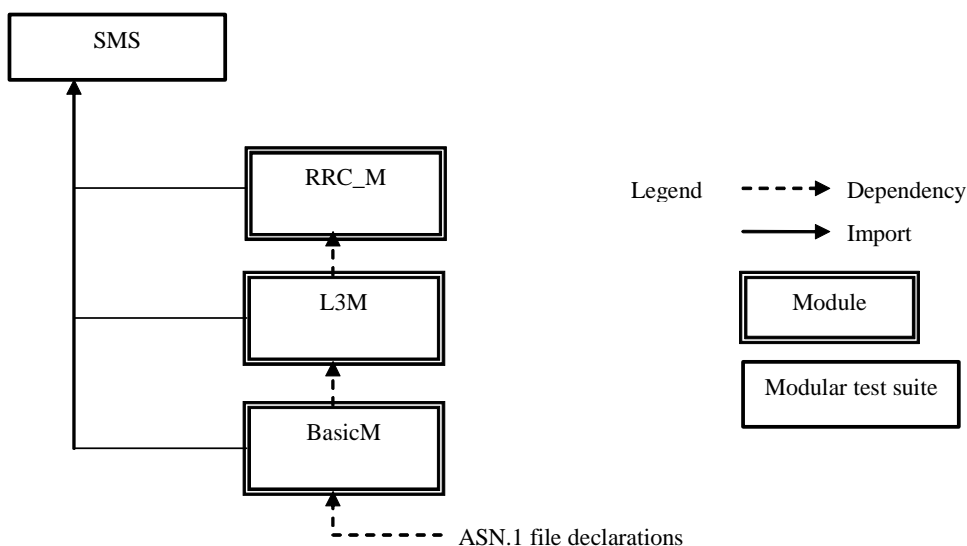
The L3M module includes the NAS configuration steps and all related TTCN objects:

- Common test steps and default test steps defined as generic procedures in 3GPP TS 34.108 [3];
- NAS declarations related to these steps: types, PDU, ASP, PCOs, TSOs, constants;
- Related ICS and IXIT parameters needed for testing and respectively defined in 3GPP TS 34.123-2 [2] and the present document;
- Default constraints based on the default message contents defined in 3GPP TS 34.108 [3].

The RRC\_M module includes the RRC steps common to RRC and RAB test cases and all related TTCN objects.

## 5.1.3 Example of a working platform

Figure 2 shows the working platform for the user that is writing the SMS test cases.



**Figure 2: An example of working platform for SMS**

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## 6 Test method and testing architecture

### 6.1 Test method

The distributed single party test method is used for the UE testing. The lower tester configures the emulator and communicates with the UE under test via the emulator. An upper tester interfaces UE as (E)MMI.

All common parts in 3GPP TS 34.108 [3], 3GPP TS 34.109 [4] and 3GPP TS 34.123-2 [2] are developed in a TTCN library including the declarations, default constraints, preambles and postambles. They have the following characteristics:

- Very complex;
- Worked in different layers;
- Including data representing the radio parameters for SS setting and the data representing the UE capabilities (PICS parameters);
- Including the generic procedures to bring the UE into certain test states or a test mode (C-plane);
- Setting RABs at U-plane and SRBs in C-plane;
- Being used by every test cases no matter which layer the test case belongs to;
- No affect on the test verdict of PASS or FAIL.

The layer-specific test cases have the characteristics:

- relatively simple and straight forward;
- having narrow test scope and test purposes;
- test scenarios in a single layer (one PCO);
- assigning the test verdict.

## 6.2 Testing architecture

A unique testing architecture is shown in figure 3.

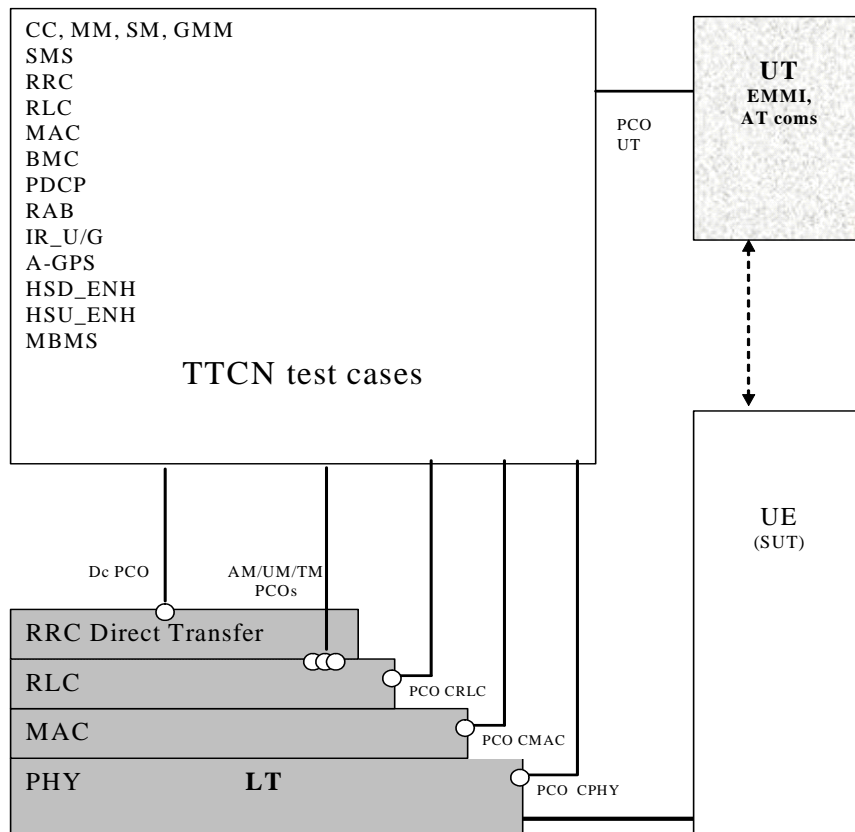


Figure 3: A unique testing architecture

### 6.2.1 Lower Tester (LT)

The Lower Tester (LT) provides the test means for the execution of the test cases for CC, SM, MM, GMM, SMS, RRC, RLC, MAC, PDCP, BMC, RAB, IR\_U/G, A-GPS, HSD\_ENH, HSU\_ENH, MBMS and HS\_ENH. The LT provides also the RLC, MAC and PHY emulators to communicate with the UE. The configuration and initialization of the emulators are control by the TTCN via ASPs.

### 6.2.2 Configuration and initialization

A number of TTCN test steps are designed for the generic setting.

- 1) Configuration of L1 of the tester, such as the cells, Physical channels and common transport channels via CPHY-PCO, configuration of MAC via CMAC-PCO and configuration of RLC layer via CRLC-PCO.
- 2) Sending system information via TR-PCO.
- 3) Establishment RRC connection via AM or UM-PCO.
- 4) Assigning a radio bearer via AM-PCO.
- 5) MM /GMM registration via Dc-PCO.
- 6) Establishment of a CS call or a PDP context via Dc-PCO.
- 7) Setting security parameters and control of integrity via CRLC- and ciphering via CRLC- and CMAC-PCO.



### 6.2.3 Upper Tester (UT)

An Upper Tester (UT) exists in the test system. The UT interfaces toward UE with any optional EMMI (3GPP TS 34.109 [4], clause 7). TTCN communicates with the UT by passing coordination primitives via a Ut PCO. The primitives can either contain AT commands aiming at the automatic tests, or some informal commands as MMI, in order to request the UE for certain actions and to provide simple means for observations of UE.

### 6.2.4 TTCN

TTCN is used as specification language based on TR 101 666 [27] (TTCN 2++). The importation of ASN.1 modules and modular TTCN are two of the most important features used in the design of the ATSSs.

The TTCN test suites have been designed to maximize the portability from the language TTCN 2 to TTCN 3.

### 6.2.5 Model extension

If a test case needs to handle a concurrent situation two or more LTs can be configured at the same time. The following test scenarios identified may require multiple testers in the test configuration.

### 6.2.6 Multiplexing of RLC services

For the RRC and NAS testing, the TTCN RRC test steps (on RB1 and RB2) and the RRC emulator (on RB3 and RB4 for the NAS messages) share the same service access point (AM SAP). The RLC emulator shall provide separate message queues (buffers) for the TTCN RRC test steps and the RRC emulator for the TTCN NAS test cases, according to the signalling radio bearer identities.

## 6.3 NAS test method and architecture

### 6.3.1 Test configuration

The NAS test method is shown in figure 4.

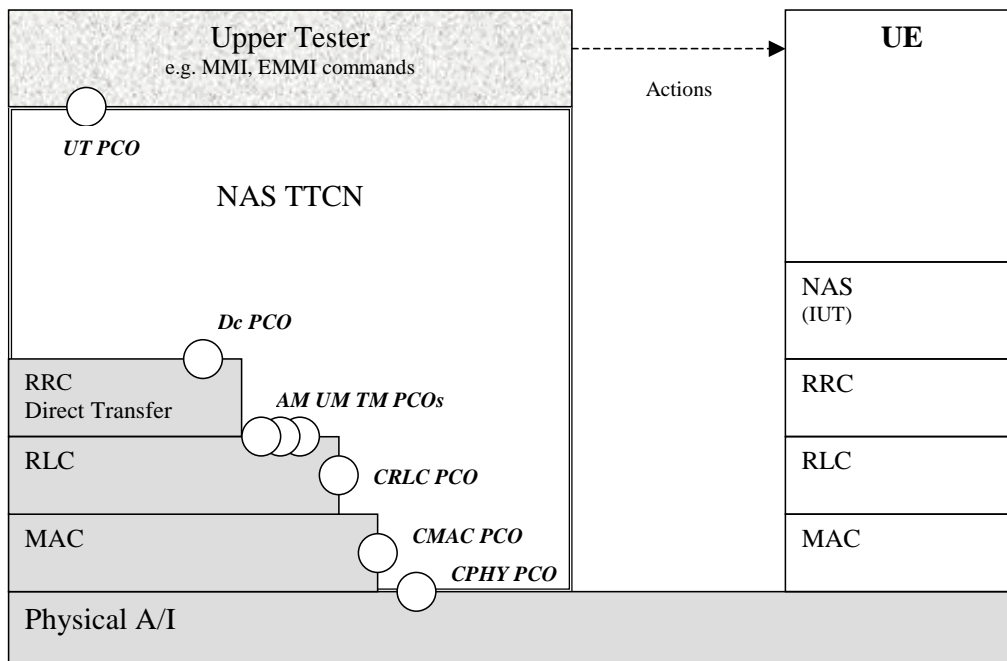


Figure 4: NAS testing architecture

The single layer distributed test method is used.

The Point of Control and Observation (PCO) are defined as the Dc (Dedicated control) SAP. The NAS test verdicts are assigned depending on the behaviours observed at the PCO.

The TTCN tester provides the NAS TTCN test cases and steps with a simple RRC direct transfer function which buffers the NAS PDU data, converts the data from the NAS TTCN table format into ASN.1, or in reverse way, and delivers all lower layer services of AM-SAP for RB3 and RB4.

The NAS TTCN test cases make also intensively use of the RRC TTCN test steps, in order to:

- Configure, initialize and control the L2 emulator;
- Initialize the UE for testing.

The RRC test steps, which are called by the NAS test cases or steps, interface with the RLC PCOs (UM, AM and TR), the control PCOs CRLC, CMAC and CPHY.

The General control (Gc) SAP and the Notification (Nt) SAP are not applied. Messages exchanged via these SAPs will be replaced with the corresponding RRC TTCN test steps.

The Ut PCO (so called logical interface [4]) is served as the interface to the UE EMMI to allow a remote control of operations, which have to be performed during execution of a test case such as to switch the UE on/off, initiate a call, etc.

## 6.3.2 Routing UL NAS messages in SS

The UL NAS messages are embedded in RRC messages INITIAL / UL DIRECT TRANSFER. In the UE test, the received UL NAS messages can either be routed to the Dc PCO and verified at the NAS message level, or routed to AM PCO and verified at the RRC message level.

- 1) RBid = 3 at the SS side indicates that the UL NAS high priority messages to be routed to Dc PCO. RB3 applies to RRC\_DataInd/Req.
- 2) RBid = -16 at the SS side indicates the received messages to be routed to RLC AM PCO. RB-16 applies to RLC\_DataInd/Req.

The RB3 and RB-16 do not coexist. The TTCN writer uses the MAC and RLC reconfigurations to re-map the RB and the corresponding logical channels. If RB3 has been configured, but a test case needs to re-map the logical channel from RB3 to RB-16 the following way is to replace RB3 with RB-16.

- CMAC\_CONFIG\_REQ (reconfiguration, RB-16).

Re-mapping on RB-16 which appears in the transport channel and logical channel mapping list.

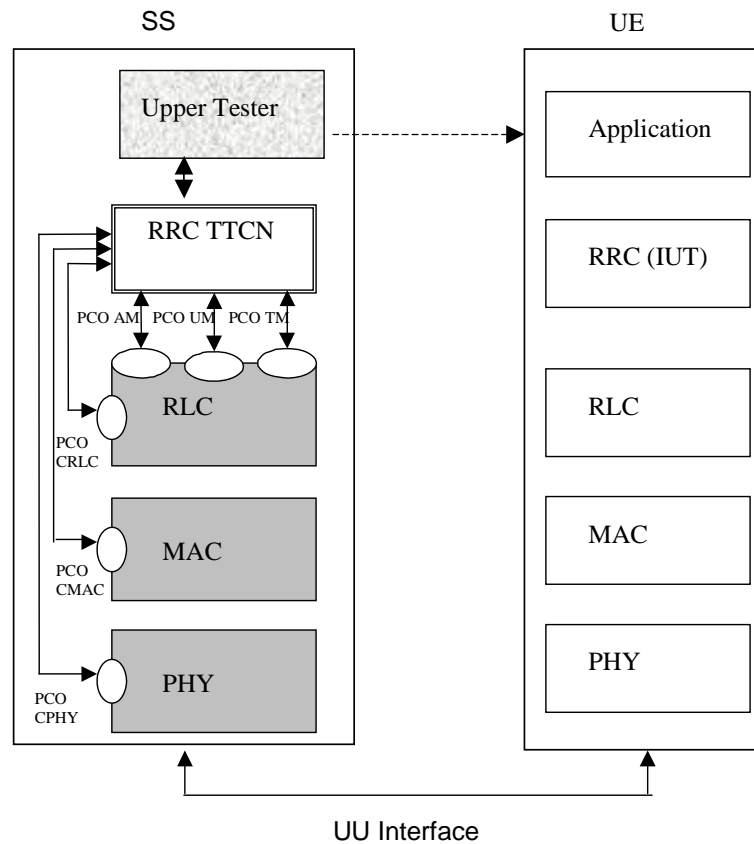
- CRLC\_CONFIG\_REQ (reconfiguration, RB-16).

RB-16 appears in the routing info, in order to replace the original mapping on RB3.

Mapping from RB-16 to RB3 is done in the reverse way.

## 6.4 RRC and RAB test method and architecture

### 6.4.1 Test configuration



**Figure 5: RRC testing architecture**

The single layer distributed test method is used.

The PCOs are defined as the AM (Acknowledged Mode), UM (Unacknowledged Mode) and TM (Transparent Mode) SAPs. The RRC test verdicts are assigned depending on the behaviours observed at the PCO. The RRC TTCN interface also with the control PCOs CRLC, CMAC and CPHY, for the configuration, initialization and control of the System Simulator.

The RRC TTCN test cases also make use of the NAS TTCN test steps in order to:

- Bring UE to Idle state;
- Bring UE to state U10.

The NAS test steps, which are called by the RRC test cases or steps, interface with the Dc PCO.

The Ut PCO (so called logical interface [4]) is served as the interface to the UE EMMI to allow a remote control of operations, which have to be performed during execution of a test case such as to switch the UE on/off, initiate a call, etc.

According to 3GPP TS 25.331 [21], clause 12.1.1, the encoding of RRC PDUs is obtained by applying UNALIGNED PER to the abstract syntax value as specified in ITU-T Recommendation X.691 [28]. The two tables below show the declaration of the encoding rule and an example of the use in the definition of an RRC PDU.

**Table 1: PER\_Unaligned Encoding Rule**

|                           |  |
|---------------------------|--|
| <b>Encoding Rule Name</b> | PER_Unaligned  |
| <b>Reference</b>          | ITU-T Recommendation X.691 [28]  |
| <b>Default</b>            |  |
| <b>Comments</b>           | Packet encoding rules (ITU-T Recommendation X.691 [28]) unaligned and with adapted padding |

**Table 2: Definition of the RRC ASN.1 DL\_DCCH\_Message type by reference**

|                          |                   |
|--------------------------|-------------------|
| <b>PDU Name</b>          | DL_DCCH_Message   |
| <b>PCO Type</b>          | DSAP              |
| <b>Type Reference</b>    | DL-DCCH-Message   |
| <b>Module Identifier</b> | Class-definitions |
| <b>Enc Rule</b>          | PER_Unaligned     |
| <b>Enc Variation</b>     |                   |

## 6.4.2 RAB test method

### 6.4.2.1 Sending data on the same TTI

The RAB test requires a specific test method to send the test data on the same TTI. The TFC restriction method is used in this case. A specific TFC subset is allowed to ensure the test data are sent on different RBs on the same TTI. The downlink restriction can be used to ensure that the SS uses a specific TFC for transmission of data, by only allowing the "No data" TFC, and the "desired" TFC. It may also be necessary to include one or more "signalling only" TFCs to allow signalling to occur. The uplink restriction can be used to verify that the UE has used a specific TFC. Any data received by the SS using a forbidden TFCI shall be discarded.

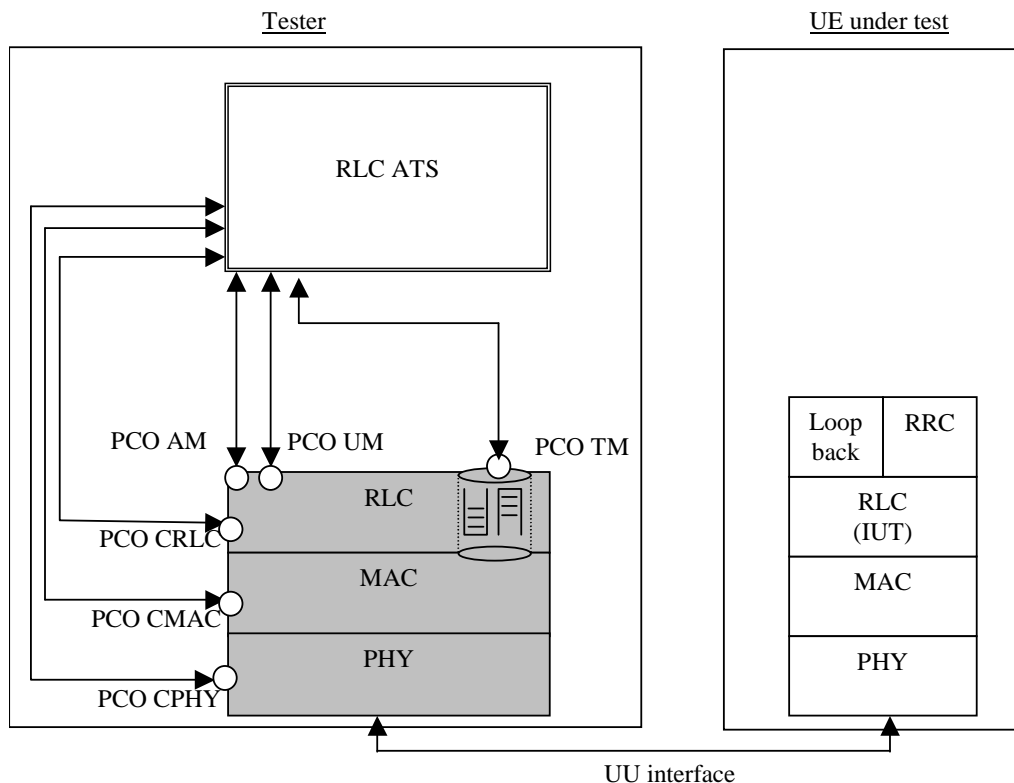
### 6.4.2.2 Sending continuous data on consecutive TTIs

The RBS ATS is developed using the tabular TTCN notation. In order to test of multiple-RB combinations and simultaneous signalling, the SS shall be capable of sending continues test data in every TTI using the downlink transport format combination under test. A specific TSO is designed to request the SS sending continuous data. The information about the number of RLC SDUs and their sizes for each RAB will be provided to the system simulator through TSO.

## 6.5 RLC test method and architecture

### 6.5.1 Testing architecture

Figure 6 illustrates a typical realization of the RLC ATS.



**Figure 6: RLC ATS single party test method**

The single party test method is used for RLC testing.

Separation of TTCN test cases from the configuration of the tester and initialization of the UE is achieved by using test steps. For each RLC test case, common test steps will be used to perform the configuration of the tester and the appropriate generic setup procedures as described in 3GPP TS 34.108 [3]. These test steps will make use of PCOs AM, UM, TM, CRLC, CMAC, and CPHY.

Three PCOs are provided at the top of the RLC emulation in the tester, one corresponding to each of the available RLC modes: acknowledged, unacknowledged, and transparent. Routing information for different radio bearers used at these PCOs will be provided in ASP parameters.

The queues shown in the RLC emulation in figure 6 indicate that normal RLC transmit and receive buffering will be used to isolate the TTCN test suite from the real time issues involved if messages are sent directly to the MAC layer.

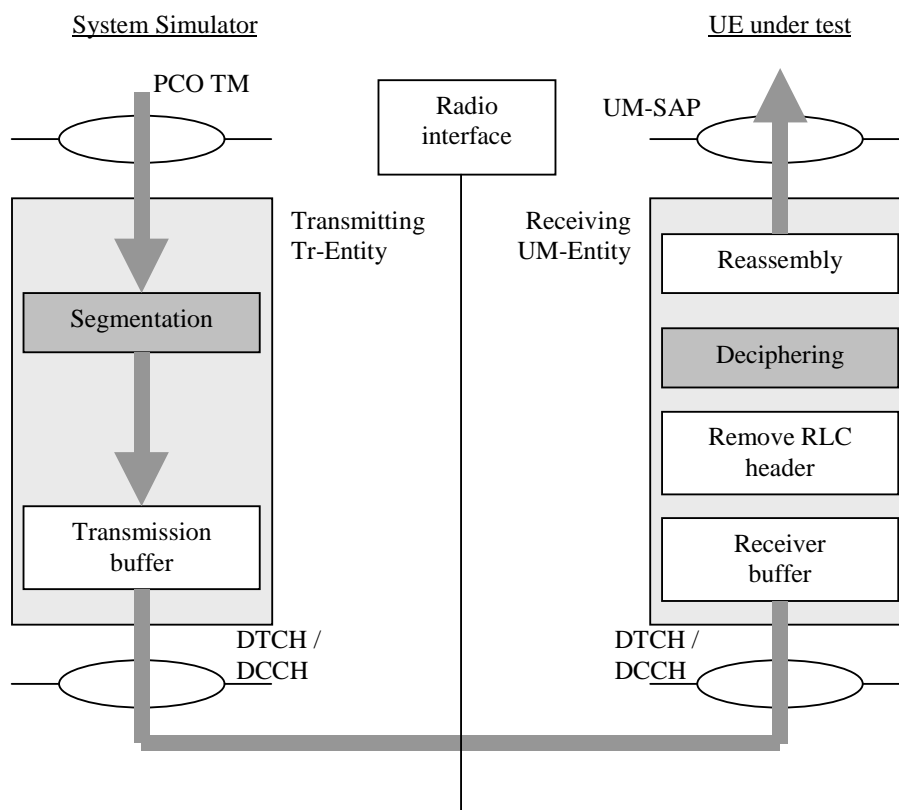
The RLC TTCN test cases make also use of the NAS TTCN test steps in order to bring UE to Idle state. The NAS test steps, which are called by the RLC test cases or steps, interface with the Dc PCO.

## 6.5.2 Test method

Figure 7 illustrates an example configuration for downlink UM testing. Uplink and AM tests will use similar configurations. A Tr-Entity is established on the tester side using a CRLC-CONFIG-REQ. A corresponding UM-Entity is created in the UE by sending a Radio Bearer Setup PDU. RLC PDUs are specified in the TTCN test suite, and sent to TM PCO. These PDUs shall be carefully designed so that the Tr-Entity will not perform any segmentation. The system simulator is responsible for direct encoding the abstract representation of transmitted PDUs into a bitstring to be sent by the Transmitting Tr entity. Direct encoding is performed by concatenation of all of the present fields in the abstract representation. It is the TTCN author's responsibility to ensure that the PDU is valid. To test reassembly in the UE side, the segmentation must be explicitly coded in TTCN. To test various aspects of the RLC header (e.g. sequence numbering, length indications, etc.), the RLC header must be explicitly coded in TTCN. Ciphering will not be tested using this approach, and will be disabled in the UE UM Entity.

The segmentation block in the SS Tr-entity is shown in grey to indicate that the functionality is present in the SS, but the test cases shall be carefully designed to ensure that segmentation is not used in the SS Tr-entity for RLC testing.

The deciphering block in the UE UM-entity is shown in grey to indicate that the functionality may be present in the UE, but shall be disabled for RLC testing.



**Figure 7: Example configuration for downlink RLC UM testing**

The TFCS used for RLC testing must guarantee that Tr mode segmentation will not occur. This is to prevent transmission of more than one Tr PDU per TTI.

All RLC tests that require uplink data will make use of the UE test loop mode 1 defined in 3GPP TS 34.109 [4]. The UE test loop mode 1 function provides all Upper Tester (UT) functionality required, so an UT PCO is not required for RLC tests. Test Loop mode 1 is only available in the user plane, so all RLC tests will be performed in the user plane, using DTCH and DCCH logical channels mapped to DCH transport channels.

Ciphering will be disabled for all RLC test cases. Ciphering will be tested implicitly by other test cases that have ciphering enabled.

Figure 8 illustrates an example configuration for uplink UM testing, and reception of an example UMD PDU. Figure 9 illustrates an example configuration for uplink AM testing, reception of an example STATUS\_PDU, and the use of the superFields and superFieldsRec fields.

The ciphering and deciphering blocks in the UE RLC entities are shown in grey to indicate that the functionality may be present in the UE, but shall be disabled for RLC testing.

The reassembly blocks in the SS Tr-entities are shown in grey to indicate that the functionality is present in the SS, but the test cases shall be carefully designed to ensure that reassembly is not used in the SS Tr-entity for RLC testing.

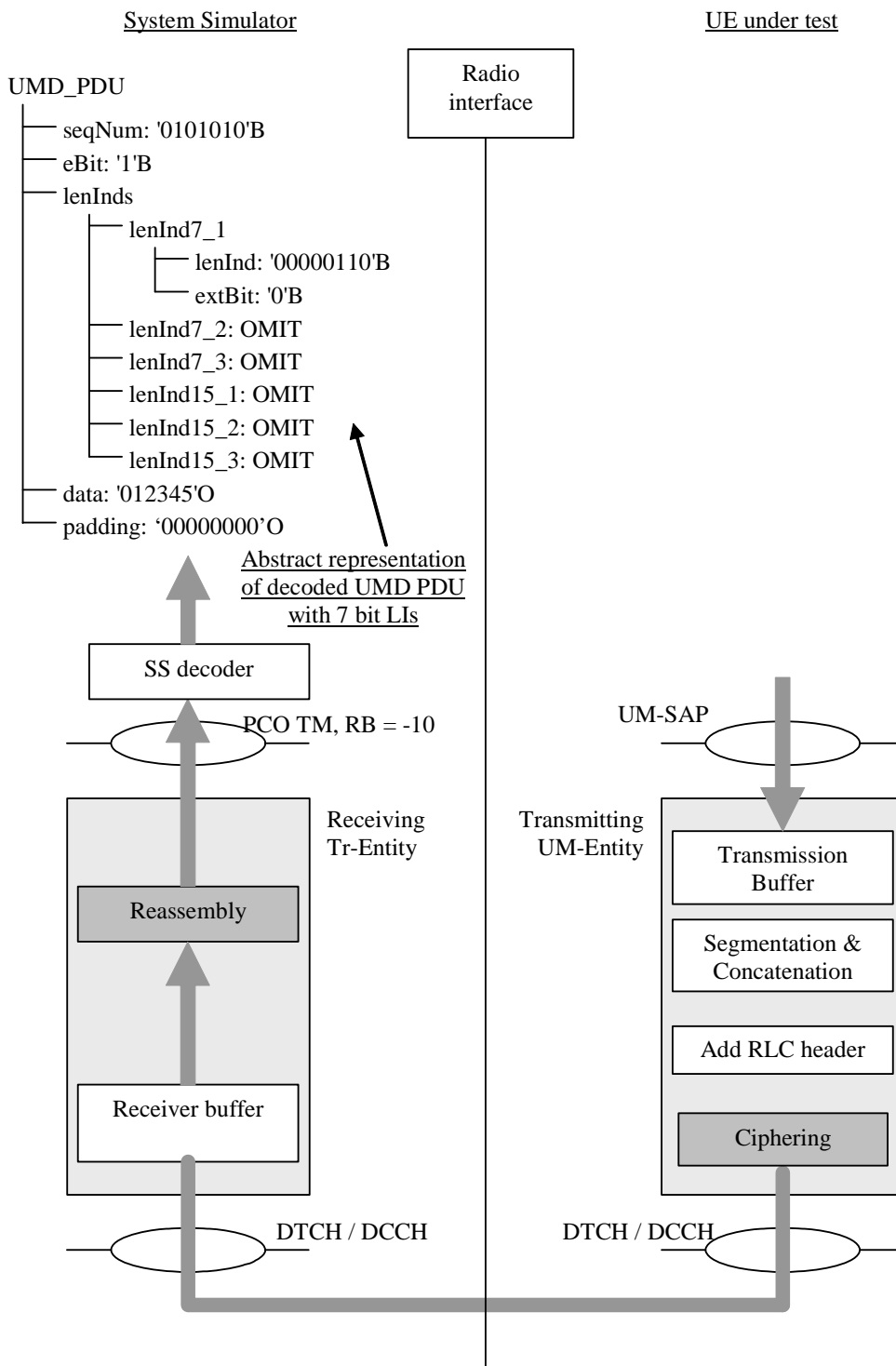


Figure 8: Example configuration for uplink RLC UM testing

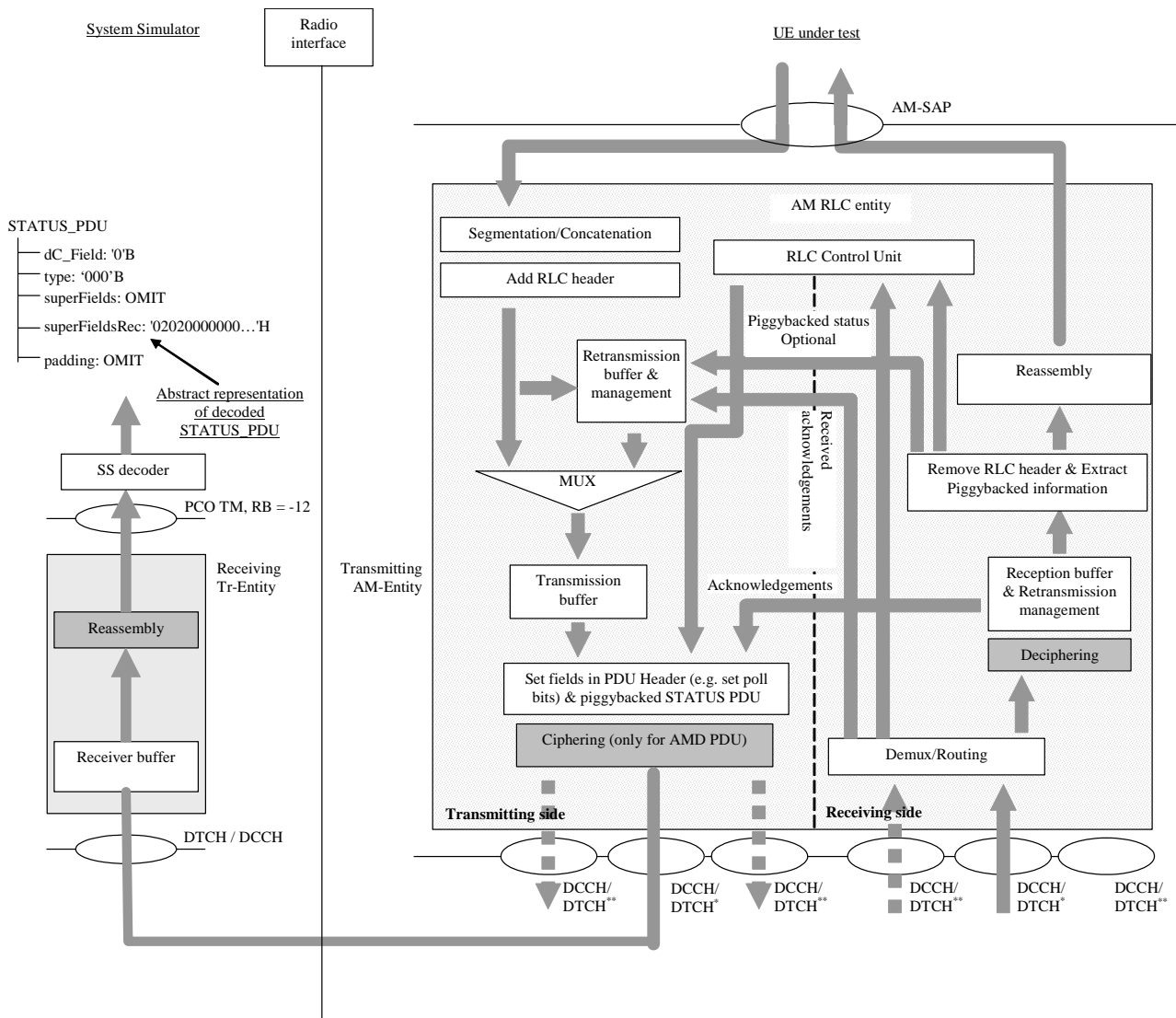


Figure 9: Example configuration for uplink RLC AM testing

Uplink data uses a similar approach to downlink, but the received data must be decoded in the correct way, depending on the current UE configuration. In the example in figure 8, the SS must decode the data received at the TM PCO into an abstract representation of the structure defined in the TTCN for a UMD\_PDU, using 7 bit length indicators. This structure is then compared with an abstract representation of the expected data to see if the receive event is successful. Refer to TR 101 666 [27], clause B.5.2.10 for more information.

For RLC testing, the following RB Ids are used within the system simulator, depending on the RLC mode, and length indicator size being simulated.

| RLC mode                | LI Size | RB Id |
|-------------------------|---------|-------|
| UM                      | 7       | -10   |
| UM                      | 15      | -11   |
| AM                      | 7       | -12   |
| AM                      | 15      | -13   |
| UM/AM (Rel-7 or later ) | 7/15    | -25   |

The SS decoder can use the RB Id to determine which abstract structure to create during the decode process. The SS decoder must also understand the RLC peer-to-peer protocol enough to determine which fields are present.

EXAMPLE 1: The semantics of LI extension bits must be known to determine how many LIs are present.

EXAMPLE 2: The contents of the LIs must be interpreted to determine how many octets of data, and how many octets of padding are present.



The SUFI list and any subsequent padding in a received STATUS\_PDU or PiggyBackedSTATUS\_PDU shall be decoded as a HEXSTRING, and put in the 'superFieldsRec' field of the abstract representation of the STATUS PDU. The "superFields" and "padding" fields shall be omitted for received STATUS PDUs. This is illustrated in figure 9.

As in downlink testing, the TFCS must be defined to guarantee that the Tr entity does not perform any reassembly. This is to prevent reception of more than one Tr PDU per TTI so that the TTCN does not need to manage possible interleaving problems due to multiple PDUs received at the same time (i.e. they may be placed on the PCO queue in any order).

### 6.5.2.1 Handling SUFIs in TTCN

The SUFIs are a very flexible set of information elements contained in the RLC protocol. The order of the fields varies, the existence of a field may depend upon the presence of another one. A field can be present multiple times. For matching received SUFIs, it is convenient to define the SUFIs as a HEXSTRING which is treated by a TSO **o\_SUFI\_Handler**.

Depending upon which SUFIs and which aspects of SUFIs are to be checked, the TSO is provided with the information (**SUFI\_Params**) on what checking it is expected to perform. If the check is successful the result TRUE will be returned, otherwise FALSE. Additionally the TSO will return an object which is structured as the SUFIs used in transmission (SuperFields). This will allow to make use of information received and needed to establish SUFIs to be transmitted.

The input parameters to **o\_SUFI\_Handler** to be used as checking criteria are collected in tabular data structure **SUFI\_Params** which is filled each time before the TSO is called. These data are to allow the checking of the presence and the value of SUFIs. All entries shall be set to well-defined values if these are to be used by **o\_SUFI\_Handler**. As a principle values specifically set are used as criteria for checking, values omitted are used as AnyOrOmit values. The resulting SUFI list is established by **o\_SUFI\_Handler** and can be retrieved in the data structure returned by the TSO. Details have to be defined in the TSO itself.

Tasks **o\_SUFI\_Handler** has to perform:

- Transfer the SUFIs received into the structure of SuperFields; this is the SUFI list structure existing today.
- If multiple occurrences of SUFI are found then use the **last** one to fill the SuperFields structure. The LIST SUFI is an exception: multiple SUFIs may be used to transfer the complete LIST information.
- Check for all parameters in SUFI\_Params set to a specific expected value that one of the SUFIs using this value is present and that the value received matches the specific expected value.
- Check that if SUFIs are received for which an expected value of Any is specified, the SUFI is consistent if that SUFI is received.
- Check that if SUFIs are received for the presence of which no entry is specified in SUFI\_Params, the SUFI is consistent.
- Check that sequence numbers are in the range between LB and UB if specific values are set.

Entries in **SUFI\_Params**.

| Element Name        | Significance                                      | Comment  |
|---------------------|---|--|
| <b>LB</b>           | Lower bound of sequence number range              | Lowest SN for checking SNs acknowledged                    |
| <b>UB</b>           | Upper bound of sequence number range              | Highest SN for checking SNs acknowledged                   |
| <b>WSN_presence</b> | Window Size SUFI present                          | To check the presence of the Window Size SUFI              |
| <b>MRW_presence</b> | Move Receive Window SUFI present                  | To check the presence of the MRW SUFI                      |
| <b>Nack1</b>        | SN of 1 <sup>st</sup> PDU negatively acknowledged | For the NackList to check SN to be negatively acknowledged |
| <b>Nack2</b>        | SN of 2 <sup>nd</sup> PDU negatively acknowledged | For the NackList to check SN to be negatively acknowledged |
| <b>Nack3</b>        | SN of 3 <sup>rd</sup> PDU negatively acknowledged | For the NackList to check SN to be negatively acknowledged |

More entries may be required in the future if specific SUFI field values are to be checked. The concept allows to add more fields easily.

6.5.2.2 Void

6.6 SMS test method and architecture

6.6.1 SMS CS test method and architecture

The test method used for SMS CS tests is the same as the NAS test method, see clause 6.3, and the same ASPs, see clause 7.1.2.

6.6.2 SMS PS test method and architecture

The test method used for SMS PS tests is the same as the NAS test method, see clause 6.3, and the same ASPs, see clause 7.1.2.

6.6.3 SMS Cell broadcasting test method and architecture

The test method used for SMS CB tests is the same as the BMC test method, see clause 6.8, and the same ASPs, see clause 7.3.1.1.

6.7 MAC test method and architecture

6.7.1 Testing architecture

Figure 10 illustrates a typical realization of the MAC ATS.

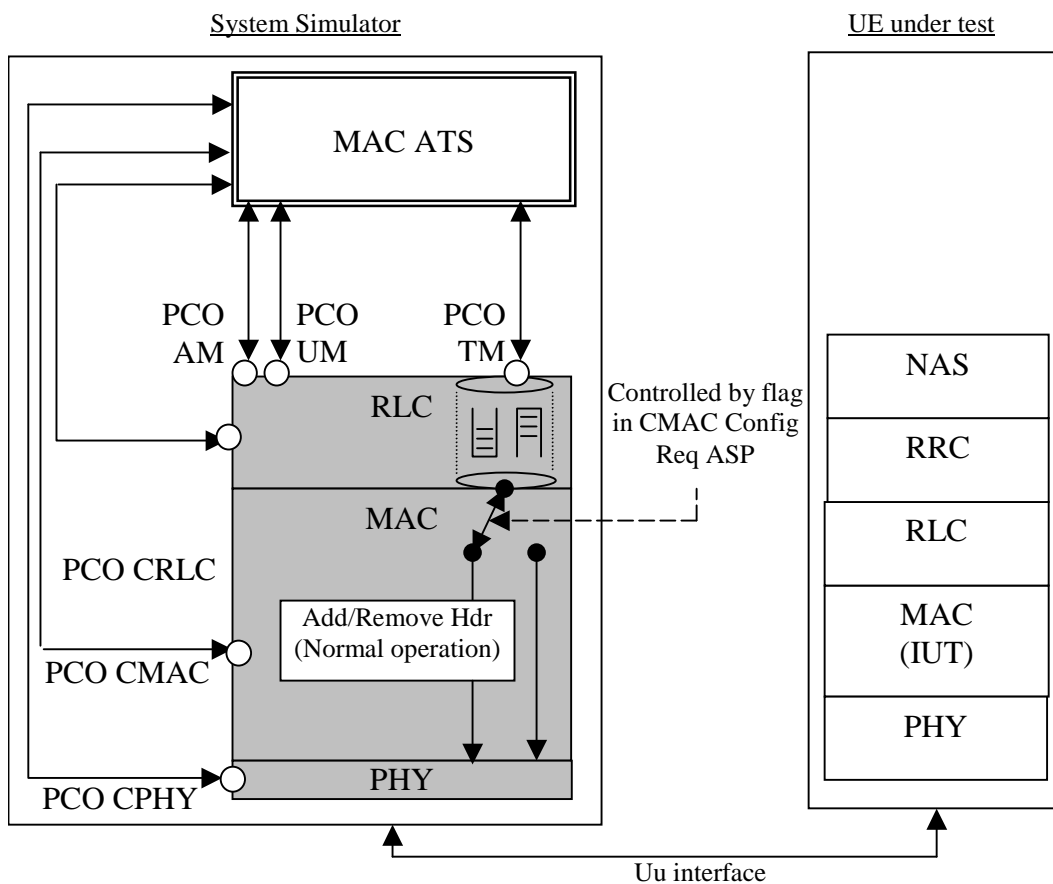


Figure 10: MAC ATS single party test method

## 6.7.2 Test method

The single party test method is used for MAC testing.

Separation of TTCN test cases from the configuration of the tester and initialization of the UE is achieved by using test steps. For each MAC test case, common test steps will be used to perform the configuration of the tester and the appropriate generic setup procedures as described in 3GPP TS 34.108 [3]. These test steps will make use of PCOs AM, UM, TM, CRLC, CMAC, and CPHY.

Three PCOs are provided at the top of the RLC emulation in the tester, one corresponding to each of the available RLC modes: acknowledged, unacknowledged, and transparent. Routing information for different radio bearers used at these PCOs will be provided in ASP parameters.

The queues shown in the RLC emulation in figure 8 indicate that normal RLC transmit and receive buffering will be used to isolate the TTCN test suite from the real time issues involved if messages are sent directly to the MAC layer.

A flag is required within the CMAC Config Req to indicate that the SS MAC emulation must not add or remove any MAC header information, even if header fields should be present according to the configured channels. This flag shall allow control of the MAC header on a per logical channel basis. For example, it shall be possible to configure 4 DCCHs and a DTCH mapped to a DCH, such that the MAC will add / remove header information for the DCCHs, but not for the DTCH.

The MAC TTCN test cases make also use of the NAS TTCN test steps in order to bring UE to Idle state. The NAS test steps, which are called by the MAC test cases or steps, interface with the Dc PCO.

For MAC testing, the following RB Ids are used for the high priority NAS RB within the system simulator depending on the MAC configuration being simulated.

| RB Id | Simulated configuration |
|-------|-------------------------|
| -14   | DCCH mapped to FACH     |
| -15   | DCCH mapped to DCH      |
| -18   | CCCH mapped to FACH     |

The SS decoder can use the RB Id to determine which MAC header fields are present, and create the appropriate abstract structure during the decode process. The SS decoder must understand enough of the MAC peer-to-peer protocol to determine which fields are present.

For example, the semantics of the UE Id Type field must be known to determine how many bits should be present in the UE Id field.

The MAC PDUs for MAC testing will always contain an AM RLC PDU (data or status) using 7 bit length indicators. See the RLC test method for further information on the SS decoder requirements for RLC PDUs.

Ciphering shall be disabled for all MAC tests.

### 6.7.2.1 Abnormal decoding situations

If the SS decoder cannot convert the received data into the supported structure, the SS shall terminate the test case immediately and indicate that a test case error has occurred.

### 6.7.2.2 MAC\_es/e test method (Rel-6 or later)

MAC test method for MAC\_es/e is depicted in the following figure. In the UE side the RLC entity is AM mode, in the SS the mode of RLC in downlink direction is TM, the AM mode functions are implemented in TTCN. In the uplink direction, only the mapping between RB identity and logical channel identity (i.e. the sS\_rlc\_Info in RBInfo is OMITTED) is configured in the RLC entity, the RLC entity passes any data block received on the logical channel to the RB identified by tsc\_RB\_DTCH\_E\_DCH\_MAC(value is -20), tsc\_RB\_DTCH\_E\_DCH\_MAC1(-21), or tsc\_RB\_DTCH\_E\_DCH\_MAC2(-22). Whenever a RLC pdu received through one of the specified RB identifiers, the TTCN shall generate a RLC ack for it and send it on the downlink direction.

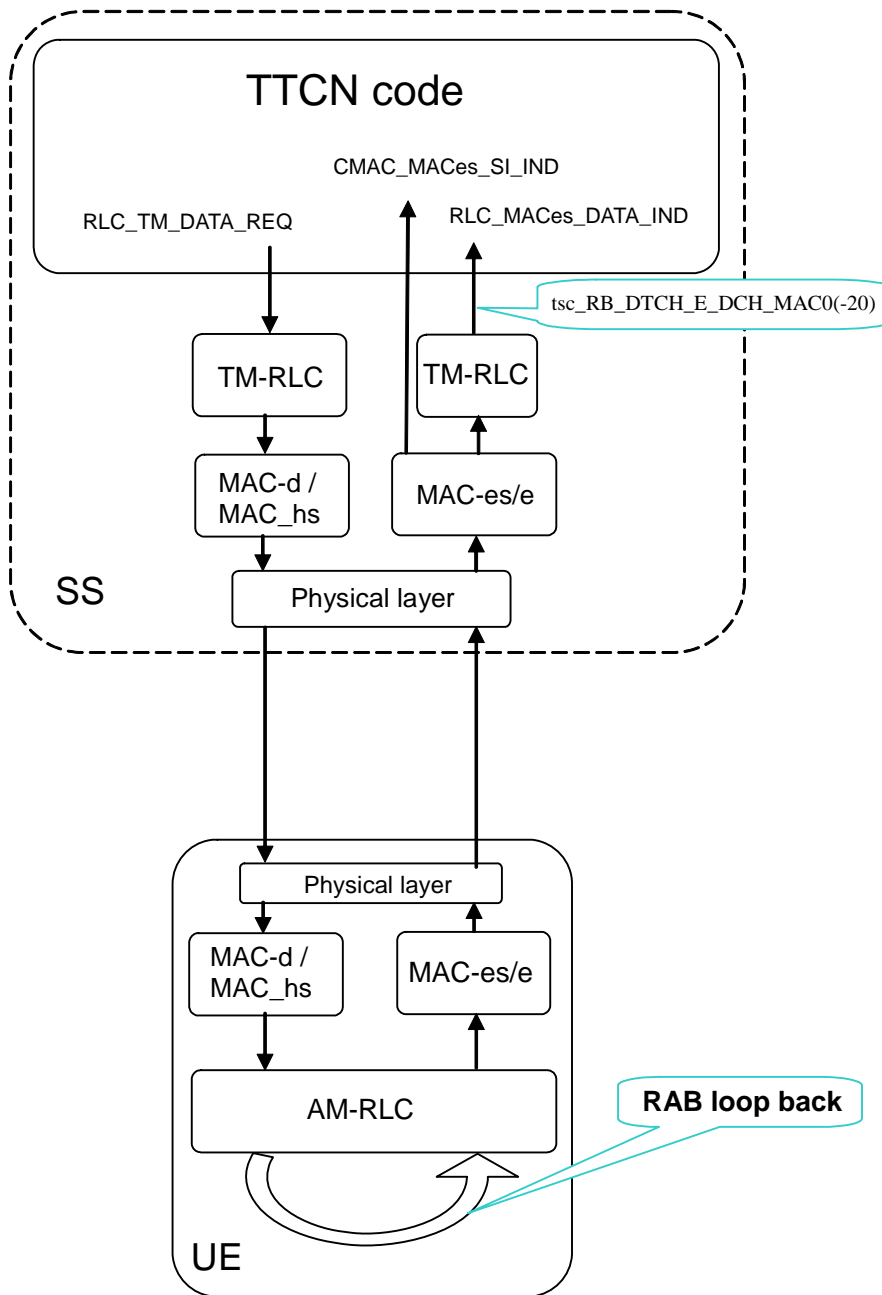


Figure 11: MAC\_es/e testing model

## 6.8 BMC test method and architecture

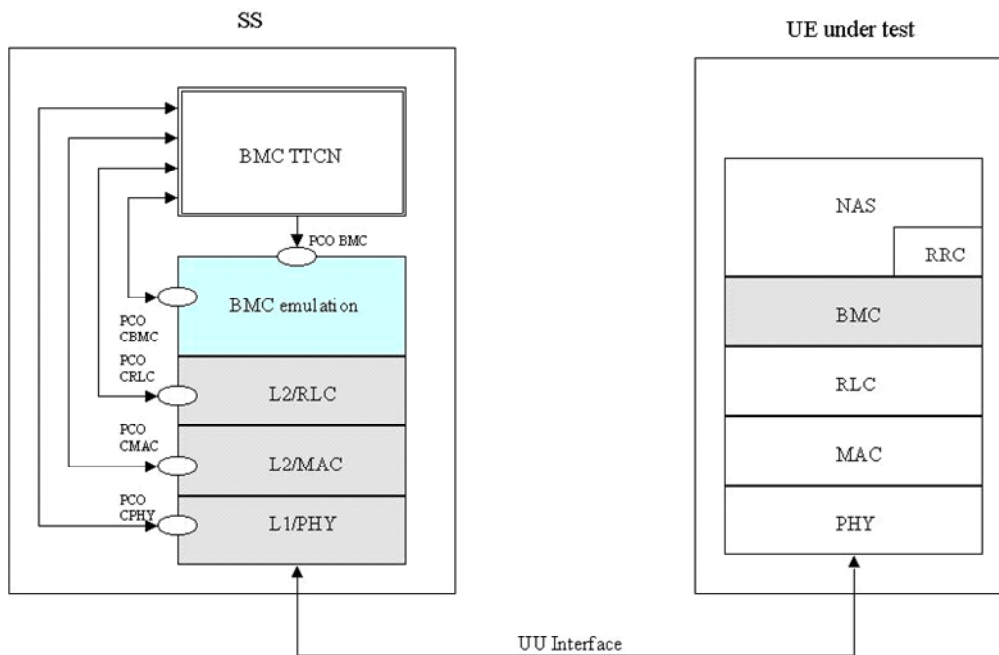


Figure 12: BMC testing architecture single party method

### 6.8.1 BMC test architecture

The single party test method is used for BMC testing, i.e. it does not exist an Upper Tester. BMC emulation is used as shown in figure 12. The BMC emulation makes use of two PCOs. The CBMC PCO is defined, to pass configuration information for a BMC entity. The BMC PCO is defined for BMC message data transfer.

Separation of TTCN test cases from the configuration of the tester and initialization of the UE is achieved by using test steps. For BMC test cases, common test steps and newly defined test steps for BMC configuration will be used to perform the configuration of the tester and on UE side. These test steps make use of PCOs, CRLC, CMAC, and CPHY.

The UE shall be able to activate and deactivate a certain CB MessageID according CB data to be sent while testing.

BMC messages are sent in BMC message blocks on the CTCH. For sending BMC messages (BMC Scheduling Message (Level 2, DRX) and BMC CBS Message ) a configuration in downlink direction shall be performed to map the CTCH (RB#30) onto the FACH - S-CCPCH.

### 6.8.2 BMC test method

For BMC testing, only PS Cell Broadcast Service as distributed BMC service is applied. CBS Messages and BMC Schedule Messages are only sent in downlink direction. No uplink is used for BMC testing. The BMC test data with necessary CBS information shall be given by PIXIT parameter with a description of the indication on the display.

This test method uses BMC primitives as defined in 3GPP TS 25.324 [20]. There are two level of BMC scheduling, Level 1 for CTCH configuration and Level 2 for DRX. The BMC scheduling information is conveyed to both BMC and MAC layer.

Level 1 scheduling is used configure the CTCH on the S-CCPCH. For BMC testing (FDD), the Level 1 scheduling parameter  $M_{TTI}$  contains one radio frame in the TTI of the FACH used for CTCH. Therefore, only Level 1 scheduling information  $N$  (period of CTCH allocation on S-CCPCH) and  $K$  (CBS frame offset to synchronize to the SFN cycle (0 to 4 095 frames per cycle)) are necessary to configure the CTCH onto the S-CCPCH.

The Level 1 scheduling is done in the SS MAC layer, therefore this information is given by using the primitive "CMAC\_BMCscheduling\_REQ" to inform the MAC on SS side about K and N. The Level 1 scheduling information, K and N, is broadcast as system information in SIB 5 and SIB 6. After having performed the CTCH configuration as Level 1 scheduling, the SS is configured to send BMC messages and the UE has to listen to each CTCH for a BMC message.

Segmentation of BMC messages is performed by RLC in UM. A RLC segment shall contain BMC message payload as configured in RB#30 with a maximum number of 57 octets. The 57 octets payload is used to calculate the BMC inband scheduling Level 2 in the BMC TTCN (TSO).

If only one CB data as BMC CBS message is sent and repeated for a BMC test case, Level 1 scheduling is adequate, i.e. no BMC Scheduling Message (Level 2) is needed. Therefore, no level 2 scheduling information are included in the "CMAC\_BMCscheduling\_REQ" primitive. If more then one BMC CBS message are transmitted and repeated, BMC scheduling Level 2 message shall be performed.

Level 2 scheduling is used to predict the sent event of the next BMC message blocks and the BS index contents.

BMC scheduling Level 2 predicts exactly, which information is contained on a certain CTCH block set with an aligned Block Set index number and how many spare CTCH blocks are given as offset, before the next BMC message block will be sent. Figure 13 shows an example, how the message flow shall be done for BMC scheduling Level 2.

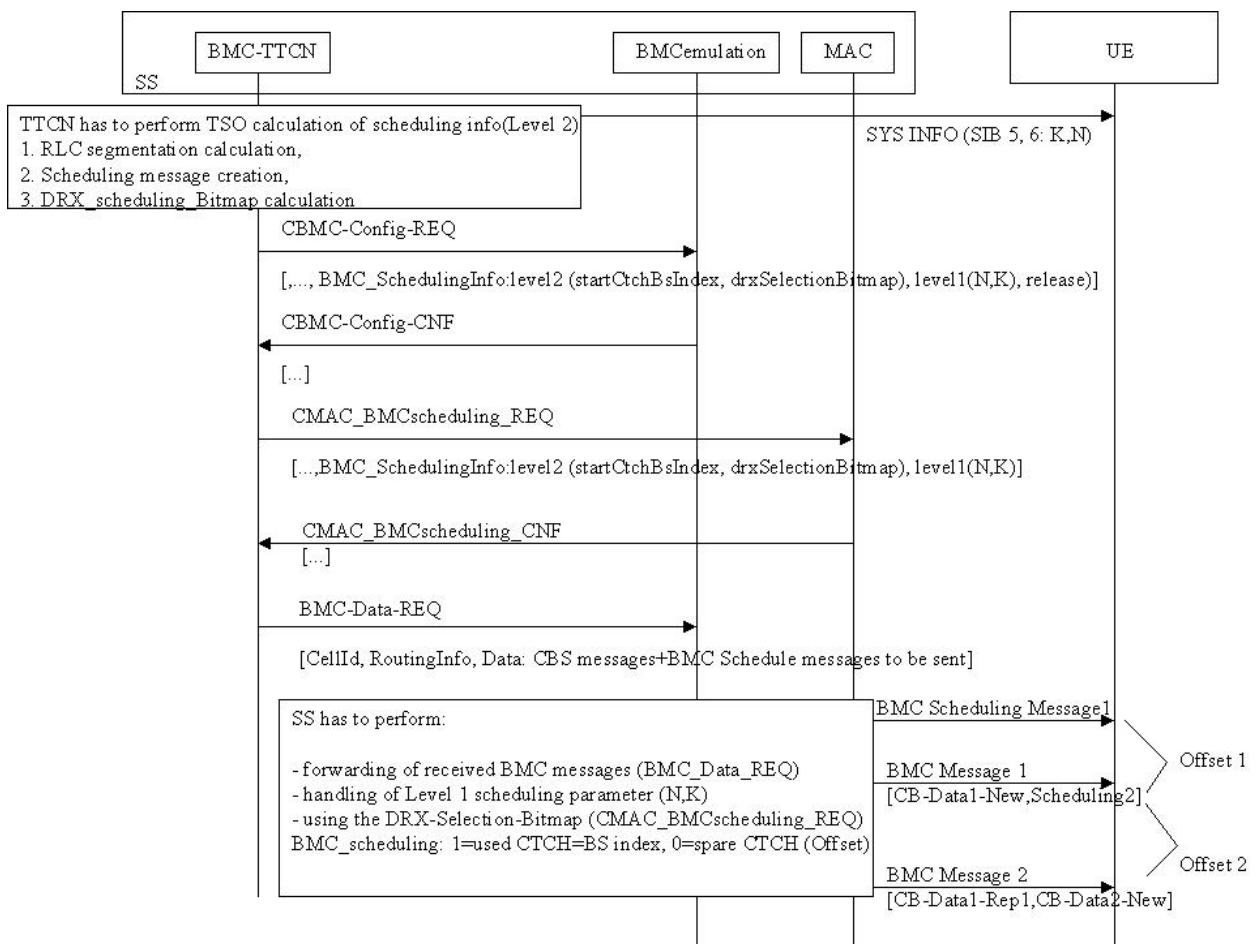


Figure 13: BMC Scheduling

The BMC test method makes use of the primitive: "BMC-Data-REQ" to transmit the BMC Messages to RLC. If BMC Scheduling Level 2 is used, an entire BMC message, including BMC CBS PDUs and a BMC Schedule PDU, to be transmitted is created by the BMC TTCN and forwarded to the BMC emulation. The transmission of BMC PDU is confirmed through the primitive BMC-Data-CNF. The segmentation of the BMC PDU is done at the RLC layer.

According to the K and N value, the MAC layer at SS side determines the CTCH blocks for the BMC use. The CTCH blocks are indexed (i = 1 ... 256). If BMC DRX is needed, the BMC scheduling Level 2 information figures out the occupancy / spare of the available CTCH blocks by using a DRX\_Selection\_Bitmap. In the bitmap each bit, set to '1', corresponds to an actually available CTCH block belonging to the DRX period for the SS transmission. The all occupied consecutive CTCH blocks constitutes a BMC DRX period, whilst the consecutive spared blocks indicate the DRX offset as spare CTCH slot.

Following the DRX\_Selection\_Bitmap, the segmented BMC messages are transmitted. Each "BMC-Data-REQ" primitive has its own aligned "CMAC\_BMCscheduling\_REQ" primitive, where all BMC scheduling information is predicted. An initial CTCH block index is given (startCtchBsIndex) as a start index offset.

An octet string is defined whereas each bit describes one assigned CTCH block, i.e. one BS index on the S-CCPCH.

Bitmap value:

- 1 (binary) = indicates a used/occupied BS index (CTCH frame, with a payload size of 57 octets) to send BMC message segments for a message block.
- 0 (binary) = indicates a spare BS index, i.e. unused CTCH frame, to give an UE supporting DRX the necessary information.

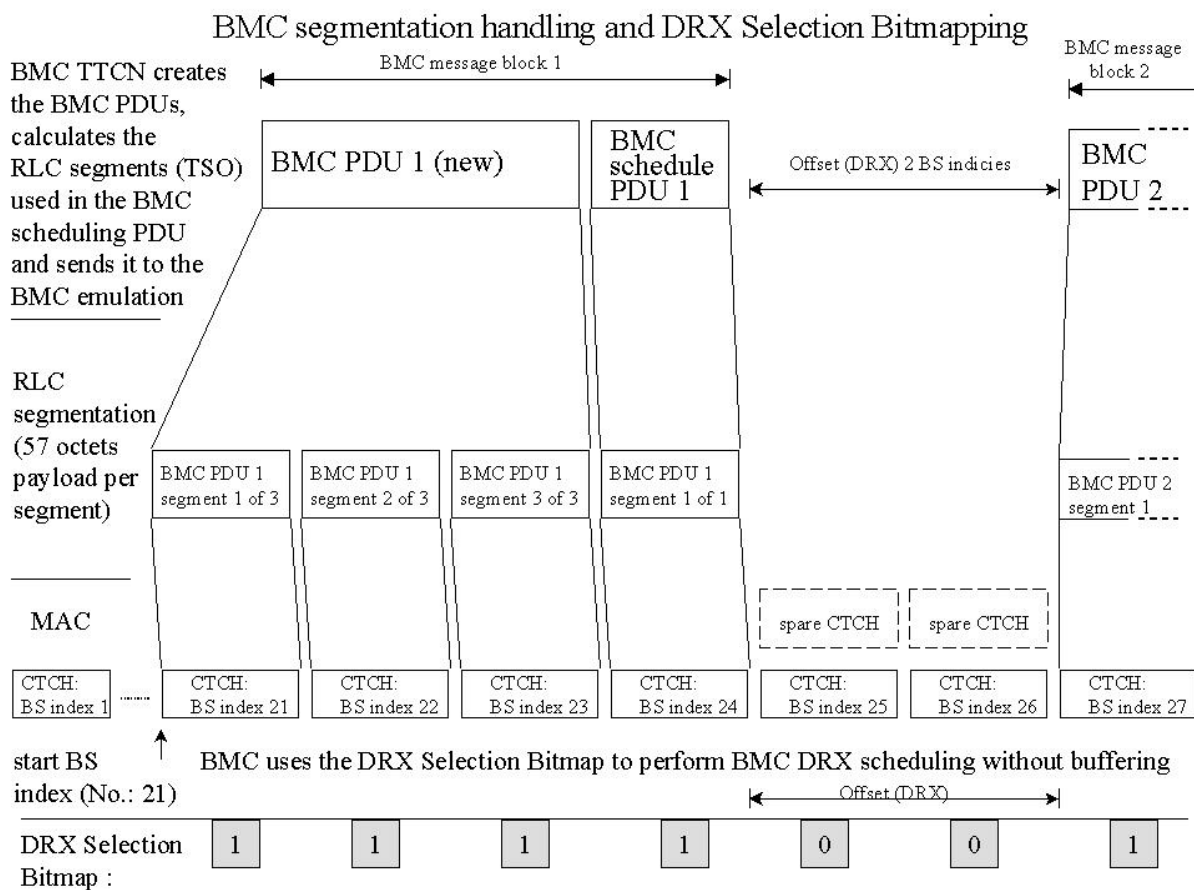


Figure 14: BMC DRX scheduling: segmentation handling

## 6.9 PDCP test

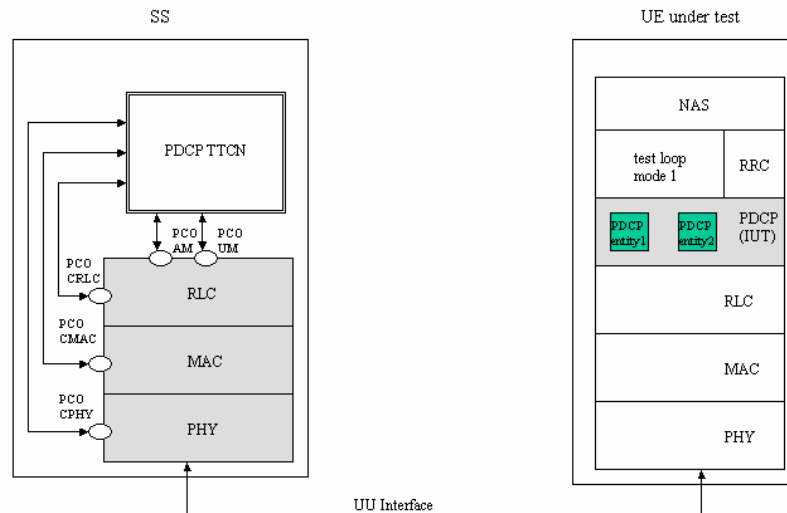


Figure 15: PDCP testing architecture 1: single party test method, with test loop mode 1

### 6.9.1 PDCP test architecture

The single party test method is used for PDCP testing. All PDCP tests that require uplink data will make use of the UE test loop mode 1 defined in 3GPP TS 34.109 [4]. Test Loop mode 1 is only available in the user plane, so all PDCP tests will be performed in the user plane, using the same logical channels mapped to transport channels as defined in RLC test cases, except for test case, clause 7.3.2.2.4, where a configuration of combined radio bearers used only for this test case is defined.

Separation of TTCN test cases from the configuration of the tester and initialization of the UE is achieved by using test steps. For PDCP test cases, common test steps and newly defined test steps for PDCP configuration will be used to perform the configuration of the tester and the appropriate generic setup procedures as described in 3GPP TS 34.108 [3] and in clause 7.4 of 3GPP TS 34.123-1 [1]. These test steps will make use of PCOs RLC AM, RLC UM, CRLC, CMAC, and CPHY.

The PDCP TTCN test cases make also use of the NAS TTCN test steps in order to setup a PS session.

For PDCP testing, the IP Header Compression protocol as described in RFC 2507 [30] is used as optimization method. The IP header compression and decompression mechanisms as described in RFC 2507 [30] is not part of PDCP TTCN. PDCP testing make use of uncompressed, compressed and decompressed TCP/IP header packets of a certain packet stream and uncompressed, compressed and decompressed UDP/IP header packets of a certain generation. This parameters are given as test parameter (PIXIT information).

PDCP testing includes transmission/reception of compressed/decompressed IP header packets, PDCP sequence numbering while lossless SRNS relocation and PID assignment rules as well as PDCP configuration tests as described in 3GPP TS 25.323 [19]. It does not test optimization specific protocol behaviour as error recovery and packet reordering as described in RFC 2507 [30].

### 6.9.2 PDCP test method

For PDCP testing, the RB test mode is used with test loop mode 1. After establishing a PS session with RB in RLC UM or/and AM, the UE is configured to support a negotiated PDCP configuration. UDP/IP header packets are used as Non-TCP/IP header packets as PDCP test data.

There are different input parameter as PIXIT values necessary for PDCP testing.



For TCP/IP header packets, uncompressed TCP/IP header packets shall be defined as PIXIT input parameter. In addition, there are the corresponding RFC 2507 [30] FULL\_HEADER packet, COMPRESSED\_TCP packet and COMPRESSED\_TCP\_NONDELTA packet given for each TCP/IP header packet as PIXIT information.

For UDP/IP header packets, uncompressed UDP/IP header packets shall be defined as PIXIT input parameter. In addition, there are the corresponding RFC 2507 [30] FULL\_HEADER packet and COMPRESSED\_NON\_TCP packet given for each UDP/IP header packet as PIXIT information.

To check the use of certain PID values assigned to IP compressed header types, a given IP header packet (PIXIT) will be sent to the UE. The UE shall return a appropriate valid IP header packet type, which corresponds to the previous sent IP header packet. The usage of valid compressed/uncompressed IP header packets shall be checked by comparing the given PIXIT IP header packet types for each IP header packet previously sent.

The IP header packet order as described in RFC 2507 [30] shall be applied within a test case.

If for example an TCP/IP header packet of type "COMPRESSED\_TCP" shall be sent, the TTCN uses the given TCP/IP header packet (PIXIT) for transmission to the UE. The UE shall decompress the received packets appropriate, afterwards it will be returned by the loop back entity and it shall be sent by applying IP header compression rules as described in RFC 2507 [30] and as configured. Then, the SS receives returned IP header packets and compares it with all valid IP header packets given as PIXIT parameter corresponding to the previously sent IP header packet. It is checked, whether or not the IP header packet with assigned PID is valid and a configured PDCP PDU where used for transmission. In this way, it is checked, that the UE performs IP header compression as configured and is able to assign the correct PID values.

## 6.10 Multi-RAT Handover Test Model

### 6.10.1 Overview

The test model is shown in figure 16. The SS in the model consists of UTRAN emulation part and GERAN emulation part, GERAN emulation part includes protocol emulation modules for GSM CS services and protocol emulation modules for GPRS service. Protocol stack L1 (GERAN), L2 is for GSM CS service function emulation, protocol stack L1, RLC/MAC, LLC, SNDCP is for GPRS service function emulation. SNDCP emulation model and relevant PCO's can be removed if "traffic channel gets through" is not tested.

L1 (GERAN) provides necessary physical layer functionality for both GSM and GPRS. A control PCO and a set of ASP's are defined for configuring and controlling its protocol behaviour required in the test cases. L1 (GERAN) provides services to L2 and RLC/MAC emulation modules, the interfaces between them are not specified in this test model, it is implementation dependent and shall follow the relevant GSM and GPRS specifications.

L2 emulates necessary GSM L2 protocol functionality used in testing. A data PCO and a set of ASP's are defined for this module and used for transmitting and receiving layer 3 signalling messages and use data. The definition of the PCO and these ASP's are based on the logical channel concept of GSM specification. A control PCO and related ASP's are also defined for L2, they are used to introduce abnormal layer 2 behaviour required by the test purposes.

RLC/MAC is emulation module for GPRS Radio Link Control/Medium Access Control protocol. Two PCO's and related ASP's are defined for the module. Control PCO is used to set TBF and assign physical resources to it, actual physical resources (packet channels) are created by L1 (GERAN) ASP's beforehand. Data PCO is for transmitting and receiving RLC control messages (RLC control block). Before any RLC data or control block, except RLC control block on PCCCH or PRACH, or PBCCH, is sent (or received) a proper TBF shall be configured. In addition RLC/MAC module provides service to LLC emulation module, the interface between them is determined by implementation and shall be compliant with relevant core specification.

LLC performs GPRS Logical Link Control protocol emulation. Its data PCO and ASP's are used for exchange GMM signalling messages between TTCN and the UE under test. The current defined ASP's on control PCO are subset of the primitives defined in core specification, they are used to assign, un-assign TLLI and ciphering parameters, or get status report.

## 6.10.2 ASP function description

### 6.10.2.1 Identities

- Within the SS, a cell is identified by cell identifier (cellId), which is of TTCN type CellId (INTEGER).
- Within a cell, a basic physical channel is identified by physical channel identifier (physicalChId), which is of TTCN type PhysicalChId (INTEGER). In multislot configuration a basic physical channel is identified by physical channel identifier (physicalChId) and timeslot, which is of TTCN type TN (INTEGER).
- Within a physical channel, logical channel is identified by logical channel type (g\_LogicChType), which is of TTCN type G\_LogicChType (INTEGER). When multiple logical channels of same type are carried by (mapped to) the same basic physical channel, they are differentiated by sub-channel number (subChannel), which is of TTCN type SubChannelNumber (INTEGER).
- At the top boundary of L2 emulation module two service access points (SAP) are available, they are identified by SAPI. SAPI=3 is used for short message service; SAPI=0 is used for L3 signalling messages and user data.

EXAMPLE: If G\_L2\_DATA\_REQ ASP has the following parameter setting:

- cellId = tsc\_CellA;
- sAPI = tsc\_SAPI\_0;
- physicalChId = tsc\_PhyCh0;
- g\_LogicChType = tsc\_SDCCH4; and
- subChannel = tsc\_SubChannel1;

it sends PDU on the SDCCH4(1) logical channel which is carried by the physical channel tsc\_PhyCh0 in cell A.

### 6.10.2.2 Cell configuration and control

In GSM each base station has a base station identity code BSIC, it consists of network colour code and base station colour code (NCC + BCC). BSIC is continuously broadcasted on the SCH channel, and it shall be used as the training sequence code for broadcast and common control channels.

In the test model the function of G\_CL1\_CreateCell\_REQ ASP is to create a cell and pass parameter BSIC to it. This ASP establishes the cell identifier which shall be used in the ASP's related to this cell.

This is the first step to configure L1 (GERAN) emulation module of the SS.

### 6.10.2.3 L1 (GERAN) configuration and control

Configuration and control functions identified for L1 (GERAN) of a cell are:

- creation of basic physical channels;
- creation of multislot configuration;
- release of basic physical channel;
- modifications of channel mode, ciphering parameters and transmission power level;
- reporting of L1 header of SACCH channel;
- pickup a frame in near future, which can carry L3 message.

### 6.10.2.3.1 Basic physical channel configuration

A basic physical channel uses a combination of frequency and time domain resources, therefore, the definition of a particular basic physical channel consists of a description in the frequency domain and a description in the time domain. In time domain the resource is called Time Slot, there are 8 time slots in one frame, numbered from 0 to 7. In frequency domain a basic physical channel may use only one frequency or may use multiple frequencies in frequency hopping.

Basic physical channel carrying FCCH + SCH + BCCH + CCCH (PCH, AGCH, RACH) or FCCH + SCH + BCCH + CCCH + SDCCH4 logical channels shall be located in time slot 0, and uses single frequency (non-hopping). The basic physical channel carrying additional BCCH, CCCH (PCH, AGCH, RACH) logical channels shall be located in time slot 2, 4, 6 and uses the same single frequency as the frequency used by the physical channel carrying FCCH, SCH.

GSM specification defines 24 permitted combinations of different logical channels, which can be mapped on to a basic physical channel. The combination defines which logical channels are carried by a basic physical channel, and it is also an indication of which modulation (GMSK or 8PSK) is used for the basic physical channel.

Training Sequence Code (TSC) is another parameter needed by physical channel. Common control and broadcast channel have to use BCC as its TSC.

Dedicated control channel and dedicated traffic channel need more parameters to configure. Parameter "Channel Mode" is needed to specify channel coding (therefore the user data rate). Ciphering related parameters are required to define the ciphering behaviour of the channel.

Common control channels need parameters to configure where in the 51-multiframe paging and access grant blocks are located.

Transmission power level is provided as per physical channel parameter, power level of each physical channel can be controlled independently.

The function of ASP\_G\_CL1\_CreateBasicPhyCh\_REQ is to create a basic physical channel which has the required property defined by all the parameters mentioned above.

In the process of L1 (GERAN) configuration, calling the ASP is the next step after calling G\_CL1\_CreateCell\_REQ.

### 6.10.2.3.2 Multislot configuration for circuit or packet switched channels

Multislot configuration for circuit switched connection consists of multiple circuit switched traffic channels, in L1 point of view these traffic channels are independent basic physical channels with the same frequency parameters (ARFCN or MA, MAIO, HSN) and the same training sequence code but located in different time slots, one of the basic physical channels is the main channel of the configuration carrying the main signalling (FACCH, SACCH, IACCH) for the configuration. The main channel shall be bi-directional channel and with channelCombination TCH/F+FACCH/F+SACCH/M or E-TCH/F+E-IACCH/F+E-FACCH/F+E-SACCH/M. When transmitting user data (not signalling message) stream is divided into substreams, each substream is transmitted independently on a channel in the configuration. At the receiving side all substreams are combined back to user stream.

According to the test model creation of a multislot configuration for circuit switched connection needs two ASP calls. Firstly, G\_L1\_CreatedBasicPhyCh\_REQ is called to establish the main channel, then G\_L1\_CreateMultiSlotConfig\_REQ is called to allocate more timeslots to the channel established by the previous ASP. A substream of a multislot configuration is identified with the physicalChId and timeslot.

Multislot configuration for packet switched connection consists of multiple PDCHs which can carry PDTCH/Us or PDTCH/Ds. All these PDCHs use the same frequency parameters (ARFCN or MA, MAIO, HSN) and the same training sequence code, but are located on different timeslots.

Similarly, a multislot configuration for packet switched connection is created with two ASP calls. First G\_L1\_CreatedBasicPhyCh\_REQ is called to establish the first PDCH channel, then G\_L1\_CreateMultiSlotConfig\_REQ is called to allocate more timeslots to the channel established by the previous ASP. All data ASP on packet data channel use physicalChId and timeslot to address the physical channels.

### 6.10.2.3.3 Frame in the near future

ASP `G_CL1_ComingFN_REQ` is defined to request L1 (GERAN) return the reduced frame number (FN modulo 42432) which is far enough in the future from current frame number and is able to carry L3 message on the specified channel. "far enough" means that there is enough time left for TTCN to prepare a L3 message to be sent on that frame. When calculating startingTime, this ASP could be useful. The starting time usually is set to a frame number in a time distance from current frame number. TTCN writer can use `G_CL1_ComingFN_REQ` to get a frame number in the future then add a certain number of frames as time distance to it and use the result as the value for startingTime.

### 6.10.2.3.4 L1 header

The layer 1 header of SACCH from UE to network carries information of timing advance and UE uplink transmission power level, verifying L1 header contents is required in some test cases, ASP `G_CL1_L1Header_REQ` and `G_CL1_L1Header_CNF` are defined for fulfilling this requirement.

## 6.10.2.4 L2 configuration and control

For normal operation there is no parameter configurable in L2. Some abnormal L2 behaviours are required in test cases. In the test model two ASP's are currently defined to introduce abnormal L2 behaviour. When creating a dedicated channel the initial SACCH header is set to the values in powerLevel and timingAdvance fields of `DedCH_Info`.

### 6.10.2.4.1 Don't response to some handover access bursts

In non-synchronized handover procedure UE/MS, having received handover command, sends handover access bursts on the target channel repeatedly till it receives PHYSICAL INFORMATION message from network or T3124 times out. Normally network replies PHYSICAL INFORMATION as soon as it receives handover access burst. Some test cases require that the SS ignores several incoming handover access bursts then responses to the one that follows. ASP `G_CL2_HoldPhyInfo_REQ` is defined for fulfilling this requirement. It is used together with and before a data ASP sending PHYSICAL INFORMATION message. When SS receives the `G_CL2_HoldPhyInfo_REQ`, it does not transmit the PHYSICAL INFORMATION message until n handover access bursts have been received.

### 6.10.2.4.2 No UA reply to SABM

GSM L2 protocol is adapted from LAPD (HDLC subset). The multiframe operation mode is established through exchange of supervisory frame SABM and unnumbered frame UA between peer entities, and SABM is always sent by UE/MS, UA is always sent by network. UE/MS will repeatedly transmit SABM till it receives UA or retransmission counter is reached. Some handover test cases require that the SS does not response to the incoming SABM, so handover fails. `G_CL2_NoUAforSABM_REQ` is used for such purpose, it commands the SS not to send UA response to the UE when SABM is received.

## 6.10.2.5 System Information sending

There are 17 different SYSTEM INFORMATION messages on BCCH and 4 different SYSTEM INFORMATION messages on SACCH defined for circuit switched services in GSM specification. In a particular test case not all of them are required. SYSTEM INFORMATION messages on BCCH shall be broadcasted periodically by the SS, SYSTEM INFORMATION TYPE 5, 6 and optionally 5bis and 5ter messages shall be sent on SACCH by the SS when nothing else has to be sent on that channel.

`G_L2_SYSINFO_REQ` is defined to deliver a SYSTEM INFORMATION message and its type `SysInfoType` to the SS, SS shall store the SYSTEM INFORMATION and transmit it periodically according to the scheduling rules specified in 3GPP TS 45.002 [31], clause 6.3.1.3. SYSTEM INFORMATION message newly delivered shall override the same type SYSTEM INFORMATION message previously stored in the SS.

SYSTEM INFORMATION message type 18, 19, 20 are scheduled by scheduling information in SYSTEM INFORMATION type 9. ASP for scheduling these messages has not been defined yet because these messages are not required in current test cases.

### 6.10.2.6 Paging

Paging message for a particular UE/MS shall be sent on the right CCCH\_GROUP (or PCCCH\_GROUP) and PAGING\_GROUP which are determined by IMSI of the UE/MS and other parameters. In the test model TTCN code is responsible to calculate the value of CCCH\_GROUP (or PCCCH\_GROUP) and the value of PAGING\_GROUP.

TTCN selects the right channel according to the value of CCCH\_GROUP (or PCCCH\_GROUP), then PAGING REQUEST message and the value of PAGING\_GROUP are passed to the SS by using:

- ASP G\_L2\_Paging\_REQ in case of UE/MS in idle mode or the UE/MS not supporting SPLIT\_PG\_CYCLE on CCCH when it is in GPRS attached mode and PCCCH is absent; or
- G\_RLC\_ControlMsg\_REQ in case of UE/MS supporting 3GPP TS 45.002 [31], clause 6.5.6, when it is in GPRS attached mode and PCCCH is present.

The SS shall determine the position where the paging block is located using the value PAGING\_GROUP and other CCCH (or PCCCH) parameters configured by G\_CL1\_CreateBasicPhyCH\_REQ, then send the PAGING REQUEST message according the parameter pagingMode in the ASP:

- send the message on the paging block determined by PAGING\_GROUP if pagingMode = "normal paging";
- send the message on the paging block determined by PAGING\_GROUP and the "next but one" position on the PCH or in the third block period on PCCCH where paging may occur (PPCH) if pagingMode = "extended paging";
- send the message on all paging blocks if pagingMode = "paging reorganization".

### 6.10.2.7 Generic procedures for GPRS signalling

Two channel combinations are applied to configure a GERAN cell for the GPRS signalling:

- The channel combinations 5 + 13, (FCCH + SCH + BCCH + CCCH + SDCCH/4(0..3) + SACCH/C4(0..3)) + (PBCCH+PCCCH+PDTCH/F+PACCH/F+PTCCH/F), are considered as default at the interRAT tests.
- The channel combinations 5 + 11, (FCCH + SCH + BCCH + CCCH + SDCCH/4(0..3) + SACCH/C4(0..3)) + (PDTCH/F+PACCH/F+PTCCH/F), are applied to the clause 42.4.7.

The following generic procedures show the usages of GPRS ASP's for the GPRS generic attach procedures, the generic cell change order within a TBF and the GSM ciphering procedure.

#### 6.10.2.7.1 GPRS generic attach procedures and ciphering mode control

##### 6.10.2.7.1.1 GPRS attach procedure in channel combinations 5 and 13

| Direction | ASP                        | message  | Comments  |
|-----------|----------------------------|--|---|
| SS        | G_CL1_CreateCell_REQ       |  | Create the cell   |
| SS        | G_CL1_CreateBasicPhyCh_REQ |  | Create the physical channel combination 5 for FCCH+SCH+BCCH+CCCH+SDCCH/4(0..3)+SACCH/C4(0..3) |
| SS        | G_CL1_CreateBasicPhyCh_REQ |  | Create the physical channel combination 13 for PDTCH/F+PACCH/F+PTCCH/F                        |
| SS -> MS  | G_L2_SYSINFO_REQ           | SYSTEM INFORMATION TYPE1, SYSTEM INFORMATION TYPE2, SYSTEM INFORMATION TYPE2quarter, SYSTEM INFORMATION TYPE3, SYSTEM INFORMATION TYPE4, SYSTEM INFORMATION TYPE13 | Broadcast system information messages : SI 1-4; SI 13   |
| SS        | G_CRLC_CreateRLC_MAC_REQ   |  | Create RLC/MAC emulation entity   |
| SS        | G_CLLC_CreateLLE_REQ       |  | Create LLC emulation entity   |
| SS        | MMI_CmdReq                 |  | Power on the UE/MS  |

| Direction | ASP                      | message   | Comments   |
|-----------|--------------------------|---|--|
| MS-> SS   | G_L2_ACCESS_IND          | CHANNEL REQUEST   | RACH, TBF establishment with Establishment Cause = one phase packet access.<br>Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in IMMEDIATE ASSIGNMENT.   |
| SS        | G_CRLC_UL_TBF_Config_REQ |   |  |
| SS -> MS  | G_L2_UNITDATA_REQ        | IMMEDIATE ASSIGNMENT                                      | Assign the uplink resources (uplink TBF) to MS. Polling bit and Starting Time are set  |
| MS -> SS  | G_RLC_ControlMsg_IND     | PACKET CONTROL ACKNOWLEDGEMENT                            | Assign TLLI, ciphering key and algorithm. The ciphering algorithm = "ciphering not used". The value of ciphering key shall be the one generated in the following authentication procedure.<br>If there is no user data traffic in acknowledged mode before authentication procedure the ciphering algorithm may be set to one of the GPRS ciphering algorithm, and the late G_CLLC_Assign_REQ shall be not used. |
| SS        | G_CLLC_Assign_REQ        |   |  |
| MS -> SS  | G_LLC_UNITDATA_IND       | ATTACH REQUEST  | MS uses the assigned uplink TBF to transmit the L3 message to SS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically according the countdown procedure. The SS reassembles the received data blocks into the L3 message and passes it to the LLC DATA PCO G_LLC.   |
| SS        | G_CRLC_DL_TBF_Config_REQ |   | Set up downlink TBF in RLC/MAC entity in SS  |
| SS -> MS  | G_L2_Paging_REQ          | IMMEDIATE ASSIGNMENT AUTHENTICATION AND CIPHERING REQUEST | Downlink TBF establishment   |
| SS -> MS  | G_LLC_UNITDATA_REQ       |   |  |
| MS-> SS   | G_L2_ACCESS_IND          | CHANNEL REQUEST   | RACH, TBF establishment with Establishment Cause = one phase packet access.<br>Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in IMMEDIATE ASSIGNMENT.   |
| SS        | G_CRLC_UL_TBF_Config_REQ |   |  |
| SS -> MS  | G_L2_UNITDATA_REQ        | IMMEDIATE ASSIGNMENT                                      | Assign the uplink resources (uplink TBF) to MS. Polling bit and Starting Time are set  |
| MS -> SS  | G_RLC_ControlMsg_IND     | PACKET CONTROL ACKNOWLEDGEMENT                            | Assign TLLI, if changed  |
| SS        | G_CLLC_Assign_REQ        |   |  |
| MS -> SS  | G_LLC_UNITDATA_IND       | AUTHENTICATION AND CIPHERING RESPONSE                     | Keep TLLI unchanged, ciphering algorithm = one of the GPRS ciphering algorithm. The value of ciphering key shall be the one generated in the authentication procedure.<br>If no user data traffic in acknowledged mode before authentication procedure, this ASP is not needed.  |
| SS        | G_CLLC_Assign_REQ        |   |  |

| Direction | ASP                      | message                        | Comments  |
|-----------|--------------------------|--------------------------------|---|
| SS        | G_CRLC_DL_TBF_Config_REQ |                                | Set up downlink TBF in RLC/MAC entity in SS   |
| SS -> MS  | G_L2_Paging_REQ          | IMMEDIATE ASSIGNMENT           | Downlink TBF establishment  |
| SS -> MS  | G_LLC_UNITDATA_REQ       | ATTACH ACCEPT                  | SS uses the established downlink TBF to transmit the L3 message to MS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically after all data blocks of the L3 message are transmitted |
| MS-> SS   | G_L2_ACCESS_IND          | CHANNEL REQUEST                | RACH, TBF establishment with Establishment Cause = one phase packet access.   |
| SS        | G_CRLC_UL_TBF_Config_REQ |                                | Set up uplink TBF in RLC/MAC entity in SS   |
| SS -> MS  | G_L2_UNITDATA_REQ        | IMMEDIATE ASSIGNMENT           | Assign the uplink resources (uplink TBF) to MS. Polling bit and Starting Time are set   |
| MS -> SS  | G_RLC_ControlMsg_IND     | PACKET CONTROL ACKNOWLEDGEMENT |   |
| SS        | G_CLLC_Assign_REQ        |                                | Assign new TLLI   |
| MS -> SS  | G_LLC_UNITDATA_IND       | ATTACH COMPLETE                | MS uses the assigned uplink TBF to transmit the L3 message to SS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically according the countdown procedure                            |
| SS        | G_CRLC_DeleteRLC_MAC_REQ |                                | Release resources in the SS for RLC/MAC emulation entity  |
| SS        | G_CLLC_DeleteLLE_REQ     |                                | Release resources in the SS for LLC emulation entity  |
| SS        | G_CL1_DeleteChannel_REQ  |                                | Release SS resources of channel combination 13  |
| SS        | G_CL1_DeleteChannel_REQ  |                                | Release SS resources of channel combination 5   |
| SS        | G_CL1_DeleteCell_REQ     |                                |   |

## 6.10.2.7.1.2

## GPRS attach procedure in channel combinations 5 and 11

| Direction | ASP                        | message  | Comments  |
|-----------|----------------------------|--|---|
| SS        | G_CL1_CreateCell_REQ       |  | Create the cell   |
| SS        | G_CL1_CreateBasicPhyCh_REQ |  | Create the physical channel combination 5 for FCCH+SCH+BCCH+CCCH+SDCCH/4(0..3)+SACCH/C4(0..3) |
| SS        | G_CL1_CreateBasicPhyCh_REQ |  | Create the physical channel combination 11 for PBCCH+PCCCH+PDTCH+PACCH                        |
| SS -> MS  | G_L2_SYSINFO_REQ           | SYSTEM INFORMATION TYPE1, SYSTEM INFORMATION TYPE2, SYSTEM INFORMATION TYPE2quarter, SYSTEM INFORMATION TYPE3, SYSTEM INFORMATION TYPE4, SYSTEM INFORMATION TYPE13 | Broadcast system information messages: SI 1~4; SI 13  |

| Direction           | ASP  | message  | Comments  |
|---------------------|--|--|---|
| SS -> MS            | G_L2_SYSINFO_REQ                                       | SYSTEM INFORMATION TYPE1, SYSTEM INFORMATION TYPE2, SYSTEM INFORMATION TYPE2quarter, SYSTEM INFORMATION TYPE3, SYSTEM INFORMATION TYPE4, SYSTEM INFORMATION TYPE13     | Broadcast system information messages: SI 1~4; SI 13  |
| SS<br>SS -> MS      | G_CRLC_CreateRLC_MAC_REQ<br>G_RLC_PSI_REQ              | PACKET SYSTEM INFORMATION TYPE1, PACKET SYSTEM INFORMATION TYPE2, PACKET SYSTEM INFORMATION TYPE3, PACKET SYSTEM INFORMATION TYPE3bis, PACKET SYSTEM INFORMATION TYPE5 | Create RLC/MAC emulation entity<br>Broadcast packet system information messages: PSI 1~3bis and if measurement order tests PSI5   |
| SS<br>SS<br>MS-> SS | G_CLLC_CreateLLE_REQ<br>MMI_CmdReq<br>G_RLC_ACCESS_IND | PACKET CHANNEL REQUEST   | Create LLC emulation entity<br>Power on the UE/MS<br>PRACH, TBF establishment with MM procedure   |
| SS                  | G_CRLC_UL_TBF_Config_REQ                               |  | Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in PACKET UPLINK ASSIGNMENT next   |
| SS -> MS            | G_RLC_ControlMsg_REQ                                   | PACKET UPLINK ASSIGNMENT   | Assign the uplink resources (uplink TBF) to MS. S/P bit set   |
| MS-> SS             | G_RLC_ControlMsg_IND                                   | PACKET CONTROL ACKNOWLEDGEMENT   |   |
| SS                  | G_CLLC_Assign_REQ                                      |  | Assign TLLI, ciphering key and algorithm. The ciphering algorithm = "ciphering not used". The value of ciphering key shall be the one generated in the following authentication procedure. If there is no user data traffic in acknowledged mode before authentication procedure the ciphering algorithm may be set to one of the GPRS ciphering algorithm, and the late G_CLLC_Assing_REQ shall be not used. |
| MS -> SS            | G_LLC_UNITDATA_IND                                     | ATTACH REQUEST   | MS uses the assigned uplink TBF to transmit the L3 message to SS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically according the countdown procedure. The SS reassembles the received data blocks into the L3 message and passes it to the LLC DATA PCO G_LLC.  |
| SS                  | G_CRLC_DL_TBF_Config_REQ                               |  | Set up downlink TBF in RLC/MAC entity in SS   |
| SS -> MS            | G_RLC_ControlMsg_REQ                                   | PACKET DOWNLINK ASSIGNMENT   | Downlink TBF establishment<br>S/P bit is set  |
| MS-> SS             | G_RLC_ControlMsg_IND                                   | PACKET CONTROL ACKNOWLEDGEMENT   |   |
| SS -> MS            | G_LLC_UNITDATA_REQ                                     | AUTHENTICATION AND CIPHERING REQUEST   |   |
| MS-> SS             | G_RLC_ACCESS_IND                                       | PACKET CHANNEL REQUEST   | PRACH, TBF establishment with MM procedure  |



| Direction | ASP                      | message                               | Comments  |
|-----------|--------------------------|---------------------------------------|---|
| SS        | G_CRLC_UL_TBF_Config_REQ |                                       | Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in PACKET UPLINK ASSIGNMENT next   |
| SS -> MS  | G_RLC_ControlMsg_REQ     | PACKET UPLINK ASSIGNMENT              | Assign the uplink resources (uplink TBF) to MS. S/P bit is set  |
| MS-> SS   | G_RLC_ControlMsg_IND     | PACKET CONTROL ACKNOWLEDGEMENT        |   |
| SS        | G_CLLC_Assign_REQ        |                                       | Assign TLLI, if changed   |
| MS -> SS  | G_LLC_UNITDATA_IND       | AUTHENTICATION AND CIPHERING RESPONSE |   |
| SS        | G_CLLC_Assign_REQ        |                                       | Keep TLLI unchanged, ciphering algorithm = one of the GPRS ciphering algorithm. The value of ciphering key shall be the one generated in the authentication procedure.<br>If no user data traffic in acknowledged mode before authentication procedure, this ASP is not needed. |
| SS        | G_CRLC_DL_TBF_Config_REQ |                                       | Set up downlink TBF in RLC/MAC entity in SS   |
| SS -> MS  | G_RLC_ControlMsg_REQ     | PACKET DOWNLINK ASSIGNMENT            | Downlink TBF establishment<br>S/P bit is set.   |
| MS-> SS   | G_RLC_ControlMsg_IND     | PACKET CONTROL ACKNOWLEDGEMENT        |   |
| SS -> MS  | G_LLC_UNITDATA_REQ       | ATTACH ACCEPT                         | SS uses the established downlink TBF to transmit the L3 message to MS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically after all data blocks of the L3 message are transmitted   |
| MS-> SS   | G_RLC_ACCESS_IND         | PACKET CHANNEL REQUEST                | PRACH, TBF establishment with MM procedure  |
| SS        | G_CRLC_UL_TBF_Config_REQ |                                       | Set up uplink TBF in RLC/MAC entity in SS   |
| SS -> MS  | G_RLC_ControlMsg_REQ     | PACKET UPLINK ASSIGNMENT              | Assign the uplink resources (uplink TBF) to MS. S/P bit is set  |
| MS-> SS   | G_RLC_ControlMsg_IND     | PACKET CONTROL ACKNOWLEDGEMENT        |   |
| SS        | G_CLLC_Assign_REQ        |                                       | Assign new TLLI, ciphering key and algorithm unchanged  |
| MS -> SS  | G_LLC_UNITDATA_IND       | ATTACH COMPLETE                       | MS uses the assigned uplink TBF to transmit the L3 message to SS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically according the countdown procedure  |
| SS        | G_CRLC_DeleteRLC_MAC_REQ |                                       | Release resources in the SS for RLC/MAC emulation entity  |
| SS        | G_CLLC_DeleteLLE_REQ     |                                       | Release resources in the SS for LLC emulation entity  |
| SS        | G_CL1_DeleteChannel_REQ  |                                       | Release SS resources of channel combination 11  |
| SS        | G_CL1_DeleteChannel_REQ  |                                       | Release SS resources of channel combination 5   |
| SS        | G_CL1_DeleteCell_REQ     |                                       |   |

## 6.10.2.7.2 Cell change order within a TBF

## 6.10.2.7.2.1 Cell change order procedure in channel combinations 5 and 13

| Direction      | ASP   | message   | Comments  |
|----------------|---|---|---|
| SS<br>SS       | G_CL1_CreateCell_REQ<br>G_CL1_CreateBasicPhyCh_REQ                    |   | Create the physical channel combination 5 for<br>FCCH+SCH+BCCH+CCCH+SDCC<br>H/4(0..3)+SACCH/C4(0..3)  |
| SS             | G_CL1_CreateBasicPhyCh_REQ  |   | Create the physical channel combination 13 for<br>PDTCH/F+PACCH/F+PTCCH/F   |
| SS -> MS       | G_L2_SYSINFO_REQ  | SYSTEM INFORMATION<br>TYPE1, SYSTEM<br>INFORMATION TYPE2,<br>SYSTEM INFORMATION<br>TYPE2quater, SYSTEM<br>INFORMATION TYPE3,<br>SYSTEM INFORMATION<br>TYPE4, SYSTEM<br>INFORMATION TYPE13 | Broadcast system information<br>messages: SI 1~4; SI 13   |
| SS<br>SS<br>SS | G_CRLC_CreateRLC_MAC_REQ<br>G_CLLC_CreateLLE_REQ<br>G_CLLC_Assign_REQ |   | Create RLC/MAC emulation entity<br>Create LLC emulation entity<br>Assign TLLI, ciphering key and<br>algorithm   |
| MS             |   |   | MS is GPRS attached, PDP<br>context activated, then trigger MS<br>to send two SNDSCP PDU on LLC<br>SAPI 3, each with 500 bytes user<br>data.                                    |
| MS-> SS        | G_L2_ACCESS_IND   | CHANNEL REQUEST   | RACH, TBF establishment with<br>Establishment Cause = one phase<br>packet access.   |
| SS             | G_CRLC_UL_TBF_Config_REQ  |   | Set up uplink TBF in RLC/MAC<br>entity in SS, this TBF is<br>corresponding to what indicated in<br>the next IMMEDIATE<br>ASSIGNMENT. The USFRate is<br>set to 5 USF per second. |
| SS -> MS       | G_L2_UNITDATA_REQ   | IMMEDIATE ASSIGNMENT  | Assign the uplink resources (uplink<br>TBF) to MS   |
| MS -> SS       | G_LLC_UNITDATA_IND  | User data on SAPI 3, the<br>first SNDSCP PDU  | The TBF shall not be in countdown<br>process  |
| SS -> MS       | G_RLC_ControlMsg_REQ  | PACKET MEASUREMENT<br>ORDER   | This is within the TBF established<br>above, which is in the process<br>handling the second SNDSCP PDU<br>REPORT_TYPE = 1   |
| MS -> SS       | G_RLC_ControlMsg_IND  | PACKET MEASUREMENT<br>REPORT  | MS sends the PACKET<br>MEASUREMENT REPORT   |
| SS -> MS       | G_RLC_ControlMsg_REQ  | PACKET CELL CHANGE<br>ORDER   | This is within the TBF established<br>above<br>what follows are in UTRAN cell, not<br>present here  |

## 6.10.2.7.2.2 Cell change order procedure in channel combinations 5 and 11

| Direction      | ASP  | message  | Comments  |
|----------------|--|--|---|
| SS<br>SS       | G_CL1_CreateCell_REQ<br>G_CL1_CreateBasicPhyCh_REQ |  | Create the physical channel combination 5 for FCCH+SCH+BCCH+CCCH+SDCC H/4(0..3)+SACCH/C4(0..3)  |
| SS             | G_CL1_CreateBasicPhyCh_REQ                         |  | Create the physical channel combination 11 for PBCCH+PCCCH+PDTCH+PACCH  |
| SS -> MS       | G_L2_SYSINFO_REQ                                   | SYSTEM INFORMATION TYPE1, SYSTEM INFORMATION TYPE2, SYSTEM INFORMATION TYPE2quarter, SYSTEM INFORMATION TYPE3, SYSTEM INFORMATION TYPE4, SYSTEM INFORMATION TYPE13     | Broadcast system information messages: SI 1~4; SI 13  |
| SS<br>SS -> MS | G_CRLC_CreateRLC_MAC_REQ<br>G_RLC_PSI_REQ          | PACKET SYSTEM INFORMATION TYPE1, PACKET SYSTEM INFORMATION TYPE2, PACKET SYSTEM INFORMATION TYPE3, PACKET SYSTEM INFORMATION TYPE3bis, PACKET SYSTEM INFORMATION TYPE5 | Create RLC/MAC emulation entity<br>Broadcast packet system information messages : PSI 1~3bis, and PSI 5   |
| SS<br>SS<br>MS | G_CLLC_CreateLLE_REQ<br>G_CLLC_Assign_REQ          |  | Create LLC emulation entity<br>Assign TLLI, ciphering key and algorithm<br>MS is GPRS attached, PDP context activated, then trigger MS to send two SNDCCP PDU on LLC SAPI 3, each with 500 bytes user data. |
| MS-> SS        | G_RLC_ACCESS_IND                                   | PACKET CHANNEL REQUEST   | PRACH, TBF establishment with one phase or two phase access   |
| SS -> MS       | G_RLC_ControlMsg_REQ                               | PACKET UPLINK ASSIGNMENT   | PCCCH, Single block allocation  |
| MS -> SS       | G_RLC_ControlMsg_IND                               | PACKET RESOURCE REQUEST  |   |
| SS             | G_CRLC_UL_TBF_Config_REQ                           |  | Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in PACKET UPLINK ASSIGNMENT next. The USFRate is set to 5 USF per second.  |
| SS -> MS       | G_RLC_ControlMsg_REQ                               | PACKET UPLINK ASSIGNMENT   | Assign the uplink resources (uplink TBF) to MS  |
| MS -> SS       | G_LLC_UNITDATA_IND                                 | User data on SAPI 3, the first SNDCCP PDU  | The TBF shall not be in countdown process   |
| SS -> MS       | G_RLC_ControlMsg_REQ                               | PACKET MEASUREMENT ORDER   | This is within the TBF established above, which is in the process handling the second SNDCCP PDU REPORT_TYPE = 0  |
| MS -> SS       | G_RLC_ControlMsg_IND                               | PACKET ENHANCED MEASUREMENT REPORT   | MS sends control message  |
| SS -> MS       | G_RLC_ControlMsg_REQ                               | PACKET CELL CHANGE ORDER   | This is within the TBF established above<br>what follows are in UTRAN cell, not present here  |

## 6.10.2.8 Generic configuration procedure for GSM ciphering mode control

| Direction | ASP                        | message                 | Comments  |
|-----------|----------------------------|-------------------------|---|
|           | ...                        |                         | Other necessary configuration ASP's   |
| SS        | G_CL1_CreateBasicPhyCh_REQ |                         | Create a dedicated physical channel, e.g. combination 1 with ciphering not started:<br>This ASP download Kc and ciphering algorithm to the SS with startingCiph = 0 in cipherMode.<br>If there is no authentication procedure before CIPHERING MODE COMMAND, the value of Kc in this ASP shall be the one generated in previous authentication procedure, otherwise the value of Kc shall be the one generated by forthcoming authentication procedure. |
|           | ...                        |                         | Any other signalling message sending/receiving or configuration ASP's   |
| SS        | G_CL1_CipheringControl_REQ |                         | rcvCipherMode = '1', the SS starts ciphering on receiving   |
| SS        | G_CL1_CipheringControl_CNF |                         |   |
| SS -> MS  | G_L2_DATA_REQ              | CIPHERING MODE COMMAND  | Sent without ciphering  |
| SS        |                            |                         | Before this point both transmitting and receiving in the SS are not ciphered.   |
| MS -> SS  | G_L2_DATA_IND              | CIPHERING MODE COMPLETE | After receiving this message the SS shall start ciphering on transmitting, The CIPHERING MODE COMPLETE is ciphered<br>Any signalling message or user data sending/receiving in ciphered mode  |
|           | ...                        |                         |   |

## 6.10.2.9 L/H bits convention and bit padding in DL

## 6.10.2.9.1 GERAN DL RLC/MAC message bit padding

The length of a GPRS RLC/MAC control messages is an integer number of RLC/MAC control blocks. Padding bits are necessary to fill the message up to the desired length. The padding bits may be the 'null' string. Otherwise, the padding bits starts with bit '0', followed by "spare padding". The padding sequence used for "spare padding" in the present document, is a repetition of octet '00101011', starting on an octet boundary.

< padding bits > ::= { null | 0 < spare padding >

"<spare padding> ::= <spare L> {null | < spare padding>}"

In the TTCN a specific encoding variation - encoding rule 1 - is defined according to the rules described above. This shall be used in the definition of the message itself. No 'padding bits' field will be defined in the TTCN. The implementation shall ensure that after encoding the message contents defined in the TTCN, the remainder of the message shall be filled with 'padding bits'.

#### 6.10.2.9.2 GSM DL message spare padding

A number of GPRS information elements are defined in the rest octets of certain GSM DL messages, for instance, IA Rest Octets, SI 2quater Rest Octets, SI 3 Rest Octets, SI 4 Rest Octets, SI 13 Rest Octets, etc. These rest octets were filled in a repetition of bit padding '00101011' or '2B'O, starting on an octet boundary to a certain length.

In the TTCN, a second encoding variation - encoding rule 2 - shall be used in the definition of the message itself, which shall be of a fixed length (always 23 octets). No "spare padding" field will be defined in the TTCN. The implementation shall ensure that after encoding the message contents defined in the TTCN, the remainder of the message, up to the defined fixed length, shall be filled with "spare padding".

#### 6.10.2.9.3 L | H convention in rest octets of GSM DL messages

A number of GPRS information elements are defined in the rest octets of certain GSM DL messages. The special notations "L" and "H" are used to denote respectively the bit's logical value corresponding to the padding spare bit for that position, and the other value. The actual value of the bit transmitted by SS therefore depends upon its position within the octet - this involves counting bits.

In the TTCN a third encoding variation - encoding rule 3 - is defined for this purpose. This encoding variation is applied to those specific TTCN Rest Octets definitions which contain the L|H convention.

#### 6.10.2.9.4 Spare Bits

Where the IE definition of RLC/MAC blocks contains bits defined to be 'spare bits', these bits shall set to the value '0' by the TTCN writers, according to the defined length indicator.

#### 6.10.2.9.5 GSM System Information messages on SACCH

Certain GSM System Information messages, for instance, SI 5 and SI 6 are sent as a B4 frame on the SACCH. These messages are defined in 3GPP 44.006 [42], clause 8.8.3, to have a maximum of 19 octets.

In the TTCN a fourth encoding variation - encoding rule 4 - shall be used in the definition of the message itself. The implementation shall ensure that after encoding the message contents defined in the TTCN, the remainder of the message, up to the fixed length of 19 octets, shall be filled with "spare padding".

#### 6.10.2.9.6 GSM Measurement Information messages on SACCH

The GSM Measurement Information message is sent as a Bter UI frame on the SACCH. This messages is defined in 3GPP 44.006 [42], clause 8.8.3 to have a maximum of 21 octets.

In the TTCN a fifth encoding variation - encoding rule 5 - shall be used in the definition of the message itself. The implementation shall ensure that after encoding the message contents defined in the TTCN, the remainder of the message, up to the fixed length of 21 octets, shall be filled with "spare padding".

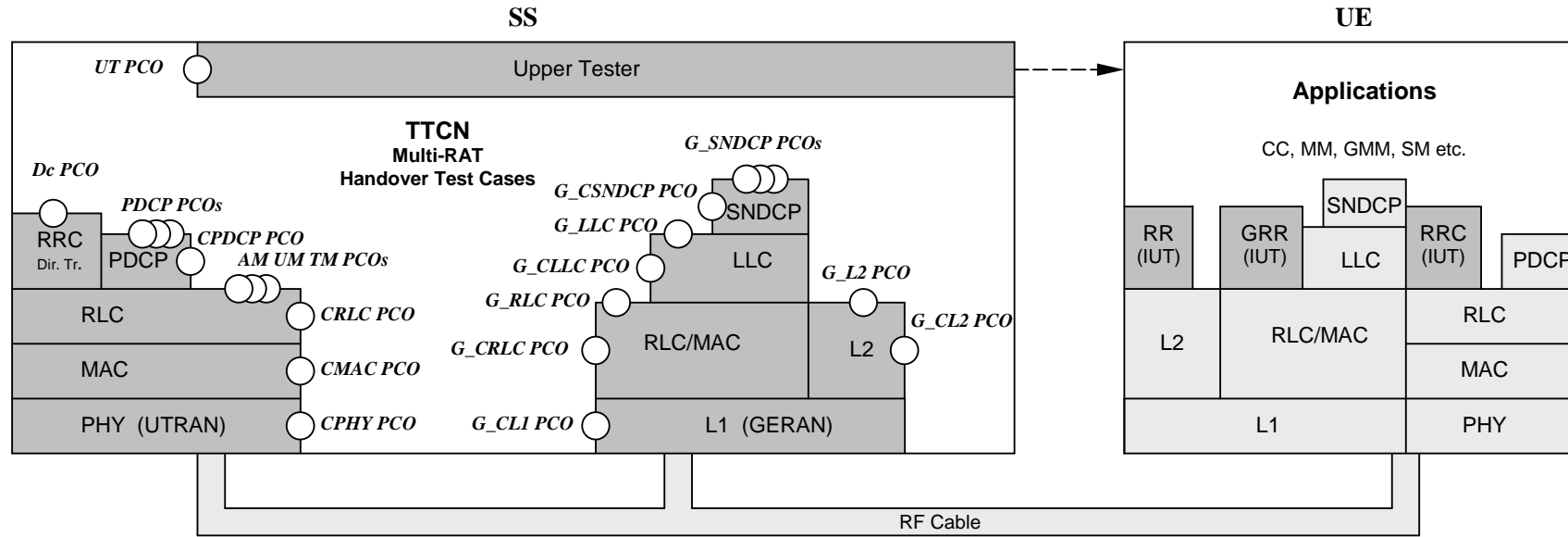
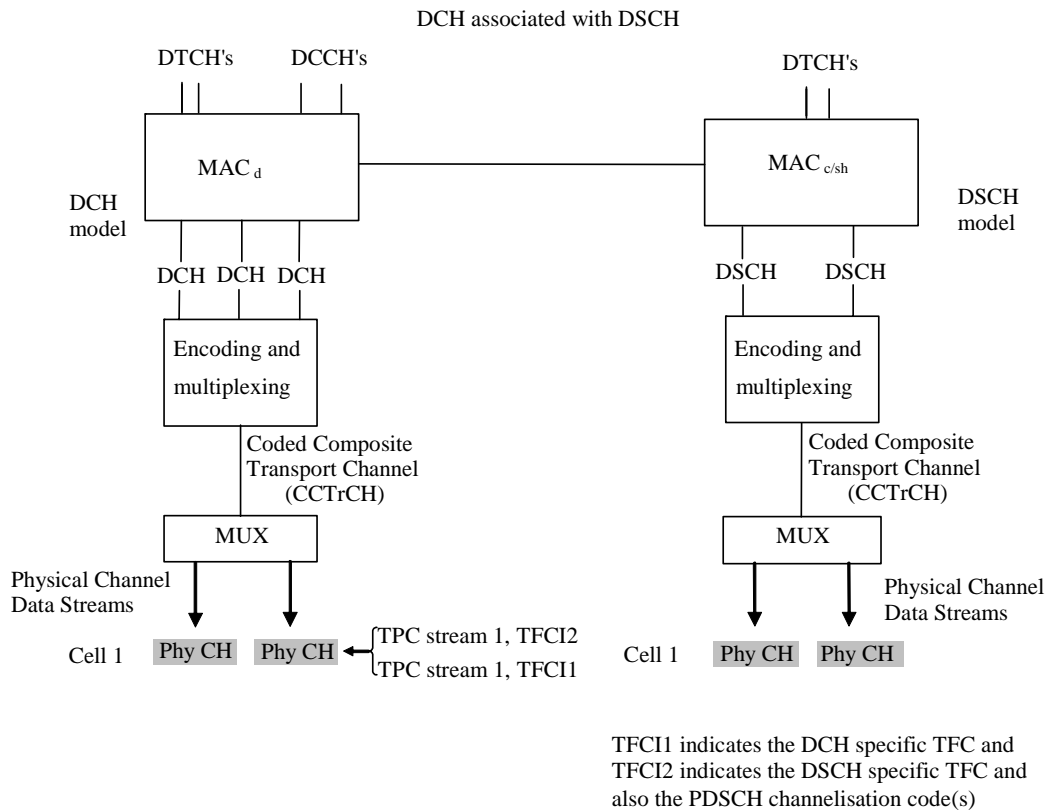


Figure 16: The model of multi-RAT handover testing

### 6.11 DCH-DSCH model (R99 or Rel-4)

The model illustrates the relationship between various channels from logical channel to physical channels. DCH are associated with DSCH.



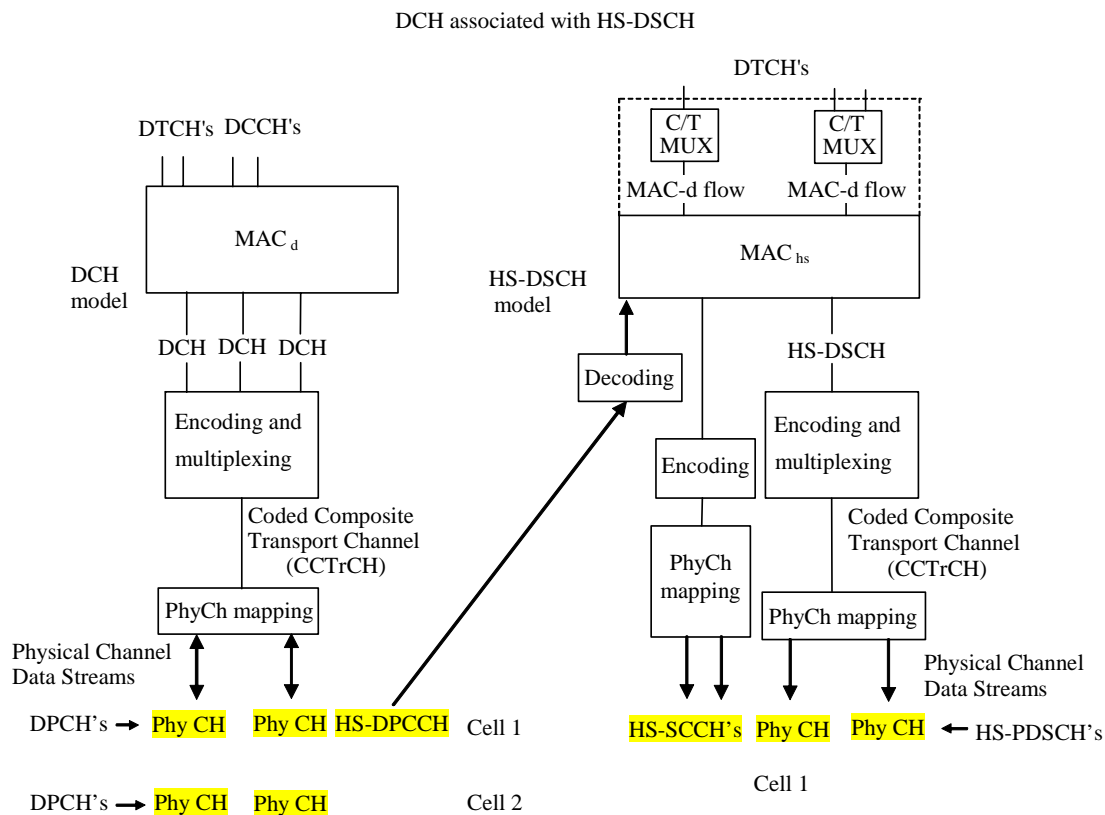
**Figure 17: Associated DCH-DSCH model**

The model associating DCH with DSCH enable in the SS:

- to define DSCH transport channel;
- to define TFCI(field2) for DSCH;
- to configure PDSCH;
- to define DSCH-RNTI value.

## 6.12 DCH with HS-DSCH (MAC-hs) model (FDD, Rel-5 or later)

The test model illustrates the relationship between various channels from logical channels to physical channels. All DCH are associated with a single HS-DSCH.



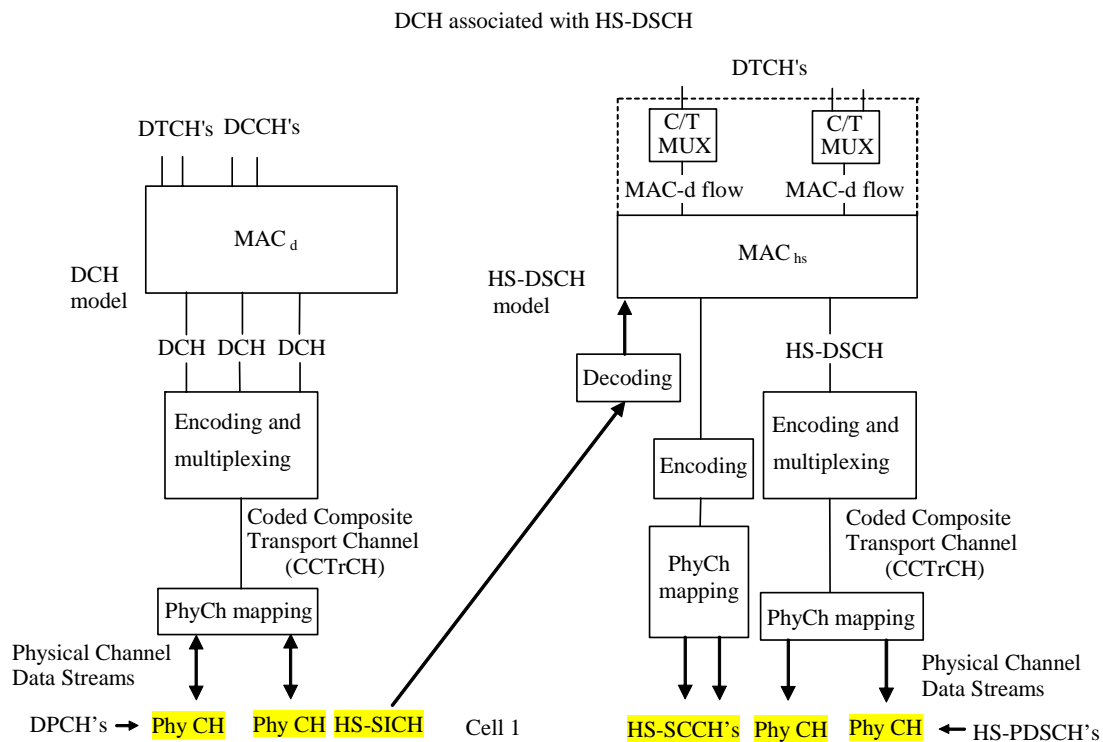
**Figure 18: Associated DCH with HS-DSCH model**

Associating DCH with HS-DSCH, the model enables in the SS:

- to define MAC-hs and multiplexing of logical channels DTCHs onto MAC-d flows;
- to configure HS-DSCH transport channel and MAC-d flows;
- to configure HS-PDSCHs and HS-SCCHs;
- to define the H-RNTI value.



### 6.12a DCH with HS-DSCH model for 1.28 Mcps TDD (Rel-5 or later)



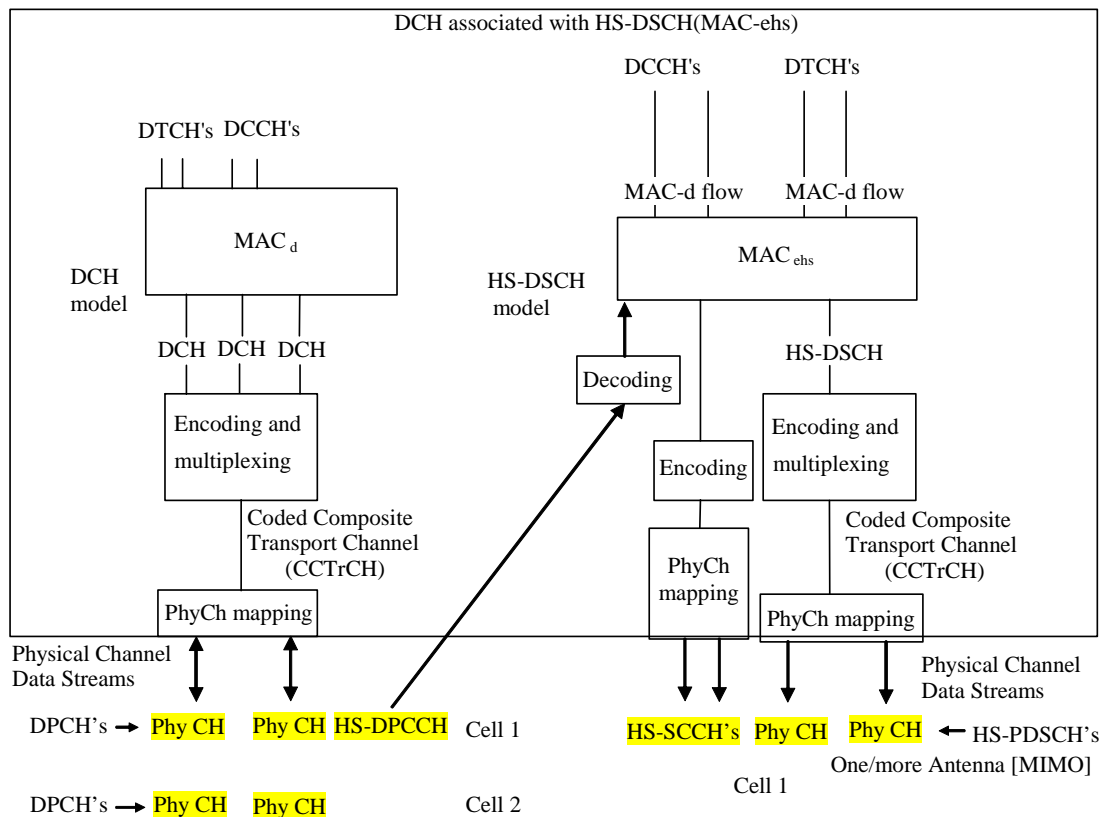
**Figure 19: Associated DCH with HS-DSCH model for 1.28Mcps TDD**

Associating DCH with HS-DSCH, the model enables in the SS:

- to define MAC-hs and multiplexing of logical channels DTCHs onto MAC-d flows;
- to configure HS-DSCH transport channel and MAC-d flows;
- to configure HS-PDSCHs and HS-SCCHs;
- to define the H-RNTI value.

### 6.12b DCH with HS-DSCH (MAC-ehs) model (FDD, Rel-7 or later)

The test model illustrates the relationship between various channels from logical channels to physical channels. All DCH are associated with a single HS-DSCH.



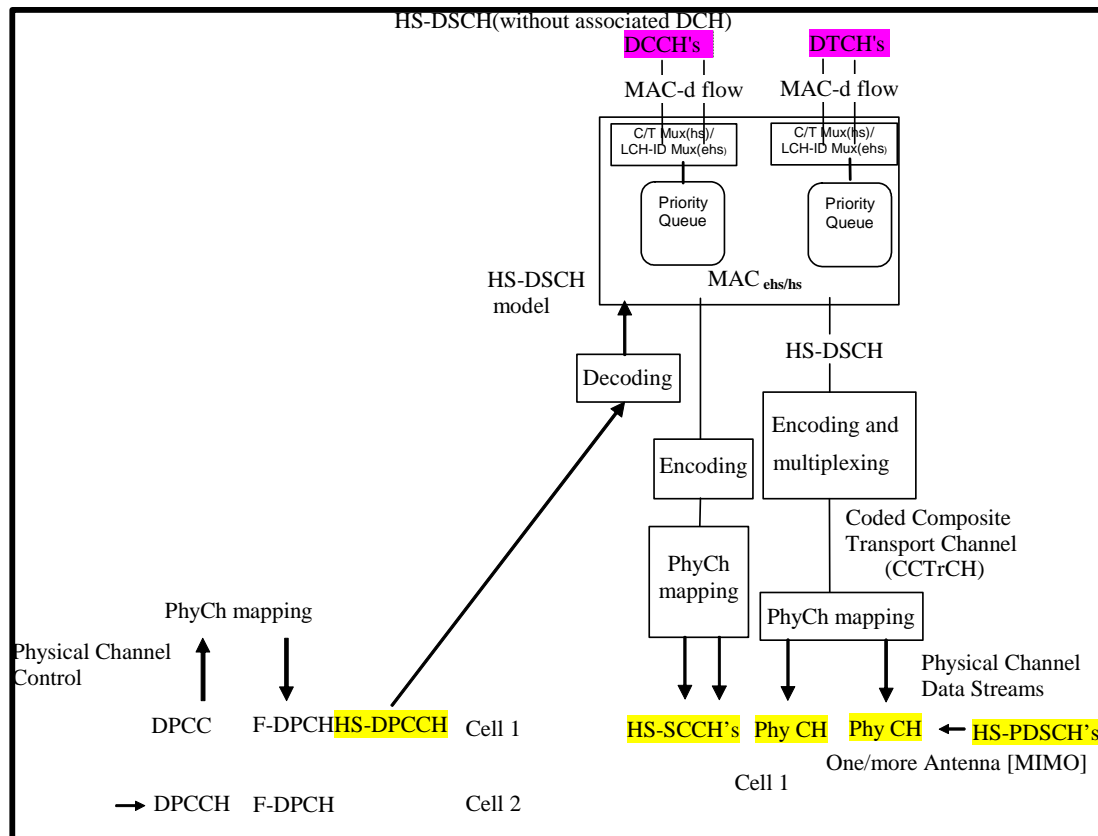
**Figure 20: Associated DCH with HS-DSCH model**

Associating DCH with HS-DSCH, the model enables in the SS:

- to define MAC-ehs and multiplexing of logical channels DTCHs & DCCHs onto MAC-d flows;
- to configure HS-DSCH transport channel and MAC-d flows;
- to configure HS-PDSCHs and HS-SCCHs;
- to define the H-RNTI value.
- to configure MIMO;

### 6.12c HS-DSCH (MAC-hs/ehs) model (FDD, Rel-7 or later)(No DCH Associated)

The test model illustrates the relationship between various channels from logical channels to physical channels.



**Figure 21: HS-DSCH model without DCH associated**

The model enables in the SS:

- to define MAC-ehs/hs and multiplexing of logical channels DTCHs & DCCCHs onto MAC-d flows;
- to configure HS-DSCH transport channel and MAC-d flows/MAC-ehs Queues;
- to configure HS-PDSCHs and HS-SCCHs;
- to define the H-RNTI value(s);
- to configure MIMO;

### 6.13 E-DCH model (Rel-6 or later)

The E-DCH model illustrates the relationship between various channels from logical channel to physical channels. In this model the TTCN writer can:

- define MAC-e/es and multiplexing of logical channels onto MAC-d flows;
- configure E-DCH transport channel and MAC-d flows;
- configure E-DPDCH, E-DPCCH, E-HICH, E-RGCH and E-AGCH.

MAC-es and the served RLC are cell-independent and are configured by using the cell-id = -1. During reconfigurations, cell changes and state transitions, the relevant counters in the RLC are maintained.

For the reason of simplicity, the E-DCH testing model does not show the relation between E-DCH and related DCH and HS-DPCH, however the TTCN writer shall understand that the E-DCH active set is a subset of the DCH active set, when configuring E-DCH in the SS the TTCN writer shall keep this requirement respected.

During the active set updating (soft handover), the test case configurations may involve more than one cell. Those cells are under the control of the same Node B (intra-node) or under several Node B's (inter-node). For the signalling testing no macro diversity is required in the SS. In such test configurations only one E-DPDCH is necessary to be configured (together with corresponding E-DCH) for each Node B. Preferably, the E-DPDCH in the serving E-DCH cell controlled by the serving Node B is chosen for the configuration. In the inter-node soft handover cases, the E-DPDCH in a Non-serving RL cell of another Node B may require to be configured, instead of the one in the serving E-DCH cell. When the configuration involves several Node B's only one MAC-e (Node B) is necessary to be connected to the MAC-es. All possible connections are represented by dashed line and the preferable connection is the connection between MAC-es and the Node B controlling the serving E-DCH cell.

Since the UL-DPCCH is needed as reference channel for the E-DPCCH the UL-DPCH is configured in every cell where an E-DCH is configured (i.e. in serving and non-serving cell). In order to simplify the implementation and to avoid macro diversity in all non-serving cells the UL-DPCH is configured without the associated transport channel configuration, i.e. the physical channel is not connected to MAC-d.

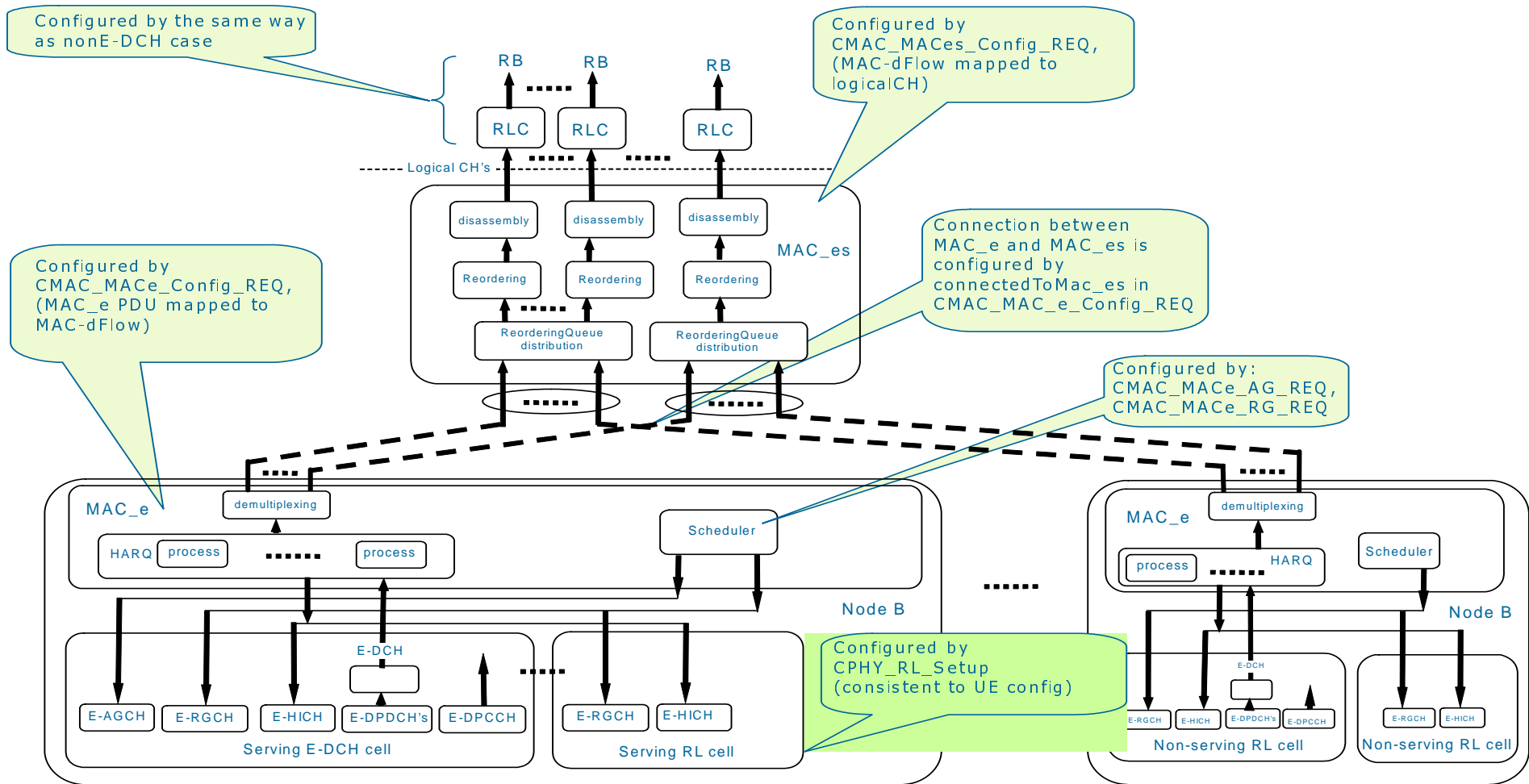


Figure 22: The model of E-DCH testing

## 6.14 MBMS model (Rel-6 or later)

The MBMS test model illustrates the relationship between various channels, from logical channel to physical channels applied to the MBMS test. The MBMS-dedicated stand-alone SCCPCH, MICH, MAC-m, MCCH, MSCH and MTCH are configured by the TTCN.

During softcombining, MTCHs which have the same logical channel identity but in different cells are connected to the same UM RLC.

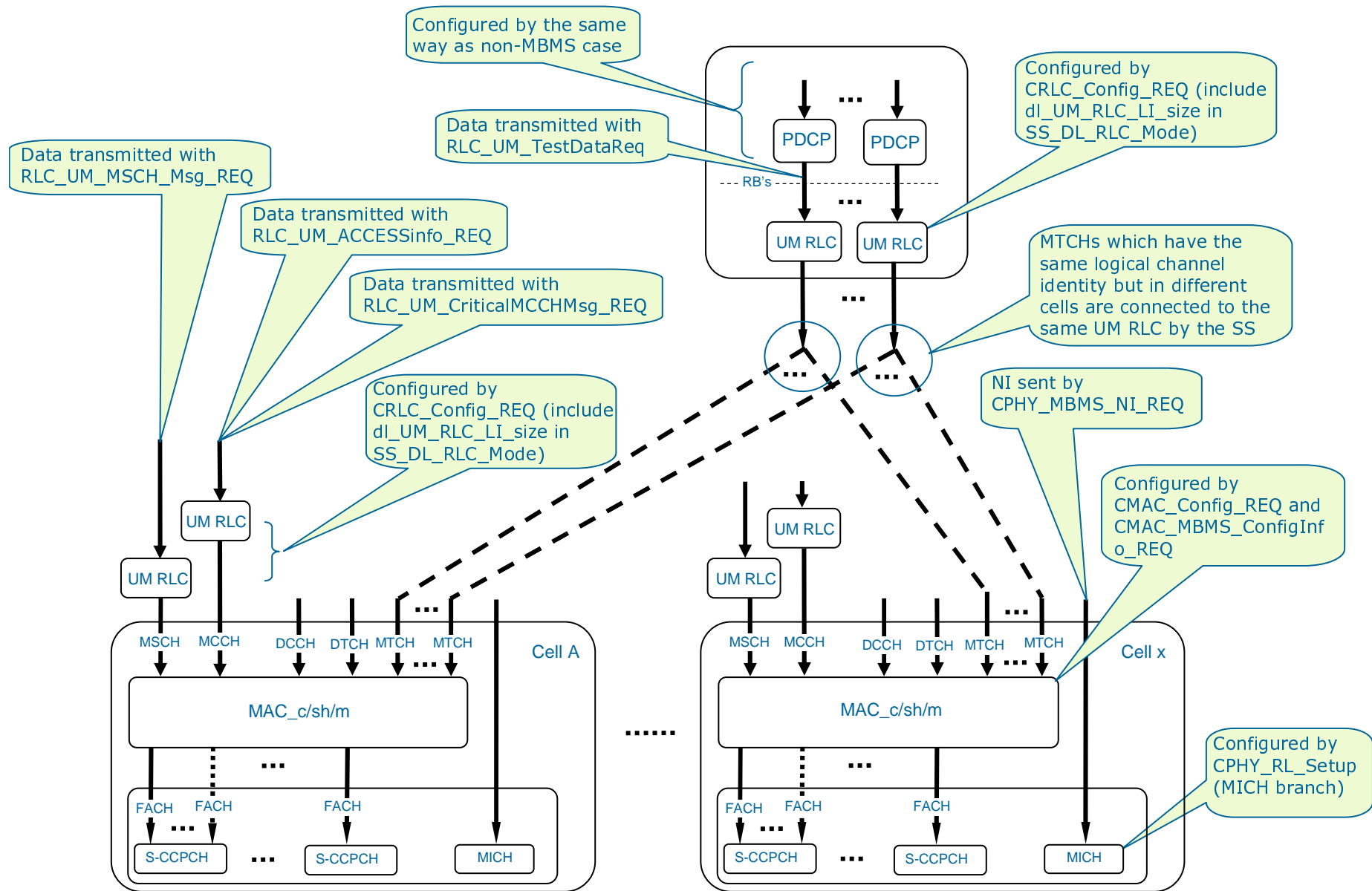


Figure 23: The model of MBMS testing

## 6.14.1 MBMS RLC test model

### 6.14.1.1 RLC test model for MTCH test

For RLC tests on MTCH a TR radio bearer is configured (tsc\_RB\_MTCH\_RLC\_TR). Similar to the UM mode, data scheduling is applied at the test.

When reconfiguring back from TR to UM mode, MAC is reconfigured and RLC is released/reconfigured again. It implies that UM will restart with sequence number 0; the corresponding RLC state variables are set to 0. Sequence numbers between the one used in the last PDU sent in TR mode and the sequence number 0 are considered by the UE as lost sequence numbers and shall have no impact on the test in the UM mode.

### 6.14.1.2 RLC test model for MCCH test

For RLC tests the MCCH critical messages can be sent as a DL sequence of PER encoded UM RLC PDUs in RLC TR mode. To achieve this, the normal UM radio bearer on MCCH is replaced with a TR radio bearer configured with a negative RB Id (tsc\_RB\_MCCH\_RLC\_TR). This is achieved by reconfiguring MAC and releasing the existing RLC UM entity /configuring a new TR RLC entity. It results in only one RLC entity being able to map on MCCH at the test.

It is assumed that the necessary MCCH data are completely sent out before the reconfiguration procedure mentioned above takes place.

When changing from UM to TR the care should be taken on the sequence numbers used in the RLC PDUs. That can be achieved by querying the SN from SS with CRLC\_SequenceNumber\_REQ. When changing back to UM the RLC may continue with the sequence number following the last sequence number used before changing to TR mode. That implies, the UM part of the RLC in SS does not need to take care of the UM PDUs sent in TR mode. The UE will regard it as PDU lost.

To support re-synchronization the 'specialLI' of the RLC\_UM\_CriticalMCCHMsg\_REQ following TR mode can be set to TRUE.

## 7 PCO and ASP definitions

### 7.1 NAS PCO and ASP definitions

#### 7.1.1 NAS PCO Definitions

**Table 3: Dc PCO Type Declarations**

| PCO Type Declarations |                              |
|-----------------------|------------------------------|
| <b>PCO Type</b>       | Dc_SAP                       |
| <b>Role</b>           | LT                           |
| <b>Comments</b>       | The PCO type for NAS testing |

**Table 4: Dc PCO Declarations**

| PCO Declarations |  |
|------------------|--|
| <b>PCO Name</b>  | Dc   |
| <b>PCO Type</b>  | Dc_SAP   |
| <b>Role</b>      | LT   |
| <b>Comments</b>  | Carry transmission and reception of NAS messages |



## 7.1.2 Primitives used at Dc PCO

The Dc PCO is used to transmit and receive NAS (MM, CC, SM, SS) messages. Two categories of primitives are operated at the Dc PCO:

- RRC\_DataReq for transmission of a NAS PDU;
- RRC\_DataInd for reception of a NAS PDU.

These primitives are declared in TTCN tabular form, see Table 21.

**Table 5: Primitives used at the Dc PCO**

| Primitive   | Parameters   | Use   |
|-------------|--|---|
| RRC_DataInd | Cell identity<br>INTEGER (-31 ... 32)<br>LogicChGSM<br>SapId<br>CN domain id<br>START<br>NAS message | The ASP is used to indicate the receipt of a NAS message using acknowledged operation     |
| RRC_DataReq | Cell identity<br>INTEGER (-31 ... 32)<br>LogicChGSM<br>SapId<br>CN domain id<br>NAS message          | The ASP is used to request the transmission of a NAS message using acknowledged operation |

The RB Identity and CN domain parameters defined in the primitives are mandatory for UTRAN and not applicable for GERAN.

The START parameter is mandatory in INITIAL DIRECT TRANSFER; each time when it is received the new START shall be downloaded to the SS to reinitialize counters-C and counters-I.

The LogicChGSM and SapId parameters are mandatory for GERAN and not applicable for UTRAN. They are defined because they may be used for future TTCN test cases.

Except the initial, uplink and downlink direct transfer procedures, the NAS TTCN specification uses the TTCN test steps to realize all RRC functions for testing. The single layer test concept is kept for the NAS tests.

A simple RRC emulation shall be maintained for the NAS tests. It has four functions:

- Emulate the three direct transfer procedures.
- Convert the NAS downlink messages defined in 3GPP TS 24.008 [9] in table format to the NAS message in ASN.1 octet string specified in 3GPP TS 25.331 [21]. Convert the NAS uplink message in the reverse way.
- PER encoding and decoding.
- Have the integrity protection.

RB3 and RB4 are specifically used for the NAS signalling. When an uplink message entered the receiving buffer at AM-SAP from the RLC emulation, either an RRC test step if running will take it out; or the RRC emulation if running will pick the received message from the buffer. Activation of any RRC test steps and activation of any NAS test steps at the same time shall be excluded in TTCN (no concurrency between them).

## 7.2 Ut PCO and ASP definitions

### 7.2.1 Ut PCO Declarations

The Ut PCO is served as the interface to the UE EMMI for remote control of operations, which have to be performed during execution of a test case such as to switch the UE on/off, initiate a call, etc.

**Table 6: Declaration of the uppertester PCO type**

| PCO Type Declarations |  |
|-----------------------|--|
| <b>PCO Type</b>       | MMI  |
| <b>Role</b>           | UT   |
| <b>Comments</b>       | The PCO type for MMI or EMMI of the upper tester |

**Table 7: Declaration of the Ut PCO**

| PCO Declarations |   |
|------------------|---|
| <b>PCO Name</b>  | Ut  |
| <b>PCO Type</b>  | MMI   |
| <b>Role</b>      | UT  |
| <b>Comments</b>  | Carry transmission commands and reception of results for the upper tester |

### 7.2.2 Primitives used at Ut PCO

The Ut PCO is used to indicate to the upper tester actions and to receive the acknowledgement of these actions. The AT commands are used wherever the suitable commands exist within 3GPP TS 27.007 [23], 3GPP TS 27.005 [22] and 3GPP TS 27 060 [24]. An MMI command is used, when AT commands does not exit for the action to performed. The primitives used at the Ut PCO, are declared in TTCN tabular form, see the table 21.

**Table 8: Primitives used at the Ut PCO**

| Primitive  | Parameters   | Use   |
|------------|--|---|
| AT_CmdReq  | Command: IA5String<br>SMS_BlockMode: HEXSTRING                         | Request an AT command to the upper tester.  |
| AT_CmdInd  | Command: IA5String<br>SMS_BlockMode: HEXSTRING                         | Indication of a result from the upper tester.   |
| AT_CmdCnf  | Result: BOOLEAN<br>ResultString: IA5String<br>SMS_BlockMode: HEXSTRING | Return a positive or negative result from the command previously sent. Both the Boolean result and String parameter are optional. |
| MMI_CmdReq | Command: IA5String   | Request a command to the upper tester.  |
| MMI_CmdCnf | Result: BOOLEAN<br>ResultString: IA5String                             | Return a positive or negative result from the command previously sent. The String parameter is optional.                          |

The AT\_CmdReq primitive for sending AT commands is mostly used to trigger electronically an uplink access, such as initiating of a call, attaching or detaching, starting packet data transfer etc. The MMI\_primitive is defined mainly for observation of some test events via a test operator, such as checking DTMF tone or checking called party number, etc.

The AT\_CmdInd primitive for receiving AT commands is mostly used to transfer unsolicited result codes from the UE to the lower tester.

The SMS\_BlockMode parameter is used to control and observe the Block mode procedure for SMS. This parameter is not yet used; it is defined for future development. The Command and SMS\_BlockMode parameters are mutually exclusive

For the Command in the AT\_CmdReq and AT\_CmdInd primitives, the verbose format is used as defined in 3GPP TS 27.007 [23]. For the Command in MMI\_CmdReq, just a descriptive IA5 string line, like "Check DTMF tone" is used.

## 7.3 RRC PCO and ASP definitions

### 7.3.1 AM/UM/TM PCO and ASP definitions

#### 7.3.1.1 SAP and PCO for data transmission and reception

**Table 9: Declaration of the RRC PCO Type**

| PCO Type Definition |                                 |
|---------------------|---------------------------------|
| <b>PCO Type</b>     | DSAP                            |
| <b>Role</b>         | LT                              |
| <b>Comment</b>      | DATA transmission and reception |

**Table 10: PCO TM declaration**

| PCO Type Definition |                                |
|---------------------|--------------------------------|
| <b>PCO Name</b>     | TM                             |
| <b>PCO Type</b>     | DSAP                           |
| <b>Role</b>         | LT                             |
| <b>Comment</b>      | Carry Transparent Mode RLC PDU |

**Table 11: PCO AM declaration**

| PCO Type Definition |                                 |
|---------------------|---------------------------------|
| <b>PCO Name</b>     | AM                              |
| <b>PCO Type</b>     | DSAP                            |
| <b>Role</b>         | LT                              |
| <b>Comment</b>      | Carry Acknowledged Mode RLC PDU |

**Table 12: PCO UM declaration**

| PCO Type Definition |                                   |
|---------------------|-----------------------------------|
| <b>PCO Name</b>     | UM                                |
| <b>PCO Type</b>     | DSAP                              |
| <b>Role</b>         | LT                                |
| <b>Comment</b>      | Carry Unacknowledged Mode RLC PDU |

**Table 13: PCO BMC declaration**

| PCO Type Definition |   |
|---------------------|---|
| <b>PCO Name</b>     | BMC   |
| <b>PCO Type</b>     | DSAP  |
| <b>Role</b>         | LT  |
| <b>Comment</b>      | Provide Unacknowledged Mode BMC data transmission service |

### 7.3.2 Control PCO and ASP

#### 7.3.2.1 SAP and PCO for control primitives transmission and reception

**Table 14: SAP declaration**

| PCO Type Definition |   |
|---------------------|---|
| <b>PCO Type</b>     | CSAP  |
| <b>Role</b>         | LT  |
| <b>Comment</b>      | Control primitives transmission and reception |

**Table 15: PCO CPHY**

| PCO Definition  |                        |
|-----------------|------------------------|
| <b>PCO Name</b> | CPHY                   |
| <b>PCO Type</b> | CSAP                   |
| <b>Role</b>     | LT                     |
| <b>Comment</b>  | Control Physical Layer |

**Table 16: PCO CRLC**

| PCO Definition  |                   |
|-----------------|-------------------|
| <b>PCO Name</b> | CRLC              |
| <b>PCO Type</b> | CSAP              |
| <b>Role</b>     | LT                |
| <b>Comment</b>  | Control RLC Layer |

**Table 17: PCO CMAC**

| PCO Definition  |                   |
|-----------------|-------------------|
| <b>PCO Name</b> | CMAC              |
| <b>PCO Type</b> | CSAP              |
| <b>Role</b>     | LT                |
| <b>Comment</b>  | Control MAC Layer |

**Table 18: PCO CBMC**

| PCO Definition  |                   |
|-----------------|-------------------|
| <b>PCO Name</b> | CBMC              |
| <b>PCO Type</b> | CSAP              |
| <b>Role</b>     | LT                |
| <b>Comment</b>  | Control BMC Layer |

**Table 19: ExternalAsn1Codec declaration**

| PCO Type Definition |   |
|---------------------|---|
| <b>PCO Type</b>     | ExternalAsn1Codec                                     |
| <b>Role</b>         | LT  |
| <b>Comment</b>      | Control decoder primitives transmission and reception |

**Table 20: PCO CCodec**

| PCO Definition  |                                  |
|-----------------|----------------------------------|
| <b>PCO Name</b> | CCodec                           |
| <b>PCO Type</b> | ExternalAsn1Codec                |
| <b>Role</b>     | LT                               |
| <b>Comment</b>  | Control asn.1 CONTAINING decoder |

7.3.2.2 Control ASP Type Definition

7.3.2.2.1 CPHY\_AICH\_AckModeSet

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_AICH_AckModeSet_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request for setting of AICH Acknowledge Mode  |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                    INTEGER(0..63),<br>routingInfo              RoutingInfo,<br>ratType                   RatType,<br>aICH_Mode                AICH_Mode<br>} |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_AICH_AckModeSet_CNF  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To confirm setting of AICH Acknowledge Mode   |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                    INTEGER(0..63),<br>routingInfo              RoutingInfo<br>} |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | AICH_Mode  |
| <b>Comment</b>        | Normal operation: The AICH will operate as normal, and will acknowledge or negatively acknowledge on all UE RACH transmission attempts, appropriately.<br>No Acknowledge: The AICH shall not transmit acknowledge or Negative Acknowledge on all UE RACH transmission attempts.<br>Negative Acknowledge: The AICH shall transmit Negative Acknowledge on all UE RACH transmission attempts |
| Type Definition       |  |
| ENUMERATED            | {<br>normal (0),<br>noAck (1),<br>negACK (2)<br>}  |

7.3.2.2.2 CPHY\_Cell\_Config

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_Cell_Config_CNF                               |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To confirm to setup the cell parameter             |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                    INTEGER(0..63)<br>} |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_Cell_Config_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request to setup the cell parameter.<br>The unit of tcell is chip; the unit of sfnOffset is frame number. The sfnOffset is defined as the number of frames the SFN shall be shifted, i.e. the frames lagging behind or in advance, in comparison to a system reference time. The both interpretations are valid for the test.<br>The primary scrambling code number of the cell is $16 \times \text{primaryScramblingCode\_SS}$ .<br>The unit of dLtxAttenuationLevel is dB; If set to 123 the cell becomes a non-suitable off cell (CPICH_Ec $\leq$ -122 dBm/3.84 MHz of an off cell). |
| Type Definition           |  |
| SEQUENCE {                |  |
| cellId                    | INTEGER (0..63),   |
| tcell                     | INTEGER (0..38399),  |
| sfnOffset                 | INTEGER (0..4095),   |
| frequencyInfo             | FrequencyInfo,   |
| primaryScramblingCode_SS  | INTEGER (0..511),  |
| cellTxPowerLevel          | CellTxPowerLevel,  |
| dLtxAttenuationLevel      | INTEGER (0..30 123),   |
| frequencyBandIndicator    | FrequencyBandFDD   |
| }                         |  |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | CellTxPowerLevel   |
| <b>Comment</b>        | The defaultCellTxPowerLvl is a default setting and is used for the most signalling tests. The real total cell DL Tx power level equals to the sum of the DL Tx power of the individual physical channels configured.<br>The totalCellTxPowerLvl applies to e.g. the idle mode tests in a non-default multi-cell radio environment. |
| Type Definition       |  |
| CHOICE {              |  |
| defaultCellTxPowerLvl | NULL,  |
| totalCellTxPowerLvl   | DL_TxPower   |
| }                     |  |

| ASN.1 Type Definition   |  |
|-------------------------|--|
| <b>Type Name</b>        | FrequencyBandFDD   |
| <b>Comment</b>          | The frequency band indicator indicates how to interpret the radio frequency broadcast. |
| Type Definition         |  |
| CHOICE {                |  |
| frequencyBandIndicator  | RadioFrequencyBandFDD,   |
| frequencyBandIndicator2 | RadioFrequencyBandFDD2   |
| }                       |  |

### 7.3.2.2.3 CPHY\_Cell\_Release

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_Cell_Release_CNF                                |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | The confirmation to the CPHY_Cell_Release_Req        |
| Type Definition           |  |
| SEQUENCE {                |  |
| soft_Reset                | BOOLEAN,   |
| cell_ID_List              | SEQUENCE (SIZE (1..8)) OF INTEGER(0..63) -- cell IDs |
| }                         |  |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| Type Name                 | CPHY_Cell_Release_REQ   |
| PCO Type                  | CSAP  |
| Comment                   | <p>1. This Primitive with "Soft_Reset" flag ON gives a common known starting point/state of SS for a test case. The SS performs the following whenever it receives this primitive with "Soft_Reset" flag ON: Releases all configured Channels and cells (if any) irrespective of Cell ID list IE.</p> <p>2. Releases the associated Memory Buffers (if any).</p> <p>3. Cancels all active timers (if any)</p> <p>With "Soft_Reset" flag OFF:</p> <p>1. Releases cells listed in IE Cell_ID_List and associated configured Channels (if any)</p> <p>2. Releases the Memory Buffers(if any) associated with Cells listed in IE Cell_ID_List</p> <p>3. Cancels all active timers (if any) associated with Cells listed in IE Cell_ID_List.</p> |
| Type Definition           |   |
| SEQUENCE {                |   |
| soft_Reset                | BOOLEAN,  |
| cell_ID_List              | SEQUENCE (SIZE (1..8)) OF INTEGER(0..63)    -- cell IDs   |
| }                         |   |

7.3.2.2.3a      CPHY\_Cell\_TimingAdjust

tbd

7.3.2.2.3b      CPHY\_Detect\_TFCI

| ASN.1 ASP Type Definition |                                  |
|---------------------------|----------------------------------|
| Type Name                 | CPHY_DetectTFCI_CNF              |
| PCO Type                  | CSAP                             |
| Comment                   | To confirm to CPHY_DetetTFCI_REQ |
| Type Definition           |                                  |
| SEQUENCE {                |                                  |
| cellId                    | INTEGER(0..63) ),                |
| routingInfo               | RoutingInfo                      |
| }                         |                                  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| Type Name                 | CPHY_DetectTFCI_REQ  |
| PCO Type                  | CSAP   |
| Comment                   | <p>To set the mode of the SS for detecting whether the specified list of TFCI values occurred.</p> <p>Usage:</p> <p>At the SS initialization, the default mode is stop.</p> <p>When the mode is set to start, the SS shall detect whether the specified list of TFCI values (tfc_List) happens on the specified uplink physical channel. When happened the SS generates a CPHY_TFCI_Detected_IND and stop further detection. Otherwise keeps monitoring until a CPHY_DetectTFCI_REQ with mode = stop received.</p> |
| Type Definition           |  |
| SEQUENCE {                |  |
| cellId                    | INTEGER(0..63) ,   |
| routingInfo               | RoutingInfo,   |
| mode                      | ENUMERATED{start(0) , stop(1)},  |
| tfc_List                  | TFCI_List  |
| }                         |  |

| ASN.1 ASP Type Definition   |  |
|---|--|
| Type Name   | CPHY_TFCI_Detected_IND   |
| PCO Type  | CSAP   |
| Comment   | To indicate the TFCI value specified in the CPHY_DetectTFCI_REQ has been detected. |
| Type Definition   |  |
| <pre>SEQUENCE {     cellId                INTEGER (0..63),     routingInfo           RoutingInfo,     tfciValue             INTEGER (0..1023) }</pre> |  |

| ASN.1 Type Definition                                      |           |
|--|-----------|
| Type Name  | TFCI_List |
| Comment  |           |
| Type Definition  |           |
| <pre>SEQUENCE ( SIZE (1..1024)) OF INTEGER (0..1023)</pre> |           |

7.3.2.2.4 CPHY\_Ini

| ASN.1 ASP Type Definition  |                                |
|--|--------------------------------|
| Type Name  | CPHY_Ini_REQ                   |
| PCO Type   | CSAP                           |
| Comment  | Request to initialize the test |
| Type Definition  |                                |
| <pre>ENUMERATED {     defaultRadioEnvironment (0),     nonDefaultMultiCell (1) }</pre> |                                |

| ASN.1 ASP Type Definition                              |                                 |
|--|---------------------------------|
| Type Name  | CPHY_Ini_CNF                    |
| PCO Type   | CSAP                            |
| Comment  | Confirm the test initialization |
| Type Definition  |                                 |
| <pre>SEQUENCE {     confirmation          NULL }</pre> |                                 |

7.3.2.2.5 CPHY\_Cell\_TxPower\_Modify

| ASN.1 ASP Type Definition   |                                   |
|---|-----------------------------------|
| Type Name   | CPHY_Cell_TxPower_Modify_CNF      |
| PCO Type  | CSAP                              |
| Comment   | To confirm to change the DL power |
| Type Definition   |                                   |
| <pre>SEQUENCE {     cellId                INTEGER (0..63) }</pre> |                                   |

| ASN.1 ASP Type Definition   |   |
|---|---|
| Type Name   | CPHY_Cell_TxPower_Modify_REQ  |
| PCO Type  | CSAP  |
| Comment   | To request to change the DL power<br>If the Tx attenuation level value is set to 123, the cell becomes a non-suitable off cell (CPICH_Ec ≤ -122 dBm/3.84 MHz of an off cell). |
| Type Definition   |   |
| <pre>SEQUENCE {     cellId                INTEGER (0..63),     dLTxAttenuationLevel INTEGER (0..40 123) }</pre> |   |



## 7.3.2.2.6 CPHY\_Frame\_Number

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_Frame_Number_CNF   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To return the requested connection frame number. The routingInfo indicates a physical channel.  |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                                 INTEGER(0..63),<br>routingInfo                         RoutingInfo,<br>frameNumber                         INTEGER(0..255)<br>} |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_Frame_Number_REQ   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To request the physical layer to return a connection frame number on which the next message can be sent at the specified PCO on the specified logical channel. The return frame number shall leave time from current frame number in order to leave some execution time for TTCN preparing next message. The routingInfo indicates a physical channel |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                                 INTEGER(0..63),<br>routingInfo                         RoutingInfo<br>}   |

## 7.3.2.2.6a CPHY\_SFN (Rel-6 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_SFN_CNF   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To return the requested system frame number of the cell. The routingInfo indicates the P-CCPCH physical channel. In MBMS the MICH Connection Frame Number (CFN) corresponds to the Cell SFN of the frame in which the start of the S-CCPCH frame is located. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                 INTEGER(0..63),<br>routingInfo                         RoutingInfo,<br>currentSFN                         INTEGER(0..4095)<br>}  |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_SFN_REQ  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To request the physical layer to return the current SFN of the cell. The routingInfo indicates the P-CCPCH physical channel. In MBMS the MICH Connection Frame Number (CFN) corresponds to the Cell SFN of the frame in which the start of the S-CCPCH frame is located. The timing of S-CCPCH relative to P-CCPCH can be configured as timingOffset in steps of 256 chips. |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                                 INTEGER(0..63),<br>routingInfo                         RoutingInfo<br>}   |

## 7.3.2.2.6b CPHY\_MBMS\_MICH\_q (Rel-6 or later)

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_MBMS_MICH_q_CNF  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To confirm CPHY_MBMS_MICH_q_REQ. The routingInfo indicates the MICH physical channel.       |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                    INTEGER(0..63),<br>routingInfo              RoutingInfo<br>} |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_MBMS_MICH_q_REQ  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To request the physical layer to transmit MBMS notification Indicators on the MICH physical channel. The transmission shall start on the SFN specified by the parameter mICHCFN and be continued for one modification period indicated by parameter modiCoefficient. The routingInfo indicates the MICH physical channel. The notification indicators to be transmitted are specified by the parameter indicatorList. |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                    INTEGER(0..63),<br>routingInfo              RoutingInfo,<br>mICHCFN                  MICH_CFN,<br>modiPeriodCoefficient    INTEGER(7..10),<br>indicatorList            MBMS_q_List<br>}  |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | MBMS_q_List   |
| <b>Comment</b>        | The maximum number of notification indicators per frame for the nn18 alternative is 18.<br>The maximum number of notification indicators per frame for the nn36 alternative is 36.<br>The maximum number of notification indicators per frame for the nn72 alternative is 72.<br>The maximum number of notification indicators per frame for the nn144 alternative is 144 |
| Type Definition       |   |
| CHOICE                | {<br>nn18    Q_List18,<br>nn36    Q_List36,<br>nn72    Q_List72,<br>nn144   Q_List144<br>}  |

| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | Q_List18   |
| <b>Comment</b>  | <p>This type is a list which holds 128 or 256 or 512 or 1024 values of ListOf18q, each value of ListOf18q is also a list of (1..18) values of INTEGER. The first value of ListOf18q is corresponding to the MICH frame which starts the modification period, the second value of ListOf18q is corresponding to the next MICH frame in the modification period and so on, the last value of ListOf18q is corresponding to the last MICH frame of the modification period. Be noted that for different modification period configurations the number of values of ListOf18q are different and shall match the configuration.</p> <p>The SS sets the bits {b0, ..., b287} of the MICH frame according to the INTEGER values in the ListOf18q corresponding to the MICH frame. (see TS25.211 subclause 5.3.3.15)</p> |
| Type Definition   |  |
| <pre>CHOICE {     frm128      SEQUENCE SIZE((128)) OF ListOf18q,     frm256      SEQUENCE SIZE((256)) OF ListOf18q,     frm512      SEQUENCE SIZE((512)) OF ListOf18q,     frm1024     SEQUENCE SIZE((1024)) OF ListOf18q }</pre> |  |

| ASN.1 Type Definition                     |   |
|---|---|
| <b>Type Name</b>                          | ListOf18q   |
| <b>Comment</b>                            | <p>This type holds (1..18) values of the “q” for a MICH frame which MICH CFN = the SFN of the P-CCPCH radio frame during which the start of the MICH radio frame occurs The values of q are calculated by TTCN according to formula:</p> $q = \left\lfloor \left( (C \times (NI \oplus ((C \times SFN) \bmod G))) \bmod G \right) \times \frac{Nn}{G} \right\rfloor$ <p>where: <math>G = 2^{16}</math>, <math>C = 25033</math>;<br/>                     NI = Notification Indicator (0..65535) is computed by the TTCN for each TMGI according to the formula:<br/> <math>NI = (TMGI + \lfloor TMGI / G \rfloor) \bmod G</math> where <math>G = 2^{16}</math>;<br/>                     the number of TMGI could be 1 to 18;<br/>                     SFN = the SFN of the P-CCPCH radio frame during which the start of the MICH radio frame occurs;<br/>                     Nn = the number of notification indicators per frame:</p> |
| Type Definition                           |   |
| SEQUENCE (SIZE(1..18)) OF INTEGER (0..17) |   |

| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | Q_List36   |
| <b>Comment</b>  | <p>This type is a list which holds 128 or 256 or 512 or 1024 values of ListOf36q, each value of ListOf36q is also a list of (1..36) values of INTEGER. The first value of ListOf36q is corresponding to the MICH frame which starts the modification period, the second value of ListOf36q is corresponding to the next MICH frame in the modification period and so on, the last value of ListOf36q is corresponding to the last MICH frame of the modification period. Be noted that for different modification period configurations the number of values of ListOf36q are different and shall match the configuration.</p> <p>The SS sets the bits {b0, ..., b287} of the MICH frame according to the INTEGER values in the ListOf36q corresponding to the MICH frame. (see TS25.211 subclause 5.3.3.15)</p> |
| Type Definition   |  |
| <pre>CHOICE {     frm128      SEQUENCE (SIZE(128)) OF ListOf36q,     frm256      SEQUENCE (SIZE(256)) OF ListOf36q,     frm512      SEQUENCE (SIZE(512)) OF ListOf36q,     frm1024     SEQUENCE (SIZE(1024)) OF ListOf36q }</pre> |  |

| ASN.1 Type Definition                     |  |
|---|--|
| Type Name                                 | ListOf36q  |
| Comment                                   | <p>This type holds (1..36) values of the “q” for a frame which MICH CFN = the SFN of the P-CCPCH radio frame during which the start of the MICH radio frame occurs. The values of q are calculated by TTCN according to formula:</p> $q = \left\lfloor \left( (C \times (NI \oplus ((C \times SFN) \bmod G))) \bmod G \right) \times \frac{Nn}{G} \right\rfloor$ <p>where: <math>G = 2^{16}</math>, <math>C = 25033</math>;<br/>                     NI = Notification Indicator (0..65535) is computed by the TTCN for each TMGI according to the formula:<br/> <math>NI = (TMGI + \lfloor TMGI / G \rfloor) \bmod G</math> where <math>G = 2^{16}</math>;<br/>                     the number of <i>TMGI</i> could be 1 to 36;<br/>                     SFN = the SFN of the P-CCPCH radio frame during which the start of the MICH radio frame occurs;<br/>                     Nn = the number of notification indicators per frame:</p> |
| Type Definition                           |  |
| SEQUENCE (SIZE(1..36)) OF INTEGER (0..35) |  |

| ASN.1 Type Definition   |   |
|---|---|
| Type Name   | Q_List72  |
| Comment   | <p>This type is a list which holds 128 or 256 or 512 or 1024 values of ListOf72q, each value of ListOf72q is also a list of (1..72) values of INTEGER. The first value of ListOf72q is corresponding to the MICH frame which starts the modification period, the second value of ListOf72q is corresponding to the next MICH frame in the modification period and so on, the last value of ListOf72q is corresponding to the last MICH frame of the modification period. Be noted that for different modification period configurations the number of values of ListOf72q are different and shall match the configuration.<br/>                     The SS sets the bits {b0, ..., b287} of the MICH frame according to the INTEGER values in the ListOf72q corresponding to the MICH frame. (see 3GPP TS 25.211 [40] subclause 5.3.3.15)</p> |
| Type Definition   |   |
| CHOICE {<br>frm128       SEQUENCE (SIZE(128)) OF ListOf72q,<br>frm256       SEQUENCE (SIZE(256)) OF ListOf72q,<br>frm512       SEQUENCE (SIZE(512)) OF ListOf72q,<br>frm1024      SEQUENCE (SIZE(1024)) OF ListOf72q<br>} |   |

| ASN.1 Type Definition                     |  |
|---|--|
| Type Name                                 | ListOf72q  |
| Comment                                   | <p>This type holds (1..72) values of the “q” for a frame which MICH CFN = the SFN of the P-CCPCH radio frame during which the start of the MICH radio frame occurs. The values of q are calculated by TTCN according to formula:</p> $q = \left\lfloor \left( (C \times (NI \oplus ((C \times SFN) \bmod G))) \bmod G \right) \times \frac{Nn}{G} \right\rfloor$ <p>where: <math>G = 2^{16}</math>, <math>C = 25033</math>;<br/>                     NI = Notification Indicator (0..65535) is computed by the TTCN for each TMGI according to the formula:<br/> <math>NI = (TMGI + \lfloor TMGI / G \rfloor) \bmod G</math> where <math>G = 2^{16}</math>;<br/>                     the number of <i>TMGI</i> could be 1 to 72;<br/>                     SFN = the SFN of the P-CCPCH radio frame during which the start of the MICH radio frame occurs;<br/>                     Nn = the number of notification indicators per frame:</p> |
| Type Definition                           |  |
| SEQUENCE (SIZE(1..72)) OF INTEGER (0..71) |  |

| ASN.1 Type Definition   |   |
|---|---|
| Type Name   | Q_List144   |
| Comment   | This type is a list which holds 128 or 256 or 512 or 1024 values of ListOf144q, each value of ListOf144q is also a list of (1..144) values of INTEGER. The first value of ListOf144q is corresponding to the MICH frame which starts the modification period, the second value of ListOf144q is corresponding to the next MICH frame in the modification period and so on, the last value of ListOf144q is corresponding to the last MICH frame of the modification period. Be noted that for different modification period configurations the number of values of ListOf144q are different and shall match the configuration. The SS sets the bits {b0, ..., b287} of the MICH frame according to the INTEGER values in the ListOf144q corresponding to the MICH frame. (see 3GPP TS 25.211 [40] subclause 5.3.3.15) |
| Type Definition   |   |
| CHOICE {<br>fRM128           SEQUENCE (SIZE(128)) OF ListOf144q,<br>fRM256           SEQUENCE (SIZE(256)) OF ListOf144q,<br>fRM512           SEQUENCE (SIZE(512)) OF ListOf144q,<br>fRM1024          SEQUENCE (SIZE(1024)) OF ListOf144q<br>} |   |

| ASN.1 Type Definition                       |  |
|---|--|
| Type Name                                   | ListOf144q   |
| Comment                                     | This type holds (1..144) values of the "q" for a frame which MICH CFN = the SFN of the P-CCPCH radio frame during which the start of the MICH radio frame occurs The values of q are calculated by TTCN according to formula:<br>$q = \left\lfloor \left( (C \times (NI \oplus ((C \times SFN) \bmod G))) \bmod G \right) \times \frac{Nn}{G} \right\rfloor$ where: $G = 2^{16}$ , $C = 25033$ ;<br>NI = Notification Indicator (0..65535) is computed by the TTCN for each TMGI according to the formula:<br>$NI = (TMGI + \lfloor TMGI / G \rfloor) \bmod G$ where $G = 2^{16}$ ;<br>the number of TMGI could be 1 to 144;<br>SFN = the SFN of the P-CCPCH radio frame during which the start of the MICH radio frame occurs;<br>Nn = the number of notification indicators per frame: |
| Type Definition                             |  |
| SEQUENCE (SIZE(1..144)) OF INTEGER (0..143) |  |

| ASN.1 Type Definition |                                  |
|-----------------------|----------------------------------|
| Type Name             | MICH_CFN                         |
| Comment               | Subclause 9.2.1.46a of TS 25.433 |
| Type Definition       |                                  |
| INTEGER (0..4095)     |                                  |

7.3.2.2.6c CPHY\_MBMS\_NI (Rel-6 or later)

| ASN.1 ASP Type Definition  |   |
|--|---|
| Type Name  | CPHY_MBMS_NI_CNF  |
| PCO Type   | CSAP  |
| Comment  | To confirm CPHY_MBMS_NI_REQ. The routingInfo indicates the MICH physical channel. |
| Type Definition  |   |
| SEQUENCE {<br>cellId                                   INTEGER (0..63),<br>routingInfo                            RoutingInfo<br>} |   |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_MBMS_NI_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request the physical layer to transmit MBMS Notification Indicators on the MICH physical channel. The transmission shall start on the SFN specified by the parameter startingTime and be continued for one modification period indicated by parameter modiPeriodCoefficient. The routingInfo indicates the MICH physical channel. The notification indicators to be transmitted are specified by the parameter indicatorList.<br>If value of invert is TRUE, all notification indicators Nq are set to "0" and all other indicators are set to "1". |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER (0..63),   |
| routingInfo               | RoutingInfo,   |
| startingTime              | MICH_CFN,  |
| modiPeriodCoefficient     | INTEGER (7..10),   |
| nIList                    | MBMSIndicatorList,   |
| invert                    | BOOLEAN DEFAULT FALSE  |
|                           | }  |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | MBMSIndicatorList   |
| <b>Comment</b>        | The TTCN calculates Notification Indicator (NI, 0..65535) for each TMGI according to the formula:<br>$NI = (TMGI + \lfloor TMGI / G \rfloor) \bmod G$ where $G = 2^{16}$ and sends these NI to the SS by the MBMSIndicatorList;<br>The SS shall calculate the q values for every MICH frame of a modification period according to formula:<br>$q = \left\lfloor \left( (C \times (NI \oplus ((C \times SFN) \bmod G))) \bmod G \right) \times \frac{Nn}{G} \right\rfloor$ where: $G = 2^{16}$ , $C = 25033$ ;<br>SFN = the SFN of the P-CCPCH radio frame during which the start of the MICH radio frame occurs;<br>Nn = the number of notification indicators per frame;<br>Then the SS sets the bits {b0, ..., b287} of the MICH frame according to the calculated q values which corresponds to the MICH frame. (see 3GPP TS 25.211 [40] subclause 5.3.3.15) |
| Type Definition       |   |
| CHOICE                | {   |
| nn18                  | SEQUENCE (SIZE(1..18)) OF SEQUENCE { nI INTEGER (0..65535)},  |
| nn36                  | SEQUENCE (SIZE(1..36)) OF SEQUENCE { nI INTEGER (0.. 65535)},   |
| nn72                  | SEQUENCE (SIZE(1..72)) OF SEQUENCE { nI INTEGER (0.. 65535)},   |
| nn144                 | SEQUENCE (SIZE(1..144)) OF SEQUENCE { nI INTEGER (0.. 65535)}   |
|                       | }   |

## 7.3.2.2.7 CPHY\_Out\_of\_Sync

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_Out_of_Sync_IND  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To report that the physical channel synchronization (in FDD mode, sync with uplink DPCH) was lost as detected by the SS receiver. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER (0..63),  |
| routingInfo               | RoutingInfo   |
|                           | }   |

7.3.2.2.8 CPHY\_PRACH\_Measurement

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_PRACH_Measurement_CNF   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To Confirm PRACH Measurement Req   |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                             INTEGER (0..63),<br>routingInfo                       RoutingInfo<br>} |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_PRACH_Measurement_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request for Start or Stop of PRACH Measurements to be done every PRACH PREAMBLE or MESSAGE received.  |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                             INTEGER (0..63),<br>routingInfo                       RoutingInfo,<br>ratType                           RatType,<br>pRACH_MeasurementInd           PRACH_MeasurementInd<br>} |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | PRACH_MeasurementInd  |
| <b>Comment</b>        | 1) StartMeas: The SS shall start the sending PRACH parameters Measurement report on CPHY PCO, for each PRACH Preamble or MESSAGE received from the UE by primitive CPHY_PRACH_Measurement_Report_IND on CPHY PCO.<br>2) StopMeas: The SS shall stop sending of PRACH parameters Measurement report on CPHY PCO, for each PRACH Preamble or MESSAGE received from the UE by primitive CPHY_PRACH_Measurement_Report_IND on CPHY PCO. |
| Type Definition       |   |
| ENUMERATED            | {<br>startMeas (0),<br>stopMeas (1)<br>}  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_PRACH_Measurement_Report_IND  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | SS indicates a PRACH parameters measurement report for each PRACH Preambles or MESSAGE received from the UE  |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                             INTEGER (0..63),<br>routingInfo                       RoutingInfo,<br>ratType                           RatType,<br>measurementReport               PRACH_MeasurementReport<br>} |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | PRACH_MeasurementReport   |
| <b>Comment</b>        |   |
| Type Definition       |   |
| SEQUENCE              | {<br>usedPRACH_AccessSlot             INTEGER (0..14),<br>usedPRACH_Signature             INTEGER (0..15) OPTIONAL<br>} |

7.3.2.2.9 CPHY\_RL\_Modify

| ASN.1 ASP Type Definition |                                     |
|---------------------------|-------------------------------------|
| <b>Type Name</b>          | CPHY_RL_Modify_CNF                  |
| <b>PCO Type</b>           | CSAP                                |
| <b>Comment</b>            | To confirm to modify the Radio Link |
| Type Definition           |                                     |
| SEQUENCE                  | {                                   |
| cellId                    | INTEGER(0..63),                     |
| routingInfo               | RoutingInfo                         |
| }                         |                                     |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_RL_Modify_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request to modify the Radio Link<br>HardHandover (PhysicalChannelReconfig)<br>ChannelizationCodeChange<br>FrequencyChange<br>PhysicalChannelModifyForTrCHReconfig<br>CompressedMode( PhysicalChannelReconfig)<br>Re_Synchronized HardHandover<br>SoftHandover |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(0..63),  |
| routingInfo               | RoutingInfo,   |
| ratType                   | RatType,   |
| modifyMessage             | CphyRlModifyReq  |
| }                         |  |

| ASN.1 Type Definition         |   |
|-------------------------------|---|
| <b>Type Name</b>              | CphyRlModifyReq                             |
| <b>Comment</b>                |   |
| Type Definition               |   |
| SEQUENCE                      | {   |
| activationTime                | SS_ActivationTime,                          |
| physicalChannelInfo           | CHOICE {                                    |
| dpch_CompressedModeStatusInfo | Dpch_CompressedModeStatusInfo,              |
| secondaryCCPCHInfo            | SecondaryCCPCHInfo,                         |
| pRACHInfo                     | PRACHInfo,                                  |
| dPCHInfo                      | DPCHInfo,                                   |
| dPCHInfo_r5                   | DPCHInfo_r5OrLater, -- Rel-5 or later       |
| hS_PDSCHInfo                  | HS_PDSCHInfo_r5OrLater, -- Rel-5 or later   |
| e_DPCHInfo                    | SS_E_DPCH_Info_r6OrLater, -- Rel-6 or later |
| e_AGCHInfo                    | SS_E_AGCH_Info, -- Rel-6 or later           |
| e_HICHInfo                    | SS_E_HICH_Info, -- Rel-6 or later           |
| e_RGCHInfo                    | SS_E_RGCH_Info, -- Rel-6 or later           |
| mBMS_MICHInfo                 | SS_MBMS_MICHConfigurationInfo_r6            |
|                               | -- Rel-6 or later                           |
| },                            |   |
| trchConfigToFollow            | BOOLEAN           DEFAULT TRUE              |
| }                             |   |

| ASN.1 Type Definition |                   |
|-----------------------|-------------------|
| <b>Type Name</b>      | SS_ActivationTime |
| <b>Comment</b>        |                   |
| Type Definition       |                   |
| CHOICE                | {                 |
| activationCFN         | ActivationTime,   |
| activateNow           | NULL              |
| }                     |                   |



7.3.2.2.10 CPHY\_RL\_Release

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_RL_Release_CNF  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | PHY emulator confirms that a specified physical channel has been released. |
| Type Definition           |  |
| SEQUENCE                  | {  |
|                           | cellId INTEGER(0..63),   |
|                           | routingInfo RoutingInfo  |
|                           | }  |

| ASN.1 ASP Type Definition |                                      |
|---------------------------|--------------------------------------|
| <b>Type Name</b>          | CPHY_RL_Release_REQ                  |
| <b>PCO Type</b>           | CSAP                                 |
| <b>Comment</b>            | To request to release the Radio Link |
| Type Definition           |                                      |
| SEQUENCE                  | {                                    |
|                           | cellId INTEGER(0..63),               |
|                           | routingInfo RoutingInfo,             |
|                           | activationTime SS_ActivationTime     |
|                           | }                                    |

7.3.2.2.11 CPHY\_RL\_Setup

| ASN.1 ASP Type Definition |                                    |
|---------------------------|------------------------------------|
| <b>Type Name</b>          | CPHY_RL_Setup_CNF                  |
| <b>PCO Type</b>           | CSAP                               |
| <b>Comment</b>            | To confirm to setup the Radio Link |
| Type Definition           |                                    |
| SEQUENCE                  | {                                  |
|                           | cellId INTEGER(0..63),             |
|                           | routingInfo RoutingInfo            |
|                           | }                                  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_RL_Setup_REQ  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request to setup the associated transport channels and the Radio Link itself. |
| Type Definition           |  |
| SEQUENCE                  | {  |
|                           | cellId INTEGER(0..63),   |
|                           | routingInfo RoutingInfo,   |
|                           | ratType RatType,   |
|                           | setupMessage CphyRlSetupReq  |
|                           | }  |

| ASN.1 Type Definition |   |
|-----------------------|---|
| Type Name             | CphyRISetupReq                              |
| Comment               | To request to setup the Radio Link          |
| Type Definition       |   |
| SEQUENCE {            | CHOICE {                                    |
| physicalChannelInfo   | PrimaryCPICHInfo,                           |
| primaryCPICHInfo      | SecondaryCPICHInfo,                         |
| secondaryCPICHInfo    | PrimarySCHInfo,                             |
| primarySCHInfo        | SecondarySCHInfo,                           |
| secondarySCHInfo      | PrimaryCCPCHInfo,                           |
| primaryCCPCHInfo      | SecondaryCCPCHInfo,                         |
| secondaryCCPCHInfo    | PRACHInfo,                                  |
| pRACHInfo             | PICHInfo,                                   |
| pICHInfo              | AICHInfo,                                   |
| aICHInfo              | DPCHInfo,                                   |
| dPCHInfo              | PDSCHInfo,                                  |
| pDSCHInfo             | DPCHInfo_r5OrLater, -- Rel-5 or later       |
| dPCHInfo_r5           | HS_PDSCHInfo_r5OrLater, -- Rel-5 or later   |
| hS_PDSCHInfo          | SS_E_DPCH_Info_r6OrLater, -- Rel-6 or later |
| e_DPCHInfo            | SS_E_AGCH_Info, -- Rel-6 or later           |
| e_AGCHInfo            | SS_E_HICH_Info, -- Rel-6 or later           |
| e_HICHInfo            | SS_E_RGCH_Info, -- Rel-6 or later           |
| e_RGCHInfo            | SS_MBMS_MICHConfigurationInfo_r6            |
| mBMS_MICHInfo         | -- Rel-6 or later                           |
| },                    |   |
| activationTime        | SS_ActivationTime,                          |
| trchConfigToFollow    | BOOLEAN            DEFAULT TRUE             |
| }                     |   |

| ASN.1 Type Definition |  |
|-----------------------|--|
| Type Name             | PrimaryCPICHInfo   |
| Comment               | mimoAntenna2CPICH indicates if MIMO is either not configured or configured with a P-CPICH or with an S-CPICH on the MIMO antenna2 (ref. figure 7 of 25.214, clause 9). |
| Type Definition       |  |
| SEQUENCE {            |  |
| dl_TxPower_PCPICH     | DL_TxPower_PCPICH,   |
| tx_diversityIndicator | BOOLEAN,   |
| mimoAntenna2CPICH     | MimoAntennaConfigType    DEFAULT noMimo  |
| -- Rel-7 or later     |  |
| }                     |  |

| ASN.1 Type Definition |  |
|-----------------------|--|
| Type Name             | SecondaryCPICHInfo   |
| Comment               | The channel can be configured for the MIMO antenna2. The value antenna2pCPICH is not applicable. |
| Type Definition       |  |
| SEQUENCE {            |  |
| scramblingCode        | INTEGER(0..15),  |
| dl_ChannelizationCode | SF512_AndCodeNumber,   |
| dl_TxPower            | DL_TxPower,  |
| mimoAntenna           | MimoAntennaConfigType    DEFAULT noMimo  |
| -- Rel-7 or later     |  |
| }                     |  |

| ASN.1 Type Definition  |                       |
|--|-----------------------|
| Type Name  | MimoAntennaConfigType |
| Comment  | Rel-7 or later        |
| Type Definition  |                       |
| ENUMERATED {noMimo(0), antenna2pCPICH(1), antenna2sCPICH(2), spare(3)} |                       |

| ASN.1 Type Definition |                |
|-----------------------|----------------|
| Type Name             | PrimarySCHInfo |
| Comment               |                |
| Type Definition       |                |
| SEQUENCE {            |                |
| tstdIndicator         | BOOLEAN,       |
| dl_TxPower            | DL_TxPower     |
| }                     |                |

| ASN.1 Type Definition |                  |
|-----------------------|------------------|
| Type Name             | SecondarySCHInfo |
| Comment               |                  |
| Type Definition       |                  |
| SEQUENCE {            |                  |
| tstdIndicator         | BOOLEAN,         |
| dl_TxPower            | DL_TxPower       |
| }                     |                  |

| ASN.1 Type Definition |                  |
|-----------------------|------------------|
| Type Name             | PrimaryCCPCHInfo |
| Comment               |                  |
| Type Definition       |                  |
| SEQUENCE {            |                  |
| sttd_Indicator        | BOOLEAN,         |
| dl_TxPower            | DL_TxPower       |
| }                     |                  |

| ASN.1 Type Definition     |  |
|---------------------------|--|
| Type Name                 | SecondaryCCPCHInfo   |
| Comment                   | The range for powerOffsetOfTFCI_PO1 and powerOffsetOfPILOT_PO3 is 0 dB to 6 dB, 0.25 dB per step.<br>mbms_softCombTimingOffset is present when L1-combination applies<br>When configuring SCCPCH for MBMS "positionFixedOrFlexible" shall be set to Flexible, and sCCPCHSlotFormat shall be chosen to the one without pilot bits |
| Type Definition           |  |
| SEQUENCE {                |  |
| scramblingCode            | INTEGER (0..15),   |
| dl_ChannelizationCode     | SF256_AndCodeNumber,   |
| sCCPCHSlotFormat          | sCCPCHSlotFormat,  |
| timingOffset              | INTEGER (0..149),  |
| positionFixedOrFlexible   | PositionFixedOrFlexible,   |
| sttd_Indicator            | BOOLEAN,   |
| dl_TxPower                | DL_TxPower,  |
| powerOffsetOfTFCI_PO1     | INTEGER (0..24),   |
| powerOffsetOfPILOT_PO3    | INTEGER (0..24),   |
| mbms_softCombTimingOffset | MBMS_SoftComb_TimingOffset OPTIONAL --Rel-6 or later   |
| }                         |  |

| ASN.1 Type Definition                                    |           |
|--|-----------|
| Type Name  | PRACHInfo |
| Comment  |           |
| Type Definition  |           |
| SEQUENCE {   |           |
| fdd_tdd CHOICE {   |           |
| fdd SEQUENCE {   |           |
| preambleSignature AvailableSignatures,                   |           |
| spreadingFactorForDataPart SF_PRACH,                     |           |
| preambleScramblingCode PreambleScramblingCodeWordNumber, |           |
| puncturingLimit PuncturingLimit,                         |           |
| accessSlot AvailableSubChannelNumbers                    |           |
| },   |           |
| tdd SEQUENCE {   |           |
| -- timeSlot TimeSlot,                                    |           |
| -- spreadingCode SpreadingCode,                          |           |
| -- midambleCode MidambleCode,                            |           |
| }  |           |
| }  |           |
| }  |           |

| ASN.1 Type Definition               |          |
|-------------------------------------|----------|
| Type Name                           | PICHInfo |
| Comment                             |          |
| Type Definition                     |          |
| SEQUENCE {                          |          |
| pichinfo PICH_Info,                 |          |
| dl_TxPower PICH_PowerOffset,        |          |
| sccpchId_associated INTEGER (0..31) |          |
| }                                   |          |

| ASN.1 Type Definition       |          |
|-----------------------------|----------|
| Type Name                   | AICHInfo |
| Comment                     |          |
| Type Definition             |          |
| SEQUENCE {                  |          |
| aichinfo AICH_Info,         |          |
| dl_TxPower AICH_PowerOffset |          |
| }                           |          |

| ASN.1 Type Definition              |  |
|------------------------------------|--|
| Type Name                          | DPCHInfo                                     |
| Comment                            | At least one of the fields shall be present. |
| Type Definition                    |  |
| SEQUENCE {                         |  |
| ul_DPCHInfo UL_DPCH_Info OPTIONAL, |  |
| dl_DPCHInfo DL_DPCHInfo OPTIONAL   |  |
| }                                  |  |

| ASN.1 Type Definition                      |             |
|--|-------------|
| Type Name                                  | DL_DPCHInfo |
| Comment                                    |             |
| Type Definition                            |             |
| SEQUENCE {                                 |             |
| dl_CommonInformation DL_CommonInformation, |             |
| dl_DPCH_InfoPerRL DL_DPCH_InfoPerRL,       |             |
| rl_Information RL_Information              |             |
| }  |             |

| ASN.1 Type Definition   |  |
|-------------------------|--|
| <b>Type Name</b>        | HS_DPCCHInfo   |
| <b>Comment</b>          | mimoStatus represents status of MIMO and shall be set only if mimo_Parameters are provided in HS-PDSCH configuration |
| Type Definition         |  |
| SEQUENCE                | {  |
| cqi_RepetitionFactor    | CQI_RepetitionFactor,  |
| ackNackRepetitionFactor | ACK_NACK_repetitionFactor,   |
| mimoStatus              | BOOLEAN DEFAULT FALSE  |
| -- Rel-7 or later       |  |
| }                       |  |

| ASN.1 Type Definition |                           |
|-----------------------|---------------------------|
| <b>Type Name</b>      | DL_DPCHInfo_r5            |
| <b>Comment</b>        | Applicable Rel-5 or later |
| Type Definition       |                           |
| SEQUENCE              | {                         |
| dl_CommonInformation  | DL_CommonInformation_r5,  |
| dl_DPCH_InfoPerRL     | DL_DPCH_InfoPerRL_r5,     |
| rl_Information        | RL_Information            |
| }                     |                           |

| ASN.1 Type Definition |                             |
|-----------------------|-----------------------------|
| <b>Type Name</b>      | DL_TxPower_PCPICH           |
| <b>Comment</b>        | Absolute Tx Power of PCPICH |
| Type Definition       |                             |
| INTEGER               | (-60..-30)                  |

| ASN.1 Type Definition |                                      |
|-----------------------|--------------------------------------|
| <b>Type Name</b>      | DL_TxPower                           |
| <b>Comment</b>        | Downlink Tx Power relative to PCPICH |
| Type Definition       |                                      |
| INTEGER               | (-35..+15)                           |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | SCCPCHSlotFormat  |
| <b>Comment</b>        | Reference to 3GPP TS25.211 [Error! Reference source not found.] |
| Type Definition       |   |
| INTEGER               | (0..17)   |

| ASN.1 Type Definition    |                                 |
|--------------------------|---------------------------------|
| <b>Type Name</b>         | PDSCHInfo                       |
| <b>Comment</b>           |                                 |
| Type Definition          |                                 |
| SEQUENCE                 | {                               |
| fdd_tdd                  | CHOICE {                        |
| fdd                      | SEQUENCE {                      |
| pdsch_CodeMapping        | PDSCH_CodeMapping               |
| },                       |                                 |
| tdd                      | SEQUENCE {                      |
| --pdsch_Identity         | PDSCH_Identity,                 |
| --pdsch_Info             | PDSCH_Info,                     |
| --pdsch_PowerControlInfo | PDSCH_PowerControlInfo OPTIONAL |
| },                       |                                 |
| dl_TxPower               | DL_TxPower                      |
| }                        |                                 |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | DPCHInfo_r5OrLater   |
| <b>Comment</b>        | Applicable Rel-5 or later<br>At least one of the first two fields ul_DPCHInfo or dl_DPCHInfo shall be present. Presence of hs_DPCCHInd means that the HS-DPCCH shall be configured in the uplink DPCH. If hs_DPCCHInd is absent no HS-DPCCH shall be configured in the uplink DPCH, or the configured HS-DPCCH shall be removed in the modify ASP. In the active set which has radio links from more than one cell the HS-DPCCH is configured only in the HS-DSCH serving cell. Three combinations are valid: ul_DPCH_Info only, dl_DPCHInfo only and ul_DPCH_Info + hs_DPCCHInd. Presence of ss_UL_DPCCH_DRX_Info if UL DPCH being configured and presence of ss_DRX_Info if DL F-DPCH being configured indicates that UL_DTX is enabled. ss_DRX_Info is provided as F-DPCH TPC commands need not be transmitted during gaps due to UL-DPCCH DTX (25.214, 5.1.2.2.1). |
| Type Definition       |  |
| CHOICE {              |  |
| r5 SEQUENCE {         |  |
| ul_DPCHInfo           | UL_DPCH_Info_r5 OPTIONAL,  |
| dl_DPCHInfo           | DL_DPCHInfo_r5 OPTIONAL,   |
| hs_DPCCHInd           | HS_DPCCHInfo OPTIONAL  |
| },                    |  |
| r6 SEQUENCE {         |  |
| ul_DPCHInfo           | UL_DPCH_Info_r6 OPTIONAL,  |
| dl_DPCHInfo           | DL_DPCHInfo_r6 OPTIONAL,   |
| hs_DPCCHInd           | HS_DPCCHInfo OPTIONAL  |
| },                    |  |
| r7 SEQUENCE {         |  |
| ul_DPCHInfo           | UL_DPCH_Info_r7 OPTIONAL,  |
| dl_DPCHInfo           | DL_DPCHInfo_r7 OPTIONAL,   |
| hs_DPCCHInd           | HS_DPCCHInfo OPTIONAL,   |
| ss_UL_DPCCH_DRX_Info  | SS_UL_DPCCH_DRX_Info OPTIONAL,   |
| ss_DRX_Info           | DTX_Info OPTIONAL  |
| },                    |  |
| spare2 SEQUENCE { }   |  |
| }                     |  |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | DL_DPCHInfo_r6  |
| <b>Comment</b>        | Applicable Rel-6<br>For SS reconfiguration from DL-DPCH to F-DPCH and vice versa the dl_CommonInformation shall include the defaultDPCH_OffsetValue as additional information for SS even when this is not included in the corresponding RRC message sent to the UE and the timing is maintained. |
| Type Definition       |   |
| SEQUENCE {            |   |
| dl_CommonInformation  | DL_CommonInformation_r6,  |
| dl_Dpch_InfoPerRL     | CHOICE {  |
| dl_DPCH_InfoPerRL     | DL_DPCH_InfoPerRL_r6,   |
| dl_FDPCH_InfoPerRL    | DL_FDPCH_InfoPerRL_r6   |
| },                    |   |
| rl_Information        | RL_Information  |
| }                     |   |

| ASN.1 Type Definition |                           |
|-----------------------|---------------------------|
| <b>Type Name</b>      | DL_DPCHInfo_r7            |
| <b>Comment</b>        | Applicable Rel-7 or later |
| Type Definition       |                           |
| SEQUENCE {            |                           |
| dl_CommonInformation  | DL_CommonInformation_r7,  |
| dl_Dpch_InfoPerRL     | CHOICE {                  |
| dl_DPCH_InfoPerRL     | DL_DPCH_InfoPerRL_r7,     |
| dl_FDPCH_InfoPerRL    | DL_FDPCH_InfoPerRL_r7     |
| },                    |                           |
| rl_Information        | RL_Information            |
| }                     |                           |

| ASN.1 Type Definition  |                      |
|--|----------------------|
| Type Name  | SS_UL_DPCCH_DRX_Info |
| Comment  |                      |
| Type Definition  |                      |
| <pre>SEQUENCE {   ss_DRX_Info          DTX_Info          OPTIONAL,   dtx_DRX_timingInfo  DTX_DRX_TimingInfo_r7 OPTIONAL,   uplink_DPCCHSlotFormatInformation  Uplink_DPCCH_Slot_Format_Information }</pre> |                      |

| ASN.1 Type Definition   |   |
|---|---|
| Type Name   | HS_PDSCHInfo_r5OrLater  |
| Comment   | <p>Applicable Rel-5 or later</p> <p>When CHY_RL_Setup_REQ is called with CHOICE of hS_PDSCHInfo HS_PDSCH and HS-SCCH shall be configured in SS.</p> <p>The following HS-DSCH related parameters are passed to the SS implicitly by HSDSCH_physical_layer_category:</p> <ul style="list-style-type: none"> <li>- Maximum number of HS-DSCH codes can be received by UE.</li> <li>- Minimum inter-TTI interval.</li> <li>- Maximum number of bits of an HS-DSCH transport block within an HS-DSCH TTI.</li> <li>- Total number of soft channel bits".</li> </ul> <p>HSDSCH_physical_Layer_category is also used for interpretation of the meaning of CQI value.</p> |
| Type Definition   |   |
| <pre>CHOICE {   r5 SEQUENCE {     hSDSCHPhysicalLayerCategory  HSDSCH_physical_layer_category,     h_RNTI                       H_RNTI,     dlHSPDSCHInformation         DL_HSPDSCH_Information,     sttd_Indicator               BOOLEAN,     hs_SCCH_TxPower              DL_TxPower -- offset related to CPICH   },   r6 SEQUENCE {     hSDSCHPhysicalLayerCategory  HSDSCH_physical_layer_category,     h_RNTI                       H_RNTI,     dlHSPDSCHInformation         DL_HSPDSCH_Information_r6,     sttd_Indicator               BOOLEAN,     hs_SCCH_TxPower              DL_TxPower -- offset related to CPICH   },   r7 HS_PDSCHInfo_r7,   spare2 SEQUENCE {} }</pre> |   |

| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | HS_PDSCHInfo_r7   |
| <b>Comment</b>  | <p>Rel-7 or later.</p> <p>Choice of hS_PDSCH_Info will be used for configuring HSD-DSCH with 64QAM and/or CPC.</p> <p>Choice of common_HS_PDSCH_Info will be used for Enhanced Cell_FACH. commonOrDedicated_H_RNTI indicates, the H-RNTI that will be used by UE (either dedicated H-RNTI if provided in RRC message, or selected common H-RNTI transmitted in SIB5).</p> <p>The transmission of BCCH on HS-DSCH is performed by using BCCH specific H-RNTI on the first indexed HS-SCCH code indicated in system information broadcast.</p> <p>Presence of ss_DTX_Info makes DL DRX to be enabled.</p> <p>Presence of hs_scch_LessInfo makes HS-SCCH less operation enabled.</p> <p>Presence of mimo_Parameters indicate MIMO is to be started.</p> <p>MIMO and HS-SCCH less operation do not co-exist. MIMO is not applicable for non DCH states.</p> <p>The two IE "hSDSCHPhysicalLayerCategory" and "hdsch_physical_layer_category_ext" are mutually exclusive. One of the IE shall be present in the SS configuration. The IE "hdsch_physical_layer_category_ext" is present when MAC-ehs is configured.</p> |
| Type Definition   |   |
| <pre> CHOICE {   hs_PDSCH_Info SEQUENCE {     hSDSCHPhysicalLayerCategory HSDSCH_physical_layer_category OPTIONAL,     hdsch_physical_layer_category_ext HSDSCH_physical_layer_category_ext OPTIONAL,     h_RNTI H_RNTI,     dlHSPDSCHInformation DL_HSPDSCH_Information_r7,     sttd_Indicator BOOLEAN,     hs_SCCH_TxPower DL_TxPower, -- offset related to CPICH     ss_DTX_Info DRX_Info OPTIONAL,     hs_scch_LessInfo HS_SCCH_LessInfo_r7 OPTIONAL,     mimo_Parameters MIMO_Parameters_r7 OPTIONAL   },   common_HS_PDSCH_Info SEQUENCE {     hSDSCHPhysicalLayerCategory HSDSCH_physical_layer_category OPTIONAL,     hdsch_physical_layer_category_ext HSDSCH_physical_layer_category_ext OPTIONAL,     commonOrDedicated_H_RNTI H_RNTI,     bcchSpecific_H_RNTI H_RNTI,     hs_scch_SystemInfo HS_SCCH_SystemInfo,     hs_dsch_PagingSystemInformation HS_DSCH_PagingSystemInformation OPTIONAL,     sttd_Indicator BOOLEAN,     hs_SCCH_TxPower DL_TxPower -- offset related to CPICH   },   spare2 SEQUENCE {},   spare3 SEQUENCE {} }         </pre> |   |



| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | SS_E_DPCH_Info_r6OrLater  |
| <b>Comment</b>  | Rel-6 or later.<br>If there is an UL-DPCH configured in the cell the E-DPCH shall use the same scramblingCodeType and scramblingCode as the UL-DPCH.<br>Presence of ul_16QAM_Settings enables usage of 16QAM in UL. With 16QAM configured the value of "E-TFCI table index" is increased by 2, and indices in the SG-Table refer to Scheduling Grant Table 2 in [17].<br>The two IE "edch_PhysicalLayerCategory" and "edch_PhysicalLayerCategory_extension" are mutually exclusive. One of the IE shall be present in the SS configuration. The IE "edch_PhysicalLayerCategory_extension" is present only for UE categories greater than or equal to 7. |
| Type Definition   |   |
| <pre>CHOICE {   r6 SEQUENCE {     e_DPCCH_Info          E_DPCCH_Info,     e_DPDCH_Info          E_DPDCH_Info,     scramblingCodeType    ScramblingCodeType OPTIONAL,     scramblingCode        UL_ScramblingCode OPTIONAL,     tti                   E_DCH_TTI OPTIONAL,     edch_PhysicalLayerCategory    INTEGER (1..16)   },   r7 SEQUENCE {     e_DPCCH_Info          E_DPCCH_Info_r7,     e_DPDCH_Info          E_DPDCH_Info_r7,     scramblingCodeType    ScramblingCodeType OPTIONAL,     scramblingCode        UL_ScramblingCode OPTIONAL,     tti                   E_DCH_TTI OPTIONAL,     edch_PhysicalLayerCategory    INTEGER (1..16) OPTIONAL,     edch_PhysicalLayerCategory_extension    INTEGER (7) OPTIONAL,     ul_16QAM_Settings     UL_16QAM_Settings OPTIONAL   },   spare1 SEQUENCE {},   spare2 SEQUENCE {} }</pre> |   |

| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | SS_E_AGCH_Info   |
| <b>Comment</b>  | Rel-6 or later.<br>Presence of ss_DTX_Info indicates DL_DRX is enabled and SS shall transmit any requested AGCH only in occasions when UE will be listening. |
| Type Definition   |  |
| <pre>SEQUENCE {   e_AGCHInfo          E_AGCH_Information,   tti                 E_DCH_TTI,   e_AGCH_PowerOffset INTEGER (0..255)   -- Range and Step are FFS (25.433, 9.2.2.13If)   -- Offset relative to P-CPICH,   e_RNTI_Primary     E_RNTI OPTIONAL,   e_RNTI_Secondary   E_RNTI OPTIONAL,   ss_DTX_Info        DRX_Info OPTIONAL -- Rel-7 or later }</pre> |  |

| ASN.1 Type Definition   |                 |
|---|-----------------|
| <b>Type Name</b>  | SS_E_HICH_Info  |
| <b>Comment</b>  | Rel-6 or later. |
| Type Definition   |                 |
| <pre>SEQUENCE {   e_HICHInfo          E_HICH_Information,   tti                 E_DCH_TTI,   e_HICH_PowerOffset INTEGER (0..255)   -- PowerOffset = -32 + offset * 0.25   -- Unit dB, Range -32dB .. +31.75dB, Step +0.25dB   -- (25.433, 9.2.2.13Id), offset relative to P-CPICH }</pre> |                 |

| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | SS_E_RGCH_Info  |
| <b>Comment</b>  | Rel-6 or later.<br>Presence of ss_DTX_Info indicates DL_DRX is enabled and SS shall transmit any requested RGCH only in occasions when UE is going to listen. |
| Type Definition   |   |
| <pre>SEQUENCE {     e_RGCHInfo          E_RGCH_Information,     tti                 E_DCH_TTI,     e_RGCH_PowerOffset  INTEGER (0..255),                         -- Range Range:-32 .. +31.75 dB, Step: 0.25 dB                         -- Offset relative to P-CPICH     ss_DTX_Info         DRX_Info  OPTIONAL  -- Rel-7 or later }</pre> |   |

| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | RL_Information  |
| <b>Comment</b>  | <p>The range for powerOffsetOfTPC_PO2 and powerOffsetOfTFCI_PO1 and powerOffsetOfPILOT_PO3 is 0 dB to 6 dB, 0,25 dB per step.</p> <p>The IE cfnTgtSfnFrameOffset is applied when adding another RL or moving the UE to another cell in DCH state in the timing-maintained hard handover or in the soft handover. The cfnTgtSfnFrameOffset is defined as being the time difference between the CFN and the SFN of the cell in which the RL is to be added.</p> <p>The use of cfnTgtSfnFrameOffset and DOFF (Default DPCH Offset Value) is mutually exclusive. The IE cfnTgtSfnFrameOffset is omitted when configuring the 1<sup>st</sup> RL, or configuring the RL in the timing re-initialized hard handover where the required synchronization information is provided in defaultDPCH_offsetValue in DL_CommonInformation.</p> <p>In addition, TmTgt value is provided to dpch_FrameOffset in DL_DPCH_InfoPerRL_r5 or DL_DPCH_InfoPerRL_r6 as CFNchipOffset_Tgt. TmTgt can be observed by the UE, or calculated by the TTCN. If it is calculated,</p> <p><b>TmTgt = (DOFF*512 + 38400 + TCell_Ref - TCell_Tgt) Mod 38400</b></p> |
| Type Definition   |   |
| <pre>SEQUENCE {     powerOffsetOfTFCI_PO1  INTEGER (0..24),     powerOffsetOfTPC_PO2  INTEGER (0..24),     powerOffsetOfPILOT_PO3  INTEGER (0..24),     dl_TxPower             DL_TxPower,     dl_TxPowerMax          DL_TxPower,     dl_TxPowerMin          DL_TxPower,     cfnTgtSfnFrameOffset  CfnTgtSfnFrameOffset  OPTIONAL }</pre> |   |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | CfnTgtSfnFrameOffset   |
| <b>Comment</b>        | <p>1. The observedValue is provided if the UE reads SFN when measuring "Cell synchronization information" and sends it to the SS in MEASUREMENT REPORT message. The OFF value in IE COUNT-C-SFN frame difference is applied to the observedValue.</p> <p>2. If the synchronization between the target cell and the reference cell is calculated the calculatedAbsoluteValue is applied. Depending upon how to interpret SfnOffset two valid calculations exist.</p> <p>2.1 If SfnOffset is interpreted as the frames lagging behind:<br/> <math>calculated\_sfnLagging = (((4096 * 38400) + SfnOffset\_Ref * 38400 + TCell\_Ref + DOFF * 512 - (SfnOffset\_Tgt * 38400 + TCell\_Tgt)) \bmod (256 * 38400)) / 38400</math></p> <p>2.2 If SfnOffset is interpreted as the frames in advance:<br/> <math>calculated\_sfnInAdvance = (((4096 + SfnOffset\_Tgt - SfnOffset\_Ref) * 38400 + TCell\_Ref + DOFF * 512 - TCell\_Tgt) \bmod (256 * 38400)) / 38400</math></p> <p>The formula can be further simplified in the default condition if SfnOffset_Ref and TCell_Ref are equal to 0:<br/> <math>calculated\_sfnLagging = (((4096 * 38400) + DOFF * 512 - (SfnOffset\_Tgt * 38400 + TCell\_Tgt)) \bmod (256 * 38400)) / 38400</math><br/> <math>calculated\_sfnInAdvance = ((DOFF * 512 + SfnOffset\_Tgt * 38400 - TCell\_Tgt) \bmod (256 * 38400)) / 38400</math><br/> <math>calculated\_sfnInAdvance = (calculated\_sfnLagging + 2 * SfnOffset\_Tgt) \bmod 256</math><br/> <math>calculated\_sfnLagging = (calculated\_sfnInAdvance + (4096 - SfnOffset\_Tgt) * 2) \bmod 256</math></p> <p>The TTCN provides calculated_sfnLagging.</p> |
| Type Definition       |  |
| SEQUENCE {            |  |
| referenceCellId       | INTEGER (0..63),   |
| cfnFrameOffset        | CHOICE {   |
| observed              | INTEGER (0..255),  |
| calculated            | INTEGER (0..255) }   |
| }                     |  |

| ASN.1 Type Definition |                                  |
|-----------------------|----------------------------------|
| <b>Type Name</b>      | SS_MBMS_MICHConfigurationInfo_r6 |
| <b>Comment</b>        | Rel-6 or later.                  |
| Type Definition       |                                  |
| SEQUENCE {            |                                  |
| michinfo              | MBMS_MICHConfigurationInfo_r6,   |
| sccpchId_associated   | INTEGER (0..31)                  |
| }                     |                                  |

7.3.2.2.12 CPHY\_Sync

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_Sync_IND   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To indicate that physical channel synchronization (in FDD mode, sync with DPCCH) has been achieved. |
| Type Definition           |   |
| SEQUENCE {                |   |
| cellId                    | INTEGER (0..63),  |
| routingInfo               | RoutingInfo   |
| }                         |   |

## 7.3.2.2.12a CPHY\_HS\_DPCCH\_AckNack (Rel-5 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_HS_DPCCH_AckNack_CNF  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | Applicable Rel-5 or later<br>To Confirm CPHY_HS_DPCCH_AckNack_REQ  |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                   INTEGER (0..63)<br>} |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_HS_DPCCH_AckNack_REQ  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | Applicable Rel-5 or later<br>To request for start or stop reporting Ack/Nack received on the HS-DPCCH for the HARQ process hARQProcessId. Harq Process ID 0..7 represent the respective process Id with HS-SCCH type 1 operation. Value 15 is used for HS-SCCH less/HS-SCCH Type 2 operation.<br>At the initialization the SS is at the "sTOPRep" state without reporting any Ack/Nack |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                   INTEGER (0..63) ,<br>ratType                                 RatType ,<br>ackNackReportReq                      AckNackReportReq ,<br>hARQProcessId                         INTEGER (0..15 31)<br>}  |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | AckNackReportReq   |
| <b>Comment</b>        | Applicable Rel-5 or later<br>startRep: The SS shall start reporting the HARQ-ACK information received on HS-DPCCH by primitive CPHY_HS_DPCCH_AckNack_IND on CPHY PCO.<br>stopRep: The SS shall stop reporting. |
| Type Definition       |  |
| ENUMERATED            | {<br>startRep (0) ,<br>stopRep (1)<br>}  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_HS_DPCCH_AckNack_IND  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | Applicable Rel-5 or later<br>SS reports the HARQ-ACK information received on HS_DPCCH, each received Ack/Nack generates a CPHY_HS_DPCCH_AckNack_IND Harq Process ID 0..7 represent the process Id with HS-SCCH type 1 operation. Value 15 is used for HS-SCCH less/HS-SCCH Type 2 operation. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                   INTEGER (0..63) ,<br>ratType                                 RatType ,<br>hARQ_ACKInfo                         ENUMERATED {ack(0), nack (1)} ,<br>hARQProcessId                         INTEGER (0..15 31)<br>}                                |

## 7.3.2.2.12b CPHY\_HS\_DPCCH\_CQI (Rel-5 or later)

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_HS_DPCCH_CQI_CNF   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | Applicable Rel-5 or later<br>To Confirm CPHY_HS_DPCCH_CQI_REQ |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER (0..63)   |
| }                         |   |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_HS_DPCCH_CQI_REQ   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | Applicable Rel-5 or later<br>To enable the SS to start reporting N times of the CQI value received on the HS-DPCCH. After N times the SS stops reporting. N is specified in numberOfReports. At the SS initialization reporting of CQI values is disabled |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER (0..63),  |
| ratType                   | RatType,  |
| numberOfReports           | INTEGER (1..32)   |
| }                         |   |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_HS_DPCCH_CQI_IND   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | Applicable Rel-5 or later<br>SS generates the indication when a CQI value is received on HS_DPCCH after invocation of ASP CPHY_HS_DPCCH_CQI_REQ and before the numberOfReports is reached.<br>This ASP is used for verifying whether the UE has configured the HS-DSCH and starts reception of HS-DSCH (3GPP TS 25.331 [21], clause 8.6.6.34).<br>'second_cqi' shall be reported when MIMO is configured and dual transport block type A CQI report is received. When second_cqi is present, allowed values for 'cqi' are 0..14.<br>In all other cases (i.e. non MIMO operation, MIMO operation but with CQI type B or single transport block type A CQI reports] 'second_cqi' shall not be reported and range for cqi is 0..30.<br>'pci' shall be present when MIMO is configured. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER (0..63),  |
| ratType                   | RatType,  |
| cfn                       | INTEGER (0..255) OPTIONAL, -- Rel-7 or later  |
| subframe                  | INTEGER (0..4) OPTIONAL, -- Rel-7 or later  |
| cqi                       | INTEGER (0..30),  |
| second_cqi                | INTEGER (0..14) OPTIONAL, -- Rel-7 or later   |
| pci                       | INTEGER (0..3) OPTIONAL -- Rel-7 or later   |
| }                         |   |

## 7.3.2.2.12c CPHY\_HS\_DSCH\_CRC\_Mode (Rel-5 or later)

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_HS_DSCH_CRC_Mode_CNF   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | Applicable Rel-5 or later<br>Confirm a previous CPHY_HS_DSCH_CRC_Mode_REQ being successful. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER (-1..63),   |
| routingInfo               | RoutingInfo   |
| }                         |   |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_HS_DSCH_CRC_Mode_REQ  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | Applicable Rel-5 or later<br>To set the CRC calculation mode for HS-DSCH.<br>If mode = normal, the SS generates the correct CRC.<br>If mode = erroneous, the SS always generates any wrong CRC value which is different from the correct one on the specified MACdFlow/mac-ehs Queue.<br>If mode = error1AndNormal, the SS generates wrong CRC for first transmission and correct CRC on first retransmission. Later SS operates in normal mode.<br>If mode = error2AndNormal, the SS generates wrong CRC for first transmission, first retransmission and correct CRC second retransmission. The corrupted bits in first error transmission and second error transmission are different, so that when UE combines the data from three transmission, shall result in correct data. Later SS operates in normal mode.<br>As default, the normal mode is applied. When the HS-DSCH first configured or reconfigured the SS enters the normal CRC calculation mode. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                          INTEGER (-1..63) ,<br>routingInfo                  RoutingInfo,<br>flow_Queue_Id              Flow_Queue_ID,<br>mode                          ENUMERATED {normal(0), erroneous(1),<br>error1AndNormal(2), error2AndNormal(3)}<br>}  |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | Flow_Queue_ID   |
| <b>Comment</b>        | Choice MAC_d_Flow is used when MAC-hs is configured and MAC_ehs_Queue is used when MAC-ehs is configured. |
| Type Definition       |   |
| CHOICE                | {<br>mac_dFlowId                  MAC_d_FlowIdentity,<br>mac_ehs_QueueId            MAC_ehs_QueueId<br>}  |

7.3.2.2.13 CPHY\_TrCH\_Config

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPHY_TrCH_Config_CNF  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To confirm to configure the transport channel   |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                          INTEGER (0..63) ,<br>routingInfo                  RoutingInfo<br>} |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPHY_TrCH_Config_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request to configure the transport channel  |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                          INTEGER (0..63) ,<br>routingInfo                  RoutingInfo,<br>ratType                       RatType,<br>trchConfigType              TrchConfigType,<br>configMessage               CphyTrchConfigReq<br>} |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | CphyTrchConfigReq  |
| <b>Comment</b>        | <p>To request to configure the transport channel.</p> <p>The same TFCS information should be provided to the PHY and MAC layers at all times. When a CPHY_TrCH_Config_REQ is used to configure the PHY layer, a corresponding CMAC_Config_REQ should be sent to the MAC layer to ensure that the configuration is consistent.</p> <p>HS-DSCH MAC-d/EHS-DSCH/EHS-DSCH-Common flows or E-DCH MAC-d flows shall be separately configured whilst the ulconnectedTrCHList, ulTFCS, dlconnectedTrCHList and dlTFCS are omitted.</p> <p>For configuring MBMS if the default TFCS used in the RRC message the dlTFCS shall use the "complete" CHOICE in "ExplicitTFCS-Configuration" IE and the TFCS configuration shall be in line with clause 14.10.1.1/14.10.1.2 of TS 25.331. ehs_DSCH_Flow is used when MAC-ehs is to be configured in Cell_DCH state. ehs_DSCH_CommonFlows shall be used for configuring MAC_ehs layer in common connected mode states.</p> <p>Only one of hsDSCHMacdFlows, ehs_DSCH_Flows, ehs_DSCH_CommonFlows can be present.</p> |
| Type Definition       |  |
| SEQUENCE              | <pre> {   activationTime          SS_ActivationTime,   ulconnectedTrCHList    SEQUENCE (SIZE (0..maxTrCH)) OF SEQUENCE {     trchid                TransportChannelIdentity,     ul_TransportChannelType SS_UL_TransportChannelType,     transportChannelInfo   CommonOrDedicatedTFS   } OPTIONAL,    ulTFCS                 TFCS OPTIONAL,   dlconnectedTrCHList    SEQUENCE (SIZE (0..maxTrCH)) OF SEQUENCE {     trchid                TransportChannelIdentity,     dl_TransportChannelType SS_DL_TransportChannelType,     transportChannelInfo   CommonOrDedicatedTFS   } OPTIONAL,    dlTFCS                 TFCS OPTIONAL,   hsDSCHMacdFlows        HS_DSCHMACdFlows OPTIONAL, -- Rel-5 or later   e_DCHMacdFlows         E_DCHMACdFlows  OPTIONAL, -- Rel-6 or later   ehs_DSCH_Flows         EHS_DSCH_Flows  OPTIONAL, -- Rel-7 or later   ehs_DSCH_CommonFlows   EHS_DSCH_CommonFlows OPTIONAL -- Rel-7 or later } </pre>   |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | RoutingInfo   |
| <b>Comment</b>        | To route between each channels.   |
| Type Definition       |   |
| CHOICE                | <pre> {   physicalChannelIdentity    INTEGER {0..31},   transportChannelIdentity   TransportChannelIdentity,   logicalChannelIdentity     LogicalChannelIdentity,   rB_Identity                INTEGER {-31..32},   cn_DomainIdentity          CN_DomainIdentity } </pre> |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | RatType                                |
| <b>Comment</b>        | To select route between each channels. |
| Type Definition       |  |
| ENUMERATED            | <pre> {   fdd (0), tdd (1) } </pre>    |

| ASN.1 Type Definition   |                      |
|---|----------------------|
| <b>Type Name</b>  | CommonOrDedicatedTFS |
| <b>Comment</b>  | Transport Format Set |
| Type Definition   |                      |
| <pre>SEQUENCE {   tti     tti10          CHOICE {     tti20          CommonOrDedicatedTF_InfoList,     tti40          CommonOrDedicatedTF_InfoList,     tti80          CommonOrDedicatedTF_InfoList,     dynamic        CommonOrDedicatedTF_InfoList_DynamicTTI     },   semistaticTF_Information  SemistaticTF_Information }</pre> |                      |

| ASN.1 Type Definition   |                              |
|---|------------------------------|
| <b>Type Name</b>  | CommonOrDedicatedTF_InfoList |
| <b>Comment</b>  | Transport Format Set         |
| Type Definition   |                              |
| <pre>SEQUENCE (SIZE (1..maxTF)) OF CommonOrDedicatedTF_Info</pre> |                              |

| ASN.1 Type Definition  |                          |
|--|--------------------------|
| <b>Type Name</b>   | CommonOrDedicatedTF_Info |
| <b>Comment</b>   | Transport Format Set     |
| Type Definition  |                          |
| <pre>SEQUENCE {   tb_Size          INTEGER (0..5035),   numberOfTbSizeList  SEQUENCE (SIZE (1..maxTF)) OF NumberOfTransportBlocks,   logicalChannelList  SS_LogicalChannelList }</pre> |                          |

| ASN.1 Type Definition  |   |
|--|---|
| <b>Type Name</b>   | CommonOrDedicatedTF_InfoList_DynamicTTI |
| <b>Comment</b>   | Transport Format Set for TDD mode       |
| Type Definition  |   |
| <pre>SEQUENCE {   tb_Size          INTEGER (0..5035),   numberOfTbSizeList  SEQUENCE (SIZE (1..maxTF)) OF NumberOfTransportBlocks,   logicalChannelList  SS_LogicalChannelList }</pre> |   |

| ASN.1 Type Definition   |                |
|---|----------------|
| <b>Type Name</b>  | TrchConfigType |
| <b>Comment</b>  |                |
| Type Definition   |                |
| <pre>CHOICE {   nonDch          NULL,   dch             ENUMERATED {normal(0), softHO(1)} }</pre> |                |



| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | HS_DSCHMACdFlows   |
| <b>Comment</b>  | Applicable Rel-5 or later<br>Within the ACK/NACK repetition period indicated by ackNackRepetitionFactor the SS shall not transmit MAC-hs PDU's on HS-PDSCH.<br>Only one among harqInfo and harqInfo_r7 shall be present. Harq_Info_r7 shall be used for Rel-7 or later.<br>mimoStatus represents status of MIMO, and shall be set only if mimo_Parameters are provided in HS-PDSCH configuration |
| Type Definition   |  |
| <pre>SEQUENCE {   harqInfo                HARQ_Info                OPTIONAL,   addOrReconfMACdFlow    SS_AddOrReconfMAC_dFlow  OPTIONAL,   ackNackRepetitionFactor ACK_NACK_repetitionFactor  OPTIONAL,   harqInfo_r7            HARQ_Info_r7            OPTIONAL,   -- to be used for Rel-7 or later.   mimoStatus             BOOLEAN                OPTIONAL   -- Rel-7 or later }</pre> |  |

| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | EHS_DSCH_Flows   |
| <b>Comment</b>  | Applicable Rel-7 or later<br>Within the ACK/NACK repetition period indicated by ackNackRepetitionFactor the SS shall not transmit MAC-hs PDU's on HS-PDSCH.<br>mimoStatus represents status of MIMO, and shall be set only if mimo_Parameters are provided in HS-PDSCH configuration |
| Type Definition   |  |
| <pre>SEQUENCE {   harqInfo_r7            HARQ_Info_r7            OPTIONAL,   addOrReconfMAC_ehs_ReordQ AddOrReconfMAC_ehs_ReordQ  OPTIONAL,   ackNackRepetitionFactor ACK_NACK_repetitionFactor  OPTIONAL,   mimoStatus             BOOLEAN                OPTIONAL }</pre> |  |

| ASN.1 Type Definition  |                           |
|--|---------------------------|
| <b>Type Name</b>   | EHS_DSCH_CommonFlows      |
| <b>Comment</b>   | Applicable Rel-7 or later |
| Type Definition  |                           |
| <pre>SEQUENCE {   harqInfo_r7                HARQ_Info_r7                OPTIONAL,   common_MAC_ehs_ReorderingQueueList Common_MAC_ehs_ReorderingQueueList  OPTIONAL }</pre> |                           |

| ASN.1 Type Definition   |                           |
|---|---------------------------|
| <b>Type Name</b>  | SS_AddOrReconfMAC_dFlow   |
| <b>Comment</b>  | Applicable Rel-5 or later |
| Type Definition   |                           |
| <pre>SEQUENCE {   mac_hs_AddReconfQueue_List SEQUENCE (SIZE(1..maxQueueIDs)) OF SEQUENCE {     mac_hs_AddReconfQueue SS_MAC_hs_AddReconfQueue} OPTIONAL,   mac_hs_DelQueue_List SEQUENCE (SIZE(1..maxQueueIDs)) OF SEQUENCE {     mac_hsQueueId INTEGER(0..7)} OPTIONAL }</pre> |                           |

| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | SS_MAC_hs_AddReconfQueue   |
| <b>Comment</b>  | Applicable Rel-5 or later<br>The priority of PriorityQueue shall set according to the priority of logical channels which is mapped on to this priority queue.<br>Note: the range of priority of PriorityQueue is from 0 to 7 and 0 is the lowest priority.<br>DiscardTimer defines the time (unit ms) to live for a MAC-hs SDU starting from the instant of its arrival into an HSDPA Priority Queue. The SS shall use this information to discard out-of-data MAC-hs SDUs from the HSDPA Priority Queues. |
| Type Definition   |  |
| <pre>SEQUENCE {   mChsAddReconfQueue          MAC_hs_AddReconfQueue,   logicalChannelList          SEQUENCE OF LogicalChannelIdentity,                               -- logical channels mapping onto the priority queue                               -- which is specified in mChsAddReconfQueue   priority                    INTEGER (0..7),   discardTimer                ENUMERATED { v20 (0), v40 (1), v60 (2), v80 (3), v100 (4), v120 (5), v140 (6), v160 (7), v180 (8), v200 (9), v250 (10), v300 (11), v400 (12), v500 (13), v750 (14), v1000 (15), v1250 (16), v1500 (17), v1750 (18), v20 00 (19), v2500 (20), v3000 (21), v3500 (22), v4000 (23), v4500 (24), v5000 (25), v7500 (26) } OPTIONAL }</pre> |  |

| ASN.1 Type Definition  |   |
|--|---|
| <b>Type Name</b>   | E_DCHMACdFlows  |
| <b>Comment</b>   | Rel-6 or later<br>addReconf_MAC_d_FlowList and addReconf_MAC_d_FlowList_r7 are mutually exclusive. One of these shall be present. |
| Type Definition  |   |
| <pre>SEQUENCE {   tti                        E_DCH_TTI,   harq_Info                 ENUMERATED {rv0 (0), rvtable (1)},   addReconf_MAC_d_FlowList E_DCH_AddReconf_MAC_d_FlowList OPTIONAL,                               -- Rel-6   addReconf_MAC_d_FlowList_r7 E_DCH_AddReconf_MAC_d_FlowList_r7 OPTIONAL                               -- Rel-7 or later }</pre> |   |

| ASN.1 Type Definition  |                       |
|--|-----------------------|
| <b>Type Name</b>   | SS_LogicalChannelList |
| <b>Comment</b>   |                       |
| Type Definition  |                       |
| <pre>CHOICE {   allSizes          NULL,   configured        NULL,   explicitList      SEQUENCE (SIZE (1..15 ) ) OF SS_LogicalChannelByRB }</pre> |                       |

| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | SS_LogicalChannelByRB                         |
| <b>Comment</b>  | logChOfRb is an optional and currently unused |
| Type Definition   |   |
| <pre>SEQUENCE {   rb_Identity        INTEGER (-31..32),   logChOfRb         INTEGER (0..1) OPTIONAL }</pre> |   |

7.3.2.2.14a CPHY\_UL\_PowerModify

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| Type Name                 | CPHY_UL_PowerModify_CNF   |
| PCO Type                  | CSAP  |
| Comment                   | To confirm the increase/decrease in UE uplink DPCH power transmission or send the TPC commands as instructed.                                       |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId   INTEGER(0..63),<br>routingInfo   RoutingInfo<br>} |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| Type Name                 | CPHY_UL_PowerModify_REQ  |
| PCO Type                  | CSAP   |
| Comment                   | To request increase/decrease in the UE uplink DPCH transmission by the delta value given in dB, from the existing transmission level or make UE to transmit at maximum or minimum power level. It is assumed that the UE UL DPCH transmission power level is set to -20 dbm by default at beginning of each test. For routing Info the DL DPCH Physical channel ID shall be used. For IE ul_DPCH_Id, the physical channel ID of associated UL DPCH shall be given. SS can use it or neglect it. UI_UE_TxPower gives either the value in dB, by which SS shall increase/decrease the uplink transmission power of UE from the existing transmission power, when this primitive is called or Start transmission of TPC commands on DL DPCCCH as configured |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId   INTEGER(0..63),<br>routingInfo   RoutingInfo,<br>ul_DPCH_Id   INTEGER(0..31),<br>ul_UE_Tx_Power                                    Ul_UE_Tx_Power<br>}   |

| ASN.1 Type Definition |  |
|-----------------------|--|
| Type Name             | Ul_UE_Tx_Power   |
| Comment               | Choice delta gives the value in dB, by which the existing UE UL DPCH transmission power level is to be increased or decreased. After reaching the new desired level SS shall make UE to maintain this new transmission power level. WithChoice maxMin, and ENUM 'tpc_Up' selection, SS shall start transmitting TPC commands on the DL DPCCCH, as '1' every slot so as to ask UE to increase the transmission power. With Choice maxMin, and ENUM 'tpc_Down' selection, SS shall start transmitting TPC commands on the DL DPCCCH, as '0' every slot so as to ask UE to decrease the transmission power. With Choice maxMin, and ENUM 'tpc_Maintain' selection, SS will start transmitting TPC commands on the DL DPCCCH, as alternate '0' and '1' in alternate slots so as to maintain the UE uplink transmission power |
| Type Definition       |  |
| CHOICE                | {<br>deltaINTEGER                                       (-64..63),<br>maxMin   ENUMERATED{ tpc_Up(0), tpc_Down(1), tpc_Maintain(2) }<br>}  |

7.3.2.2.14 CPHY\_TrCH\_Release

| ASN.1 ASP Type Definition |                                      |
|---------------------------|--------------------------------------|
| <b>Type Name</b>          | CPHY_TrCH_Release_REQ                |
| <b>PCO Type</b>           | CSAP                                 |
| <b>Comment</b>            | To request to release the Radio Link |
| Type Definition           |                                      |
| SEQUENCE                  | {                                    |
| cellId                    | INTEGER(0..63),                      |
| routingInfo               | RoutingInfo,                         |
| trchConfigType            | TrchConfigType,                      |
| activationTime            | SS_ActivationTime                    |
|                           | }                                    |

| ASN.1 ASP Type Definition |                                      |
|---------------------------|--------------------------------------|
| <b>Type Name</b>          | CPHY_TrCH_Release_CNF                |
| <b>PCO Type</b>           | CSAP                                 |
| <b>Comment</b>            | To confirm to release the Radio Link |
| Type Definition           |                                      |
| SEQUENCE                  | {                                    |
| cellId                    | INTEGER(0..63),                      |
| routingInfo               | RoutingInfo                          |
|                           | }                                    |

7.3.2.2.15 CMAC\_BMC\_Scheduling

| ASN.1 ASP Type Definition |                                |
|---------------------------|--------------------------------|
| <b>Type Name</b>          | CMAC_BMC_Scheduling_CNF        |
| <b>PCO Type</b>           | CSAP                           |
| <b>Comment</b>            | To confirm the BMC scheduling. |
| Type Definition           |                                |
| SEQUENCE                  | {                              |
| cellId                    | INTEGER(0..63),                |
| routingInfo               | RoutingInfo                    |
|                           | }                              |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CMAC_BMC_Scheduling_REQ                         |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | Send the BMC scheduling information to the MAC. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER(0..63),                                 |
| routingInfo               | RoutingInfo,                                    |
| ratType                   | RatType,  |
| schedulingInfo            | BMC_SchedulingInfo                              |
|                           | }   |

| ASN.1 Type Definition |                                   |
|-----------------------|-----------------------------------|
| <b>Type Name</b>      | BMC_SchedulingInfo                |
| <b>Comment</b>        |                                   |
| Type Definition       |                                   |
| SEQUENCE              | {                                 |
| level1Info            | BMC_SchedulingLevel1Info,         |
| level2Info            | BMC_SchedulingLevel2Info OPTIONAL |
|                       | }                                 |

| ASN.1 Type Definition |                          |                    |                             |
|-----------------------|--------------------------|--------------------|-----------------------------|
| Type Name             | BMC_SchedulingLevel2Info |                    |                             |
| Comment               |                          |                    |                             |
| Type Definition       |                          |                    |                             |
| SEQUENCE              | {                        | starCtchBsIndex    | INTEGER (1..256) DEFAULT 1, |
|                       |                          | drxSelectionBitmap | OCTET STRING                |
|                       | }                        |                    |                             |

| ASN.1 Type Definition |  |                      |                        |
|-----------------------|--|----------------------|------------------------|
| Type Name             | BMC_SchedulingLevel1Info                         |                      |                        |
| Comment               | 0 ≤ K ≤ N-1 (3GPP TS 25.331 [21], clause 8.5.16) |                      |                        |
| Type Definition       |  |                      |                        |
| SEQUENCE              | {  | ctchAllocationPeriod | INTEGER (1..256), -- N |
|                       |  | cbsFrameOffset       | INTEGER (0..255) -- K  |
|                       | }  |                      |                        |

7.3.2.2.16 CMAC\_Ciphering\_Activate

| ASN.1 ASP Type Definition |  |                   |
|---------------------------|--|-------------------|
| Type Name                 | CMAC_Ciphering_Activate_CNF                        |                   |
| PCO Type                  | CSAP   |                   |
| Comment                   | To confirm to activate or inactivate the ciphering |                   |
| Type Definition           |  |                   |
| SEQUENCE                  | {  |                   |
|                           | cellId   | INTEGER (-1..63), |
|                           | routingInfo  | RoutingInfo       |
|                           | }  |                   |

| ASN.1 ASP Type Definition |   |                                |
|---------------------------|---|--------------------------------|
| Type Name                 | CMAC_Ciphering_Activate_REQ   |                                |
| PCO Type                  | CSAP  |                                |
| Comment                   | To request to start or restart downlink ciphering or uplink deciphering. The physicalChannelIdentity of DPCH applies to routingInfo. Initialize the 20 MSB of HFN component of COUNT-C to the START value stored. If the value of incHFN is set to "NotInc" the SS initializes the remaining LSBs of HFN component in COUNT-C to zero and the SS shall not increment HFN part of COUNT-C at every CFN cycle. If the value of incHFN is set to "IncPerCFN_Cycle" the SS initializes the remainingLSBs of HFN component in COUNT-C accordingly. If it is absent the SS initialize the LSBs of HFN component in COUNT-C to zero, increments the HFN component in COUNT-C by one and then starts the increment HFN part of COUNT-C at every CFN cycle. Only one among cipheringModeInfo and CipheringModeInfo_r7 shall be present. The later being applicable from Rel 7 onwards. |                                |
| Type Definition           |   |                                |
| SEQUENCE                  | {   |                                |
|                           | cellId  | INTEGER (-1..63),              |
|                           | routingInfo   | RoutingInfo,                   |
|                           | ratType   | RatType,                       |
|                           | cn_DomainIdentity   | CN_DomainIdentity,             |
|                           | cipheringModeInfo   | CipheringModeInfo OPTIONAL,    |
|                           | cipheringModeInfo_r7  | CipheringModeInfo_r7 OPTIONAL, |
|                           | -- Rel 7 or later   |                                |
|                           | incHFN  | Increment_Mode                 |
|                           | }   |                                |

| ASN.1 Type Definition |   |
|-----------------------|---|
| Type Name             | Increment_Mode  |
| Comment               |   |
| Type Definition       |   |
| ENUMERATED            | {incPerCFN_Cycler(0), notInc(1), incByOne_IncPerCFN_Cycle(2)} |

## 7.3.2.2.16a CMAC\_FACH\_MeasOccas

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CMAC_FACH_MeasOccas_CNF                         |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To confirm to config FACH Measurement Occasions |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER(0..63),                                 |
| routingInfo               | RoutingInfo                                     |
|                           | }   |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CMAC_FACH_MeasOccas_REQ   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To request MAC layer to configure FACH Measurement Occasions (FMO).<br>If IE "Inter-frequency FDD measurement indicator" is set to TRUE, the UE will start inter-frequency FMO at the activationTime. If this IE is set to FALSE, the UE inter-frequency FMO will be stopped at the activation Time.<br>For the FDD test, the IE "Inter-frequency TDD measurement indicator" is set to FALSE.<br>If IE "Inter-RAT measurement indicators" is included, the UE will start inter-RAT FMO at the activationTime. If this IE is omitted, the UE inter-RAT FMO will be stopped at the activation Time.<br><br>largest_TTI_Number is the TTI (in number of 10ms frames) of the FACH having the largest TTI on the SCCPCH. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER(0..63),   |
| routingInfo               | RoutingInfo,  |
| fmo                       | FACH_MeasurementOccasionInfo,   |
| largest_TTI               | INTEGER(1..8),  |
| activationTime            | SS_ActivationTime   |
|                           | }   |

## 7.3.2.2.17 CMAC\_Config

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_Config_CNF  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | For MAC emulator to report that a previous attempt to setup, reconfigure or release a logical channel is successful. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo  |
|                           | }  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_Config_REQ  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request to configure MAC entity. Setup is used for creation of the MAC instances or the MAC resources. Release is used for free the all MAC resources. The reconfiguration is to change the MAC parameters, it is not the MAC modification. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo,   |
| ratType                   | RatType,   |
| configMessage             | CHOICE {   |
| setup                     | CmacConfigReq,   |
| reconfigure               | CmacConfigReq,   |
| release                   | SS_ActivationTime  |
|                           | }  |
|                           | }  |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | CmacConfigReq   |
| <b>Comment</b>        | To request to configure MAC<br>The IE associatedPhychConfigToFollow should be set to TRUE when there is a associated physical channel configuration to follow (e.g configuration of PICH or MICH),<br>The implementation of the IE "associatedPhychConfigToFollow" can be left to the SS either to wait for the associated physical channel before MAC is configured or to continue the configuration of MAC without waiting for the associated physical channel. |
| Type Definition       |   |
| SEQUENCE              | {<br>activationTime SS_ActivationTime,<br>uE_Info UE_Info,<br>trCHInfo TrCHInfo,<br>trCH_LogCHMapping TrCH_LogCHMappingList1,<br>associatedPhychConfigToFollow BOOLEAN DEFAULT FALSE<br>}   |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | UE_Info   |
| <b>Comment</b>        | The value of c_RNTI_DSCH_RNTI is 16 bits, used either for C-RNTI or DSCH-RNTI. DSCH is configured if the physical channel in CMAC_config_REQ is a PDSCH. Otherwise, C-RNTI is applied. At the MAC-hs configuration both u_RNTI and c_RNTI_DSCH_RNTI are omitted.<br>If MAC is being configured with Common_MAC_ehs flows, UE Info U-RNTI shall be provided and is applied in MAC-c header on SRB#1. |
| Type Definition       |   |
| SEQUENCE              | {<br>u_RNTI U_RNTI OPTIONAL,<br>c_RNTI C_RNTI OPTIONAL<br>}   |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | TrCH_LogCHMappingList1  |
| <b>Comment</b>        | maxulTrCH = maxdlTrCH = 16<br>dlconnectedMACdFlows is used for MAC-hs and dlconnectedMAC_ehsFlows for MAC-ehs configurations in dedicated. dlconnectedMAC_ehsCommonFlow is used for MAC-ehs in Common state.  |
| Type Definition       |   |
| SEQUENCE              | {<br>ulconnectedTrCHList SEQUENCE (SIZE (1..maxulTrCH)) OF SEQUENCE {<br>trchid TransportChannelIdentity,<br>trCH_LogCHMappingList TrCH_LogCHMappingList<br>} OPTIONAL,<br>dlconnectedTrCHList SEQUENCE (SIZE (1..maxdlTrCH)) OF SEQUENCE {<br>trchid TransportChannelIdentity,<br>trCH_LogCHMappingList TrCH_LogCHMappingList<br>} OPTIONAL,<br>dlconnectedMACdFlows SEQUENCE (SIZE (1..8)) OF SEQUENCE {<br>mac_dFlowId MAC_d_FlowIdentity,<br>trCH_LogCHMappingList TrCH_LogCHMappingList<br>} OPTIONAL,<br>-- Rel-5 or later<br>dlconnectedMAC_ehsFlows SEQUENCE (SIZE (1..8)) OF SEQUENCE {<br>mac_ehs_QueueId MAC_ehs_QueueId,<br>trCH_LogCHMappingList TrCH_LogCHMappingList<br>} OPTIONAL,<br>-- Rel-7 or later<br>dlconnectedMAC_ehsCommonFlow SEQUENCE {<br>mac_ehs_QueueId MAC_ehs_QueueId,<br>trCH_LogCHMappingList TrCH_LogCHMappingList<br>} OPTIONAL<br>-- Rel-7 or later<br>} |

| ASN.1 Type Definition  |                       |
|--|-----------------------|
| Type Name  | TrCH_LogCHMappingList |
| Comment  | maxLogCHperTrCH = 15  |
| Type Definition  |                       |
| SEQUENCE (SIZE (1..maxLogCHperTrCH)) OF TrCH_LogicalChannelMapping |                       |

| ASN.1 Type Definition   |  |
|---|--|
| Type Name   | TrCHInfo   |
| Comment   | The same TFCS information should be provided to the PHY and MAC layers at all times. When a CMAC_Config_REQ is used to configure the MAC layer, a corresponding CPHY_TrCH_Config_REQ should be sent to the PHY layer to ensure that the configuration is consistent.<br>For MAC-hs configuration:<br>When ulconnectedTrCHList, ulTFCS, dlconnectedTrCHList and dlTFCS are omitted and hsDSCHMacdFlows is present this ASP configures an MAC-hs entity.<br>For MAC-ehs configuration:<br>When ulconnectedTrCHList, ulTFCS, dlconnectedTrCHList and dlTFCS are omitted and ehs_DSCH_Flows or E-HS-DSCH_Common Flows is present this ASP configures an MAC-ehs entity.<br>Only one of hsDSCHMacdFlows or ehs_DSCH_Flows can be present (Only one of MAC-hs or MAC-ehs layer can be configured). |
| Type Definition   |  |
| <pre> SEQUENCE {     ulconnectedTrCHList SEQUENCE (SIZE (1..maxulTrCH)) OF SEQUENCE {         trchid TransportChannelIdentity,         transportChannelInfo CommonOrDedicatedTFCS     } OPTIONAL,     ulTFCS TFCS OPTIONAL,     dlconnectedTrCHList SEQUENCE (SIZE (1..maxdlTrCH)) OF SEQUENCE {         trchid TransportChannelIdentity,         transportChannelInfo CommonOrDedicatedTFCS     } OPTIONAL,     dlTFCS TFCS OPTIONAL,     hsDSCHMacdFlows HS_DSCHMACdFlows OPTIONAL, -- Rel-5 or later     ehs_DSCH_Flows EHS_DSCH_Flows OPTIONAL, -- Rel-7 or later     ehs_DSCH_CommonFlows EHS_DSCH_CommonFlows OPTIONAL -- Rel-7 or later }         </pre> |  |

| ASN.1 Type Definition  |  |
|--|--|
| Type Name  | TrCH_LogicalChannelMapping   |
| Comment  | When used for logical channel to MAC_d flow mapping<br>dl_LogicalChannelMapping shall be chosen, |
| Type Definition  |  |
| <pre> SEQUENCE {     logicalChannel_Mapping CHOICE {         ul_LogicalChannelMapping SS_UL_LogicalChannelMapping,         dl_LogicalChannelMapping SS_DL_LogicalChannelMapping     },     rB_Identity INTEGER (-31..32) OPTIONAL,     cn_DomainIdentity CN_DomainIdentity OPTIONAL }         </pre> |  |



| ASN.1 Type Definition  |  |
|--|--|
| <b>Type Name</b>   | SS_UL_LogicalChannelMapping  |
| <b>Comment</b>   | <p>If the macHeaderManipulation field is 'NormalMacHeader', then data received on the transport channel supporting this logical channel shall have it's MAC header inspected to determine the appropriate routing, and removed as normal. The MAC SDU shall be passed to the appropriate logical channel.</p> <p>If the macHeaderManipulation field is 'OmitMacHeader', then data received on the transport channel supporting this logical channel shall have it's MAC header inspected to determine the appropriate routing, but the MAC layer shall not remove the MAC header. Thus the entire MAC PDU shall be passed to the appropriate logical channel, and the MAC header can be checked by the TTCN.</p> |
| Type Definition  |  |
| <pre>SEQUENCE {     macHeaderManipulation          MAC_HeaderManipulation,     ul_TransportChannelType        SS_UL_TransportChannelType,     logicalChannelIdentity         LogicalChannelIdentity,     logicalChannelType             LogicalChannelType }</pre> |  |

| ASN.1 Type Definition  |   |
|--|---|
| <b>Type Name</b>   | SS_DL_LogicalChannelMapping   |
| <b>Comment</b>   | <p>If the macHeaderManipulation field is 'NormalMacHeader', then data transmitted on this logical channel shall have an appropriate MAC header added before it is sent to lower layers for transmission.</p> <p>If the macHeaderManipulation field is 'OmitMacHeader', then data transmitted on this logical channel shall not have any MAC header information added, even if the logical channel type and mapping indicates that there should be a MAC header present. This allows the entire MAC PDU to be specified in the TTCN, so individual fields in the MAC header can be modified.</p> <p>When used for DTCH mapping to MAC_d flow, rlc_SizeList shall choose "configured" according to the configured mACHsAddReconfQueue values.</p> <p>When the logical channel is MTCH, the logicalChannelIdentity shall be consistent with MBMS_LogicalChIdentity in MBMS_PTM_RBInformation_N and MBMS_PTM_RBInformation_C.</p> |
| Type Definition  |   |
| <pre>SEQUENCE {     macHeaderManipulation          MAC_HeaderManipulation,     dlTransportChannelType        SS_DL_TransportChannelType,     logicalChannelIdentity         LogicalChannelIdentity,     logicalChannelType             LogicalChannelType,     rlc_SizeList                  CHOICE {         allSizes                   NULL,         configured                  NULL,         explicitList                RLC_SizeExplicitList},     mac_LogicalChannelPriority     MAC_LogicalChannelPriority OPTIONAL }</pre> |   |

| ASN.1 Type Definition   |                            |
|---|----------------------------|
| <b>Type Name</b>  | SS_UL_TransportChannelType |
| <b>Comment</b>  |                            |
| Type Definition   |                            |
| <pre>ENUMERATED {     dch (0),     rach (1),     cpch (2),     usch (3),     edch (4) -- Rel-6 or later }</pre> |                            |

| ASN.1 Type Definition     |                            |
|---------------------------|----------------------------|
| <b>Type Name</b>          | MAC_LogicalChannelPriority |
| <b>Comment</b>            |                            |
| Type Definition           |                            |
| <pre>INTEGER (1..8)</pre> |                            |

| ASN.1 Type Definition  |                            |
|--|----------------------------|
| Type Name  | SS_DL_TransportChannelType |
| Comment  |                            |
| Type Definition  |                            |
| <pre> ENUMERATED {   dch      (0),   fach    (1),   bch     (2),   pch     (3),   dsch    (4),   hsdSCH  (5)    -- Rel-5 or later } </pre> |                            |

| ASN.1 Type Definition  |                    |
|--|--------------------|
| Type Name  | LogicalChannelType |
| Comment  |                    |
| Type Definition  |                    |
| <pre> ENUMERATED {   bCCH    (0),   pCCH    (1),   cCCH    (2),   cTCH    (3),   dCCH    (4),   dTCH    (5),   sHCCH   (6),   mTCH    (7),    -- Rel-6 or later   mCCH    (8),    -- Rel-6 or later   mSCH    (9),    -- Rel-6 or later } </pre> |                    |

| ASN.1 Type Definition  |                        |
|--|------------------------|
| Type Name  | MAC_HeaderManipulation |
| Comment  |                        |
| Type Definition  |                        |
| <pre> ENUMERATED {   normalMacHeader (0),   omitMacHeader   (1) } </pre> |                        |

### 7.3.2.2.17a CMAC\_MACHs\_MACehs\_TFRCconfigure (Rel-5 or later)

| ASN.1 ASP Type Definition                                    |   |
|--|---|
| Type Name  | CMAC_MACHs_MACehs_TFRCconfigure_CNF   |
| PCO Type   | CSAP  |
| Comment  | Applicable Rel-5 or later<br>Confirm a previous CMAC_MACHs_MACehs_TFRCconfigure_REQ being successful. |
| Type Definition  |   |
| <pre> SEQUENCE {   cellId          INTEGER (-1..63) } </pre> |   |

| <b>ASN.1 ASP Type Definition</b> |  |
|----------------------------------|--|
| <b>Type Name</b>                 | CMAC_MAChs_MACehs_TFRCconfigure_REQ  |
| <b>PCO Type</b>                  | CSAP   |
| <b>Comment</b>                   | <p>Applicable Rel-5 or later</p> <p>To configure the TFRC selection in the MAC-hs entity, channelisationCodeOffset + noOfChannelisationCodes shall not be great than 15.</p> <p>If explicitlyConfigured is selected in <code>tfrcConfigMode</code>, the SS shall use all the parameter values specified to configure a correct transport format and radio resources. This configuration is used for HS-SCCH associated HS-DSCH transmission.</p> <p>If <code>sS_Configured</code> is selected, the parameter value range is specified. SS shall dynamically select the suitable values for the parameters "modulationScheme", "channelisationCodeOffset", "noOfChannelisatonCodes ", ".tbSizeIndexOnHS_SCCH", "redundancyVersion" and "hs_PDSCH_TxPower" according to UE's capability category and CQI information reported by the UE. As HS-SCCH less operation and MIMO cannot be simultaneously configured, only one among <code>hs_scch_LessInfo</code> and <code>mimoStatus</code> can be present. When both are absent non MIMO, non HS-SCCH less operation is configured.</p> <p><code>explicitHS_SCCH_LessMode</code> is used to force SS to use HS-SCCH less operation. <code>explicitMIMO</code> is used for MIMO operation. Presence of <code>ss_DTX_Info</code> indicates DL_DRX is enabled.</p> <p>If <code>minimumInterTTIinterval</code> is set to 1, Data is sent every TTI. If it is set to 2, every TTI with Data shall be followed by at least 1 TTI without Data. If it is set to 3, every TTI with Data shall be followed by at least 2 TTI without Data. This field needs to be set as per UE category as defined in Table 5.1a of 25.306.</p> |
| <b>Type Definition</b>           |  |

```

SEQUENCE {
  cellId          INTEGER(-1..63),
  tfrcConfigMode CHOICE {
    explicitlyConfigured SEQUENCE {
      modulationScheme      ModulationScheme,
      channelisationCodeOffset INTEGER (1..15),
      noOfChannelisationCodes INTEGER (1..15),
      tbsSizeIndexOnHS_SCCH INTEGER (0..63),
      minimumInterTTIinterval INTEGER (1..3),
      redundancyVersions     RedundancyVersionList,
      hs_PDSCH_TxPower      DL_TxPower -- default offset related
                                -- to p-CPICH or s-CPICH
    },
    ss_Configured SEQUENCE {
      minChannelisationCodeOffset INTEGER (1..15),
      maxNoOfChannelisationCodes  INTEGER (1..15),
      iniHS_PDSCH_TxPower         DL_TxPower, -- default offset related
                                -- to p-CPICH or s-CPICH
      hs_scch_LessInfo           HS_SCCH_LessInfo_r7 OPTIONAL,
      mimoStatus                 BOOLEAN          DEFAULT FALSE
    },
    explicitHS_SCCH_LessMode SEQUENCE{
      hs_pdsch_CodeIndex      INTEGER (1..15),
      hs_scch_LessTFI         INTEGER (1..90),
      hs_scch_LessSecondCodeApplicability BOOLEAN,
      tbs                     INTEGER (0..3),
                                -- the index of tbs for HS-SCCH less operation
                                -- The value should be consistent with code index, TFI and second
                                -- code applicability
      hs_PDSCH_TxPower        DL_TxPower
                                -- default offset related to p-CPICH or s-CPICH
    },
    explicitMIMO SEQUENCE {
      modulationSchemeAndNumTB INTEGER(0|3|4|6|7),
                                -- set according to table 14 of 25.212
      channelisationCodeOffset INTEGER (1..15),
      noOfChannelisationCodes  INTEGER (1..15),
      precodingWeight2         INTEGER (0..3),
                                -- set according to table 14a of 25.212
      primaryTB_SizeIndexOnHS_SCCH INTEGER (0..63),
      secondaryTB_SizeIndexOnHS_SCCH INTEGER (0..63) OPTIONAL,
                                --present only if second TB is to be tx as per modulationSchemeAndNumTB
      minimumInterTTIinterval  INTEGER (1..3),
      primaryRedundancyVersions RedundancyVersionList,
      secondaryRedundancyVersions RedundancyVersionList OPTIONAL,
                                --present only if second TB is to be tx as per modulationSchemeAndNumTB
      hs_PDSCH_TxPower          DL_TxPower -- default offset related
                                -- to p-CPICH or s-CPICH
    }
  },
  activationTime      SS_ActivationTime,
  ss_DTX_Info         DRX_Info          OPTIONAL
  hs_DSCH_TBSizeTable HS_DSCH_TBSizeTable OPTIONAL
}
    
```

| ASN.1 Type Definition                    |   |
|--|---|
| <b>Type Name</b>                         | RedundancyVersionList   |
| <b>Comment</b>                           | Gives the Redundancy and constellation version coding sequence (Xrv) to be used for every transmission / retransmission. The SIZE (number of Xrv elements in there) of the SEQUENCE implies the number of HARQ transmission / retransmissions to be required. |
| Type Definition                          |   |
| SEQUENCE (SIZE (1..8)) OF INTEGER (0..7) |   |

| ASN.1 Type Definition                                   |                  |
|---|------------------|
| <b>Type Name</b>  | ModulationScheme |
| <b>Comment</b>  |                  |
| Type Definition   |                  |
| ENUMERATED {qpsk (0), qam16 (1), qam64 (2), spare1 (3)} |                  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MAChs_MACehs_HARQprocAssign_CNF   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | Applicable Rel-5 or later<br>Confirm a previous CMAC_MAChs_MACehs_HARQprocAssign_REQ being successful. |
| Type Definition           |  |
| SEQUENCE {                |  |
| cellId                    | INTEGER (-1..63)   |
| }                         |  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MAChs_MACehs_HARQprocAssign_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | Applicable Rel-5 or later<br>To assign a HARQ process handling the next MAC-hs PDU transmission. This ASP provides TTCN the ability to select an HARQ process serving the next MAC-hs PDU which follows the ASP. After successful transmission the MAC-hs returns back to normal operation. In the normal operation a suitable HARQ process is selected by HARQ entity in the MAC-hs to serve the MAC-hs PDU without TTCN intervening. |
| Type Definition           |  |
| SEQUENCE {                |  |
| cellId                    | INTEGER (-1..63),  |
| harqProcessId             | INTEGER (0..15 31)   |
| }                         |  |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CMAC_MAChs_MACehs_Reset_CNF   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | Applicable Rel-5 or later<br>Confirm a previous CMAC_MAChs_MACehs_Reset_REQ being successful. |
| Type Definition           |   |
| SEQUENCE {                |   |
| cellId                    | INTEGER (-1..63)  |
| }                         |   |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MAChs_MACehs_Reset_REQ                              |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | Applicable Rel-5 or later<br>To reset the MAC-hs entity. |
| Type Definition           |  |
| SEQUENCE {                |  |
| cellId                    | INTEGER (-1..63)   |
| }                         |  |

### 7.3.2.2.17aa CMAC\_MACehs\_HS\_SCCH\_Orders (Rel-5 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MACehs_HS_SCCH_OrdersCNF  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | Applicable Rel-7 or later<br>Confirm a previous CMAC_MACehs_HS_SCCH_Orders REQ being successful. |
| Type Definition           |  |
| SEQUENCE {                |  |
| cellId                    | INTEGER (-1..63),  |
| routingInfo               | RoutingInfo -- Physical Channel ID   |
| }                         |  |

| ASN.1 ASP Type Definition  |   |
|--|---|
| <b>Type Name</b>   | CMAC_MACeHS_HS_SCCH_OrdersREQ   |
| <b>PCO Type</b>  | CSAP  |
| <b>Comment</b>   | Applicable Rel-7 or later<br>To instruct SS to transmit requested HS-SCCH orders at requested time:<br>OrderType, drx_order, dtx_Order are as per 25.212 clause 4.6c.2<br>Cfn and subframe together indicate, the time on which the HS-SCCH order is to be transmitted. |
| Type Definition  |   |
| <pre>SEQUENCE {   cellId          INTEGER(-1..63),   routingInfo     RoutingInfo,      -- Physical Channel ID   cfn             INTEGER(0..255),   subframe       INTEGER(0..4),   ordertype      INTEGER(0..7),   drx_Order      INTEGER(0..1),   dtx_Order      INTEGER(0..1),   spare          INTEGER(0..1),   h_RNTI         H_RNTI }</pre> |   |

7.3.2.2.17b CMAC\_MACe\_Config (Rel-6 or later)

| ASN.1 ASP Type Definition                              |   |
|--|---|
| <b>Type Name</b>                                       | CMAC_MACe_Config_CNF                                      |
| <b>PCO Type</b>  | CSAP  |
| <b>Comment</b>   | Confirm a previous CMAC_MACe_Config_REQ being successful. |
| Type Definition  |   |
| <pre>SEQUENCE {   nodeB_Id      INTEGER(0..63) }</pre> |   |

| ASN.1 ASP Type Definition  |                      |
|--|----------------------|
| <b>Type Name</b>   | CMAC_MACe_Config_REQ |
| <b>PCO Type</b>  | CSAP                 |
| <b>Comment</b>   |                      |
| Type Definition  |                      |
| <pre>SEQUENCE {   nodeB_Id      INTEGER(0..63),   configMessage CHOICE {     setup        MACeConfig,     reconfig     MACeConfig,     reset        NULL,     release      SS_ActivationTime   } }</pre> |                      |

| ASN.1 Type Definition  |  |
|--|--|
| <b>Type Name</b>   | MACeConfig   |
| <b>Comment</b>   | <p>If the macHeaderManipulation field is 'NormalMacHeader' in ddiMappingList, then data received on the E-DCH (MAC_e PDU) shall have it's MAC header inspected to de-multiplex and to determine the appropriate routing, and the MACes PDU shall be passed to the MAC_es together with the relevant DDI, N, CFN and subframe number.</p> <p>If the macHeaderManipulation field field is 'OmitMacHeader', then data received on the E-DCH (MAC_e PDU) shall have it's MAC header inspected to de-multiplex and to determine the appropriate routing, then the MAC_e layer shall delivery the MAC-es PDU, SI and the related CFN, subframe number to the MAC_es entity.</p> <p>connectedToMAC_es field is used to provide the possibility that the E-DCH-MACdFlows from only one MAC_e entity are connected to the MAC_es entity in the inter node B soft handover test cases.</p> <p>The IEs ddiMappinglist and e_DCHMacdFlows can be OMITted when changing the serving cell MAC-e without modification of MAC-e configurations. It will be applied in EDCH SHO.</p> <p>ss_DRX_MAC_Info presence indicates UL DRX shall be applied.</p> |
| Type Definition  |  |
| <pre>SEQUENCE {   activationTime          SS_ActivationTime,   ddiMappinglist         DDI_MappingList    OPTIONAL,   e_DCHMacdFlows        E_DCHMACdFlows    OPTIONAL,   connectedToMAC_es     BOOLEAN DEFAULT TRUE, -- can be set to FALSE in inter nodeB SHO   ss_DRX_MAC_Info       SS_DRX_MAC_Info    OPTIONAL }</pre> |  |

| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | SS_DRX_MAC_Info  |
| <b>Comment</b>  | Consistent with E-DCH TTI, either of mac_dtx_Cycle_2ms or mac_dtx_Cycle_10ms shall be present. |
| Type Definition   |  |
| <pre>SEQUENCE {   mac_InactivityThreshold MAC_InactivityThreshold,   mac_dtx_Cycle_2ms      MAC_DTX_Cycle_2ms OPTIONAL,   mac_dtx_Cycle_10ms    MAC_DTX_Cycle_10ms OPTIONAL,   timingInfo             NewTiming }</pre> |  |

7.3.2.2.17c CMAC\_MACe\_NodeB\_CellMapping (Rel-6 or later)

| ASN.1 ASP Type Definition   |  |
|---|--|
| <b>Type Name</b>  | CMAC_MACe_NodeB_CellMapping_CNF                                      |
| <b>PCO Type</b>   | CSAP   |
| <b>Comment</b>  | Confirm a previous CMAC_MACe_NodeB_CellMapping_REQ being successful. |
| Type Definition   |  |
| <pre>SEQUENCE {   nodeB_Id                INTEGER (0..63) }</pre> |  |

| ASN.1 ASP Type Definition  |   |
|--|---|
| <b>Type Name</b>   | CMAC_MACe_NodeB_CellMapping_REQ   |
| <b>PCO Type</b>  | CSAP  |
| <b>Comment</b>   | <p>To put a set of cells under the control of a MAC_e entity indicated by nodeB_Id, which is configured by CMAC_MAC_e_Config_REQ.</p> <p>This ASP establishes the routing relation between E-DCH related channels in these cells with a MAC_e entity.</p> <p>A cell is mapped to only one NodeB, and the cellId allocation is unique in a test.</p> |
| Type Definition  |   |
| <pre>SEQUENCE {   nodeB_Id                INTEGER (0..63),   celllist                SEQUENCE OF INTEGER (0..63) }</pre> |   |

7.3.2.2.17d CMAC\_MACes\_Config (Rel-6 or later)

| ASN.1 ASP Type Definition                                    |   |
|--|---|
| Type Name  | CMAC_MACes_Config_CNF   |
| PCO Type   | CSAP  |
| Comment  | Confirm a previous CMAC_MACes_Config_REQ being successful. cellId=-1. |
| Type Definition  |   |
| <pre>SEQUENCE {     cellId          INTEGER (-1..63) }</pre> |   |

| ASN.1 ASP Type Definition   |   |
|---|---|
| Type Name   | CMAC_MACes_Config_REQ   |
| PCO Type  | CSAP  |
| Comment   | This ASP is used for creating and configuring, reconfiguring, resetting or releasing an MAC_es, a cell / nodeB-independent entity in the SS. cellId=-1. |
| Type Definition   |   |
| <pre>SEQUENCE {     cellId          INTEGER (-1..63),     configMessage   CHOICE {         setup        MACesConfig,         reconfig     MACesConfig,         reset        NULL,         release      SS_ActivationTime} }</pre> |   |

| ASN.1 Type Definition   |  |
|---|--|
| Type Name   | MACesConfig  |
| Comment   | MACesConfig establishes the mapping between logical channels and E-DCH_MACd_Flows.<br>When the macTestMode is TRUE, the re-ordering entity shall not eliminate the duplicated packets, but passes them to RLC. macTestMode = "TRUE" is used for testing the retransmission function of HARQ process. |
| Type Definition   |  |
| <pre>SEQUENCE {     activationTime  SS_ActivationTime,     ddiMappinglist DDI_MappingList,     macTestMode    BOOLEAN DEFAULT FALSE }</pre> |  |

| ASN.1 Type Definition                             |                 |
|---|-----------------|
| Type Name   | DDI_MappingList |
| Comment   |                 |
| Type Definition                                   |                 |
| <pre>SEQUENCE (SIZE (1..31)) OF DDI_Mapping</pre> |                 |



| ASN.1 Type Definition      |   |
|----------------------------|---|
| <b>Type Name</b>           | DDI_Mapping   |
| <b>Comment</b>             | <p>Both SRBs and RBs can be mapped onto E-DCH. The mechanism for control of MAC header manipulation (macHeaderManipulation) is applied to individual logical channels to be mapped on E-DCH. Typically, the SRBs are configured in 'NormalMacHeader' mode while the RBs in user plane can be configured either in 'NormalMacHeader' or in "OmitMacHeader" mode.</p> <p>If more than one UL RLC PDU size is configured for the RB (represent by logicalChannelIdentity), the different sizes will use subsequent DDI values starting from the DDI value in this table.</p> <p>If the value of macHeaderManipulation field is 'NormalMacHeader', then data received on the E-DCH MACd flows supporting this logical channel shall have its MAC header inspected to determine the appropriate routing, and removed as normal. The MACes SDU shall be passed to the appropriate logical channel.</p> <p>If the value of macHeaderManipulation field is 'OmitMacHeader', then data received on the E-DCH MACd flows supporting this logical channel shall have its MAC header inspected to determine the appropriate routing, then the MAC_es layer shall deliver the MAC-es SDU, SI and the related CFN, subframe number, HARQ process identity to the appropriate logical channel. The TTCN receives these fields by RLC_MACes_DATA_IND, then these fields can be checked by the TTCN.</p> <p>HARQ ID = CFN mod 4 for TTI=10ms;<br/> HARQ ID = (5*CFN + subframe number) mod 8 for TTI=2ms</p> |
| Type Definition            |   |
| SEQUENCE {                 |   |
| macHeaderManipulation      | MAC_HeaderManipulation,   |
| logicalChannelIdentity     | LogicalChannelIdentity,   |
| e_DCH_MAC_d_FlowIdentity   | E_DCH_MAC_d_FlowIdentity,   |
| ddi                        | DDI,  |
| rlc_PDU_SizeList           | RLC_PDU_SizeList,   |
| includeInSchedulingInfo    | BOOLEAN,  |
| mac_LogicalChannelPriority | MAC_LogicalChannelPriority,   |
| logicalChannelType         | LogicalChannelType,   |
| rB_Identity                | INTEGER (-31..32) OPTIONAL  |
| }                          |   |

## 7.3.2.2.17e CMAC\_MACe\_AG (Rel-6 or later)

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CMAC_MACe_AG_CNF                                      |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | Confirm a previous CMAC_MACe_AG_REQ being successful. |
| Type Definition           |   |
| SEQUENCE {                |   |
| nodeB_Id                  | INTEGER (0..63)                                       |
| }                         |   |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MACe_AG_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | The hARQProcId shall be converted to the nearest CFN (and subframe number if TTI = 2 ms) by the SS, and the Absolute Grant is sent in that CFN (and subframe number if TTI = 2 ms) |
| Type Definition           |  |
| SEQUENCE {                |  |
| nodeB_Id                  | INTEGER (0..63),   |
| grantType                 | ENUMERATED {primary(0), secondary(1)},   |
| absoluteGrantValue        | BIT STRING (SIZE(5)),  |
| absoluteGrantScope        | BIT STRING (SIZE(1)),  |
| hARQProcId                | INTEGER (0..7),  |
| activationTime            | SS_ActivationTime  |
| }                         |  |

## 7.3.2.2.17f CMAC\_MACe\_AckNack (Rel-6 or later)

| ASN.1 ASP Type Definition |                               |
|---------------------------|-------------------------------|
| <b>Type Name</b>          | CMAC_MACe_AckNack_CNF         |
| <b>PCO Type</b>           | CSAP                          |
| <b>Comment</b>            | To Confirm CMAC_e_AckNack_REQ |
| Type Definition           |                               |
| SEQUENCE                  | {                             |
|                           | nodeB_Id INTEGER (0..63)      |
|                           | }                             |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MACe_AckNack_REQ  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request the SS to set operation mode of the Ack/Nack function for the HARQ process hARQProcId.<br>The harQProcId, between 0 to 3 for 10 ms TTI or 0 to 7 for 2 msTTI, is individually applied to the configuration for the normal / nack mode. If the special hARQProcId -1 is used, all active HARQ processes ( 0..3 for 10 ms TTI and 0..7 for 2 ms TTI) will be configured according to ackNackFunction.<br>At the SS initialization Ack/Nack function is in normal operation mode |
| Type Definition           |  |
| SEQUENCE                  | {  |
|                           | nodeB_Id INTEGER (0..63),  |
|                           | hARQProcId INTEGER (-1 0..7),  |
|                           | ackNackFunction AckNackFunction  |
|                           | }  |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | AckNackFunction   |
| <b>Comment</b>        | normal : put the HARQ process in normal operation mode, it generates the ACK or NACK according to whether the received TB block can be decoded correctly and delivery the correctly decoded data to higher layer. When the MAC_e is configured the HARQ process is in normal operation mode.<br>nack : put the HARQ process in the special operation mode in which the HARQ process always sends NACK for the received TB block till the number of the retransmissions reaches the number indicated in this field. The HARQ process is back to the normal operation mode after the number is reached or received a normal mode request. Except each received TB shall be passed to higher layer, other operations are the same as a real NACK occurred. |
| Type Definition       |   |
| CHOICE                | {   |
|                       | normal NULL,  |
|                       | nack E_DCH_MAC_d_FlowMaxRetrans   |
|                       | }   |

## 7.3.2.2.17g CMAC\_MACe\_E\_TFC\_Restriction (Rel-6 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MACe_E_TFC_Restriction_CNF  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | For MAC emulator to report that a previous attempt of restricting TFCs have been successful. |
| Type Definition           |  |
| SEQUENCE                  | {  |
|                           | nodeB_Id INTEGER (0..63)   |
|                           | }  |

| ASN.1 ASP Type Definition  |   |
|--|---|
| <b>Type Name</b>   | CMAC_MACe_E_TFC_Restriction_REQ   |
| <b>PCO Type</b>  | CSAP  |
| <b>Comment</b>   | To request to configure MACe entity. The field restrictAllowedTFCs is provided to allow the E-TFCI to be restricted. The IE fullE_TFCS will be used to remove any previous E_TFCS restriction configured. |
| Type Definition  |   |
| <pre>SEQUENCE {     nodeB_Id                INTEGER (0..63),     restrictAllowedTFCs     CHOICE {                             e_TFCS_Restriction    E_TFCS_Restriction,                             fullE_TFCS            NULL } }</pre> |   |

| ASN.1 Type Definition        |  |
|------------------------------|--|
| <b>Type Name</b>             | E_TFCS_Restriction   |
| <b>Comment</b>               | The E_TFCS restriction is a list of E-TFCIs, and can be used to verify that the UE has used a specific TFC. Any data received by the SS using a forbidden TFCI shall be discarded. |
| Type Definition              |  |
| SEQUENCE OF INTEGER (0..127) |  |

## 7.3.2.2.17h CMAC\_MACe\_RG (Rel-6 or later)

| ASN.1 ASP Type Definition   |   |
|---|---|
| <b>Type Name</b>  | CMAC_MACe_RG_CNF                                      |
| <b>PCO Type</b>   | CSAP  |
| <b>Comment</b>  | Confirm a previous CMAC_MACe_RG_REQ being successful. |
| Type Definition   |   |
| <pre>SEQUENCE {     nodeB_Id                INTEGER (0..63) }</pre> |   |

| ASN.1 ASP Type Definition   |   |
|---|---|
| <b>Type Name</b>  | CMAC_MACe_RG_REQ  |
| <b>PCO Type</b>   | CSAP  |
| <b>Comment</b>  | For non-serving RL the value for relativeGrant is limited to "down" and "hold". The SS shall convert the hARQProclId to the nearest CFN (and subframe number if TTI = 2 ms) by the SS and send the Relative Grant in that CFN (and subframe number if TTI = 2 ms) |
| Type Definition   |   |
| <pre>SEQUENCE {     nodeB_Id                INTEGER (0..63),     relativeGrant           ENUMERATED {up(0), down(1), hold(2)},     hARQProcId             INTEGER (0..7),     activationTime          SS_ActivationTime }</pre> |   |

## 7.3.2.2.17ha CMAC\_MACe\_Bind\_Grant\_Tx (Rel-7 or later)

| ASN.1 ASP Type Definition   |  |
|---|--|
| <b>Type Name</b>  | CMAC_MACe_Bind_Grant_Tx_CNF  |
| <b>PCO Type</b>   | CSAP   |
| <b>Comment</b>  | To confirm the request of binding subsequent Absolute/Relative grant transmission<br>The response comes after successful transmission of AG/RG data along with channel to which AG/RG is binded.<br>Cfn and subframe number provides the timing at which the Relative grant transmission was successful.<br>After successful transmission, binding is invalid. (i.e next AG/RG transmission happen without any special restrictions) |
| Type Definition   |  |
| <pre>SEQUENCE{   cellId          INTEGER(-1..63),   routingInfo     RoutingInfo,      -- Physical channel Id of AG/RG channel   result          ENUMERATED{failure(0), success(1)},   cfn             INTEGER(0..255),  -- gives the cfn in which it was transmitted   subframe        INTEGER(0..4 7),  -- subframe in which it was transmitted                                      -- 0..4 when TTI=2ms, 7 when TTI=10ms    physicalChannel CHOICE {     e_HICH        INTEGER(0..31),    -- the channel ID     spare1        NULL   } }</pre> |  |

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | CMAC_MACe_Bind_Grant_Tx_REQ  |
| <b>PCO Type</b>  | CSAP   |
| <b>Comment</b>   | To request of binding subsequent Absolute/Relative grant transmission with another DL physical channel transmission.<br>On the request, the transmission of the Absolute/Relative grant is temporarily suppressed till SS has transmission ready on channel to which AG/RG is binded |
| Type Definition  |  |
| <pre>SEQUENCE{   cellId          INTEGER(-1..63),   routingInfo     RoutingInfo,      -- Physical channel Id of AG/RG channel   physicalChannel CHOICE {     e_HICH        INTEGER(0..31),    -- the channel ID     spare1        NULL   } }</pre> |  |

## 7.3.2.2.17i CMAC\_MACes\_SI\_IND

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | CMAC_MACes_SI_IND  |
| <b>PCO Type</b>  | CSAP   |
| <b>Comment</b>   | This ASP is used for MACes delivering scheduling information in MAC_es testing.<br>cellId=-1.<br>If the SI was sent alone in a MAC-e PDU or sent together with other MAC-es PDU in a MAC-e PDU but without a special DDI associated the value of specialDDIpresence is set to absent;<br>If the SI was sent together with other MAC-es PDU in a MAC-e PDU with a special DDI (DDI 63) associated the specialDDIpresence is set to present. |
| Type Definition  |  |
| <pre>SEQUENCE {   cellId          INTEGER(-1..63),   cfn             INTEGER(0..255),   subframe        INTEGER(0..4 7), -- 0..4 when TTI=2ms, 7 when TTI=10ms   specialDDIpresence ENUMERATED {absent(0), present(1)},   uePowerHeadRoom  BIT STRING(SIZE(5)),   totalE_DCHBufferStatus BIT STRING(SIZE(5)),   highestPriorityLogChBS BIT STRING(SIZE(4)),   highestPriorityLogChId BIT STRING(SIZE(4)) }</pre> |  |

7.3.2.2.17j CMAC\_MACes\_SI\_Config (Rel-6 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MACes_SI_Config_CNF   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | Applicable Rel-6 or later<br>To Confirm CMAC_MACes_SI_Config_REQ, cellId=-1. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                   INTEGER (-1..63)<br>}          |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MACes_SI_Config_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | Applicable Rel-6 or later<br>To configure the SS to enable / disable to report the reception of Scheduling Information in MAC-Es PDU's via primitive CMAC_MACes_SI_IND.<br>At the SS initialization, the default mode is SI reporting disabled. cellId=-1. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                   INTEGER (-1..63),<br>sI_reportEnable                        ENUMERATED {disable(0), enable(1)}   DEFAULT disable<br>}  |

7.3.2.2.17k CMAC\_MBMS\_ConfigInfo (Rel-6 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MBMS_ConfigInfo_CNF   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To confirm CMAC_MBMS_ConfigInfo_REQ. The routingInfo indicates the physical channel which carries logical channel of type: MCCH, MSCH. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                   INTEGER (0..63),<br>routingInfo                             RoutingInfo<br>}             |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_MBMS_ConfigInfo_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To provide the SS MCCH or MSCH configuration information. The routingInfo indicates the physical channel which carries logical channel of type : MCCH or MSCH.<br>This ASP shall be called after the ASP CMAC_Config_REQ used for MCCH or MSCH configuration.  |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                   INTEGER (0..63),<br>routingInfo                             RoutingInfo,<br>mCCH_ConfigInfo                        MBMS_MCCH_ConfigurationInfo_r6   OPTIONAL,<br>mSCH_ConfigInfo                        MBMS_MSCH_ConfigurationInfo_r6   OPTIONAL<br>} |

## 7.3.2.2.18 CMAC\_PAGING\_Config

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_PAGING_Config_CNF                 |
| <b>PCO Type</b>           | CSAP                                   |
| <b>Comment</b>            | To confirm to setup the paging message |
| Type Definition           |  |
| SEQUENCE                  | {                                      |
| cellId                    | INTEGER(0..63),                        |
| routingInfo               | RoutingInfo                            |
| }                         |  |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CMAC_PAGING_Config_REQ  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To request MAC layer to send the Paging message on the specified configuration. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER(0..63),   |
| routingInfo               | RoutingInfo,  |
| ratType                   | RatType,  |
| configMessage             | CmacPagingConfigReq   |
| }                         |   |

| ASN.1 Type Definition |                                       |
|-----------------------|---------------------------------------|
| <b>Type Name</b>      | CmacPagingConfigReq                   |
| <b>Comment</b>        |                                       |
| Type Definition       |                                       |
| SEQUENCE              | {                                     |
| pI_BitMapInfo         | CHOICE {                              |
| e18                   | BIT STRING (SIZE (18)),               |
| e36                   | BIT STRING (SIZE (36)),               |
| e72                   | BIT STRING (SIZE (72)),               |
| e144                  | BIT STRING (SIZE (144))               |
|                       | },                                    |
| dRX_CycleLength       | INTEGER {3..9},                       |
| iMSI                  | SEQUENCE (SIZE (6..15)) OF Digit,     |
| t_pich_T_sccpch       | BOOLEAN -- T_pich>T_sccpch then FALSE |
| }                     |                                       |

## 7.3.2.2.19 CMAC\_Restriction

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_Restriction_CNF   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | For MAC emulator to report that a previous attempt of restricting TFCs have been successful. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo  |
| }                         |  |

| ASN.1 ASP Type Definition  |   |
|--|---|
| <b>Type Name</b>   | CMAC_Restriction_REQ  |
| <b>PCO Type</b>  | CSAP  |
| <b>Comment</b>   | To request to configure MAC entity. The field restrictAllowedTFCs is provided to allow the UL and/or DL SS TFCS to be restricted for a specific transport channel. This information only needs to be sent to the MAC layer, since it is the MAC layer's responsibility to determine the set of valid TFCs each TTI. |
| Type Definition  |   |
| <pre>SEQUENCE {     cellId                INTEGER (-1..63),     routingInfo           RoutingInfo,     ratType               RatType,     restrictAllowedTFCs  TFC_Restriction }</pre> |   |

| ASN.1 Type Definition  |  |
|--|--|
| <b>Type Name</b>   | TFC_Restriction  |
| <b>Comment</b>   | <p>This type is used to specify the allowed TFCs within the current TFCS. A TFC restriction is applicable until a subsequent TFC restriction is applied. TFC restrictions are not cumulative, so each TFC restriction completely replaces the previous TFC restriction.</p> <p>The downlink restriction can be used to ensure that the SS uses a specific TFC for transmission of data, by only allowing the 'No data' TFC, and the 'desired' TFC. It may also be necessary to include one or more 'signalling only' TFCs to allow signalling to occur.</p> <p>The uplink restriction can be used to verify that the UE has used a specific TFC. Any data received by the SS using a forbidden TFCI shall be discarded.</p>  |
| Type Definition  |  |
| <pre>SEQUENCE {     ulTFCI_Restriction  TFC_Subset OPTIONAL,     dlTFCI_Restriction  TFC_Subset OPTIONAL }</pre> |  |
| <b>Detailed Comments</b>   | <p>SS requirements for downlink:</p> <ol style="list-style-type: none"> <li>1. The SS MAC layer shall not use a restricted non-allowed TFC for DL.</li> <li>2. The SS MAC layer shall not use a TFC that requires the SS RLC layer to provide padding PDUs (3GPP TS 25.322 [18])</li> <li>3. In the case that there is data pending on one or more RLC entities, but not enough to use one of the allowed TFCs: <ol style="list-style-type: none"> <li>a. The SS MAC layer shall use the 'No data' TFC until there is enough data in the RLC to use another allowed TFC.</li> <li>b. The SS RLC layer shall buffer the data until there is enough data in the RLC entities for the MAC layer to use an allowed TFC other than the 'No data' TFC for transmission of the data.</li> </ol> </li> </ol> <p>NOTE: The TTCN author is responsible for ensuring:</p> <ol style="list-style-type: none"> <li>1. The SDU discard function is not configured for TM and UM entities in the UE, and is configured to no_discard for AM entities in the UE.</li> <li>2. That RLC SDUs that are expected to be sent in the same TTI (due to a TFC restriction) are sent as quickly as possible to minimize the number of 'no data' TFCs used by the MAC layer, and the amount of buffering that must be performed by the RLC layer.</li> </ol> <p>SS requirements for uplink:<br/>The SS shall discard all data received using a restricted non-allowed TFC.</p> |

### 7.3.2.2.20 CMAC\_SecurityMode\_Config

| ASN.1 ASP Type Definition  |   |
|--|---|
| <b>Type Name</b>   | CMAC_SecurityMode_Config_CNF                  |
| <b>PCO Type</b>  | CSAP  |
| <b>Comment</b>   | To confirm to configure the MAC security mode |
| Type Definition  |   |
| <pre>SEQUENCE {     cellId                INTEGER (-1..63) }</pre> |   |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_SecurityMode_Config_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request to configure the MAC security mode.<br>If there are several CMAC_Ciphering_Activate_REQ follow this ASP, the SS shall take a serial of specified actions on the same contents in this ASP at the activation time indicated in each CMAC_Ciphering_Activate_REQ. |
| Type Definition           |  |
| SEQUENCE {                |  |
| cellId                    | INTEGER(-1..63),   |
| macCipheringInfo          | SecurityInfo   |
| }                         |  |

## 7.3.2.2.21 CMAC\_SequenceNumber

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CMAC_Sequence_Number_CNF  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To return the requested counter sequence number on MAC-d DCH. The physicalChannelIdentity of DPCH applies to routingInfo. |
| Type Definition           |   |
| SEQUENCE {                |   |
| cellId                    | INTEGER(-1..63),  |
| routingInfo               | RoutingInfo,  |
| count_C_MSB_UL            | COUNT_C_MSB ,   |
| count_C_MSB_DL            | COUNT_C_MSB   |
| }                         |   |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_SequenceNumber_REQ  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request the MAC layer to return current counter sequence numbers. The physicalChannelIdentity of DPCH applies to routingInfo. |
| Type Definition           |  |
| SEQUENCE {                |  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo  |
| }                         |  |

## 7.3.2.2.22 CMAC\_SYSINFO\_Config

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CMAC_SYSINFO_Config_CNF                          |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To confirm to setup the system information block |
| Type Definition           |  |
| SEQUENCE {                |  |
| cellId                    | INTEGER(0..63),                                  |
| routingInfo               | RoutingInfo                                      |
| }                         |  |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CMAC_SYSINFO_Config_REQ   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To request MAC layer to send the BCCH message on the specified configuration. |
| Type Definition           |   |
| SEQUENCE {                |   |
| cellId                    | INTEGER(0..63),   |
| routingInfo               | RoutingInfo,  |
| ratType                   | RatType,  |
| configMessage             | CmacSysinfoConfigReq  |
| }                         |   |



| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | CmacSysinfoConfigReq  |
| <b>Comment</b>        |   |
| Type Definition       |   |
| SEQUENCE {            |   |
| sg_REP                | INTEGER (2..12),<br>-- Repetition period is the sg_REP-th power of 2. |
| sg_POS                | INTEGER (0..2047),<br>-- The position of each segment is 2 * sg_POS.  |
| bcch_ModificationTime | BCCH_ModificationTime OPTIONAL  |
| }                     |   |

## 7.3.2.2.22a CRLC\_Bind\_TestData\_TTI

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CRLC_Bind_TestData_TTI_CNF  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To confirm the request of binding subsequent data sending RLC_TR_TestDataReq on the different DL RBs in the same TTI. |
| Type Definition           |   |
| SEQUENCE {                |   |
| cellId                    | INTEGER(-1..63),  |
| result                    | ENUMERATED{failure(0), success(1)}  |
| }                         |   |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CRLC_Bind_TestData_TTI_REQ  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To request binding subsequent data sending RLC_TR_TestDataReq on the different DL RBs in the same TTI.<br>On the request, the transmission of the test data is temporarily suppressed on those radio bearers which follow subsequently this CRLC_Bind_TestData_TTI_REQ and have 'numOfDiffRb' different RB IDs. Having received the number 'numOfDiffRb' of RLC_TR_TestDataReq, the SS RLC sends the test data on those RBs in the same TTI according to the allowed DL TFCS. |
| Type Definition           |   |
| SEQUENCE {                |   |
| cellId                    | INTEGER(-1..63),  |
| numOfDiffRb               | INTEGER(2..6) -- Number of different RB IDs   |
| }                         |   |

## 7.3.2.2.22b CRLC\_BindTestDataInOneMAChs\_MACehs\_PDU (Rel-5 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_BindTestDataInOneMAChs_MACehs_PDU_CNF   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To confirm the request of binding subsequent data sending RLC_TR/UM/AM_TestDataReq on the specified RB mapped on HS-DSCH in the same MAC-hs/MAC-ehs PDU. |
| Type Definition           |  |
| SEQUENCE{                 |  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo, -- RB ID desired to be given  |
| result                    | ENUMERATED{failure(0), success(1)}   |
| }                         |  |

| ASN.1 ASP Type Definition   |   |
|---|---|
| <b>Type Name</b>  | CRLC_BindTestDataInOneMAChs_MACehs_PDU_REQ  |
| <b>PCO Type</b>   | CSAP  |
| <b>Comment</b>  | To request of binding subsequent data sending RLC_TR/UM/AM_TestDataReq on the specified RB mapped on HS-DSCH in the same MAC-hs/MAC-ehs PDU. On the request, the transmission of the test data is temporarily suppressed on the radio bearers till 'numOfSDUs' are received by RLC layer on the Radio Bearer. After receiving all SDU's the RLC layer submits to MAC such that all of them are sent in one MAC-hs/ MAC-ehs PDU. |
| Type Definition   |   |
| <pre>SEQUENCE {   cellId          INTEGER (-1..63),   routingInfo     RoutingInfo,          -- RB ID desired to be given   numOfSDUs      INTEGER                -- Number of RLC SDU's }</pre> |   |

## 7.3.2.2.23 CRLC\_Ciphering\_Activate

| ASN.1 ASP Type Definition                                  |  |
|--|--|
| <b>Type Name</b>   | CRLC_Ciphering_Activate_CNF                        |
| <b>PCO Type</b>  | CSAP   |
| <b>Comment</b>   | To confirm to activate or inactivate the ciphering |
| Type Definition  |  |
| <pre>SEQUENCE {   cellId          INTEGER (-1..63) }</pre> |  |

| ASN.1 ASP Type Definition  |   |
|--|---|
| <b>Type Name</b>   | CRLC_Ciphering_Activate_REQ   |
| <b>PCO Type</b>  | CSAP  |
| <b>Comment</b>   | To request to start or restart downlink ciphering or uplink deciphering. Each call of the ASP includes one RLC SN in rb-DL-CiphActivationTimeInfo for the corresponding rb-identity. Initialize the 20 MSB of HFN component of COUNT-C to the START value stored. For RLC_UM COUNT-C:<br>- If the value of incHFN is set to "NotInc" the SS initializes the remaining LSBs of HFN component in UM COUNT-C to zero.<br>- If the value of incHFN is set to "Inc" the SS initializes the remaining LSBs of HFN component in UM COUNT-C to zero, then increments the HFN by one.<br>For RLC_AM COUNT-C:<br>- If the value of incHFN is set to "NotInc" no further action is needed.<br>- If the value of incHFN is set to "Inc" the SS increments the HFN by one. |
| Type Definition  |   |
| <pre>SEQUENCE {   cellId          INTEGER (-1..63),   ratType         RatType,   cn_DomainIdentity CN_DomainIdentity,   ciphActivationInfo CiphActivationInfo,   incHFN          RLC_IncMode }</pre> |   |

| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | CiphActivationInfo  |
| <b>Comment</b>  | DL or UL ciphering activation info<br>If RB is omitted in rB_UL_CiphActivationTimeInfo the SS takes no action on this RB and the ciphering configuration keeps unchanged on this RB.<br>CipheringModeCommand = dummy NULL means no ciphering. |
| Type Definition   |   |
| <pre>CHOICE {   cipheringModeInfo          CipheringModeInfo,   rb_UL_CipheringActivationTimeInfo RB_ActivationTimeInfoList,   cipheringModeInfo_r7      CipheringModeInfo_r7 -- Rel-7 or later }</pre> |   |



| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | RB_LogCH_Mapping   |
| <b>Comment</b>  | Provide mapping information between RB, logical channel and CN domain. When the logical channel is MTCH, the logicalChannelIdentity shall be consistent with MBMS_LogicalChIdentity in MBMS_PTM_RBInformation_N and MBMS_PTM_RBInformation_C being sent to the UE. |
| Type Definition   |  |
| <pre>SEQUENCE {   uLogicalChannelIdentity      LogicalChannelIdentity OPTIONAL,   dLogicalChannelIdentity      LogicalChannelIdentity OPTIONAL,   logicalChannelType           LogicalChannelType      OPTIONAL,   cn_DomainIdentity            CN_DomainIdentity      OPTIONAL }</pre> |  |

| ASN.1 Type Definition  |  |
|--|--|
| <b>Type Name</b>   | SS_RLC_Info  |
| <b>Comment</b>   | UL and DL have been swapped intentionally in this type definition. This is to maximize re-use of the type definitions in 3GPP TS 25.331 [21] which are intended to configure a UE, where UL is transmission, and DL is reception. For the SS, UL is reception, and DL is transmission. For example, consider configuring a DL AM RLC entity (transmitter) in the SS. The transmission parameters to be configured include PollingInformation, Transmission-RLC-Discard etc. If the DL-AM-RLC-Mode type definition is used to configure this entity, it is only possible to configure reception parameters such as StatusInformation, and receiving window size. By swapping UL and DL, it is possible to configure the DL AM RLC entity using the existing type definition UL-AM-RLC-Info, which contains all of the required transmission parameters. |
| Type Definition  |  |
| <pre>SEQUENCE {   sS_ul_RLC_Mode      DL_RLC_Mode      OPTIONAL,   sS_dl_RLC_Mode      SS_DL_RLC_Mode   OPTIONAL,   rlc_OneSidedReEst   BOOLEAN          DEFAULT FALSE,   altE_bitInterpretation ENUMERATED {false (0), true (1)} DEFAULT false,   -- applicable only for UM RLC mode of Rel-7 or later   useSpecialValueOfHEField ENUMERATED {false (0), true (1)} DEFAULT false   -- applicable only for AM RLC mode of Rel-7 or later }</pre> |  |

| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | SS_DL_RLC_Mode  |
| <b>Comment</b>  | “dl_UM_outOfSeqDelivery” is present only for the DL_RLC entity connected to MCCH, and in the configuration with dl_UM_outOfSeqDelivery present the UM RLC can transmit RLC PDU containing SDU of ACCESS INFORMATION message out of sequence when it is necessary. Maximum one among dl_RLC_PDU_size & dl_PayloadSize shall be included. For RLC UM configuration, with altE_bitInterpretation set to TRUE, neither dl_PayloadSize nor dl_RLC_PDU_size can be present. |
| Type Definition   |   |
| <pre>SEQUENCE {   dl_PayloadSize      PayloadSize      OPTIONAL,   dl_RLCModeInfo      UL_RLC_Mode,   dl_UM_RLC_LI_size   DL_UM_RLC_LI_size  OPTIONAL,   -- only for UM RLC configuration of Rel-5 or later   dl_UM_outOfSeqDelivery UM_RLC_OutOfSeqDelivery_Info_r6 OPTIONAL,   -- Rel-6 or later   dl_RLC_PDU_size     CHOICE {     fixedSize      OctetModeRLC_SizeInfoType1,     flexibleSize   SS_FlexibleSize   } OPTIONAL   -- Only for AM RLC Configuration of Rel-7 or later }</pre> |   |

| ASN.1 Type Definition        |             |
|------------------------------|-------------|
| <b>Type Name</b>             | PayloadSize |
| <b>Comment</b>               |             |
| Type Definition              |             |
| <pre>INTEGER (0..4992)</pre> |             |

| ASN.1 Type Definition  |   |
|--|---|
| <b>Type Name</b>   | SS_FlexibleSize   |
| <b>Comment</b>   | Rel-7 or later<br>If max_RLC_SDU_Size is present, SS shall guarantee that the size of data field of DL RLC PDU does not exceed the size specified in Bytes. |
| Type Definition  |   |
| <pre>SEQUENCE {   li_Size ENUMERATED { size7 (0), size15 (1)}, -- Size of length indicator   max_RLC_SDU_Size INTEGER (1..1500) OPTIONAL     - Maximum size of data field of RLC PDU (25.322, 9.2.2.9 and 25.433, 9.2.1.38c) }</pre> |   |

## 7.3.2.2.25 CRLC\_Integrity\_Activate

| ASN.1 ASP Type Definition                         |   |
|---|---|
| <b>Type Name</b>                                  | CRLC_integrity_Activate_CNF                                   |
| <b>PCO Type</b>                                   | CSAP  |
| <b>Comment</b>                                    | To confirm to activate or inactivate the integrity protection |
| Type Definition                                   |   |
| <pre>SEQUENCE {   cellId INTEGER (-1..63) }</pre> |   |

| ASN.1 ASP Type Definition   |  |
|---|--|
| <b>Type Name</b>  | CRLC_Integrity_Activate_REQ  |
| <b>PCO Type</b>   | CSAP   |
| <b>Comment</b>  | To request to start or to modify the downlink or uplink integrity protection. The ASP shall be called before send SECURITY MODE COMMAND. It activates the integrity on all SRBs in DL. The SS initializes the 20 MSB of HFN component of COUNT-I to the START value stored and set the remaining LSBs of HFN component in COUNT-I to zero.<br>If integrityModeCommand in ASP is set to "startIntegrityProtection", the SS shall start the downlink integrity protection from the first downlink RRC message.<br>If te integrityModeCommand in ASP is set to "modify", the SS shall start the downlink integrity protection at the RRC message sequence number specified in "dl_IntegrityProtActivationInfo". |
| Type Definition   |  |
| <pre>SEQUENCE {   cellId INTEGER (-1..63),   cn_DomainIdentity CN_DomainIdentity,   integrityActivationInfo IntegrityActivationInfo }</pre> |  |

| ASN.1 Type Definition  |  |
|--|--|
| <b>Type Name</b>   | IntegrityActivationInfo  |
| <b>Comment</b>   | DL or UL integrity activation info<br>At the RRC message sequence numbers specified in the ul_IntegProtActivationInfo the SS shall initialize COUNT-I for the SRB's indicated in the ul_IntegrityProtActivationInfo and start using the new configuration on uplink for the indicated SRB's.<br>If the START value is omitted in the CRLC_SecurityMode_Config_REQ above COUNT-I initialization shall not be performed. |
| Type Definition  |  |
| <pre>CHOICE {   integrityProtectionModeInfo IntegrityProtectionModeInfo,   ul-IntegProtActivationInfo IntegrityProtActivationInfoList,   integrityProtectionModeInfo_r7 IntegrityProtectionModeInfo_r7 -- Rel-7 or later }</pre> |  |

| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | IntegrityProtActivationInfoList        |
| <b>Comment</b>  | List of SS IntegrityProtActivationInfo |
| Type Definition   |  |
| <pre>SEQUENCE (SIZE (1..maxRB ) ) OF SS_IntegrityProtActivationTimeInfo</pre> |  |

| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | SS_IntegrityProtActivationTimeInfo                                     |
| <b>Comment</b>  | Omitting rrc_MessageSequenceNumber means activation time set to "now". |
| Type Definition   |  |
| SEQUENCE {<br>rb_Identity                                 INTEGER (-31..32),<br>rrc_MessageSequenceNumber   RRC_MessageSequenceNumber   OPTIONAL<br>} |  |

## 7.3.2.2.26 CRLC\_Integrity\_Failure

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | CRLC_Integrity_Failure_IND   |
| <b>PCO Type</b>  | CSAP   |
| <b>Comment</b>   | RLC emulator reports the occurrences of a failure in integrity protection, i.e. reception of an integrity-protected RLC AM/UM SDU containing a non-matching X-MAC value compared to the desired. |
| Type Definition  |  |
| SEQUENCE {<br>cellId                                     INTEGER (-1..63),<br>routingInfo                             RoutingInfo,<br>failureCause                            ENUMERATED { codeNotMatched(0) }<br>-- the enumerated types of failure cause field is ffs<br>} |  |

## 7.3.2.2.26a CRLC\_MAC\_I\_Mode

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | CRLC_MAC_I_Mode_CNF                                      |
| <b>PCO Type</b>  | CSAP   |
| <b>Comment</b>   | Confirm a previous CRLC_MAC_I_Mode_REQ being successful. |
| Type Definition  |  |
| SEQUENCE {<br>cellId                                     INTEGER (-1..63),<br>srbId                                    INTEGER (0..4)<br>} |  |

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | CRLC_MAC_I_Mode_REQ  |
| <b>PCO Type</b>  | CSAP   |
| <b>Comment</b>   | To set the MAC-I calculation mode. The ASP does not affect the UL integrity calculation.<br>If mode = normal, the SS generates the correct MAC-I.<br>If mode = erroneous, the SS generates any wrong MAC-I value different from the one it shall be.<br>As default, when the integrity protection is jswitched on the SS enters the normal MAC-I calculation mode. |
| Type Definition  |  |
| SEQUENCE {<br>cellId                                     INTEGER (-1..63),<br>srbId                                    INTEGER (0..4),<br>mode                                     ENUMERATED {normal(0), erroneous(1)}<br>} |  |

7.3.2.2.26b CRLC\_NotAckNxtRxSDU

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_NotAckNxtRxSDU_CNF  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To confirm that the next received SDU has not been acknowledged. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo  |
|                           | }  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_NotAckNxtRxSDU_REQ  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request that the next received SDU is not acknowledged. The received SDU is passed to the upper layers. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo,   |
| mode                      | ENUMERATED{start(0)}   |
|                           | }  |

7.3.2.2.26c CRLC\_ProhibitRLC\_Ack

The use of the pair of ASPs should be restricted to each start of SRB3 Uplink ciphering only. The SS behaviours are not specified if the ASPs are used in any other procedures.

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_ProhibitRLC_Ack_CNF                                     |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To confirm that the reception of a CRLC_ProhibitRLC_Ack_REQ. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo,   |
| supportFlag               | SupportFlag      DEFAULT noNeed                              |
|                           | }  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_ProhibitRLC_Ack_REQ                                       |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request the SS to prohibit/Continue acknowledging RLC SDUs. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo,   |
| mode                      | ENUMERATED{prohibit(0), continue(1)}                           |
|                           | }  |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | SupportFlag  |
| <b>Comment</b>        | The default value noNeed indicates that the SS does not perform the operation mentioned in CRLC_ProhibitRLC_Ack_REQ, but performs the suspension / resume of UL RLC PDU data.<br>If the non default values are taken, the SS has either prohibited, or continued acknowledging RLC SDUs. |
| Type Definition       |  |
| ENUMERATED            | {ackProhibited(0), ackContinued(1), noNeed (2)}  |

## 7.3.2.2.27 CRLC\_Resume

| ASN.1 ASP Type Definition |                               |
|---------------------------|-------------------------------|
| <b>Type Name</b>          | CRLC_Resume_CNF               |
| <b>PCO Type</b>           | CSAP                          |
| <b>Comment</b>            | To confirm the resume request |
| Type Definition           |                               |
| SEQUENCE                  | {                             |
| cellId                    | INTEGER(-1..63),              |
| routingInfo               | RoutingInfo                   |
| }                         |                               |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CRLC_Resume_REQ   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To request to resume data transmission.<br>If the SS implemented the optional suspension of UL data PDUs, then the processing in the UL of data PDUs shall be resumed. Any suspended UL control PDUs and Piggybacked Status shall be preceded or resumed. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER(-1..63),  |
| routingInfo               | RoutingInfo   |
| }                         |   |

## 7.3.2.2.27a CRLC\_RRC\_MessageSN

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CRLC_RRC_MessageSN_CNF  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To return the counter I values (HFN and RRC message sequence number) for sending the next DL RRC message or for receiving the next UL RRC message on the concerned SRB.<br>COUNT_I_MSB is the 28 MSB of the COUNT-I (HFN) |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER(-1..63),  |
| routingInfo               | RoutingInfo,  |
| count_I_MSB_UL            | COUNT_I_MSB,  |
| count_I_LSB_UL            | RRC_SequenceNumber,   |
| count_I_MSB_DL            | COUNT_I_MSB,  |
| count_I_LSB_DL            | RRC_SequenceNumber  |
| }                         |   |

| ASN.1 Type Definition  |              |
|------------------------|--------------|
| <b>Type Name</b>       | COUNT_I_MSB  |
| <b>Comment</b>         | 28 bits long |
| Type Definition        |              |
| INTEGER (0..268435455) |              |

| ASN.1 Type Definition |                    |
|-----------------------|--------------------|
| <b>Type Name</b>      | RRC_SequenceNumber |
| <b>Comment</b>        | 4 bits long        |
| Type Definition       |                    |
| INTEGER (0..15)       |                    |



| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| Type Name                 | CRLC_RRC_MessageSN_REQ   |
| PCO Type                  | CSAP   |
| Comment                   | To request the SS to return the values in COUNT-I for sending the next DL RRC message or for receiving the next UL RRC message on the concerned SRB. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                               INTEGER(-1..63),<br>routingInfo                         RoutingInfo<br>}                                   |

7.3.2.2.28 CRLC\_SecurityMode\_Config

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| Type Name                 | CRLC_SecurityMode_Config_CNF   |
| PCO Type                  | CSAP   |
| Comment                   | To confirm to configure the RLC security mode<br>If several subsequent CRLC_Integrity_Activate_REQ or CRLC_Ciphering_Activate_REQ follow this ASP, the SS shall take a serial of specified actions on the same contents in this ASP at the activation time indicated in each CRLC_Integrity (or Ciphering) Activate_REQ. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                               INTEGER(-1..63)<br>}   |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| Type Name                 | CRLC_SecurityMode_Config_REQ   |
| PCO Type                  | CSAP   |
| Comment                   | To request to configure the RLC security mode  |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                               INTEGER(-1..63),<br>rlcSecurityInfo                    SecurityInfo<br>} |

| ASN.1 Type Definition |  |
|-----------------------|--|
| Type Name             | SecurityInfo   |
| Comment               | The integrityKey is not applicable to MAC  |
| Type Definition       |  |
| SEQUENCE{             | Cn_DomainIdentity                    CN_DomainIdentity,<br>startValue                        START_VALUE                          OPTIONAL,<br>cipheringKey                      BITSTRING(128)                      OPTIONAL,<br>integrityKey                       BITSTRING(128)                      OPTIONAL,<br>gsmCipheringKey                   BITSTRING(64)                        OPTIONAL<br>}   |
| Detailed Comments     | When the SS receives SecurityInfo, the SS first stores the contents. The SecurityInfo contents is not activated until receiving the subsequent ASP, CRLC_Ciphering_Activate_REQ, CMAC_Ciphering_Activate_REQ or CRLC_Integrity_Activate_REQ. Omitted fields of SecurityInfo shall not be affected by the subsequent ASP at the activation time.<br><br>EXAMPLE:     Omitting of startValue indicates not to re-initialize the relevant COUNT-C or COUNT-I, omitting of cipheringKey indicates that the current ciphering key is valid. |

7.3.2.2.28a CRLC\_SetRRC\_MessageSN

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_SetRRC_MessageSN_CNF                                  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To confirm the RRC message sequence number setting request |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo  |
|                           | }  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_SetRRC_MessageSN_REQ  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request the SS to set the RRC message sequence number in COUNT-I to the value specified in this ASP. The ASP is used to initialize SS RRC SN. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo,   |
| count_I_LSB_UL            | RRC_SequenceNumber OPTIONAL,   |
| count_I_LSB_DL            | RRC_SequenceNumber OPTIONAL  |
|                           | }  |

7.3.2.2.28b CRLC\_Set\_Count\_I

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_Set_Count_I_CNF   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To confirm the count_I_MSB and the RRC message sequence number setting request |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo  |
|                           | }  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_Set_Count_I_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request the SS to set the 28 MSB and 4 LSB (RRC message sequence number) in COUNT-I according to the parameter values specified in this ASP. Parameters omitted in this ASP shall leave the corresponding bits in the SS COUNT-I unchanged.<br>Typically the parameters count_I_MSB_UL and count_I_MSB_DL are omitted. They are only applied in a few specific security test cases requiring restoration of the used integrity context.<br>NOTE: The 28 MSBs are initialized with the UE-provided START value plus 8 bits set to 0, using a different ASP (CRLC_SecurityMode_Config_REQ). |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo,   |
| count_I_LSB_UL            | RRC_SequenceNumber OPTIONAL,   |
| count_I_LSB_DL            | RRC_SequenceNumber OPTIONAL,   |
| count_I_MSB_UL            | COUNT_I_MSB OPTIONAL,  |
| count_I_MSB_DL            | COUNT_I_MSB OPTIONAL   |
|                           | }  |

## 7.3.2.2.29 CRLC\_SequenceNumber

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_Sequence_Number_CNF   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To return the requested counter sequence number to which the next DL PDU to be sent or the expected UL PDU to be received.   |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                     INTEGER(-1..63),<br>routingInfo                             RoutingInfo,<br>count_C_MSB_UL                         COUNT_C_MSB,<br>count_C_LSB_UL                         RLC_SequenceNumber,<br>count_C_MSB_DL                         COUNT_C_MSB,<br>count_C_LSB_DL                         RLC_SequenceNumber<br>} |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_SequenceNumber_REQ  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request the RLC layer to return current counter sequence numbers to which the next DL PDU to be sent or the expected UL PDU to be received. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                     INTEGER(-1..63),<br>routingInfo                             RoutingInfo<br>}                   |

## 7.3.2.2.29a CRLC\_SendContinuousData\_TTI

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CRLC_SendContinuousData_CNF   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | Confirm sending data in every TTI on each requested RB  |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                                     INTEGER(-1..63),<br>result                                    ENUMERATED{failure(0), success(1)}<br>} |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CRLC_SendContinuousData_REQ   |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To request sending data in every TTI on each RB identified.<br>After the CMAC_Restriction_REQ, the TFC under test will be the one corresponding to the maximum CTFC value in the Restricted list, so that SS can select the number of Transport blocks and the size of Transport blocks on individual Transport channels derived from this CTFC.<br>SS shall take care about all kind of discard info in all RLC modes and the final goal is that the DL TFCs under test shall be selected in downlink for sending data on the request RBs in each TTI. |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                                     INTEGER(-1..63),<br>rabTxInfo                                RabTxInfo<br>}   |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | RbTxInfo   |
| <b>Comment</b>        | Provide test data, number of RBs, and RB Tx info of each RB (RB id, SDU size and number of SDUs) to be transmitted in consecutive TTIs |
| Type Definition       |  |
| SEQUENCE {            |  |
| testData              | BIT STRING (SIZE (8..163840)),   |
| rbTxInfoList          | SEQUENCE (SIZE (1..6)) OF RbTxInfo   |
| }                     |  |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | RbTxInfo  |
| <b>Comment</b>        | Info on RB id and the actual DL test data size (SDU_Size * number of SDUs). The actual test data is extracted from the first (SDU_Size * number of SDUs) bits in the raw testData buffer. SS shall transmit the actual test data in every TTI. The value nomOfSdu = T / TTI , whereby T=1200 is the duration of the data transmitting in the RAB test, taking into account the test tolerance (+50 %) of the UE loop back delay (< 800 ms). |
| Type Definition       |   |
| SEQUENCE {            |   |
| rB_Identity           | INTEGER (-31..32),  |
| sduSize               | INTEGER (1..163840),  |
| nomOfSdu              | INTEGER (0..255) -- 0 is set for no data on this RB   |
| }                     |   |

## 7.3.2.2.30 CRLC\_Status

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_Status_IND  |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To report the occurrence of certain events to RRC. Note: the possible event types to be defined for this ASP is FFS. |
| Type Definition           |  |
| SEQUENCE {                |  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo,   |
| ratType                   | RatType,   |
| statusInd                 | CrlcStatusInd  |
| }                         |  |

| ASN.1 Type Definition                    |               |
|--|---------------|
| <b>Type Name</b>                         | CrlcStatusInd |
| <b>Comment</b>                           |               |
| Type Definition                          |               |
| ENUMERATED {                             |               |
| dataLinkFailure (0)                      |               |
| maxRESET (1),                            |               |
| sDUDiscarded (2)                         |               |
| -- More event types are to be added here |               |
| }  |               |

## 7.3.2.2.31 CRLC\_Suspend

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CRLC_Suspend_CNF  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To confirm the suspension of data transmission. The parameter vt indicates either the value of the Send State Variable VT(S) for AM, or the value of Data State Variable VT(US) for UM. |
| Type Definition           |   |
| SEQUENCE {                |   |
| cellId                    | INTEGER(-1..63),  |
| routingInfo               | RoutingInfo,  |
| vt                        | RLC_SequenceNumber  |
| }                         |   |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_Suspend_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request the suspension of data transmission. The parameter n indicates that an RLC entity will not send a PDU with "Sequence Number"≥VT(S)+N for AM and "Sequence Number"≥VT(US)+N for UM, where N is a non-negative integer. Optionally an SS may start immediate suspension of processing of data PDUs in the UL. The UL control PDUs and Piggybacked Status may optionally be processed. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                             INTEGER(-1..63),<br>routingInfo                     RoutingInfo,<br>n                                 RLC_SequenceNumber<br>}  |

7.3.2.2.31a CRLC\_MTCH\_Scheduling (Rel-6 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CRLC_MTCH_Scheduling_CNF   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To confirm the CRLC_MTCH_Scheduling_REQ  |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                             INTEGER(-1..63),<br>routingInfo                     RoutingInfo<br>} |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CRLC_MTCH_Scheduling_REQ  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | Applied to the RLC entity carrying MTCH.<br>MBMS serviceSchedulingInfo can contain a list of MBMS ServiceSchedulingInfo for multiple consecutive scheduling periods of discontinuous MBMS services. mSCH_REPconfiguration provides the timing of scheduling periods. serviceShedulingInfos provides a list of SS_ServiceSchedulingInfo corresponding to multiple scheduling periods.<br>On or after the start and within the duration of a MBMS session, the RLC behaves as normal entity. Outside of these ranges the RLC regards the buffer occupancy as being zero, prohibiting the MAC from requesting PDU's. The same is valid for the service silence period (noServiceData).<br>Each call of the ASP replaces the existing whole scheduling information list or creates a new scheduling information list if the list does not exist.<br>The absence of IE mSCH_REPconfiguration and schedulingInfoInfos indicates continuous MBMS services. The SS shall delete the existing scheduling information list if it has existed. The RLC entity behaves as normal. |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                             INTEGER(-1..63),<br>routingInfo                     RoutingInfo,<br>mSCH_REPconfiguration         MSCH_REPconfiguration             OPTIONAL,<br>serviceShedulingInfos         ServiceSchedulingInfoList         OPTIONAL<br>}  |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | ServiceSchedulingInfoList  |
| <b>Comment</b>        | Multiple ServiceSchedulingInfo can be submitted to the SS. Each ServiceSchedulingInfo corresponds to a MSCH scheduling period. |
| Type Definition       |  |
| SEQUENCE              | (SIZE(1.. MaxNumMSCHMsgs))OF SS_ServiceSchedulingInfo  |

| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | SS_ServiceSchedulingInfo   |
| <b>Comment</b>  | The IE is applied to the discontinuous MBMS service and contains pairs of "start" and "duration" within a scheduling period. The start value indicates the start of the service transmission in number of 4-frames relative to:<br>either the 1 <sup>st</sup> TTI on which the MBMS SCHEDULING INFORMATION message of the corresponding scheduling period is sent if MSCH is configured;<br>or the IE scheduledSFN value in MSCH_REP configuration if MSCH is not configured.<br>The duration value indicates how long the service is transmitted in unit of 4-frames.<br>noServiceData is applied to the scheduling period when no MBMS service data are sent on that MTCH. |
| Type Definition   |  |
| CHOICE {<br>mbms_ServiceTransmInfoList                      MBMS_ServiceTransmInfoList,<br>noServiceData                                      NULL<br>} |  |

7.3.2.2.32      CBMC\_Config

| ASN.1 ASP Type Definition   |   |
|---|---|
| <b>Type Name</b>  | CBMC_Config_CNF   |
| <b>PCO Type</b>   | CSAP  |
| <b>Comment</b>  | To confirm the BMC configuration, reconfiguration or release. |
| Type Definition   |   |
| SEQUENCE {<br>cellId    INTEGER(0..63),<br>routingInfo    RoutingInfo                      -- RBid<br>} |   |

| ASN.1 ASP Type Definition   |  |
|---|--|
| <b>Type Name</b>  | CBMC_Config_REQ  |
| <b>PCO Type</b>   | CSAP   |
| <b>Comment</b>  | To request the configuration, reconfiguration or release of BMC. |
| Type Definition   |  |
| SEQUENCE {<br>cellId    INTEGER(0..63),<br>routingInfo    RoutingInfo,                      -- RBid<br>configMessage                                      CHOICE {<br>setup    BMC_SchedulingInfo,<br>release    NULL<br>}<br>} |  |

7.3.2.2.32b      DEC\_PERbitstring

| ASN.1 ASP Type Definition   |                                    |
|---|------------------------------------|
| <b>Type Name</b>  | DEC_PERbitstring_CNF               |
| <b>PCO Type</b>   | ExternalAsn1Codec                  |
| <b>Comment</b>  | To receive the decoded BIT STRING. |
| Type Definition   |                                    |
| SEQUENCE {<br>containedType                      ContainedType<br>} |                                    |

| ASN.1 ASP Type Definition   |   |
|---|---|
| <b>Type Name</b>  | DEC_PERbitstring_REQ  |
| <b>PCO Type</b>   | ExternalAsn1Codec   |
| <b>Comment</b>  | To request decoding of the BITSTRING received from UE in receivedBITSTRING with the type specified in containingType. |
| Type Definition   |   |
| <pre>SEQUENCE {   receivedBITSTRING          BIT STRING,   containingType              ContainingPERbitstringType }</pre> |   |

| ASN.1 PDU Type Definition  |                   |
|--|-------------------|
| <b>Type Name</b>   | ContainedType     |
| <b>PDU Type</b>  | ContainingDecoder |
| <b>Comment</b>   |                   |
| Type Definition  |                   |
| <pre>CHOICE {   ue_CapabilityContainer_IEs          UE_CapabilityContainer_IEs,   rrcConnectionSetupComplete_r3_add_ext_IEs  RRCConnectionSetupComplete_r3_add_ext_IEs,   ueCapabilityInformation_r3_add_ext_IEs      UECapabilityInformation_r3_add_ext_IEs,   interRATHandoverInfo_r3_add_ext          InterRATHandoverInfo_r3_add_ext_IEs,   interRATHandoverInfo                  InterRATHandoverInfo,   ue_RadioAccessCapabilityInfo          UE_RadioAccessCapabilityInfo }</pre> |                   |

| ASN.1 Type Definition  |                            |
|--|----------------------------|
| <b>Type Name</b>   | ContainingPERbitstringType |
| <b>Comment</b>   |                            |
| Type Definition  |                            |
| <pre>ENUMERATED {   ue_CapabilityContainer_IEs          (0),   rrcConnectionSetupComplete_r3_add_ext_IEs  (1),   ueCapabilityInformation_r3_add_ext_IEs      (2),   interRATHandoverInfo_r3_add_ext_IEs      (3),   interRATHandoverInfo                  (4),   ue_RadioAccessCapabilityInfo          (5) }</pre> |                            |

### 7.3.2.2.32c ENC\_PERbitstring

| ASN.1 ASP Type Definition                                      |                                    |
|--|------------------------------------|
| <b>Type Name</b>   | ENC_PERbitstring_CNF               |
| <b>PCO Type</b>  | ExternalAsn1Codec                  |
| <b>Comment</b>   | To receive the encoded BIT STRING. |
| Type Definition  |                                    |
| <pre>SEQUENCE {   encodedBITSTRING          BIT STRING }</pre> |                                    |

| ASN.1 ASP Type Definition                                 |   |
|---|---|
| <b>Type Name</b>  | ENC_PERbitstring_REQ                    |
| <b>PCO Type</b>   | ExternalAsn1Codec                       |
| <b>Comment</b>  | To request encoding of asn.1 PDU or IE. |
| Type Definition   |   |
| <pre>CHOICE {   mcchMessage          MCCH_Message }</pre> |   |

## 7.3.2.2.33 RLC\_TR\_DATA

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | RLC_TR_DATA_REQ                                     |
| <b>PCO Type</b>           | DSAP  |
| <b>Comment</b>            | To request to transmit DATA using transparent mode. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER(-1..63),                                    |
| routingInfo               | RoutingInfo,  |
| tM_Message                | CHOICE {  |
| dL_DCCH_Message           | DL_DCCH_Message,                                    |
| dL_CCCH_Message           | DL_CCCH_Message,                                    |
| pCCH_Message              | PCCH_Message,                                       |
| dL_SHCCH_Message          | DL_SHCCH_Message,                                   |
| bCCH_FACH_Message         | BCCH_FACH_Message,                                  |
| bCCH_BCH_Message          | BCCH_BCH_Message }                                  |
|                           | }   |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | RLC_TR_DATA_IND                                     |
| <b>PCO Type</b>           | DSAP  |
| <b>Comment</b>            | To indicate to receive DATA using transparent mode. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER(-1..63),                                    |
| routingInfo               | RoutingInfo,  |
| tM_Message                | CHOICE {  |
| uL_DCCH_Message           | UL_DCCH_Message,                                    |
| uL_CCCH_Message           | UL_CCCH_Message,                                    |
| uL_SHCCH_Message          | UL_SHCCH_Message }                                  |
|                           | }   |

## 7.3.2.2.34 RLC\_AM\_DATA

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | RLC_AM_DATA_REQ                                      |
| <b>PCO Type</b>           | DSAP   |
| <b>Comment</b>            | To request to transmit DATA using acknowledged mode. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER (-1..63),                                    |
| routingInfo               | RoutingInfo,   |
| confirmationRequest       | AmConfirmationRequest,                               |
| aM_Message                | CHOICE {   |
| dL_DCCH_Message           | DL_DCCH_Message,                                     |
| dL_CCCH_Message           | DL_CCCH_Message,                                     |
| pCCH_Message              | PCCH_Message,  |
| dL_SHCCH_Message          | DL_SHCCH_Message,                                    |
| bCCH_FACH_Message         | BCCH_FACH_Message,                                   |
| bCCH_BCH_Message          | BCCH_BCH_Message,                                    |
| invalid_dL_DCCH_Message   | Invalid_DL_DCCH_Message }                            |
|                           | }  |

| ASN.1 Type Definition   |   |
|-------------------------|---|
| <b>Type Name</b>        | AmConfirmationRequest   |
| <b>Comment</b>          | If the noConfirmationRequested option is used, then an RLC_AM_DATA_CNF is not expected from the RLC AM entity.<br>If the confirmationRequested option is used, then the RLC AM entity is being requested to provide an RLC_AM_DATA_CNF primitive containing the same Mui value. |
| Type Definition         |   |
| CHOICE                  | {   |
| noConfirmationRequested | NULL,   |
| confirmationRequested   | Mui   |
|                         | }   |



| ASN.1 Type Definition |     |
|-----------------------|-----|
| Type Name             | Mui |
| Comment               |     |
| Type Definition       |     |
| INTEGER {0..4095}     |     |

| ASN.1 ASP Type Definition  |  |
|--|--|
| Type Name  | RLC_AM_DATA_IND                                      |
| PCO Type   | DSAP   |
| Comment  | To indicate to receive DATA using acknowledged mode. |
| Type Definition  |  |
| <pre>SEQUENCE {     cellId                INTEGER (-1..63),     routingInfo           RoutingInfo,     integrityResult       IntegrityResult,     aM_Message           CHOICE {         uL_DCCH_Message  UL_DCCH_Message,         uL_CCCH_Message  UL_CCCH_Message,         uL_SHCCH_Message UL_SHCCH_Message} }</pre> |  |

| ASN.1 Type Definition   |                 |
|---|-----------------|
| Type Name   | IntegrityResult |
| Comment   |                 |
| Type Definition   |                 |
| <pre>CHOICE {     integrityNotUsed  NULL,     integrityUsed     IntegrityStatus }</pre> |                 |

| ASN.1 Type Definition                              |                 |
|--|-----------------|
| Type Name  | IntegrityStatus |
| Comment  |                 |
| Type Definition                                    |                 |
| <pre>ENUMERATED {     i_pass(0), i_fail(1) }</pre> |                 |

| ASN.1 ASP Type Definition  |   |
|--|---|
| Type Name  | RLC_AM_DATA_CNF   |
| PCO Type   | DSAP  |
| Comment  | For RLC emulator to report to the upper layer that a previously transmitted SDU has been acknowledged correctly by the UE |
| Type Definition  |   |
| <pre>SEQUENCE {     cellId                INTEGER (-1..63),     routingInfo           RoutingInfo,     mui                   Mui }</pre> |   |

## 7.3.2.2.34a RLC\_UM\_ACCESSInfo (Rel-6 or later)

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | RLC_UM_ACCESSInfo_REQ  |
| <b>PCO Type</b>  | DSAP   |
| <b>Comment</b>   | To request to transmit ACCESS INFORMATION messages using unacknowledged mode. This ASP is valid for the RLC entity configured for the logical channel MCCH.<br>When an RLC_UM_ACCESSInfo_REQ with uM_Messages present is received the ongoing transmission of ACCESS INFORMATION, if any, shall be stopped in the modification period indicated by startingTime. At the same time, the SS starts transmitting the ACCESS INFORMATION messages passed by the ASP, then repeats the transmission in each next modification period.<br>When an RLC_UM_ACCESSInfo_REQ without uM_Messages is received the SS stops the ongoing ACCESS INFORMATION transmission at the modification period specified by startingTime. |
| Type Definition  |  |
| <pre>SEQUENCE {   cellId          INTEGER(-1..63),   routingInfo     RoutingInfo,   startingTime    INTEGER(0..4095),   -- pointing to the first frame of a modification   uM_Messages     AI_MsgList OPTIONAL }</pre> |  |

| ASN.1 Type Definition              |   |
|------------------------------------|---|
| <b>Type Name</b>                   | AI_MsgList  |
| <b>Comment</b>                     | AI_MsgList is an ordered list of AI messages. The order corresponds to the AI_Msg transmission timing in a modification period. A modification period can have 1, 2, 4 or 8 access information periods depending on MCCH configuration. The size of the list shall be consistent with the MCCH configuration. |
| Type Definition                    |   |
| SEQUENCE (SIZE(1 2 4 8)) OF AI_Msg |   |

| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | AI_Msg  |
| <b>Comment</b>  | The ai_Message is sent on the first TTI of the access information period. If the corresponding ai_Message is empty there is no ACCESS INFORMATION scheduled for that access information period. |
| Type Definition   |   |
| <pre>CHOICE {   ai_Message      MBMSAccessInformation,   ai_EmptyMsg     NULL }</pre> |   |

## 7.3.2.2.34b RLC\_UM\_CriticalMCCHMsg (Rel-6 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | RLC_UM_CriticalMCCHMsg_REQ   |
| <b>PCO Type</b>           | DSAP   |
| <b>Comment</b>            | To request to transmit critical MCCH messageList using unacknowledged mode. This ASP is valid only for the RLC entity configured for the logical channel MCCH. When an RLC_UM_CriticalMCCHMsg_REQ with non-empty uM_Messages is received the SS stops ongoing critical MCCH information transmission in the modification period indicated by startingTime. At the same time, the SS starts transmitting the set of critical MCCH messageList passed by the ASP in the same order as they appear in the uM_MessageList, and then repeats the transmission in each next repetition period until another RLC_UM_CriticalMCCHMsg_REQ is received to modify the critical messages at start of the next modification period. When an RLC_UM_CriticalMCCHMsg_REQ without uM_Messages is received the SS stops the ongoing critical MCCH message transmission at the modification period specified by startingTime.<br>If specialLI is set to TRUE all SUDs sent within the RLC_UM_CriticalMCCHMsg_REQ have the special LI set to indicate beginning of the RLC SDU. |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                          INTEGER (-1..63),<br>routingInfo                   RoutingInfo,<br>startingTime                  INTEGER (0..4095),<br>-- pointing to the first frame of a modification<br>uM_Messages                   MCCH_MessageList OPTIONAL,<br>specialLI                      BOOLEAN DEFAULT FALSE<br>}  |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | MCCH_MessageList   |
| <b>Comment</b>        | MBMSAccessInformation shall not be included in the MCCH_MessageList. |
| Type Definition       |  |
| SEQUENCE              | (SIZE (1..maxNumMCCHMsgs)) OF MCCH_MessageType                       |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | maxNumMCCHMsgs  |
| <b>Comment</b>        | For covering the configuration with 20 neighbouring cells |
| Type Definition       |   |
| INTEGER               | (25)  |

## 7.3.2.2.34c RLC\_TR\_SeqOfRlcPdus

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | RLC_TR_SeqOfRlcPdus_REQ   |
| <b>PCO Type</b>           | DSAP  |
| <b>Comment</b>            | To request to transmit a sequence of RLC PDUs using transparent mode: The first PDU is sent in the frame at startingTime, the other PDUs are subsequently sent in the following frames. This primitive can be used e.g. to send fully coded RLC PDUs of critical messages at the beginning of a repetition period. Each sequence of RLC PDUs is sent just once i.e. not repeated at the beginning of the next repetition period.<br>Therefore the sequence may also contain Access Information.<br>Furthermore the sequence may contain corrupted PDUs. |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                          INTEGER (-1..63),<br>routingInfo                   RoutingInfo,<br>startingTime                  INTEGER (0..4095),<br>-- pointing to the first frame of a modification<br>seqOfPdus                      MCCH_RlcPduList<br>}   |

| ASN.1 Type Definition                               |  |
|---|--|
| <b>Type Name</b>                                    | MCCH_RlcPduList  |
| <b>Comment</b>                                      | Each RLC PDU is completely encoded and consists of RLC UM header and RLC SDU |
| Type Definition                                     |  |
| SEQUENCE (SIZE(1..maxNumMCCHRlcPdus)) OF BIT STRING |  |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | maxNumMCCHRlcPdus                               |
| <b>Comment</b>        | Maximum number of RLC PDUs in RLC tests of MCCH |
| Type Definition       |   |
| INTEGER (64)          |   |

## 7.3.2.2.35 RLC\_UM\_DATA

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | RLC_UM_DATA_REQ  |
| <b>PCO Type</b>           | DSAP   |
| <b>Comment</b>            | To request to transmit DATA using unacknowledged mode. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),                                       |
| routingInfo               | RoutingInfo,   |
| uM_Message                | CHOICE {   |
| dL_DCCH_Message           | DL_DCCH_Message,                                       |
| dL_CCCH_Message           | DL_CCCH_Message,                                       |
| pCCH_Message              | PCCH_Message,  |
| dL_SHCCH_Message          | DL_SHCCH_Message,                                      |
| bCCH_FACH_Message         | BCCH_FACH_Message,                                     |
| bCCH_BCH_Message          | BCCH_BCH_Message                                       |
| invalid_dL_DCCH_Message   | Invalid_DL_DCCH_Message},                              |
| specialLI                 | BOOLEAN  |
|                           | }  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | RLC_UM_DATA_IND  |
| <b>PCO Type</b>           | DSAP   |
| <b>Comment</b>            | To indicate to receive DATA using unacknowledged mode. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),                                       |
| routingInfo               | RoutingInfo,   |
| integrityResult           | IntegrityResult,                                       |
| uM_Message                | CHOICE {   |
| uL_DCCH_Message           | UL_DCCH_Message,                                       |
| uL_CCCH_Message           | UL_CCCH_Message,                                       |
| uL_SHCCH_Message          | UL_SHCCH_Message}                                      |
|                           | }  |

## 7.3.2.2.35a RLC\_UM\_MSCH\_Msg (Rel-6 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | RLC_UM_MSCH_Msg_REQ  |
| <b>PCO Type</b>           | DSAP   |
| <b>Comment</b>            | To request to transmit MSCH_MessageList using unacknowledged mode. The ASP is applied to the RLC entity configured for the logical channel MSCH. |
| Type Definition           |  |
| SEQUENCE                  | {  |
| cellId                    | INTEGER(-1..63),   |
| routingInfo               | RoutingInfo,   |
| mSCH_REPconfiguration     | MSCH_REPconfiguration,   |
| uM_Messages               | MSCH_MessageList   |
|                           | }  |

| ASN.1 Type Definition  |   |
|--|---|
| <b>Type Name</b>   | MSCH_REPconfiguration   |
| <b>Comment</b>   | <p>MSCH_REPconfiguration describes how the scheduled data to be transmitted.</p> <p>If MSCH is configured MSCH_REPconfiguration specifies when series of MSCH scheduling repetitions start and how long the scheduling period is.<br/>The scheduledSFN fulfils:<br/> <math display="block">\text{scheduledSFN} = ((\text{SFNss} / \text{MSCH\_REP} + 1) * \text{MSCH\_REP} + \text{MSCH\_OFF} + (\text{SCTO} / 10\text{ms})) \bmod 4096,</math>                     where SFNss is the value of currentSFN provided by SS via CPHY_SFN_CNF. The SS shall start sending the 1<sup>st</sup> SCHEDULING INFORMATION message on the frame indicated by scheduledSFN and successively send the remaining MSCH messages in the list on the 1<sup>st</sup> TTI of every mSCH_REP.</p> <p>If MSCH is not configured the scheduledSFN fulfils:<br/> <math display="block">\text{scheduledSFN} = (\text{SFNss} + (\text{SCTO} / 10\text{ms})) \bmod 4096,</math>                     mSCH_REP is omitted.</p> |
| Type Definition  |   |
| <pre>SEQUENCE {     scheduledSFN      INTEGER(0..4095),     mSCH_REP         ENUMERATED { sp32(0), sp64(1), sp128(2), sp256(3), sp512(4),     sp1024(5) } OPTIONAL }</pre> |   |

| ASN.1 Type Definition                                  |   |
|--|---|
| <b>Type Name</b>                                       | MSCH_MessageList  |
| <b>Comment</b>   | Multiple MSCH messages can be submitted to the SS. Every scheduling period a new message in the sequence is transmitted according to the appearing order in the sequence. |
| Type Definition  |   |
| SEQUENCE (SIZE(1.. maxNumMSCHMsgs)) OF SS MSCH Message |   |

| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | SS_MSCH_Message   |
| <b>Comment</b>  | noSend of SS_MSCH_Message is applied to the scheduling period when no MBMS service data are sent on all MTCH. |
| Type Definition   |   |
| <pre>CHOICE {     mSCH_Message      MSCH_MessageType,     noSend             NULL} </pre> |   |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | maxNumMSCHMsgs   |
| <b>Comment</b>        | Covering a sufficiently long duration of multiple MSCH scheduling periods for test |
| Type Definition       |  |
| INTEGER (64)          |  |

7.3.2.2.36 RLC\_TR\_MACesDATA\_IND (Rel-6 or later)

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | RLC_TR_MACesDATA_IND   |
| <b>PCO Type</b>           | DSAP   |
| <b>Comment</b>            | <p>This ASP is used for MACes delivering data in MAC_es testing.</p> <p>The IE cellId = -1, The routingInfo is RB identity, corresponding to RLC in TM, (tsc_RB_DTCH_E_DCH_MAC0(-20), tsc_RB_DTCH_E_DCH_MAC1(-21), or tsc_RB_DTCH_E_DCH_MAC2(-22)).</p> <p>The cfn and subframe indicate the CFN and sub-frame number on which the mACesSDUs (RLC PDUs) were received.</p> <p>The ddi, tsn and n are the reported values in the header of each MAC-es PDU that carries the mACesSDUs.</p> <p>If SI is received together with other MACes PDUs in a MAC-e PDU but without a special DDI associated, the SS shall split SI from MACes data and the latter ones are delivered with the ASP.</p> |
| Type Definition           |  |
| SEQUENCE                  | <pre> {   cellId          INTEGER (-1..63),   routingInfo     RoutingInfo,   cfn             INTEGER (0..255),   subframe        INTEGER (0..4 7), -- Value 7 applied when TTI=10ms   happyBit        ENUMERATED {happy(0), unhappy(1)},   ddi             INTEGER (0..62),   tsn             INTEGER (0..63),   n              INTEGER (0..63),   mACesSDUs      MACesSDU_List }                     </pre>   |

| ASN.1 Type Definition |                            |
|-----------------------|----------------------------|
| <b>Type Name</b>      | MACesSDU_List              |
| <b>Comment</b>        |                            |
| Type Definition       |                            |
| SEQUENCE              | (SIZE (1..63)) OF MACesSDU |

| ASN.1 Type Definition |                  |
|-----------------------|------------------|
| <b>Type Name</b>      | MACesSDU         |
| <b>Comment</b>        |                  |
| Type Definition       |                  |
| BIT STRING            | -- RLC PDU in TM |

7.3.2.3 Specific ASP and IE definitions for 1.28 Mcps TDD (Rel-4 or later)

The ASP definitions in 7.3.2.2 are applied to 1.28 Mcps TDD with the exceptions.

The ASP definition CPHY\_AICH\_AckModeSet is not applied.

Specific IE definitions in this clause replace the definitions in clause 7.3.2.2.

## 7.3.2.3.1 Specific ASP definitions

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | CPHY_Cell_Config_REQ   |
| <b>PCO Type</b>  | CSAP   |
| <b>Comment</b>   | Applicable Rel-4 or later<br>To request to setup the cell parameter.<br>The unit of tcell is chip; the unit of sfnOffset is frame number; the primary scrambling code number of the cell is 16*primaryScramblingCode_SS; the unit of dLTxAttenuationLevel is dB. |
| Type Definition  |  |
| <pre>SEQUENCE {   cellId                INTEGER (0..63),   sfnOffset             INTEGER (0 .. 4095),   frequencyInfo         FrequencyInfo,   cellTxPowerLevel     CellTxPowerLevel,   dLTxAttenuationLevel INTEGER (0..30),   cellParametersID     CellParametersID,   timeSlotConfigurationList_LCR TimeSlotConfigurationList_LCR,   dwPCHInfo             DwPCHInfo,   transmissionDiversityApplied ENUMERATED {NotApplied(0),Applied(1)} OPTIONAL }</pre> |  |

| ASN.1 ASP Type Definition                          |  |
|--|--|
| <b>Type Name</b>                                   | CPHY_HS_SICH_AckNack_CNF   |
| <b>PCO Type</b>                                    | CSAP   |
| <b>Comment</b>                                     | Applicable Rel-5 or later<br>To Confirm CPHY_HS_SICH_AckNack_REQ |
| Type Definition                                    |  |
| <pre>SEQUENCE{   cellId    INTEGER (0..63) }</pre> |  |

| ASN.1 ASP Type Definition  |   |
|--|---|
| <b>Type Name</b>   | CPHY_HS_SICH_AckNack_REQ  |
| <b>PCO Type</b>  | CSAP  |
| <b>Comment</b>   | Applicable Rel-5 or later<br>To request for Start or Stop of reporting Ack/Nack received on the SICH for the HARQ process hARQProcessId.<br>At the SS initialization reporting of Ack/Nack is in "STOP" state |
| Type Definition  |   |
| <pre>SEQUENCE{   cellId                INTEGER (0..63) ,   ratType               <a href="#">RatType</a>,   ackNackReportReq     <a href="#">AckNackReportReq</a>,   hARQProcessId        INTEGER (0..7) }</pre> |   |

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | CPHY_HS_SICH_AckNack_IND   |
| <b>PCO Type</b>  | CSAP   |
| <b>Comment</b>   | Applicable Rel-5 or later<br>SS reports the HARQ-ACK information received on HS_DPCCH,<br>each received Ack/Nack generates a CPHY_HS_DPCCH_AckNack_IND |
| Type Definition  |  |
| <pre>SEQUENCE {   cellId                INTEGER (0..63) ,   ratType               <a href="#">RatType</a>,   hARQ_ACKInfo         ENUMERATED {ack(0), nack (1)},   hARQProcessId        INTEGER (0..7) }</pre> |  |

| ASN.1 ASP Type Definition                            |   |
|--|---|
| <b>Type Name</b>                                     | CPHY_HS_SICH_CQI_CNF  |
| <b>PCO Type</b>                                      | CSAP  |
| <b>Comment</b>                                       | Applicable Rel-5 or later.<br>To Confirm CPHY_HS_SICH_CQI_REQ |
| Type Definition                                      |   |
| <pre>SEQUENCE{   cellId      INTEGER (0..63) }</pre> |   |

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | CPHY_HS_SICH_CQI_REQ   |
| <b>PCO Type</b>  | CSAP   |
| <b>Comment</b>   | Applicable Rel-5 or later.<br>To enable the SS to start reporting N times of the CQI value received on the HS-SICH. At the SS initialization reporting of CQI values is disabled |
| Type Definition  |  |
| <pre>SEQUENCE{   cellId      INTEGER (0..63) ,   ratType     RatType,   cQIReport   ENUMERATED {startRep (0),stopRep (1) } }</pre> |  |

| ASN.1 ASP Type Definition   |  |
|---|--|
| <b>Type Name</b>  | CPHY_HS_SICH_CQI_IND   |
| <b>PCO Type</b>   | CSAP   |
| <b>Comment</b>  | Applicable Rel-5 or later.<br>SS generates the indication when the CQI information is received on HS_SICH after invocation of ASP CPHY_HS_SICH_CQI_REQ.<br>This ASP is used for verifying whether the UE has configured the HS-DSCH and starts reception of HS-DSCH. (TS 25.331 cl.8.6.6.34) |
| Type Definition   |  |
| <pre>SEQUENCE {   cellId      INTEGER (0..63) ,   ratType     RatType,   rMS        ENUMERATED {qPSK (0),16QAM (1) } ,   rTB        INTEGER (0..63) }</pre> |  |



|   |   |
|---|---|
| <b>Type Name</b>  | CMAC_MAChs_TFRCconfigure_REQ  |
| <b>PCO Type</b>   | CSAP  |
| <b>Comment</b>  | <p>Applicable Rel-5 or later</p> <p>To configure the TFRC selection in the MAC-hs entity</p> <p>If explicitlyConfigured is selected in tfrcConfigMode, the SS shall use all the parameter values specified to configure a correct transport format and radio resources.</p> <p>If sS_Configured is selected, the parameter value range is specified. SS shall dynamically select the suitable values for the parameters "modulationScheme", "dlTimeslotandCode", "noOfChannelisationCodes ", "tbSizeIndexOnHS_SCCH", "redundancyVersion" and "hs_PDSCH_TxPower" according to UE's capability category and CQI information reported by the UE.</p> <p>MaxnoofDLtsLCR=6</p> |
| <b>Type Definition</b>  |   |
| <pre> SEQUENCE {   cellId          INTEGER(-1..63),   tfrcConfigMode CHOICE {     explicitlyConfigured SEQUENCE {       modulationScheme ModulationScheme,        noOfTimeSlots      INTEGER (0..6),       noOfCodesPerTimeslot INTEGER (0..16),       tbSizeIndexOnHS_SCCH INTEGER (0..63),       redundancyVersion  INTEGER (0..7),       hs_PDSCH_TxPower  DL_TxPower -- default offset related                           -- to p-PCCPCH      sS_Configured SEQUENCE {        numofTimeslots      INTEGER (0..6),       numofCodesPerTimeslot INTEGER (0..16),       iniHS_PDSCH_TxPower DL_TxPower -- default offset related                           -- to p-PCCPCH      }   } } </pre> |   |

|   |                            |
|---|----------------------------|
| <b>Type Name</b>  | CMAC_MACe_AG_REQ           |
| <b>PCO Type</b>   | CSAP                       |
| <b>Comment</b>  | Applicable Rel-7 or later. |
| <b>Type Definition</b>  |                            |
| <pre> SEQUENCE {   nodeB_Id          INTEGER (0..63),   absoluteGrantValue BIT STRING(SIZE(5)),   ChannelisationCode UL_TS_ChannelisationCode,   TRRI              BIT STRING(SIZE(5)),   RDI               INTEGER (0..7),   ECSN              INTEGER (0..7),   EI                INTEGER (0..3),   ENI               INTEGER (0..7),   hARQProcId        INTEGER (0..7),   activationTime     SS_ActivationTime } </pre> |                            |

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | CMAC_MACes_SI_IND  |
| <b>PCO Type</b>  | CSAP   |
| <b>Comment</b>   | <p>This ASP is used for MACes delivering scheduling information in MAC_es testing. cellId=-1.</p> <p>If the SI was sent alone in a MAC-e PDU or sent together with other MAC-es PDU in a MAC-e PDU but without a special DDI associated the value of specialDDIpresence is set to absent;</p> <p>If the SI was sent together with other MAC-es PDU in a MAC-e PDU with a special DDI (DDI 63) associated the specialDDIpresence is set to present.</p> |
| Type Definition  |  |
| <pre>SEQUENCE {   cellId          INTEGER (-1..63),   cfn             INTEGER (0..255),   subframe       INTEGER (0..1),   specialDDIpresence  ENUMERATED {absent (0), present (1)},   uePowerHeadRoom  BIT STRING (SIZE(5)),   totale_DCHBufferStatus  BIT STRING (SIZE(5)),   highestPriorityLogChBS  BIT STRING (SIZE(4)),   highestPriorityLogChId  BIT STRING (SIZE(4)) }</pre> |  |

| ASN.1 ASP Type Definition  |  |
|--|--|
| <b>Type Name</b>   | RLC_TR_MACesDATA_IND   |
| <b>PCO Type</b>  | DSAP   |
| <b>Comment</b>   | <p>This ASP is used for MACes delivering data in MAC_es testing.</p> <p>The IE cellId = -1, The routingInfo is RB identity, corresponding to RLC in TM, (tsc_RB_DTCH_E_DCH_MAC0(-20), tsc_RB_DTCH_E_DCH_MAC1(-21), or tsc_RB_DTCH_E_DCH_MAC2(-22)).</p> <p>The cfn and subframe indicate the CFN and sub-frame number on which the mACesSDUs (RLC PDUs) were received.</p> <p>The ddi, tsn and n are the reported values in the header of each MAC-es PDU that carries the mACesSDUs.</p> <p>If SI is received together with other MACes PDUs in a MAC-e PDU but without a special DDI associated, the SS shall split SI from MACes data and the latter ones are delivered with the ASP.</p> |
| Type Definition  |  |
| <pre>SEQUENCE {   cellId          INTEGER (-1..63),   routingInfo     RoutingInfo,   cfn             INTEGER (0..255),   subframe       INTEGER (0..1),   ddi            INTEGER (0..62),   tsn            INTEGER (0..63),   n              INTEGER (0..63),   mACesSDUs      MACesSDU_List }</pre> |  |

7.3.2.3.2 Specific IE definitions

| ASN.1 Type Definition             |                                       |
|-----------------------------------|---------------------------------------|
| Type Name                         | CphyRIModifyReq                       |
| Comment                           | Applicable Rel-4 or later for LCR TDD |
| Type Definition                   |                                       |
| SEQUENCE                          | {                                     |
| activationTime                    | SS_ActivationTime,                    |
| physicalChannelInfo               | CHOICE {                              |
| secondaryCCPCHInfo                | SecondaryCCPCHInfo,                   |
| pRACHInfo                         | PRACHInfo,                            |
| dPCHInfo                          | DPCHInfo,                             |
| dPCHInfo_r5                       | DPCHInfo_r5,                          |
| hs_DPSCHInfo                      | HS_DPSCHInfo,                         |
| e_DCHInfo                         | SS_E_DCH_Info_r7,                     |
| e_DCH_Non_ScheduledTransGrantInfo | SS_Non_ScheduledTransGrantInfoTDD,    |
| e_AGCHInfo                        | SS_E_AGCH_Info,                       |
| e_HICHInfo                        | SS_E_HICH_Info,                       |
| mBMS_MICHInfo                     | SS_MBMS_MICHConfigurationInfo_r6      |
|                                   | },                                    |
| trchConfigToFollow                | BOOLEAN      DEFAULT TRUE             |
|                                   | }                                     |

| ASN.1 Type Definition             |   |
|-----------------------------------|---|
| Type Name                         | CphyRISetupReq  |
| Comment                           | Applicable Rel-4 or later for LCR TDD<br>To request to setup the Radio Link for LCR TDD |
| Type Definition                   |   |
| SEQUENCE                          | {   |
| physicalChannelInfo               | CHOICE {  |
| primaryCCPCHInfo                  | PrimaryCCPCHInfo,   |
| secondaryCCPCHInfo                | SecondaryCCPCHInfo,   |
| pRACHInfo                         | PRACHInfo,  |
| pICHInfo                          | PICHInfo,   |
| dPCHInfo                          | DPCHInfo,   |
| pDSCHInfo                         | PDSCHInfo,  |
| pUSCHInfo                         | PUSCHInfo,  |
| dPCHInfo_r5                       | DPCHInfo_r5,  |
| hs_DPSCHInfo                      | HS_DPSCHInfo,   |
| e_DCHInfo                         | SS_E_DCH_Info_r7,   |
| e_DCH_Non_ScheduledTransGrantInfo | SS_Non_ScheduledTransGrantInfoTDD,  |
| e_AGCHInfo                        | SS_E_AGCH_Info,   |
| e_HICHInfo                        | SS_E_HICH_Info,   |
| mBMS_MICHInfo                     | SS_MBMS_MICHConfigurationInfo_r6  |
|                                   | }   |
|                                   | }   |

| ASN.1 Type Definition |   |
|-----------------------|---|
| Type Name             | PrimaryCCPCHInfo                        |
| Comment               | Applicable Rel-4 or later for LCR TDD   |
| Type Definition       |   |
| SEQUENCE              | {                                       |
| sctd_Indicator        | ENUMERATED {NotApplied(0), Applied(1)}, |
| tstd_Indicator        | ENUMERATED {NotApplied(0), Applied(1)}, |
| commonTimeSlotInfo    | CommonTimeSlotInfo,                     |
| dL_TxPower_PCCPCH     | DL_TxPower_PCCPCH                       |
|                       | }                                       |

| ASN.1 Type Definition   |  |
|---|--|
| <b>Type Name</b>  | SecondaryCCPCHInfo   |
| <b>Comment</b>  | Applicable Rel-4 or later for LCR TDD<br>The range for powerOffsetOfTFCI_PO1 and powerOffsetOfPILOT_PO3 is 0-6 dB, 0.25 dB per step. |
| Type Definition   |  |
| <pre>SEQUENCE {   tstD_Indicator          ENUMERATED {NotApplied(0), Applied(1)},   setD_Indicator          ENUMERATED {NotApplied(0), Applied(1)},   dl_TxPower              DL_TxPower,   commonTimeSlotInfo     CommonTimeSlotInfoSCCPCH,   channelisationCode      SCCPCH_ChannelisationCodeList,   individualTimeSlotInfo IndividualTimeSlotInfo_LCR_r4,   powerOffsetOfTFCI_PO1  INTEGER (0..24) OPTIONAL }</pre> |  |

| ASN.1 Type Definition  |                                       |
|--|---------------------------------------|
| <b>Type Name</b>   | PRACHInfo                             |
| <b>Comment</b>   | Applicable Rel-4 or later for LCR TDD |
| Type Definition  |                                       |
| <pre>SEQUENCE {   prach_RACH_Info_LCR_r4      PRACH_RACH_Info_LCR_r4,   accessServiceClass_TDD_LCR AccessServiceClass_TDD_LCR_r4,   fpach_Power                 DL_TxPower }</pre> |                                       |

| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | DL_DPCHInfo   |
| <b>Comment</b>  | Applicable Rel-4 or later for LCR TDD<br>The range for powerOffsetOfTPC_PO2 and powerOffsetOfTFCI_PO1 and powerOffsetOfPILOT_PO3 is 0 dB to 6 dB, 0,25 dB per step. |
| Type Definition   |   |
| <pre>SEQUENCE {   dl_CommonInformation      DL_CommonInformation_r4,   dl_DPCH_InfoPerRL        DL_DPCH_InfoPerRL_r4,   powerOffsetOfTFCI_PO1    INTEGER (0..24),   powerOffsetOfTPC_PO2     INTEGER (0..24),   dl_TxPower                DL_TxPower,   dl_TxPowerMax             DL_TxPower,   dl_TxPowerMin             DL_TxPower,   dl_TimeslotISCPInfoLCR   TimeslotListWithISCP }</pre> |   |

| ASN.1 Type Definition   |   |
|---|---|
| <b>Type Name</b>  | DL_DPCHInfo_r5  |
| <b>Comment</b>  | Applicable Rel-4 or later for LCR TDD<br>The range for powerOffsetOfTPC_PO2 and powerOffsetOfTFCI_PO1 and powerOffsetOfPILOT_PO3 is 0 dB to 6 dB, 0,25 dB per step. |
| Type Definition   |   |
| <pre>SEQUENCE {   dl_CommonInformation      DL_CommonInformation_r5,   dl_DPCH_InfoPerRL        DL_DPCH_InfoPerRL_r5,   powerOffsetOfTFCI_PO1    INTEGER (0..24),   powerOffsetOfTPC_PO2     INTEGER (0..24),   dl_TxPower                DL_TxPower,   dl_TxPowerMax             DL_TxPower,   dl_TxPowerMin             DL_TxPower,   dl_TimeslotISCPInfoLCR   TimeslotListWithISCP }</pre> |   |

| ASN.1 Type Definition   |                                       |
|---|---------------------------------------|
| <b>Type Name</b>  | PDSCHInfo                             |
| <b>Comment</b>  | Applicable Rel-4 or later for LCR TDD |
| Type Definition   |                                       |
| <pre>SEQUENCE {   pdsch_Identity          PDSCH_Identity,   pdsch_Info              PDSCH_Info_r4,   pdsch_PowerControlInfo PDSCH_PowerControlInfo OPTIONAL,   dl_TxPower              DL_TxPower }</pre> |                                       |

| ASN.1 Type Definition  |  |
|--|--|
| <b>Type Name</b>   | HS_PDSCHInfo   |
| <b>Comment</b>   | <p>Applicable later than r4</p> <p>When CHY_RL_Setup_REQ is called with CHOICE of hS_PDSCHInfo HS_PDSCH and HS-SCCH shall be configured in SS.</p> <p>The following HS-DSCH related parameters are passed to the SS implicitly by HSDSCH_physical_layer_category:</p> <ul style="list-style-type: none"> <li>- Maximum number of HS-DSCH codes can be received by UE.</li> <li>- Minimum inter-TTI interval.</li> <li>- Maximum number of bits of an HS-DSCH transport block within an HS-DSCH TTI.</li> <li>- Total number of soft channel bits".</li> </ul> <p>HSDSCH_physical_Layer_category is also used for interpretation of the meaning of CQI value.</p> |
| Type Definition  |  |
| <pre>SEQUENCE {   hSDSCHPhysicalLayerCategory HSDSCH_physical_layer_category,   h_RNTI                      H_RNTI,   dlHSPDSCHInformation        DL_HSPDSCH_Information,   hs_SCCH_TxPower              DL_TxPower -- offset related to                                 -- p-PCCPCH (25.433, 9.2.2.18I) }</pre> |  |

| ASN.1 Type Definition  |   |
|--|---|
| <b>Type Name</b>   | HS_DSCHMACdFlows  |
| <b>Comment</b>   | <p>Applicable later than r4</p> <p>Within the ACK/NACK repetition period indicated by ackNackRepetitionFactor the SS shall not transmit MAC-hs PDU's on HS-PDSCH.</p> |
| Type Definition  |   |
| <pre>SEQUENCE {   harqInfo          HARQ_Info          OPTIONAL,   addOrReconfMACdFlow SS_AddOrReconfMAC_dFlow OPTIONAL, }</pre> |   |

## 7.3.3 TTCN primitives

### 7.3.3.1 UTRAN TTCN primitives

Table 21 shows the primitives that are used for RLC, BMC ,RB and PDCP tests, these primitives are defined in TTCN tabular form.

**Table 21: Primitives for RLC, BMC and RB tests**

| Primitive          | Parameters   | Use   |
|--------------------|--|---|
| RLC_TR_TestDataReq | Cell identity<br>INTEGER (-31..32)<br>Data (Meta type PDU)   | The ASP is used to request the transmission of unstructured data using transparent mode in the downlink direction   |
| RLC_TR_TestDataInd | Cell identity<br>INTEGER (-31..32)<br>Data (Meta type PDU)   | The ASP is used to indicate the reception of unstructured data using transparent mode in the uplink direction   |
| RLC_UM_TestDataReq | Cell identity<br>INTEGER (-31..32)<br>Data (Meta type PDU)   | The ASP is used to request the transmission of unstructured data using unacknowledged mode in the downlink direction  |
| RLC_UM_TestDataInd | Cell identity<br>INTEGER (-31..32)<br>Data (Meta type PDU)   | The ASP is used to indicate the reception of unstructured data using unacknowledged mode in the uplink direction  |
| RLC_AM_TestDataReq | Cell identity<br>INTEGER (-31..32)<br>Data (Meta type PDU)   | The ASP is used to request the transmission of unstructured data using acknowledged mode in the downlink direction  |
| RLC_AM_TestDataInd | Cell identity<br>INTEGER (-31..32)<br>Data (Meta type PDU)   | The ASP is used to indicate the reception of unstructured data using acknowledged mode in the uplink direction  |
| BMC_DataReq        | Cell identity,<br>INTEGER (-31..32),<br>Data (Meta type PDU) | The ASP is used to request the transmission of unstructured BMC data or scheduling message, using unacknowledged mode in the downlink direction.  |
| BMC_DataCnf        | CellId,<br>INTEGER (-31..32)                                 | The ASP is used to confirm the reception of BMC CBS data  |
| RLC_HandoverReq    | CellId<br>INTEGER (-31..32)<br>Data (Meta type PDU)          | The ASP is used to request the transmission of the HandoverFromUTRANCommand_GSM message using acknowledged operation (AM).<br>The Meta PDU in turn consists of 2 components.<br>1) The ASN.1 PER encoded HandoverFromUTRANCommand, without any 1 bit to 7 bits of padding.<br>2) The GSM Handover command.<br>The SS shall take care of inserting the MAC and RLC sequence number of Integrity check info, as in the case of other RRC DL PDU's |

The TTCN tabular format applies to the primitive definitions.

## 7.3.4 GERAN PCO and ASP definitions

### 7.3.4.1 PCO Type definitions

#### 7.3.4.1.1 PCO type for data transmission and reception in GERAN

**Table 22: Declaration of the G\_DSAP PCO Type**

| PCO Type Definition |                                 |
|---------------------|---------------------------------|
| <b>PCO Type</b>     | G_DSAP                          |
| <b>Role</b>         | LT                              |
| <b>Comment</b>      | DATA transmission and reception |

#### 7.3.4.1.2 PCO type for configuration and control in GERAN

**Table 23: Declaration of the G\_CSAP PCO Type**

| PCO Type Definition |  |
|---------------------|--|
| <b>PCO Type</b>     | G_CSAP   |
| <b>Role</b>         | LT   |
| <b>Comment</b>      | Transmission and reception of control primitives |

## 7.3.4.2 PCO definitions

## 7.3.4.2.1 PCOs for data transmission and reception in GERAN

## 7.3.4.2.1.1 PCO for data transmission and reception through GERAN L2

**Table 24: Declaration of G\_L2 PCO**

| PCO Type Definition |  |
|---------------------|--|
| PCO Name            | G_L2   |
| PCO Type            | G_DSAP   |
| Role                | LT   |
| Comment             | Control and observation point of GERAN L3 messages and user data |

## 7.3.4.2.1.2 PCO for data transmission and reception through GPRS RLC

**Table 25: Declaration of G\_RLC PCO**

| PCO Type Definition |   |
|---------------------|---|
| PCO Name            | G_RLC   |
| PCO Type            | G_DSAP  |
| Role                | LT  |
| Comment             | Control and observation point of GPRS GRR signalling messages |

## 7.3.4.2.1.3 PCO for data transmission and reception through GPRS LLC

**Table 26: Declaration of LLC PCO**

| PCO Type Definition |   |
|---------------------|---|
| PCO Name            | G_LLC   |
| PCO Type            | G_DSAP  |
| Role                | LT  |
| Comment             | Control and observation point of GPRS GMM signalling messages |

## 7.3.4.2.1.4 PCO for data transmission and reception through GPRS SMDCP

**Table 27: Declaration of SMDCP PCO**

| PCO Type Definition |  |
|---------------------|--|
| PCO Name            | G_SMDCP  |
| PCO Type            | G_DSAP   |
| Role                | LT   |
| Comment             | Control and observation point of GPRS user packet data |

## 7.3.4.2.2 PCOs for control primitives transmission and reception in GERAN

## 7.3.4.2.2.1 PCO for GERAN L1 control primitives transmission and reception

**Table 28: Declaration of G\_CL1 PCO**

| PCO Type Definition |                                   |
|---------------------|-----------------------------------|
| PCO Name            | G_CL1                             |
| PCO Type            | G_CSAP                            |
| Role                | LT                                |
| Comment             | Control GERAN Physical Layer (L1) |

## 7.3.4.2.2.2 PCO for GERAN L2 control primitives transmission and reception

**Table 29: Declaration of G\_CL2 PCO**

| PCO Type Definition |                  |
|---------------------|------------------|
| <b>PCO Name</b>     | G_CL2            |
| <b>PCO Type</b>     | G_CSAP           |
| <b>Role</b>         | LT               |
| <b>Comment</b>      | Control GERAN L2 |

## 7.3.4.2.2.3 PCO for GPRS RLC control primitives transmission and reception

**Table 30: Declaration of G\_CRLC PCO**

| PCO Type Definition |                            |
|---------------------|----------------------------|
| <b>PCO Name</b>     | G_CRLC                     |
| <b>PCO Type</b>     | G_CSAP                     |
| <b>Role</b>         | LT                         |
| <b>Comment</b>      | Control GPRS RLC/MAC layer |

## 7.3.4.2.2.4 PCO for GPRS LLC control primitives transmission and reception

**Table 31: Declaration of G\_CLLC PCO**

| PCO Type Definition |                        |
|---------------------|------------------------|
| <b>PCO Name</b>     | G_CLLC                 |
| <b>PCO Type</b>     | G_CSAP                 |
| <b>Role</b>         | LT                     |
| <b>Comment</b>      | Control GPRS LLC layer |

## 7.3.4.2.2.5 PCO for GPRS SNDTCP control primitives transmission and reception

**Table 32: Declaration of G\_CSNDTCP PCO**

| PCO Type Definition |                           |
|---------------------|---------------------------|
| <b>PCO Name</b>     | G_CSNDTCP                 |
| <b>PCO Type</b>     | G_CSAP                    |
| <b>Role</b>         | LT                        |
| <b>Comment</b>      | Control GPRS SNDTCP layer |



## 7.3.4.3 GERAN ASP Definitions

## 7.3.4.3.1 ASPs for data transmission and reception in GERAN

## 7.3.4.3.1.1 ASPs for data transmission and reception through GERAN L2

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_L2_DATA_REQ  |  |
| <b>PCO Type</b>          | G_DSAP   |  |
| <b>Comments</b>          | The ASP is used to send L3 signalling message on the signalling channels or user data on the traffic channels to the UE/MS in acknowledged mode. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |
| cellId                   | CellId   |  |
| sAPI                     | SAPI   | 0 or 3   |
| physicalChId             | PhysicalChId   | Channel identifier   |
| g_LogicChType            | G_LogicChType  |  |
| subChannel               | SubChannelNumber   | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| rfn                      | RFN  | The reduced frame number of the first frame on which this message is sent.<br>This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.   |
| msg                      | PDU  | Signalling message or user data to be sent   |
| <b>Detailed Comments</b> | Parameter rfn is only used in the test cases that require L3 message to be sent on specified frame number.                                       |  |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_L2_DATA_IND   |  |
| <b>PCO Type</b>          | G_DSAP  |  |
| <b>Comments</b>          | The ASP is used to receive a L3 signalling message on the signalling channels or user data on the traffic channels from the UE/MS in acknowledged mode. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  |  |
| sAPI                     | SAPI  | 0 or 3   |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| rfn                      | RFN   | The reduced frame number of the first frame carrying the message   |
| msg                      | PDU   | Signalling message or user data received   |
| <b>Detailed Comments</b> |   |  |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_L2_L2Estab_IND  |  |
| <b>PCO Type</b>          | G_DSAP  |  |
| <b>Comments</b>          | The ASP is used to receive an indication of that L2 multiple frame operation on the specified channel has been established. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  |  |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4, This field shall be coded as 15 if it is not applicable. |
| sAPI                     | SAPI  | 0,3  |
| establish_mode           | OCTETSTRING[1]  |  |
| rfn                      | RFN   | The reduced frame number of the first frame carries the L2 SABM frame  |
| msg                      | PDU   | this field is present only when the establish mode is CoRes (collision resolution)   |
| <b>Detailed Comments</b> | see 3GPP TS 44.006 [42] clauses 7.1.1 and 7.1.3   |  |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_L2_UNITDATA_REQ   |  |
| <b>PCO Type</b>          | G_DSAP  |  |
| <b>Comments</b>          | The ASP is used to send L3 signalling message on the signalling channels or send user data on the traffic channels to the UE/MS in unacknowledged mode. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  |  |
| sAPI                     | SAPI  | 0 or 3   |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| rfn                      | RFN   | The reduced frame number of the first frame on which this message is sent. This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.  |
| msg                      | PDU   | Signalling message or user data to be sent   |
| <b>Detailed Comments</b> | Parameter fn is only used in the test cases that require specific L3 message to be sent on specified frame number.                                      |  |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_L2_UNITDATA_IND   |   |
| <b>PCO Type</b>          | G_DSAP  |   |
| <b>Comments</b>          | The ASP is used to receive a L3 signalling message on the signalling channels or user data on the traffic channels from the UE/MS in unacknowledged mode. |   |
|                          | <b>Parameter Name</b>   | <b>Parameter Type</b>   |
| cellId                   | CellId  |   |
| sAPI                     | SAPI  | 0 or 3  |
| physicalChId             | PhysicalChId  | Channel identifier  |
| g_LogicChType            | G_LogicChType   |   |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3).<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| rfrn                     | RFN   | The reduced frame number of the first frame carrying the message  |
| msg                      | PDU   | Signalling message or user data received  |
| <b>Detailed Comments</b> |   |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_L2_ACCESS_IND   |   |
| <b>PCO Type</b>          | G_DSAP  |   |
| <b>Comments</b>          | The ASP is used to receive a random access or handover access burst on the specified channel. |   |
|                          | <b>Parameter Name</b>   | <b>Parameter Type</b>   |
| cellId                   | CellId  |   |
| physicalChId             | PhysicalChId  | Channel identifier  |
| g_LogicChType            | G_LogicChType   | RACH, FACCH, SDCCH/8, SDCCH/4.<br>RACH is used for random access burst; others are used for handover access burst   |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: FACCH/H, SDCCH/8, SDCCH/4.<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| rfrn                     | RFN   | The reduced frame number of the first frame carrying the burst  |
| burst                    | PDU   | Random access burst or handover access burst  |
| <b>Detailed Comments</b> |   |   |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_L2_Paging_REQ  |  |
| <b>PCO Type</b>          | G_DSAP   |  |
| <b>Comments</b>          | The ASP is used to send a paging message on the specified paging group of the specified paging channel to the UE/MS, when the UE/MS is in idle mode or the UE/MS not supporting SPLIT_PG_CYCLE on CCCH is in GPRS attached mode and PCCCH is absent.   |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |
| cellId                   | CellId   |  |
| sAPI                     | SAPI   | 0  |
| physicalChId             | PhysicalChId   | Channel identifier of the right CCCH_GROUP                         |
| g_LogicChType            | G_LogicChType  | PCH  |
| pagingGroup              | PAGING_GROUP   |  |
| pagingMode               | PagingMode   | 0-normal paging;<br>1-extended paging;<br>2-paging reorganization. |
| msg                      | PDU  | Paging message   |
| <b>Detailed Comments</b> | <p>The SS is required to send valid layer 3 messages continuously on all paging subchannels on CCCH where paging can appear.</p> <p>For "normal paging" the SS send the paging message in the specified pagingGroup;</p> <p>For "extended paging" " the SS send the paging message in the specified pagingGroup and in the "next but one" position on the PCH, following the block corresponding to pagingGroup;</p> <p>For "paging reorganization" the SS send the paging message in all paging subchannels.</p> <p>The required 51-multiframe occurs when:<br/> <math>\text{pagingGroup div (N div BS\_PA\_MFRMS)} = (\text{FN div 51}) \bmod (\text{BS\_PA\_MFRMS})</math><br/> The index to the required paging block in the 51-multiframe determined above:<br/> Paging block index = <math>\text{pagingGroup} \bmod (\text{N div BS\_PA\_MFRMS})</math><br/> <math>\text{N} = (9 - \text{BS\_AG\_BLKS\_RES}) * \text{BS\_PA\_MFRMS}</math> CCCH not combined or<br/> <math>\text{N} = (3 - \text{BS\_AG\_BLKS\_RES}) * \text{BS\_PA\_MFRMS}</math> CCCH + SDCCH combined</p> |  |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_L2_PagingGPRS_REQ  |  |
| <b>PCO Type</b>          | G_DSAP   |  |
| <b>Comments</b>          | The ASP is used to send a paging message on the specified paging group of the specified paging channel to the UE/MS, when the UE/MS supporting SPLIT_PG_CYCLE on CCCH is in GPRS attached mode and PCCCH absent.   |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |
| cellId                   | CellId   |  |
| sAPI                     | SAPI   | 0  |
| physicalChId             | PhysicalChId   | Channel identifier of the right CCCH_GROUP                         |
| g_LogicChType            | G_LogicChType  | PCH  |
| pagingGroup              | PAGING_GROUP   |  |
| pagingMode               | PagingMode   | 0-normal paging;<br>1-extended paging;<br>2-paging reorganization. |
| splitPGcycleCode         | INTEGER  | 0 -- No Split Paging,<br>1..32 -- Split Paging                     |
| msg                      | PDU  | Paging message   |
| <b>Detailed Comments</b> | <p>The SS is required to send valid layer 3 messages continuously on all paging subchannels on CCCH where paging can appear.</p> <p>For "normal paging" the SS send the paging message in the specified pagingGroup;</p> <p>For "extended paging" " the SS send the paging message in the specified pagingGroup and in the "next but one" position on the PCH, following the block corresponding to pagingGroup;</p> <p>For "paging reorganization" the SS send the paging message in all paging subchannels.</p> <p>The required 51-multiframe occurs when:<br/> <math>\text{pagingGroup div (M div 64)} = (\text{FN div 51}) \bmod 64</math><br/> The index to the required paging block in the 51-multiframe determined above:<br/> Paging block index = <math>\text{pagingGroup} \bmod (\text{M div 64})</math><br/> <math>\text{M} = (9 - \text{BS\_AG\_BLKS\_RES}) * 64</math> CCCH not combined or<br/> <math>\text{M} = (3 - \text{BS\_AG\_BLKS\_RES}) * 64</math> CCCH + SDCCH combined</p> |  |
| <b>NOTE:</b>             | This ASP may not be implemented if the MS/UE does not support SPLIT_PG_CYCLE on CCCH.  |  |

|                        |         |
|------------------------|---------|
| <b>Type Name</b>       | CellId  |
| <b>Type Definition</b> | INTEGER |
| <b>Type Encoding</b>   |         |
| <b>Comments</b>        |         |

|                        |  |
|------------------------|--|
| <b>Type Name</b>       | SAPI   |
| <b>Type Definition</b> | INTEGER  |
| <b>Type Encoding</b>   |  |
| <b>Comments</b>        | Service access point identifier for GERAN L2 and LLC |

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Type Name</b>       | PhysicalChId                         |
| <b>Type Definition</b> | INTEGER(0..31)                       |
| <b>Type Encoding</b>   |                                      |
| <b>Comments</b>        | Physical channel identifier in GERAN |

|                        |   |
|------------------------|---|
| <b>Type Name</b>       | G_LogicChType   |
| <b>Type Definition</b> | INTEGER   |
| <b>Type Encoding</b>   |   |
| <b>Comments</b>        | GERAN logical channel type:<br>0-BCCH;<br>1-RACH;<br>2-PCH;<br>3-AGCH;<br>4-SDCCH/4;<br>5-SACCH/C4;<br>6-SDCCH/8;<br>7-SACCH/C8;<br>8-TCH/F;<br>9-FACCH/F;<br>10-SACCH/TF;<br>11-TCH/H;<br>12-FACCH/H;<br>13-SACCH/TH;<br>14-PBCCH;<br>15-PRACH;<br>16-PPCH;<br>17-PAGCH;<br>18-PDTCH/F;<br>19-PACCH/F;<br>20-PTCCH/F;<br>21-E-TCH/F;<br>22-E-IACCH/F;<br>23-E-FACCH/F;<br>24-SACCH/M;<br>25-SACCH/MD |

|                        |  |
|------------------------|--|
| <b>Type Name</b>       | SubChannelNumber   |
| <b>Type Definition</b> | INTEGER  |
| <b>Type Encoding</b>   |  |
| <b>Comments</b>        | Subchannel number for TCH/H, FACCH/H, SACCH/TH, SDCCH/4, SDCCH/C4, SDCCH/8 and SDCCH/C8.<br>For TCH/H, FACCH/H and SACCH/TH value is (0..1);<br>For SDCCH/8 and SACCH/C8 value is (0..7);<br>For SDCCH/4 and SACCH/C4 value is (0..3). |

|                        |   |
|------------------------|---|
| <b>Type Name</b>       | PAGING_GROUP  |
| <b>Type Definition</b> | INTEGER   |
| <b>Type Encoding</b>   |   |
| <b>Comments</b>        | 3GPP TS 05.02 or 3GPP TS 45.002 [31], clauses 6.5.2 and 6.5.6 |

|                        |  |
|------------------------|--|
| <b>Type Name</b>       | PagingMode   |
| <b>Type Definition</b> | INTEGER  |
| <b>Type Encoding</b>   |  |
| <b>Comments</b>        | 0 - normal paging;<br>1 - extended paging;<br>2 - paging reorganization. |

|                           |  |                       |                      |
|---------------------------|--|-----------------------|----------------------|
| <b>Type Name</b>          | RFN  |                       |                      |
| <b>Encoding Variation</b> |  |                       |                      |
| <b>Comments</b>           | The reduced frame number, its range is 0 -- 42431 (FN modulo 42432) about 195.8 s  |                       |                      |
| <b>Element Name</b>       | <b>Type Definition</b>   | <b>Field Encoding</b> | <b>Comments</b>      |
| t1_                       | BITSTRING[5]   |                       | (FN div 1326) mod 32 |
| t3                        | BITSTRING[6]   |                       | FN mod 51            |
| t2                        | BITSTRING[5]   |                       | FN mod 26            |
| <b>Detailed Comments</b>  | see 3GPP TS 04.18 or 3GPP TS 44.018 [43], clause 10.5.2.38.<br>The reduced frame number, FN modulo 42432 can be calculated in the following formula: $51 \times ((t3 - t2) \text{ mod } 26) + t3 + 1326 \times t1\_$ .<br>RFN is used for starting time and TBF starting time. |                       |                      |

|                          |   |  |  |
|--------------------------|---|--|--|
| <b>ASP Name</b>          | G_L2_Release_CNF  |  |  |
| <b>PCO Type</b>          | G_DSAP  |  |  |
| <b>Comments</b>          | This ASP from L2, indicates that the multiple frame operation release was successful. This means that the UA message was received in response to L2 DISC command. |  |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |  |
| cellId                   | CellId  |  |  |
| sAPI                     | SAPI  | 0 or 3   |  |
| physicalChId             | PhysicalChId  | Channel identifier   |  |
| g_LogicChType            | G_LogicChType   |  |  |
| subChannel               | SubChannelNumber  | For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3).<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |  |
| releaseMode              | BITSTRING[1]  | 0 = normal release;<br>1 = local release.  |  |
| <b>Detailed Comments</b> |   |  |  |

|                          |  |  |  |
|--------------------------|--|--|--|
| <b>ASP Name</b>          | G_L2_Release_REQ   |  |  |
| <b>PCO Type</b>          | G_DSAP   |  |  |
| <b>Comments</b>          | This ASP requests L2 to send Layer 2 DISC command on the indicated SAPI. |  |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |  |
| cellId                   | CellId   |  |  |
| sAPI                     | SAPI   | 0 or 3   |  |
| physicalChId             | PhysicalChId   | Channel identifier   |  |
| g_LogicChType            | G_LogicChType  |  |  |
| subChannel               | SubChannelNumber   | For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3).<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |  |
| releaseMode              | BITSTRING[1]   | 0 = normal release;<br>1 = local release.  |  |
| <b>Detailed Comments</b> |  |  |  |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_L2_Release_IND  |  |
| <b>PCO Type</b>          | G_DSAP  |  |
| <b>Comments</b>          | The ASP is used to receive an indication of the termination of an established multiple frame operation or an indication of an unsuccessful establishment attempt. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  |  |
| sAPI                     | SAPI  | 0  |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); for SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). |
| releaseMode              | BITSTRING[1]  | 0 = normal release; 1 = local end release  |
| outstanding_Indicator    | BOOLEAN   | whether or not there are outstanding acknowledgements or unsolved G_L2_DATA_REQ primitives.  |
| <b>Detailed Comments</b> |   |  |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_L2_SYSINFO_REQ   |  |
| <b>PCO Type</b>          | G_DSAP   |  |
| <b>Comments</b>          | The ASP is used to send system information messages to the lower layer emulator.   |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |
| cellId                   | CellId   |  |
| sAPI                     | SAPI   | 0  |
| physicalChId             | PhysicalChId   |  |
| g_LogicChType            | G_LogicChType  | BCCH or SACCH  |
| instanceIndex            | INTEGER  | To indicate the instance of the system information messages.<br>For SYSTEM INFORMATION Type 2ter, 18, 19, 20 the value is (0..7); for type 14, 15 the value is (0..3); for type 2quater the value is (0..15); for all other type the value is 0. |
| sysInfoType              | SysInfoType  | SYSTEM INFORMATION Type 5, 5bis, 5ter, and 6 are sent on SACCH, the other SYSTEM INFORMATION 's are sent on BCCH.  |
| BCCHExt                  | B1   | '0' indicates message sent on BCCH Norm, '1' indicates message sent on BCCH Ext. Only valid for SI 2quater, 7, 8, 13, 15, 16, 17. Default value '0'  |
| msg                      | PDU  | This field contains SYSTEM INFORMATION message. See 3GPP TS 44.018 [43] clause 9.1.31 to clause 9.1.43h for SYSTEM INFORMATION message definitions.  |
| <b>Detailed Comments</b> | The lower layer emulator shall store the SYSTEM INFORMATION's, and transmit them periodically according to the rules specified in clause 6.3.1.3 of 3GPP TS 05.02 or 3GPP TS 45.002 [31]. The msg shall override the same type system information message previous stored in the lower layer emulator. |  |

|                        |   |
|------------------------|---|
| <b>Type Name</b>       | SysInfoType   |
| <b>Type Definition</b> | INTEGER   |
| <b>Type Encoding</b>   |   |
| <b>Comments</b>        | <p>25--SYSTEM INFORMATION TYPE 1<br/> 26--SYSTEM INFORMATION TYPE 2<br/> 2 -- SYSTEM INFORMATION TYPE 2bis<br/> 3 -- SYSTEM INFORMATION TYPE 2ter<br/> 7 -- SYSTEM INFORMATION TYPE 2quater<br/> 27--SYSTEM INFORMATION TYPE 3<br/> 28--SYSTEM INFORMATION TYPE 4<br/> 29--SYSTEM INFORMATION TYPE 5<br/> 5 -- SYSTEM INFORMATION TYPE 5bis<br/> 6 -- SYSTEM INFORMATION TYPE 5ter<br/> 30--SYSTEM INFORMATION TYPE 6<br/> 31--SYSTEM INFORMATION TYPE 7<br/> 24--SYSTEM INFORMATION TYPE 8<br/> 4 -- SYSTEM INFORMATION TYPE 9</p> <p>0 -- SYSTEM INFORMATION TYPE 13<br/> 61--SYSTEM INFORMATION TYPE 16<br/> 62--SYSTEM INFORMATION TYPE 17<br/> 64--SYSTEM INFORMATION TYPE 18<br/> 65--SYSTEM INFORMATION TYPE 19<br/> 66--SYSTEM INFORMATION TYPE 20<br/> 67—SYSTEM INFORMATION TYPE 15</p> |

#### 7.3.4.3.1.2 ASPs for data transmission and reception through GERAN RLC

|                          |  |                       |  |
|--------------------------|--|-----------------------|--|
| <b>ASP Name</b>          | G_RLC_PSI_REQ  |                       |  |
| <b>PCO Type</b>          | G_DSAP   |                       |  |
| <b>Comments</b>          | The ASP is used to send packet system information messages to the lower layer emulator.  |                       |  |
|                          | <b>Parameter Name</b>  | <b>Parameter Type</b> | <b>Comments</b>  |
|                          | cellId   | CellId                |  |
|                          | physicalChId   | PhysicalChId          |  |
|                          | g_LogicChType  | G_LogicChType         | PBCCH or PACCH or PCCCH  |
|                          | packetSysInfoCategory  | PSI_Category          | PSI1 or high repetition rate or low repetition rate.<br>Type of this field is INTEGER:<br>0-- PSI1;<br>1--high repetition category;<br>2--low repetition category.   |
|                          | positionInList   | PositionInList        | Position in the high repetition rate list or the low repetition rate list, for PSI1 this field is not applicable and set to 31.<br>Type of this field is INTEGER, the order of the position is from 0, 1, ... . 0 indicates the first position, 1 the second, and so on. |
|                          | msg  | PDU                   | This field contains PACKET SYSTEM INFORMATION message, see 3GPP TS 04.60 or 3GPP TS 44.060 [32] clauses 11.2.18 to 11.2.25 for the message definitions   |
| <b>Detailed Comments</b> | On PBCCH, the lower layer emulator shall store the PACKET SYSTEM INFORMATION's, and transmit them periodically according to the rules specified in clause 6.3.2.4 of 3GPP TS 05.02 or 3GPP TS 45.002 [31]. The msg shall override the same type packet system information message previous stored in the lower layer.<br>Multiple instances of a PSI shall be put in the same list and in ascending order of the message instance number |                       |  |

|                        |   |
|------------------------|---|
| <b>Type Name</b>       | PSI_Category  |
| <b>Type Definition</b> | INTEGER   |
| <b>Type Encoding</b>   |   |
| <b>Comments</b>        | 3GPP TS 05.02 or 3GPP TS 45.002 [31] clause 6.3.2.4 |



|                        |   |
|------------------------|---|
| <b>Type Name</b>       | PositionInList  |
| <b>Type Definition</b> | INTEGER   |
| <b>Type Encoding</b>   |   |
| <b>Comments</b>        | 0 is the first position;<br>1 is the second, and so on. |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_RLC_ControlMsg_REQ   |   |
| <b>PCO Type</b>          | G_DSAP   |   |
| <b>Comments</b>          | The ASP is used to transmit a RLC/MAC control message to the UE/MS on the specified channel.   |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>   |
| cellId                   | CellId   |   |
| physicalChId             | PhysicalChId   |   |
| g_LogicChType            | G_LogicChType  | PCCCH or PACCH or PTCCH   |
| tBF_Direction            | INTEGER  | 1-downlink TBF;<br>0-uplink TBF   |
| tFI                      | TFI  | Temporary flow identity   |
| rRBP                     | RRBP   | Relative reserved block period  |
| s_P_Bit                  | S_P_Bit  | Supplementary/polling bit   |
| rfn                      | RFN  | The reduced frame number of the first frame on which this message is sent.<br>This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.  |
| pagingGroup              | PAGING_GROUP   | for message other than PACKET PAGING REQUEST this field shall be omitted  |
| pagingMode               | PagingMode   | 0 -- normal paging;<br>1 -- extended paging;<br>3 -- paging reorganization.<br>this field is valid only for PACKET PAGING REQUEST control message, for message other than PACKET PAGING REQUEST this field shall be omitted |
| msg                      | PDU  | Down link RLC/MAC control message   |
| <b>Detailed Comments</b> | <p>This ASP provides values for "RRBP" and "S/P" fields in MAC header for TTCN controlling the response from the UE, the value for "PayloadType" and "USF" fields in MAC header shall be filled by the SS.</p> <p>If a RLC/MAC control message can not be fitted into one RLC/MAC control block, the SS RLC/MAC entity shall take the responsibility of segmentation of the message, and set the correct "PayloadType" and optional octet1 (and optional octet2).</p> <p>PTCCH is valid for PACKET TIMING ADVANCE/POWER CONTROL message if sending PACKET PAGING REQUEST.</p> <p>The required 52-multiframe occurs when:<br/> <math>\text{pagingGroup div (M div 64) = (FN div 52) mod 64}</math></p> <p>The index to the required paging block in the 51-multiframe determined above:<br/> <math>\text{Paging block index} = \text{pagingGroup mod (M div 64)}</math></p> $M = (12 - \text{BS\_PAG\_BLKS\_RES} - \text{BS\_PBCCH\_BLKS}) \times 64$ |   |

|                        |  |
|------------------------|--|
| <b>Type Name</b>       | RRBP   |
| <b>Type Definition</b> | BITSTRING[2]                                       |
| <b>Type Encoding</b>   |  |
| <b>Comments</b>        | 3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 10.4.5 |

|                        |  |
|------------------------|--|
| <b>Type Name</b>       | S_P_Bit  |
| <b>Type Definition</b> | BITSTRING[1]   |
| <b>Type Encoding</b>   |  |
| <b>Comments</b>        | 0 - RRBP field is not valid;<br>1 - RRBP field is valid. |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_RLC_ControlMsg_IND   |  |
| <b>PCO Type</b>          | G_DSAP   |  |
| <b>Comments</b>          | The ASP is used to receive an uplink RLC/MAC control block sent by the UE/MS on the specified channel.   |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |
| cellId                   | CellId   |  |
| physicalChId             | PhysicalChId   |  |
| g_LogicChType            | G_LogicChType  | PACCH or PDTCH   |
| tBF_Direction            | INTEGER  | 1 - downlink TBF;<br>0 - uplink TBF                        |
| tFI                      | TFI  | Temporary flow identity                                    |
| rfn                      | RFN  | The reduced frame number of the frame carrying the message |
| msg                      | PDU  | Uplink RLC/MAC control message                             |
| <b>Detailed Comments</b> | Logical channel type PDTCH is valid for PACKET ENHANCED MEASUREMENT REPORT message only.<br>The ASP is not used to receive PACKET CHANNEL REQUEST, EGPRS PACKET CHANNEL REQUEST and burst format of PACKET CONTROL ACKNOWLEDGEMENT which are received by G_RLC_ACCESS_IND. |  |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_RLC_ACCESS_IND   |   |
| <b>PCO Type</b>          | G_DSAP   |   |
| <b>Comments</b>          | The ASP is used to receive an access burst sent by the UE/MS on the specified channel.                                     |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>   |
| cellId                   | CellId   |   |
| physicalChId             | PhysicalChId   |   |
| g_LogicChType            | G_LogicChType  | PRACH or PACCH or PTCCH   |
| rfn                      | RFN  | The reduced frame number of the frame carrying the burst              |
| retryBit                 | BITSTRING[1]   | For access bursts on PRACH, RACH. For PACCH, this field is no meaning |
| burst                    | PDU  | 8-bit or 11-bit access burst  |
| <b>Detailed Comments</b> | PACKET CHANNEL REQUEST, EGPRS PACKET CHANNEL REQUEST and burst format of PACKET CONTROL ACKNOWLEDGEMENT are access bursts. |   |

## 7.3.4.3.1.3

## ASPs for data transmission and reception through GERAN LLC

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_LLC_UNITDATA_REQ   |  |
| <b>PCO Type</b>          | G_DSAP   |  |
| <b>Comments</b>          | The ASP is used to send L3 PDU to the UE/MS in LLC unconfirmed transmission.   |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |
| ILMEId                   | LLMEId   |  |
| tLLI                     | TLLI   |  |
| sAPI                     | SAPI   |  |
| protectMode              | BITSTRING[1]   | 0 -- unprotected;<br>1 -- protected                    |
| cipherMode               | BITSTRING[1]   | 0 -sent without encryption;<br>1 -sent with encryption |
| msg                      | PDU  | L3 PDU   |
| <b>Detailed Comments</b> | 3GPP TS 04.64 or 3GPP TS 44.064 [33] clause 8.4.1<br>After the ciphering function is started in the SS by G_CLLC_Assign_REQ, the SS shall encrypt the "msg" when cipherMode = '1', and the SS shall not encrypt the "msg" if cipherMode = '0'. |  |

|                        |  |
|------------------------|--|
| <b>Type Name</b>       | LLMEId   |
| <b>Type Definition</b> | INTEGER  |
| <b>Type Encoding</b>   |  |
| <b>Comments</b>        | The identifier of the Logical Link Management Entity in SGSN |

|                          |   |                       |
|--------------------------|---|-----------------------|
| <b>ASP Name</b>          | G_LLC_UNITDATA_IND  |                       |
| <b>PCO Type</b>          | G_DSAP  |                       |
| <b>Comments</b>          | The ASP is used to receive a L3 PDU from the UE/MS in LLC unconfirmed transmission. |                       |
|                          | <b>Parameter Name</b>   | <b>Parameter Type</b> |
| ILMEId                   | LLMEId  |                       |
| tLLI                     | TLLI  |                       |
| sAPI                     | SAPI  |                       |
| msg                      | PDU   | L3 PDU                |
| <b>Detailed Comments</b> | 3GPP TS 04.64 or 3GPP TS 44.064 [33] clause 8.4.2                                   |                       |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_LLC_XID_RES  |  |
| <b>PCO Type</b>          | G_DSAP   |  |
| <b>Comments</b>          | The ASP is used to send to the UE/MS the negotiated XID parameters agreed by the SS. |  |
|                          | <b>Parameter Name</b>  | <b>Parameter Type</b>                          |
| ILMEId                   | LLMEId   |  |
| tLLI                     | TLLI   |  |
| sAPI                     | SAPI   |  |
| xID_Info                 | XID_Info   | the negotiated XID parameters agreed by the SS |
| <b>Detailed Comments</b> |  |  |

|                        |                                     |
|------------------------|-------------------------------------|
| <b>Type Name</b>       | XID_Info                            |
| <b>Type Definition</b> | OCTETSTRING                         |
| <b>Type Encoding</b>   |                                     |
| <b>Comments</b>        | Exchange Identification Information |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_LLC_XID_IND  |   |
| <b>PCO Type</b>          | G_DSAP   |   |
| <b>Comments</b>          | The ASP is used to receive the XID requested by the UE/MS. |   |
|                          | <b>Parameter Name</b>                                      | <b>Parameter Type</b>                     |
| ILMEId                   | LLMEId   |   |
| tLLI                     | TLLI   |   |
| sAPI                     | SAPI   |   |
| xID_Info                 | XID_Info   | the XID parameters requested by the UE/MS |
| <b>Detailed Comments</b> |  |   |

#### 7.3.4.3.1.4 ASPs for data transmission and reception through GERAN SMDCP

|                          |   |                             |
|--------------------------|---|-----------------------------|
| <b>ASP Name</b>          | G_SN_DATA_REQ   |                             |
| <b>PCO Type</b>          | G_DSAP  |                             |
| <b>Comments</b>          | The ASP is used to send a valid IP datagram on the specified NSAPI to the UE/MS by acknowledged transmission. |                             |
|                          | <b>Parameter Name</b>   | <b>Parameter Type</b>       |
| sNDCPId                  | SNDCPId   |                             |
| nSAPI                    | NSAPI   | 5 to 15                     |
| n_PDU_Number             | OCTETSTRING[1]  |                             |
| n_PDU                    | N_PDU   | Valid IPv4 or IPv6 datagram |
| <b>Detailed Comments</b> | Acknowledged transmission mode  |                             |

|                          |  |                       |
|--------------------------|--|-----------------------|
| <b>ASP Name</b>          | G_SN_DATA_IND  |                       |
| <b>PCO Type</b>          | G_DSAP   |                       |
| <b>Comments</b>          | The ASP is used to receive an IP datagram on the specified NASPI from the UE/MS in acknowledged transmission mode. |                       |
|                          | <b>Parameter Name</b>  | <b>Parameter Type</b> |
| sNDCPId                  | SNDCPId  |                       |
| nSAPI                    | NSAPI  | 5 to 15               |
| n_PDU                    | N_PDU  | IPv4 or IPv6 datagram |
| <b>Detailed Comments</b> | Acknowledged transmission mode   |                       |

|                          |   |                                      |
|--------------------------|---|--------------------------------------|
| <b>ASP Name</b>          | G_SN_UNIDATA_REQ  |                                      |
| <b>PCO Type</b>          | G_DSAP  |                                      |
| <b>Comments</b>          | The ASP is used to send a valid IP datagram on the specified NSAPI to the UE/MS by unacknowledged transmission. |                                      |
|                          | <b>Parameter Name</b>   | <b>Parameter Type</b>                |
|                          | sNDCPIId  | SNDCPIId                             |
|                          | nSAPI   | NSAPI<br>5 to 15                     |
|                          | n_PDU   | N_PDU<br>Valid IPv4 or IPv6 datagram |
| <b>Detailed Comments</b> | Unacknowledged transmission mode  |                                      |

|                          |  |                                |
|--------------------------|--|--------------------------------|
| <b>ASP Name</b>          | G_SN_UNITDATA_IND  |                                |
| <b>PCO Type</b>          | G_DSAP   |                                |
| <b>Comments</b>          | The ASP is used to receive an IP datagram on the specified NASPI from the UE/MS in unacknowledged transmission mode. |                                |
|                          | <b>Parameter Name</b>  | <b>Parameter Type</b>          |
|                          | sNDCPIId   | SNDCPIId                       |
|                          | nSAPI  | NSAPI<br>5 to 15               |
|                          | n_PDU  | N_PDU<br>IPv4 or IPv6 datagram |
| <b>Detailed Comments</b> | Unacknowledged transmission mode   |                                |

|                          |  |                                      |
|--------------------------|--|--------------------------------------|
| <b>ASP Name</b>          | G_SN_XID_REQ   |                                      |
| <b>PCO Type</b>          | G_DSAP   |                                      |
| <b>Comments</b>          | The ASP is used to send the requested XID parameters to the UE/MS. |                                      |
|                          | <b>Parameter Name</b>  | <b>Parameter Type</b>                |
|                          | sNDCPIId   | SNDCPIId                             |
|                          | xID_Info   | XID_Info<br>XID parameters requested |
| <b>Detailed Comments</b> |  |                                      |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_SN_XID_IND  |   |
| <b>PCO Type</b>          | G_DSAP  |   |
| <b>Comments</b>          | The ASP is used to receive the XID parameters requested by the UE/MS. |   |
|                          | <b>Parameter Name</b>   | <b>Parameter Type</b>                             |
|                          | sNDCPIId  | SNDCPIId  |
|                          | xID_Info  | XID_Info<br>XID parameters requested by the UE/MS |
| <b>Detailed Comments</b> |   |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_SN_XID_CNF  |   |
| <b>PCO Type</b>          | G_DSAP  |   |
| <b>Comments</b>          | The ASP is used to receive the negotiated XID parameters agreed by the UE/MS. |   |
|                          | <b>Parameter Name</b>   | <b>Parameter Type</b>   |
|                          | sNDCPIId  | SNDCPIId  |
|                          | xID_Info  | XID_Info<br>The negotiated XID parameters agreed by the UE/MS |
| <b>Detailed Comments</b> |   |   |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_SN_XID_RES   |  |
| <b>PCO Type</b>          | G_DSAP   |  |
| <b>Comments</b>          | The ASP sends to the UE/MS the negotiated XID parameters agreed by the SS. |  |
|                          | <b>Parameter Name</b>  | <b>Parameter Type</b>                                      |
|                          | sNDCPIId   | SNDCPIId   |
|                          | xID_Info   | XID_Info<br>The negotiated XID parameters agreed by the SS |
| <b>Detailed Comments</b> |  |  |

|                        |  |
|------------------------|--|
| <b>Type Name</b>       | SNDCPIId                                   |
| <b>Type Definition</b> | INTEGER                                    |
| <b>Type Encoding</b>   |  |
| <b>Comments</b>        | The identifier of the SMDCP entity in SGSN |

## 7.3.4.3.1.5

## ASPs for data transmission and reception through GERAN DTM

| <b>ASP Name</b>          | G_L2_GTP_REQ   |  |
|--------------------------|--|--|
| <b>PCO Type</b>          | G_DSAP   |  |
| <b>Comments</b>          | The ASP is used for DTM to send an LLC signalling message on the DCCH in acknowledged mode.  |  |
| Parameter Name           | Parameter Type   | Comments   |
| cellId                   | CellId   |  |
| SAPI                     | SAPI   |  |
| physicalChId             | PhysicalChId   | Channel identifier   |
| g_LogicChType            | G_LogicChType  |  |
| subChannel               | SubChannelNumber   | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| protectMode              | BITSTRING[1]   | 0 -- unprotected;<br>1 -- protected  |
| cipherMode               | BITSTRING[1]   | 0 - sent without encryption;<br>1 - sent with encryption   |
| skipIndicator            | B4   | GTP header, unciphered   |
| GTPProtocolDiscriminator | B4   | GTP header, unciphered   |
| msgType                  | B8   | GTP header, unciphered   |
| TLLI                     | TLLI   | GTP header, unciphered   |
| gmmSmPDUlength           | Length   | GTP header, unciphered   |
| gmmSmPDU                 | PDU  | GMM or SM PDU - ciphered   |
| <b>Detailed Comments</b> | Ciphering must be started in the SS by G_CLLC_Assign_REQ, and also by either G_CL1_CipheringControl_REQ, G_CL1_CipherModeModify_REQ, or G_CL1_CreateBasicPhyCh_REQ. When cipherMode = '1' the SS shall encrypt the "LLCPDU", using the algorithm specified in px_GPRS_CipherAlg, and then encrypt the whole outgoing message using the algorithm specified in px_GSM_CipherAlg. The SS shall not encrypt the message at all if cipherMode = '0'. |  |

| <b>ASP Name</b>          | G_L2_GTP_IND  |  |
|--------------------------|---|--|
| <b>PCO Type</b>          | G_DSAP  |  |
| <b>Comments</b>          | The ASP is used for DTM to receive an LLC signalling message on DCCH acknowledged mode. |  |
| Parameter Name           | Parameter Type  | Comments   |
| cellId                   | CellId  |  |
| SAPI                     | SAPI  |  |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| rfrn                     | RFN   | The reduced frame number of the first frame carrying the message   |
| TLLI                     | TLLI  |  |
| gmmSmPDU                 | PDU   | Deciphered GMM or SM signalling message received   |
| <b>Detailed Comments</b> | If ciphering is used, the SS will take care to ensure the "LLC PDU" is deciphered       |  |

## 7.3.4.3.2 ASPs for control primitive transmission and reception in GERAN

## 7.3.4.3.2.1 ASPs for configuration and control of GERAN L1

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_CL1_CreateCell_REQ                      |  |
| <b>PCO Type</b>          | G_CSAP                                    |  |
| <b>Comments</b>          | The ASP is used to create a cell in GERAN |  |
|                          | <b>Parameter Name</b>                     | <b>Parameter Type</b>  |
|                          | cellId                                    | CellId   |
|                          | baseId                                    | BITSTRING[6]<br>base transceiver station identity code = NCC+BCC.<br>see 3GPP TS 23.003 [6]                          |
|                          | timingAdvance                             | BITSTRING[8]<br>The SS sets the timing of uplink direction in advance<br>of downlink direction timing by this value. |
| <b>Detailed Comments</b> |   |  |

|                          |   |                       |
|--------------------------|---|-----------------------|
| <b>ASP Name</b>          | G_CL1_CreateCell_CNF  |                       |
| <b>PCO Type</b>          | G_CSAP  |                       |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CL1_CreateCell_REQ |                       |
|                          | <b>Parameter Name</b>   | <b>Parameter Type</b> |
|                          | cellId  | CellId                |
|                          |   | The cell created      |
| <b>Detailed Comments</b> |   |                       |

|                          |   |                        |
|--------------------------|---|------------------------|
| <b>ASP Name</b>          | G_CL1_DeleteCell_REQ                      |                        |
| <b>PCO Type</b>          | G_CSAP                                    |                        |
| <b>Comments</b>          | The ASP is used to delete a cell in GERAN |                        |
|                          | <b>Parameter Name</b>                     | <b>Parameter Type</b>  |
|                          | cellId                                    | CellId                 |
|                          |   | The cell to be deleted |
| <b>Detailed Comments</b> |   |                        |

|                          |   |                       |
|--------------------------|---|-----------------------|
| <b>ASP Name</b>          | G_CL1_DeleteCell_CNF  |                       |
| <b>PCO Type</b>          | G_CSAP  |                       |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CL1_DeleteCell_REQ |                       |
|                          | <b>Parameter Name</b>   | <b>Parameter Type</b> |
|                          | cellId  | CellId                |
|                          |   | The cell deleted      |
| <b>Detailed Comments</b> |   |                       |

| <b>ASP Name</b>          | G_CL1_CreateBasicPhyCh_REQ   |  |
|--------------------------|--|--|
| <b>PCO Type</b>          | G_CSAP   |  |
| <b>Comments</b>          | The ASP is used to create a basic physical channel in GERAN  |  |
| Parameter Name           | Parameter Type   | Comments   |
| cellId                   | CellId   | The cell which the channel to be created belongs to  |
| physicalChId             | PhysicalChId   | Identifier of the physical channel in the SS.  |
| channelCombination       | ChannelCombination   | Logical channels combined onto the basic physical channel.   |
| frqInfo                  | FrqInfo  | Parameters for Description of the physical channel in frequency domain   |
| timeSlot                 | TN   | The timeslot number of the physical channel  |
| tsc                      | TSC  | Training sequence code. For common control and broadcast channels the value of tsc must be equal to BCC (base station colour code)   |
| channelSpecificInfo      | ChannelSpecificInfo  | Specific parameters related to individual channel  |
| txPower                  | TX_Power   | The transmission power level in dB $\mu$ Vemf()  |
| bandIndicator            | BITSTRING[1]   | Parameter for DCS or PCS frequency band selection.<br>A value 0 for frqInfo.arfcn interpreted as DCS1800.<br>A value 1 for frqInfo.arfcn interpreted as PCS1900.<br>If omitted, the value in frqInfo.arfcn interpreted as DCS1800. |
| <b>Detailed Comments</b> | <p>The value of channelCombination permitted currently:</p> <ol style="list-style-type: none"> <li>1 TCH/F + FACCH/F + SACCH/TF</li> <li>2 TCH/H(0,1) + FACCH/H(0,1) + SACCH/TH(0,1)</li> <li>3 TCH/H(0,0) + FACCH/H(0,1) + SACCH/TH(0,1) + TCH/H(1,1)</li> <li>4 FCCH + SCH + BCCH + CCCH</li> <li>5 FCCH + SCH + BCCH + CCCH + SDCCH/4(0..3) + SACCH/C4(0..3)</li> <li>6 BCCH + CCCH</li> <li>7 SDCCH/8(0..7) + SACCH/C8(0..7)</li> <li>8 TCH/F + FACCH/F + SACCH/M</li> <li>9 TCH/F + SACCH/M</li> <li>10 TCH/FD + SACCH/MD</li> <li>11 PBCCH+PCCCH+PDTCH/F+PACCH/F+PTCCH/F</li> <li>12 PCCCH+PDTCH/F+PACCH/F+PTCCH/F</li> <li>13 PDTCH/F+PACCH/F+PTCCH/F</li> <li>18 E-TCH/F + E-IACCH/F + E-FACCH/F + SACCH/TF</li> <li>19 E-TCH/F + E-IACCH/F + E-FACCH/F + SACCH/M</li> <li>20 E-TCH/F + E-IACCH/F + SACCH/M</li> <li>21 E-TCH/FD + E-IACCH/F + SACCH/MD</li> </ol> |  |

| <b>ASP Name</b>          | G_CL1_CreateBasicPhyCh_CNF  |   |
|--------------------------|---|---|
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CL1_CreateBasicPhyCh_REQ |   |
| Parameter Name           | Parameter Type  | Comments                                      |
| cellId                   | CellId  | The cell which the created channel belongs to |
| physicalChId             | PhysicalChId  | The physical channel created.                 |
| <b>Detailed Comments</b> |   |   |

| Type Name          | FrqInfo   |                |   |
|--------------------|---|----------------|---|
| Encoding Variation |   |                |   |
| Comments           | Parameters for Description of basic physical channel in frequency domain. |                |   |
| Element Name       | Type Definition   | Field Encoding | Comments  |
| h                  | BITSTRING[1]  |                | h=1:hopping channel<br>h=0: non-hopping channel   |
| spr                | BITSTRING [3]   |                | '000'B  |
| spr1               | BITSTRING [2]   |                | '00'B if h = 0, otherwise OMIT  |
| maio               | BITSTRING [6]   |                | mobile allocation index offset if h = 1,<br>otherwise OMIT  |
| hsn                | BITSTRING [6]   |                | hopping sequence number if h = 1,<br>otherwise OMIT   |
| arfcn              | BITSTRING [10]  |                | absolute RF channel number if h = 0,<br>otherwise OMIT  |
| hoppingFreqList    | FrequencyList   |                | hopping frequency list if h = 1, otherwise<br>OMIT.<br>The definition see 3GPP TS 44.018 [43] or<br>3GPP TS 04.18, clause 10.5.2.13 |
| Detailed Comments  |   |                |   |

| Type Name          | ChannelSpecificInfo               |                |  |
|--------------------|-----------------------------------|----------------|--|
| Encoding Variation |                                   |                |  |
| Comments           | Parameters for individual channel |                |  |
| Element Name       | Type Definition                   | Field Encoding | Comments   |
| dedCH_Info         | DedCH_Info                        |                | Parameters for dedicated channel.<br>Valid for combination:1, 2, 3, 5, 7, 8, 9, 10<br>This field is omitted if DedCH_Info does not<br>apply for the channelCombination                 |
| cCCH_Info          | CCCH_Info                         |                | Parameters for common control channels:<br>PCH, SCH, etc.<br>Valid for combination: 4, 5, 6<br>This field is omitted if CCCH_Info does not<br>apply for the channelCombination         |
| pCCCH_Info         | PCCCH_Info                        |                | Parameters for packet common control<br>channels: PCCCH, PPCH,...<br>Valid for combination: 11, 12<br>This field is omitted if PCCCH_Info does<br>not apply for the channelCombination |
| pBCCH_Info         | PBCCH_Info                        |                | Parameters for packet broadcast channels:<br>PBCCH<br>Valid for combination: 11<br>This field is omitted if PBCCH_Info does<br>not apply for the channelCombination                    |
| Detailed Comments  |                                   |                |  |

| Type Name          | DedCH_Info  |                |   |
|--------------------|---|----------------|---|
| Encoding Variation |   |                |   |
| Comments           | Parameters for dedicated channel  |                |   |
| Element Name       | Type Definition   | Field Encoding | Comments  |
| chMod              | ChMode  |                | Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [43]<br>clause 10.5.2.6  |
| cipherMode         | CipherModeSetting   |                | Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [43]<br>clause 10.5.2.9  |
| cipherKey          | BITSTRING[64]   |                |   |
| powerLevel         | BITSTRING[5]  |                | Initial MS uplink transmission power level. This value is<br>used in the L1 header of SACCH.  |
| timingAdvance      | BITSTRING[8]  |                | Initial timing advance. This value is used in the L1 header<br>of SACCH.<br>This field shall be set to the same value as in<br>timingAdvance of G_CL1_CreateCell_REQ. |
| Detailed Comments  | In addition to ciphering algorithm the cipherMode specifies the initial ciphering mode of the<br>physical channel in both transmission and receiving direction by startingCiph bit. During ciphering<br>mode setting procedure the ciphering mode of receiving direction can be changed by<br>G_CL1_CipheringControl_REQ. |                |   |



| Type Name          | CCCH_Info                              |                |  |
|--------------------|--|----------------|--|
| Encoding Variation |  |                |  |
| Comments           | Parameters for common control channels |                |  |
| Element Name       | Type Definition                        | Field Encoding | Comments   |
| bS_PA_MFRMS        | BITSTRING[3]                           |                | the number of 51-multiframes between transmissions of paging messages. Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [43] clause 10.5.2.11                  |
| bS_AG_BLKES_RES    | BITSTRING[3]                           |                | the number of blocks on each common control channel reserved for access grant messages. Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [43] clause 10.5.2.11 |
| Detailed Comments  |  |                |  |

| Type Name          | PCCCH_Info                                    |                |   |
|--------------------|---|----------------|---|
| Encoding Variation |   |                |   |
| Comments           | Parameters for packet common control channels |                |   |
| Element Name       | Type Definition                               | Field Encoding | Comments  |
| bS_PBCCH_BLKES     | BITSTRING[2]                                  |                | 3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 12.25 |
| bS_PAG_BLKES_RES   | BITSTRING[4]                                  |                | 3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 12.25 |
| bS_PRACH_BLKES     | BITSTRING[4]                                  |                | 3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 12.25 |
| Detailed Comments  |   |                |   |

| Type Name          | PBCCH_Info                              |                |   |
|--------------------|---|----------------|---|
| Encoding Variation |   |                |   |
| Comments           | Parameters for packet broadcast channel |                |   |
| Element Name       | Type Definition                         | Field Encoding | Comments  |
| pSI1_REPEAT_PERIOD | BITSTRING[4]                            |                | The repeat period of packet system information Type 1. See 3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 11.2.18              |
| pSI_COUNT_HR       | BITSTRING[4]                            |                | The number of PSI message instances sent with high repetition rate. See 3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 11.2.18 |
| pSI_COUNT_LR       | BITSTRING[6]                            |                | The number of PSI message instances sent with low repetition rate. See 3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 11.2.18  |
| Detailed Comments  |   |                |   |

| ASP Name            | G_CL1_CreateMultiSlotConfig_REQ  |   |  |
|---------------------|--|---|--|
| PCO Type            | G_CSAP   |   |  |
| Comments            | The ASP is used to create a multi-slot configuration in GERAN and should be preceded with G_CL1_CreateBasicPhyCh_REQ in order to create a basic physical channel with single timeslot.                 |   |  |
| Parameter Name      | Parameter Type   | Comments  |  |
| cellId              | CellId   | The cell which the configuration to be created belongs to                 |  |
| mainChannel         | PhysicalChId   | identifier of the main physical channel of this multi-slot configuration. |  |
| multiSlotAllocation | MultiSlotAllocation  | The timeslot allocation of the configuration                              |  |
| Detailed Comments   | This ASP is to add a multi-slot configuration to the physical channel created in G_CL1_CreateBasicPhyCh_REQ ASP. For multi-slot configuration refer 3GPP TS 05.02 or 3GPP TS 45.002 [31] clause 6.4.2. |   |  |

| ASP Name          | G_CL1_CreateMultiSlotConfig_CNF  |   |  |
|-------------------|--|---|--|
| PCO Type          | G_CSAP   |   |  |
| Comments          | The ASP is used to get the confirmation of a G_CL1_CreateMultiSlotConfig_REQ |   |  |
| Parameter Name    | Parameter Type   | Comments  |  |
| cellId            | CellId   | The cell which the created multi-slot configuration belongs to. |  |
| physicalChId      | PhysicalChId   | The main physical channel identifier.                           |  |
| Detailed Comments |  |   |  |

| Type Name                | MultiSlotAllocation  |                |  |
|--------------------------|--|----------------|--|
| Encoding Variation       |  |                |  |
| Comments                 | Used in multi-slot configuration   |                |  |
| Element Name             | Type Definition  | Field Encoding | Comments   |
| tN0                      | BOOLEAN  |                | TRUE - time slot 0 is allocated; FALSE -- not allocated            |
| channelCombination0      | ChannelCombination   |                | Channel combination for time slot 0; not applicable if tN0 = FALSE |
| tN1                      | BOOLEAN  |                | TRUE - time slot 1 is allocated; FALSE -- not allocated            |
| channelCombination 1     | ChannelCombination   |                | Channel Combination for time slot 1; not applicable if tN1 = FALSE |
| tN2                      | BOOLEAN  |                | TRUE - time slot 2 is allocated; FALSE -- not allocated            |
| channelCombination 2     | ChannelCombination   |                | Channel Combination for time slot 2; not applicable if tN2 = FALSE |
| tN3                      | BOOLEAN  |                | TRUE - time slot 3 is allocated; FALSE -- not allocated            |
| channelCombination 3     | ChannelCombination   |                | Channel Combination for time slot 3; not applicable if tN3 = FALSE |
| tN4                      | BOOLEAN  |                | TRUE - time slot 4 is allocated; FALSE -- not allocated            |
| channelCombination 4     | ChannelCombination   |                | Channel Combination for time slot 4; not applicable if tN4 = FALSE |
| tN5                      | BOOLEAN  |                | TRUE - time slot 5 is allocated; FALSE -- not allocated            |
| channelCombination 5     | ChannelCombination   |                | Channel Combination for time slot 5; not applicable if tN5 = FALSE |
| tN6                      | BOOLEAN  |                | TRUE - time slot 6 is allocated; FALSE -- not allocated            |
| channelCombination 6     | ChannelCombination   |                | Channel Combination for time slot 6; not applicable if tN6 = FALSE |
| tN7                      | BOOLEAN  |                | TRUE - time slot 7 is allocated; FALSE -- not allocated            |
| channelCombination 7     | ChannelCombination   |                | Channel Combination for time slot 7; not applicable if tN7 = FALSE |
| <b>Detailed Comments</b> | Multislot configuration is referred to 3GPP TS 05.02 or 3GPP TS 45.002 [31] clause 6.4.2. The timeslot for which G_CL1_CreateBasicPhyCh_REQ has set the channel combination shall be set to FALSE. |                |  |

| ASP Name                 | G_CL1_CipheringControl_REQ  |   |
|--------------------------|---|---|
| PCO Type                 | G_CSAP  |   |
| Comments                 | The ASP is used to set the ciphering mode of the physical channel in receiving direction, the kc and ciphering algorithm was set by the G_CL1_CreateBasicPhyCh_REQ for the physical channel before calling the ASP.   |   |
| Parameter Name           | Parameter Type  | Comments  |
| cellId                   | CellId  |   |
| physicalChId             | PhysicalChId  | Channel identifier  |
| rcvCipherMode            | BITSTRING[1]  | Ciphering Mode in SS receiving direction:<br>0 → not ciphered<br>1 → ciphered |
| <b>Detailed Comments</b> | <p>For GSM dedicated physical channel, the ciphering mode of the SS shall be changed in three steps: (3GPP TS 44.018 [43], clause 3.4.7)</p> <p>Before the SS sending CIPHERING MODE COMMAND the SS is transmitting and receiving in old ciphering mode (for example, not ciphered), after the SS sending CIPHERING MODE COMMAND the SS changes its receiving ciphering mode to new ciphering mode (for example, ciphered) and keeps transmitting in old ciphering mode; then after receiving CIPHERING MODE COMPLETE or any correct L2 frame in new ciphering mode the SS changes the transmitting ciphering mode to the new mode.</p> <p>TTCN writer shall use this ASP before sending the CIPHERING MODE COMMAND to ensure the ciphering mode of the physical channel, in sufficient time, according to the 3 step procedure outlined above.</p> |   |

|                          |   |                    |
|--------------------------|---|--------------------|
| <b>ASP Name</b>          | G_CL1_CipheringControl_CNF  |                    |
| <b>PCO Type</b>          | G_CSAP  |                    |
| <b>Comments</b>          | The ASP is used to confirm that the G_CL1_CipheringControl_REQ is executed correctly. |                    |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>    |
| cellId                   | CellId  |                    |
| physicalChId             | PhysicalChId  | Channel identifier |
| <b>Detailed Comments</b> |   |                    |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_CL1_ComingFN_REQ   |   |
| <b>PCO Type</b>          | G_CSAP   |   |
| <b>Comments</b>          | The ASP is used to request lower layer return the reduced frame number (FN modulo 42432) which is far enough in the future from current frame number and is able to carry L3 message on the specified channel. The requirement of "far enough" is that there is enough time left for TTCN to prepare a L3 message to send before that frame.<br>The ASP could also be used in the calculation of a value for starting time |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>   |
| cellId                   | CellId   |   |
| physicalChId             | PhysicalChId   | Channel identifier  |
| g_LogicChType            | G_LogicChType  |   |
| subChannel               | SubChannelNumber   | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3).<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| <b>Detailed Comments</b> |  |   |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_CL1_ComingFN_CNF   |   |
| <b>PCO Type</b>          | G_CSAP   |   |
| <b>Comments</b>          | The ASP is used to receive the result of G_CL1_ComingFN_REQ. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>   |
| cellId                   | CellId   |   |
| physicalChId             | PhysicalChId   | Channel identifier  |
| g_LogicChType            | G_LogicChType  |   |
| subChannel               | SubChannelNumber   | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3).<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| rfn                      | RFN  | the reduced frame number (FN modulo 42432) which is about 0.7 seconds later than current frame number and is able to carry L3 message on the channel specified by "physicalChId"+"G_LogicChType"+"subChannel"   |
| <b>Detailed Comments</b> |  |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_CL1_L1Header_REQ  |   |
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | The ASP is used to request lower layer return the L1 header of SACCH. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>   |
| cellId                   | CellId  |   |
| physicalChId             | PhysicalChId  | Channel identifier  |
| g_LogicChType            | G_LogicChType   | SACCH   |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: SACCH/TH, SACCH/C8, and SACCH/C4<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| <b>Detailed Comments</b> |   |   |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_CL1_L1Header_CNF   |   |
| <b>PCO Type</b>          | G_CSAP   |   |
| <b>Comments</b>          | The ASP is used to receive the result of G_CL1_L1Header_REQ. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>   |
| cellId                   | CellId   |   |
| physicalChId             | PhysicalChId   | Channel identifier  |
| g_LogicChType            | G_LogicChType  | SACCH   |
| subChannel               | SubChannelNumber   | Valid only for logical channel types: SACCH/TH, SACCH/C8, and SACCH/C4<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| l1Header                 | L1HD   | Power level and timing advance  |
| <b>Detailed Comments</b> |  |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_CL1_DeleteChannel_REQ   |   |
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | The ASP is used to delete a basic physical channel or an multi-slot configuration |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>   |
| cellId                   | CellId  | The identifier of the cell which the channel to be deleted belongs to |
| physicalChId             | PhysicalChId  | The physical channel or the multi-slot configuration to be deleted.   |
| <b>Detailed Comments</b> |   |   |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_CL1_DeleteChannel_CNF  |   |
| <b>PCO Type</b>          | G_CSAP   |   |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CL1_DeleteChannel_REQ |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>   |
| cellId                   | CellId   | The identifier of the cell which the deleted channel belongs to |
| physicalChId             | PhysicalChId   | The physical channel or multi-slot configuration deleted.       |
| <b>Detailed Comments</b> |  |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_CL1_ChModeModify_REQ  |   |
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | The ASP is used to modify the channel mode of a dedicated channel |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>   |
| cellId                   | CellId  | The identifier of the cell  |
| physicalChId             | PhysicalChId  | Channel identifier  |
| g_LogicChType            | G_LogicChType   |   |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3).<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| chMode                   | ChMode  | Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [43] clause 10.5.2.1b  |
| <b>Detailed Comments</b> |   |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_CL1_ChModeModify_CNF  |   |
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CL1_ChModeModify_REQ |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>   |
| cellId                   | CellId  | The identifier of the cell  |
| physicalChId             | PhysicalChId  | Channel identifier  |
| g_LogicChType            | G_LogicChType   |   |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3).<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| <b>Detailed Comments</b> |   |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_CL1_SetNewKey_REQ   |   |
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | The ASP is used to set new cipher key for a dedicated channel |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>   |
| cellId                   | CellId  | The identifier of the cell  |
| physicalChId             | PhysicalChId  | The channel which uses the new key  |
| g_LogicChType            | G_LogicChType   |   |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3).<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| cipherKey                | BITSTRING[64]   |   |
| <b>Detailed Comments</b> |   |   |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_CL1_SetNewKey_CNF  |   |
| <b>PCO Type</b>          | G_CSAP   |   |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CL1_SetNewKey_REQ |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>   |
| cellId                   | CellId   | The identifier of the cell  |
| physicalChId             | PhysicalChId   | Channel identifier  |
| g_LogicChType            | G_LogicChType  |   |
| subChannel               | SubChannelNumber   | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3).<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| <b>Detailed Comments</b> |  |   |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_CL1_CipherModeModify_REQ                                   |  |
| <b>PCO Type</b>          | G_CSAP   |  |
| <b>Comments</b>          | The ASP is used to modify cipher mode of a dedicated channel |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |
| cellId                   | CellId   | The identifier of the cell   |
| physicalChId             | PhysicalChId   | Channel identifier   |
| g_LogicChType            | G_LogicChType  |  |
| subChannel               | SubChannelNumber   | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| cipherMode               | CipherModeSetting  | The new cipher mode. Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [43] clause 10.5.2.9   |
| <b>Detailed Comments</b> |  |  |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_CL1_CipherModeModify_CNF  |  |
| <b>PCO Type</b>          | G_CSAP  |  |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CL1_CipherModeModify_REQ |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  | The identifier of the cell   |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| <b>Detailed Comments</b> |   |  |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_CL1_ChangePowerLevel_REQ   |  |
| <b>PCO Type</b>          | G_CSAP   |  |
| <b>Comments</b>          | The ASP is used to change the transmission power level of a physical channel |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |
| cellId                   | CellId   | The identifier of the cell which the physical channel belongs to |
| physicalChId             | PhysicalChId   | Channel using the new transmission power level                   |
| txPower                  | TX_Power   | The new transmission power level in dB $\mu$ V <sub>emf</sub> () |
| <b>Detailed Comments</b> |  |  |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_CL1_ChangePowerLevel_CNF  |  |
| <b>PCO Type</b>          | G_CSAP  |  |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CL1_ChangePowerLevel_REQ |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  | The identifier of the cell                                       |
| physicalChId             | PhysicalChId  | The physical channel which uses the new transmission power level |
| <b>Detailed Comments</b> |   |  |

## 7.3.4.3.2.2 ASPs for configuration and control of GERAN L2

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_CL2_HoldPhyInfo_REQ   |  |
| <b>PCO Type</b>          | G_CSAP  |  |
| <b>Comments</b>          | The ASP commands the SS to hold the PHYSICAL INFORMATION message, which will be sent on PCO G_L2 following the current ASP. The PHYSICAL INFORMATION message shall be sent to the UE/MS within T3124 from the time when the SS has received n handover access bursts. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  |  |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4,<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| n                        | INTEGER   | The number of handover access bursts to be received  |
| <b>Detailed Comments</b> | T3124 is defined in 3GPP TS 04.18 or 3GPP TS 44.018 [43] clauses 3.4.4.2.2 and 11.1.1   |  |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_CL2_HoldPhyInfo_CNF   |  |
| <b>PCO Type</b>          | G_CSAP  |  |
| <b>Comments</b>          | The ASP is used to get a confirmation of the G_CL2_HoldPhyInfo_REQ. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  |  |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4.<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| <b>Detailed Comments</b> |   |  |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_CL2_MeasRptControl_REQ   |   |
| <b>PCO Type</b>          | G_CSAP   |   |
| <b>Comments</b>          | The ASP is used to enable or disable the reporting of received Measurement Reports to the TTCN |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>   |
| cellId                   | CellId   |   |
| physicalChId             | PhysicalChId   | Channel identifier  |
| g_LogicChType            | G_LogicChType  | Valid only for logical channel types: SACCH/TF, SACCH/TH, SACCH/C8 and SACCH/C4           |
| subChannel               | SubChannelNumber   | For SACCH/TH value is (0..1); for SACCH/C8 value is (0..7); for SACCH/C4 value is (0..3). |
| sendMeasRpts             | BOOLEAN  | Whether or not to report received Measurement Reports to the TTCN.                        |
| <b>Detailed Comments</b> | Per default, this will be set to FALSE   |   |

|                          |   |                    |
|--------------------------|---|--------------------|
| <b>ASP Name</b>          | G_CL2_MeasRptControl_CNF  |                    |
| <b>PCO Type</b>          | G_CSAP  |                    |
| <b>Comments</b>          | The ASP is used to confirm that G_CL2_MeasRptControl_REQ was executed correctly |                    |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>    |
| cellId                   | CellId  |                    |
| physicalChId             | PhysicalChId  | Channel identifier |
| <b>Detailed Comments</b> |   |                    |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_CL2_NoUAforSABM_REQ   |  |
| <b>PCO Type</b>          | G_CSAP  |  |
| <b>Comments</b>          | The ASP commands the SS not to send UA response to the UE when it receives SABM from the UE on the specified channel. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  |  |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4,<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| <b>Detailed Comments</b> |   |  |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_CL2_NoUAforSABM_CNF   |  |
| <b>PCO Type</b>          | G_CSAP  |  |
| <b>Comments</b>          | The ASP is used to get a confirmation of the G_CL2_NoUAforSABM_REQ. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  |  |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4.<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| <b>Detailed Comments</b> |   |  |

|                          |   |                    |
|--------------------------|---|--------------------|
| <b>ASP Name</b>          | G_CL2_Release_REQ   |                    |
| <b>PCO Type</b>          | G_CSAP  |                    |
| <b>Comments</b>          | The ASP is used request the SS stop L2 transmission on a channel. |                    |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>    |
| cellId                   | CellId  |                    |
| physicalChId             | PhysicalChId  | Channel identifier |
| <b>Detailed Comments</b> |   |                    |

|                       |   |                    |
|-----------------------|---|--------------------|
| <b>ASP Name</b>       | G_CL2_Release_CNF   |                    |
| <b>PCO Type</b>       | G_CSAP  |                    |
| <b>Comments</b>       | The ASP is used to confirm that the G_CL2_Release_REQ is executed correctly |                    |
| <b>Parameter Name</b> | <b>Parameter Type</b>   | <b>Comments</b>    |
| cellId                | CellId  |                    |
| physicalChId          | PhysicalChId  | Channel identifier |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_CL2_ResumeUAforSABM_REQ  |  |
| <b>PCO Type</b>          | G_CSAP   |  |
| <b>Comments</b>          | The ASP commands the SS to send UA response to the UE when it receives SABM from the UE on the specified channel. This ASP is used after G_CL2_NoUAforSABM_REQ to resume the normal multiframe operation of L2 |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |
| cellId                   | CellId   |  |
| physicalChId             | PhysicalChId   | Channel identifier   |
| g_LogicChType            | G_LogicChType  |  |
| subChannel               | SubChannelNumber   | Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4,<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| <b>Detailed Comments</b> |  |  |



|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_CL2_ResumeUAforSABM_CNF   |  |
| <b>PCO Type</b>          | G_CSAP  |  |
| <b>Comments</b>          | The ASP is used to get a confirmation of the G_CL2_ResumeUAforSABM_REQ. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| cellId                   | CellId  |  |
| physicalChId             | PhysicalChId  | Channel identifier   |
| g_LogicChType            | G_LogicChType   |  |
| subChannel               | SubChannelNumber  | Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4.<br>This field is not applicable and the SS shall ignore it if this field is coded as 15. |
| <b>Detailed Comments</b> |   |  |

## 7.3.4.3.2.3 ASPs for configuration and control of GERAN RLC/MAC

|                          |  |                            |
|--------------------------|--|----------------------------|
| <b>ASP Name</b>          | G_CRLC_CreateRLC_MAC_REQ   |                            |
| <b>PCO Type</b>          | G_CSAP   |                            |
| <b>Comments</b>          | The ASP is used to create a RLC/MAC entity in GERAN RLC/MAC emulation module.  |                            |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>            |
| cellId                   | CellId   | The identifier of the cell |
| <b>Detailed Comments</b> | One RLC/MAC entity per cell can exist, cellId will be used for coupling LLC layer module to the RLC/MAC emulation module.. The packet channel description given in the ChannelSpecificInfo of G_CL1_CreateBasicPhyCh_REQ shall be used to configure this layer. This ASP shall be called after the G_CL1_CreateBasicPhyCh_REQ ASP. |                            |

|                          |   |                            |
|--------------------------|---|----------------------------|
| <b>ASP Name</b>          | G_CRLC_CreateRLC_MAC_CNF                                |                            |
| <b>PCO Type</b>          | G_CSAP  |                            |
| <b>Comments</b>          | The ASP is used to confirm the G_CRLC_CreateRLC_MAC_REQ |                            |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                                   | <b>Comments</b>            |
| cellId                   | CellId  | The identifier of the cell |
| <b>Detailed Comments</b> |   |                            |

|                          |   |                            |
|--------------------------|---|----------------------------|
| <b>ASP Name</b>          | G_CRLC_DeleteRLC_MAC_REQ  |                            |
| <b>PCO Type</b>          | G_CSAP  |                            |
| <b>Comments</b>          | The ASP is used to delete a RLC/MAC entity in GERAN emulation module.                     |                            |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>            |
| cellId                   | CellId  | The identifier of the cell |
| <b>Detailed Comments</b> | This ASP is used to release any resource used for the RLC/MAC emulation entity in the SS. |                            |

|                          |   |                            |
|--------------------------|---|----------------------------|
| <b>ASP Name</b>          | G_CRLC_DeleteRLC_MAC_CNF                                |                            |
| <b>PCO Type</b>          | G_CSAP  |                            |
| <b>Comments</b>          | The ASP is used to confirm the G_CRLC_CreateRLC_MAC_REQ |                            |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                                   | <b>Comments</b>            |
| cellId                   | CellId  | The identifier of the cell |
| <b>Detailed Comments</b> |   |                            |

| <b>ASP Name</b>          | G_CRLC_UL_TBF_Config_REQ  |   |
|--------------------------|---|---|
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | The ASP is used to configure a TBF used for uplink packet data transfer   |   |
| Parameter Name           | Parameter Type  | Comments  |
| cellId                   | CellId  |   |
| tFI                      | TFI   |   |
| tBF_Mode                 | BITSTRING[1]  | 0 - GPRS;<br>1 - EGPRS  |
| channelCoding            | ChannelCoding   |   |
| tLLI_BlockChannelCoding  | BITSTRING[1]  | 0 - CS-1 or MCS-1(EGPRS);<br>1 - same as channelCoding  |
| rLC_Mode                 | BITSTRING[1]  | 0 - acknowledged mode;<br>1 - unacknowledged mode   |
| startingTime             | RFN   | This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.  |
| uSF_Rate                 | INTEGER   | This parameter controls the speed of the UL TBF transferring data blocks by controlling the USF rate:<br>1---> implementation dependent. TTCN does not specify the USF generating rate;<br>2---> 10 USF's per second;<br>3---> 5 USF's per second;<br>4---> 1 USF per second;<br>5---> 1 USF per 2 seconds;<br>6---> 1 USF per 3 seconds;<br>7---> 1 USF per 4 seconds. |
| dynamicAllocation        | dynamicAllocation   | dynamic allocation and other parameters.  |
| <b>Detailed Comments</b> | For GPRS channel coding can be: CS-1, CS-2, CS-3 and CS-4;<br>For EGPRS channel coding can be : MCS-1, MCS-2, MCS-3, MCS-4, MCS-5, MCS-6, MCS-7, MCS-8, MCS-9, MCS-5-7 and MCS-6-9.<br>Due to one cell currently has only one RLC/MAC emulation module, this ASP does not contain RLC/MAC identity parameter to indicate which RLC/MAC emulation module this TBF is established for, instead, the parameter cellId implicitly indicates the RLC/MAC module, which is created by G_CRLC_CreateRLC_MAC_REQ in the cell. The higher layer (LLC emulation module) uses rLC/MAC_MappingInfo (with type of CellId) to address the RLC/MAC emulation module to which it connects |   |

| <b>ASP Name</b>          | G_CRLC_UL_TBF_Config_CNF  |          |
|--------------------------|---|----------|
| <b>PCO Type</b>          | G_CSAP  |          |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CRLC_UL_TBF_Config_REQ |          |
| Parameter Name           | Parameter Type  | Comments |
| cellId                   | CellId  |          |
| tFI                      | TFI   |          |
| <b>Detailed Comments</b> |   |          |

|                        |  |
|------------------------|--|
| <b>Type Name</b>       | ChannelCoding  |
| <b>Type Definition</b> | INTEGER  |
| <b>Type Encoding</b>   |  |
| <b>Comments</b>        | 1 - CS-1;<br>2 - CS-2;<br>3 - CS-3;<br>4 -- CS-4;<br>5 - MCS-1;<br>6 - MCS-2;<br>7 - MCS-3;<br>8 - MCS-4;<br>9 - MCS-5;<br>10 - MCS-6;<br>11 - MCS-7;<br>12 - MCS-8;<br>13 - MCS-9;<br>14 - MCS-5-7;<br>15 - MCS-6-9 |

| Type Name          | DynamicAllocation   |                |  |
|--------------------|---|----------------|--|
| Encoding Variation |   |                |  |
| Comments           | Used for up link TBF; dynamic allocation or extended dynamic allocation |                |  |
| Element Name       | Type Definition   | Field Encoding | Comments   |
| extendedAllocation | BITSTRING[1]  |                | 0 - dynamic allocation; 1 - extended dynamic allocation    |
| uSFGranularity     | BITSTRING[1]  |                | 0 - one block;<br>1 - four blocks                          |
| physicalChId       | PhysicalChId  |                | Single PDCH or multislot-configured PDCHs                  |
| tN0                | BOOLEAN   |                | TRUE - time slot 0 is allocated;<br>FALSE -- not allocated |
| uSF_TN0            | BITSTRING[3]  |                | USF value for slot 0                                       |
| tN1                | BOOLEAN   |                | TRUE - time slot 1 is allocated;<br>FALSE -- not allocated |
| uSF_TN1            | BITSTRING[3]  |                | USF value for slot 1                                       |
| tN2                | BOOLEAN   |                | TRUE - time slot 2 is allocated;<br>FALSE -- not allocated |
| uSF_TN2            | BITSTRING[3]  |                | USF value for slot 2                                       |
| tN3                | BOOLEAN   |                | TRUE - time slot 3 is allocated;<br>FALSE -- not allocated |
| uSF_TN3            | BITSTRING[3]  |                | USF value for slot 3                                       |
| tN4                | BOOLEAN   |                | TRUE - time slot 4 is allocated;<br>FALSE -- not allocated |
| uSF_TN4            | BITSTRING[3]  |                | USF value for slot 4                                       |
| tN5                | BOOLEAN   |                | TRUE - time slot 5 is allocated;<br>FALSE -- not allocated |
| uSF_TN5            | BITSTRING[3]  |                | USF value for slot 5                                       |
| tN6                | BOOLEAN   |                | TRUE - time slot 6 is allocated;<br>FALSE -- not allocated |
| uSF_TN6            | BITSTRING[3]  |                | USF value for slot 6                                       |
| tN7                | BOOLEAN   |                | TRUE - time slot 7 is allocated;<br>FALSE -- not allocated |
| uSF_TN7            | BITSTRING[3]  |                | USF value for slot 7                                       |
| Detailed Comments  | The uSF_TNx field is not applicable when tNx = FALSE.                   |                |  |

| ASP Name           | G_CRLC_DL_TBF_Config_REQ  |   |
|--------------------|---|---|
| PCO Type           | G_CSAP  |   |
| Comments           | The ASP is used to configure a TBF used for down link packet data transfer  |   |
| Parameter Name     | Parameter Type  | Comments  |
| cellId             | CellId  |   |
| tFI                | TFI   |   |
| tBF_Mode           | BITSTRING[1]  | 0 - GPRS;<br>1 - EGPRS  |
| channelCoding      | ChannelCoding   |   |
| rLC_Mode           | BITSTRING[1]  | 0 - acknowledged mode;<br>1 - unacknowledged mode   |
| timeSlotAllocation | TimeSlotAllocation  | Downlink TBF time slot allocation   |
| startingTime       | RFN   | This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.  |
| dataBlockRate      | INTEGER   | This parameter controls the speed of the DL TBF sending RLC/MAC data blocks on the assigned PDCH's:<br>1---> implementation dependent. TTCN does not specify the data block rate;<br>2---> 10 data blocks per second;<br>3---> 5 data blocks per second;<br>4---> 1 data block per second;<br>5---> 1 data block per 2 seconds;<br>6---> 1 data block per 3 seconds;<br>7---> 1 data block per 4 seconds. |
| Detailed Comments  | For GPRS channel coding can be: CS-1, CS-2, CS-3 and CS-4;<br>For EGPRS channel coding can be : MCS-1, MCS-2, MCS-3, MCS-4, MCS-5, MCS-6, MCS-7, MCS-8, MCS-9, MCS-5-7 and MCS-6-9. |   |

|                          |   |                 |
|--------------------------|---|-----------------|
| <b>ASP Name</b>          | G_CRLC_DL_TBF_Config_CNF  |                 |
| <b>PCO Type</b>          | G_CSAP  |                 |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CRLC_DL_TBF_Config_REQ |                 |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b> |
| cellId                   | CellId  |                 |
| tFI                      | TFI   |                 |
| <b>Detailed Comments</b> |   |                 |

|                           |                                   |                       |  |
|---------------------------|-----------------------------------|-----------------------|--|
| <b>Type Name</b>          | TimeSlotAllocation                |                       |  |
| <b>Encoding Variation</b> |                                   |                       |  |
| <b>Comments</b>           | Used for downlink and up link TBF |                       |  |
| <b>Element Name</b>       | <b>Type Definition</b>            | <b>Field Encoding</b> | <b>Comments</b>  |
| physicalChId              | PhysicalChId                      |                       | single PDCH or multislot-configured PDCHs                  |
| tN0                       | BOOLEAN                           |                       | Timeslot 0;<br>TRUE - allocated;<br>FALSE - not allocated. |
| tN1                       | BOOLEAN                           |                       | Timeslot 1;<br>TRUE - allocated;<br>FALSE - not allocated. |
| tN2                       | BOOLEAN                           |                       | Timeslot 2;<br>TRUE - allocated;<br>FALSE - not allocated. |
| tN3                       | BOOLEAN                           |                       | Timeslot 3;<br>TRUE - allocated;<br>FALSE - not allocated. |
| tN4                       | BOOLEAN                           |                       | Timeslot 4;<br>TRUE - allocated;<br>FALSE - not allocated. |
| tN5                       | BOOLEAN                           |                       | Timeslot 5;<br>TRUE - allocated;<br>FALSE - not allocated. |
| tN6                       | BOOLEAN                           |                       | Timeslot 6;<br>TRUE - allocated;<br>FALSE - not allocated. |
| tN7                       | BOOLEAN                           |                       | Timeslot 7;<br>TRUE - allocated;<br>FALSE - not allocated. |
| <b>Detailed Comments</b>  |                                   |                       |  |

#### 7.3.4.3.2.4 ASPs for configuration and control of GERAN LLC

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_CLLC_CreateLLE_REQ  |   |
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | The ASP is used to create an LLE (LLC Entity) in GERAN emulation part of the SS and connects the created LLE to the RLC/MAC emulation module pointed by rLC/MAC_MappingInfo.. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>   |
| ILMEId                   | LLMEId  | Logical Layer Management Entity Id  |
| rLC/MAC_MappingInfo      | CellId  | This parameter indicates the RLC/MAC emulation module in the cell, not the cell itself. |
| <b>Detailed Comments</b> | The RLC/MAC emulation module needs to be created prior to this ASP by G_CRLC_CreateRLC_MAC_REQ ASP.   |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_CLLC_CreateLLE_CNF                                |   |
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | The ASP is used to confirm the G_CLLC_CreateLLE_REQ |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                               | <b>Comments</b>   |
| ILMEId                   | LLMEId  | The identifier of the cell Logical Layer Management Entity Id |
| <b>Detailed Comments</b> |   |   |

|                          |  |                                    |
|--------------------------|--|------------------------------------|
| <b>ASP Name</b>          | G_CLLC_DeleteLLE_REQ   |                                    |
| <b>PCO Type</b>          | G_CSAP   |                                    |
| <b>Comments</b>          | The ASP is used to delete an LLE (LLC Entity) in GERAN LLC emulation module. |                                    |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>                    |
| ILMEId                   | LLMEId   | Logical Layer Management Entity Id |
| <b>Detailed Comments</b> |  |                                    |

|                          |   |                                    |
|--------------------------|---|------------------------------------|
| <b>ASP Name</b>          | G_CLLC_DeleteLLE_CNF                                |                                    |
| <b>PCO Type</b>          | G_CSAP  |                                    |
| <b>Comments</b>          | The ASP is used to confirm the G_CLLC_DeleteLLE_REQ |                                    |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                               | <b>Comments</b>                    |
| ILMEId                   | LLMEId  | Logical Layer Management Entity Id |
| <b>Detailed Comments</b> |   |                                    |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_CLLC_Assign_REQ   |  |
| <b>PCO Type</b>          | G_CSAP  |  |
| <b>Comments</b>          | The ASP is used to assign, change, or unassign the TLLI, the ciphering key (Kc) and the ciphering algorithm of GERAN LLC emulation module.  |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>                                      |
| ILMEId                   | LLMEId  | Logical Layer Management Entity Id                   |
| oldTLLI                  | TLLI  | OCTETSTRING[4]                                       |
| newTLLI                  | TLLI  |  |
| cipherKey                | BITSTRING[64]   |  |
| cipherAlgorithm          | GPRS_CipherAlg  | BITSTRING[3], see 3GPP TS 24.008 [9] clause 10.5.5.3 |
| <b>Detailed Comments</b> | <p>This ASP is used to assign, change, or unassign the TLLI, the ciphering key (Kc) and the ciphering algorithm.</p> <ol style="list-style-type: none"> <li>The oldTLLI and newTLLI parameters shall be interpreted as follows: <ul style="list-style-type: none"> <li>If oldTLLI = all 1's and newTLLI ≠ all 1's then newTLLI is assigned and used when (re-)transmitting LLC frames. If an oldTLLI ≠ all 1's was assigned to the LLME, then oldTLLI is unassigned. Only newTLLI is accepted when received from the peer. It shall be treated as a TLLI change. If oldTLLI = all 1's was assigned to the LLME, then this shall be treated as a TLLI assignment, and this ASP shall be the first ASP sent to the SS in order to enable LLC to process requests from layer 3.</li> <li>If oldTLLI ≠ all 1's and newTLLI ≠ all 1's then oldTLLI and newTLLI are assigned, and newTLLI shall be used when (re-)transmitting LLC frames. Both oldTLLI and newTLLI shall be accepted when received from the peer. It shall be treated as a TLLI change.</li> <li>If oldTLLI ≠ all 1's and newTLLI = all 1's then oldTLLI shall be unassigned. It shall be treated as a TLLI unassignment, and this ASP shall be the last ASP sent to the SS in order to disable LLC to not process requests from layer 3 any longer.</li> </ul> </li> <li>Kc and Ciphering Algorithm are associated with newTLLI (and with oldTLLI if assigned): <ul style="list-style-type: none"> <li>If Ciphering Algorithm indicates no ciphering, then the ciphering function shall be disabled.</li> <li>Otherwise, the ciphering function shall be enabled. If a Ciphering Algorithm was already associated with newTLLI or oldTLLI, then the new Kc shall replace the previous Kc, and Ciphering Algorithm shall replace the previous algorithm selection. All I frames, and UI frames with the E bit set to 1, shall use the new Kc and algorithm for ciphering. All unacknowledged I frames shall be ciphered using the new Kc and algorithm before retransmission. As an implementation option, the previous Kc and algorithm may be used to decipher received frames.</li> </ul> </li> </ol> |  |

|                          |  |                                    |
|--------------------------|--|------------------------------------|
| <b>ASP Name</b>          | G_CLLC_Assign_CNF  |                                    |
| <b>PCO Type</b>          | G_CSAP   |                                    |
| <b>Comments</b>          | the ASP is used to get confirmation of G_CLLC_Assign_REQ |                                    |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                                    | <b>Comments</b>                    |
| ILMEId                   | LLMEId   | Logical Layer Management Entity Id |
| <b>Detailed Comments</b> |  |                                    |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_CLLC_ReassignLLE_REQ   |  |
| <b>PCO Type</b>          | G_CSAP   |  |
| <b>Comments</b>          | The ASP is used to reassign RLC/MAC entity to the specified LLME Identity. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>  |
| ILMEId                   | LLMEId   | Logical Layer Management Entity Id   |
| rLC/MAC_MappingInfo      | CellId   | This parameter indicates the RLC/MAC emulation module in the cell, not the cell itself |
| tLLI                     | TLLI   |  |
| <b>Detailed Comments</b> | This ASP allows simulation of Intra-SGSN operations in tests.              |  |

|                          |   |                                    |
|--------------------------|---|------------------------------------|
| <b>ASP Name</b>          | G_CLLC_ReassignLLE_CNF                                |                                    |
| <b>PCO Type</b>          | G_CSAP  |                                    |
| <b>Comments</b>          | The ASP is used to confirm the G_CLLC_ReassignLLE_REQ |                                    |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                                 | <b>Comments</b>                    |
| ILMEId                   | LLMEId  | Logical Layer Management Entity Id |
| <b>Detailed Comments</b> |   |                                    |

#### 7.3.4.3.2.5 ASPs for configuration and control of GERAN Sndcp

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_CSNDCP_Activate_REQ                        |  |
| <b>PCO Type</b>          | G_CSAP                                       |  |
| <b>Comments</b>          | The ASP is used to activate the Sndcp entity |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                        | <b>Comments</b>  |
| sNDCPId                  | SNDCPId                                      | The Sndcp entity identifier of the cell  |
| ILMEId                   | LLMEId                                       | Logical link management entity Id  |
| nSAPI                    | NSAPI  | The Network Service Access Point Identifier  |
| sAPI                     | SAPI   | LLC SAPI   |
| PCI_Compression          | INTEGER                                      | 0 - RFC 1144 [46] compress;<br>1 - RFC 2507 [30] compression;<br>32 - no compression   |
| dataCompression          | INTEGER                                      | 0 - ITU-T Recommendation V.42bis [47] compression;<br>1 - ITU-T Recommendation V.44 [48] compression;<br>32 - no compression |
| nPDUNumberSync           | INTEGER                                      | 0 - Asynchronous<br>1 - Synchronous  |
| <b>Detailed Comments</b> |  |  |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_CSNDCP_Activate_CNF  |   |
| <b>PCO Type</b>          | G_CSAP   |   |
| <b>Comments</b>          | The ASP is used to get the confirmation of a G_CSNDCP_Activate_REQ |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>                             |
| sNDCPId                  | SNDCPId  | SNDcpentity identifier                      |
| nSAPI                    | NSAPI  | The Network Service Access Point Identifier |
| <b>Detailed Comments</b> |  |   |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_CSNDCP_SNSM_Activate_RES   |   |
| <b>PCO Type</b>          | G_CSAP   |   |
| <b>Comments</b>          | This ASP is used to inform that the NSAPI is in use and the acknowledge mode peer to peer LLC operation for the requested SAPI is established. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>                             |
| sNDCPId                  | SNDCPId  | The Sndcp entity identifier                 |
| tLLI                     | TLLI   | Temporary Logical Link Entity               |
| nSAPI                    | NSAPI  | The Network Service Access Point Identifier |
| <b>Detailed Comments</b> |  |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_CSNDCP_SNSM_Deactivate_IND  |   |
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | This ASP is used to inform the SNDCP emulator that an NSAPI has been deactivated and cannot be used anymore. Upon reception of this ASP the SNDCP emulator shall release acknowledged peer-to-peer LLC operation for the associated SAPI. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>                             |
| sNDCPId                  | SNDCPId   | The SNDCP entity identifier                 |
| tLLI                     | TLLI  | Temporary Logical Link Entity               |
| nSAPI                    | NSAPI   | The Network Service Access Point Identifier |
| ILCReleaseIndicator      | INTEGER   | Deactivation cause                          |
| <b>Detailed Comments</b> |   |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_CSNDCP_SNSM_Deactivate_RES  |   |
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | This ASP indicates that the NSAPI is no longer in use and the acknowledged peer to peer LLC operation for the requested SAPI has been released. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>                             |
| sNDCPId                  | SNDCPId   | The SNDCP entity identifier                 |
| tLLI                     | TLLI  | Temporary Logical Link Entity               |
| nSAPI                    | NSAPI   | The Network Service Access Point Identifier |
| <b>Detailed Comments</b> |   |   |

|                          |  |  |
|--------------------------|--|--|
| <b>ASP Name</b>          | G_CSNDCP_SNSM_Status_REQ   |  |
| <b>PCO Type</b>          | G_CSAP   |  |
| <b>Comments</b>          | This ASP informs that the SNDCP cannot continue its operation due to errors in the lower layers of the protocol stack. |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>                                    |
| sNDCPId                  | SNDCPId  | The SNDCP entity identifier                        |
| tLLI                     | TLLI   | Temporary Logical Link Entity                      |
| sAPI<br>cause            | SAPI<br>INTEGER  | The Service Access Point Identifier<br>Error cause |
| <b>Detailed Comments</b> |  |  |

|                          |   |  |
|--------------------------|---|--|
| <b>ASP Name</b>          | G_CSNDCP_SNSM_Modify_IND  |  |
| <b>PCO Type</b>          | G_CSAP  |  |
| <b>Comments</b>          | This ASP informs the SNDCP emulator to trigger the change of QoS profile for an NSAPI and indication of the SAPI to be used |  |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>  |
| sNDCPId                  | SNDCPId   | The SNDCP entity identifier  |
| tLLI                     | TLLI  | Temporary Logical Link Entity  |
| nSAPI                    | NSAPI   | The Network Service Access Point Identifier                                      |
| qos                      | OCTETSTRING[4]  | Quality of Service, defined 3GPP TS 04.08 or 3GPP TS 44.008 [49] clause 10.5.6.5 |
| sAPI                     | SAPI  |  |
| send_NPDU_Number         | INTEGER   |  |
| received_NPDU_Number     | INTEGER   |  |
| <b>Detailed Comments</b> |   |  |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | G_CSNDCP_SNSM_Modify_RES   |   |
| <b>PCO Type</b>          | G_CSAP   |   |
| <b>Comments</b>          | This ASP indicates that the NSAPI and QoS profile are now in used and the acknowledged peer to peer LLC operations for the appropriate SAPIs are established and/or released |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>                             |
| sNDCPId                  | SNDCPId  | The SNDCP entity identifier                 |
| tLLI                     | TLLI   | Temporary Logical Link Entity               |
| nSAPI                    | NSAPI  | The Network Service Access Point Identifier |
| <b>Detailed Comments</b> |  |   |

## 7.3.5 A-GPS Upper tester, PCO and ASP definitions

### 7.3.5.1 Upper tester

In order to perform A-GPS test, an Upper Tester is defined to have two basic functional unites:

- Satellite simulator generating and broadcasting satellite signals;
- Assistance data source storing the data simulating a number of pre-defined GPS test scenarios.

Under the TTCN command, the upper tester loads a pre-defined or re-loads another pre-defined GPS test scenario to the satellite simulator. The generated satellite signals shall simulate a sufficient number satellites. The signal shall be sufficiently strong, in order to enable the UE to do the positioning measurement.

The SS also sends the GPS assistance data to the UE through RRC signalling to facilitate the UE acquiring and tracking satellites. Such assistance data shall be consistent to within  $\pm 2$  seconds with the satellite signals generated.

The assistance data source shall provide the assistance data consistent to  $+1/-0$  second with the GPS test scenario currently running in the satellite simulator (i.e. the data shall be up to 1 second in advance of the scenario); this allows for a further 2 seconds of latency in the SS.

### 7.3.5.2 SV PCO

The upper tester has an ASP interface through a PCO in type of SatS PCO defined in the table.

| PCO Type Declarations |  |
|-----------------------|--|
| <b>PCO Type</b>       | SatS   |
| <b>Role</b>           | UT   |
| <b>Comments</b>       | PCO type used for the Satellite Simulator and the assistance data source in the upper tester |

| PCO Declarations |   |
|------------------|---|
| <b>PCO Name</b>  | SV  |
| <b>PCO Type</b>  | SatS  |
| <b>Role</b>      | UT  |
| <b>Comments</b>  | Carry control, configuration and GPS assistance data to/from satellite simulator and assistance data source in the upper tester |

### 7.3.5.3 A-GPS Primitives

The primitives at SV PCO are used to

- load a pre-defined GPS test scenario into the satellite simulator;
- start or stop generating and broadcasting satellite signals from the satellite simulator;
- retrieve the GPS assistance data from assistance data source, the table below is the summary of these primitives.

| Primitive                    | Parameters   | Use  |
|------------------------------|--|--|
| Satellite_StartStop_REQ      | Mode: start or stop  | Start or stop generating satellite signals in the satellite simulator.                               |
| Satellite_StartStop_CNF      | Null   | Confirm the Satellite_StartStop_Req.   |
| Load_GPS_Scenario_REQ        | GPS test scenario number                                     | Requests to load a pre-defined GPS test scenario into the satellite simulator                        |
| Load_GPS_Scenario_CNF        | Null   | Confirm the load_GPS_Scenario_Req  |
| Retri_GPS_AssistanceData_REQ | Indication of which assistance data elements to be retrieved | Request the assistance data source to provide the next (in time) valid GPS assistance data elements. |
| Retri_GPS_AssistanceData_CNF | GPS assistance data elements                                 | Return the GPS assistance data retrieved   |



## 7.3.5.3.1 Control ASP Type Definition

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | Satellite_StartStop_CNF                          |
| <b>PCO Type</b>           | SatS   |
| <b>Comment</b>            | To confirm successful of Satellite_StartStop_REQ |
| Type Definition           |  |
| SEQUENCE                  | {<br>confirm NULL<br>}                           |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | Satellite_StartStop_REQ   |
| <b>PCO Type</b>           | SatS  |
| <b>Comment</b>            | To start or stop generating satellite signals in the satellite simulator<br>"start" starts broadcasting satellite signals;<br>"stop" stops broadcasting satellite signals<br>If used for start (0), this ASP shall be called 2 s. after the ASP<br>Load_GPS_Scenario_REQ for loading or reloading a pre-defined GPS test<br>scenario. |
| Type Definition           |   |
| SEQUENCE                  | {<br>satelliteSignals ENUMERATED {startSatSignal (0), stopSatSignal (1)}<br>}   |

## 7.3.5.3.2 Data ASP Type Definition

| ASN.1 ASP Type Definition |                                      |
|---------------------------|--------------------------------------|
| <b>Type Name</b>          | Load_GPS_Scenario_CNF                |
| <b>PCO Type</b>           | SatS                                 |
| <b>Comment</b>            | To confirm the Load_GPS_Scenario_REQ |
| Type Definition           |                                      |
| SEQUENCE                  | {<br>dummy NULL<br>}                 |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | Load_GPS_Scenario_REQ   |
| <b>PCO Type</b>           | SatS  |
| <b>Comment</b>            | To request the upper tester to load the required pre-defined GPS test scenario. |
| Type Definition           |   |
| SEQUENCE                  | {<br>gps_Scenario INTEGER (0..31)<br>}  |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | Retri_GPS_AssistanceData_CNF   |
| <b>PCO Type</b>           | SatS   |
| <b>Comment</b>            | To return the next valid GPS assistance data elements as requested in the<br>Retri_GPS_AssistanceData_REQ.<br>The returned GPS assistance data (all or part) will be used as assistance data<br>sent to UE in RRC messages for A-GPS positioning.<br>The returned Almanac information is split into two fields:<br>- Almanac for satellites 1 to 12:in 'assistanceData' together with other information;<br>- Almanac for satellites 13 to 24: in 'almanacSat13To24' |
| Type Definition           |  |
| SEQUENCE                  | {<br>assistanceData UE_Positioning_GPS_AssistanceData,<br>almanacSat13To24 AlmanacSatInfoList OPTIONAL<br>}  |

| <b>ASN.1 ASP Type Definition</b> |   |
|----------------------------------|---|
| <b>Type Name</b>                 | Retri_GPS_AssistanceData_REQ  |
| <b>PCO Type</b>                  | SatS  |
| <b>Comment</b>                   | To request the GPS assistance data source to provide the next valid GPS assistance data elements, consistent with the running GPS test scenario. The parameter navModelAddDataRequest in the assistanceDataReq shall be omitted.<br>Another three parameters, utcModelRequest, dgpsCorrectionsRequest and realTimeIntegrityRequest in the assistanceDataReq are not applicable and shall be set to "FALSE". |
| <b>Type Definition</b>           |   |
| SEQUENCE                         | {   |
| assistanceDataReq                | UE_Positioning_GPS_AdditionalAssistanceDataRequest  |
| }                                |   |

## 7.3.6 ROHC test model and ASP

### 7.3.6.1 ROHC test method

The ROHC test architecture illustrates the relationship between various compressor and de-compressor entities. No de-compressor is implemented in PDCP on the uplink direction in the SS.

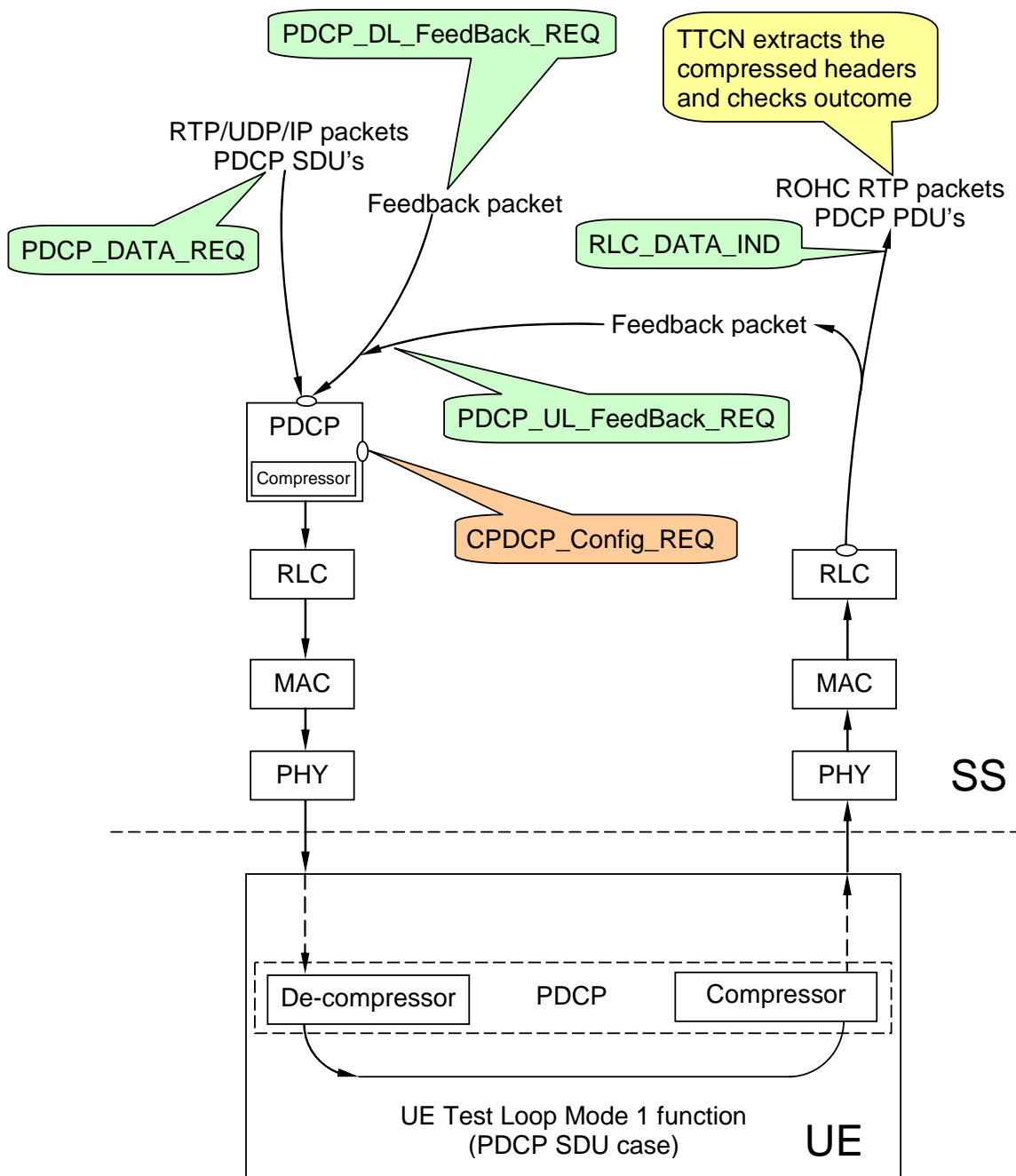


Figure 24: ROHC testing architecture

7.3.6.2 ASP and PCO for control primitives transmission and reception

7.3.6.2.1 PCO definition

Table 33: PCO CPDcP declaration

| PCO Definition |  |
|----------------|--|
| PCO Name       | CPDcP                                    |
| PCO Type       | CSAP                                     |
| Role           | LT                                       |
| Comment        | Provide PDCP Layer configuration service |

## 7.3.6.2.2 CPDCP\_Config

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPDCP_Config_CNF  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | For PDCP emulator to report that a previous attempt to setup, reconfigure or release a logical channel is successful. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER(-1..63),  |
| routingInfo               | RoutingInfo   |
| }                         |   |

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPDCP_Config_REQ  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | To request to configure PDCP entity. Setup is used for creation of the PDCP instances or the PDCP resources. Release is used for free the all PDCP resources. The reconfiguration is to change the PDCP parameters. PDCP entity does not belong to a particular cell, the cellId shall assign the value -1. the routingInfo is RB identity which is used to connect this PDCP entity to the RLC entity with the same RB identity and it is also used for PDCP_DATA_REQ ASP to transmit data through this PDCP entity. |
| Type Definition           |   |
| SEQUENCE                  | {   |
| cellId                    | INTEGER(-1..63),  |
| routingInfo               | RoutingInfo,  |
| ratType                   | RatType,  |
| configMessage             | CHOICE {  |
| setup                     | SS_PDCP_Info_r4,  |
| reconfigure               | SS_PDCP_InfoReconfig_r4,  |
| release                   | NULL  |
| }                         |   |
| }                         |   |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | SS_PDCP_Info_r4  |
| <b>Comment</b>        | When configuring downlink direction of the SS, the UL_RFC3095-r4 shall be used; when configuring uplink direction of the SS the DL_RFC3095-r4 shall be used. |
| Type Definition       |  |
| SEQUENCE              | {  |
| pDCP_ROHC_TargetMode  | PDCP_ROHC_TargetMode,  |
| pDCP_Info             | PDCP_Info_r4   |
| }                     |  |

| ASN.1 Type Definition |  |
|-----------------------|--|
| <b>Type Name</b>      | SS_PDCP_InfoReconfig_r4  |
| <b>Comment</b>        | When configuring downlink direction of the SS, the UL_RFC3095-r4 shall be used; when configuring uplink direction of the SS the DL_RFC3095-r4 shall be used. |
| Type Definition       |  |
| SEQUENCE              | {  |
| pDCP_ROHC_TargetMode  | PDCP_ROHC_TargetMode,  |
| pDCP_Info             | PDCP_InfoReconfig_r4   |
| }                     |  |

7.3.6.2.3 CPDCP\_ComProtocolControl

| ASN.1 ASP Type Definition |   |
|---------------------------|---|
| <b>Type Name</b>          | CPDCP_ComProtocolControl_CNF  |
| <b>PCO Type</b>           | CSAP  |
| <b>Comment</b>            | For PDCP emulator to report that a previous attempt to control the compression protocol is successful.                        |
| Type Definition           |   |
| SEQUENCE                  | {<br>cellId                                     INTEGER (-1..63),<br>routingInfo                             RoutingInfo<br>} |

| ASN.1 ASP Type Definition |  |
|---------------------------|--|
| <b>Type Name</b>          | CPDCP_ComProtocolControl_REQ   |
| <b>PCO Type</b>           | CSAP   |
| <b>Comment</b>            | To request to reinitialize/context-relocate the compression protocol. PDCP entity does not belong to a particular cell; the cellId shall assign the value -1. The routingInfo is RB identity which is used to connect this PDCP entity to the RLC entity with the same RB identity and it is also used for PDCP_DATA_REQ ASP to transmit data through this PDCP entity.<br>For reinitialization:<br>- Configured compression parameters remain valid.<br>- All compression state information is initialized.<br>- The PDCP sequence numbers are not changed.<br>- Actions specified in section 6.3.1 of RFC 3095 [54].<br>For contextRelocation:<br>- initialize the context with the parameter in the ASP<br>- valid for RFC3095 compression only |
| Type Definition           |  |
| SEQUENCE                  | {<br>cellId                                     INTEGER (-1..63),<br>routingInfo                             RoutingInfo,<br>ratType                                 RatType,<br>controlMessage                         CHOICE {<br>reinitialisation                 NULL,<br>contextRelocation                Context<br>}<br>}   |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | Context   |
| <b>Comment</b>        | Adapted from ASN1 type: RFC3095_Context_List  |
| Type Definition       |   |
| SEQUENCE              | (SIZE (1..maxRFC3095_CID)) OF SEQUENCE {<br>dl_RFC3095_Context                    DL_RFC3095_Context            OPTIONAL,<br>ul_RFC3095_Context                   UL_RFC3095_Context            OPTIONAL<br>} |

| ASN.1 Type Definition |   |
|-----------------------|---|
| <b>Type Name</b>      | DL_RFC3095_Context  |
| <b>Comment</b>        | For the compressor in the SS  |
| Type Definition       |   |
| SEQUENCE              | {<br>rfc3095_Context_Identity             INTEGER (0..16383),<br>dl_mode                               ENUMERATED {u, o, r},<br>dl_ref_ir                             OCTET STRING (SIZE (1..3000)),<br>dl_ref_time                          INTEGER (0..4294967295)       OPTIONAL,<br>dl_curr_time                         INTEGER (0..4294967295)       OPTIONAL,<br>dl_syn_offset_id                     INTEGER (0..65535)            OPTIONAL,<br>dl_syn_slope_ts                     INTEGER (0..4294967295)       OPTIONAL,<br>dl_dyn_changed                        BOOLEAN<br>} |

| ASN.1 Type Definition    |                                   |
|--------------------------|-----------------------------------|
| <b>Type Name</b>         | UL_RFC3095_Context                |
| <b>Comment</b>           | For the de-compressor in the SS   |
| Type Definition          |                                   |
| SEQUENCE {               |                                   |
| rfc3095_Context_Identity | INTEGER (0..16383),               |
| ul_mode                  | ENUMERATED {u, o, r},             |
| ul_ref_ir                | OCTET STRING (SIZE (1..3000)),    |
| ul_ref_time              | INTEGER (0..4294967295) OPTIONAL, |
| ul_curr_time             | INTEGER (0..4294967295) OPTIONAL, |
| ul_syn_offset_id         | INTEGER (0..65535) OPTIONAL,      |
| ul_syn_slope_ts          | INTEGER (0..4294967295) OPTIONAL, |
| ul_ref_sn_1              | INTEGER (0..65535) OPTIONAL       |
| }                        |                                   |

### 7.3.6.3 ASP and PCO for data transmission and reception

#### 7.3.6.3.1 PCO definition

Table 34: PCO PDCP declaration

| PCO Type Definition |                                    |
|---------------------|------------------------------------|
| <b>PCO Name</b>     | PDCP                               |
| <b>PCO Type</b>     | DSAP                               |
| <b>Role</b>         | LT                                 |
| <b>Comment</b>      | Provide PDCP data transfer service |

#### 7.3.6.3.2 PDCP\_DATA

| <b>ASP Name</b>          | PDCP_DATA_REQ                          |                                   |
|--------------------------|--|-----------------------------------|
| <b>PCO Type</b>          | DSAP                                   |                                   |
| <b>Comments</b>          | To request to transmit data (PDCP SDU) |                                   |
| Parameter Name           | Parameter Type                         | Comments                          |
| cellId                   | CellId                                 |                                   |
| rB_Id                    | SS_RB_Identity                         | Radio bearer identifier           |
| pDCP_SDU                 | PDU                                    | IPv4/UDP/RTP or IPv6/UDP/RTP PDUs |
| <b>Detailed Comments</b> |  |                                   |

| <b>ASP Name</b>          | PDCP_DATA_IND                          |                                   |
|--------------------------|--|-----------------------------------|
| <b>PCO Type</b>          | DSAP                                   |                                   |
| <b>Comments</b>          | To indicate to receive data (PDCP SDU) |                                   |
| Parameter Name           | Parameter Type                         | Comments                          |
| cellId                   | CellId                                 |                                   |
| rB_Id                    | SS_RB_Identity                         | Radio bearer identifier           |
| pDCP_SDU                 | PDU                                    | IPv4/UDP/RTP or IPv6/UDP/RTP PDUs |
| <b>Detailed Comments</b> |  |                                   |

#### 7.3.6.3.3 PDCP\_DL\_FeEDBack

| <b>ASP Name</b>          | PDCP_DL_FeEDBack_CNF                                   |                         |
|--------------------------|--|-------------------------|
| <b>PCO Type</b>          | DSAP   |                         |
| <b>Comments</b>          | For the SS to confirm a previous PDCP_DL_FeEDBack_REQ. |                         |
| Parameter Name           | Parameter Type   | Comments                |
| cellId                   | CellId   |                         |
| rB_Id                    | SS_RB_Identity   | Radio bearer identifier |
| <b>Detailed Comments</b> |  |                         |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | PDCP_DL_FeedBack_REQ   |   |
| <b>PCO Type</b>          | DSAP   |   |
| <b>Comments</b>          | To request the SS to send a feedback packet to the compressor in the UE. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>  | <b>Comments</b>   |
| cellId                   | CellId   |   |
| rB_Id                    | SS_RB_Identity   | Radio bearer identifier                                   |
| feedBackPacket1          | FeedBackPacket1  | either of feedBackPacket1 or feedBackPacket2 is presented |
| feedBackPacket2          | FeedBackPacket2  |   |
| <b>Detailed Comments</b> |  |   |

|                          |  |                         |
|--------------------------|--|-------------------------|
| <b>ASP Name</b>          | PDCP_UL_FeedBack_CNF                                   |                         |
| <b>PCO Type</b>          | DSAP   |                         |
| <b>Comments</b>          | For the SS to confirm a previous PDCP_UL_FeedBack_REQ. |                         |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                                  | <b>Comments</b>         |
| cellId                   | CellId   |                         |
| rB_Id                    | SS_RB_Identity   | Radio bearer identifier |
| <b>Detailed Comments</b> |  |                         |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | PDCP_UL_FeedBack_REQ  |   |
| <b>PCO Type</b>          | DSAP  |   |
| <b>Comments</b>          | To request the SS to pass a feedback packet received on uplink to the compressor in the SS.<br>When a feedback packet is received at the uplink direction, TTCN uses this ASP to pass the received feedback packet to the downlink compressor of the SS |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>   |
| cellId                   | CellId  |   |
| rB_Id                    | SS_RB_Identity  | Radio bearer identifier                                   |
| feedBackPacket1          | FeedBackPacket1   | either of feedBackPacket1 or feedBackPacket2 is presented |
| feedBackPacket2          | FeedBackPacket2   |   |
| <b>Detailed Comments</b> |   |   |

|                           |                        |                       |   |
|---------------------------|------------------------|-----------------------|---|
| <b>Type Name</b>          | FeedBackPacket1        |                       |   |
| <b>Encoding Variation</b> |                        |                       |   |
| <b>Comments</b>           | For ROHC RTP           |                       |   |
| <b>Element Name</b>       | <b>Type Definition</b> | <b>Field Encoding</b> | <b>Comments</b>   |
| feedBackType              | BITSTRING[5]           |                       | '11110'B  |
| code                      | BITSTRING[3]           |                       |   |
| size                      | OCTETSTRING[1]         |                       | Present if code = 0                                     |
| addCIDpart1               | BITSTRING[4]           |                       | Present if small CID and CID <>0; this shall be "1110"  |
| addCIDpart2               | BITSTRING[4]           |                       | Present if small CID and CID <>0; This is the CID value |
| largeCID                  | OCTETSTRING[1..2]      |                       | Present if large CID                                    |
| sequenceNumber            | BITSTRING[8]           |                       |   |
| <b>Detailed Comments</b>  |                        |                       |   |

|                           |  |                       |   |
|---------------------------|--|-----------------------|---|
| <b>Type Name</b>          | FeedBackPacket2  |                       |   |
| <b>Encoding Variation</b> |  |                       |   |
| <b>Comments</b>           | For ROHC RTP   |                       |   |
| <b>Element Name</b>       | <b>Type Definition</b>   | <b>Field Encoding</b> | <b>Comments</b>   |
| feedBackType              | BITSTRING[5]   |                       | '11110'B  |
| code                      | BITSTRING[3]   |                       |   |
| size                      | OCTETSTRING[1]   |                       | Present if code = 0                                     |
| addCIDpart1               | BITSTRING[4]   |                       | Present if small CID and CID <>0; this shall be "1110"  |
| addCIDpart2               | BITSTRING[4]   |                       | Present if small CID and CID <>0; This is the CID value |
| largeCID                  | OCTETSTRING[1..2]  |                       | Present if large CID                                    |
| ackType                   | BITSTRING[2]   |                       | 0 = ACK; 1 = NACK; 2 = STATIC-NACK; 3 = reserved        |
| mode                      | BITSTRING[2]   |                       |   |
| sequenceNumber            | BITSTRING[12]  |                       |   |
| optioncode                | BITSTRING[4]   |                       |   |
| optionLength              | BITSTRING[4]   |                       | Only 0 and 1 are valid values                           |
| optionData                | BITSTRING[8]   |                       | Present if optionLength = 1                             |
| <b>Detailed Comments</b>  | See section 5.7.6.1 of RFC 3095 [54] for the coding of optionalLength and optionalData |                       |   |

### 7.3.7 Handling RLP for CS non-transparent data

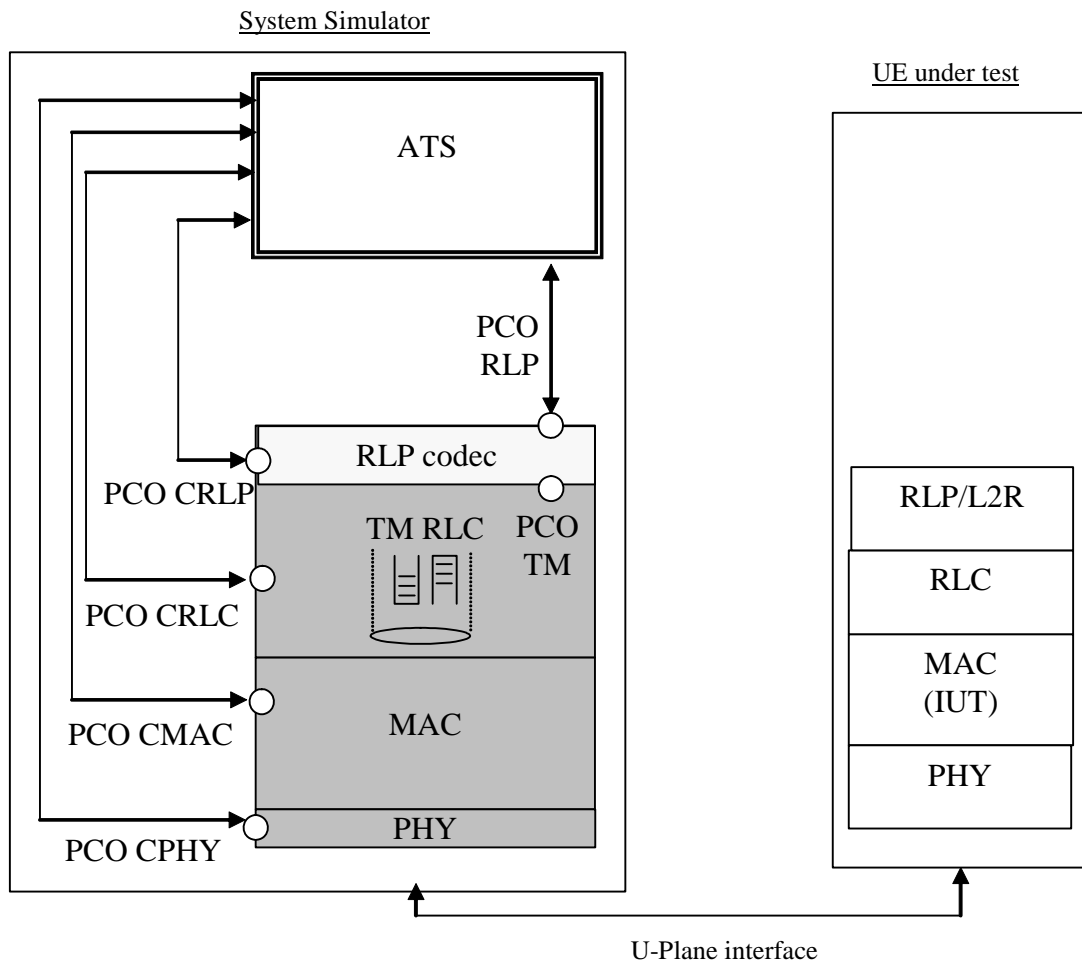
After the establishment of a CS non-transparent data call during the test, the UE may attempt to initiate a Radio Link Protocol (RLP) connection or start XID exchange before the RLP connection if the UE has an RLP installed. The RLP frames exchanges shall be handled by the SS, in order to carry on the test. Otherwise, the UE may disconnect the CS call.

For the purpose of handling UE originated RLP frames the SS has installed an RLC codec. The RLP codec supports RLP Version 0,1, and 2, detects the version number at the first XID exchange. Without any prior XID exchange, the default version 0 applies. According to the RLP version number, the codec decodes / encodes U, S, I+S frames including header, information and FCS (Frame Check Sequence) fields. The RLP has a fixed bit frame size that is set to 576 bits. The SS RLP codec calculates the FCS value and inserts it in the FCS fields in each DL RLP frames. The FCS values in the UL frames are irrelevant in the TTCN. The I frames are decoded and acknowledged in TTCN, and the other RLP frames are decoded and discarded in the default behaviour trees in TTCN.

#### 7.3.7.1 UTRAN cell

In a UTRAN cell, an RLP codec can be activated on the top of the SS TM RLC entity if the RLP protocol is applied to the UE. In addition of PCO TM, two new PCOs are defined. The PCO CRLP is used for the control and configuration of the RLP codec and the PCO RLP is used for the transferring of the RLP frames. PCO TM is not applied if PCO RLP is used in the test.





**Figure 25: RLP codec model**

An activate / deactivate command is required within the CRLP\_Config\_REQ to configure and activate the RLP codec and RLP PCO. The deactivate command switches off the RLP PCO and the SS discards all received RLP frames.

7.3.7.2 GERAN cell

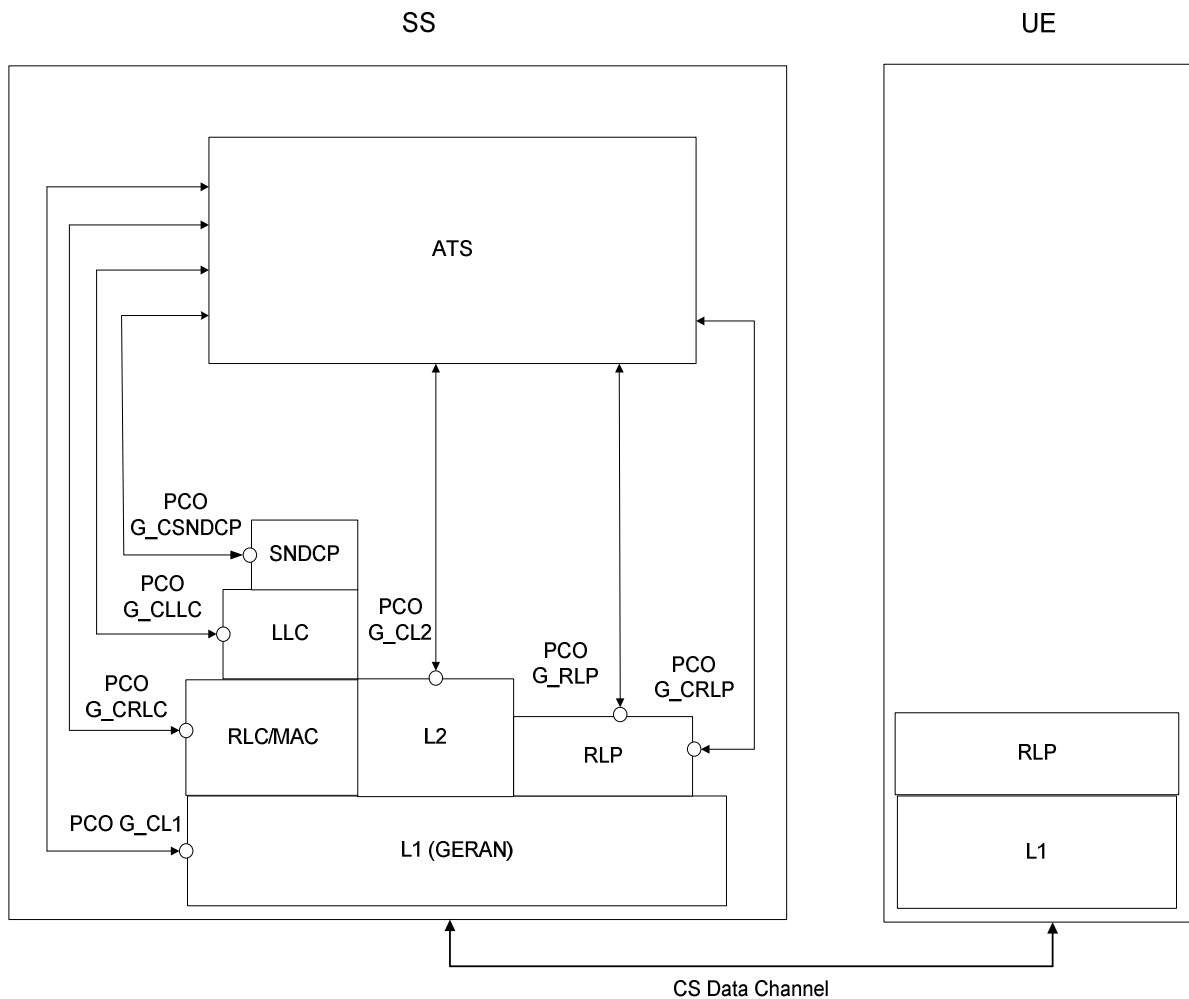


Figure 26: GERAN RLP codec model

After the establishment of a CS non-transparent data call in a GERAN cell during the test, the UE may attempt to initiate a Radio Link Protocol (RLP) connection or start XID exchange before the RLP connection if the UE has an RLP installed. The RLP frame exchanges shall be handled by the SS, in order to carry on the test. Otherwise, the UE may disconnect the CS call.

In a GERAN cell, an RLP codec can be activated on the traffic channel if the RLP protocol is applied to the UE. Two new PCOs are defined: G\_CRLP is used for the control and configuration of the RLP codec and G\_RLP is used for the transferring of the RLP frames in the GERAN cell.

For the purposes of interRAT handover testing, only the frame length of 576 bits is required. The 240 bits frame length and the REMAP function are not required.

7.3.7.3 ASP and PCO for control primitives

Table 35: PCO CRLP

| PCO Definition |                    |
|----------------|--------------------|
| PCO Name       | CRLP               |
| PCO Type       | CSAP               |
| Role           | LT                 |
| Comment        | Control RLP codec. |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | CRLP_Config_REQ  |   |
| <b>PCO Type</b>          | CSAP   |   |
| <b>Comments</b>          | The ASP is used to activate or deactivate the RLP codec. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                                    | <b>Comments</b>                           |
| cellId                   | CellId   | The cell which the RB identity belongs to |
| rB_Identity              | SS_RB_Identity   | Identifier of the RB identity in the SS   |
| command                  | INTEGER  | 0: activate<br>1: deactivate              |
| <b>Detailed Comments</b> |  |   |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | CRLP_Config_CNF   |   |
| <b>PCO Type</b>          | CSAP  |   |
| <b>Comments</b>          | For RLP codec to confirm that a previous attempt to activate or deactivate has been successful. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>                           |
| cellId                   | CellId  | The cell which the RB identity belongs to |
| rB_Identity              | SS_RB_Identity  | Identifier of the RB identity in the SS   |
| <b>Detailed Comments</b> |   |   |

| PCO Definition  |                                 |
|-----------------|---------------------------------|
| <b>PCO Name</b> | G_CRLP                          |
| <b>PCO Type</b> | G_CSAP                          |
| <b>Role</b>     | LT                              |
| <b>Comment</b>  | Control RLP codec in GERAN cell |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | G_CRLP_Config_REQ   |   |
| <b>PCO Type</b>          | G_CSAP  |   |
| <b>Comments</b>          | The ASP is used to activate or deactivate the RLP agent in the GERAN cell and establish a pipe between the TTCN and the RLP agent on the TCH. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>                           |
| cellId                   | CellId  | The cell which the RB identity belongs to |
| channelId                | PhysicalChId  | Identifier of the TCH in the SS           |
| command                  | INTEGER   | 0: activate<br>1: deactivate              |
| <b>Detailed Comments</b> |   |   |

|                          |   |                                   |
|--------------------------|---|-----------------------------------|
| <b>ASP Name</b>          | G_CRLP_Config_CNF   |                                   |
| <b>PCO Type</b>          | G_CSAP  |                                   |
| <b>Comments</b>          | For the RLP agent to confirm that a previous attempt to activate or deactivate has been successful. |                                   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>                   |
| cellId                   | CellId  | The cell which the TCH belongs to |
| channelId                | PhysicalChId  | Identifier of the TCH in the SS   |
| <b>Detailed Comments</b> |   |                                   |

7.3.7.4 ASP and PCO for data transmission and reception

Table 36: PCO RLP declaration

| PCO Type Definition |                  |
|---------------------|------------------|
| <b>PCO Name</b>     | RLP              |
| <b>PCO Type</b>     | DSAP             |
| <b>Role</b>         | LT               |
| <b>Comment</b>      | Carry RLP frame. |

|                          |   |   |
|--------------------------|---|---|
| <b>ASP Name</b>          | RLP_FrameReq  |   |
| <b>PCO Type</b>          | DSAP  |   |
| <b>Comments</b>          | The ASP is used to request the transmission of the RLP frame. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>                         |
| cellId                   | CellId  |   |
| rB_Identity              | SS_RB_Identity  | Identifier of the RB identity in the SS |
| data                     | PDU   | Meta type PDU                           |
| <b>Detailed Comments</b> |   |   |

|                          |  |   |
|--------------------------|--|---|
| <b>ASP Name</b>          | RLP_FrameInd   |   |
| <b>PCO Type</b>          | DSAP   |   |
| <b>Comments</b>          | The ASP is used to indicate the reception of an RLP frame. |   |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                                      | <b>Comments</b>                         |
| cellId                   | CellId   |   |
| rB_Identity              | SS_RB_Identity   | Identifier of the RB identity in the SS |
| data                     | PDU  | Meta type PDU                           |
| <b>Detailed Comments</b> |  |   |

| PCO Type Definition |                  |
|---------------------|------------------|
| <b>PCO Name</b>     | G_RLP            |
| <b>PCO Type</b>     | G_DSAP           |
| <b>Role</b>         | LT               |
| <b>Comment</b>      | Carry RLP frame. |

|                          |   |                                 |
|--------------------------|---|---------------------------------|
| <b>ASP Name</b>          | G_RLP_FrameReq  |                                 |
| <b>PCO Type</b>          | G_DSAP  |                                 |
| <b>Comments</b>          | The ASP is used to request the transmission of the RLP frame. |                                 |
| <b>Parameter Name</b>    | <b>Parameter Type</b>   | <b>Comments</b>                 |
| cellId                   | CellId  |                                 |
| channelId                | PhysicalChId  | Identifier of the TCH in the SS |
| data                     | PDU   | Meta type PDU                   |
| <b>Detailed Comments</b> |   |                                 |

|                          |  |                                 |
|--------------------------|--|---------------------------------|
| <b>ASP Name</b>          | G_RLP_FrameInd   |                                 |
| <b>PCO Type</b>          | G_DSAP   |                                 |
| <b>Comments</b>          | The ASP is used to indicate the reception of an RLP frame. |                                 |
| <b>Parameter Name</b>    | <b>Parameter Type</b>                                      | <b>Comments</b>                 |
| cellId                   | CellId   |                                 |
| channelId                | PhysicalChId   | Identifier of the TCH in the SS |
| data                     | PDU  | Meta type PDU                   |
| <b>Detailed Comments</b> |  |                                 |

# 8 Design Considerations

## 8.1 Channel mapping

Figure 27 shows the channel type mapping that is used for the configuration of the SS.

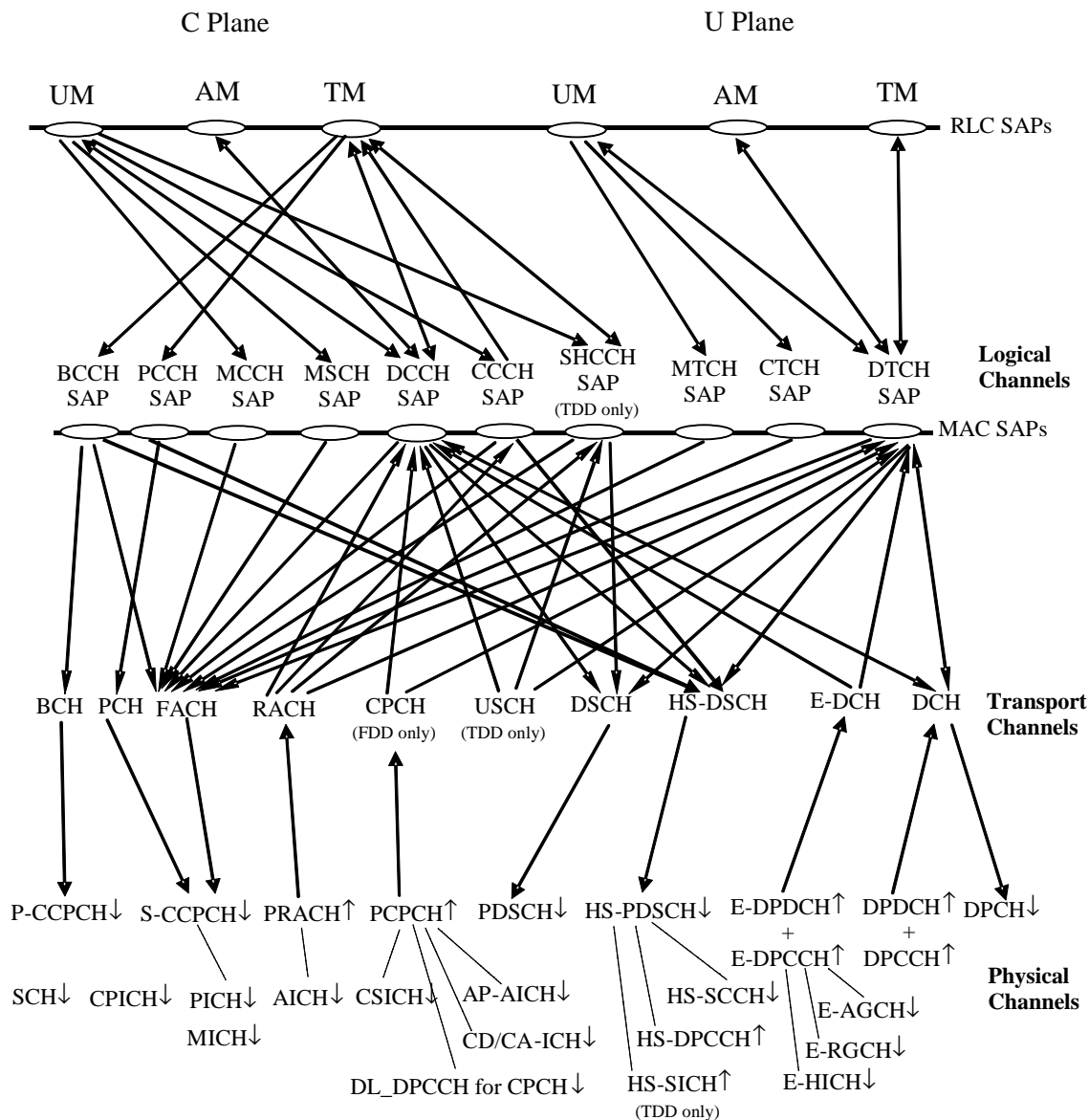


Figure 27: Channel mapping in SS-

## 8.2 Channel and RB identity

The TTCN addresses the TTCN tester by using a channel identifier:

- Either Physical channel identifier (PhyCh id); or
- Transport channel identifier (TrCh id); or
- Radio bearer identifier (RB id).

The selected channel identifier identifies uniquely:

- a channel within a cell;
- a total path of the address in the lower layers concerned.

Having taken out the cell id and PCO id (AM, UM and TM), a complete address, as RoutingInfo in the RRC ASP definition, should have at least five fields, CN domain id, RB id, LogCH id, TrCH id and PhyCH id. For simplified application of CHOICE of the routing information, a TTCN writer must carefully follow a number of rules assigning the channel identifiers.

General requirements:

- a structured scheme of planning all channel identifiers assigned;
- the scheme shall meet the requirements for all test cases in 3GPP TS 34.123-1 [1] including TDD channels;
- the scheme can apply to all radio bearer configurations in 3GPP TS 34.108 [3], clause 6.10;
- a clear multiplex mapping between a PhyCH id to TrCH ids and a TrCH id to LogCH ids, RB ids is needed.

Requirements on identification of RB in a test case:

- unique identification of the individual SRBs;
- unique identification of the individual sub-flows of a RABs in CS and PS domain.;
- an assigned RB id can represent UL and DL.

Requirements on identification of Logical Channel in a test case:

- it is an instance number of the individual logical channel; and
- uniquely identifies among all the Logical Channel mapped onto a Transport Channel.

Requirements on identification of Transport Channel in a test case:

- unique identification of the individual Transport Channel;
- assign different identities for UL and DL of a same Transport Channel type;
- the order of the Transport Channel id assigned in a cell shall follow the TFCS definitions in the 3GPP TS 34.108 [3], clause 6.10.

EXAMPLE: Transport Channel ids are assigned in the ascending order for (RABsubflow#1, RABsubflow#2, RABsubflow#3, 64kRAB, DCCH).

Requirements on identification of Physical Channel in a test case:

- unique identification of the individual Physical Channel;
- assign different identities for UL and DL of a same Physical Channel type;
- each S-CCPCH or PRACH has a unique identifier;
- for 2 Mbps PS data radio link (in case of demux of a Transport Channel), three DPCH are needed for high-speed data. A single Physical Channel id is assigned to a bundle of the three physical channels.

Table 37 shows which type of channel identity is chosen for the individual primitives. In table 37, the ASN.1 primitives use a CHOICE type for channel identity, while TTCN primitives use an explicit channel identity.

Table 37: Primitives and the associated channel identity type

| Primitive name                    | Channel Identity                  | Releases                    |
|-----------------------------------|-----------------------------------|-----------------------------|
| <b>ASN.1 Primitives</b>           |                                   |                             |
| CPHY_AICH_AckModeSet_CNF          | Physical Channel Identity         |                             |
| CPHY_AICH_AckModeSet_REQ          | Physical Channel Identity         |                             |
| CPHY_Cell_Config_CNF              | No Routing Info Field Present     |                             |
| CPHY_Cell_Config_REQ              | No Routing Info Field Present     |                             |
| CPHY_Cell_Ini_CNF                 | No Routing Info Field Present     |                             |
| CPHY_Cell_Ini_REQ                 | No Routing Info Field Present     |                             |
| CPHY_Cell_TxPower_Modify_CNF      | No Routing Info Field Present     |                             |
| CPHY_Cell_TxPower_Modify_REQ      | No Routing Info Field Present     |                             |
| CPHY_Cell_Release_CNF             | No Routing Info Field Present     |                             |
| CPHY_Cell_Release_REQ             | No Routing Info Field Present     |                             |
| CPHY_DetectTFCI_CNF               | Physical Channel Identity         |                             |
| CPHY_DetectTFCI_IND               | Physical Channel Identity         |                             |
| CPHY_DetectTFCI_REQ               | Physical Channel Identity         |                             |
| CPHY_Frame_Number_CNF             | Physical Channel Identity         |                             |
| CPHY_Frame_Number_REQ             | Physical Channel Identity         |                             |
| CPHY_SFN_CNF                      | Physical Channel Identity         | Rel-6 or later              |
| CPHY_SFN_REQ                      | Physical Channel Identity         | Rel-6 or later              |
| CPHY_MBMS_MICH_q_CNF              | Physical Channel Identity         | Rel-6 or later              |
| CPHY_MBMS_MICH_q_REQ              | Physical Channel Identity         | Rel-6 or later              |
| CPHY_MBMS_NI_CNF                  | Physical Channel Identity         | Rel-6 or later              |
| CPHY_MBMS_NI_REQ                  | Physical Channel Identity         | Rel-6 or later              |
| CPHY_Out_of_Sync_IND              | Physical Channel Identity         |                             |
| CPHY_PRACH_Measurement_CNF        | Physical Channel Identity         |                             |
| CPHY_PRACH_Measurement_REQ        | Physical Channel Identity         |                             |
| CPHY_PRACH_Measurement_Report_IND | Physical Channel Identity         |                             |
| CPHY_RL_Modify_CNF                | Physical Channel Identity         |                             |
| CPHY_RL_Modify_REQ                | Physical Channel Identity         |                             |
| CPHY_RL_Release_CNF               | Physical Channel Identity         |                             |
| CPHY_RL_Release_REQ               | Physical Channel Identity         |                             |
| CPHY_RL_Setup_CNF                 | Physical Channel Identity         |                             |
| CPHY_RL_Setup_REQ                 | Physical Channel Identity         |                             |
| CPHY_Sync_IND                     | Physical Channel Identity         |                             |
| CPHY_TrCH_Config_CNF              | Physical Channel Identity         |                             |
| CPHY_TrCH_Config_REQ              | Physical Channel Identity         |                             |
| CPHY_TrCH_Release_CNF             | Physical Channel Identity         |                             |
| CPHY_TrCH_Release_REQ             | Physical Channel Identity         |                             |
| CPHY_HS_DPCCH_AckNack_CNF         | No Routing Info Field Present     | Rel-5 or later              |
| CPHY_HS_DPCCH_AckNack_REQ         | No Routing Info Field Present     | Rel-5 or later              |
| CPHY_HS_DPCCH_AckNack_IND         | No Routing Info Field Present     | Rel-5 or later              |
| CPHY_HS_DPCCH_CQI_CNF             | No Routing Info Field Present     | Rel-5 or later              |
| CPHY_HS_DPCCH_CQI_REQ             | No Routing Info Field Present     | Rel-5 or later              |
| CPHY_HS_DPCCH_CQI_IND             | No Routing Info Field Present     | Rel-5 or later              |
| CPHY_HS_DSCH_CRC_Mode_CNF         | Physical Channel Identity         | Rel-5 or later              |
| CPHY_HS_DSCH_CRC_Mode_REQ         | Physical Channel Identity         | Rel-5 or later              |
| CPHY_HS_SICH_AckNack_CNF          | No Routing Info Field Present     | Rel-5 or later<br>(LCR TDD) |
| CPHY_HS_SICH_AckNack_REQ          | No Routing Info Field Present     | Rel-5 or later<br>(LCR TDD) |
| CPHY_HS_SICH_AckNack_IND          | No Routing Info Field Present     | Rel-5 or later<br>(LCR TDD) |
| CPHY_HS_SICH_CQI_CNF              | No Routing Info Field Present     | Rel-5 or later<br>(LCR TDD) |
| CPHY_HS_SICH_CQI_REQ              | No Routing Info Field Present     | Rel-5 or later<br>(LCR TDD) |
| CPHY_HS_SICH_CQI_IND              | No Routing Info Field Present     | Rel-5 or later<br>(LCR TDD) |
| CPHY_UL_PowerModify_CNF           | Physical Channel Identity         |                             |
| CPHY_UL_PowerModify_REQ           | Physical Channel Identity         |                             |
| CMAC_BMC_Scheduling_CNF           | Physical Channel Identity         |                             |
| CMAC_BMC_Scheduling_REQ           | Physical Channel Identity         |                             |
| CMAC_Ciphering_Activate_CNF       | Physical Channel Identity of DPCH |                             |
| CMAC_Ciphering_Activate_REQ       | Physical Channel Identity of DPCH |                             |

|                                     |   |                |
|-------------------------------------|---|----------------|
| CMAC_Config_CNF                     | Physical Channel Identity                             |                |
| CMAC_Config_REQ                     | Physical Channel Identity                             |                |
| CMAC_FACH_MeasOccas_CNF             | Physical Channel Identity                             |                |
| CMAC_FACH_MeasOccas_REQ             | Physical Channel Identity                             |                |
| CMAC_PAGING_Config_CNF              | Physical Channel Identity                             |                |
| CMAC_PAGING_Config_REQ              | Physical Channel Identity                             |                |
| CMAC_Restriction_CNF                | Physical Channel Identity                             |                |
| CMAC_Restriction_REQ                | Physical Channel Identity                             |                |
| CMAC_SecurityMode_Config_CNF        | No Routing Info Field Present (applies to all RB Ids) |                |
| CMAC_SecurityMode_Config_REQ        | No Routing Info Field Present (applies to all RB Ids) |                |
| CMAC_SequenceNumber_CNF             | Physical Channel Identity                             |                |
| CMAC_SequenceNumber_REQ             | Physical Channel Identity                             |                |
| CMAC_SYSINFO_Config_CNF             | RB Identity   |                |
| CMAC_SYSINFO_Config_REQ             | RB Identity   |                |
| CMAC_MAChs_MACehs_Reset_CNF         | No Routing Info Field Present                         | Rel-5 or later |
| CMAC_MAChs_MACehs_Reset_REQ         | No Routing Info Field Present                         | Rel-5 or later |
| CMAC_MAChs_MACehs_HARQprocAsign_CNF | No Routing Info Field Present                         | Rel-5 or later |
| CMAC_MAChs_MACehs_HARQprocAsign_REQ | No Routing Info Field Present                         | Rel-5 or later |
| CMAC_MAChs_MACehs_TFRCconfigure_CNF | No Routing Info Field Present                         | Rel-5 or later |
| CMAC_MAChs_MACehs_TFRCconfigure_REQ | No Routing Info Field Present                         | Rel-5 or later |
| CMAC_MACehs_HS_SCCH_OrdersCNF       | No Routing Info Field Present                         | Rel-7 or later |
| CMAC_MACehs_HS_SCCH_OrdersREQ       | No Routing Info Field Present                         | Rel-7 or later |
| CMAC_MACe_Config_CNF                | Node B Identity                                       | Rel-6 or later |
| CMAC_MACe_Config_REQ                | Node B Identity                                       | Rel-6 or later |
| CMAC_MACe_NodeB_CellMapping_CNF     | Node B Identity                                       | Rel-6 or later |
| CMAC_MACe_NodeB_CellMapping_REQ     | Node B Identity                                       | Rel-6 or later |
| CMAC_MACes_Config_CNF               | No Routing Info Field Present                         | Rel-6 or later |
| CMAC_MACes_Config_REQ               | No Routing Info Field Present                         | Rel-6 or later |
| CMAC_MACe_AG_CNF                    | Node B Identity                                       | Rel-6 or later |
| CMAC_MACe_AG_REQ                    | Node B Identity                                       | Rel-6 or later |
| CMAC_MACe_AckNack_CNF               | Node B Identity                                       | Rel-6 or later |
| CMAC_MACe_AckNack_REQ               | Node B Identity                                       | Rel-6 or later |
| CMAC_MACe_RG_CNF                    | Node B Identity                                       | Rel-6 or later |
| CMAC_MACe_RG_REQ                    | Node B Identity                                       | Rel-6 or later |
| CMAC_MACe_Bind_Grant_Tx_CNF         | Physical Channel Identity                             | Rel-7 or later |
| CMAC_MACe_Bind_Grant_Tx_REQ         | Physical Channel Identity                             | Rel-7 or later |
| CMAC_MACe_E_TFC_Restriction_CNF     | Node B Identity                                       | Rel-6 or later |
| CMAC_MACe_E_TFC_Restriction_REQ     | Node B Identity                                       | Rel-6 or later |
| CMAC_MACes_SI_IND                   | No Routing Info Field Present                         | Rel-6 or later |
| CMAC_MACes_SI_Config_CNF            | No Routing Info Field Present                         | Rel-6 or later |
| CMAC_MBMS_ConfigInfo_CNF            | Physical Channel Identity                             | Rel-6 or later |
| CMAC_MBMS_ConfigInfo_REQ            | Physical Channel Identity                             | Rel-6 or later |
| CRLC_Bind_TestData_TTI_CNF          | No Routing Info Field Present                         |                |
| CRLC_Bind_TestData_TTI_REQ          | No Routing Info Field Present                         |                |
| CRLC_Ciphering_Activate_CNF         | No Routing Info Field Present (applies to all RB Ids) |                |
| CRLC_Ciphering_Activate_REQ         | No Routing Info Field Present (applies to all RB Ids) |                |
| CRLC_MAC_I_Mode_CNF                 | RB Identity   |                |
| CRLC_MAC_I_Mode_REQ                 | RB Identity   |                |
| CRLC_Config_CNF                     | RB Identity   |                |
| CRLC_Config_REQ                     | RB Identity   |                |
| CRLC_Integrity_Activate_CNF         | No Routing Info Field Present (applies to all RB Ids) |                |
| CRLC_Integrity_Activate_REQ         | No Routing Info Field Present (applies to all RB Ids) |                |
| CRLC_Integrity_Failure_IND          | RB Identity   |                |
| CRLC_NotAckNxtRxSDU_CNF             | RB Identity   |                |
| CRLC_NotAckNxtRxSDU_REQ             | RB Identity   |                |
| CRLC_ProhibitRLC_Ack_CNF            | RB Identity   |                |
| CRLC_ProhibitRLC_Ack_REQ            | RB Identity   |                |
| CRLC_Resume_CNF                     | RB Identity (applies to all suspended RB Ids)         |                |
| CRLC_Resume_REQ                     | RB Identity (applies to all suspended RB Ids)         |                |
| CRLC_RRC_MessageSN_CNF              | RB Identity   |                |
| CRLC_RRC_MessageSN_REQ              | RB Identity   |                |



|                                      |   |                |
|--------------------------------------|---|----------------|
| CRLC_SecurityMode_Config_CNF         | No Routing Info Field Present (applies to all RB Ids) |                |
| CRLC_SecurityMode_Config_REQ         | No Routing Info Field Present (applies to all RB Ids) |                |
| CRLC_SendContinuousData_CNF          | No Routing Info Field Present                         |                |
| CRLC_SendContinuousData_REQ          | No Routing Info Field Present                         |                |
| CRLC_SendTestDataInOneMAC_Hs_PDU_CNF | RB Identity   | Rel-5 or later |
| CRLC_SendTestDataInOneMAC_Hs_PDU_REQ | RB Identity   | Rel-5 or later |
| CRLC_SequenceNumber_CNF              | RB Identity   |                |
| CRLC_SequenceNumber_REQ              | RB Identity   |                |
| CRLC_SetRRC_MessageSN_CNF            | RB Identity   |                |
| CRLC_SetRRC_MessageSN_REQ            | RB Identity   |                |
| CRLC_Set_Count_I_CNF                 | RB Identity   |                |
| CRLC_Set_Count_I_REQ                 | RB Identity   |                |
| CRLC_Status_Ind                      | RB Identity   |                |
| CRLC_Suspend_CNF                     | RB Identity   |                |
| CRLC_Suspend_REQ                     | RB Identity   |                |
| CRLC_MTCH_Scheduling_REQ             | RB Identity   | Rel-6 or later |
| CRLC_MTCH_Scheduling_CNF             | RB Identity   | Rel-6 or later |
| CBMC_Config_CNF                      | RB Identity   |                |
| CBMC_Config_REQ                      | RB Identity   |                |
| RLC_AM_DATA_CNF                      | RB Identity   |                |
| RLC_AM_DATA_IND                      | RB Identity   |                |
| RLC_AM_DATA_REQ                      | RB Identity   |                |
| RLC_TR_DATA_IND                      | RB Identity   |                |
| RLC_TR_DATA_REQ                      | RB Identity   |                |
| RLC_UM_ACCESSInfo_REQ                | RB Identity   | Rel-6 or later |
| RLC_UM_CriticalMCCHMsg_REQ           | RB Identity   | Rel-6 or later |
| RLC_UM_DATA_IND                      | RB Identity   |                |
| RLC_UM_DATA_REQ                      | RB Identity   |                |
| RLC_UM_MSCH_Msg_REQ                  | RB Identity   | Rel-6 or later |
| RLC_TR_MACesDATA_IND                 | RB Identity   | Rel-6 or later |
| <b>TTCN Primitives</b>               |   |                |
| RLC_AM_TestDataInd                   | RB Identity   |                |
| RLC_AM_TestDataReq                   | RB Identity   |                |
| RLC_TR_TestDataInd                   | RB Identity   |                |
| RLC_TR_TestDataReq                   | RB Identity   |                |
| RLC_UM_TestDataInd                   | RB Identity   |                |
| RLC_UM_TestDataReq                   | RB Identity   |                |
| BMC_DataReq                          | RB Identity   |                |

## 8.2.1 Physical channels

**Table 38: Physical channel identities**

| Type    | Min. No. | Current Config. | Identities (value assigned)                                | Direction | Comment  |
|---------|----------|-----------------|--|-----------|--|
| P-CCPCH | 1        | 1               | tsc_P_CCPCH (4)  | downlink  | Primary Common Control Physical Channel. For Broadcasting System Information messages, using the Primary Scrambling Code for the Cell. |
| P-CPICH | 1        | 1               | tsc_P_CPICH (0)  | downlink  | Primary Common Pilot Channel using the Primary Scrambling Code for the Cell.   |
| S-CPICH | 1        | 1               | tsc_S_CPICH (3)  | downlink  | Secondary Common Pilot Channel, used as the phase reference for some RF tests.   |
| P-SCH   | 1        | 1               | tsc_P_SCH (1)  | downlink  | Primary Synchronization Channel  |
| S-SCH   | 1        | 1               | tsc_S_SCH (2)  | downlink  | Secondary Synchronization Channel  |
| S-CCPCH | 3        | 1               | tsc_S_CCPCH1 (5)<br>tsc_S_CCPCH2 (10)<br>tsc_S_CCPCH3 (13) | downlink  | Secondary Common Control Physical Channel.   |

| Type     | Min. No. | Current Config. | Identities (value assigned)            | Direction | Comment  |
|----------|----------|-----------------|--|-----------|--|
| PICH     | 1        | 1               | tsc_PICH1 (6)<br>tsc_PICH2 (11)        | downlink  | To identify whether the UE should access the PCCH for Paging Messages.   |
| AICH     | 1        | 1               | tsc_AICH1 (7)<br>tsc_AICH2 (12)        | downlink  | General Acquisition Indicator Channel, can be used for: <ul style="list-style-type: none"> <li>- Acquisition Indicator Channel, for PRACH</li> <li>- Access Preamble Acquisition Indicator Channel (AP-ICH), for PCPCH</li> <li>- Collision-Detection/Channel-Assignment Indicator Channel (CD/CA-ICH), for PCPCH</li> </ul> |
| DPCH     | 3        | 1               | tsc_DL_DPCH1 (26)<br>tsc_DL_DPCH2 (27) | downlink  | Downlink Physical Data Channel. Layer 1 signalling is transmitted only on the first DPCH.<br>This number is for the First Cell. Additional Cells may define a lower number which should be at least 1.   |
| DPDCH    | 1        | 1               | tsc_UL_DPCH1 (20)<br>tsc_UL_DPCH2 (21) | uplink    | Uplink Dedicated Physical Channel. A single DPCH associated with all the DPDCHs used for Layer 1 signalling.   |
| PRACH    | 2        | 1               | tsc_PRACH1 (8)<br>tsc_PRACH2 (9)       | uplink    | Physical Random Access Channel.  |
| PCPCH    | 1        | FFS             |  | uplink    | Physical Common Packet Channel.  |
| CSICH    | 1        | FFS             |  | downlink  | CPCH Status Indicator Channel  |
| HS-PDSCH | 1        |                 | tsc_HSPDSCH(18)                        | downlink  | Rel-5 or later<br>High speed physical downlink shared channel  |
| E-AGCH   | 1        |                 | tsc_E_AGCH (14)                        | downlink  | Rel-6 or later<br>E-DCH Absolute Grant Channel   |
| E-HICH   | 1        |                 | tsc_E_HICH (15)                        | downlink  | Rel-6 or later<br>E-DCH HARQ Acknowledgement Indicator Channel   |
| E-RGCH   | 1        |                 | tsc_E_RGCH (16)                        | downlink  | Rel-6 or later<br>E-DCH Relative Grant Channel   |
| E-DPDCH  | 1        |                 | tsc_E_DPCH (22)                        | uplink    | Rel-6 or later<br>Enhanced Dedicated Physical Channel  |
| F-DPCH   | 1        |                 | tsc_F_DPCH (28)                        | downlink  | Rel-6 or later<br>Fractional Dedicated Physical Channel  |
| MICH     | 1        |                 | tsc_MICH (29)                          | downlink  | Rel-6 or later<br>MBMS notification Indicator Channel  |

The Physical Channel values 20 to 25 are assigned to uplink DPCHs and the values 26 to 31 are assigned to downlink DPCHs/ FDPCHs.

## 8.2.2 Transport channels

Table 39: Transport channel identities

| Type   | Min. No. | Current Config. | Identities<br>(value assigned)   | Direction | Comments  |
|--------|----------|-----------------|--|-----------|---|
| BCH    | 1        | 1               | tsc_BCH1 (11)  | downlink  |   |
| FACH   | 1        | 1               | tsc_FACH1 (13)<br>tsc_FACH2 (14)<br>tsc_FACH3 (16)<br>tsc_FACH4 (17)<br>tsc_FACH5 (23)                           | downlink  |   |
| PCH    | 1        | 1               | tsc_PCH1 (12)<br>tsc_PCH2 (30)   | downlink  |   |
| DCH    | n        | 4               | tsc_UL_DCH1 (1)<br>tsc_UL_DCH2 (2)<br>tsc_UL_DCH3 (3)<br>tsc_UL_DCH4 (4)<br>tsc_UL_DCH5 (5)<br>tsc_UL_DCH6 (21)  | uplink    | tsc_UL_DCH1 for RAB1-1 or RAB1,<br>tsc_UL_DCH2 for RAB1-2 or RAB2,<br>tsc_UL_DCH3 for RAB1-3,<br>tsc_UL_DCH4 RAB2,<br>tsc_UL_DCH5 for SRB/RAB3,<br>tsc_UL_DCH6 for SRB. |
| DCH    | n        | 4               | tsc_DL_DCH1 (6)<br>tsc_DL_DCH2 (7)<br>tsc_DL_DCH3 (8)<br>tsc_DL_DCH4 (9)<br>tsc_DL_DCH5 (10)<br>tsc_DL_DCH6 (22) | downlink  | tsc_DL_DCH1 for RAB1-1 or RAB1,<br>tsc_DL_DCH2 for RAB1-2 or RAB2,<br>tsc_DL_DCH3 for RAB1-3,<br>tsc_DL_DCH4 for RAB2,<br>tsc_DL_DCH5 for SRB,<br>tsc_DL_DCH6 for SRB.  |
| USCH   | 1        | N/A             | tsc_USCH1(20)  | uplink    | TDD only  |
| DSCH   | 1        | N/A             | tsc_DSCH (19)  | downlink  |   |
| RACH   | 2        | 1               | tsc_RACH1 (15)<br>tsc_RACH2 (31)   | uplink    |   |
| CPCH   | 1        | N/A             | tsc_CPCH1(32)  | uplink    |   |
| FAUSCH | N/A      | N/A             | tsc_FAUSCH1(18)  | uplink    | Not in Release 99   |
| HSDSCH | 1        | 1               | N/A  | downlink  | Rel-5 or later  |
| E-DCH  | 1        | 1               | N/A  | uplink    | Rel-6 or later  |

### 8.2.2.1 Support of Default Configurations

In test cases using default configurations according to 3GPP TS 25.331 [21], clause 13.7, the configuration of the system simulator follows the same parameter values as defined for the UE side with the following exceptions:

- UL/DL transport channel ids;
- E-DCH MAC-d flow id / HS-DSCH MAC-d flow id.

As the transport channel identities and the MAC-d flow identities have the local significance, the TTCN implementations follow the test model.

## 8.2.3 Logical Channels

Table 40 shows the logical channels identities.

**Table 40: Logical channel identities**

| Type      | Min. No. | Current Config. | Identities<br>(value assigned)   | Direction | Comments  |
|-----------|----------|-----------------|--|-----------|---|
| BCCH_BCH  | 1        | 1               | tsc_BCCH1 (1)  | downlink  |   |
| BCCH_FACH | 1        | 1               | tsc_BCCH6 (6)  | downlink  |   |
| CCCH      | 1        | 1               | tsc_DL_CCCH5 (5)   | downlink  |   |
| CCCH      | 1        | 2               | tsc_UL_CCCH5 (5)<br>tsc_UL_CCCH6 (6)   | uplink    |   |
| DCCH      | 4        | 4               | tsc_DL_DCCH1 (1)<br>tsc_DL_DCCH2 (2)<br>tsc_DL_DCCH3 (3)<br>tsc_DL_DCCH4 (4)<br>tsc_DL_DCCH5 (5)   | downlink  | tsc_DL_DCCH1 for SRB1,<br>tsc_DL_DCCH2 for SRB2,<br>tsc_DL_DCCH3 for SRB3,<br>tsc_DL_DCCH4 for SRB4,<br>tsc_DL_DCCH5 for SRB5                         |
| DCCH      | 4        | 4               | tsc_UL_DCCH1 (1)<br>tsc_UL_DCCH2 (2)<br>tsc_UL_DCCH3 (3)<br>tsc_UL_DCCH4 (4)                       | uplink    | tsc_UL_DCCH1 for SRB1,<br>tsc_UL_DCCH2 for SRB2,<br>tsc_UL_DCCH3 for SRB3,<br>tsc_UL_DCCH4 for SRB4   |
| PCCH      | 1        | 2               | tsc_PCCH1 (1)<br>tsc_PCCH2 (2)   | downlink  |   |
| DTCH      | n        | 4               | tsc_UL_DTCH1 (7)<br>tsc_UL_DTCH2 (8)<br>tsc_UL_DTCH3 (9)<br>tsc_UL_DTCH4 (10)<br>tsc_UL_DTCH5 (13) | uplink    | tsc_UL_DTCH1 for RAB1-1 or RAB 1,<br>tsc_UL_DTCH2 for RAB1-2 or RAB 2,<br>tsc_UL_DTCH3 for RAB1-3'<br>tsc_UL_DTCH4 for RAB2,<br>tsc_UL_DTCH5 for RAB3 |
| DTCH      | n        | 4               | tsc_DL_DTCH1 (7)<br>tsc_DL_DTCH2 (8)<br>tsc_DL_DTCH3 (9)<br>tsc_DL_DTCH4 (10)                      | downlink  | tsc_DL_DTCH1 for RAB1-1 or RAB 1,<br>tsc_DL_DTCH2 for RAB1-2 or RAB 2,<br>tsc_DL_DTCH3 for RAB-3,<br>tsc_DL_DTCH4 for RAB2                            |
| CTCH      | 1        | 2               | tsc_CTCH1 (11)<br>tsc_CTCH2 (12)   | downlink  |   |
| MTCH      | 1        | 4               | tsc_MTCH1(1)<br>tsc_MTCH2(2)<br>tsc_MTCH3(3)<br>tsc_MTCH4(4)                                       | downlink  | MBMS_LogicalChIdentity  |
| MCCH      | 1        | 1               | tsc_MCCH1(1)   | downlink  | One and only one for each cell  |
| MSCH      | 0        | 1               | tsc_MSCH1(1)   | downlink  |   |

## 8.2.4 Radio bearers

| Identities<br>(value assigned) | Direction | Type | RLC<br>mode | Service<br>domain | Comments                                   |
|--------------------------------|-----------|------|-------------|-------------------|--|
| tsc_RB_BCCH (-1)               | downlink  |      | TM          | NA                | BCCH-BCH                                   |
| tsc_RB_PCCH (-2)               | downlink  |      | TM          | NA                | PCCH PCH                                   |
| tsc_RB_BCCH_FACH (-3)          | downlink  |      | TM          | NA                | BCCH FACH                                  |
| tsc_RB_2ndPCCH (-4)            | downlink  |      | TM          | NA                | Second PCCH PCH SCPCCH                     |
| tsc_RB_2ndCCCH (-5)            | uplink    |      | TM          | NA                | Second CCCH RACH PRACH                     |
| tsc_RB_MTCH_RLC_TR (-6)        | downlink  |      | TM          | PS                | Rel-6 or later<br>For TM MTCH RLC tests    |
| tsc_RB_UM_7_RLC (-10)          | downlink  | RAB  | TM          | CS                | For UM RLC tests using 7 bit LIs           |
| tsc_RB_UM_7_RLC (-10)          | uplink    | RAB  | TM          | CS                | For UM RLC tests using 7 bit LIs           |
| tsc_RB_UM_15_RLC (-11)         | downlink  | RAB  | TM          | CS                | For UM RLC tests using 15 bit LIs          |
| tsc_RB_UM_15_RLC (-11)         | uplink    | RAB  | TM          | CS                | For UM RLC tests using 15 bit LIs          |
| tsc_RB_AM_7_RLC (-12)          | downlink  | RAB  | TM          | CS                | For AM RLC tests using 15 bit LIs          |
| tsc_RB_AM_7_RLC (-12)          | uplink    | RAB  | TM          | CS                | For AM RLC tests using 7 bit LIs           |
| tsc_RB_AM_15_RLC (-13)         | downlink  | RAB  | TM          | CS                | For AM RLC tests using 15 bit LIs          |
| tsc_RB_AM_15_RLC (-13)         | uplink    | RAB  | TM          | CS                | For AM RLC tests using 15 bit LIs          |
| tsc_RB_DCCH_FACH_MAC (-14)     | downlink  | SRB3 | TM          | CS                | For MAC tests using DCCH<br>mapped to FACH |

| Identities<br>(value assigned) | Direction | Type    | RLC<br>mode | Service<br>domain | Comments   |
|--------------------------------|-----------|---------|-------------|-------------------|--|
| tsc_RB_DCCH_FACH_MAC (-14)     | uplink    | SRB3    | TM          | CS                | For MAC tests using DCCH mapped to FACH  |
| tsc_RB_DCCH_DCH_MAC (-15)      | downlink  | SRB3    | TM          | CS                | For MAC tests using DCCH mapped to DCH   |
| tsc_RB_DCCH_FACH_MAC (-15)     | uplink    | SRB3    | TM          | CS                | For MAC tests using DCCH mapped to DCH   |
| tsc_RB3_DCCH_RRC_(-16)         | uplink    | SRB3    | AM          | CS or PS          | For RRC test cases to route UL NAS messages  |
| tsc_RB_CCCH_FACH_MAC (-18)     | downlink  | SRB0    | TM          | CS or PS          | For MAC test using downlink SRB0 on TM   |
| tsc_RB_BCCH_FACH_RAB (-19)     | downlink  |         | TM          | NA                | BCCH FACH  |
| tsc_RB_DTCH_E_DCH_MAC(-20)     | uplink    | RAB     | TM          | PS                | For MAC_es_e tests   |
| tsc_RB_DTCH_E_DCH_MAC1(-21)    | uplink    | RAB     | TM          | PS                | For MAC_es_e tests   |
| tsc_RB_DTCH_E_DCH_MAC2(-22)    | uplink    | RAB     | TM          | PS                | For MAC_es_e tests   |
| tsc_RB_MAC_HS(-25)             | uplink    | RAB     | TM          | PS                | For MAC_hs/ehs tests   |
| tsc_RB_MAC_HS(-25)             | downlink  | RAB     | TM          | PS                | For MAC_hs/ehs tests   |
| tsc_RB_MAC_ehs_26 (-26)        | uplink    | RAB     | TM          | PS                | For MAC_ehs tests  |
| tsc_RB_MAC_ehs_26 (-26)        | downlink  | RAB     | TM          | PS                | For MAC_ehs tests  |
| tsc_RB_MAC_ehs_27(-27)         | uplink    | RAB     | TM          | PS                | For MAC_ehs tests  |
| tsc_RB_MAC_ehs_27(-27)         | downlink  | RAB     | TM          | PS                | For MAC_ehs tests  |
| tsc_RB0 (0)                    | uplink    | SRB0    | TM          | CS or PS          | The service domain for which the most recent security negotiation took place. CCCH |
| tsc_RB0 (0)                    | downlink  | SRB0    | UM          | CS or PS          | CCCH   |
| tsc_RB1 (1)                    | uplink    | SRB1    | UM          | CS or PS          | DCCH   |
| tsc_RB1 (1)                    | downlink  | SRB1    | UM          | CS or PS          | DCCH   |
| tsc_RB2 (2)                    | uplink    | SRB2    | AM          | CS or PS          | DCCH   |
| tsc_RB2 (2)                    | downlink  | SRB2    | AM          | CS or PS          | DCCH   |
| tsc_RB3 (3)                    | uplink    | SRB3    | AM          | CS or PS          | DCCH   |
| tsc_RB3 (3)                    | downlink  | SRB3    | AM          | CS or PS          | DCCH   |
| tsc_RB4 (4)                    | uplink    | SRB4    | AM          | CS or PS          | DCCH   |
| tsc_RB4 (4)                    | downlink  | SRB4    | AM          | CS or PS          | DCCH   |
| tsc_RB5 (5)                    | uplink    |         | TM          |                   | DCCH   |
| tsc_RB5 (5)                    | downlink  |         | TM          |                   | DCCH   |
| tsc_RB_MCCH(8)                 | downlink  | SRB     | UM          | PS                | Rel-6 or later   |
| tsc_RB_MCCH_RLC_TR(-8)         | downlink  | SRB     | TM          | PS                | Rel-6 or later   |
| tsc_RB_MSCH(9)                 | downlink  | SRB     | UM          | PS                | Rel-6 or later   |
| tsc_RB10 (10)                  | uplink    | RAB#1-1 | TM          | CS                | or RAB1  |
| tsc_RB10 (10)                  | downlink  | RAB#1-1 | TM          | CS                | or RAB1  |
| tsc_RB11 (11)                  | uplink    | RAB#1-2 | TM          | CS                | or RAB2  |
| tsc_RB11 (11)                  | downlink  | RAB#1-2 | TM          | CS                | or RAB2  |
| tsc_RB12 (12)                  | uplink    | RAB#1-3 | TM          | CS                |  |
| tsc_RB12 (12)                  | downlink  | RAB#1-3 | TM          | CS                |  |
| tsc_RB13 (13)                  | uplink    | RAB#2   | TM          | CS                |  |
| tsc_RB13 (13)                  | downlink  | RAB#2   | TM          | CS                |  |
| tsc_RB_MTCH1(14)               | downlink  | RAB     | UM          | PS                | Rel-6 or later, media contents   |
| tsc_RB_MTCH2(15)               | downlink  | RAB     | UM          | PS                | Rel-6 or later, media contents   |
| tsc_RB_MTCH3(16)               | downlink  | RAB     | UM          | PS                | Rel-6 or later, media contents   |
| tsc_RB17 (17)                  | uplink    | RAB#2   | AM          | PS                | Rel-5 or later, 2nd AM RAB for HS  |
| tsc_RB17 (17)                  | downlink  | RAB#2   | AM          | PS                | Rel-5 or later, 2nd AM RAB for HS  |
| tsc_RB20 (20)                  | uplink    | RAB#1   | AM          | PS                |  |
| tsc_RB20 (20)                  | downlink  | RAB#1   | AM          | PS                |  |
| tsc_RB21 (21)                  | uplink    | RAB#2   | UM          | PS                |  |
| tsc_RB21 (21)                  | downlink  | RAB#2   | UM          | PS                |  |
| tsc_RB22 (22)                  | uplink    | RAB#2   | AM          | PS                |  |
| tsc_RB22 (22)                  | downlink  | RAB#2   | AM          | PS                |  |
| tsc_RB23 (23)                  | uplink    | RAB#2   | AM          | PS                | 2nd AM RAB for PS  |
| tsc_RB23 (23)                  | downlink  | RAB#2   | AM          | PS                | 2nd AM RAB for PS  |
| tsc_RB24 (24)                  | uplink    | RAB#2   | AM          | PS                | 2nd AM RAB for PS  |
| tsc_RB24 (24)                  | downlink  | RAB#2   | AM          | PS                | 2nd AM RAB for PS  |

| Identities<br>(value assigned) | Direction | Type  | RLC<br>mode | Service<br>domain | Comments   |
|--------------------------------|-----------|-------|-------------|-------------------|--|
| tsc_RB25 (25)                  | uplink    | RAB#1 | AM          | PS                | Rel-5 or later:<br>DTCH on DPCH associated HS-<br>DSCH<br>Rel-6 or later:<br>DTCH on E-DCH |
| tsc_RB25 (25)                  | downlink  | RAB#1 | AM          | PS                | Rel-5 or later<br>DTCH on HS-DSCH  |
| tsc_RB26 (26)                  | uplink    | RAB#1 | UM          | PS                | Rel-5 or later   |
| tsc_RB26 (26)                  | downlink  | RAB#1 | UM          | PS                | Rel-5 or later   |
| tsc_RB27 (27)                  | uplink    | RAB#2 | UM          | PS                | Rel-5 or later   |
| tsc_RB27 (27)                  | downlink  | RAB#2 | UM          | PS                | Rel-5 or later   |
| tsc_RB28 (28)                  | uplink    | RAB#3 | AM          | PS                | Rel-5 or later   |
| tsc_RB28 (28)                  | downlink  | RAB#3 | AM          | PS                | Rel-5 or later   |
| tsc_RB29 (29)                  | downlink  | SRB0  | AM          | PS                | RB Id for Radio bearer that carries<br>the 2nd CCCH in the DL                              |
| tsc_RB30 (30)                  | downlink  |       | UM          |                   | CTCH FACH  |
| tsc_RB31 (31)                  | downlink  |       | UM          |                   | Second CTCH FACH   |

The RB values 0 to 5 are used for the signalling bearers. The values 10 to 15 are assigned to the CS RAB sub-flows. The values 15 to 29 are assigned to the PS RAB sub-flows. The value 30 is assigned to the CBSMS/BMC service.

**Table 41: RB identities mapping between 34.123-1 & 34.123-3**

| RAB Combinations                        | 34.123-1 | 34.123-3           |
|---|----------|--------------------|
| <b>Single CS RAB</b>                    | RB5      | tsc_RB10           |
|   | RB6      | tsc_RB11           |
|   | RB7      | tsc_RB12           |
| <b>Single PS RAB</b>                    | RB5      | tsc_RB20           |
|   | RB7      | tsc_RB20           |
|   | RB8      | tsc_RB20           |
| <b>CS+PS Multi RABs</b>                 | RB5      | tsc_RB10           |
|   | RB6      | tsc_RB11, tsc_RB20 |
|   | RB7      | tsc_RB12           |
|   | RB8      | tsc_RB20           |
| <b>CS+CS Multi RABs</b>                 | RB9      | tsc_RB22           |
|   | RB5      | tsc_RB10           |
|   | RB6      | tsc_RB11           |
|   | RB7      | tsc_RB12           |
| <b>PS+PS Multi RABs</b>                 | RB8      | tsc_RB13           |
|   | RB5      | tsc_RB20           |
|   | RB6      | tsc_RB22           |
|   | RB7      | tsc_RB20           |
| <b>Single PS (HSDPA/HSUPA) RAB</b>      | RB8      | tsc_RB24           |
|   | RB5      | tsc_RB25           |
|   | RB5      | tsc_RB26           |
|   | RB6      | tsc_RB27           |
| <b>PS+PS Multi (HSDPA) RABs</b>         | RB7      | tsc_RB25           |
|   | RB8      | tsc_RB28           |
|   | RB9      | tsc_RB17           |
|   | RB5      | tsc_RB25           |
| <b>Single PS (HSUPA) RAB</b>            | RB5      | tsc_RB10           |
|   | RB6      | tsc_RB11, tsc_RB25 |
|   | RB7      | tsc_RB12           |
|   | RB8      | tsc_RB25           |
| <b>CS + PS Multi (HSDPA/HSUPA) RABs</b> | RB9      | tsc_RB17           |
|   | RB5      | tsc_RB10           |
|   | RB6      | tsc_RB11           |
|   | RB7      | tsc_RB12           |
| <b>PS (HSUPA) + Speech Multi RABs</b>   | RB8      | tsc_RB25           |
|   | RB5      | tsc_RB10           |
|   | RB6      | tsc_RB11           |
|   | RB7      | tsc_RB12           |
| <b>PS AM + PS AM Multi (HSUPA) RABs</b> | RB8      | tsc_RB25           |
|   | RB5      | tsc_RB25           |
| <b>PS UM + PS AM Multi (HSUPA) RABs</b> | RB6      | tsc_RB17           |
|   | RB5      | tsc_RB27           |
|   | RB6      | tsc_RB25           |

|   |     |          |
|---|-----|----------|
| PS UM + PS AM + PS AM Multi<br>(HSUPA) RABs | RB5 | tsc_RB27 |
|   | RB6 | tsc_RB25 |
|   | RB7 | tsc_RB17 |

## 8.2.5 Scrambling and channelization codes

Table 42 shows the primary/secondary scrambling codes and the channelization codes for downlink channels.

Table 42: Primary/secondary scrambling codes and channelization codes for downlink channels

| Type     | Identities (value assigned) | Primary scrambling code   | Secondary scrambling code   | Channelization Code   |
|----------|-----------------------------|---|---|---|
| P-CCPCH  | tsc_P_CCPCH (4)             | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | NA  | tsc_P_CCPCH_ChC<br>(256:1)  |
| P-CPICH  | tsc_P_CPICH (0)             | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | NA  | tsc_P_CPICH_ChC<br>(256:0)  |
| S-CCPCH  | tsc_S_CCPCH1 (5)            | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | NA (carrying PCH)   | tsc_S_CCPCH1_ChC<br>(64:1 or 4 or 6 depending on the channels configuration)<br>tsc_S_CCPCH1_ChC_MBMS<br>(64:1) for MBMS testing  |
|          | tsc_S_CCPCH2 (10)           | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | NA (carrying PCH)   | tsc_S_CCPCH2_ChC<br>(64:1)<br>tsc_S_CCPCH2_ChC_MBMS<br>(256:9) for MBMS testing   |
|          | tsc_S_CCPCH3 (13)           | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | NA (carrying PCH)   | tsc_S_CCPCH3_ChC<br>(64:2)<br>tsc_S_CCPCH3_ChC_MBMS<br>(8:1 or 16:1 or 32:2 depending on the channels configuration) for MBMS testing   |
| PICH     | tsc_PICH1 (6)               | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | NA  | tsc_PICH1_ChC<br>(256:2)  |
|          | tsc_PICH2 (11)              | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | NA  | tsc_PICH2_ChC<br>(256:12)   |
| AICH     | tsc_AICH1 (7)               | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | NA  | tsc_AICH1_ChC<br>(256:3)  |
|          | tsc_AICH2 (12)              | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | NA  | tsc_AICH2_ChC<br>(256:13)   |
| DPCH     | tsc_DL_DPCH1 (26)           | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | tsc_DL_DPCH1_2ndScrC<br>(1)<br>This value is related to the primary scrambling code of the cell | Depending on the configuration:<br>tsc_DL_DPCH1_ChC_SRB (128:9)<br>tsc_DL_DPCH1_ChC_Speech (128:0)<br>tsc_DL_DPCH1_ChC_Streaming (32:0)<br>tsc_DL_DPCH1_ChC_64k_CS (32:0)<br>tsc_DL_DPCH1_ChC_64k_PS (32:0) |
|          | tsc_DL_DPCH2 (27)           | $(px\_PriScrmCode + 50 \times (\text{cell No} - 1)) \bmod 512$ ,<br>$(px\_PriScrmCode + 20 + 50 \times (\text{cell No} - 21)) \bmod 512$ for MBMS testing | tsc_DL_DPCH2_2ndScrC<br>(1)<br>This value is related to the primary scrambling code of the cell | Depending on the configuration:<br>tsc_DL_DPCH2_ChC_SRB (256:1)<br>tsc_DL_DPCH2_ChC_Speech (128:1)<br>tsc_DL_DPCH2_ChC_Streaming (32:1)<br>tsc_DL_DPCH2_ChC_64k_CS (32:1)<br>tsc_DL_DPCH2_ChC_64k_PS (32:1) |
| HS-PDSCH | tsc_HSPDSCH(18)             | Same as HS-SCCH   | Same as HS-SCCH   | Rel-5 or later<br>SF= 16<br>Number of codes depending on the configuration, at most 15 codes  |



|         |                 |   |    |  |
|---------|-----------------|---|----|--|
| HS-SCCH | NA              | $(px\_PriScrmCode + 50 \times (\text{cell No } -1) ) \bmod 512,$<br>$(px\_PriScrmCode+20+ 50 \times (\text{cell No } -21) ) \bmod 512$ for MBMS testing | -  | Rel-5 or later<br>tsc_HS_SCCH_ChC<br>(128:7) |
| E-AGCH  | tsc_E_AGCH (14) | $(px\_PriScrmCode + 50 \times (\text{cell No } -1) ) \bmod 512,$<br>$(px\_PriScrmCode+20+ 50 \times (\text{cell No } -21) ) \bmod 512$ for MBMS testing | NA | Rel-6 or later                               |
| E-HICH  | tsc_E_HICH (15) | $(px\_PriScrmCode + 50 \times (\text{cell No } -1) ) \bmod 512,$<br>$(px\_PriScrmCode+20+ 50 \times (\text{cell No } -21) ) \bmod 512$ for MBMS testing | NA | Rel-6 or later                               |
| E-RGCH  | tsc_E_RGCH (16) | $(px\_PriScrmCode + 50 \times (\text{cell No } -1) ) \bmod 512,$<br>$(px\_PriScrmCode+20+ 50 \times (\text{cell No } -21) ) \bmod 512$ for MBMS testing | NA | Rel-6 or later                               |
| F-DPCH  | tsc_F_DPCH (28) | $(px\_PriScrmCode + 50 \times (\text{cell No } -1) ) \bmod 512,$<br>$(px\_PriScrmCode+20+ 50 \times (\text{cell No } -21) ) \bmod 512$ for MBMS testing | NA | Rel-6 or later                               |
| MICH    | tsc_MICH (29)   | $(px\_PriScrmCode+ 50 \times (\text{cell No } -1) ) \bmod 512,$<br>$(px\_PriScrmCode+20+ 50 \times (\text{cell No } -21) ) \bmod 512$ for MBMS testing  | NA | tsc_MICH_ChC (256:8)                         |

Table 43 shows the scrambling codes, the signatures and the spreading factors for uplink channels.

**Table 43: Scrambling codes, signatures and spreading factor for uplink channels**

| Type     | Identities<br>(value assigned) | Scrambling code   | Signature                                   | Spreading factor   |
|----------|--------------------------------|---|---|--|
| DPDCH    | tsc_UL_DPCH1 (20)              | $(px\_UL\_ScramblingCode + 1000 \times (\text{cell No} - 1)) \text{ MOD } 16777216$       | NA  | If only one DPDCH and depending on the configuration<br>tsc_UL_DPDCH_SF_SRB (64)<br>tsc_UL_DPDCH_SF_Speech (64)<br>tsc_UL_DPDCH_SF_Streaming (16)<br>tsc_UL_DPDCH_SF_64k_CS (16)<br>tsc_UL_DPDCH_SF_64k_PS (16)<br>If more than one DPDCH<br>tsc_UL_DPDCH_SF_4 (4:1) |
|          | tsc_UL_DPCH2 (21)              | $(px\_UL\_ScramblingCode + 1\ 000 \times (\text{cell No} - 1)) \text{ MOD } 16\ 777\ 216$ | NA  | If only one DPDCH and depending on the configuration<br>tsc_UL_DPDCH_SF_SRB (64)<br>tsc_UL_DPDCH_SF_Speech (64)<br>tsc_UL_DPDCH_SF_Streaming (16)<br>tsc_UL_DPDCH_SF_64k_CS (16)<br>tsc_UL_DPDCH_SF_64k_PS (16)<br>If more than one DPDCH<br>tsc_UL_DPDCH_SF_4 (4:1) |
| PRACH    | tsc_PRACH1 (8)                 | tsc_PRACH1_ScrC (0)   | tsc_PRACH1_Signatures ('0000000011111111'B) | tsc_PRACH1_SF (64)   |
|          | tsc_PRACH2 (9)                 | tsc_PRACH2_ScrC (1)   | tsc_PRACH2_Signatures ('0000000011111111'B) | tsc_PRACH2_SF (64)   |
| HS-DPCCH | NA                             | Same as DPDCH   | NA  | Rel-5 or later<br>Depending on the number of DPDCHs:<br>If only one DPDCH: $C_{256,64}$ ;<br>If 2 or 4 or 6 DPDCHs: $C_{256,1}$ ;<br>If 3 or 5 DPDCHs: $C_{256,32}$ .  |
| E-DPCH   | tsc_E_DPCH (22)                | Same as DPDCH   | NA  | Rel-6 or later   |

## 8.2.6 MAC-d

MAC-d and the served RLC are cell-independent and are configured by using the cell-id = -1. During reconfigurations, cell changes and state transitions, the relevant counters in the RLC and MAC-d are maintained.

For the active set updating, the DL DCH with the same channel Id in the different cells are implicitly connected to form the DL multiple paths.

### 8.2.6.1 MAC-d configuration examples

The following example shows how the MAC and RLC ASP are used to configure different configurations.

The 1<sup>st</sup> parameter in ASP represents the cell identity: p\_CellId corresponds to the current cell identity, tsc\_CellDedicated corresponds to the cell independent (-1). The 2<sup>nd</sup> parameter represents the channel Id, this parameter is not needed in the CRLC ASP).

#### 1. Cell\_DCH\_StandAloneSRB: configuration of DL/UL-DPCH1

```

CPHY!CPHY_RL_Setup_REQ      ( p_CellId, tsc_DL_DPCH1)      -- Cell concerned
CPHY?CPHY_RL_Setup_CNF     ( p_CellId, tsc_DL_DPCH1)      -- Cell concerned
CPHY!CPHY_TrCH_Config_REQ  ( p_CellId, tsc_DL_DPCH1)      -- Cell concerned
CPHY?CPHY_TrCH_Config_CNF  ( p_CellId, tsc_DL_DPCH1 )      -- Cell concerned
CMAC ! CMAC_Config_REQ     ( tsc_CellDedicated, tsc_DL_DPCH1)  -- Cell independent (-1)
CMAC ? CMAC_Config_CNF     ( tsc_CellDedicated, tsc_DL_DPCH1)  -- Cell independent (-1)
CPHY!CPHY_RL_Setup_REQ     ( p_CellId, tsc_UL_DPCH1)      -- Cell concerned
CPHY?CPHY_RL_Setup_CNF     ( p_CellId, tsc_UL_DPCH1)      -- Cell concerned
CPHY!CPHY_TrCH_Config_REQ  ( p_CellId, tsc_UL_DPCH1 )      -- Cell concerned
CPHY?CPHY_TrCH_Config_CNF  ( p_CellId, tsc_UL_DPCH1 )      -- Cell concerned
CMAC ! CMAC_Config_REQ     ( tsc_CellDedicated, tsc_UL_DPCH1)  -- Cell independent (-1)
CMAC ? CMAC_Config_CNF     ( tsc_CellDedicated, tsc_UL_DPCH1 )  -- Cell independent (-1)
CRLC ! CRLC_Config_REQ     ( tsc_CellDedicated )              -- Cell independent (-1)
CRLC ? CRLC_Config_CNF     ( tsc_CellDedicated )              -- Cell independent (-1)

```

#### 2. Cell\_FACH: configuration of S-CCPCH1

```

CPHY!CPHY_RL_Setup_REQ      ( p_CellId, tsc_S_CCPCH1)      -- Cell concerned
CPHY?CPHY_RL_Setup_CNF     ( p_CellId, tsc_S_CCPCH1)      -- Cell concerned
CPHY!CPHY_TrCH_Config_REQ  ( p_CellId, tsc_S_CCPCH1)      -- Cell concerned
CPHY ? CPHY_TrCH_Config_CNF ( p_CellId, tsc_S_CCPCH1)      -- Cell concerned
CMAC ! CMAC_Config_REQ     ( p_CellId, tsc_S_CCPCH1)      -- Cell concerned
CMAC ? CMAC_Config_CNF     ( p_CellId, tsc_S_CCPCH1 )      -- Cell concerned
CPHY!CPHY_RL_Setup_REQ     ( p_CellId, tsc_PICH1)         -- Cell concerned
CPHY?CPHY_RL_Setup_CNF     ( p_CellId, tsc_PICH1)         -- Cell concerned
CRLC ! CRLC_Config_REQ     ( tsc_CellDedicated )          -- Cell independent (-1)
CRLC ? CRLC_Config_CNF     ( tsc_CellDedicated )          -- Cell independent (-1)

```

#### 3. Cell\_FACH: configuration of P-CCPCH

```

CPHY!CPHY_RL_Setup_REQ      ( p_CellId, tsc_P_CPICH )      -- Cell concerned
CPHY?CPHY_RL_Setup_CNF     ( p_CellId, tsc_P_CPICH )      -- Cell concerned
CPHY!CPHY_RL_Setup_REQ     ( p_CellId, tsc_P_SCH)         -- Cell concerned
CPHY?CPHY_RL_Setup_CNF     ( p_CellId, tsc_P_SCH )        -- Cell concerned
CPHY!CPHY_RL_Setup_REQ     ( p_CellId, tsc_P_SCH)         -- Cell concerned
CPHY?CPHY_RL_Setup_CNF     ( p_CellId, tsc_S_SCH )        -- Cell concerned
CPHY!CPHY_RL_Setup_REQ     ( p_CellId, tsc_P_CCPCH)       -- Cell concerned
CPHY?CPHY_RL_Setup_CNF     ( p_CellId, tsc_P_CCPCH )      -- Cell concerned
CPHY!CPHY_TrCH_Config_REQ  ( p_CellId, tsc_P_CCPCH )      -- Cell concerned
CPHY?CPHY_TrCH_Config_CNF  ( p_CellId, tsc_P_CCPCH )      -- Cell concerned
CMAC!CMAC_Config_REQ       ( p_CellId, tsc_P_CCPCH)       -- Cell concerned
CMAC?CMAC_Config_CNF       ( p_CellId, tsc_P_CCPCH )      -- Cell concerned
CRLC! CRLC_Config_REQ      ( p_CellId)                    -- Cell concerned
CRLC? CRLC_Config_CNF      ( p_CellId)                    -- Cell concerned

```

## 8.2.7 Configuration of compressed mode

### 8.2.7.1 UE Side

Two IE are available for the configuration of the compressed mode for the UE.

- a) DPCH\_CompressedModeInfo.
- b) DPCH\_CompressedModeStatusInfo.

Compressed mode initiation at UE side can be divided into 2 steps:

- a) Downloading compressed mode parameters.
- b) Activating the compressed mode.

Both of them can be done in one shot.

### 8.2.7.2 SS Side

Compressed mode configuration at SS side shall be maintained the same status as that on the UE side. So there are 3 different types of compressed mode configuration states both on UE and SS side.

- Configuration of compressed mode parameters (Use of DPCH\_CompressedModeInfo) without the activation.
- Configuration of compressed mode parameters and simultaneous activation (use of DPCH\_CompressedModeInfo).
- Only activation (use of DPCH\_CompressedModeStatusInfo).

If compressed mode parameters are to be downloaded to the UE without actually activation, it shall be configured on the SS side by any one of the following two procedures.

- If DPCH channel on which compressed mode is to be downloaded is not already configured, primitive "CPHY\_RL\_Setup\_REQ", with "CphyRISetupReq. PhysicalChannelInfo" which is of choice, chosen to dPCHInfo shall be called. The procedure is used to pre-configure all compressed patterns necessary for test, but deactivate the all patterns configured at the beginning of the test. This procedure has not been implemented in the TTCN.
- If DPCH channel on which compressed mode is to be downloaded is already configured, the primitive "CPHY\_RL\_Modify\_REQ" with "CphyRIModifyReq. PhysicalChannelInfo" which is of choice, chosen to dPCHInfo shall be called. This procedure is generally used in the TTCN.

If compressed mode parameters are to be configured and simultaneously activated, the same procedure as for the configuration of compressed mode without activation shall be used.

Activation of the compressed mode, whose parameters are already configured shall be achieved by the primitive "CPHY\_RL\_Modify\_REQ" with "CphyRIModifyReq. PhysicalChannelInfo" which is of choice, chosen to dpch\_CompressedModeStatusInfo.

## 8.2.8 Use of U-RNTI and C-RNTI

The uRNTI and cRNTI are optional when configuring the MAC (CMAC\_Config\_REQ). Table 44 gives indication on when uRNTI and cRNTI are needed.

**Table 44: cRNTI and uRNTI in CMAC-Config\_REQ**

|                        | P-CCPCH   | S-CCPCH with mapped DL-DCCH/DTCH (UE in cell_FACH) | S-CCPCH without mapped DL-DCCH/DTCH (UE in cell_DCH) | PRACH with mapped DL-DCCH/DTCH (UE in cell_FACH) | PRACH without mapped DL-DCCH/DTCH (UE in cell_DCH) | DPCH      |
|------------------------|-----------|--|--|--|--|-----------|
| <b>uRNTI</b>           | -         | Included   | -  | Omit   | -  | -         |
| <b>cRNTI</b>           | -         | Included   | -  | Included   | -  | -         |
| <b>CMAC-Config_REQ</b> | OMIT both | Download cRNTI and uRNTI                           | OMIT both  | Download cRNTI                                   | OMIT both  | OMIT both |

In the case of DL-DCCH/DTCH mapped on S-CCPCH, cRNTI and uRNTI are downloaded to the MAC layer. As default, SS MAC shall use cRNTI as UE id. At the CMAC configuration of the beginning of test cases, the RLC payload size is configured, as default on cRNTI for the MAC header calculation. If uRNTI is to be used the SS RLC payload size shall be reconfigured as cRNTI and uRNTI do not have the same length (16 bits and 32 bits respectively).

CELL UPDATE CONFIRM or URA UPDATE CONFIRM shall be sent on DCCH at the test for the ciphering reason except the periodic update without carrying the UE identity information. In this case the CELL UPDATE CONFIRM or URA UPDATE CONFIRM is sent on CCCH at the test.

**Table 45: Relationship between cell update cause, UE state and RLC size reconfiguration**

| Cell update cause        | UE State (before cell update) | CELL UPDATE CONFIRM | CRLC_Reconf RLC_Size Needed                  | Valid UE ID      |
|--------------------------|-------------------------------|---------------------|--|------------------|
| Cell reselection         | CELL_PCH / CELL_FACH          | DCCH                | Y  | U_RNTI           |
| Periodical cell update   | CELL_PCH                      | DCCH or CCCH        | Y (for DCCH)                                 | U_RNTI           |
| Periodical cell update   | CELL_FACH                     | DCCH or CCCH        | N  | C_RNTI           |
| Uplink data transmission | CELL_PCH / URA_PCH            | DCCH                | Y  | U_RNTI           |
| UTRAN paging response    | CELL_PCH / URA_PCH            | DCCH                | Y  | U_RNTI           |
| Re-entered service area  | CELL_PCH / URA_PCH            | DCCH                | Y  | U_RNTI           |
| Re-entered service area  | CELL_FACH                     | DCCH                | N  | C_RNTI           |
| Radio Link failure       | CELL_DCH                      | DCCH                | Y  | U_RNTI           |
| RLC_unrecoverable error  | CELL_DCH / CELL_FACH          | DCCH                | Y<br>N (selected the same cell in CELL_FACH) | U_RNTI<br>C_RNTI |

## 8.3 Channels configurations

### 8.3.1 Configuration of Cell\_FACH

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink. The configuration is applied to the RRC tests related in the states CELL\_FACH, CELL\_PCH and URA\_PCH. They need a minimum radio configuration for testing.

**Table 46: Uplink configuration of Cell\_FACH**

|                       |                     |                     |                     |                     |                     |                     |
|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <b>RB Identity</b>    | tsc_RB20<br>(20)    | tsc_RB0<br>(0)      | tsc_RB1<br>(1)      | tsc_RB2<br>(2)      | tsc_RB3<br>(3)      | tsc_RB4<br>(4)      |
| <b>LogCh Type</b>     | DTCH                | CCCH                | DCCH                | DCCH                | DCCH                | DCCH                |
| <b>LogCh Identity</b> | Tsc_UL_DTCH1<br>(7) | tsc_UL_CCCH5<br>(5) | tsc_UL_DCCH1<br>(1) | tsc_UL_DCCH2<br>(2) | tsc_UL_DCCH3<br>(3) | tsc_UL_DCCH4<br>(4) |
| <b>RLC mode</b>       | AM                  | TM                  | UM                  | AM                  | AM                  | AM                  |
| <b>TrCH Type</b>      | RACH                |                     |                     |                     |                     |                     |
| <b>TrCH identity</b>  | tsc_RACH1<br>(15)   |                     |                     |                     |                     |                     |
| <b>PhyCh Type</b>     | PRACH               |                     |                     |                     |                     |                     |
| <b>PhyCH identity</b> | tsc_PRACH1<br>(8)   |                     |                     |                     |                     |                     |

**Table 47: Downlink configuration of Cell\_FACH**

|                       |                         |                         |                         |                         |                         |                         |                              |                         |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------------|-------------------------|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB0<br>(0)          | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB_BC<br>CH_FACH<br>(-3) | tsc_RB_PC<br>CH<br>(-2) |
| <b>LogCh Type</b>     | DTCH                    | CCCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    | BCCH                         | PCCH                    |
| <b>LogCh Identity</b> | tsc_DL_DT<br>CH1<br>(7) | tsc_DL_CC<br>CH5<br>(5) | tsc_DL_DC<br>CH1<br>(1) | tsc_DL_DC<br>CH2<br>(2) | tsc_DL_DC<br>CH3<br>(3) | tsc_DL_DC<br>CH4<br>(4) | tsc_BCCH6<br>(6)             | tsc_PCCH1<br>(1)        |
| <b>RLC mode</b>       | AM                      | UM                      | UM                      | AM                      | AM                      | AM                      | TM                           | TM                      |
| <b>MAC priority</b>   | 1                       | 1                       | 2                       | 3                       | 4                       | 5                       | 6                            | 1                       |
| <b>TrCH Type</b>      | FACH                    | FACH                    |                         |                         |                         |                         |                              | PCH                     |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)       | tsc_FACH1<br>(13)       |                         |                         |                         |                         |                              | tsc_PCH1<br>(12)        |
| <b>PhyCh Type</b>     | Secondary CCPCH         |                         |                         |                         |                         |                         |                              |                         |
| <b>PhyCH identity</b> | tsc_S_CCPCH1<br>(5)     |                         |                         |                         |                         |                         |                              |                         |

### 8.3.2 Configuration of Cell\_DCH\_StandAloneSRB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1. 3. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to the RRC and NAS signalling tests in the DCH state without RAB.

**Table 48: Uplink configuration of Cell\_DCH\_StandAloneSRB**

|                       |                      |                     |                     |                     |                     |    |
|-----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|----|
| <b>RB Identity</b>    | tsc_RB1<br>(1)       | tsc_RB2<br>(2)      | tsc_RB3<br>(3)      | tsc_RB4<br>(4)      | tsc_RB0<br>(0)      |    |
| <b>LogCh Type</b>     | DCCH                 | DCCH                | DCCH                | DCCH                | CCCH                |    |
| <b>LogCh Identity</b> | tsc_UL_DCCH1<br>(1)  | tsc_UL_DCCH2<br>(2) | tsc_UL_DCCH3<br>(3) | tsc_UL_DCCH4<br>(4) | tsc_UL_CCCH5<br>(5) |    |
| <b>RLC mode</b>       | UM                   | AM                  | AM                  | AM                  | TM                  | AM |
| <b>TrCH Type</b>      | DCH                  |                     |                     |                     | RACH                |    |
| <b>TrCH identity</b>  | tsc_UL_DCH5<br>(5)   |                     |                     |                     | tsc_RACH1<br>(15)   |    |
| <b>PhyCh Type</b>     | DPDCH                |                     |                     |                     | PRACH               |    |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |                     |                     |                     | tsc_PRACH1<br>(8)   |    |

**Table 49: Downlink configuration of Cell\_DCH\_StandAloneSRB**

|                       |                         |                         |                         |                         |                         |                     |                   |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------|-------------------|
| <b>RB Identity</b>    | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB0<br>(0)          | tsc_RB_PCCH<br>(-2) |                   |
| <b>LogCh Type</b>     | DCCH                    | DCCH                    | DCCH                    | DCCH                    | CCCH                    | PCCH                |                   |
| <b>LogCh Identity</b> | tsc_DL_DCCH<br>1<br>(1) | tsc_DL_DCCH<br>2<br>(2) | tsc_DL_DCCH<br>3<br>(3) | tsc_DL_DCCH<br>4<br>(4) | tsc_DL_CCCH<br>5<br>(5) | tsc_PCCH1<br>(1)    |                   |
| <b>RLC mode</b>       | UM                      | AM                      | AM                      | AM                      | UM                      | TM                  | AM                |
| <b>MAC priority</b>   | 1                       | 2                       | 3                       | 4                       | 1                       | 1                   | 1                 |
| <b>TrCH Type</b>      | DCH                     |                         |                         |                         | FACH                    | PCH                 | FACH              |
| <b>TrCH identity</b>  | tsc_DL_DCH5<br>(10)     |                         |                         |                         | tsc_FACH1<br>(13)       | tsc_PCH1<br>(12)    | tsc_FACH2<br>(14) |
| <b>PhyCh Type</b>     | DPCH                    |                         |                         |                         | Secondary CCPCH         |                     |                   |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26)    |                         |                         |                         | tsc_S_CCPCH1<br>(5)     |                     |                   |

### 8.3.3 Configuration of Cell\_DCH\_Speech

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.4 and 6.10.2.4.1.5. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RRC and NAS signalling tests in the DCH state where a CS voice service, such as narrowband speech, emergency speech call or TS 61 for speech, is established.

**Table 50: Uplink configuration of Cell\_DCH\_Speech**

|                       |                      |                     |                     |  |   |
|-----------------------|----------------------|---------------------|---------------------|--|---|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | tsc_RB11<br>(11)    | tsc_RB12<br>(12)    | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                | DTCH                |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  | tsc_UL_DTCH2<br>(8) | tsc_UL_DTCH3<br>(9) |  |   |
| <b>RLC mode</b>       | TM                   | TM                  | TM                  |  |   |
| <b>TrCH Type</b>      | DCH                  | DCH                 | DCH                 |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   | tsc_UL_DCH2<br>(2)  | tsc_UL_DCH3<br>(3)  |  |   |
| <b>PhyCh Type</b>     | DPDCH                |                     |                     | PRACH  |   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |                     |                     | tsc_PRACH1<br>(8)  |   |

**Table 51: Downlink configuration of Cell\_DCH\_Speech**

|                       |                      |                     |                     |  |  |
|-----------------------|----------------------|---------------------|---------------------|--|--|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | tsc_RB11<br>(11)    | tsc_RB12<br>(12)    | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                | DTCH                |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7)  | tsc_DL_DTCH2<br>(8) | tsc_DL_DTCH3<br>(9) |  |  |
| <b>RLC mode</b>       | TM                   | TM                  | TM                  |  |  |
| <b>MAC priority</b>   | 1                    | 1                   | 1                   |  |  |
| <b>TrCH Type</b>      | DCH                  | DCH                 | DCH                 |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)   | tsc_DL_DCH2<br>(7)  | tsc_DL_DCH3<br>(8)  |  |  |
| <b>PhyCh Type</b>     | DPCH                 |                     |                     | Secondary CCPCH  |  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26) |                     |                     | tsc_S_CCPCH1<br>(5)  |  |

### 8.3.4 Configuration of Cell\_DCH\_64kCS\_RAB\_SRB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.13 for the conversational unknown quality class. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RRC and NAS signalling tests in the DCH state where one of the following CS transparent data services is established:

- Multimedia call 28,8 kbit/s, 3,1 kHz Audio;
- Multimedia call 32 kbit/s, UDI;
- Multimedia call 33,6 kbit/s, 3,1 kHz Audio;
- Multimedia call 56 kbit/s, RDI;
- Multimedia call 64 kbit/s, UDI;
- Asynchronous 3,1 kHz Audio 28,8 kbit/s;
- Synchronous 3,1 kHz Audio 28,8 kbit/s;
- Synchronous V.110 UDI up to 56 kbit/s;
- BTM RDI 56 kbit/s;
- BTM UDI 64 bit/s.

**Table 52: Uplink configuration of Cell\_DCH\_64kCS\_RAB\_SRB**

|                       |                      |  |   |
|-----------------------|----------------------|--|---|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                 |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  |  |   |
| <b>RLC mode</b>       | TM                   |  |   |
| <b>TrCH Type</b>      | DCH                  |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   |  |   |
| <b>PhyCh Type</b>     | DPDCH                |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |  | tsc_PRACH1<br>(8)   |

**Table 53: Downlink configuration of Cell\_DCH\_64kCS\_RAB\_SRB**

|                       |                      |  |  |
|-----------------------|----------------------|--|--|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                 |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7)  |  |  |
| <b>RLC mode</b>       | TM                   |  |  |
| <b>MAC priority</b>   | 1                    |  |  |
| <b>TrCH Type</b>      | DCH                  |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)   |  |  |
| <b>PhyCh Type</b>     | DPCH                 |  | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26) |  | tsc_S_CCPCH1<br>(5)  |



### 8.3.5 Configuration of Cell\_DCH\_57\_6kCS\_RAB\_SRB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.17 for the streaming unknown quality class. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RRC and NAS signalling tests in the DCH state where one of the following CS non-transparent data services is established:

- Asynchronous 3,1 kHz Audio up to 19,2 kbit/s;
- Asynchronous 3,1 kHz Audio modem auto-bauding;
- Asynchronous V.110 UDI up to 38,4 kbit/s, except 28,8 kbit/s;
- Asynchronous V.120 up to 56 kbit/s;
- Asynchronous PIAFS up to 64 kbit/s;
- Asynchronous FTM up to 64 kbit/s;
- Synchronous 3,1 kHz Audio up to 19,2 kbit/s;
- Synchronous V.110 UDI up to 56 kbit/s, except 28,8 kbit/s;
- Synchronous X.31 Flags Stuffing UDI up to 56 kbit/s;
- Synchronous V.120 up to 56 kbit/s;
- Synchronous BTM up to 64 kbit/s;
- TS61 FAX.

**Table 54: Uplink configuration of Cell\_DCH\_57\_6kCS\_RAB\_SRB**

|                       |                      |  |   |
|-----------------------|----------------------|--|---|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                 |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  |  |   |
| <b>RLC mode</b>       | TM                   |  |   |
| <b>TrCH Type</b>      | DCH                  |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   |  |   |
| <b>PhyCh Type</b>     | DPDCH                |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |  | tsc_PRACH1<br>(8)   |

**Table 55: Downlink configuration of Cell\_DCH\_57\_6KCS\_RAB\_SRB**

|                       |                      |  |  |
|-----------------------|----------------------|--|--|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                 |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7)  |  |  |
| <b>RLC mode</b>       | TM                   |  |  |
| <b>MAC priority</b>   | 1                    |  |  |
| <b>TrCH Type</b>      | DCH                  |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)   |  |  |
| <b>PhyCh Type</b>     | DPCH                 |  | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26) |  | tsc_S_CCPCH1<br>(5)  |

### 8.3.6 Configuration of Cell\_RLC\_DCH\_RAB

The configuration is based on 3GPP TS 34.108 [3], clauses 6.11.1, 6.11.2, 6.11.3, and 6.11.4 for the RLC AM and UM tests with 7 and 15 bit length indicators. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The RB Ids used for the DTCH depend on the RLC mode and length indicator size being simulated (reference clause 6.5.2, RLC test method). Table 56 shows the test suite constants used for each RLC mode, and length indicator size.

**Table 56: RB Ids used for DTCH depending on RLC mode and LI size**

| RLC mode | LI Size | TSC              | RB Id |
|----------|---------|------------------|-------|
| UM       | 7       | tsc_RB_UM_7_RLC  | -10   |
| UM       | 15      | tsc_RB_UM_15_RLC | -11   |
| AM       | 7       | tsc_RB_AM_7_RLC  | -12   |
| AM       | 15      | tsc_RB_AM_15_RLC | -13   |

**Table 57: Uplink configuration of Cell\_RLC\_DCH\_RAB**

|                       |                      |  |   |
|-----------------------|----------------------|--|---|
| <b>RB Identity</b>    | See table 56         | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                 |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  |  |   |
| <b>RLC mode</b>       | TM                   |  |   |
| <b>TrCH Type</b>      | DCH                  |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   |  |   |
| <b>PhyCh Type</b>     | DPDCH                |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |  | tsc_PRACH1<br>(8)   |

**Table 58: Downlink configuration of Cell\_RLC\_DCH\_RAB**

|                       |                   |  |  |
|-----------------------|-------------------|--|--|
| <b>RB Identity</b>    | See table 56      | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH              |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1 (7)  |  |  |
| <b>RLC mode</b>       | TM                |  |  |
| <b>MAC priority</b>   | 1                 |  |  |
| <b>TrCH Type</b>      | DCH               |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1 (6)   |  |  |
| <b>PhyCh Type</b>     | DPCH              | Secondary CCPCH  |  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1 (26) | tsc_S_CCPCH1 (5)   |  |

### 8.3.7 Configuration of Cell\_FACH\_BMC

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 without RAB/DTCH for uplink. A RB30/CTCH is configured. The configuration is applied to the BMC and CBSMS tests.

The uplink configuration of Cell\_FACH\_BMC is the same as the uplink configuration of Cell\_FACH.

**Table 59: Downlink configuration of Cell\_FACH\_BMC**

|                       |                  |                  |                  |                  |                  |                  |                        |               |                  |
|-----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------------|---------------|------------------|
| <b>RB Identity</b>    |                  | tsc_RB0 (0)      | tsc_RB1 (1)      | tsc_RB2 (2)      | tsc_RB3 (3)      | tsc_RB4 (4)      | tsc_RB_BCC H_FACH (-3) | Tsc_RB30 (30) | tsc_RB_PCCH (-2) |
| <b>LogCh Type</b>     |                  | CCCH             | DCCH             | DCCH             | DCCH             | DCCH             | BCCH                   | CTCH          | PCCH             |
| <b>LogCh Identity</b> |                  | tsc_DL_CCCH5 (5) | tsc_DL_DCCH1 (1) | tsc_DL_DCCH2 (2) | tsc_DL_DCCH3 (3) | tsc_DL_DCCH4 (4) | tsc_BCCH6 (6)          | Tsc_CTCH (11) | tsc_PCCH1 (1)    |
| <b>RLC mode</b>       | AM               | UM               | UM               | AM               | AM               | AM               | TM                     | UM            | TM               |
| <b>MAC priority</b>   | 1                | 1                | 2                | 3                | 4                | 5                | 6                      | 7             | 1                |
| <b>TrCH Type</b>      | FACH             | FACH             |                  |                  |                  |                  |                        |               | PCH              |
| <b>TrCH identity</b>  | tsc_FACH2 (14)   | tsc_FACH1 (13)   |                  |                  |                  |                  |                        |               | tsc_PCH1 (12)    |
| <b>PhyCh Type</b>     | Secondary CCPCH  |                  |                  |                  |                  |                  |                        |               |                  |
| <b>PhyCH identity</b> | tsc_S_CCPCH1 (5) |                  |                  |                  |                  |                  |                        |               |                  |

### 8.3.8 Configuration of PS Cell\_DCH\_64kPS\_RAB\_SRB and Cell\_PDCP\_AM\_RAB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.26. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RRC and NAS signalling tests in the DCH state where a PS RAB on DTCH is setup for the interactive or background service class. The configuration is applied to PDCP test cases in acknowledge mode.

**Table 60: Uplink configuration of PS Cell\_DCH\_64kPS\_RAB\_SRB SRB and Cell\_PDCP\_AM\_RAB**

|                       |                         |  |   |
|-----------------------|-------------------------|--|---|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                    |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTC<br>H1<br>(7) |  |   |
| <b>RLC mode</b>       | AM                      |  |   |
| <b>TrCH Type</b>      | DCH                     |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH<br>1<br>(1)  |  |   |
| <b>PhyCh Type</b>     | DPDCH                   |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20)    |  | tsc_PRACH1<br>(8)   |

**Table 61: Downlink configuration of PS Cell\_DCH\_64kPS\_RAB\_SRB SRB and Cell\_PDCP\_AM\_RAB**

|                       |                         |  |  |
|-----------------------|-------------------------|--|--|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                    |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTC<br>H1<br>(7) |  |  |
| <b>RLC mode</b>       | AM                      |  |  |
| <b>MAC priority</b>   | 1                       |  |  |
| <b>TrCH Type</b>      | DCH                     |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH<br>1<br>(6)  |  |  |
| <b>PhyCh Type</b>     | DPCH                    |  | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26)    |  | tsc_S_CCPCH1<br>(5)  |

### 8.3.9 Configuration of Cell\_Two\_DTCH

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.6 to 6.10.2.4.1.11. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

**Table 62: Uplink configuration of Cell\_Two\_DTCH**

|                       |                         |                         |   |   |
|-----------------------|-------------------------|-------------------------|---|---|
| <b>RB Identity</b>    | tsc_RB10<br>(10)        | tsc_RB11<br>(11)        | Same as uplink configuration of<br>Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of<br>Cell_DCH_StandAloneSRB on<br>PRACH |
| <b>LogCh Type</b>     | DTCH                    | DTCH                    |   |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH<br>1<br>(7) | tsc_UL_DTCH<br>2<br>(8) |   |   |
| <b>RLC mode</b>       | TM                      | TM                      |   |   |
| <b>TrCH Type</b>      | DCH                     | DCH                     |   |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)      | tsc_UL_DCH2<br>(2)      |   |   |
| <b>PhyCh Type</b>     | DPCH                    |                         | PRACH   |   |
| <b>PhyCH identity</b> | tsc_UL_DPDCH1<br>(20)   |                         | tsc_PRACH1<br>(8)   |   |

**Table 63: Downlink configuration of Cell\_Two\_DTCH**

|                       |                      |                     |  |  |
|-----------------------|----------------------|---------------------|--|--|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | tsc_RB11<br>(11)    | Same as downlink configuration of<br>Cell_DCH_StandAloneSRB on<br>DPCH | Same as downlink configuration of<br>Cell_DCH_StandAloneSRB on<br>sCCPCH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7)  | tsc_DL_DTCH2<br>(8) |  |  |
| <b>RLC mode</b>       | TM                   | TM                  |  |  |
| <b>MAC priority</b>   | 1                    | 1                   |  |  |
| <b>TrCH Type</b>      | DCH                  | DCH                 |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)   | tsc_DL_DCH2<br>(7)  |  |  |
| <b>PhyCh Type</b>     | DPCH                 |                     | Secondary CCPCH  |  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26) |                     | tsc_S_CCPCH1<br>(5)  |  |

### 8.3.10 Configuration of Cell\_Single\_DTCH (CS)

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.12 to 6.10.2.4.1.22. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

**Table 64: Uplink configuration of Cell\_Single\_DTCH (CS)**

|                       |                      |  |   |
|-----------------------|----------------------|--|---|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | Same as uplink configuration of<br>Cell_DCH_StandAloneSRB on<br>DPCH | Same as uplink configuration of<br>Cell_DCH_StandAloneSRB on<br>PRACH |
| <b>LogCh Type</b>     | DTCH                 |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  |  |   |
| <b>RLC mode</b>       | TM                   |  |   |
| <b>TrCH Type</b>      | DCH                  |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   |  |   |
| <b>PhyCh Type</b>     | DPDCH                |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |  | tsc_PRACH1<br>(8)   |

**Table 65: Downlink configuration of Cell\_Single\_DTCH (CS)**

|                       |                     |  |  |
|-----------------------|---------------------|--|--|
| <b>RB Identity</b>    | tsc_RB10<br>(10)    | Same as downlink configuration of<br>Cell_DCH_StandAloneSRB on<br>DPCH | Same as downlink configuration of<br>Cell_DCH_StandAloneSRB on<br>sCCPCH |
| <b>LogCh Type</b>     | DTCH                |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7) |  |  |
| <b>RLC mode</b>       | TM                  |  |  |
| <b>MAC priority</b>   | 1                   |  |  |
| <b>TrCH Type</b>      | DCH                 |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)  |  |  |
| <b>PhyCh Type</b>     |                     | DPCH   | Secondary CCPCH  |
| <b>PhyCH identity</b> |                     | tsc_DL_DPCH1<br>(26)   | tsc_S_CCPCCH1<br>(5)   |

### 8.3.11 Configuration of PS Cell\_PDCP\_UM\_RAB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.26. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to PDCP test cases in unacknowledge mode.

**Table 66: Uplink configuration of PS Cell\_PDCP\_UM\_RAB**

|                       |                     |  |   |
|-----------------------|---------------------|--|---|
| <b>RB Identity</b>    | tsc_RB21<br>(21)    | Same as uplink configuration of<br>Cell_DCH_StandAloneSRB on<br>DPCH | Same as uplink configuration of<br>Cell_DCH_StandAloneSRB on<br>PRACH |
| <b>LogCh Type</b>     | DTCH                |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7) |  |   |
| <b>RLC mode</b>       | UM                  |  |   |
| <b>TrCH Type</b>      | DCH                 |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)  |  |   |
| <b>PhyCh Type</b>     |                     | DPDCH  | PRACH   |
| <b>PhyCH identity</b> |                     | tsc_UL_DPCH1<br>(20)   | tsc_PRACH1<br>(8)   |

**Table 67: Downlink configuration of PS Cell\_PDCP\_UM\_RAB**

|                       |                     |  |  |
|-----------------------|---------------------|--|--|
| <b>RB Identity</b>    | tsc_RB21<br>(21)    | Same as downlink configuration of<br>Cell_DCH_StandAloneSRB on<br>DPCH | Same as downlink configuration of<br>Cell_DCH_StandAloneSRB on<br>sCCPCH |
| <b>LogCh Type</b>     | DTCH                |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7) |  |  |
| <b>RLC mode</b>       | UM                  |  |  |
| <b>MAC priority</b>   | 1                   |  |  |
| <b>TrCH Type</b>      | DCH                 |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)  |  |  |
| <b>PhyCh Type</b>     |                     | DPCH   | Secondary CCPCH  |
| <b>PhyCH identity</b> |                     | tsc_DL_DPCH1<br>(26)   | tsc_S_CCPCCH1<br>(5)   |

### 8.3.12 Configuration of PS Cell\_PDCP\_AM\_UM\_RAB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.26. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to PDCP test cases using both the acknowledged and unacknowledged mode.

**Table 68: Uplink configuration of PS Cell\_PDCP\_AM\_UM\_RAB**

|                       |                      |                     |  |   |
|-----------------------|----------------------|---------------------|--|---|
| <b>RB Identity</b>    | tsc_RB20<br>(20)     | tsc_RB21<br>(21)    | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  | tsc_UL_DTCH2<br>(8) |  |   |
| <b>RLC mode</b>       | AM                   | UM                  |  |   |
| <b>TrCH Type</b>      | DCH                  |                     |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   |                     |  |   |
| <b>PhyCh Type</b>     | DPDCH                |                     |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |                     |  | tsc_PRACH1<br>(8)   |

**Table 69: Downlink configuration of PS Cell\_PDCP\_AM\_UM\_RAB**

|                       |                      |                     |  |  |
|-----------------------|----------------------|---------------------|--|--|
| <b>RB Identity</b>    | tsc_RB20<br>(20)     | tsc_RB21<br>(21)    | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7)  | tsc_DL_DTCH2<br>(8) |  |  |
| <b>RLC mode</b>       | AM                   | UM                  |  |  |
| <b>MAC priority</b>   | 1                    | 1                   |  |  |
| <b>TrCH Type</b>      | DCH                  |                     |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)   |                     |  |  |
| <b>PhyCh Type</b>     | DPCH                 |                     |  | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26) |                     |  | tsc_S_CCPCH1<br>(5)  |

### 8.3.13 Configuration of Cell\_2SCCPCH\_BMC

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 without RAB/DTCH for uplink. RB30/CTCH and RB31/CTCH as well as two PCCH are configured. The configuration is applied to the BMC and CBSMS tests.

**Table 70: Uplink configuration of Cell\_2SCCPCH\_BMC**

|                       |                     |                     |                     |                     |                     |                     |
|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <b>RB Identity</b>    | tsc_RB20<br>(20)    | tsc_RB0<br>(0)      | tsc_RB1<br>(1)      | tsc_RB2<br>(2)      | Tsc_RB3<br>(3)      | tsc_RB4<br>(4)      |
| <b>LogCh Type</b>     | DTCH                | CCCH                | DCCH                | DCCH                | DCCH                | DCCH                |
| <b>LogCh Identity</b> | Tsc_UL_DTCH1<br>(7) | tsc_UL_CCCH5<br>(5) | tsc_UL_DCCH1<br>(1) | tsc_UL_DCCH2<br>(2) | tsc_UL_DCCH3<br>(3) | tsc_UL_DCCH4<br>(4) |
| <b>RLC mode</b>       | AM                  | TM                  | UM                  | AM                  | AM                  | AM                  |
| <b>TrCH Type</b>      | RACH                |                     |                     |                     |                     |                     |
| <b>TrCH identity</b>  | tsc_RACH1<br>(15)   |                     |                     |                     |                     |                     |
| <b>PhyCh Type</b>     | PRACH               |                     |                     |                     |                     |                     |
| <b>PhyCH identity</b> | tsc_PRACH1<br>(8)   |                     |                     |                     |                     |                     |

**Table 71: Downlink configuration of Cell\_2SCCPCH\_BMC: second S-CCPCH**

|                       |                      |                        |
|-----------------------|----------------------|------------------------|
| <b>RB Identity</b>    | Tsc_RB31<br>(31)     | tsc_RB_2ndPCCH<br>(-4) |
| <b>LogCh Type</b>     | CTCH                 | PCCH                   |
| <b>LogCh Identity</b> | Tsc_CTCH2<br>(12)    | tsc_PCCH2<br>(2)       |
| <b>RLC mode</b>       | UM                   | TM                     |
| <b>MAC priority</b>   | 1                    | 1                      |
| <b>TrCH Type</b>      | FACH                 | PCH                    |
| <b>TrCH identity</b>  | tsc_FACH1<br>(13)    | tsc_PCH2<br>(30)       |
| <b>PhyCh Type</b>     | Secondary CCPCH      |                        |
| <b>PhyCH identity</b> | tsc_S_CCPCH2<br>(10) |                        |

**Table 72: Downlink configuration of Cell\_2SCCPCH\_BMC: first S-CCPCH**

|                       |                         |                         |                         |                         |                         |                         |                              |                   |                     |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------------|-------------------|---------------------|
| <b>RB Identity</b>    | tsc_RB2<br>0<br>(20)    | tsc_RB0<br>(0)          | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB_BCCH<br>_FACH<br>(-3) | Tsc_RB30<br>(30)  | tsc_RB_PCCH<br>(-2) |
| <b>LogCh Type</b>     | DTCH                    | CCCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    | BCCH                         | CTCH              | PCCH                |
| <b>LogCh Identity</b> | tsc_DL_<br>DTCH1<br>(6) | tsc_DL_<br>CCCH5<br>(5) | tsc_DL_<br>DCCH1<br>(1) | tsc_DL_<br>DCCH2<br>(2) | tsc_DL_<br>DCCH3<br>(3) | tsc_DL_<br>DCCH4<br>(4) | tsc_BCCH6<br>(6)             | Tsc_CTCH1<br>(11) | tsc_PCCH1<br>(1)    |
| <b>RLC mode</b>       | AM                      | UM                      | UM                      | AM                      | AM                      | AM                      | TM                           | UM                | TM                  |
| <b>MAC priority</b>   | 1                       | 1                       | 2                       | 3                       | 4                       | 5                       | 6                            | 7                 | 1                   |
| <b>TrCH Type</b>      | FACH                    | FACH                    |                         |                         |                         |                         |                              |                   | PCH                 |
| <b>TrCH identity</b>  | Tsc_FA<br>CH2<br>(14)   | tsc_FACH1<br>(13)       |                         |                         |                         |                         |                              |                   | tsc_PCH1<br>(12)    |
| <b>PhyCh Type</b>     | Secondary CCPCH         |                         |                         |                         |                         |                         |                              |                   |                     |
| <b>PhyCH identity</b> | tsc_S_CCPCH1<br>(5)     |                         |                         |                         |                         |                         |                              |                   |                     |



### 8.3.14 Configuration of Cell\_Four\_DTCH\_CS\_PS, Cell\_Four\_DTCH\_PS\_CS

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.40. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

**Table 73: Uplink configuration of Cell\_Four\_DTCH\_CS\_PS**

|                       |                         |                         |                         |                          |  |   |
|-----------------------|-------------------------|-------------------------|-------------------------|--------------------------|--|---|
| <b>RB Identity</b>    | tsc_RB10<br>(10)        | tsc_RB11<br>(11)        | tsc_RB12<br>(12)        | tsc_RB20<br>(20)         | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                    | DTCH                    | DTCH                    | DTCH                     |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTC<br>H1<br>(7) | tsc_UL_DTC<br>H2<br>(8) | tsc_UL_DTC<br>H3<br>(9) | tsc_UL_DTC<br>H4<br>(10) |  |   |
| <b>RLC mode</b>       | TM                      | TM                      | TM                      | AM                       |  |   |
| <b>MAC priority</b>   | 1                       | 1                       | 1                       | 1                        |  |   |
| <b>TrCH Type</b>      | DCH                     | DCH                     | DCH                     | DCH                      |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH<br>1<br>(1)  | tsc_UL_DCH<br>2<br>(2)  | tsc_UL_DCH<br>3<br>(3)  | tsc_UL_DCH<br>4<br>(4)   |  |   |
| <b>PhyCh Type</b>     | DPDCH                   |                         |                         |                          |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20)    |                         |                         |                          |  | tsc_PRACH1<br>(8)   |

**Table 74: Downlink configuration of Cell\_Four\_DTCH\_CS\_PS, Cell\_Four\_DTCH\_PS\_CS**

|                       |                         |                         |                         |                          |  |  |
|-----------------------|-------------------------|-------------------------|-------------------------|--------------------------|--|--|
| <b>RB Identity</b>    | tsc_RB10<br>(10)        | tsc_RB11<br>(11)        | tsc_RB12<br>(12)        | tsc_RB20<br>(20)         | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                    | DTCH                    | DTCH                    | DTCH                     |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTC<br>H1<br>(7) | tsc_DL_DTC<br>H2<br>(8) | tsc_DL_DTC<br>H3<br>(9) | tsc_DL_DTC<br>H4<br>(10) |  |  |
| <b>RLC mode</b>       | TM                      | TM                      | TM                      | AM                       |  |  |
| <b>MAC priority</b>   | 1                       | 1                       | 1                       | 1                        |  |  |
| <b>TrCH Type</b>      | DCH                     | DCH                     | DCH                     | DCH                      |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH<br>1<br>(6)  | tsc_DL_DCH<br>2<br>(7)  | tsc_DL_DCH<br>3<br>(8)  | tsc_DL_DCH<br>4<br>(9)   |  |  |
| <b>PhyCh Type</b>     | DPCH                    |                         |                         |                          |  | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(20)    |                         |                         |                          |  | tsc_S_CCPCH1<br>(5)  |

### 8.3.15 Configuration of Cell\_Two\_DTCH\_CS\_PS, Cell\_Two\_DTCH\_PS\_CS

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.51 and 6.10.2.4.1.53. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

**Table 75: Uplink configuration of Cell\_Two\_DTCH\_CS\_PS, Cell\_Two\_DTCH\_PS\_CS**

|                       |                      |                     |   |   |
|-----------------------|----------------------|---------------------|---|---|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | tsc_RB20<br>(20)    | Same as uplink<br>configuration of<br>Cell_DCH_StandA<br>loneSRB on<br>DPCH | Same as uplink<br>configuration of<br>Cell_DCH_StandAloneS<br>RB on PRACH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                |   |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  | tsc_UL_DTCH2<br>(8) |   |   |
| <b>RLC mode</b>       | TM                   | AM                  |   |   |
| <b>TrCH Type</b>      | DCH                  | DCH                 |   |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   | tsc_UL_DCH2<br>(2)  |   |   |
| <b>PhyCh Type</b>     | DPDCH                |                     | PRACH   |   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |                     | tsc_PRACH1<br>(8)   |   |

**Table 76: Downlink configuration of Cell\_Two\_DTCH\_CS\_PS**

|                       |                      |                     |  |  |
|-----------------------|----------------------|---------------------|--|--|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | tsc_RB20<br>(20)    | Same as downlink<br>configuration of<br>Cell_DCH_StandAlon<br>eSRB on DPCH | Same as downlink<br>configuration of<br>Cell_DCH_StandAloneS<br>RB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7)  | tsc_DL_DTCH2<br>(8) |  |  |
| <b>RLC mode</b>       | TM                   | AM                  |  |  |
| <b>MAC priority</b>   | 1                    | 1                   |  |  |
| <b>TrCH Type</b>      | DCH                  | DCH                 |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)   | tsc_DL_DCH2<br>(7)  |  |  |
| <b>PhyCh Type</b>     | DPCH                 |                     | Secondary CCPCH  |  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(20) |                     | tsc_S_CCPCH1<br>(5)  |  |

### 8.3.16 Configuration of Cell\_Four\_DTCH\_CS

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.49. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

**Table 77: Uplink configuration of Cell\_Four\_DTCH\_CS**

|                       |                         |                         |                         |                         |   |  |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|---|--|
| <b>RB Identity</b>    | tsc_RB10<br>(10)        | tsc_RB11<br>(11)        | tsc_RB12<br>(12)        | tsc_RB13<br>(13)        | Same as uplink configuration of Cell_DCH_StandAloneS RB on DPCH | Same as uplink configuration of Cell_DCH_StandAlone SRB on PRACH |
| <b>LogCh Type</b>     | DTCH                    | DTCH                    | DTCH                    | DTCH                    |   |  |
| <b>LogCh Identity</b> | tsc_UL_DTC<br>H1<br>(1) | tsc_UL_DTC<br>H2<br>(2) | tsc_UL_DTC<br>H3<br>(3) | tsc_UL_DTC<br>H4<br>(4) |   |  |
| <b>RLC mode</b>       | TM                      | TM                      | TM                      | TM                      |   |  |
| <b>MAC priority</b>   | 1                       | 1                       | 1                       | 1                       |   |  |
| <b>TrCH Type</b>      | DCH                     | DCH                     | DCH                     | DCH                     |   |  |
| <b>TrCH identity</b>  | tsc_UL_DCH<br>1<br>(6)  | tsc_UL_DCH<br>2<br>(7)  | tsc_UL_DCH<br>3<br>(8)  | tsc_UL_DCH<br>4<br>(9)  |   |  |
| <b>PhyCh Type</b>     | DPDCH                   |                         |                         |                         |   | PRACH  |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20)    |                         |                         |                         |   | tsc_PRACH1<br>(8)  |

**Table 78: Downlink configuration of Cell\_Four\_DTCH\_CS**

|                       |                         |                         |                         |                          |   |   |
|-----------------------|-------------------------|-------------------------|-------------------------|--------------------------|---|---|
| <b>RB Identity</b>    | tsc_RB10<br>(10)        | tsc_RB11<br>(11)        | tsc_RB12<br>(12)        | tsc_RB13<br>(13)         | Same as downlink configuration of Cell_DCH_StandAloneS RB on DPCH | Same as downlink configuration of Cell_DCH_StandAlone SRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                    | DTCH                    | DTCH                    | DTCH                     |   |   |
| <b>LogCh Identity</b> | tsc_DL_DTC<br>H1<br>(7) | tsc_DL_DTC<br>H2<br>(8) | tsc_DL_DTC<br>H3<br>(9) | tsc_DL_DTC<br>H4<br>(10) |   |   |
| <b>RLC mode</b>       | TM                      | TM                      | TM                      | TM                       |   |   |
| <b>MAC priority</b>   | 1                       | 1                       | 1                       | 1                        |   |   |
| <b>TrCH Type</b>      | DCH                     | DCH                     | DCH                     | DCH                      |   |   |
| <b>TrCH identity</b>  | tsc_DL_DCH<br>1<br>(6)  | tsc_DL_DCH<br>2<br>(7)  | tsc_DL_DCH<br>3<br>(8)  | tsc_DL_DCH<br>4<br>(9)   |   |   |
| <b>PhyCh Type</b>     | DPCH                    |                         |                         |                          |   | Secondary CCPCH   |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(20)    |                         |                         |                          |   | tsc_S_CCPCH1<br>(5)   |

### 8.3.17 Configuration of Cell\_DCH\_MAC\_SRB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1. 3. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1; except that RB3 is mapped on TM mode.

The configuration is applied to the MAC tests.

**Table 79: Uplink configuration of Cell\_DCH\_MAC\_SRB**

|                       |                      |                     |                                  |                     |                     |    |
|-----------------------|----------------------|---------------------|----------------------------------|---------------------|---------------------|----|
| <b>RB Identity</b>    | tsc_RB1<br>(1)       | tsc_RB2<br>(2)      | tsc_RB_DCCH<br>_DCH_MAC<br>(-15) | tsc_RB4<br>(4)      | tsc_RB0<br>(0)      |    |
| <b>LogCh Type</b>     | DCCH                 | DCCH                | DCCH                             | DCCH                | CCCH                |    |
| <b>LogCh Identity</b> | tsc_UL_DCCH1<br>(1)  | tsc_UL_DCCH2<br>(2) | tsc_UL_DCCH3<br>(3)              | tsc_UL_DCCH4<br>(4) | tsc_UL_CCCH5<br>(5) |    |
| <b>RLC mode</b>       | UM                   | AM                  | TM                               | AM                  | TM                  | AM |
| <b>TrCH Type</b>      | DCH                  |                     |                                  |                     | RACH                |    |
| <b>TrCH identity</b>  | tsc_UL_DCH5<br>(5)   |                     |                                  |                     | tsc_RACH1<br>(15)   |    |
| <b>PhyCh Type</b>     | DPDCH                |                     |                                  |                     | PRACH               |    |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |                     |                                  |                     | tsc_PRACH1<br>(8)   |    |

**Table 80: Downlink configuration of Cell\_DCH\_MAC\_SRB**

|                       |                         |                         |                                  |                         |                         |                     |                   |
|-----------------------|-------------------------|-------------------------|----------------------------------|-------------------------|-------------------------|---------------------|-------------------|
| <b>RB Identity</b>    | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB_DCC<br>H_DCH_MAC<br>(-15) | tsc_RB4<br>(4)          | tsc_RB0<br>(0)          | tsc_RB_PCCH<br>(-2) |                   |
| <b>LogCh Type</b>     | DCCH                    | DCCH                    | DCCH                             | DCCH                    | CCCH                    | PCCH                |                   |
| <b>LogCh Identity</b> | tsc_DL_DCCH<br>1<br>(1) | tsc_DL_DCCH<br>2<br>(2) | tsc_DL_DCCH<br>3<br>(3)          | tsc_DL_DCCH<br>4<br>(4) | tsc_DL_CCCH<br>5<br>(5) | tsc_PCCH1<br>(1)    |                   |
| <b>RLC mode</b>       | UM                      | AM                      | TM                               | AM                      | UM                      | TM                  | AM                |
| <b>MAC priority</b>   | 1                       | 2                       | 3                                | 4                       | 1                       | 1                   | 1                 |
| <b>TrCH Type</b>      | DCH                     |                         |                                  |                         | FACH                    | PCH                 | FACH              |
| <b>TrCH identity</b>  | tsc_DL_DCH5<br>(10)     |                         |                                  |                         | tsc_FACH1<br>(13)       | tsc_PCH1<br>(12)    | tsc_FACH2<br>(14) |
| <b>PhyCh Type</b>     | DPCH                    |                         |                                  |                         | Secondary CCPCH         |                     |                   |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26)    |                         |                                  |                         | tsc_S_CCPCH1<br>(5)     |                     |                   |

### 8.3.18 Configuration of Cell\_FACH\_MAC\_SRB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink; except that RB3 is mapped on TM mode.

The configuration is applied to the MAC tests.

**Table 81: Uplink configuration of Cell\_FACH\_MAC\_SRB**

|                       |                         |                         |                         |                         |                                   |                         |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-----------------------------------|-------------------------|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB0<br>(0)          | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB_DCCH_FACH_M<br>AC<br>(-14) | tsc_RB4<br>(4)          |
| <b>LogCh Type</b>     | DTCH                    | CCCH                    | DCCH                    | DCCH                    | DCCH                              | DCCH                    |
| <b>LogCh Identity</b> | Tsc_UL_DTCH<br>1<br>(7) | tsc_UL_CCCH<br>5<br>(5) | tsc_UL_DCCH<br>1<br>(1) | tsc_UL_DCCH<br>2<br>(2) | tsc_UL_DCCH3<br>(3)               | tsc_UL_DCCH<br>4<br>(4) |
| <b>RLC mode</b>       | AM                      | TM                      | UM                      | AM                      | TM                                | AM                      |
| <b>TrCH Type</b>      | RACH                    |                         |                         |                         |                                   |                         |
| <b>TrCH identity</b>  | tsc_RACH1<br>(15)       |                         |                         |                         |                                   |                         |
| <b>PhyCh Type</b>     | PRACH                   |                         |                         |                         |                                   |                         |
| <b>PhyCH identity</b> | tsc_PRACH1<br>(8)       |                         |                         |                         |                                   |                         |

**Table 82: Downlink configuration of Cell\_FACH\_MAC\_SRB**

|                       |                         |                         |                         |                         |                                       |                         |                              |                         |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------------------------|-------------------------|------------------------------|-------------------------|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB0<br>(0)          | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB_DC<br>CH_FACH_<br>MAC<br>(-14) | tsc_RB4<br>(4)          | tsc_RB_BC<br>CH_FACH<br>(-3) | tsc_RB_PC<br>CH<br>(-2) |
| <b>LogCh Type</b>     | DTCH                    | CCCH                    | DCCH                    | DCCH                    | DCCH                                  | DCCH                    | BCCH                         | PCCH                    |
| <b>LogCh Identity</b> | tsc_DL_DT<br>CH1<br>(6) | tsc_DL_CC<br>CH5<br>(5) | tsc_DL_DC<br>CH1<br>(1) | tsc_DL_DC<br>CH2<br>(2) | tsc_DL_DC<br>CH3<br>(3)               | tsc_DL_DC<br>CH4<br>(4) | tsc_BCCH6<br>(6)             | tsc_PCCH1<br>(1)        |
| <b>RLC mode</b>       | AM                      | UM                      | UM                      | AM                      | TM                                    | AM                      | TM                           | TM                      |
| <b>MAC priority</b>   | 1                       | 1                       | 2                       | 3                       | 4                                     | 5                       | 6                            | 1                       |
| <b>TrCH Type</b>      | FACH                    | FACH                    |                         |                         |                                       |                         |                              | PCH                     |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)       | tsc_FACH1<br>(13)       |                         |                         |                                       |                         |                              | tsc_PCH1<br>(12)        |
| <b>PhyCh Type</b>     | Secondary CCPCH         |                         |                         |                         |                                       |                         |                              |                         |
| <b>PhyCH identity</b> | tsc_S_CCPCH1<br>(5)     |                         |                         |                         |                                       |                         |                              |                         |

### 8.3.19 Configuration of Cell\_FACH\_MAC\_SRB0

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink; except that the downlink SRB0 is mapped on TM mode.

The configuration is applied to the MAC tests.

The uplink configuration of Cell\_FACH\_MAC\_SRB0 is the same as the uplink configuration of Cell\_FACH.

**Table 83: Downlink configuration of Cell\_FACH\_MAC\_SRB0**

|                       |                         |                                       |                         |                         |                         |                         |                              |                         |
|-----------------------|-------------------------|---------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------------|-------------------------|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB_CC<br>CH_FACH_<br>MAC<br>(-18) | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB_BC<br>CH_FACH<br>(-3) | tsc_RB_PC<br>CH<br>(-2) |
| <b>LogCh Type</b>     | DTCH                    | CCCH                                  | DCCH                    | DCCH                    | DCCH                    | DCCH                    | BCCH                         | PCCH                    |
| <b>LogCh Identity</b> | tsc_DL_DT<br>CH1<br>(6) | tsc_DL_CC<br>CH5<br>(5)               | tsc_DL_DC<br>CH1<br>(1) | tsc_DL_DC<br>CH2<br>(2) | tsc_DL_DC<br>CH3<br>(3) | tsc_DL_DC<br>CH4<br>(4) | tsc_BCCH6<br>(6)             | tsc_PCCH1<br>(1)        |
| <b>RLC mode</b>       | AM                      | TM                                    | UM                      | AM                      | AM                      | AM                      | TM                           | TM                      |
| <b>MAC priority</b>   | 1                       | 1                                     | 2                       | 3                       | 4                       | 5                       | 6                            | 1                       |
| <b>TrCH Type</b>      | FACH                    | FACH                                  |                         |                         |                         |                         |                              | PCH                     |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)       | tsc_FACH1<br>(13)                     |                         |                         |                         |                         |                              | tsc_PCH1<br>(12)        |
| <b>PhyCh Type</b>     | Secondary CCPCH         |                                       |                         |                         |                         |                         |                              |                         |
| <b>PhyCH identity</b> | tsc_S_CCPCH1<br>(5)     |                                       |                         |                         |                         |                         |                              |                         |

### 8.3.20 Configuration of Cell\_FACH\_2SCCPCH\_StandAlonePCH

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3] except the mapping of PCH, clause 6.10.2.4.4.1.1.1 for uplink.

The configuration is applied to the RAB tests.

The uplink configuration of Cell\_FACH\_2SCCPCH\_StandAlonePCH is the same as the uplink configuration of Cell\_FACH.

**Table 84: Downlink configuration of Cell\_FACH\_2SCCPCH\_StandAlonePCH**

|                       |                         |                         |                         |                         |                         |                         |                              |                         |  |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------------|-------------------------|--|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB0<br>(0)          | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB_BC<br>CH_FACH<br>(-3) | tsc_RB_PC<br>CH<br>(-2) |  |
| <b>LogCh Type</b>     | DTCH                    | CCCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    | BCCH                         | PCCH                    |  |
| <b>LogCh Identity</b> | tsc_DL_DT<br>CH1<br>(6) | tsc_DL_CC<br>CH5<br>(5) | tsc_DL_DC<br>CH1<br>(1) | tsc_DL_DC<br>CH2<br>(2) | tsc_DL_DC<br>CH3<br>(3) | tsc_DL_DC<br>CH4<br>(4) | tsc_BCCH6<br>(6)             | tsc_PCCH1<br>(1)        |  |
| <b>RLC mode</b>       | AM                      | UM                      | UM                      | AM                      | AM                      | AM                      | TM                           | TM                      |  |
| <b>MAC priority</b>   | 1                       | 1                       | 2                       | 3                       | 4                       | 5                       | 6                            | 1                       |  |
| <b>TrCH Type</b>      | FACH                    | FACH                    |                         |                         |                         |                         |                              | PCH                     |  |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)       | tsc_FACH1<br>(13)       |                         |                         |                         |                         |                              | tsc_PCH1<br>(12)        |  |
| <b>PhyCh Type</b>     | Secondary CCPCH         |                         |                         |                         |                         |                         |                              | Secondary<br>CCPCH      |  |
| <b>PhyCH identity</b> | tsc_S_CCPCH2<br>(10)    |                         |                         |                         |                         |                         |                              | tsc_S_CCP<br>CH1<br>(5) |  |

### 8.3.21 Configuration of PS Cell\_DCH\_2AM\_PS

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.26 and 6.10.2.4.1.57. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 with 2 AM RAB and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to MAC and RAB test cases.

**Table 85: Uplink configuration of Cell\_DCH\_2AM\_PS**

|                       |                         |                         |  |   |
|-----------------------|-------------------------|-------------------------|--|---|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB22<br>(22)        | Same as uplink configuration of<br>Cell_DCH_StandAloneSRB on<br>DPCH | Same as uplink configuration of<br>Cell_DCH_StandAloneSRB on<br>PRACH |
| <b>LogCh Type</b>     | DTCH                    | DTCH                    |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH<br>1<br>(7) | tsc_UL_DTCH<br>2<br>(8) |  |   |
| <b>RLC mode</b>       | AM                      | AM                      |  |   |
| <b>TrCH Type</b>      | DCH                     |                         |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)      |                         |  |   |
| <b>PhyCh Type</b>     | DPDCH                   |                         | PRACH  |   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20)    |                         | tsc_PRACH1<br>(8)  |   |

**Table 86: Downlink configuration of Cell\_DCH\_2AM\_PS**

|                       |                         |                         |  |  |
|-----------------------|-------------------------|-------------------------|--|--|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB22<br>(22)        | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                    | DTCH                    |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH<br>1<br>(7) | tsc_DL_DTCH<br>2<br>(8) |  |  |
| <b>RLC mode</b>       | AM                      | AM                      |  |  |
| <b>MAC priority</b>   | 1                       | 1                       |  |  |
| <b>TrCH Type</b>      | DCH                     |                         |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)      |                         |  |  |
| <b>PhyCh Type</b>     | DPCH                    |                         | Secondary CCPCH  |  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26)    |                         | tsc_S_CCPCH1<br>(5)  |  |

### 8.3.22 Configuration of PS Cell\_DCH\_2\_PS\_Call

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.56 and 6.10.2.4.1.58. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

**Table 87: Uplink configuration of Cell\_DCH\_2\_PS\_Call**

|                       |                         |                         |  |   |
|-----------------------|-------------------------|-------------------------|--|---|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB22<br>(22)        | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                    | DTCH                    |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH<br>1<br>(7) | tsc_UL_DTCH<br>2<br>(8) |  |   |
| <b>RLC mode</b>       | AM                      | AM                      |  |   |
| <b>TrCH Type</b>      | DCH                     | DCH                     |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)      | tsc_UL_DCH2<br>(2)      |  |   |
| <b>PhyCh Type</b>     | DPDCH                   |                         | PRACH  |   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20)    |                         | tsc_PRACH1<br>(8)  |   |

**Table 88: Downlink configuration of Cell\_DCH\_2\_PS\_Call**

|                       |                         |                         |  |  |
|-----------------------|-------------------------|-------------------------|--|--|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB22<br>(22)        | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                    | DTCH                    |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH<br>1<br>(7) | tsc_DL_DTCH<br>2<br>(8) |  |  |
| <b>RLC mode</b>       | AM                      | AM                      |  |  |
| <b>MAC priority</b>   | 1                       | 1                       |  |  |
| <b>TrCH Type</b>      | DCH                     | DCH                     |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)      | tsc_DL_DCH2<br>(7)      |  |  |
| <b>PhyCh Type</b>     | DPCH                    |                         | Secondary CCPCH  |  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26)    |                         | tsc_S_CCPCH1<br>(5)  |  |



### 8.3.23 Configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_Cnfg1

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink. The configuration is applied to the RAB tests.

The uplink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_Cnfg1 is the same as the uplink configuration of Cell\_FACH.

**Table 89: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_Cnfg1: 1<sup>st</sup> & 2<sup>nd</sup> S-CCPCH**

|                       |                      |                         |                              |                     |
|-----------------------|----------------------|-------------------------|------------------------------|---------------------|
| <b>RB Identity</b>    |                      | tsc_RB0<br>(0)          | tsc_RB_BCCH_<br>FACH<br>(-3) | tsc_RB_PCCH (-2)    |
| <b>LogCh Type</b>     |                      | CCCH                    | BCCH                         | PCCH                |
| <b>LogCh Identity</b> |                      | tsc_DL_CCCH<br>5<br>(5) | tsc_BCCH6<br>(6)             | tsc_PCCH1<br>(1)    |
| <b>RLC mode</b>       |                      | UM                      | TM                           | TM                  |
| <b>MAC priority</b>   |                      | 1                       | 6                            | 1                   |
| <b>TrCH Type</b>      | FACH                 | FACH                    |                              | PCH                 |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)    | tsc_FACH1<br>(13)       |                              | tsc_PCH1<br>(12)    |
| <b>PhyCh Type</b>     | Secondary CCPCH      |                         |                              | Secondary CCPCH     |
| <b>PhyCH identity</b> | tsc_S_CCPCH2<br>(10) |                         |                              | tsc_S_CCPCH1<br>(5) |

**Table 90: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_Cnfg1: 3<sup>rd</sup> S-CCPCH**

|                       |                         |                         |                         |                         |                         |                         |                                       |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------------------------|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB29<br>(29)        | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB_BC<br>CH_FACH_<br>RAB<br>(-19) |
| <b>LogCh Type</b>     | DTCH                    | CCCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    | BCCH                                  |
| <b>LogCh Identity</b> | tsc_DL_DTC<br>H1<br>(7) | tsc_DL_C<br>CCH6<br>(6) | tsc_DL_DC<br>CH1<br>(1) | tsc_DL_DC<br>CH2<br>(2) | tsc_DL_DC<br>CH3<br>(3) | tsc_DL_DC<br>CH4<br>(4) | tsc_BCCH7<br>(7)                      |
| <b>RLC mode</b>       | AM                      | UM                      | UM                      | AM                      | AM                      | AM                      | TM                                    |
| <b>MAC priority</b>   | 1                       | 1                       | 2                       | 3                       | 4                       | 5                       | 6                                     |
| <b>TrCH Type</b>      | FACH                    | FACH                    |                         |                         |                         |                         |                                       |
| <b>TrCH identity</b>  | tsc_FACH4<br>(17)       | tsc_FACH3<br>(16)       |                         |                         |                         |                         |                                       |
| <b>PhyCh Type</b>     | Secondary CCPCH         |                         |                         |                         |                         |                         |                                       |
| <b>PhyCH identity</b> | tsc_S_CCPCH3<br>(13)    |                         |                         |                         |                         |                         |                                       |

### 8.3.24 Configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_Cnfg2

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink. The configuration is applied to the RAB tests.

The uplink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_Cnfg2 is the same as the uplink configuration of Cell\_FACH.

**Table 91: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_Cnfg2: 2<sup>nd</sup> S-CCPCH**

|                       |                         |                         |                         |                         |                         |                         |                                       |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------------------------|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB29<br>(29)        | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB_BC<br>CH_FACH_<br>RAB<br>(-19) |
| <b>LogCh Type</b>     | DTCH                    | CCCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    | BCCH                                  |
| <b>LogCh Identity</b> | tsc_DL_DTC<br>H1<br>(7) | tsc_DL_C<br>CCH6<br>(6) | tsc_DL_DC<br>CH1<br>(1) | tsc_DL_DC<br>CH2<br>(2) | tsc_DL_DC<br>CH3<br>(3) | tsc_DL_DC<br>CH4<br>(4) | tsc_BCCH7<br>(7)                      |
| <b>RLC mode</b>       | AM                      | UM                      | UM                      | AM                      | AM                      | AM                      | TM                                    |
| <b>MAC priority</b>   | 1                       | 1                       | 2                       | 3                       | 4                       | 5                       | 6                                     |
| <b>TrCH Type</b>      | FACH                    | FACH                    |                         |                         |                         |                         |                                       |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)       | tsc_FACH1<br>(13)       |                         |                         |                         |                         |                                       |
| <b>PhyCh Type</b>     | Secondary CCPCH         |                         |                         |                         |                         |                         |                                       |
| <b>PhyCH identity</b> | tsc_S_CCPCH2<br>(10)    |                         |                         |                         |                         |                         |                                       |

**Table 92: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_Cnfg2: 1<sup>st</sup> & 3<sup>rd</sup> S-CCPCH**

|                       |                      |                         |                              |                     |
|-----------------------|----------------------|-------------------------|------------------------------|---------------------|
| <b>RB Identity</b>    |                      | tsc_RB0<br>(0)          | tsc_RB_BCCH_<br>FACH<br>(-3) | tsc_RB_PCCH<br>(-2) |
| <b>LogCh Type</b>     |                      | CCCH                    | BCCH                         | PCCH                |
| <b>LogCh Identity</b> |                      | tsc_DL_CCCH<br>5<br>(5) | tsc_BCCH6<br>(6)             | tsc_PCCH1<br>(1)    |
| <b>RLC mode</b>       |                      | UM                      | TM                           | TM                  |
| <b>MAC priority</b>   |                      | 1                       | 6                            | 1                   |
| <b>TrCH Type</b>      | FACH                 | FACH                    |                              | PCH                 |
| <b>TrCH identity</b>  | tsc_FACH4<br>(17)    | tsc_FACH3<br>(16)       |                              | tsc_PCH1<br>(12)    |
| <b>PhyCh Type</b>     | Secondary CCPCH      |                         |                              | Secondary CCPCH     |
| <b>PhyCH identity</b> | tsc_S_CCPCH3<br>(13) |                         |                              | tsc_S_CCPCH1<br>(5) |

### 8.3.25 Configuration of Cell\_FACH\_3\_SCCPCH\_3\_FACH\_CTCH

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink. The configuration is applied to the RAB tests.

The uplink configuration of Cell\_FACH\_3\_SCCPCH\_3\_FACH\_CTCH is the same as the uplink configuration of Cell\_FACH.

**Table 93: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_3\_FACH\_CTCH: 1<sup>st</sup> & 2<sup>nd</sup> S-CCPCH**

|                       |                      |                     |                          |                     |
|-----------------------|----------------------|---------------------|--------------------------|---------------------|
| <b>RB Identity</b>    | tsc_RB30<br>(30)     | tsc_RB0<br>(0)      | tsc_RB_BCCH_FACH<br>(-3) | tsc_RB_PCCH<br>(-2) |
| <b>LogCh Type</b>     | CTCH                 | CCCH                | BCCH                     | PCCH                |
| <b>LogCh Identity</b> | tsc_CTCH1<br>(11)    | tsc_DL_CCCH5<br>(5) | tsc_BCCH6<br>(6)         | tsc_PCCH1<br>(1)    |
| <b>RLC mode</b>       | UM                   | UM                  | TM                       | TM                  |
| <b>MAC priority</b>   | 7                    | 1                   | 6                        | 1                   |
| <b>TrCH Type</b>      | FACH                 | FACH                |                          | PCH                 |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)    | tsc_FACH1<br>(13)   |                          | tsc_PCH1<br>(12)    |
| <b>PhyCh Type</b>     | Secondary CCPCH      |                     |                          | Secondary<br>CCPCH  |
| <b>PhyCH identity</b> | tsc_S_CCPCH2<br>(10) |                     |                          | tsc_S_CCPCH1<br>(5) |

**Table 94: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_3\_FACH\_CTCH: 3<sup>rd</sup> S-CCPCH**

|                       |                      |                      |                      |                      |                      |                      |                                    |
|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|------------------------------------|
| <b>RB Identity</b>    | tsc_RB20<br>(20)     | tsc_RB29<br>(29)     | tsc_RB1<br>(1)       | tsc_RB2<br>(2)       | tsc_RB3<br>(3)       | tsc_RB4<br>(4)       | tsc_RB_BC<br>CH_FACH_<br>RAB (-19) |
| <b>LogCh Type</b>     | DTCH                 | CCCH                 | DCCH                 | DCCH                 | DCCH                 | DCCH                 | BCCH                               |
| <b>LogCh Identity</b> | tsc_DL_DTC<br>H1 (7) | tsc_DL_CC<br>CH6 (6) | tsc_DL_DC<br>CH1 (1) | tsc_DL_DC<br>CH2 (2) | tsc_DL_DC<br>CH3 (3) | tsc_DL_DC<br>CH4 (5) | tsc_BCCH7<br>(7)                   |
| <b>RLC mode</b>       | AM                   | UM                   | UM                   | AM                   | AM                   | AM                   | TM                                 |
| <b>MAC priority</b>   | 1                    | 1                    | 2                    | 3                    | 4                    | 5                    | 6                                  |
| <b>TrCH Type</b>      | FACH                 | FACH                 |                      |                      |                      |                      |                                    |
| <b>TrCH identity</b>  | tsc_FACH4<br>(17)    | tsc_FACH3<br>(16)    |                      |                      |                      |                      |                                    |
| <b>PhyCh Type</b>     | Secondary CCPCH      |                      |                      |                      |                      |                      |                                    |
| <b>PhyCH identity</b> | tsc_S_CCPCH3<br>(13) |                      |                      |                      |                      |                      |                                    |

### 8.3.26 Configuration of PS Cell\_DCH\_DSCH\_PS\_RAB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.2.1. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RAB signalling tests where a PS RAB on DTCH is setup for the interactive or background service class is mapped on to DSCH.

The uplink configuration is same in clause 8.3.8.

**Table 95a: Downlink configuration of PS Cell\_DCH\_DSCH\_PS\_RAB**

|                       |                       |  |  |
|-----------------------|-----------------------|--|--|
| <b>RB Identity</b>    | tsc_RB20<br>(20)      | Same as downlink configuration of<br>Cell_DCH_StandAloneSRB on<br>DPCH | Same as downlink configuration of<br>Cell_DCH_StandAloneSRB on<br>sCCPCH |
| <b>LogCh Type</b>     | DTCH                  |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7)   |  |  |
| <b>RLC mode</b>       | AM                    |  |  |
| <b>MAC priority</b>   | 1                     |  |  |
| <b>TrCH Type</b>      | DSCH                  |  |  |
| <b>TrCH identity</b>  | tsc_DSCH1<br>(19)     |  |  |
| <b>PhyCh Type</b>     | PDSCH                 | DPCH   | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_DL_PDSCH1<br>(16) | tsc_DL_DPCH1<br>(26)   | tsc_S_CCPCH1<br>(5)  |

### 8.3.27 Configuration of Cell\_DCH\_DSCH\_CS\_PS

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.2.4. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

The Uplink configuration is similar to clause 8.3.14.

**Table 97b: Downlink configuration of Cell\_DCH\_DSCH\_CS\_PS**

|                       |                        |                        |                        |                           |   |  |
|-----------------------|------------------------|------------------------|------------------------|---------------------------|---|--|
| <b>RB Identity</b>    | tsc_RB10<br>(10)       | tsc_RB11<br>(11)       | tsc_RB12<br>(12)       | tsc_RB20<br>(20)          | Same as downlink<br>configuration of<br>Cell_DCH_Stand<br>AloneSRB on<br>DPCH | Same as downlink<br>configuration of<br>Cell_DCH_StandAlone<br>SRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                   | DTCH                   | DTCH                   | DTCH                      |   |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7)    | tsc_DL_DTCH2<br>(8)    | tsc_DL_DTCH3<br>(9)    | tsc_DL_DTCH4<br>(10)      |   |  |
| <b>RLC mode</b>       | TM                     | TM                     | TM                     | AM                        |   |  |
| <b>MAC priority</b>   | 1                      | 1                      | 1                      | 1                         |   |  |
| <b>TrCH Type</b>      | DCH                    | DCH                    | DCH                    | DSCH                      |   |  |
| <b>TrCH identity</b>  | tsc_DL_DCH<br>1<br>(6) | tsc_DL_DCH<br>2<br>(7) | Tsc_DL_DCH<br>3<br>(8) | tsc_DL_DSC<br>H1<br>(19)  |   |  |
| <b>PhyCh Type</b>     | DPCH                   |                        |                        | PDSCH                     | DPCH  | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(20)   |                        |                        | tsc_DL_PDS<br>CH1<br>(16) | tsc_DL_DPCH1<br>(20)  | tsc_S_CCPCH1<br>(5)  |

### 8.3.28 Configuration of Cell\_FACH\_2SCCPCH\_StandAlonePCH\_2a

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2a for downlink and 3GPP TS 34.108 [3] except the mapping of PCH, clause 6.10.2.4.4.2 for uplink. The configuration is applied to the RAB tests.

**Table 96: Uplink configuration of Configuration of Configuration of Cell\_FACH\_2SCCPCH\_StandAlonePCH\_2a**

|                       |                   |                  |                  |                  |                  |                  |                  |
|-----------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>RB Identity</b>    | tsc_RB24 (24)     | tsc_RB20 (20)    | tsc_RB0 (0)      | tsc_RB1 (1)      | tsc_RB2 (2)      | tsc_RB3 (3)      | tsc_RB4 (4)      |
| <b>LogCh Type</b>     | DTCH              | DTCH             | CCCH             | DCCH             | DCCH             | DCCH             | DCCH             |
| <b>LogCh Identity</b> | tsc_UL_DTCH4 (10) | tsc_UL_DTCH1 (7) | tsc_UL_CCCH5 (5) | tsc_UL_DCCH1 (1) | tsc_UL_DCCH2 (2) | tsc_UL_DCCH3 (3) | tsc_UL_DCCH4 (4) |
| <b>RLC mode</b>       | AM                | AM               | TM               | UM               | AM               | AM               | AM               |
| <b>TrCH Type</b>      | RACH              |                  |                  |                  |                  |                  |                  |
| <b>TrCH identity</b>  | tsc_RACH1 (15)    |                  |                  |                  |                  |                  |                  |
| <b>PhyCh Type</b>     | PRACH             |                  |                  |                  |                  |                  |                  |
| <b>PhyCH identity</b> | tsc_PRACH1 (8)    |                  |                  |                  |                  |                  |                  |

**Table 97: Downlink configuration of Cell\_FACH\_2SCCPCH\_StandAlonePCH\_2a**

|                       |                   |                    |                   |                   |                   |                   |                   |                       |                     |  |
|-----------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------|---------------------|--|
| <b>RB Identity</b>    | tsc_RB20 (20)     | tsc_RB24 (24)      | tsc_RB0 (0)       | tsc_RB1 (1)       | tsc_RB2 (2)       | tsc_RB3 (3)       | tsc_RB4 (4)       | tsc_RB_BCCH_FACH (-3) | tsc_RB_2ndPCCH (-4) |  |
| <b>LogCh Type</b>     | DTCH              | DTCH               | CCCH              | DCCH              | DCCH              | DCCH              | DCCH              | BCCH                  | PCCH                |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1 (7)  | tsc_DL_DTC H4 (10) | tsc_DL_CC CH5 (5) | tsc_DL_DC CH1 (1) | tsc_DL_DC CH2 (2) | tsc_DL_DC CH3 (3) | tsc_DL_DC CH4 (4) | tsc_BCCH6 (6)         | tsc_PCCH1 (1)       |  |
| <b>RLC mode</b>       | AM                | AM                 | UM                | UM                | AM                | AM                | AM                | TM                    | TM                  |  |
| <b>MAC priority</b>   | 1                 | 1                  | 1                 | 2                 | 3                 | 4                 | 5                 | 6                     | 1                   |  |
| <b>TrCH Type</b>      | FACH              | FACH               | FACH              |                   |                   |                   |                   |                       | PCH                 |  |
| <b>TrCH identity</b>  | tsc_FACH2 (14)    |                    | tsc_FACH1(13)     |                   |                   |                   |                   |                       | tsc_PCH1 (12)       |  |
| <b>PhyCh Type</b>     | Secondary CCPCH   |                    |                   |                   |                   |                   |                   |                       | Secondary CCPCH     |  |
| <b>PhyCH identity</b> | tsc_S_CCPCH2 (10) |                    |                   |                   |                   |                   |                   |                       | tsc_S_CCPCH1 (5)    |  |

### 8.3.29 Configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_2a\_Cnfg1

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2a for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.2 for uplink. The configuration is applied to the RAB tests.

The uplink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH Cnfg1 is the same as the uplink configuration of Cell\_FACH\_2\_SCCPCH\_StandAlonePCH\_2a.

**Table 98: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_2a\_Cnfg1: 1<sup>st</sup> & 2<sup>nd</sup> S-CCPCH**

|                       |                      |      |                     |                           |                     |
|-----------------------|----------------------|------|---------------------|---------------------------|---------------------|
| <b>RB Identity</b>    |                      |      | tsc_RB0<br>(0)      | tsc_RB_BCCH_F<br>ACH (-3) | tsc_RB_PCCH (-2)    |
| <b>LogCh Type</b>     |                      |      | CCCH                | BCCH                      | PCCH                |
| <b>LogCh Identity</b> |                      |      | tsc_DL_CCCH5<br>(5) | tsc_BCCH6<br>(6)          | tsc_PCCH1<br>(1)    |
| <b>RLC mode</b>       |                      |      | UM                  | TM                        | TM                  |
| <b>MAC priority</b>   |                      |      | 1                   | 6                         | 1                   |
| <b>TrCH Type</b>      | FACH                 | FACH | FACH                |                           | PCH                 |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)    |      | tsc_FACH1<br>(13)   |                           | tsc_PCH1<br>(12)    |
| <b>PhyCh Type</b>     | Secondary CCPCH      |      |                     |                           | Secondary CCPCH     |
| <b>PhyCH identity</b> | tsc_S_CCPCH2<br>(10) |      |                     |                           | tsc_S_CCPCH1<br>(5) |

**Table 99: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_2a\_Cnfg1: 3<sup>rd</sup> S-CCPCH**

|                       |                       |                         |                         |                         |                         |                              |                         |                                   |
|-----------------------|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------------|-------------------------|-----------------------------------|
| <b>RB Identity</b>    | tsc_RB24<br>(24)      | tsc_RB2<br>0 (20)       | tsc_RB2<br>9 (29)       | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB<br>3 (3)              | tsc_RB4<br>(4)          | tsc_RB_BCCH<br>_FACH_RAB<br>(-19) |
| <b>LogCh Type</b>     | DTCH                  | DTCH                    | CCCH                    | DCCH                    | DCCH                    | DCCH                         | DCCH                    | BCCH                              |
| <b>LogCh Identity</b> | tsc_DL_DTC<br>H4 (10) | tsc_DL_<br>DTCH1<br>(7) | tsc_DL_<br>CCCH6<br>(6) | tsc_DL_<br>DCCH1<br>(1) | tsc_DL_<br>DCCH2<br>(2) | tsc_DL_<br>_DCCH<br>3<br>(3) | tsc_DL_D<br>CCH4<br>(4) | tsc_BCCH7<br>(7)                  |
| <b>RLC mode</b>       | AM                    | AM                      | UM                      | UM                      | AM                      | AM                           | AM                      | TM                                |
| <b>MAC priority</b>   | 1                     | 1                       | 1                       | 2                       | 3                       | 4                            | 5                       | 6                                 |
| <b>TrCH Type</b>      | FACH                  |                         | FACH                    |                         |                         |                              |                         |                                   |
| <b>TrCH identity</b>  | tsc_FACH4<br>(17)     |                         | tsc_FACH3<br>(16)       |                         |                         |                              |                         |                                   |
| <b>PhyCh Type</b>     | Secondary CCPCH       |                         |                         |                         |                         |                              |                         |                                   |
| <b>PhyCH identity</b> | tsc_S_CCPCH3 (13)     |                         |                         |                         |                         |                              |                         |                                   |

### 8.3.30 Configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_2a\_Cnfg2

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2a for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.2 for uplink. The configuration is applied to the RAB tests.

The uplink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH Cnfg2 is the same as the uplink configuration of Cell\_FACH\_2\_SCCPCH\_StandAlonePCH\_2a.

**Table 100: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_2a\_Cnfg2: 2<sup>nd</sup> S-CCPCH**

|                       |                          |                         |                         |                              |                         |                         |                         |   |
|-----------------------|--------------------------|-------------------------|-------------------------|------------------------------|-------------------------|-------------------------|-------------------------|---|
| <b>RB Identity</b>    | tsc_RB21<br>(24)         | tsc_RB2<br>0<br>(20)    | tsc_RB2<br>9<br>(29)    | tsc_RB<br>1<br>(1)           | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB_<br>BCCH_F<br>ACH_RA<br>B<br>(-19) |
| <b>LogCh Type</b>     | DTCH                     | DTCH                    | CCCH                    | DCCH                         | DCCH                    | DCCH                    | DCCH                    | BCCH                                      |
| <b>LogCh Identity</b> | tsc_DL_D<br>TCH2<br>(10) | tsc_DL_<br>DTCH1<br>(7) | tsc_DL_<br>CCCH6<br>(6) | tsc_DL_<br>_DCCH<br>1<br>(1) | tsc_DL_<br>DCCH2<br>(2) | tsc_DL_<br>DCCH3<br>(3) | tsc_DL_<br>DCCH4<br>(4) | tsc_BCC<br>H7<br>(7)                      |
| <b>RLC mode</b>       | AM                       | AM                      | UM                      | UM                           | AM                      | AM                      | AM                      | TM  |
| <b>MAC priority</b>   | 1                        | 1                       | 1                       | 2                            | 3                       | 4                       | 5                       | 6   |
| <b>TrCH Type</b>      | FACH                     | FACH                    | FACH                    |                              |                         |                         |                         |   |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)        |                         | tsc_FACH1<br>(13)       |                              |                         |                         |                         |   |
| <b>PhyCh Type</b>     | Secondary CCPCH          |                         |                         |                              |                         |                         |                         |   |
| <b>PhyCH identity</b> | tsc_S_CCPCH2 (10)        |                         |                         |                              |                         |                         |                         |   |

**Table 101: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_4\_FACH\_2a\_Cnfg2: 1<sup>st</sup> & 3<sup>rd</sup> S-CCPCH**

|                       |                      |      |                         |                              |                     |
|-----------------------|----------------------|------|-------------------------|------------------------------|---------------------|
| <b>RB Identity</b>    |                      |      | tsc_RB0<br>(0)          | tsc_RB_BCCH_<br>FACH<br>(-3) | tsc_RB_PCCH<br>(-2) |
| <b>LogCh Type</b>     |                      |      | CCCH                    | BCCH                         | PCCH                |
| <b>LogCh Identity</b> |                      |      | tsc_DL_CCCH<br>5<br>(5) | tsc_BCCH6<br>(6)             | tsc_PCCH1<br>(1)    |
| <b>RLC mode</b>       |                      |      | UM                      | TM                           | TM                  |
| <b>MAC priority</b>   |                      |      | 1                       | 6                            | 1                   |
| <b>TrCH Type</b>      | FACH                 | FACH | FACH                    |                              | PCH                 |
| <b>TrCH identity</b>  | tsc_FACH4<br>(17)    |      | tsc_FACH3<br>(16)       |                              | tsc_PCH1<br>(12)    |
| <b>PhyCh Type</b>     | Secondary CCPCH      |      |                         |                              | Secondary CCPCH     |
| <b>PhyCH identity</b> | tsc_S_CCPCH3<br>(13) |      |                         |                              | tsc_S_CCPCH1<br>(5) |

### 8.3.31 Configuration of Cell\_FACH\_3\_SCCPCH\_3\_FACH\_CTCH\_2a

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.2 for uplink. The configuration is applied to the RAB tests.

The uplink configuration of Cell\_FACH\_3\_SCCPCH\_3\_FACH\_CTCH\_2a is the same as the uplink configuration of Cell\_FACH Cell\_FACH\_3\_SCCPCH\_4\_FACH Cnfg1.

**Table 102: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_3\_FACH\_CTCH\_2a : 1<sup>st</sup> & 2<sup>nd</sup> S-CCPCH**

|                       |                      |                     |                              |                     |
|-----------------------|----------------------|---------------------|------------------------------|---------------------|
| <b>RB Identity</b>    | tsc_RB30<br>(30)     | tsc_RB0<br>(0)      | tsc_RB_BCCH_<br>FACH<br>(-3) | tsc_RB_PCCH<br>(-2) |
| <b>LogCh Type</b>     | CTCH                 | CCCH                | BCCH                         | PCCH                |
| <b>LogCh Identity</b> | tsc_CTCH1<br>(11)    | tsc_DL_CCCH5<br>(5) | tsc_BCCH6<br>(6)             | tsc_PCCH1<br>(1)    |
| <b>RLC mode</b>       | UM                   | UM                  | TM                           | TM                  |
| <b>MAC priority</b>   | 7                    | 1                   | 6                            | 1                   |
| <b>TrCH Type</b>      | FACH                 | FACH                |                              | PCH                 |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)    | tsc_FACH1<br>(13)   |                              | tsc_PCH1<br>(12)    |
| <b>PhyCh Type</b>     | Secondary CCPCH      |                     |                              | Secondary CCPCH     |
| <b>PhyCH identity</b> | tsc_S_CCPCH2<br>(10) |                     |                              | tsc_S_CCPCH1<br>(5) |

**Table 103: Downlink configuration of Cell\_FACH\_3\_SCCPCH\_3\_FACH\_CTCH\_2a: 3<sup>rd</sup> S-CCPCH**

|                       |                      |                      |                         |                         |                         |                         |                         |  |
|-----------------------|----------------------|----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--|
| <b>RB Identity</b>    | tsc_RB24<br>(24)     | tsc_RB20<br>(20)     | tsc_RB2<br>9 (29)       | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB_<br>BCCH_F<br>ACH_RA<br>B (-19) |
| <b>LogCh Type</b>     | DTCH                 | DTCH                 | CCCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    | BCCH                                   |
| <b>LogCh Identity</b> | tsc_DL_D<br>TCH4(10) | tsc_DL_D<br>TCH1 (7) | tsc_DL_<br>CCCH6<br>(6) | tsc_DL_<br>DCCH1<br>(1) | tsc_DL_<br>DCCH2<br>(2) | tsc_DL_<br>DCCH3<br>(3) | tsc_DL_<br>DCCH4<br>(5) | tsc_BCC<br>H7 (7)                      |
| <b>RLC mode</b>       | AM                   | AM                   | UM                      | UM                      | AM                      | AM                      | AM                      | TM                                     |
| <b>MAC priority</b>   | 1                    | 1                    | 1                       | 2                       | 3                       | 4                       | 5                       | 6                                      |
| <b>TrCH Type</b>      | FACH                 | FACH                 | FACH                    |                         |                         |                         |                         |  |
| <b>TrCH identity</b>  | tsc_FACH4<br>(17)    |                      | tsc_FACH3<br>(16)       |                         |                         |                         |                         |  |
| <b>PhyCh Type</b>     | Secondary CCPCH      |                      |                         |                         |                         |                         |                         |  |
| <b>PhyCH identity</b> | tsc_S_CCPCH3<br>(13) |                      |                         |                         |                         |                         |                         |  |



### 8.3.32 Configuration of Cell\_DCH\_HS\_DSCH (Rel-5 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.5.1 or 6.10.2.4.5.2. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RRC and NAS signalling tests in the DCH state where a PS RAB on DTCH mapped on HS-DSCH is setup for the interactive or background service class.

**Table 104: Uplink configuration of Cell\_DCH\_HS\_DSCH**

|                       |                     |  |   |
|-----------------------|---------------------|--|---|
| <b>RB Identity</b>    | tsc_RB25<br>(25)    | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7) |  |   |
| <b>RLC mode</b>       | AM                  |  |   |
| <b>TrCH Type</b>      | DCH                 |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)  |  |   |
| <b>PhyCh Type</b>     |                     | DPDCH  | PRACH   |
| <b>PhyCH identity</b> |                     | tsc_UL_DPCH1<br>(20)   | tsc_PRACH1<br>(8)   |

**Table 105: Downlink configuration of Cell\_DCH\_HS\_DSCH**

|                               |                     |  |  |
|-------------------------------|---------------------|--|--|
| <b>RB Identity</b>            | tsc_RB25<br>(25)    | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>             | DTCH                |  |  |
| <b>LogCh Identity</b>         | tsc_DL_DTCH1<br>(7) |  |  |
| <b>RLC mode</b>               | AM                  |  |  |
| <b>MAC priority</b>           | 8                   |  |  |
| <b>TrCH Type</b>              | HS-DSCH             |  |  |
| <b>TrCH identity /QueueID</b> | 0                   |  |  |
| <b>PhyCh Type</b>             | PDSCH               | DPCH   | Secondary CCPCH  |
| <b>PhyCH identity</b>         | tsc_HSPDSCH<br>(18) | tsc_DL_DPCH1<br>(26)   | tsc_S_CCPCH1<br>(5)  |

### 8.3.33 Configuration of cell\_One\_DTCH\_HS\_DSCH\_MAC (Rel-5 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.5.1. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those MAC-hs/MAC-ehs[Rel-7 or later] Signalling tests in the DCH state where a PS RAB on DTCH mapped on HS-DSCH is setup for the interactive or background service class.

**Table 106: Uplink configuration of cell\_One\_DTCH\_HS\_DSCH\_MAC**

|                       |                        |  |   |
|-----------------------|------------------------|--|---|
| <b>RB Identity</b>    | tsc_RB_MAC_HS<br>(-25) | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                   |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)    |  |   |
| <b>RLC mode</b>       | TM                     |  |   |
| <b>TrCH Type</b>      | DCH                    |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)     |  |   |
| <b>PhyCh Type</b>     |                        | DPDCH  | PRACH   |
| <b>PhyCH identity</b> |                        | tsc_UL_DPCH1<br>(20)   | tsc_PRACH1<br>(8)   |

**Table 107: Downlink configuration of Cell\_DCH\_HS\_DSCH**

|                               |                     |  |  |
|-------------------------------|---------------------|--|--|
| <b>RB Identity</b>            | tsc_RB_MAC_HS (-25) | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>             | DTCH                |  |  |
| <b>LogCh Identity</b>         | tsc_DL_DTCH1 (7)    |  |  |
| <b>RLC mode</b>               | TM                  |  |  |
| <b>MAC priority</b>           | 8                   |  |  |
| <b>TrCH Type</b>              | HS-DSCH             |  |  |
| <b>TrCH identity /QueueID</b> | 0                   |  |  |
| <b>PhyCh Type</b>             | PDSCH               | DPCH   | Secondary CCPCH  |
| <b>PhyCH identity</b>         | tsc_HSPDSCH (18)    | tsc_DL_DPCH1 (26)  | tsc_S_CCPCH1 (5)   |

### 8.3.33a Configuration of cell\_Three\_DTCH\_1Q\_HS\_DSCH\_MAC (Rel-7 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.11.4f. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those MAC-ehs Signalling tests in the DCH state where a 3 PS RAB on DTCH mapped on HS-DSCH [ 1 MAC-ehs Queue] is setup for the interactive or background service class.

**Table 105a: Uplink configuration of cell\_Three\_DTCH\_1Q\_HS\_DSCH\_MAC**

|                       |                     |                         |                         |  |
|-----------------------|---------------------|-------------------------|-------------------------|--|
| <b>RB Identity</b>    | tsc_RB_MAC_HS (-25) | tsc_RB_MAC_ehs_26 (-26) | tsc_RB_MAC_ehs_27 (-27) | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH |
| <b>LogCh Type</b>     | DTCH                | DTCH                    | DTCH                    |  |
| <b>LogCh Identity</b> | tsc_UL_DTCH1 (7)    | tsc_UL_DTCH2 (8)        | tsc_UL_DTCH3 (9)        |  |
| <b>RLC mode</b>       | TM                  | TM                      | TM                      |  |
| <b>TrCH Type</b>      | DCH                 |                         |                         |  |
| <b>TrCH identity</b>  | tsc_UL_DCH1 (1)     |                         |                         |  |
| <b>PhyCh Type</b>     | DPDCH               |                         |                         |  |
| <b>PhyCH identity</b> | tsc_UL_DPCH1 (20)   |                         |                         |  |

**Table 105b: Downlink configuration of cell\_Three\_DTCH\_1Q\_HS\_DSCH\_MAC**

|                               |                     |                         |                         |  |
|-------------------------------|---------------------|-------------------------|-------------------------|--|
| <b>RB Identity</b>            | tsc_RB_MAC_HS (-25) | tsc_RB_MAC_ehs_26 (-26) | tsc_RB_MAC_ehs_27 (-27) | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH |
| <b>LogCh Type</b>             | DTCH                | DTCH                    | DTCH                    |  |
| <b>LogCh Identity</b>         | tsc_DL_DTCH1 (7)    | tsc_DL_DTCH2 (8)        | tsc_DL_DTCH3 (9)        |  |
| <b>RLC mode</b>               | TM                  | TM                      | TM                      |  |
| <b>MAC priority</b>           | 8                   | 8                       | 8                       |  |
| <b>TrCH Type</b>              | HS-DSCH             |                         |                         |  |
| <b>TrCH identity /QueueID</b> | 0                   |                         |                         |  |
| <b>PhyCh Type</b>             | PDSCH               |                         |                         | DPCH   |
| <b>PhyCH identity</b>         | tsc_HSPDSCH (18)    |                         |                         | tsc_DL_DPCH1 (26)  |

### 8.3.33b Configuration of cell\_Three\_DTCH\_3Q\_HS\_DSCH\_MAC (Rel-7 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.11.4f. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3],

clause 6.10.2.4.4.1.1.1. The configuration is applied to those MAC-ehs Signalling tests in the DCH state where a 3 PS RAB on DTCH mapped on HS-DSCH [ 1 MAC-ehs Queue] is setup for the interactive or background service class.

The uplink configuration of cell\_Three\_DTCH\_3Q\_HS\_DSCH\_MAC is the same as the uplink configuration of cell\_Three\_DTCH\_1Q\_HS\_DSCH\_MAC

**Table 105c: Downlink configuration of cell\_Three\_DTCH\_3Q\_HS\_DSCH\_MAC**

|                               |                     |                         |                         |  |
|-------------------------------|---------------------|-------------------------|-------------------------|--|
| <b>RB Identity</b>            | Tsc_RB_MAC_HS (-25) | tsc_RB_MAC_ehs_26 (-26) | tsc_RB_MAC_ehs_27 (-27) | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH |
| <b>LogCh Type</b>             | DTCH                | DTCH                    | DTCH                    |  |
| <b>LogCh Identity</b>         | tsc_DL_DTCH1 (7)    | tsc_DL_DTCH2 (8)        | tsc_DL_DTCH3 (9)        |  |
| <b>RLC mode</b>               | TM                  | TM                      | TM                      |  |
| <b>MAC priority</b>           | 8                   | 8                       | 8                       |  |
| <b>TrCH Type</b>              | HS-DSCH             | HS-DSCH                 | HS-DSCH                 |  |
| <b>TrCH identity /QueueID</b> | 0                   | 1                       | 2                       |  |
| <b>PhyCh Type</b>             | PDSCH               |                         |                         | DPCH   |
| <b>PhyCH identity</b>         | tsc_HSPDSCH (18)    |                         |                         | tsc_DL_DPCH1 (26)  |

### 8.3.33c Configuration of Cell\_E\_HS\_SRB\_MAC\_TM\_RAB (Rel-7 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.6.3, with RAB configured in TM mode on SS side. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to RRC signalling tests in the DCH state where a PS RAB is setup for the interactive or background service class (A14):

- PS RAB on DTCH is mapped on E-DCH in uplink and HS-DSCH in downlink.
- Uplink SRBs on DCCH are mapped on E-DCH.
- Downlink SRBs on DCCH are mapped on HS-DSCH.

**Table 105d: Uplink configuration of Cell\_E\_HS\_SRB\_MAC\_TM\_RAB**

|                                    |                                 |  |   |
|------------------------------------|---------------------------------|--|---|
| <b>RB Identity</b>                 | tsc_RB_DTCH_E_DCH_MAC1<br>(-21) | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>                  | DTCH                            |  |   |
| <b>LogCh Identity</b>              | tsc_UL_DTCH1<br>(7)             |  |   |
| <b>RLC mode</b>                    | TM                              |  |   |
| <b>TrCH Type</b>                   | E-DCH                           |  |   |
| <b>TrCH identity/Mac-d Flow Id</b> | 2                               | 1  |   |
| <b>PhyCh Type</b>                  | E-DPDCH                         |  | PRACH   |
| <b>PhyCH identity</b>              | tsc_E_DPCH<br>(22)              |  | tsc_PRACH1<br>(8)   |

**Table 105e: Downlink configuration of Cell\_E\_HS\_SRB\_MAC\_TM\_RAB**

|                                      |                                 |  |  |
|--------------------------------------|---------------------------------|--|--|
| <b>RB Identity</b>                   | tsc_RB_DTCH_E_DCH_MAC1<br>(-21) | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>                    | DTCH                            |  |  |
| <b>LogCh Identity</b>                | tsc_DL_DTCH1<br>(7)             |  |  |
| <b>RLC mode</b>                      | TM                              |  |  |
| <b>MAC priority</b>                  | 8                               |  |  |
| <b>TrCH Type</b>                     | HS-DSCH                         |  |  |
| <b>TrCH identity / Mac-d Flow Id</b> | 0                               | 1  |  |
| <b>PhyCh Type</b>                    | PDSCH                           |  | Secondary CCPCH  |
| <b>PhyCH identity</b>                | tsc_HSPDSCH<br>(18)             |  | tsc_S_CCPCH1<br>(5)  |

### 8.3.34 Configuration of Cell\_2UM\_3AM\_DCH\_HS\_DSCH (Rel-5 or later)

The configuration is based on 3GPP TS 34.108[3], clause 6.11.4a The RB0/UM-CCCH is referred to 3GPP TS 34.108[3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to MAC test case 7.1.5.2.

**Table 108: Uplink configuration of Cell\_2UM\_3AM\_DCH\_HS\_DSCH**

|                       |                      |                     |                     |                      |                      |  |   |
|-----------------------|----------------------|---------------------|---------------------|----------------------|----------------------|--|---|
| <b>RB Identity</b>    | tsc_RB26<br>(26)     | tsc_RB27<br>(27)    | tsc_RB25<br>(25)    | tsc_RB28<br>(28)     | tsc_RB17<br>(17)     | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                | DTCH                | DTCH                 | DTCH                 |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  | tsc_UL_DTCH2<br>(8) | tsc_UL_DTCH3<br>(9) | tsc_UL_DTCH4<br>(10) | tsc_UL_DTCH5<br>(13) |  |   |
| <b>RLC mode</b>       | UM                   | UM                  | AM                  | AM                   | AM                   |  |   |
| <b>TrCH Type</b>      | DCH                  |                     |                     |                      |                      |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   |                     |                     |                      |                      |  |   |
| <b>PhyCh Type</b>     | DPDCH                |                     |                     |                      |                      |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |                     |                     |                      |                      |  | tsc_PRACH1<br>(8)   |

**Table 109: Downlink configuration of Cell\_2UM\_3AM\_DCH\_HS\_DSCH**

|                               |                     |                     |                     |                      |                      |  |  |
|-------------------------------|---------------------|---------------------|---------------------|----------------------|----------------------|--|--|
| <b>RB Identity</b>            | tsc_RB26<br>(26)    | tsc_RB27<br>(27)    | tsc_RB25<br>(25)    | tsc_RB28<br>(28)     | tsc_RB17<br>( )      | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>             | DTCH                | DTCH                | DTCH                | DTCH                 | DTCH                 |  |  |
| <b>LogCh Identity</b>         | tsc_DL_DTCH1<br>(7) | tsc_DL_DTCH2<br>(8) | tsc_DL_DTCH3<br>(9) | tsc_DL_DTCH4<br>(10) | tsc_DL_DTCH5<br>(11) |  |  |
| <b>RLC mode</b>               | UM                  | UM                  | AM                  | AM                   | AM                   |  |  |
| <b>MAC priority</b>           | 8                   | 8                   | 8                   | 8                    | 8                    |  |  |
| <b>TrCH Type</b>              | HS-DSCH             |                     |                     |                      |                      |  |  |
| <b>TrCH identity /QueueID</b> | 0                   |                     | 1                   |                      | 2                    |  |  |
| <b>PhyCh Type</b>             | PDSCH               |                     |                     |                      |                      | DPCH   | Secondary CCPCH  |
| <b>PhyCH identity</b>         | tsc_HSPDSCH<br>(18) |                     |                     |                      |                      | tsc_DL_DPCH1<br>(26)   | tsc_S_CCCH1<br>(5)   |

### 8.3.35 Configuration of Cell\_DCH\_Speech\_WAMR (Rel-5 or later)

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.62. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108[3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RAB test 14.2.62.

**Table 110: Uplink configuration of Cell\_DCH\_Speech\_WAMR**

|                       |                      |                     |  |   |
|-----------------------|----------------------|---------------------|--|---|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | tsc_RB11<br>(11)    | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  | tsc_UL_DTCH2<br>(8) |  |   |
| <b>RLC mode</b>       | TM                   | TM                  |  |   |
| <b>TrCH Type</b>      | DCH                  | DCH                 |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   | tsc_UL_DCH2<br>(2)  |  |   |
| <b>PhyCh Type</b>     | DPDCH                |                     | PRACH  |   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |                     | tsc_PRACH1<br>(8)  |   |

**Table 111: Downlink configuration of Cell\_DCH\_Speech\_WAMR**

|                       |                         |                         |                         |  |  |
|-----------------------|-------------------------|-------------------------|-------------------------|--|--|
| <b>RB Identity</b>    | tsc_RB10<br>(10)        | tsc_RB11<br>(11)        | tsc_RB5<br>(5)          | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                    | DTCH                    | DCCH                    |  |  |
| <b>LogCh Identity</b> | tsc_DL_DT<br>CH1<br>(7) | tsc_DL_DTC<br>H2<br>(8) | tsc_DL_DC<br>CH5<br>(5) |  |  |
| <b>RLC mode</b>       | TM                      | TM                      | TM                      |  |  |
| <b>MAC priority</b>   | 1                       | 1                       | 5                       |  |  |
| <b>TrCH Type</b>      | DCH                     | DCH                     | DCH                     |  |  |
| <b>TrCH identity</b>  | tsc_DL_D<br>CH1<br>(6)  | tsc_DL_DC<br>H2<br>(7)  | tsc_DL_DC<br>H6<br>(22) |  |  |
| <b>PhyCh Type</b>     | DPCH                    |                         |                         | Secondary CCPCH  |  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26)    |                         |                         | tsc_S_CCPCH1<br>(5)  |  |

### 8.3.36 Configuration of PS Cell\_Four\_DTCH\_HS\_CS and Cell\_Four\_DTCH\_CS\_HS (Rel-5 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.5.3 and 6.10.2.4.5.3a. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The uplink configuration is same in clause 8.3.14 except a HS-DPCCH shall be included in the UL\_DPCH and tsc\_RB25 shall be used instead of tsc\_RB20.

**Table 112: Downlink configuration of PS Cell\_Four\_DTCH\_HS\_CS and Cell\_Four\_DTCH\_CS\_HS**

|                       |                      |                         |                         |                     |  |  |
|-----------------------|----------------------|-------------------------|-------------------------|---------------------|--|--|
| <b>RB Identity</b>    | tsc_RB25<br>(25)     | tsc_RB10<br>(10)        | tsc_RB11<br>(11)        | tsc_RB12<br>(12)    | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                    | DTCH                    | DTCH                |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH4<br>(10) | tsc_DL_DTC<br>H1<br>(7) | tsc_DL_DTCH<br>2<br>(8) | tsc_DL_DTCH3<br>(9) |  |  |
| <b>RLC mode</b>       | AM                   | TM                      | TM                      | TM                  |  |  |
| <b>MAC priority</b>   | 8                    | 1                       | 1                       | 1                   |  |  |
| <b>TrCH Type</b>      | HS_DSCH              | DCH                     | DCH                     | DCH                 |  |  |
| <b>TrCH identity</b>  | N/A                  | tsc_DL_DC<br>H1<br>(6)  | tsc_DL_DCH2<br>(7)      | tsc_DL_DCH3<br>(8)  |  |  |
| <b>PhyCh Type</b>     | HS-PDSCH             | DPCH                    |                         |                     | Secondary CCPCH  |  |
| <b>PhyCH identity</b> | tsc_HSPDSCH<br>(18)  | tsc_DL_DPCH1<br>(26)    |                         |                     | tsc_S_CCPC<br>H1<br>(5)  |  |

### 8.3.37 Configuration of PS Cell\_Two\_DTCH\_HS\_CS (Rel-5 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.5.4 and 6.10.2.4.5.4a. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The uplink configuration is same in clause 8.3.15 except a HS-DPCCH shall be included in the UL\_DPCH and tsc\_RB25 shall be used instead of tsc\_RB20.

**Table 113: Downlink configuration of PS Cell\_Two\_DTCH\_HS\_CS**

|                       |                      |                      |  |  |
|-----------------------|----------------------|----------------------|--|--|
| <b>RB Identity</b>    | tsc_RB25<br>(25)     | tsc_RB10<br>(10)     | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                 |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH4<br>(10) | tsc_DL_DTCH1<br>(7)  |  |  |
| <b>RLC mode</b>       | AM                   | TM                   |  |  |
| <b>MAC priority</b>   | 8                    | 1                    |  |  |
| <b>TrCH Type</b>      | HS_DSCH              | DCH                  |  |  |
| <b>TrCH identity</b>  | N/A                  | tsc_DL_DCH1<br>(6)   |  |  |
| <b>PhyCh Type</b>     | HS-PDSCH             | DPCH                 |  | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_HSPDSCH<br>(18)  | tsc_DL_DPCH1<br>(20) |  | tsc_S_CCPCH1<br>(5)  |

### 8.3.38 Configuration of PS Cell\_DCH\_64kPS\_RAB\_SRB\_HS (Rel-5 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.26. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

**Table 114: Uplink configuration of PS Cell\_DCH\_64kPS\_RAB\_SRB\_HS**

|                       |                         |  |   |
|-----------------------|-------------------------|--|---|
| <b>RB Identity</b>    | tsc_RB25<br>(25)        | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                    |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTC<br>H1<br>(7) |  |   |
| <b>RLC mode</b>       | AM                      |  |   |
| <b>TrCH Type</b>      | DCH                     |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH<br>1<br>(1)  |  |   |
| <b>PhyCh Type</b>     | DPDCH                   |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20)    |  | tsc_PRACH1<br>(8)   |

**Table 115: Downlink configuration of PS Cell\_DCH\_64kPS\_RAB\_SRB SRB**

|                       |                         |  |  |
|-----------------------|-------------------------|--|--|
| <b>RB Identity</b>    | tsc_RB25<br>(25)        | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                    |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTC<br>H1<br>(7) |  |  |
| <b>RLC mode</b>       | AM                      |  |  |
| <b>MAC priority</b>   | 8                       |  |  |
| <b>TrCH Type</b>      | DCH                     |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH<br>1<br>(6)  |  |  |
| <b>PhyCh Type</b>     | DPCH                    |  | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26)    |  | tsc_S_CCPCH1<br>(5)  |

### 8.3.39 Configuration of PS Cell\_DCH\_2AM\_HS\_DSCH (Rel-5 or later)

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.26 and 6.10.2.4.1.57. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 with 2 AM RAB and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to MAC and RAB test cases.

**Table 116: Uplink configuration of Cell\_DCH\_2AM\_HS\_DSCH**

|                       |                      |                     |  |   |
|-----------------------|----------------------|---------------------|--|---|
| <b>RB Identity</b>    | tsc_RB25<br>(25)     | tsc_RB17<br>(17)    | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  | tsc_UL_DTCH2<br>(8) |  |   |
| <b>RLC mode</b>       | AM                   | AM                  |  |   |
| <b>TrCH Type</b>      | DCH                  | DCH                 |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   | tsc_UL_DCH2<br>(2)  |  |   |
| <b>PhyCh Type</b>     | DPDCH                |                     |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |                     |  | tsc_PRACH1<br>(8)   |

**Table 117: Downlink configuration of Cell\_DCH\_2AM\_HS\_DSCH**

|                               |                     |                     |  |  |
|-------------------------------|---------------------|---------------------|--|--|
| <b>RB Identity</b>            | tsc_RB25<br>(25)    | tsc_RB17<br>(17)    | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>             | DTCH                | DTCH                |  |  |
| <b>LogCh Identity</b>         | tsc_DL_DTCH1<br>(7) | tsc_DL_DTCH2<br>(8) |  |  |
| <b>RLC mode</b>               | AM                  | AM                  |  |  |
| <b>MAC priority</b>           | 8                   | 8                   |  |  |
| <b>TrCH Type</b>              | HS-DSCH             | HS-DSCH             |  |  |
| <b>TrCH identity /QueueID</b> | 0                   | 1                   |  |  |
| <b>PhyCh Type</b>             | PDSCH               |                     | DPCH   | Secondary CCPCH  |
| <b>PhyCH identity</b>         | tsc_HSPDSCH<br>(18) |                     | tsc_DL_DPCH1<br>(26)   | tsc_S_CCPCH1<br>(5)  |



### 8.3.40 Configuration of Cell\_Three\_DTCH\_5SRB (Rel-5 or later)

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.62. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

The uplink configuration is same in clause 8.3.3 Cell\_DCH\_Speech.

**Table 118: Downlink configuration of Cell\_Three\_DTCH\_5SRB**

| RB Identity      | tsc_RB10<br>(10)        | tsc_RB11<br>(11)        | tsc_RB12<br>(12)        | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB5<br>(5)          | Same as<br>downlink<br>configuration<br>of<br>Cell_DCH_StandAloneSRB<br>on sCCPCH |
|------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---|
| LogCh Type       | DTCH                    | DTCH                    | DTCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    |   |
| LogCh Identity   | tsc_DL_DTCH<br>1<br>(7) | tsc_DL_DTCH<br>2<br>(8) | tsc_DL_DTCH<br>3<br>(9) | tsc_DL_DCCH<br>1<br>(1) | tsc_DL_DCCH<br>2<br>(2) | tsc_DL_DCCH<br>3<br>(3) | tsc_DL_DCCH<br>4<br>(4) | tsc_DL_DCCH<br>5<br>(5) |   |
| RLC mode         | TM                      | TM                      | TM                      | UM                      | AM                      | AM                      | AM                      | TM                      |   |
| MAC priority     | 1                       | 1                       | 1                       | 1                       | 2                       | 3                       | 4                       | 5                       |   |
| TrCH Type        | DCH                     | DCH                     | DCH                     | DCH                     |                         |                         |                         | DCH                     |   |
| TrCH/ Q-identity | tsc_DL_DCH1<br>(6)      | tsc_DL_DCH2<br>(7)      | tsc_DL_DCH3<br>(8)      | tsc_DL_DCH5<br>(10)     |                         |                         |                         | tsc_DL_DCH6<br>(22)     |   |
| PhyCh Type       | DPCH                    |                         |                         |                         |                         |                         |                         |                         | Secondary<br>CCPCH  |
| PhyCH identity   | tsc_DL_DPCH1<br>(26)    |                         |                         |                         |                         |                         |                         |                         | tsc_S_CCPC<br>H1<br>(5)   |

### 8.3.41 Configuration of Cell\_Five\_DTCH\_CS\_HS (Rel-5 or later)

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.5.7. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

**Table 119: Uplink configuration of Cell\_Five\_DTCH\_CS\_HS and Cell\_Five\_DTCH\_CS\_HS**

|                       |                      |                      |                      |                       |                       |   |   |
|-----------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|---|---|
| <b>RB Identity</b>    | tsc_RB10<br>(10)     | tsc_RB11<br>(11)     | tsc_RB12<br>(12)     | tsc_RB25<br>(25)      | tsc_RB17<br>(17)      | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH except TrCH Identity is tsc_UL_DCH6 (21) | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                 | DTCH                 | DTCH                  | DTCH                  |   |   |
| <b>LogCh Identity</b> | tsc_UL_D TCH1<br>(7) | tsc_UL_D TCH2<br>(8) | tsc_UL_D TCH3<br>(9) | tsc_UL_D TCH4<br>(10) | tsc_UL_D TCH5<br>(13) |   |   |
| <b>RLC mode</b>       | TM                   | TM                   | TM                   | AM                    | AM                    |   |   |
| <b>MAC priority</b>   | 1                    | 1                    | 1                    | 1                     | 1                     |   |   |
| <b>TrCH Type</b>      | DCH                  | DCH                  | DCH                  | DCH                   | DCH                   |   |   |
| <b>TrCH identity</b>  | tsc_UL_D CH1<br>(1)  | tsc_UL_D CH2<br>(2)  | tsc_UL_D CH3<br>(3)  | tsc_UL_D CH4<br>(4)   | tsc_UL_D CH5<br>(5)   |   |   |
| <b>PhyCh Type</b>     | DPDCH                |                      |                      |                       |                       |   | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |                      |                      |                       |                       |   | tsc_PRACH1<br>(8)   |

**Table 120: Downlink configuration of PS Cell\_Five\_DTCH\_HS\_CS and Cell\_Five\_DTCH\_CS\_HS**

|                       |                       |                       |                      |                      |                      |  |  |
|-----------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|--|--|
| <b>RB Identity</b>    | tsc_RB25<br>(25)      | tsc_RB17<br>(17)      | tsc_RB10<br>(10)     | tsc_RB11<br>(11)     | tsc_RB12<br>(12)     | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                  | DTCH                  | DTCH                 | DTCH                 | DTCH                 |  |  |
| <b>LogCh Identity</b> | tsc_DL_D TCH4<br>(10) | tsc_DL_DT CH5<br>(13) | tsc_DL_DTC H1<br>(7) | tsc_DL_D TCH2<br>(8) | tsc_DL_DTC H3<br>(9) |  |  |
| <b>RLC mode</b>       | AM                    | AM                    | TM                   | TM                   | TM                   |  |  |
| <b>MAC priority</b>   | 8                     | 8                     | 1                    | 1                    | 1                    |  |  |
| <b>TrCH Type</b>      | HS_DSCH               | HS_DSCH               | DCH                  | DCH                  | DCH                  |  |  |
| <b>TrCH identity</b>  | N/A                   | N/A                   | tsc_DL_DC H1<br>(6)  | tsc_DL_D CH2<br>(7)  | tsc_DL_DC H3<br>(8)  |  |  |
| <b>PhyCh Type</b>     | HS-PDSCH              |                       | DPCH                 |                      |                      | Secondary CCPCH  |  |
| <b>PhyCH identity</b> | tsc_HSPDSCH<br>(18)   |                       | tsc_DL_DPCH1<br>(26) |                      |                      | tsc_S_CCPCH1<br>(5)  |  |

### 8.3.42 Configuration of Cell\_DCH\_E\_HS (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.6.1. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to RRC signalling tests in the DCH state where a PS RAB on DTCH mapped on E-DCH in uplink and HS-DSCH in downlink is setup for the streaming or interactive or background service class (A12).

The downlink configuration is same in clause 8.3.32 Cell\_DCH\_HS\_DSCH.

**Table 121: Uplink configuration of Cell\_DCH\_E\_HS**

|                                    |                     |  |   |
|------------------------------------|---------------------|--|---|
| <b>RB Identity</b>                 | tsc_RB25<br>(25)    | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>                  | DTCH                |  |   |
| <b>LogCh Identity</b>              | tsc_UL_DTCH1<br>(7) |  |   |
| <b>RLC mode</b>                    | AM                  |  |   |
| <b>TrCH Type</b>                   | E-DCH               |  |   |
| <b>TrCH identity/Mac-d Flow Id</b> | 2                   | DPDCH  | PRACH   |
| <b>PhyCh Type</b>                  | E-DPDCH             |  |   |
| <b>PhyCH identity</b>              | tsc_E_DPCH<br>(22)  | tsc_UL_DPCH1<br>(20)   | tsc_PRACH1<br>(8)   |

### 8.3.43 Configuration of Cell\_DCH\_dISRB\_E\_HS (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.6.2. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to RRC signalling tests in the DCH state where a PS RAB is setup for the interactive or background service class (A13):

- PS RAB on DTCH is mapped on E-DCH in uplink and HS-DSCH in downlink.
- Uplink SRBs on DCCH are mapped on E-DCH.
- Downlink SRBs on DCCH are mapped on DCH.

The downlink configuration is same in clause 8.3.32 Cell\_DCH\_HS\_DSCH.

**Table 122: Uplink configuration of Cell\_DCH\_dISRB\_E\_HS**

|                                     |                     |  |   |
|-------------------------------------|---------------------|--|---|
| <b>RB Identity</b>                  | tsc_RB25<br>(25)    | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>                   | DTCH                |  |   |
| <b>LogCh Identity</b>               | tsc_UL_DTCH1<br>(7) |  |   |
| <b>RLC mode</b>                     | AM                  |  |   |
| <b>TrCH Type</b>                    | E-DCH               |  |   |
| <b>TrCH identity/ Mac-d Flow Id</b> | 2                   | 1  |   |
| <b>PhyCh Type</b>                   | E-DPDCH             |  | PRACH   |
| <b>PhyCH identity</b>               | tsc_E_DPCH<br>(22)  |  | tsc_PRACH1<br>(8)   |

### 8.3.44 Configuration of Cell\_E\_HS (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.6.3. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to RRC signalling tests in the DCH state where a PS RAB is setup for the interactive or background service class (A14):

- PS RAB on DTCH is mapped on E-DCH in uplink and HS-DSCH in downlink.
- Uplink SRBs on DCCH are mapped on E-DCH.
- Downlink SRBs on DCCH are mapped on HS-DSCH.

The uplink configuration is same in clause 8.3.43 Cell\_DCH\_dISRB\_E\_HS. In the downlink F-DPCH is configured.

**Table 123: Downlink configuration of Cell\_E\_HS**

|                                      |                     |  |  |
|--------------------------------------|---------------------|--|--|
| <b>RB Identity</b>                   | tsc_RB25<br>(25)    | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>                    | DTCH                |  |  |
| <b>LogCh Identity</b>                | tsc_DL_DTCH1<br>(7) |  |  |
| <b>RLC mode</b>                      | AM                  |  |  |
| <b>MAC priority</b>                  | 8                   |  |  |
| <b>TrCH Type</b>                     | HS-DSCH             |  |  |
| <b>TrCH identity / Mac-d Flow Id</b> | 0                   | 1  |  |
| <b>PhyCh Type</b>                    | PDSCH               |  | Secondary CCPCH  |
| <b>PhyCH identity</b>                | tsc_HSPDSCH<br>(18) |  | tsc_S_CCPCH1<br>(5)  |

### 8.3.45 Configuration of PS Cell\_Four\_DTCH\_E\_HS\_CS and Cell\_Four\_DTCH\_CS\_E\_HS (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.6.4. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to RRC signalling tests in the DCH state where a PS RAB is setup for the interactive or background service class:

- PS RAB on DTCH is mapped on E-DCH in uplink and HS-DSCH in downlink.
- CS RAB on DTCH are mapped on DCH in uplink and downlink.
- Uplink SRBs on DCCH are mapped on DCH.
- Downlink SRBs on DCCH are mapped on DCH.

The downlink configuration is same as in clause 8.3.36 Cell\_Four\_DTCH\_HS\_CS and Cell\_Four\_DTCH\_CS\_HS.

**Table 124: Uplink configuration of Cell\_Four\_DTCH\_E\_HS\_CS and Cell\_Four\_DTCH\_CS\_E\_HS**

|  |                          |                         |                         |                         |   |   |
|--|--------------------------|-------------------------|-------------------------|-------------------------|---|---|
| <b>RB Identity</b>                       | tsc_RB25<br>(25)         | tsc_RB10<br>(10)        | tsc_RB11<br>(11)        | tsc_RB12<br>(12)        | Same as uplink<br>configuration of<br>Cell_DCH_StandAlone<br>eSRB on DPCH | Same as uplink<br>configuration of<br>Cell_DCH_StandAlone<br>SRB on PRACH |
| <b>LogCh Type</b>                        | DTCH                     | DTCH                    | DTCH                    | DTCH                    |   |   |
| <b>LogCh Identity</b>                    | tsc_UL_DTC<br>H4<br>(10) | tsc_UL_D<br>TCH1<br>(7) | tsc_UL_D<br>TCH2<br>(8) | tsc_UL_D<br>TCH3<br>(9) |   |   |
| <b>RLC mode</b>                          | AM                       | TM                      | TM                      | TM                      |   |   |
| <b>MAC priority</b>                      |                          | 1                       | 1                       | 1                       |   |   |
| <b>TrCH Type</b>                         | E-DCH                    | DCH                     | DCH                     | DCH                     |   |   |
| <b>TrCH identity /<br/>Mac-d Flow Id</b> | 2                        | tsc_UL_D<br>CH1<br>(1)  | tsc_UL_D<br>CH2<br>(2)  | tsc_UL_D<br>CH3<br>(3)  |   |   |
| <b>PhyCh Type</b>                        | E-DPDCH                  | DPDCH                   |                         |                         | PRACH   |   |
| <b>PhyCH identity</b>                    | tsc_E_DPCH<br>(22)       | tsc_UL_DPCH1<br>(20)    |                         |                         | tsc_PRACH1<br>(8)   |   |

### 8.3.46 Configuration of Cell\_2DCH\_2AM\_dISRB\_E\_HS (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.5.2. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to RRC signalling tests in the DCH state where a PS RAB is setup for the interactive or background service class (A15):

- 2 AM PS RAB on DTCH is mapped on E-DCH in uplink and HS-DSCH in downlink.
- Uplink SRBs on DCCH are mapped on E-DCH.
- Downlink SRBs on DCCH are mapped on DCH.

The downlink configuration is same in clause 8.3.39 Cell\_2DCH\_2AM\_HS\_DSCH

**Table 125: Uplink configuration of Cell\_2DCH\_2AM\_dISRB\_E\_HS**

|  |                     |                     |   |  |
|--|---------------------|---------------------|---|--|
| <b>RB Identity</b>                           | tsc_RB25<br>(25)    | tsc_RB17<br>(17)    | Same as uplink<br>configuration of<br>Cell_DCH_StandAloneSRB<br>on DPCH | Same as uplink<br>configuration of<br>Cell_DCH_StandAloneSRB<br>on PRACH |
| <b>LogCh Type</b>                            | DTCH                | DTCH                |   |  |
| <b>LogCh Identity</b>                        | tsc_UL_DTCH1<br>(7) | tsc_UL_DTCH2<br>(8) |   |  |
| <b>RLC mode</b>                              | AM                  | AM                  |   |  |
| <b>TrCH Type</b>                             | E-DCH               |                     |   |  |
| <b>TrCH<br/>identity//Mac-<br/>d Flow Id</b> | 2                   | 3                   | 1   |  |
| <b>PhyCh Type</b>                            | E-DPDCH             |                     |   | PRACH  |
| <b>PhyCH<br/>identity</b>                    | tsc_E_DPCH<br>(22)  |                     |   | tsc_PRACH1<br>(8)  |

### 8.3.47 Configuration of Cell\_E\_HS\_MAC\_TM\_RAB (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.11.4c, with RAB configured in TM mode on SS side. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to MAC(e/es) signalling tests in the DCH state where a PS RAB is setup for the interactive or background service class (A12):

- PS RAB on DTCH is mapped on E-DCH in uplink and HS-DSCH in downlink.
- Uplink SRBs on DCCH are mapped on DCH
- Downlink SRBs on DCCH are mapped on DCH

**Table 126: Uplink configuration of Cell\_E\_HS\_MAC\_TM\_RAB**

|                                    |                                 |  |   |
|------------------------------------|---------------------------------|--|---|
| <b>RB Identity</b>                 | tsc_RB_DTCH_E_DCH_MAC1<br>(-21) | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>                  | DTCH                            |  |   |
| <b>LogCh Identity</b>              | tsc_UL_DTCH1<br>(7)             |  |   |
| <b>RLC mode</b>                    | TM                              |  |   |
| <b>TrCH Type</b>                   | E-DCH                           |  |   |
| <b>TrCH identity/Mac-d Flow Id</b> | 2                               |  |   |
| <b>PhyCh Type</b>                  | E-DPDCH                         | DPDCH  | PRACH   |
| <b>PhyCH identity</b>              | tsc_E_DPCH<br>(22)              | tsc_UL_DPCH1<br>(20)   | tsc_PRACH1<br>(8)   |

**Table 127: Downlink configuration of Cell\_E\_HS\_MAC\_TM\_RAB**

|                               |                                 |  |  |
|-------------------------------|---------------------------------|--|--|
| <b>RB Identity</b>            | tsc_RB_DTCH_E_DCH_MAC1<br>(-21) | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>             | DTCH                            |  |  |
| <b>LogCh Identity</b>         | tsc_DL_DTCH1<br>(7)             |  |  |
| <b>RLC mode</b>               | TM                              |  |  |
| <b>MAC priority</b>           | 8                               |  |  |
| <b>TrCH Type</b>              | HS-DSCH                         |  |  |
| <b>TrCH identity /QueueID</b> | 0                               |  |  |
| <b>PhyCh Type</b>             | PDSCH                           | DPCH   | Secondary CCPCH  |
| <b>PhyCH identity</b>         | tsc_HSPDSCH<br>(18)             | tsc_DL_DPCH1<br>(26)   | tsc_S_CCPCH1<br>(5)  |

### 8.3.48 Configuration of Cell\_2DCH\_MAC\_2TM\_dISRB\_E\_HS (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.11.4d. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. (A13).

The configuration is applied to MAC(e/es) signalling tests in the DCH state where a PS RAB is setup for the interactive or background service class (A15):

- 2 TM PS RAB on DTCH is mapped on E-DCH in uplink and HS-DSCH in downlink.
- Uplink SRBs on DCCH are mapped on E-DCH.
- Downlink SRBs on DCCH are mapped on DCH.

**Table 128: Uplink configuration of Cell\_2DCH\_MAC\_2TM\_dISRB\_E\_HS**

|                                     |                              |                              |   |   |                |
|-------------------------------------|------------------------------|------------------------------|---|---|----------------|
| <b>RB Identity</b>                  | tsc_RB_DTCH_E_DCH_MAC1 (-21) | tsc_RB_DTCH_E_DCH_MAC2 (-22) | Same as uplink configuration of Cell_DCH_St andAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |                |
| <b>LogCh Type</b>                   | DTCH                         | DTCH                         |   |   |                |
| <b>LogCh Identity</b>               | tsc_UL_DTCH1 (7)             | tsc_UL_DTCH2 (8)             |   |   |                |
| <b>RLC mode</b>                     | TM                           | TM                           |   |   |                |
| <b>TrCH Type</b>                    | E-DCH                        |                              |   |   |                |
| <b>TrCH identity//Mac-d Flow Id</b> | 2                            | 3                            | 1   |   |                |
| <b>PhyCh Type</b>                   | E-DPDCH                      |                              |   |   | PRACH          |
| <b>PhyCH identity</b>               | tsc_E_DPCH (22)              |                              |   |   | tsc_PRACH1 (8) |

**Table 129: Downlink configuration of Cell\_2DCH\_MAC\_2TM\_dISRB\_E\_HS**

|                               |                              |                              |   |  |
|-------------------------------|------------------------------|------------------------------|---|--|
| <b>RB Identity</b>            | tsc_RB_DTCH_E_DCH_MAC1 (-21) | tsc_RB_DTCH_E_DCH_MAC2 (-22) | Same as downlink configuration of Cell_DCH_St andAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>             | DTCH                         | DTCH                         |   |  |
| <b>LogCh Identity</b>         | tsc_DL_DTCH1 (7)             | tsc_DL_DTCH2 (8)             |   |  |
| <b>RLC mode</b>               | TM                           | TM                           |   |  |
| <b>MAC priority</b>           | 8                            | 8                            |   |  |
| <b>TrCH Type</b>              | HS-DSCH                      | HS-DSCH                      |   |  |
| <b>TrCH identity /QueueID</b> | 0                            | 1                            |   |  |
| <b>PhyCh Type</b>             | PDSCH                        |                              | DPCH  | Secondary CCPCH  |
| <b>PhyCH identity</b>         | tsc_HSPDSCH (18)             |                              | tsc_DL_DPC H1 (26)  | tsc_S_CCPCH1 (5)   |

### 8.3.49 Configuration of Cell\_2DCH\_1AM\_1UM\_E\_HS (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.6.6. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to RRC signalling tests in the DCH state where a PS RAB is setup for the streaming or interactive or background service class and another UM PS Bearer is setup for conversational / unknown or speech (A16):

- 1 AM PS RAB and 1 UM PS RAB on DTCH are mapped on E-DCH in uplink and HS-DSCH in downlink.
- Uplink SRBs on DCCH are mapped on E-DCH.
- Downlink SRBs on DCCH are mapped on HS-DSCH.

In the downlink F-DPCH is configured.

**Table 130: Uplink configuration of Cell\_2DCH\_1AM\_1UM\_E\_HS**

|                                     |                     |                     |   |  |
|-------------------------------------|---------------------|---------------------|---|--|
| <b>RB Identity</b>                  | tsc_RB25<br>(25)    | tsc_RB27<br>(27)    | Same as uplink<br>configuration of<br>Cell_DCH_StandAloneSRB<br>on DPCH | Same as uplink<br>configuration of<br>Cell_DCH_StandAloneSRB<br>on PRACH |
| <b>LogCh Type</b>                   | DTCH                | DTCH                |   |  |
| <b>LogCh Identity</b>               | tsc_UL_DTCH1<br>(7) | tsc_UL_DTCH3<br>(9) |   |  |
| <b>RLC mode</b>                     | AM                  | UM                  |   |  |
| <b>TrCH Type</b>                    | E-DCH               |                     | 1   |  |
| <b>TrCH identity//Mac-d Flow Id</b> | 2                   | 4                   |   |  |
| <b>PhyCh Type</b>                   | E-DPDCH             |                     | PRACH   |  |
| <b>PhyCH identity</b>               | tsc_E_DPCH<br>(22)  |                     | tsc_PRACH1<br>(8)   |  |

**Table 131: Downlink configuration of Cell\_2DCH\_1AM\_1UM\_E\_HS**

|                                      |                      |                     |   |   |
|--------------------------------------|----------------------|---------------------|---|---|
| <b>RB Identity</b>                   | tsc_RB25<br>(25)     | tsc_RB27 (27)       | Same as downlink<br>configuration of<br>Cell_DCH_StandAloneSRB<br>on DPCH | Same as downlink<br>configuration of<br>Cell_DCH_StandAloneSRB on<br>sCCPCH |
| <b>LogCh Type</b>                    | DTCH                 | DTCH                |   |   |
| <b>LogCh Identity</b>                | tsc_DL_DTCH<br>1 (7) | tsc_DL_DTCH3<br>(9) |   |   |
| <b>RLC mode</b>                      | AM                   | UM                  |   |   |
| <b>MAC priority</b>                  | 8                    | 8                   | 1   |   |
| <b>TrCH Type</b>                     | HS-DSCH              |                     |   |   |
| <b>TrCH identity / Mac-d Flow Id</b> | 0                    | 3                   |   |   |
| <b>PhyCh Type</b>                    | PDSCH                |                     | Secondary CCPCH   |   |
| <b>PhyCH identity</b>                | tsc_HSPDSCH<br>(18)  |                     | tsc_S_CCPCH1<br>(5)   |   |

### 8.3.50 Configuration of Cell\_3DCH\_2AM\_1UM\_E\_HS (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.6.7. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to RRC signalling tests in the DCH state where two PS RABs are setup for the streaming or interactive or background service class and another UM PS Bearer is setup for conversational / unknown or speech:

- 2 AM PS RABs and 1 UM PS RAB on DTCH are mapped on E-DCH in uplink and HS-DSCH in downlink.
- Uplink SRBs on DCCH are mapped on E-DCH.
- Downlink SRBs on DCCH are mapped on HS-DSCH.



In the downlink F-DPCH is configured.

**Table 132: Uplink configuration of Cell\_2DCH\_1AM\_1UM\_E\_HS**

|                                     |                  |                  |                  |  |   |
|-------------------------------------|------------------|------------------|------------------|--|---|
| <b>RB Identity</b>                  | tsc_RB25 (25)    | tsc_RB17 (17)    | tsc_RB27 (27)    | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>                   | DTCH             | DTCH             | DTCH             |  |   |
| <b>LogCh Identity</b>               | tsc_UL_DTCH1 (7) | tsc_UL_DTCH2 (8) | tsc_UL_DTCH3 (9) |  |   |
| <b>RLC mode</b>                     | AM               | AM               | UM               |  |   |
| <b>TrCH Type</b>                    | E-DCH            |                  |                  | 1  |   |
| <b>TrCH identity//Mac-d Flow Id</b> | 2                | 3                | 4                |  |   |
| <b>PhyCh Type</b>                   | E-DPDCH          |                  |                  |  | PRACH   |
| <b>PhyCH identity</b>               | tsc_E_DPCH (22)  |                  |                  |  | tsc_PRACH1 (8)  |

**Table 133: Downlink configuration of Cell\_2DCH\_1AM\_1UM\_E\_HS**

|                                      |                  |                  |                  |  |  |
|--------------------------------------|------------------|------------------|------------------|--|--|
| <b>RB Identity</b>                   | tsc_RB25 (25)    | tsc_RB17 (17)    | tsc_RB27 (27)    | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>                    | DTCH             | DTCH             | DTCH             |  |  |
| <b>LogCh Identity</b>                | tsc_DL_DTCH1 (7) | tsc_DL_DTCH2 (8) | tsc_DL_DTCH3 (9) |  |  |
| <b>RLC mode</b>                      | AM               | AM               | UM               |  |  |
| <b>MAC priority</b>                  | 8                | 8                | 8                |  |  |
| <b>TrCH Type</b>                     | HS-DSCH          |                  |                  | 1  |  |
| <b>TrCH identity / Mac-d Flow Id</b> | 0                | 2                | 3                |  |  |
| <b>PhyCh Type</b>                    | PDSCH            |                  |                  |  | Secondary CCPCH  |
| <b>PhyCH identity</b>                | tsc_HSPDSCH (18) |                  |                  |  | tsc_S_CCPCH1 (5)   |

### 8.3.51 Configuration of Cell\_Four\_DTCH\_CS\_E\_HS\_5SRB (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.6.8. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

The uplink configuration is same as in clause 8.3.45 Cell\_Four\_DTCH\_E\_HS\_CS and Cell\_Four\_DTCH\_CS\_E\_HS.

The downlink configuration is the same as in clause 8.3.52 Cell\_Four\_DTCH\_HS\_5SRB.

### 8.3.52 Configuration of Cell\_Four\_DTCH\_HS\_5SRB (Rel-5 or later)

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.5.8. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

The uplink configuration is same in clause 8.3.36 Cell\_Four\_DTCH\_HS\_CS and Cell\_Four\_DTCH\_CS\_HS.

Table 134: Downlink configuration of Cell\_Four\_DTCH\_HS\_5SRB

|                         |                            |                         |                         |                         |                         |                         |                         |                         |                         |   |
|-------------------------|----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---|
| <b>RB Identity</b>      | tsc_RB25<br>(25)           | tsc_RB10<br>(10)        | tsc_RB11<br>(11)        | tsc_RB12<br>(12)        | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB5<br>(5)          | Same as<br>downlink<br>configuration<br>of<br>Cell_DCH_StandAloneSRB<br>on sCCPCH |
| <b>LogCh Type</b>       | DTCH                       | DTCH                    | DTCH                    | DTCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    |   |
| <b>LogCh Identity</b>   | tsc_DL_DTCH<br>41<br>(107) | tsc_DL_DTCH<br>1<br>(7) | tsc_DL_DTCH<br>2<br>(8) | tsc_DL_DTCH<br>3<br>(9) | tsc_DL_DCCH<br>1<br>(1) | tsc_DL_DCCH<br>2<br>(2) | tsc_DL_DCCH<br>3<br>(3) | tsc_DL_DCCH<br>4<br>(4) | tsc_DL_DCCH<br>5<br>(5) |   |
| <b>RLC mode</b>         | AM                         | TM                      | TM                      | TM                      | UM                      | AM                      | AM                      | AM                      | TM                      |   |
| <b>MAC priority</b>     | 8                          | 1                       | 1                       | 1                       | 1                       | 2                       | 3                       | 4                       | 5                       |   |
| <b>TrCH Type</b>        | HS-DSCH                    | DCH                     | DCH                     | DCH                     | DCH                     |                         |                         |                         | DCH                     |   |
| <b>TrCH/ Q-identity</b> | 0                          | tsc_DL_DCH1<br>(6)      | tsc_DL_DCH2<br>(7)      | tsc_DL_DCH3<br>(8)      | tsc_DL_DCH5<br>(10)     |                         |                         |                         | tsc_DL_DCH6<br>(22)     |   |
| <b>PhyCh Type</b>       | PDSCH                      | DPCH                    |                         |                         |                         |                         |                         |                         |                         | Secondary<br>CCPCH  |
| <b>PhyCH identity</b>   | tsc_HSPDSC<br>H<br>(18)    | tsc_DL_DPCH1<br>(26)    |                         |                         |                         |                         |                         |                         |                         | tsc_S_CCPC<br>H1<br>(5)   |

### 8.3.53 Configuration of Cell\_E\_HS\_StandAloneSRB/ Cell\_E\_HS\_StandAloneSRB\_NoConn (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.6.1a. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to stand-alone SRB RRC signalling tests in the DCH:

- Uplink SRBs on DCCH are mapped on E-DCH.
- Downlink SRBs on DCCH are mapped on HS-DSCH.

Additionally UL-DPCCH and HS-DPCCH are configured in UL as well as F-DPCH is configured in DL.

**Table 131a: Uplink configuration of Cell\_E\_HS\_StandAloneSRB/  
Cell\_E\_HS\_StandAloneSRB\_NoConn**

|  |                                    |                     |                     |                     |   |                   |
|--|------------------------------------|---------------------|---------------------|---------------------|---|-------------------|
| <b>RB Identity</b>                       | tsc_RB1<br>(1)                     | tsc_RB2<br>(2)      | tsc_RB3<br>(3)      | tsc_RB4<br>(4)      | Same as uplink configuration<br>of Cell_DCH_StandAloneSRB<br>on PRACH |                   |
| <b>LogCh Type</b>                        | DCCH                               | DCCH                | DCCH                | DCCH                |   |                   |
| <b>LogCh Identity</b>                    | tsc_UL_DCCH1<br>(1)                | tsc_UL_DCCH2<br>(2) | tsc_UL_DCCH3<br>(3) | tsc_UL_DCCH4<br>(4) |   |                   |
| <b>RLC mode</b>                          | UM                                 | AM                  | AM                  | AM                  |   |                   |
| <b>TrCH Type</b>                         | E-DCH                              |                     |                     |                     |   |                   |
| <b>TrCH identity /<br/>Mac-d Flow Id</b> | tsc_E_DCH_MAC_d_FlowId_DCCH<br>(1) |                     |                     |                     |   |                   |
| <b>PhyCh Type</b>                        | E-DPDCH                            |                     |                     |                     |   | PRACH             |
| <b>PhyCH identity</b>                    | tsc_E_DPCH<br>(22)                 |                     |                     |                     |   | tsc_PRACH1<br>(8) |

**Table 131b: Downlink configuration of Cell\_E\_HS\_StandAloneSRB/  
Cell\_E\_HS\_StandAloneSRB\_NoConn**

|  |                                      |                         |                         |                     |   |
|--|--------------------------------------|-------------------------|-------------------------|---------------------|---|
| <b>RB Identity</b>                       | tsc_RB1<br>(1)                       | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)      | Same as downlink<br>configuration of<br>Cell_DCH_StandAloneSRB on<br>sCCPCH |
| <b>LogCh Type</b>                        | DCCH                                 | DCCH                    | DCCH                    | DCCH                |   |
| <b>LogCh Identity</b>                    | tsc_DL_DCCH<br>1<br>(1)              | tsc_DL_DCCH<br>2<br>(2) | tsc_DL_DCCH<br>3<br>(3) | tsc_DL_DCCH4<br>(4) |   |
| <b>RLC mode</b>                          | UM                                   | AM                      | AM                      | AM                  |   |
| <b>MAC priority</b>                      | 1                                    | 2                       | 3                       | 4                   |   |
| <b>TrCH Type</b>                         | HS-DSCH                              |                         |                         |                     |   |
| <b>TrCH identity /<br/>Mac-d Flow Id</b> | tsc_HS_DSCH_MAC_d_FlowId_DCCH<br>(1) |                         |                         |                     |   |
| <b>PhyCh Type</b>                        | HS-PDSCH                             |                         |                         |                     |   |
| <b>PhyCH identity</b>                    | tsc_HSPDSCH<br>(18)                  |                         |                         |                     | tsc_S_CCPCH1<br>(5)   |

### 8.3.54 MBMS channel configuration (Rel-6 or later)

The MBMS channel configurations are configured in addition to any existing configurations defined in clause 8.3.

#### 8.3.54.1 Configuration cell\_MBMS\_MCCH (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.

The configuration is applied to the MBMS tests.

**Table 135: cell\_MBMS\_MCCH**

|                       |                      |
|-----------------------|----------------------|
| <b>RB Identity</b>    | tsc_RB_MCCH<br>(8)   |
| <b>LogCh Type</b>     | MCCH                 |
| <b>LogCh Identity</b> | tsc_MCCH1<br>(1)     |
| <b>RLC mode</b>       | UM                   |
| <b>MAC priority</b>   | 1                    |
| <b>TrCH Type</b>      | FACH                 |
| <b>TrCH identity</b>  | tsc_FACH3<br>(16)    |
| <b>PhyCh Type</b>     | Secondary CCPCH      |
| <b>PhyCH identity</b> | tsc_S_CCPCH2<br>(10) |

#### 8.3.54.2 Configuration cell\_MBMS\_MCCH\_One\_MTCH (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.

The configuration is applied to the MBMS tests.

**Table 136: cell\_MBMS\_MCCH\_One\_MTCH**

|                       |                      |                      |
|-----------------------|----------------------|----------------------|
| <b>RB Identity</b>    | tsc_RB_MCCH<br>(8)   | tsc_RB_MTCH1<br>(14) |
| <b>LogCh Type</b>     | MCCH                 | MTCH                 |
| <b>LogCh Identity</b> | tsc_MCCH1<br>(1)     | tsc_MTCH1<br>(1)     |
| <b>RLC mode</b>       | UM                   | UM                   |
| <b>MAC priority</b>   | 1                    | 1                    |
| <b>TrCH Type</b>      | FACH                 | FACH                 |
| <b>TrCH identity</b>  | tsc_FACH3<br>(16)    | tsc_FACH4<br>(17)    |
| <b>PhyCh Type</b>     | Secondary CCPCH      | Secondary CCPCH      |
| <b>PhyCH identity</b> | tsc_S_CCPCH2<br>(10) | tsc_S_CCPCH3<br>(13) |

### 8.3.55 Configuration of PS Cell\_DCH\_64kPS\_AM\_RAB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.26. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The configuration is applied to MBMS tests in the DCH state where a PS RAB on DTCH is setup for the interactive or background service class.

**Table 137: Uplink configuration of PS Cell\_DCH\_64kPS\_AM\_RAB**

|                       |                         |  |   |
|-----------------------|-------------------------|--|---|
| <b>RB Identity</b>    | tsc_RB22<br>(22)        | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                    |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTC<br>H2<br>(8) |  |   |
| <b>RLC mode</b>       | AM                      |  |   |
| <b>TrCH Type</b>      | DCH                     |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH<br>1<br>(1)  |  |   |
| <b>PhyCh Type</b>     | DPDCH                   |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20)    |  | tsc_PRACH1<br>(8)   |

**Table 138: Downlink configuration of PS Cell\_DCH\_64kPS\_AM\_RAB**

|                       |                         |  |  |
|-----------------------|-------------------------|--|--|
| <b>RB Identity</b>    | tsc_RB22<br>(22)        | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                    |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTC<br>H2<br>(8) |  |  |
| <b>RLC mode</b>       | AM                      |  |  |
| <b>MAC priority</b>   | 1                       |  |  |
| <b>TrCH Type</b>      | DCH                     |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH<br>1<br>(6)  |  |  |
| <b>PhyCh Type</b>     | DPCH                    |  | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26)    |  | tsc_S_CCPCH1<br>(5)  |

### 8.3.56 Configuration of PS Cell\_MBMS\_PTPRB

The configuration is based on, clause 6.10.2.4.1.58. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to MBMS PTP RB test cases.

The uplink configuration is same in clause 8.3.2 Cell\_DCH\_StandAloneSRB.

**Table 139: Downlink configuration of Cell\_MBMS\_PTPRB**

|                       |                      |  |  |
|-----------------------|----------------------|--|--|
| <b>RB Identity</b>    | tsc_RB21<br>(21)     | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                 |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH2<br>(8)  |  |  |
| <b>RLC mode</b>       | UM                   |  |  |
| <b>MAC priority</b>   | 1                    |  |  |
| <b>TrCH Type</b>      | DCH                  |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH2<br>(7)   |  |  |
| <b>PhyCh Type</b>     | DPCH                 |  | Secondary CCPCH  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26) |  | tsc_S_CCPCH1<br>(5)  |

### 8.3.57 Configuration of PS Cell\_MBMS\_PTPRB\_AM

The configuration is based on, clause 6.10.2.4.1.58. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to MBMS PTP RB test cases, with additional PS RAB established.

The uplink configuration is same in clause 8.3.8 Cell\_DCH\_64kPS\_RAB\_SRB and Cell\_PDCP\_AM\_RAB.

**Table 140: Downlink configuration of PS Cell\_MBMS\_PTPRB\_AM**

|                       |                      |                     |  |  |
|-----------------------|----------------------|---------------------|--|--|
| <b>RB Identity</b>    | tsc_RB20<br>(20)     | tsc_RB21<br>(21)    | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                |  |  |
| <b>LogCh Identity</b> | tsc_DL_DTCH1<br>(7)  | tsc_DL_DTCH2<br>(8) |  |  |
| <b>RLC mode</b>       | AM                   | UM                  |  |  |
| <b>MAC priority</b>   | 1                    | 1                   |  |  |
| <b>TrCH Type</b>      | DCH                  | DCH                 |  |  |
| <b>TrCH identity</b>  | tsc_DL_DCH1<br>(6)   | tsc_DL_DCH2<br>(7)  |  |  |
| <b>PhyCh Type</b>     | DPCH                 |                     | Secondary CCPCH  |  |
| <b>PhyCH identity</b> | tsc_DL_DPCH1<br>(26) |                     | tsc_S_CCPCH1<br>(5)  |  |

### 8.3.58 Configuration of Cell\_FACH\_MCCH\_SRB / Cell\_FACH\_MCCH\_NoDedicated

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.9 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink. The configuration is applied to the MBMS tests related in the states CELL\_FACH, CELL\_PCH and URA\_PCH.

The uplink configuration is same in clause 8.3.1 Cell\_FACH

**Table 138a: Downlink configuration of Cell\_FACH\_MCCH\_NoConn / Cell\_FACH\_MCCH\_SRB / Cell\_FACH\_MCCH\_NoDedicated**

|                       |                         |                         |                         |                         |                         |                         |                    |                  |                  |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------|------------------|------------------|
| <b>RB Identity</b>    | tsc_RB20<br>(20)        | tsc_RB0<br>(0)          | tsc_RB1<br>(1)          | tsc_RB2<br>(2)          | tsc_RB3<br>(3)          | tsc_RB4<br>(4)          | tsc_RB_MCCH<br>(8) | tsc_RB_(-2)      |                  |
| <b>LogCh Type</b>     | DTCH                    | CCCH                    | DCCH                    | DCCH                    | DCCH                    | DCCH                    | MCCH               | PCCH             |                  |
| <b>LogCh Identity</b> | tsc_DL_DT<br>CH1<br>(7) | tsc_DL_CC<br>CH5<br>(5) | tsc_DL_DC<br>CH1<br>(1) | tsc_DL_DC<br>CH2<br>(2) | tsc_DL_DC<br>CH3<br>(3) | tsc_DL_DC<br>CH4<br>(4) | tsc_MCCH1<br>(1)   | tsc_PCCH1<br>(1) |                  |
| <b>RLC mode</b>       | AM                      | UM                      | UM                      | AM                      | AM                      | AM                      | UM                 | TM               |                  |
| <b>MAC priority</b>   | 1                       | 1                       | 2                       | 3                       | 4                       | 5                       | 1                  | 1                |                  |
| <b>TrCH Type</b>      | FACH                    | FACH                    |                         |                         |                         |                         | FACH               |                  | PCCH             |
| <b>TrCH identity</b>  | tsc_FACH2<br>(14)       | tsc_FACH1<br>(13)       |                         |                         |                         |                         | tsc_FACH3<br>(16)  |                  | tsc_PCCH1<br>(1) |
| <b>PhyCh Type</b>     | Secondary CCPCH         |                         |                         |                         |                         |                         |                    |                  |                  |
| <b>PhyCH identity</b> | tsc_S_CCPCH1<br>(5)     |                         |                         |                         |                         |                         |                    |                  |                  |

### 8.3.59 Configuration of Cell\_DCH\_MCCH\_PS

The configuration is based on 3GPP TS 34.108 [3], clause . The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to the MBMS signalling tests in the DCH state.

The uplink configuration is same in clause 8.3.8 Cell\_DCH\_64kPS\_RAB\_SRB

**Table 138b: Downlink configuration of Cell\_DCH\_MCCH\_PS**

|                       |                              |                     |                     |                     |                     |                     |                     |                    |
|-----------------------|------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|
| <b>RB Identity</b>    | tsc_RB1<br>(1)               | tsc_RB2<br>(2)      | tsc_RB3<br>(3)      | tsc_RB4<br>(4)      | tsc_RB20<br>(20)    | tsc_RB0<br>(0)      | tsc_RB_PCCH<br>(-2) | tsc_RB_MCCH<br>(8) |
| <b>LogCh Type</b>     | DCCH                         | DCCH                | DCCH                | DCCH                | DTCH                | CCCH                | PCCH                | MCCH               |
| <b>LogCh Identity</b> | tsc_DL_DCCH1<br>(1)          | tsc_DL_DCCH2<br>(2) | tsc_DL_DCCH3<br>(3) | tsc_DL_DCCH4<br>(4) | tsc_DL_DTCH1<br>(7) | tsc_DL_CCCH5<br>(5) | tsc_PCCH1<br>(1)    | tsc_MCCH1<br>(1)   |
| <b>RLC mode</b>       | UM                           | AM                  | AM                  | AM                  | AM                  | UM                  | TM                  | UM                 |
| <b>MAC priority</b>   | 1                            | 2                   | 3                   | 4                   | 1                   | 1                   | 1                   | 1                  |
| <b>TrCH Type</b>      | DCH                          |                     |                     |                     | DCH                 | FACH                | PCH                 | FACH               |
| <b>TrCH identity</b>  | tsc_DL_DCH5<br>(10)          |                     |                     |                     | tsc_DL_DCH1<br>(6)  | tsc_FACH1<br>(13)   | tsc_PCH1<br>(12)    | tsc_FACH3<br>(16)  |
| <b>PhyCh Type</b>     | DPCH<br>tsc_DL_DPCH1<br>(26) |                     |                     |                     |                     | Secondary CCPCH     |                     |                    |
| <b>PhyCH identity</b> |                              |                     |                     |                     |                     | tsc_S_CCPCH1<br>(5) |                     |                    |

### 8.3.60 Configuration of PS Cell\_DCH\_1AM\_2AM\_HS\_DSCH (Rel-6 or later)

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.5.10. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 with 2 AM RAB and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RAB test cases.

**Table 138c: Uplink configuration of Cell\_DCH\_1AM\_2AM\_HS\_DSCH**

|                       |                      |                     |                     |  |   |
|-----------------------|----------------------|---------------------|---------------------|--|---|
| <b>RB Identity</b>    | tsc_RB25<br>(25)     | tsc_RB17<br>(17)    | tsc_RB28<br>(28)    | Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH |
| <b>LogCh Type</b>     | DTCH                 | DTCH                | DTCH                |  |   |
| <b>LogCh Identity</b> | tsc_UL_DTCH1<br>(7)  | tsc_UL_DTCH2<br>(8) | tsc_UL_DTCH3<br>(9) |  |   |
| <b>RLC mode</b>       | AM                   | AM                  |                     |  |   |
| <b>TrCH Type</b>      | DCH                  | DCH                 |                     |  |   |
| <b>TrCH identity</b>  | tsc_UL_DCH1<br>(1)   | tsc_UL_DCH2<br>(2)  |                     |  |   |
| <b>PhyCh Type</b>     | DPDCH                |                     |                     |  | PRACH   |
| <b>PhyCH identity</b> | tsc_UL_DPCH1<br>(20) |                     |                     |  | tsc_PRACH<br>(8)  |

**Table 138d: Downlink configuration of Cell\_DCH\_1AM\_2AM\_HS\_DSCH**

|                               |                     |                     |                     |  |  |
|-------------------------------|---------------------|---------------------|---------------------|--|--|
| <b>RB Identity</b>            | tsc_RB25<br>(25)    | tsc_RB17<br>(17)    | tsc_RB28<br>(28)    | Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH | Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH |
| <b>LogCh Type</b>             | DTCH                | DTCH                | DTCH                |  |  |
| <b>LogCh Identity</b>         | tsc_DL_DTCH1<br>(7) | tsc_DL_DTCH2<br>(8) | tsc_DL_DTCH3<br>(9) |  |  |
| <b>RLC mode</b>               | AM                  | AM                  | AM                  |  |  |
| <b>MAC priority</b>           | 8                   | 8                   | 8                   |  |  |
| <b>TrCH Type</b>              | HS-DSCH             | HS-DSCH             | HS-DSCH             |  |  |
| <b>TrCH identity /QueueID</b> | 0                   | 2                   | 3                   |  |  |
| <b>PhyCh Type</b>             | PDSCH               |                     |                     | DPCH   | Secondary CC   |
| <b>PhyCH identity</b>         | tsc_HSPDSCH<br>(18) |                     |                     | tsc_DL_DPCH1<br>(26)   | tsc_S_CCPC<br>(5)  |

## 8.4 System information blocks scheduling

All SIBs specified in 3GPP TS 34.108 [3] are broadcast for all test cases in the present document. The repeat period of broadcasting of a complete SIB configuration is 64 frames (0,64 s) as the default configuration.

Except MIB and SB1, they have the highest scheduling rates, SIB7 has also a higher scheduling rate.

According to the default SIB contents in 3GPP TS 34.108 [3], SIB11 and SIB12 have 3 segments. SIB5/SIB5bis has 4 segments for FDD and 5 segments for 1.28 Mcps TDD. SIB 6 has 4 segments. MIB, SB1, SIB1, SIB2, SIB3, SIB4, SIB7 and SIB18 are not segmented, i.e. one segment for each. For the PDCP tests, SIB16 has 7 segments.

Use CMAC\_SYSINFO\_CONFIG\_REQ, CMAC\_SYSINFO\_CONFIG\_CNF and RLC\_TR\_DATA\_REQ as interface to SS for broadcasting.

Two TSOs are defined, one for PER encoding function, the other for segmentation function. The TSOs shall be implemented in the tester.

### 8.4.1 Grouping SIBs for testing

The grouping of SIBs is defined in 3GPP TS 34.108 [3], clause 6.1.0a.1.



## 8.4.2 SIB configurations

SIB configurations are defined in 3GPP TS 34.108 [3], clause 6.1.0a.2.

## 8.4.3 Test SIB default schedule

The SIB default schedule is defined in 3GPP TS 34.108 [3], clause 6.1.0a.3.

### 8.4.3.1 Test SIB schedule for idle mode, measurement and Inter-RAT UTRAN to GERAN test cases

The SIB schedule is defined in 3GPP TS 34.108 [3], clause 6.1.0a.4.2.

## 8.4.4 Test SIB special schedule

### 8.4.4.1 Test SIB schedule for two S-CCPCH or two PRACH

The SIB schedule for two S-CCPCH or two PRACH is defined in 3GPP TS 34.108 [3], clause 6.1.0a.4.1.

### 8.4.4.2 Test SIB schedule for Inter-Rat Handover from GERAN to UTRAN Test

The SIB schedule for Inter-Rat Handover from GERAN to UTRAN Test is defined in 3GPP TS 34.108 [3], clause 6.1.0a.4.3.

## 8.4.5 Handling the transmission of SIB

According to the SIB repeat periods, SIBs need to be transmitted on a very regular basis during the operation of a test case. This transmission usually has no direct bearing on the operation of the test case, although the carried information ensures the correct configuration and operation of the UE during the test case.

To send this information repeatedly directly from each test case would make the test cases very complex to implement, difficult to understand and place real-time requirements upon them that are beyond the capabilities of most TTCN driven test engines.

Management of scheduling of System Information messages is performed by the system simulator. The SIB contents, usually determined in part by the individual tests, come from the TTCN test cases.

### 8.4.5.1 Delivery of System Information content

The content of the System Information messages is delivered as a fully encoded bit string to the TM-RLC SAP from the message content defined in the TTCN test case.

The IE 'SFNprime' in the SI messages is set to 0 by the TTCN, and the correct value of 'SFNprime' shall be inserted by the System Simulator prior to transmission of a SI message.

SI messages are ASN.1 packed encoded through a TTCN TSO and segmented another TTCN TSO into SIBs in the TTCN and sent only once to the TM-RLC SAP. Repetition of the SIB is the responsibility of the System Simulator lower layers.

SIBs are considered to be cached. That is, sending a SIB to the TM-RLC SAP will cause a previously sent copy of the SIB to be lost, and all future transmissions of the SIB will be the most recently sent version. This allows for the updating of System Information during the operation of a test case.

### 8.4.5.2 Scheduling of system Information blocks

The schedule for the transmission of SIBs is provided by the TTCN test case. It is sent using the CMAC\_SYSINFO\_CONFIG\_REQ primitive sent to the CMAC SAP (CMAC\_PCO).

Each CMAC\_SYSINFO\_CONFIG\_REQ primitive carries scheduling information for the next SIB sent from the TTCN. Each primitive is followed by an associated SIB. Sending two CMAC\_SYSINFO\_CONFIG\_REQ primitives in succession may cause an unspecified result.

### 8.4.5.3 Example of usage

The following example shows how the MIB, SB1 and all SIBs in subclause 8.4.3 are sent to the System Simulator lower layers for broadcasting. The 1<sup>st</sup> parameter in CMAC\_SYSINFO\_CONFIG\_REQ represents the repeat period in power of 2. The 2<sup>nd</sup> parameter represents the repetition position. Two consecutive frames represent an available repetition position.

|           |                                 |
|-----------|---------------------------------|
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (3, 0)  |
| TM_PCO:   | MIB                             |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (4, 1)  |
| TM_PCO:   | SB1                             |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 2)  |
| TM_PCO:   | SIB7                            |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 3)  |
| TM_PCO:   | SIB6 (segment 1 of 4)           |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 5)  |
| TM_PCO:   | SIB6 (segment 2 of 4)           |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 6)  |
| TM_PCO:   | SIB6 (segment 3 of 4)           |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 7)  |
| TM_PCO:   | SIB6 (segment 4 of 4)           |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 10) |
| TM_PCO:   | SIB7 + SIB3 (concatenation)     |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 11) |
| TM_PCO:   | SIB1 + SIB2 (concatenation)     |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 13) |
| TM_PCO:   | SIB12 (segment 1 of 3)          |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 14) |
| TM_PCO:   | SIB12 (segment 2 of 3)          |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 15) |
| TM_PCO:   | SIB12 (segment 3 of 3)          |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 18) |
| TM_PCO:   | SIB7 + SIB18 (concatenation)    |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 19) |
| TM_PCO:   | SIB5/SIB5bis (segment 1 of 4)   |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 21) |
| TM_PCO:   | SIB5/SIB5bis (segment 2 of 4)   |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 22) |
| TM_PCO:   | SIB5/SIB5bis (segment 3 of 4)   |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 23) |
| TM_PCO:   | SIB5/SIB5bis (segment 4 of 4)   |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 26) |
| TM_PCO:   | SIB7 + SIB4 (concatenation)     |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 27) |
| TM_PCO:   | No segment                      |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 29) |
| TM_PCO:   | SIB11 (segment 1 of 3)          |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 30) |
| TM_PCO:   | SIB11 (segment 3 of 3)          |
| CMAC_PCO: | CMAC_SYSINFO_CONFIG_REQ (6, 31) |
| TM_PCO:   | SIB11 (segment 3 of 3)          |

## 8.5 Security in testing

The security functions at the SS side are implemented in RLC and MAC layers. When the AM or UM RLC entities and a MAC(d) entity are created, the TTCN will download a security context for each CN domain used. The two ASPs CMAC\_SecurityMode\_Config\_REQ and CRLC\_SecurityMode\_Config\_REQ configures the SS security contexts and associate the contexts to the created entities. The SS shall support one activate security contexts and one context pending activation for each CN domain.

A security context at the SS consists of the security parameter START, 20 bits long and a pair of integrity key and a ciphering key, each 128 bits long. All these security parameters belong to a CS or a PS domain. The SS shall have the ability to store these values till the new values are downloaded and activated.  $START_{cs}$  is used for initialization of all counters-C and counters-I (32 bits long each) of all DL and UL radio bearers for ciphering and integrity protection in the CS domain. The same is for  $START_{ps}$  in the PS domain. The TTCN downloads the new START value whenever it is received from the UE. In the case of a succeeded authentication procedure, the START value is reset to zero by the TTCN.

Once the START is downloaded the SS will, according to the activation time, initialize the 20 most significant bits of the RRC HFN (for integrity protection), the RLC HFN (for ciphering) and the MAC-d HFN (for ciphering) to the START value of the corresponding service domain; the remaining bits are initialized to 0.

Upon the concerned RLC entities and the MAC(d) entity release in the SS, the associated security contexts are no longer used and shall be removed as well. The RLC and the MAC(d) entities are addressed by the TTCN with the cell id = -1.

### 8.5.1 Authentication

A GMM or MM authentication test step makes use of a number of TSOs to generate an authentication vector:

$$AV := \{RAND, XRES, CK, IK, AUTN\}$$

If the UE has valid authentication parameters (CKSN/KSI), for the respective domain, use of the Authentication procedure after an INITIAL DIRECT TRANSFER message is optional. Authentication in this case will be left to the test case implementation and need not be specified in the prose. However, in the case where the UE does not have valid authentication parameters the Authentication procedure shall be performed.

### 8.5.2 Ciphering

The ciphering in the SS is activated through the ASP CRLC\_Ciphering\_Activate\_REQ for the AM or UM mode and through CMAC\_Ciphering\_Activate\_REQ for the TM mode.

A PIXIT parameter  $px\_CipheringOnOff$  indicates whether all the tests are performed under ciphering activated or not. If ciphering should be off at the test execution, the ciphering algorithm in IE ciphering ModeInfo is set to uea0 (no encryption). The UE under test is informed about the SS ciphering capability via IE cipheringAlgorithmCap set to uea0.

Table 1 gives the mapping of the RB id and the bearer value used in the ciphering calculation at the SS side.

**Table 1: Mapping between RB identity in ASP and BEARER value in the ciphering calculation**

| RB identity<br>(TTCN constant) | Direction | RLC mode | BEARER value | Type    | Comments   |
|--------------------------------|-----------|----------|--------------|---------|--|
| -1 (tsc_RB_BCCH)               | downlink  | TM       | N/A          |         | No ciphering applicable                              |
| -2 (tsc_RB_PCCH)               | downlink  | TM       | N/A          |         | No ciphering applicable                              |
| -3 (tsc_RB_BCCH_FACH)          | downlink  | TM       | N/A          |         | No ciphering applicable                              |
| -4 (tsc_RB_2ndPCCH)            | downlink  | TM       | N/A          |         | No ciphering applicable                              |
| -5 (tsc_RB_2ndCCCH)            | uplink    | TM       | N/A          |         | No ciphering applicable                              |
| -6 (tsc_RB_MTCH_RLC_TR)        | downlink  | TM       | N/A          | RAB     | For RLC MTCH test, no ciphering applicable           |
| -8 (tsc_RB_MCCH_RLC_TR)        | downlink  | TM       | N/A          |         | No ciphering applicable                              |
| -10 (tsc_RB_UM_7_RLC)          | downlink  | TM       | N/A          | RAB     | For UM RLC tests using 7 bit Lis, no ciphering used  |
| -10 (tsc_RB_UM_7_RLC)          | uplink    | TM       | N/A          | RAB     | For UM RLC tests using 7 bit Lis, no ciphering used  |
| -11 (tsc_RB_UM_15_RLC)         | downlink  | TM       | N/A          | RAB     | For UM RLC tests using 15 bit Lis, no ciphering used |
| -11 (tsc_RB_UM_15_RLC)         | uplink    | TM       | N/A          | RAB     | For UM RLC tests using 15 bit Lis, no ciphering used |
| -12 (tsc_RB_AM_7_RLC)          | downlink  | TM       | N/A          | RAB     | For AM RLC tests using 15 bit Lis, no ciphering used |
| -12 (tsc_RB_AM_7_RLC)          | uplink    | TM       | N/A          | RAB     | For AM RLC tests using 7 bit Lis, no ciphering used  |
| -13 (tsc_RB_AM_15_RLC)         | downlink  | TM       | N/A          | RAB     | For AM RLC tests using 15 bit Lis, no ciphering used |
| -13 (tsc_RB_AM_15_RLC)         | uplink    | TM       | N/A          | RAB     | For AM RLC tests using 15 bit Lis, no ciphering used |
| -14 (tsc_RB_DCCH_FACH_MAC)     | downlink  | TM       | N/A          | SRB3    | MAC testing no ciphering used                        |
| -14 (tsc_RB_DCCH_FACH_MAC)     | uplink    | TM       | N/A          | SRB3    | MAC testing no ciphering used                        |
| -15 (tsc_RB_DCCH_DCH_MAC)      | downlink  | TM       | N/A          | SRB3    | MAC testing no ciphering used                        |
| -15 (tsc_RB_DCCH_FACH_MAC)     | uplink    | TM       | N/A          | SRB3    | MAC testing no ciphering used                        |
| -16 (tsc_RB3_DCCH_RRC)         | uplink    | AM       | 2            | SRB3    |  |
| -18 (tsc_RB_CCCH_FACH_MAC)     | downlink  | TM       | N/A          | SRB0    | No ciphering applicable                              |
| -19 (tsc_RB_BCCH_FACH_RAB)     | downlink  | TM       | N/A          | SRB     | No ciphering applicable                              |
| -20 (tsc_RB_DTCH_E_DCH_MAC)    | uplink    | TM       | N/A          | RAB     | MAC testing no ciphering used                        |
| -21 (tsc_RB_DTCH_E_DCH_MAC1)   | uplink    | TM       | N/A          | RAB     | MAC testing no ciphering used                        |
| -22 (tsc_RB_DTCH_E_DCH_MAC2)   | uplink    | TM       | N/A          | RAB     | MAC testing no ciphering used                        |
| -25 (tsc_RB_MAC_HS)            | downlink  | TM       | N/A          | RAB     | MAC/RLC testing no ciphering used                    |
| -25 (tsc_RB_MAC_HS)            | uplink    | TM       | N/A          | RAB     | MAC/RLC testing no ciphering used                    |
| -26 (tsc_RB_MAC_ehs_26)        | downlink  | TM       | N/A          | RAB     | MACehs testing no ciphering used                     |
| -26 (tsc_RB_MAC_ehs_26)        | Uplink    | TM       | N/A          | RAB     | MACehs testing no ciphering used                     |
| -27 (tsc_RB_MAC_ehs_27)        | downlink  | TM       | N/A          | RAB     | MACehs testing no ciphering used                     |
| -27 (tsc_RB_MAC_ehs_27)        | downlink  | TM       | N/A          | RAB     | MACehs testing no ciphering used                     |
| 0 (tsc_RB0)                    | uplink    | TM       | N/A          | SRB0    | No ciphering applicable                              |
| 0 (tsc_RB0)                    | downlink  | UM       | N/A          | SRB0    | No ciphering applicable                              |
| 1 (tsc_RB1)                    | uplink    | UM       | 0            | SRB1    |  |
| 1 (tsc_RB1)                    | downlink  | UM       | 0            | SRB1    |  |
| 2 (tsc_RB2)                    | uplink    | AM       | 1            | SRB2    |  |
| 2 (tsc_RB2)                    | downlink  | AM       | 1            | SRB2    |  |
| 3 (tsc_RB3)                    | uplink    | AM       | 2            | SRB3    |  |
| 3 (tsc_RB3)                    | downlink  | AM       | 2            | SRB3    |  |
| 4 (tsc_RB4)                    | uplink    | AM       | 3            | SRB4    |  |
| 4 (tsc_RB4)                    | downlink  | AM       | 3            | SRB4    |  |
| 5 (tsc_RB5)                    | uplink    | TM       | 4            | SRB     | DCCH   |
| 5 (tsc_RB5)                    | downlink  | TM       | 4            | SRB     | DCCH   |
| 6                              | uplink    |          | 5            |         | Not used currently                                   |
| 6                              | downlink  |          | 5            |         | Not used currently                                   |
| 7                              | uplink    |          | 6            |         | Not used currently                                   |
| 7                              | downlink  |          | 6            |         | Not used currently                                   |
| 8                              | uplink    |          | 7            |         | Not used currently                                   |
| 8 (tsc_RB_MCCH)                | downlink  | UM       | 7            |         | No ciphering applicable                              |
| 9                              | uplink    |          | 8            |         | Not used currently                                   |
| 9 (tsc_RB_MSCH)                | downlink  |          | 8            |         | No ciphering applicable                              |
| 10 (tsc_RB10)                  | uplink    | TM       | 9            | RAB#1-1 | or RAB1  |
| 10 (tsc_RB10)                  | downlink  | TM       | 9            | RAB#1-1 | or RAB1  |
| 11 (tsc_RB11)                  | uplink    | TM       | 10           | RAB#1-2 | or RAB2  |
| 11 (tsc_RB11)                  | downlink  | TM       | 10           | RAB#1-2 | or RAB2  |
| 12 (tsc_RB12)                  | uplink    | TM       | 11           | RAB#1-3 |  |
| 12 (tsc_RB12)                  | downlink  | TM       | 11           | RAB#1-3 |  |
| 13 (tsc_RB13)                  | uplink    | TM       | 12           | RAB#2   |  |
| 13 (tsc_RB13)                  | downlink  | TM       | 12           | RAB#2   |  |
| 14                             | uplink    |          | 13           |         | Not used currently                                   |
| 14 (tsc_MTCH1)                 | downlink  | UM       | 13           |         | No ciphering   |
| 15                             | uplink    |          | 14           |         | Not used currently                                   |
| 15 (tsc_MTCH2)                 | downlink  | UM       | 14           |         | No ciphering   |
| 16                             | uplink    |          | 15           |         | Not used currently                                   |
| 16 (tsc_MTCH3)                 | downlink  | UM       | 15           |         | No ciphering   |
| 17 (tsc_RB17)                  | uplink    | AM       | 16           | RAB#2   |  |

| RB identity<br>(TTCN constant) | Direction | RLC<br>mode | BEARER<br>value | Type  | Comments                      |
|--------------------------------|-----------|-------------|-----------------|-------|-------------------------------|
| 17 (tsc_RB17)                  | downlink  | AM          | 16              | RAB#2 |                               |
| 20 (tsc_RB20)                  | uplink    | AM          | 19              | RAB#1 |                               |
| 20 (tsc_RB20)                  | downlink  | AM          | 19              | RAB#1 |                               |
| 21 (tsc_RB21)                  | uplink    | UM          | 20              | RAB#2 |                               |
| 21 (tsc_RB21)                  | downlink  | UM          | 20              | RAB#2 |                               |
| 22 (tsc_RB22)                  | uplink    | AM          | 21              | RAB#2 |                               |
| 22 (tsc_RB22)                  | downlink  | AM          | 21              | RAB#2 |                               |
| 23 (tsc_RB23)                  | uplink    | AM          | 22              | RAB#2 |                               |
| 23 (tsc_RB23)                  | downlink  | AM          | 22              | RAB#2 |                               |
| 24 (tsc_RB24)                  | uplink    | AM          | 23              | RAB#2 |                               |
| 24 (tsc_RB24)                  | downlink  | AM          | 23              | RAB#2 |                               |
| 25 (tsc_RB25)                  | uplink    | AM          | 24              | RAB#1 |                               |
| 25 (tsc_RB25)                  | downlink  | AM          | 24              | RAB#1 |                               |
| 26 (tsc_RB26)                  | uplink    | UM          | 25              | RAB#1 | MAC testing no ciphering used |
| 26 (tsc_RB26)                  | downlink  | UM          | 25              | RAB#1 | MAC testing no ciphering used |
| 27 (tsc_RB27)                  | uplink    | UM          | 26              | RAB#2 | MAC testing no ciphering used |
| 27 (tsc_RB27)                  | downlink  | UM          | 26              | RAB#2 | MAC testing no ciphering used |
| 28 (tsc_RB28)                  | uplink    | AM          | 27              | RAB#3 | MAC testing no ciphering used |
| 28 (tsc_RB28)                  | downlink  | AM          | 27              | RAB#3 | MAC testing no ciphering used |
| 29                             | uplink    |             | 28              |       | Not used yet currently        |
| 29 (tsc_RB29)                  | downlink  | AM          | 28              | SRB0  | No ciphering applicable       |
| 30                             | uplink    |             | 29              |       | Not used yet currently        |
| 30 (tsc_RB30)                  | downlink  | UM          | N/A             |       | CTCH FACH no ciphering used   |
| 31                             | uplink    |             | 30              |       | Not used yet currently        |
| 31 (tsc_RB31)                  | downlink  | UM          | N/A             |       | CTCH FACH no ciphering used   |
| 32                             | uplink    |             | 31              |       | Not used yet currently        |
| 32                             | downlink  |             | 31              |       | Not used yet currently        |

### 8.5.3 Integrity

The integrity protection in the SS is activated through the ASP CRLC\_Integrity\_Activate\_REQ for all SRB.

MAC-I (MessageAuthenticationCode) is calculated by the SS. If the integrity protection is not yet started, the "integrity protection info" IE is omitted in TTCN. If integrity protection is started the TTCN includes the "integrity protection info" IE with all bits set to "0". The SS takes care of all the necessary initialization and calculation on SRBs.

Once integrity is started, the SS initializes and calculates a correct Message Authentication Code, overrides the initial value all bits "0" and inserts a corresponding RRC message sequence number into the IntegrityCheckInfo for all DL DCCH messages. In UL, the SS shall check the received MessageAuthenticationCode. If it is wrong, the ASP CRLC\_Integrity\_Failure\_IND will report having received an UL message with integrity error. If it is correct SS forwards the received messages to the TTCN.

In addition, CRLC\_MAC\_I\_Mode\_REQ can be used to force the SS generate wrong DL MAC-I on a specific SRB for the integrity error handling test.

### 8.5.4 Test security scenarios

Five basic test scenarios are presented in the present document. The corresponding core spec references are found in 3GPP TS 25.331 [21], clauses 8.1.12, 8.2.2.2, 8.5.10.1, 8.5.10.2, 8.6.3.4, 8.6.3.5, 8.6.4.3 and 8.6.4.8.

- Start security;
- RB setup;
- AM RB reconfiguration;
- Security modification;
- SRNS relocation;
- Modification of RLC size of AM RB during RB reconfiguration;
- Cell/URA update;
- InterRAAt HO to UTRAN.

As Default, the 1<sup>st</sup> three basic scenarios can be subdivided into:

- Start integrity without ciphering start;
- Start integrity and ciphering at the same time.

Regarding the simultaneous SRNS relocation, the security scenarios at the relocation are split into:

- No security configuration modification;
- Modification of integrity (FRESH) without ciphering configuration change;
- Modification integrity FRESH and ciphering algorithm;
- A security modification pending at the SRNS relocation.

This clause shows the procedures how the security ASP applied to the SS configurations at the different security test scenarios.

## 8.5.4.1 Start security function

CIPHERING\_STATUS = NotStarted for the CN domain concerned.

### 8.5.4.1.1 Start integrity protection without start of ciphering

INTEGRITY\_PROTECTION Status = NotStarted.

SECURITY MODE COMMAND with "Integrity protection mode info" IE containing integrityProtectionModeCommand = Start, no "Ciphering mode info" IE

#### 1 Before sending SECURITY MODE COMMAND (SMC)

```
CRLC_SecurityMode_Config_REQ
  startValue = value most recently received or 0 (new key)
  integrityKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CRLC_SetRRC_MessageSN_REQ (SN=0)
  -- Downlink RRC message sequence number set to 0
CRLC_Integrity_Activate_REQ (CN domain concerned)
  integrityProtectionModeCommand = startIntegrityProtection (FRESH)
  integrityProtectionAlgorithm = selected value
  -- downlink integrity protection starts immediately
CRLC_Integrity_Activate_REQ (CN domain concerned)
  ul_IntegProtActivationInfo = 0 (RB2 only)
```

#### 2 Send SECURITY MODE COMMAND

#### 3 After receiving SECURITY MODE COMPLETE

```
CRLC_Integrity_Activate_REQ (CN domain concerned)
  ul_IntegProtActivationInfo = value in "Uplink integrity protection activation time"
  (except RB2) received from SECURITY MODE COMPLETE
```

### 8.5.4.1.2 Start both integrity protection and ciphering

INTEGRITY\_PROTECTION Status = NotStarted.

SECURITY MODE COMMAND with "Integrity protection mode info" IE containing integrityProtectionModeCommand = Start, and "Ciphering mode info" IE containing cipheringModeCommand = Start/Restart (algorithm UEA0 or UEA1)

#### 1 Before sending SECURITY MODE COMMAND message

```
CRLC_SecurityMode_Config_REQ
  startValue = value most recently received or 0 (new key)
  cipheringKey = value maintained by TTCN
  integrityKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CRLC_SequenceNumber_REQ
  -- Get current RLC SN of all SRB for calculating suitable down link activation time
CRLC_Suspend_REQ
  -- Suspend all signalling radio bearers except RB2. Optionally an SS may start immediate
  suspension of processing of data PDUs in the UL. The UL control PDUs and Piggybacked Status
  may optionally processed.
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  cipheringModeCommand = Start/Restart (algorithm)
  rb_DL_CiphActivationTimeInfo = calculated activation time
  incHFN = NotInc
CRLC_SetRRC_MessageSN_REQ (SN=0)
  -- Downlink RRC message sequence number set to 0
```

```

CRLC_Integrity_Activate_REQ (CN domain concerned)
    integrityProtectionModeCommand = startIntegrityProtection (FRESH)
    integrityProtectionAlgorithm = selected value
    (downlink integrity protection starts immediate)
CRLC_Integrity_Activate_REQ (CN domain concerned)
    ul_IntegProtActivationInfo = 0 (RB2 only)
CRLC_ProhibitRLC_Ack_REQ
    mode = prohibit (RB3 only)
    -- An SS supporting suspension of UL data PDUs may provide a dummy CRLC_ProhibitRLC_Ack_CNF

```

## 2 Send SECURITY MODE COMMAND

### 3 After receiving SECURITY MODE COMPLETE

```

CRLC_Ciphering_Activate_REQ (CN domain concerned)
    rb_UL_CipheringActivationTimeInfo = value received in SECURITY MODE COMPLETE
    incHFN = NotInc
CRLC_Integrity_Activate_REQ (CN domain concerned)
    ul_IntegProtActivationInfo = value in "Uplink integrity protection activation time"
    (except RB2) received from SECURITY MODE COMPLETE
CRLC_ProhibitRLC_Ack_REQ
    mode = continue (RB3 only)
    -- An SS supporting suspension of UL data PDUs may provide a dummy CRLC_ProhibitRLC_Ack_CNF
CRLC_Resume_REQ
    -- If the SS implemented the optional suspension of UL data PDUs, then the processing in the
    UL of data PDUs shall be resumed. Any suspended UL control PDUs and Piggybacked Status shall
    be preceded or resumed.

```

#### 8.5.4.1.3 Void

#### 8.5.4.2 RB setup

INTEGRITY\_PROTECTION Status = Started.  
 Condition: "RAB information for setup" IE included in RADIO BEARER SETUP

##### 8.5.4.2.1 AM / UM RB

- 1 Sending the RADIO BEARER SETUP message.
- 2 Configuring the RB.
- 3 After receiving RADIO BEARER SETUP COMPLETE.

##### 8.5.4.2.1.1 Ciphering not started

CIPHERING\_STATUS = NotStarted for the CN domain concerned

```

CRLC_SecurityMode_Config_REQ
    startValue = value most recently received
    cipheringKey = value maintained by TTCN
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    cipheringModeCommand = NULL (no ciphering)
    rb_DL_CiphActivationTimeInfo = 0 (from the first block)
    incHFN = NotInc
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    rb_UL_CipheringActivationTimeInfo = 0 (from the first block)
    incHFN = NotInc

```

##### 8.5.4.2.1.2 Ciphering started

CIPHERING\_STATUS = Started for the CN domain concerned

```

CRLC_SecurityMode_Config_REQ
    startValue = value most recently received
    cipheringKey = value maintained by TTCN
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    cipheringModeCommand = Start/Restart (algorithm)
    rb_DL_CiphActivationTimeInfo = 0 (from the first block)
    incHFN = NotInc

```

```
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  rb_UL_CipheringActivationTimeInfo = 0 (from the first block)
  incHFN = NotInc
```

#### 8.5.4.2.2 TM RB

Enter Cell\_DCH,  
no TM RB established before,  
"COUNT-C activation time" IE included in RADIO BEARER SETUP COMPLETE message.

##### 8.5.4.2.2.1 Ciphering not started

CIPHERING\_STATUS = NotStarted for the CN domain concerned,

#### 1 Send the RADIO BEARER SETUP message

#### 2 Configuring the RB

#### 3 After receiving RADIO BEARER SETUP COMPLETE

```
CMAC_SecurityMode_Config_REQ
  startValue = value most recently received
  cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
  incHFN = NotInc
  cipheringModeCommand = NULL (no ciphering)
  activationTimeForDPCH = value in "COUNT-C activation time"
```

##### 8.5.4.2.2.2 Ciphering started

CIPHERING\_STATUS = Started for the CN domain concerned,

#### 1 Sending RADIO BEARER SETUP

#### 2 Configuring the RB

```
CMAC_SecurityMode_Config_REQ
  startValue = value most recently received
  cipheringKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
  incHFN = NotInc
  cipheringModeCommand = Start/Restart (algorithm)
  activationTimeForDPCH = value in "Activation time" of the RB
```

#### 3 After receiving RADIO BEARER SETUP COMPLETE message

```
CMAC_SecurityMode_Config_REQ
  startValue = value received in response message
  cipheringKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
  incHFN = IncPerCFN_Cycle
  cipheringModeCommand = Start/Restart (algorithm)
  activationTimeForDPCH = value in "COUNT-C activation time"
```

#### 8.5.4.3 RB Reconfiguration for AM RAB modification of RLC size

CIPHERING\_STATUS = Started for the CN domain concerned,  
"RB mapping info" IE, **changing AM RB RLC size**, is included in  
CELL UPDATE CONFIRM,  
RADIO BEARER RECONFIGURATION,  
RADIO BEARER RELEASE



### 8.5.4.3.1 "RB mapping info" in CELL UPDATE CONFIRM

After sending the CELL UPDATE CONFIRM message, re-establish the RB and re-configure the RB with new RLC size and re-initialize COUNT-C for the RB:

```

CRLC_Config_REQ
    Release the concerned RB
CRLC_Config_REQ
    Setup the concerned RB (new RLC size)
CRLC_SecurityMode_Config_REQ
    startValue = value received in the CELL UPDATE message
    integrityKey = value maintained by TTCN
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
    cipheringModeCommand = Start/Restart (existing algorithm)
    rb_DL_CiphActivationTimeInfo = now
    incHFN = NotInc
CRLC_Ciphering_Activate_REQ
    rb_UL_CiphActivationTimeInfo = now
    incHFN = NotInc

```

### 8.5.4.3.2 "RB mapping info" in RB RECONFIGURATION / RELEASE

After receiving the reconfiguration complete message, re-establish the RB and re-configure the RB with new RLC size and re-initialize COUNT-C for the RB:

```

CRLC_Config_REQ
    Release the concerned RB
CRLC_Config_REQ
    Setup the concerned RB (new RLC size)
CRLC_SecurityMode_Config_REQ
    startValue = value received in the reconfiguration complete message
    integrityKey = value maintained by TTCN
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
    cipheringModeCommand = Start/Restart (existing algorithm)
    rb_DL_CiphActivationTimeInfo = now
    incHFN = NotInc
CRLC_Ciphering_Activate_REQ
    rb_UL_CiphActivationTimeInfo = now
    incHFN = NotInc

```

### 8.5.4.4 Security modification

Updating security keys is the scenario in this clause.

INTEGRITY\_PROTECTION STATUS = Started  
 SECURITY MODE COMMAND contains "Ciphering mode info" IE and/or "Integrity protection mode info" IE

#### 8.5.4.4.1 Integrity started, ciphering not started

CIPHERING\_STATUS = NotStarted for the CN domain concerned  
 SECURITY MODE COMMAND with "Integrity protection mode info" IE containing integrityProtectionModeCommand = modify, but "Ciphering mode info" IE absent the same CN domain as in the previous SMC to start integrity protection.

#### 1 Before sending SECURITY MODE COMMAND message

```

CRLC_SecurityMode_Config_REQ
    startValue = 0 (new key)
    integrityKey = new key
    cn_DomainIdentity = CS or PS
CRLC_RRC_MessageSN_REQ
    -- Get current RRC Message SN for calculation of DL activation time
CRLC_Integrity_Activate_REQ (CN domain concerned)
    integrityProtectionModeCommand = modify
    dl_IntegrityProtActivationInfo = now (SRB2), calculated value or a pending activation
    time set by previous security mode control procedure (SRB2 other than SRB2)
CRLC_Integrity_Activate_REQ (CN domain concerned, RB2)
    ul_IntegrityProtActivationInfo = now

```

## 2 Sending SECURITY MODE COMMAND message

### 3 After receiving SECURITY MODE COMPLETE

```
CRLC_Integrity_Activate_REQ (CN domain concerned)
  ul_IntegProtActivationInfo = value in "Uplink integrity protection activation time"
  (except RB2)
```

#### 8.5.4.4.2 Integrity and ciphering started

CIPHERING\_STATUS = Started for the CN domain concerned

SECURITY MODE COMMAND contains

```
"Integrity protection mode info" IE with integrityProtectionModeCommand = modify,
"Ciphering mode info" IE with cipheringModeCommand = Start/Restart.
```

### 1 Before sending SECURITY MODE COMMAND message

```
CRLC_SecurityMode_Config_REQ
  startValue = 0 (new key)
  integrityKey = new key
  cipheringKey = new key
  cn_DomainIdentity = CS or PS
if TM RB exist
  CMAC_SecurityMode_Config_REQ
    startValue = 0 (new key)
    cipheringKey = new key
    integrityKey = new key
    cn_DomainIdentity = CS or PS
CRLC_SequenceNumber_REQ
  -- Get current RLC SN for calculating suitable down link activation time
CRLC_Suspend_REQ
  -- Optionally an SS may start immediate suspension of processing of data PDUs in the UL. The
  UL control PDUs and Piggybacked Status may optionally be processed.

CRLC_Ciphering_Activate_REQ (CN domain concerned)
  cipheringModeCommand = Start/Restart (existing algorithm)
  rb_DL_CiphActivationTimeInfo = calculated activation time
  incHFN = NotInc
CRLC_RRC_MessageSN_REQ
  -- Get current RRC message SN for calculating suitable DL activation time
CRLC_Integrity_Activate_REQ (CN domain concerned)
  integrityProtectionModeCommand = modify
  dl_IntegrityProtActivationInfo = now (SRB2), calculated value or a pending activation
  time set by previous security mode control procedure (SRB other than SRB2)
CRLC_Integrity_Activate_REQ (CN domain concerned, RB2)
  ul_IntegrityProtActivationInfo = now
if TM RB exist
  CPHY_Frame_Number_REQ
    --Get current CFN for calculating suitable activation time for TM RB
  CMAC_Ciphering_Activate_REQ (CN domain concerned)
    cipheringModeCommand = Start/Restart (existing algorithm)
    activationTimeForDPCH = calculated activation time
    incHFN = IncPerCFN_Cycle
CRLC_ProhibitRLC_Ack_REQ
  mode = prohibit (RB3 only)
  -- An SS supporting suspension of UL data PDUs may provide a dummy CRLC_ProhibitRLC_Ack_CNF
```

## 2 Sending SECURITY MODE COMMAND message

### 3 After receiving SECURITY MODE COMPLETE

```
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  rb_UL_CipheringActivationTimeInfo = value received in SECURITY MODE COMPLETE
  incHFN = NotInc
CRLC_Integrity_Activate_REQ (CN domain concerned, except RB2)
  ul_IntegProtActivationInfo = value in "Uplink integrity protection activation time"
CRLC_ProhibitRLC_Ack_REQ
  mode = continue (RB3 only)
  -- An SS supporting suspension of UL data PDUs may provide a dummy CRLC_ProhibitRLC_Ack_CNF
CRLC_Resume_REQ
  -- If the SS implemented the optional suspension of UL data PDUs, then the processing in the
  UL of data PDUs shall be resumed. Any suspended UL control PDUs and Piggybacked Status shall
  be preceded or resumed.
```

### 8.5.4.5 SRNS relocation

Simultaneous SRNS relocation will take place either "Downlink count synchronization info" IE is received in  
 CELL UPDATE CONFIRM,  
 PHYSICAL CHANNEL RECONFIGURATION,  
 RADIO BEARER SETUP,  
 RADIO BEARER RELEASE,  
 TRANSPORT CHANNEL RECONFIGURATION,  
 URA UPDATE CONFIRM,  
 UTRAN MOBILITY INFORMATION,  
 or "new U-RNTI" IE is received in  
 RADIO BEARER RECONFIGURATION.

INTEGRITY\_PROTECTION Status = Started

#### 8.5.4.5.1 Void

#### 8.5.4.5.2 Presence of "Integrity protection mode info" but absence of "Ciphering mode info"

SRNS relocation related messages listed contains "Integrity protection mode info" but does not have "Ciphering mode info" IE.

SRNS relocation related message with "Integrity protection mode info" IE containing integrityProtectionModeCommand = Start, but no "Ciphering mode info" IE (no ciphering configuration change).

#### 8.5.4.5.2.1 No security configuration pending

No security configuration pending triggered by previous SECURITY MODE COMMAND.

### 1 Before sending one of the SRNS relocation related messages

```
CRLC_SecurityMode_Config_REQ
  startValue = OMIT (no COUNT-I re-initialization)
  integrityKey = OMIT or value maintained by TTCN (no key change)
  cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ (CN domain concerned)
  integrityProtectionModeCommand = Start (FRESH)
  integrityProtectionAlgorithm = selected value
  -- downlink integrity protection starts immediately
CRLC_Integrity_Activate_REQ (CN domain concerned)
  ul_IntegProtActivationInfo = value (now)
```

### 2 Sending one of the SRNS relocation related messages

### 3 Re-establishing RB2 and re-initialize COUNT-C for RB2

```
CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
  newHFN = MAX(HFN of DL COUNT-C of RB2, HFN of UL COUNT-C of RB2) + 1
CRLC_Config_REQ
  -- Release RB2
CRLC_Config_REQ
  -- Setup RB2
CRLC_SecurityMode_Config_REQ
  startValue = newHFN
  cn_DomainIdentity = CS or PS concerned
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  if CIPHERING_STATUS= NotStarted
    cipheringModeCommand = NULL (no ciphering)
  if CIPHERING_STATUS = Started
    cipheringModeCommand = Start/Restart (existing algorithm)
  rb_DL_CiphActivationTimeInfo = now (RB2 only)
  incHFN = NotInc
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  rb_UL_CipheringActivationTimeInfo = now (RB2 only)
  incHFN = NotInc
```

**4 Receiving the response message****5 Re-establishing all RBs and SRBs (except SRB2) and re-initialize COUNT-C for all RBs and SRBs (except SRB2)**

```

CRLC_Config_REQ
  -- Release all RBs and all SRBs (except SRB2)
CRLC_Config_REQ
  -- Setup all RB's and all SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
  startValue = value received in the response message
  integrityKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
  if CIPHERING_STATUS= NotStarted
    cipheringModeCommand = NULL (no ciphering)
  if CIPHERING_STATUS = Started
    cipheringModeCommand = Start/Restart (existing algorithm)
  rb_DL_CiphActivationTimeInfo = now (except SRB2)
  incHFN = NotInc
CRLC_Ciphering_Activate_REQ
  rb_UL_CiphActivationTimeInfo = now (except SRB2)
  incHFN = NotInc

```

**8.5.4.5.2.2 Pending security configuration (new keys)**

A pending security configuration is triggered by the previous SECURITY MODE COMMAND (new Key).

**1 Before sending one of the SRNS relocation related messages**

```

CRLC_SecurityMode_Config_REQ
  startValue = 0 (new key)
  integrityKey = new key
  cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
  IntegrityProtectionModeCommand = Start (FRESH)
  IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts
  immediately)
CRLC_Integrity_Activate_REQ
  ul_IntegProtActivationInfo = value (now)

```

**2 Send one of the SRNS relocation related messages****3 Re-establish RB2 and re-initialize COUNT-C for RB2**

```

CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
  HFN = MAX(HFN of DL/UL COUNT-C of RB2) + 1
CRLC_Config_REQ
  Release RB2
CRLC_Config_REQ
  Setup RB2
CRLC_SecurityMode_Config_REQ
  startValue = HFN calculated above
  cipheringKey = new key
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
  if CIPHERING_STATUS= NotStarted
    cipheringModeCommand = NULL (no ciphering)
  if CIPHERING_STATUS = Started
    cipheringModeCommand = Start/Restart (existing algorithm)
  rb_DL_CiphActivationTimeInfo = now (RB2 only)
  incHFN = NotInc
CRLC_Ciphering_Activate_REQ
  rb_UL_CiphActivationTimeInfo = now (RB2 only)
  incHFN = NotInc

```

**4 Receive the response message****5 Re-establish all RBs and SRBs (except RB2) and re-initialize COUNT-C for all RBs and SRBs (except RB2)**

```

CRLC_Config_REQ
    Release all RB's and SRB's (except RB2)
CRLC_Config_REQ
    Setup all RB's and SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
    startValue = value received in the response message
    integrityKey = new key
    cipheringKey = new key
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
    if CIPHERING_STATUS= NotStarted
        cipheringModeCommand = NULL (no ciphering)
    if CIPHERING_STATUS = Started
        cipheringModeCommand = Start/Restart (existing algorithm)
    rb_DL_CiphActivationTimeInfo = now (except RB2)
    incHFN = NotInc
CRLC_Ciphering_Activate_REQ
    rb_UL_CiphActivationTimeInfo = now (except RB2)
    incHFN = NotInc

```

**6 Re-initialize COUNT-I for all RB's and SRB's (except RB2)**

```

CRLC_SecurityMode_Config_REQ
    startValue = 0 (new key)
    integrityKey = new key
    cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
    IntegrityProtectionModeCommand = Start (FRESH)
    IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts
    immediately)
CRLC_Integrity_Activate_REQ
    ul_IntegProtActivationInfo = value (now)

```

**8.5.4.5.2.3 Pending security configuration (no new keys)**

A pending security configuration is triggered by the previous SECURITY MODE COMMAND (no new keys).

**1 Before sending one of the SRNS relocation related messages**

```

CRLC_SecurityMode_Config_REQ
    startValue = OMIT (no COUNT-I re-initialization)
    integrityKey = OMIT or value maintained by TTCN (no key change) cn_DomainIdentity = CS
    or PS
CRLC_Integrity_Activate_REQ
    SS_IntegrityProtectionModeCommand = Start (FRESH)
    IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts
    immediately)
CRLC_Integrity_Activate_REQ
    ul_IntegProtActivationInfo = value (now)

```

**2 Send one of the SRNS relocation related messages**

### 3 Re-establish RB2 and re-initialize COUNT-C for RB2

```

CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
    HFN = MAX(HFN of DL/UL COUNT-C of RB2) + 1
CRLC_Config_REQ
    Release RB2
CRLC_Config_REQ
    Setup RB2
CRLC_SecurityMode_Config_REQ
    startValue = HFN calculated above
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
    if CIPHERING_STATUS= NotStarted
        cipheringModeCommand = NULL (no ciphering)
    if CIPHERING_STATUS = Started
        cipheringModeCommand = Start/Restart (existing algorithm)
    rb_DL_CiphActivationTimeInfo = now (RB2 only)
    incHFN = NotInc
CRLC_Ciphering_Activate_REQ
    rb_UL_CipheringActivationTimeInfo = now (RB2 only)
    incHFN = NotInc

```

### 4 Receive the response message

### 5 Re-establish all RBs and SRBs (except RB2) and re-initialize COUNT-C for all RBs and SRBs (except RB2)

```

CRLC_Config_REQ
    Release all RB's and SRB's (except RB2)
CRLC_Config_REQ
    Setup all RB's and SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
    startValue = value received in the response message
    integrityKey = value maintained by TTCN
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
    if CIPHERING_STATUS= NotStarted
        cipheringModeCommand = NULL (no ciphering)
    if CIPHERING_STATUS = Started
        cipheringModeCommand = Start/Restart (existing algorithm)
    rb_DL_CiphActivationTimeInfo = now (except RB2)
    incHFN = NotInc
CRLC_Ciphering_Activate_REQ
    rb_UL_CiphActivationTimeInfo = now (except RB2)
    incHFN = NotInc

```

### 6 Re-initialize COUNT-I for all RB's and SRB's (except RB2)

```

CRLC_SecurityMode_Config_REQ
    startValue = value received in the response message
    integrityKey = value maintained by TTCN
    cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
    IntegrityProtectionModeCommand = Start (FRESH)
    IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts
    immediately)
CRLC_Integrity_Activate_REQ
    ul_IntegProtActivationInfo = value (now)

```

#### 8.5.4.5.3 Presence of "Integrity protection mode info" and "Ciphering mode info" IE

CIPHERING\_STATUS = Started for the CN domain concerned,  
SRNS relocation related message with "Integrity protection mode info" IE containing  
integrityProtectionModeCommand = Start, and "Ciphering mode info" IE containing cipheringModeCommand  
= Start/Restart (change ciphering algorithm, no "Radio bearer downlink ciphering activation time  
info")

## 8.5.4.5.3.1 No security configuration pending

**1 Before sending one of the SRNS relocation related messages**

```

CRLC_SecurityMode_Config_REQ
  startValue = OMIT (no COUNT-I re-initialization)
  integrityKey = OMIT or value maintained by TTCN (no key change)
  cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
  SS_IntegrityProtectionModeCommand = Start (FRESH)
  IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts
  immediately)
CRLC_Integrity_Activate_REQ
  ul_IntegProtActivationInfo = value (now)

```

**2 Send one of the SRNS relocation related messages****3 Re-establish RB2 and re-initialize COUNT-C for RB2**

```

CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
  HFN = MAX(HFN of DL/UL COUNT-C of RB2) + 1
CRLC_Config_REQ
  Release RB2
CRLC_Config_REQ
  Setup RB2
CRLC_SecurityMode_Config_REQ
  startValue = HFN calculated above
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
  if CIPHERING_STATUS= NotStarted
    cipheringModeCommand = NULL (no ciphering)
  if CIPHERING_STATUS = Started
    cipheringModeCommand = Start/Restart (existing algorithm)
  rb_DL_CiphActivationTimeInfo = now (RB2 only)
  incHFN = NotInc
CRLC_Ciphering_Activate_REQ
  rb_UL_CiphActivationTimeInfo = now (RB2 only)
  incHFN = NotInc

```

**4 Receive the response message****5 Re-establish all RBs and SRBs (except RB2) and re-initialize COUNT-C for all RBs and SRBs (except RB2)**

```

CRLC_Config_REQ
  Release all RB's and SRB's (except RB2)
CRLC_Config_REQ
  Setup all RB's and SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
  startValue = value received in the response message
  integrityKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
  cipheringModeCommand = Start/Restart (new algorithm)
  rb_DL_CiphActivationTimeInfo = now (except RB2)
  incHFN = NotInc
CRLC_Ciphering_Activate_REQ
  rb_UL_CiphActivationTimeInfo = now (except RB2)
  incHFN = NotInc

```

## 8.5.4.5.3.2 Pending security configuration (new keys)

**1 Before sending one of the SRNS relocation related messages**

```

CRLC_SecurityMode_Config_REQ
  startValue = 0 (new key)
  integrityKey = new key
  cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
  SS_IntegrityProtectionModeCommand = Start (FRESH)
  IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts
  immediately)
CRLC_Integrity_Activate_REQ
  ul_IntegProtActivationInfo = value (now)

```

**2 Send one of the SRNS relocation related messages****3 Re-establish RB2 and re-initialize COUNT-C for RB2**

```

CRLC_SequenceNumber_REQ
  CRLC_SequenceNumber_CNF
  HFN = MAX(HFN of DL/UL COUNT-C of RB2) + 1
CRLC_Config_REQ
  Release RB2
CRLC_Config_REQ
  Setup RB2
CRLC_SecurityMode_Config_REQ
  startValue = HFN calculated above
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
  cipheringModeCommand = NULL (no ciphering status change)
  rb_DL_CiphActivationTimeInfo = now (RB2 only)
  incHFN = NotInc
CRLC_Ciphering_Activate_REQ
  rb_UL_CipheringActivationTimeInfo = now (RB2 only)
  incHFN = NotInc

```

**4 Receive the response message****5 Re-establish all RBs and SRBs (except RB2) and re-initialize COUNT-C for all RBs and SRBs (except RB2)**

```

CRLC_Config_REQ
  Release all RB's and SRB's (except RB2)
CRLC_Config_REQ
  Setup all RB's and SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
  startValue = 0
  integrityKey = new key
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
  cipheringModeCommand = Start/Restart (new algorithm)
  rb_DL_CiphActivationTimeInfo = now (except RB2)
  incHFN = NotInc
CRLC_Ciphering_Activate_REQ
  rb_UL_CiphActivationTimeInfo = now (except RB2)
  incHFN = NotInc

```

**6 Re-initialize COUNT-I for all RBs and SRBs (except RB2)**

```

CRLC_SecurityMode_Config_REQ
  startValue = 0 (new key)
  integrityKey = new key
  cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
  IntegrityProtectionModeCommand = Start (FRESH)
  IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts
  immediately)
CRLC_Integrity_Activate_REQ
  ul_IntegProtActivationInfo = value (now)

```

**8.5.4.5.3.3 Pending security configuration (no new key)****1 Before sending one of the SRNS relocation related messages**

```

CRLC_SecurityMode_Config_REQ
  startValue = OMIT (no COUNT-I re-initialization)
  integrityKey = OMIT or value maintained by TTCN (no key change)
  cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
  SS_IntegrityProtectionModeCommand = Start (FRESH)
  IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts
  immediately)
CRLC_Integrity_Activate_REQ
  ul_IntegProtActivationInfo = value (now)

```

**2 Send one of the SRNS relocation related messages**



### 3 Re-establish RB2 and re-initialize COUNT-C for RB2

```

CRLC_SequenceNumber_REQ
    CRLC_SequenceNumber_CNF
        HFN = MAX(HFN of DL/UL COUNT-C of RB2) + 1
CRLC_Config_REQ
    Release RB2
CRLC_Config_REQ
    Setup RB2
CRLC_SecurityMode_Config_REQ
    startValue = HFN calculated above
    n_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
    if CIPHERING_STATUS= NotStarted
        cipheringModeCommand = NULL (no ciphering)
    if CIPHERING_STATUS = Started
        cipheringModeCommand = Start/Restart (existing algorithm)
    rb_DL_CiphActivationTimeInfo = now (RB2 only)
    incHFN = NotInc
CRLC_Ciphering_Activate_REQ
    rb_UL_CipheringActivationTimeInfo = now (RB2 only)
    incHFN = NotInc

```

### 4 Receive the response message

### 5 Re-establish all RBs and SRBs (except RB2) and re-initialize COUNT-C for all RBs and SRBs (except RB2)

```

CRLC_Config_REQ
    Release all RB's and SRB's (except RB2)
CRLC_Config_REQ
    Setup all RB's and SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
    startValue = value received in the response message
    integrityKey = value maintained by TTCN
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
    cipheringModeCommand = Start/Restart (new algorithm)
    rb_DL_CiphActivationTimeInfo = now (except RB2)
CRLC_Ciphering_Activate_REQ
    rb_UL_CiphActivationTimeInfo = now (except RB2)

```

### 6 Re-initialize COUNT-I for all RBs and SRBs (except RB2)

```

CRLC_SecurityMode_Config_REQ
    startValue = value received in the response message
    integrityKey = value maintained by TTCN
    cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
    IntegrityProtectionModeCommand = Start (FRESH)
    IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts
    immediately)
CRLC_Integrity_Activate_REQ
    ul_IntegProtActivationInfo = value (now)

```

## 8.5.4.6 CELL/URA update

### 8.5.4.6.1 RLC re-establish (RB2, RB3, RB4)

"RLC re-establish (RB2, RB3, RB4)" in CELL UPDATE CONFIRM message is set to TRUE CIPHERING\_STATUS = Started for the CN domain concerned

#### 1. After sending CELL UPDATE CONFIRM message, re-establish the RB2, RB3 and RB4 (if established)

```

CRLC_SecurityMode_Config_REQ
    startValue = value received from CELL UPDATE message
    cipheringKey = value maintained by TTCN
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    cipheringModeCommand = Start/Restart (existing algorithm)
    rb_DL_CiphActivationTimeInfo = now (RB2, RB3, RB4)
    incHFN = NotInc
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    rb_UL_CipheringActivationTimeInfo = now (RB2, RB3, RB4)
    incHFN = NotInc

```

### 8.5.4.6.2 RLC re-establish (RAB)

"RLC re-establish (RB5 and upwards)" in CELL UPDATE CONFIRM message is set to TRUE CIPHERING\_STATUS = Started for the CN domain concerned

#### 1. After sending CELL UPDATE CONFIRM message, re-establish the RAB

```
CRLC_SecurityMode_Config_REQ
  startValue = value received from CELL UPDATE message
  cipheringKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  cipheringModeCommand = Start/Restart (existing algorithm)
  rb_DL_CiphActivationTimeInfo = now (RB5 and upwards)
  incHFN = NotInc
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  rb_UL_CipheringActivationTimeInfo = now (RB5 and upwards)
  incHFN = NotInc
```

### 8.5.4.7 Inter RAT handover to UTRAN

#### 8.5.4.7.1 ciphering has not been activated

ciphering has not been started in the radio access technology from which inter RAT handover is performed. TM mode radio bearer will be established in the UTRAN.

#### 1. Sending HANDOVER TO UTRAN COMMAND in a RAT different from UTRAN

#### 2. After receiving HANDOVER TO UTRAN COMPLETE message

```
CMAC_SecurityMode_Config_REQ
  startValue = value received in HANDOVER TO UTRAN COMPLETE message
  cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
  incHFN = NotInc
  cipheringModeCommand = NULL
  activationTimeForDPCH = now
CRLC_SecurityMode_Config_REQ
  startValue = value received in HANDOVER TO UTRAN COMPLETE
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  cipheringModeCommand = NULL
  rb_DL_CiphActivationTimeInfo = now (RB1, RB2, RB3, RB4)
  incHFN = Inc CRLC_Ciphering_Activate_REQ (CN domain concerned)
  rb_UL_CipheringActivationTimeInfo = now (RB1, RB2, RB3, RB4)
  incHFN = Inc
```

### 8.5.4.7.2 ciphering has been activated

ciphering has been started in the radio access technology from which inter RAT handover is performed. TM mode radio bearer will be established in the UTRAN.

#### 1. Before sending HANDOVER TO UTRAN COMMAND

```

CRLC_SecurityMode_Config_REQ
  startValue = "START" value included in the IE "UE security information" in the variable
"INTER_RAT_HANDOVER_INFO_TRANSFERRED"
  cipheringKey = value generated in authentication procedure in GRAN
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  cipheringModeCommand = Start/Restart (algorithm in HANDOVER TO UTRAN COMMAND)
  rb_DL_CiphActivationTimeInfo = now (RB1, RB2, RB3, RB4)
  incHFN = NotInc
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  rb_UL_CipheringActivationTimeInfo = now (RB1, RB2, RB3, RB4)
  incHFN = NotInc
CMAC_SecurityMode_Config_REQ
  startValue = "START" value included in the IE "UE security information" in the variable
"INTER_RAT_HANDOVER_INFO_TRANSFERRED"
  cipheringKey = value generated in authentication procedure in GRAN
  cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
  incHFN = NotInc
  cipheringModeCommand = Start/Restart (algorithm in HANDOVER TO UTRAN COMMAND)
  activationTimeForDPCH = now

```

#### 2. Sending HANDOVER TO UTRAN COMMAND in a RAT different from UTRAN

#### 3. After receiving HANDOVER TO UTRAN COMPLETE message

```

CMAC_SecurityMode_Config_REQ
  startValue = value received in the response message
  cipheringKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
  cipheringModeCommand = Start/Restart (algorithm) in HANDOVER TO UTRAN COMMAND)
  activationTimeForDPCH = value in "COUNT-C activation time"
  incHFN = IncByOne_IncPerCFN_Cycle
CRLC_SecurityMode_Config_REQ
  startValue = value received in HANDOVER TO UTRAN COMPLETE
  cipheringKey = value generated in authentication procedure in GRAN
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  cipheringModeCommand = Start/Restart (algorithm in HANDOVER TO UTRAN COMMAND)
  rb_DL_CiphActivationTimeInfo = now (RB1, RB2, RB3, RB4)
  incHFN = Inc
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  rb_UL_CipheringActivationTimeInfo = now (RB1, RB2, RB3, RB4)
  incHFN = Inc

```

### 8.5.4.8 Hard handover

Ciphering is activated for any TM radio bearer;  
 "Downlink DPCH info for all RL" in a message performing timing re-initialized hard handover or;  
 "Downlink DPCH info for all RL" in a message other than RADIO BEARER SETUP transferring UE to Cell\_DCH from non-Cell\_DCH state.

#### 1. Before sending the message

```

CMAC_SecurityMode_Config_REQ
  startValue = value most recently received
  cipheringKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
  incHFN = NotInc
  cipheringModeCommand = Start/Restart (existing algorithm)
  activationTimeForDPCH = now

```

#### 2. Send the message for hard HO

### 3. After receiving the response message

```

CMAC_SecurityMode_Config_REQ
  startValue = value received in the response message
  cipheringKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
  cipheringModeCommand = Start/Restart (existing algorithm)
  activationTimeForDPCH = value in "COUNT-C activation time"
  incHFN = IncByOne_IncPerCFN_Cycle

```

## 8.5.5 Test USIM configurations

The default test USIM is defined in 3GPP TS 34.108 [3]. This clause specifies a number of specific test USIM configurations which are used for the concerned test cases.

### 8.5.5.1 Test USIM for Idle mode tests

The PLMN 1-12 identities used below have been defined in 3GPP TS 34.123-1 [11], table 6.2. Clause numbers refer to 3GPP TS 34.123-1 [1].

Test USIM is configured as bellow for PLMN selection of RPLMN, HPLMN, UPLMN and OPLMN in TC\_6\_1\_1\_1 and TC\_6\_1\_1\_4.

**Table 2**

| USIM field              | Priority        | PLMN   | Access Technology Identifier |
|-------------------------|-----------------|--------|------------------------------|
| EF <sub>LOCI</sub>      |                 | PLMN 1 |                              |
| EF <sub>PLMNwACT</sub>  | 1 <sup>st</sup> | PLMN 3 | UTRAN                        |
|                         | 2 <sup>nd</sup> | PLMN 4 | UTRAN                        |
| EF <sub>OPLMNwACT</sub> | 1 <sup>st</sup> | PLMN 5 | UTRAN                        |
|                         | 2 <sup>nd</sup> | PLMN 6 | UTRAN                        |
| EF <sub>FPLMN</sub>     |                 | PLMN 3 |                              |

Test USIM is configured as bellow for PLMN selection of other PLMN with access technology combinations in TC\_6\_1\_1\_2.

**Table 143**

| USIM field          | Priority | PLMN    | Access Technology Identifier |
|---------------------|----------|---------|------------------------------|
| EF <sub>LOCI</sub>  |          | PLMN 6  |                              |
| EF <sub>FPLMN</sub> |          | PLMN 10 |                              |

Test USIM is configured as below for automatic PLMN selection of other PLMN with access technology combinations in TC\_6\_1\_1\_5.

**Table 113a**

| USIM field         | Priority | PLMN   | Access Technology Identifier |
|--------------------|----------|--------|------------------------------|
| EF <sub>LOCI</sub> |          | PLMN 6 |                              |

Test USIM is configured as bellow for manual PLMN selection independent of RF level and preferred PLMN in TC\_6\_1\_1\_3.

**Table 144**

| USIM field             | Priority        | PLMN   | Access Technology Identifier |
|------------------------|-----------------|--------|------------------------------|
| EF <sub>LOCI</sub>     |                 |        |                              |
| EF <sub>PLMNwAcT</sub> | 1 <sup>st</sup> | PLMN 3 | UTRAN                        |

Test USIM is configured as below for emergency calls in TC\_6\_1\_2\_6.

**Table 114a**

| USIM field          | Priority | PLMN   |
|---------------------|----------|--------|
| EF <sub>LOCI</sub>  |          | PLMN1  |
| EF <sub>FPLMN</sub> |          | PLMN 3 |

Test USIMs are configured as bellow for Selection of the correct PLMN and associated RAT in TC\_6\_2\_1\_1. Two test USIMs are needed for the test.

**Table 145: USIM A**

| USIM field              | Priority        | PLMN | Access Technology Identifier |
|-------------------------|-----------------|------|------------------------------|
| EF <sub>LOCI</sub>      |                 |      |                              |
| EF <sub>HPLMNwAcT</sub> | 1 <sup>st</sup> |      | GSM                          |
| EF <sub>HPLMNwAcT</sub> | 2 <sup>nd</sup> |      | UTRAN                        |

**Table 3: USIM B**

| USIM field              | Priority        | PLMN | Access Technology Identifier |
|-------------------------|-----------------|------|------------------------------|
| EF <sub>LOCI</sub>      |                 |      |                              |
| EF <sub>HPLMNwAcT</sub> | 1 <sup>st</sup> |      | UTRAN                        |
|                         | 2 <sup>nd</sup> |      | GSM                          |

Test USIMs are configured as bellow for Selection of RAT for HPLMN in TC\_6\_2\_1\_2. Two test USIMs are needed for the test.

**Table 147: USIM A**

| USIM field              | Priority        | PLMN   | Access Technology Identifier |
|-------------------------|-----------------|--------|------------------------------|
| EF <sub>LOCI</sub>      |                 | PLMN 1 |                              |
| EF <sub>HPLMNwAcT</sub> | 1 <sup>st</sup> |        | UTRAN                        |
|                         | 2 <sup>nd</sup> |        | GSM                          |

**Table 4: USIM B**

| USIM field              | Priority        | PLMN   | Access Technology Identifier |
|-------------------------|-----------------|--------|------------------------------|
| EF <sub>LOCI</sub>      |                 | PLMN 1 |                              |
| EF <sub>HPLMNwAcT</sub> | 1 <sup>st</sup> |        | UTRAN                        |
|                         | 2 <sup>nd</sup> |        |                              |

Test USIMs are configured as bellow for Selection of RAT for HPLMN in TC\_6\_2\_1\_6. Two test USIMs are needed for the test.

**Table 147a: USIM A**

| USIM field              | Priority        | PLMN   | Access Technology Identifier |
|-------------------------|-----------------|--------|------------------------------|
| EF <sub>LOCI</sub>      |                 | PLMN 1 |                              |
| EF <sub>HPLMNwAcT</sub> | 1 <sup>st</sup> |        | UTRAN                        |
|                         | 2 <sup>nd</sup> |        | GSM                          |
| EF <sub>PLMNwAcT</sub>  | 1 <sup>st</sup> | PLMN3  | UTRAN                        |

**Table 148a: USIM B**

| USIM field              | Priority        | PLMN   | Access Technology Identifier |
|-------------------------|-----------------|--------|------------------------------|
| EF <sub>LOCI</sub>      |                 | PLMN 1 |                              |
| EF <sub>HPLMNwAcT</sub> | 1 <sup>st</sup> |        | UTRAN                        |
|                         | 2 <sup>nd</sup> |        |                              |
| EF <sub>PLMNwAcT</sub>  | 1 <sup>st</sup> | PLMN3  | UTRAN                        |

Test USIM for Selection of RAT for UPLMN or OPLMN in TC\_6\_2\_1\_3, TC\_6\_2\_1\_4, TC\_6\_2\_1\_7, TC\_6\_2\_1\_8 and for Selection of Other PLMN with access technology combinations"; Automatic mode in TC\_6\_2\_1\_9.

**Table 149**

| USIM field              | Priority        | PLMN   | Access Technology Identifier |
|-------------------------|-----------------|--------|------------------------------|
| EF <sub>LOCI</sub>      |                 | PLMN 1 |                              |
| EF <sub>HPLMNwAcT</sub> | 1 <sup>st</sup> |        | UTRAN                        |
|                         | 2 <sup>nd</sup> |        | GSM                          |
| EF <sub>PLMNwAcT</sub>  | 1 <sup>st</sup> | PLMN 3 | UTRAN                        |
|                         | 2 <sup>nd</sup> | PLMN 4 | GSM                          |
| EF <sub>OPLMNwAcT</sub> | 1 <sup>st</sup> | PLMN 5 | UTRAN                        |
|                         | 2 <sup>nd</sup> | PLMN 6 | GSM                          |

Test USIM are configured as bellow for manual selection of other PLMN with access technology combinations in TC\_6\_2\_1\_5.

**Table 150**

| USIM field          | Priority | PLMN   | Access Technology Identifier |
|---------------------|----------|--------|------------------------------|
| EF <sub>LOCI</sub>  |          | PLMN 7 |                              |
| EF <sub>FPLMN</sub> |          | PLMN 8 |                              |
|                     |          | PLMN 9 |                              |

Test USIM for cell reselection if cell becomes barred or for cell reselection timings requires that the USIM does not contain any preferred RAT. This specific test USIM applies to TC\_6\_2\_2\_1, TC\_6\_2\_2\_2 and TC\_6\_2\_2\_3.

## 8.6 Downlink power setting in SS

Refer to 3GPP TS 34.108 [3], clause 6.1.5.

## 8.7 Test suite operation definitions

### 8.7.1 Test suite operation definitions in the common modules

**Table 151: TSO definitions in the common modules**

| TSO Name     | Description  |
|--------------|--|
| o_AuthRspChk | <p><b>Type of the result:</b> BOOLEAN</p> <p><b>Parameters:</b><br/> p_AuthRsp : AuthRsp<br/> p_AuthRspExt : AuthRspExt<br/> p_K : BITSTRING<br/> p_RAND : BITSTRING<br/> p_Ext : BOOLEAN</p> <p><b>Description</b><br/> Checks the input parameter p_AuthRsp and p_AuthRspExt, both received in an Authentication Response, according to the authentication algorithm defined in the following procedure.<br/> The extension, p_AuthRspExt, is optional. Its presence is indicated by p_Ext.<br/> Returns TRUE if the Authentication Response contained in parameters p_AuthRsp and eventually p_AuthRspExt is correct, FALSE otherwise.<br/> The value of tcv_Auth_n indicates whether the AuthRspExt has been provided by the UE or not (n=31, or 31 &lt; n &lt; 128). See 3GPP TS 34.108 [3] clause 8.1.2.<br/> If not the parameter p_AuthRspExt is not to be used.</p> <p>Algorithm (without the knowledge of tcv_Auth_n):<br/> =====</p> <pre> if NOT p_Ext EvaluateAuthRsp else EvaluateAuthRspAndAuthRspExt EvaluateAuthRsp: ===== resultbitstring = o_BitstringXOR(XRES, AuthRsp) if resultbitstring is all 0s then there is a match. EvaluateAuthRspAndAuthRspExt: ===== XRESHigh = o_BitstringXtract(XRES, 32, 32, 0) /* XRES divides into 2 parts: the higher part of 32 bits related to AuthRsp and the lower part related to AuthRspExt */ /* SourceLength of 32 is only to ensure usage of the procedure */ resultbitstring = o_BitstringXOR(XRESHigh, AuthRsp) if resultbitstring is all 0s then there is a match for the first 32 bits:EvaluateAuthRspExt else Authentication failed. EvaluateAuthRspExt: ===== /* As AuthRspExt may not be octet aligned the last octet indicated in AuthRspExt is not used for checking */ if (AuthRspExt.iel = 1) then Authentication passed /* there was only 1 possibly incomplete octet which is not used */ else { AuthRspExthigh = o_BitstringXtract(AuthRspExt.authRsp, ((AuthRspExt.iel - 1)* 8), (AuthRspExt.iel - 1)* 8, 0) /* extract (AuthRspExt.iel - 1)* 8 bits starting from bit 0 */ XRESlow = o_BitstringXtract(XRES, ((AuthRspExt.iel - 1)* 8 + 32), (AuthRspExt.iel - 1)* 8, 32) /* extract (AuthRspExt.iel - 1)* 8 bits starting from bit 32 */ resultbitstring = o_BitstringXOR(XRESlow, AuthRspExthigh, (AuthRspExt.iel - 1)* 8) if resultbitstring is all 0s then there is a match for the bits following the first 32 bits else Authentication failed </pre> |

| TSO Name          | Description  |
|-------------------|--|
| o_BitstringChange | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/> P_Str: BITSTRING<br/> p_Len: INTEGER<br/> p_Offset: INTEGER</p> <p><b>Description</b><br/> Performs the manipulation of a bitstring by toggling the bit identified by p_Offset. The length of the string to be manipulated is specified in p_Len. This is only provided to help ensure that the p_Offset is less than p_Len.<br/> Returns a resulting bitstring of length p_Len.<br/> EXAMPLE 1: o_BitstringChange('010101'B, 6, 5) produces '010100'B.<br/> EXAMPLE 2: o_BitstringChange('010101'B, 6, 0) produces '110101'B.</p>  |
| o_BitstringConcat | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/> P_Str1: BITSTRING<br/> p_Str2: BITSTRING<br/> p_Len1: INTEGER<br/> p_Len2: INTEGER</p> <p><b>Description</b><br/> Performs the concatenation of 2 bitstrings of possibly different lengths.<br/> The bit significance is from left to right, i.e. the MSB is at the left-hand side.<br/> Returns a resulting bitstring p_Str1    p_Str2 of length p_Len1 + p_Len2.</p> <p>EXAMPLE: o_BitstringConcat('010101'B,'11'B) produces '01010111'B of length 6 + 2 = 8.</p>   |
| o_BitstringXOR    | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/> p_Str1: BITSTRING<br/> p_Str2: BITSTRING<br/> p_Len: INTEGER</p> <p><b>Description</b><br/> Performs an XOR operation using 2 bitstrings of the same length (p_Len).<br/> Returns a resulting Bitstring of length p_Len.</p> <p>EXAMPLE: o_BitstringXOR('0011'B, '0101'B, 4) produces '0110'B.</p>  |
| o_BitstringXtract | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/> P_Str: BITSTRING<br/> p_SrcLen: INTEGER<br/> p_TargetLen: INTEGER<br/> p_Offset: INTEGER</p> <p><b>Description</b><br/> Performs the wrap around extract of a bitstring. The length of the string from which extraction is to be made is specified in p_SrcLen. The length of the bitstring to be extracted is indicated as p_TargetLen, the offset in the original string is indicated in p_Offset.<br/> The bit position 0 is at the left side.<br/> Returns a resulting bitstring of length p_TargetLen.</p> <p>EXAMPLE 1: o_BitstringXtract('101010'B, 6, 2, 1) produces '01'B.<br/> EXAMPLE 2: o_BitstringXtract('101010'B, 6, 4, 3) produces '0101'B, wrapping around.<br/> EXAMPLE 3: o_BitstringXtract('111000'B, 6, 4, 3) produces '0111'B, wrapping around.</p> |
| o_BooleanToBit    | <p><b>Type of the result:</b> B1</p> <p><b>Parameters:</b><br/> p_Boolean : BOOLEAN</p> <p><b>Description</b><br/> This TSO is used to convert the given BOOLEAN into a single bit. A boolean value of TRUE will give a result '1' and a boolean value of FALSE will give a result '0'.</p>  |



| TSO Name               | Description  |
|------------------------|--|
| o_BMC_DrxScheduling    | <p><b>Type of the result:</b> BMC_ResultOfSchedulingLevel2</p> <p><b>Parameters:</b><br/> p_BMC_CBS_Message1 : BMCCBSMESSAGE<br/> p_BMC_CBS_Message2 : BMCCBSMESSAGE<br/> p_BMC_CB_RepPeriod : INTEGER<br/> p_BMC_NoOfBroadcast_Req : INTEGER<br/> p_Offset : BMC_DRX_Offset</p> <p><b>Description</b><br/> This TSO shall calculate all BMC CBS schedule Messages for the CBS messages as described in 3GPP TS 34.123-1, clause 7.4.3.1.<br/> The TSO has to precalculate the CTCH Block SETs needed, i.e. it shall have all necessary knowledge (RLC segmentation, MAC handling, if needed) to predict the CTCH with BMC contents for the given input to be sent.</p> <p>The TSO shall consider the BMC CBS Scheduling Level2 as described in 3GPP TS 25.324 [20], 3GPP TR 25.925 [44] and the description of BMC test architecture and test method in the present document, clause 6.8.</p> <p>The TSO calculates the BMC CBS Schedule messages to predict its next BlockSet to be sent. In addition, a DRX scheduling Bitmap is created for each CTCH allocated TTI aligned to the pre-calculated offset in between 2 CTCH Block Sets.</p> <p>The principle of DRX shall be followed by this TSO. I.e. BMC Messages shall be sent blockwise (CTCH Block Set) with predicted offset in between 2 Block Sets.</p> <p>The TSO shall consider the following aspects to calculate the DRX Selection Bitmap and to create the BMC CBS Schedule messages:</p> <ol style="list-style-type: none"> <li>1. The first CTCH Block Set consists of the first BMC CBS Schedule message predicting the offset, length and content of the following Block Set where the BMC CBS Message1 shall be send as new message.</li> <li>2. The BMC CBS Message1 shall be repeated for p_BMC_CB_RepPeriod multiplied by p_BMC_NoOfBroadcast_Req times before the BMC CBS Message2 is broadcasted.</li> <li>3. The BMC CBS Schedule Messages shall be the last message of a CTCH Block Set, i.e. on the end of a Block Set.</li> <li>4. If no further repetition of BMC CBS Messages is needed, no further BMC CBS Schedule message shall be created.</li> </ol> <p>output parameter:<br/> DrxSelectionBitmap: The TSO creates a Bitmap as Octetstring for scheduled CTCH allocated TTI as described in 3GPP TS 34.123-3: clause 6.8.2 BMC test method and architecture.</p> <p>CBS_Schedule_Message01, CBS_Schedule_Message02,<br/> CBS_Schedule_Message03: Considering the given BMC PDUs BMC_DRX_Offset and BMCCBSMESSAGE to be sent, the BMC Schedule messages have to be created according the given parameter.</p> |
| o_CheckStringStartWith | <p><b>Type of the result:</b> BOOLEAN</p> <p><b>Parameters:</b><br/> p_SourceString: IA5String<br/> p_StartString : IA5String</p> <p><b>Description</b><br/> o_CheckStringStartWith returns TRUE if the p_sourceString start with the p_StartString. Otherwise it returns FALSE.</p> <p>EXAMPLE: o_CheckStringStartWith ("CLCC:1,0,0,2,0;" , "CLCC:1,0,0")=TRUE */.</p>  |

| TSO Name                 | Description  |
|--------------------------|--|
| o_ComputeSM_ContentsSpec | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/> p_NumOfChars: INTEGER<br/> p_Text: IA5String</p> <p><b>Description</b><br/> This operation provides a short message's contents with a specified number of characters 'p_NumOfChars', each represented by 7 bits. 'p_Text' is used as contents of the short message. If 'p_Text' contains less than 'p_NumOfChars' characters, 'p_Text' is repeated until the short message reaches the 'p_NumOfChars' characters long. The bits are arranged acc. to 3GPP TS 23.038 [34], clause 6.1.2.1.1.</p> <p>max. 160 characters, i.e. 140 octets.</p>  |
| o_ConcatStrg             | <p><b>Type of the result:</b> IA5String</p> <p><b>Parameters:</b><br/> P_String1: IA5String<br/> p_String2: IA5String</p> <p><b>Description</b><br/> o_ConcatString concatenates 'p_String1' and 'p_String2' and returns the resulting string.</p> <p>EXAMPLE: o_ConcatString ("AT+CBST=0", ";0") = "AT+CBST=0;0"</p>  |
| o_ConvertIMSI            | <p><b>Type of the result:</b> IMSI_GSM_MAP</p> <p><b>Parameters:</b><br/> P_Imsi : HEXSTRING</p> <p>The input parameter 'p_Imsi' is a BCD string (subset of HEXSTRING), the result is of type IMSI_GSM_MAP.</p>  |
| o_ConvertTMSI            | <p><b>Type of the result:</b> TMSI_GSM_MAP</p> <p><b>Parameters:</b><br/> p_Tmsi : OCTETSTRING</p> <p><b>Description</b><br/> The input parameter 'p_Tmsi' is an OCTETSTRING; the result is of type TMSI_GSM_MAP.</p>  |
| o_ConvertPTMSI           | <p><b>Type of the result:</b> P_TMSI_GSM_MAP</p> <p><b>Parameters:</b><br/> p_PTMSI : OCTETSTRING</p> <p><b>Description</b><br/> The input parameter 'PTMSI' is a OCTETSTRING, the result is of type P_TMSI_GSM_MAP.</p>   |
| o_ConvtPLMN              | <p><b>Type of the result:</b> TMSI_GSM_MAP</p> <p><b>Parameters:</b> OCTETSTRING<br/> p_MCC, p_MNC : HEXSTRING</p> <p><b>Description</b><br/> the functions of o_ConvtPLMN are as following:</p> <ol style="list-style-type: none"> <li>1. The least significant HEX of p_MNC is removed from p_MNC and inserted into p_MCC in the position left to the third HEX to form a new p_MCC of 4 HEXs, then swap the first HEX (left most, most significant Hex) with the second HEX of the new p_MCC.</li> <li>2. Swap the first Hex with the second HEX of the remaining part of p_MNC and append it to the new p_MCC formed in Step1 above.</li> </ol> <p>EXAMPLE 1: o_ConvtPLMN('123'H, '456'H) = '216354'O.<br/> EXAMPLE 2: o_ConvtPLMN ('234'H, '01F'H) = '32F410'O.</p> |

| TSO Name                            | Description   |
|-------------------------------------|---|
| o_FirstDigit                        | <p><b>Type of the result:</b> B4</p> <p><b>Parameters:</b><br/>p_BCDdigits : HEXSTRING</p> <p><b>Description</b><br/>The input parameter p_BCDdigits shall be a BCD string (subset of HEXSTRING), the result is a BITSTRING[4] of a binary representation of one BCD digit.<br/>The function of the o_FirstDigit is to return the first (most significant) digit of the input parameter 'p_BCDdigits'.</p> <p>EXAMPLE 1: o_FirstDigit('12345') = '0001'B.<br/>EXAMPLE 2: o_FirstDigit('012345678') = '0000'B.</p>   |
| o_GetBit                            | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/>p_Source: BITSTRING<br/>p_DataLength: INTEGER</p> <p><b>Description</b><br/>o_GetBit returns the BITSTRING of length p_DataLength extracted from p_Source.<br/>The extraction shall start in the bit position 0 (at the left).</p>  |
| o_GetLeastSignificantBits           | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/>bstring : BITSTRING<br/>lg : INTEGER</p> <p><b>Description</b><br/>o_GetLeastSignificantBits operation returns the `lg` least significant bits of the original `bstring`.</p> <p>for example:</p> <p>o_GetLeastSignificantBits('110011000101010'B, 3) = '010'B,<br/>o_GetLeastSignificantBits('110011000101010'B, 6) = '101010'B.</p>   |
| o_GetMostSignificantBits            | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/>bstring : BITSTRING<br/>lg :INTEGER</p> <p><b>Description</b><br/>o_GetMostSignificantBits operation returns the `lg` most significant bits of the original `bstring`.</p> <p>for example:</p> <p>o_GetMostSignificantBits('110011000101010'B, 3) = '110'B,<br/>o_GetMostSignificantBits('110011000101010'B, 6) = '110011'B.</p>  |
| o_GetMostSignificantBits_WrapAround | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/>bstring : BITSTRING<br/>lg :INTEGER</p> <p><b>Description</b><br/>o_GetMostSignificantBits operation returns the `lg` most significant bits of the original `bstring`.</p> <p>for example:</p> <p>o_GetMostSignificantBits('110011000101010'B, 3) = '110'B,<br/>o_GetMostSignificantBits('110011000101010'B, 6) = '110011'B.<br/>If lg is greater than the length of bstring, then a bitsring of size greater than lg is created by concatenating bstring to itself (any number of times till it is size is greater than lg), and then 'lg' most significant bits of concatenated bstring are returned.</p> <p>example<br/>o_GetMostSignificantBits('1100'B, 9) = '110011001'B.</p> |
| o_GetN_OctetsFromPRBS               | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/>p_Start, p_N: INTEGER</p>   |

| TSO Name          | Description   |
|-------------------|---|
|                   | <p><b>Description</b></p> <p>This operation returns N octets from a repeated pseudo random bit sequence, starting with octet position p_Start. The PRBS is the 2047 bit pseudo random test pattern defined in ITU-T Recommendation O.153 [45] for measurements at 64 kbit/s and N x 64 kbit/s</p> <p>o_GetN_OctetsFromPRBS( p_Start, p_N ) generates an OCTETSTRING containing p_N octets starting from octet number p_Start in the PRBS.</p> <p>Requirements</p> <p>p_Start ≥ 0</p> <p>p_N ≥ 1</p> <p>Definition</p> <p>Define the 2 047 bit PRBS sequence b(i) as an m-sequence produced by using the following primitive (over GF(2)) generator polynomial of degree 11:</p> $X^{11} + X^9 + 1$ <p>This sequence is defined recursively as:</p> $b(i) = 1, \quad i = 0, 1, \dots, 10$ $b(i) = b(i - 2) + b(i - 11) \text{ modulo } 2, \quad i = 11, 16, \dots, 2046$ <p>The OCTETSTRING, o(j) generated by the present TSO is produced by extracting p_N octets from the repeated sequence b(i) as follows:</p> $o(j, k) = b( ( p\_Start + j ) * 8 + k ) \text{ modulo } 2047$ <p>where:</p> $j = 0, 1, \dots, p\_N - 1$ $k = 0, 1, \dots, 7$ <p>o(j, k) is the kth bit of the jth octet in o(j),<br/> o(j, 0) is the MSB of the jth octet in o(j),<br/> o(j, 7) is the LSB of the jth octet in o(j),</p> <p>Example results:</p> <p>o_GetN_OctetsFromPRBS( 0, 25 ) and o_GetN_OctetsFromPRBS( 2047, 25 ) both return:</p> <pre>'FFE665A5C5CA3452085408ABEECE4B0B813FD337873F2CD1E2'O</pre> <p>o_GetN_OctetsFromPRBS( 255, 25 ) and o_GetN_OctetsFromPRBS( 255 + 2047, 25 ) both return</p> <pre>'01FFCCCB4B8B9468A410A81157DD9C9617027FA66F0E7E59A3'O</pre> |
| o_GetPI           | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b></p> <p>p_Imsi : HEXSTRING</p> <p>p_Np: INTEGER</p> <p><b>Description</b></p> <p>PI = drx_index mod np</p> <p>The drx_index is calculated as described hereafter:<br/> drx_index = ( p_Imsi / 8192 )</p> <p>This calculation is defined in TS 25.304 clause 8.3.</p> <p>NOTE: the IMSI is passed as HEXSTRING, the relevant conversion shall be done.</p>  |
| o_GetSC_TimeStamp | <p><b>Type of the result:</b> TP_ServCentreTimeSt</p> <p><b>Parameters:</b></p> <p>p_timezone : TZONES</p> <p>This operation provides the hexstring containing the Service Centre Time Stamp (SCTS) according to 3GPP TS 23.040 [35], clauses 9.2.2.1 and 9.2.3.11. The TSO reads the current time of the test systems clock and transforms the time in combination with the input parameter 'timezone' into a service centre time stamp.</p> <p>Example:</p> <p>2002 April 18, 15:32:46, timezone=4</p> <p>o_GetSC_TimeStamp returns 20408151236440</p> <p>TPSCTS is HEXSTRING[14]</p>   |
| o_HexToDigitsMCC  | <p><b>Type of the result:</b> MCC</p> <p><b>Parameters:</b></p> <p>p_BCDdigits : HEXSTRING</p> <p><b>Description</b></p> <p>The input parameter p_BCDdigits shall be a BCD string (subset of HEXSTRING), the result is a SEQUENCE (SIZE(3)) OF digit (MCC).</p>   |

| TSO Name         | Description   |
|------------------|---|
|                  | <p>NOTE: The length of p_BCDdigits shall be 3. User shall take the responsibility of fulfilling this requirement.</p> <p>EXAMPLE 1: o_HexToDigitsMCC('111'H) = {1, 1, 1}.</p> <p>EXAMPLE 2: o_HexToDigitsMCC('123'H) = {1, 2, 3}.</p>   |
| o_HexToDigitsMNC | <p><b>Type of the result:</b> MNC</p> <p><b>Parameters:</b><br/>p_BCDdigits : HEXSTRING</p> <p><b>Description</b><br/>The function of this operation is:</p> <ol style="list-style-type: none"> <li>1. The least significant HEX is removed if it is 'F' and the operation returns SEQUENCE (SIZE(2)) OF Digit.</li> <li>2. The operation returns SEQUENCE (SIZE(3)) OF Digit if all 3 HEX digits in p_BCDdigits are BCD Digit.</li> </ol> <p>EXAMPLE 1: o_HexToDigitsMNC('123'H) = {1, 2, 3}.</p> <p>EXAMPLE 2: o_HexToDigitsMNC('13F'H) = {1, 3}.</p>   |
| o_HexToIA5       | <p><b>Type of the result:</b> IA5String</p> <p><b>Parameters:</b><br/>p_String: HEXSTRING</p> <p><b>Description</b><br/>o_HEX_TO_IA5 converts hexadecimal string 'p_String' to an IA5 String</p> <p>EXAMPLE: o_HEX_TO_IA5 ('15A'H) = "15A".</p>   |
| o_IA5_ToOct      | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/>p_String : IA5String</p> <p><b>Description</b><br/>o_IA5_ToOct converts the string p_String from IA5String type to OCTETSTRING. Each character is mapped onto an octet, and bit 8 is set to 0. This TSO shall be used to convert Access Point Numbers for example. See 3GPP TS 24008, clause 10.5.6.1</p> <p>EXAMPLE: o_IA5_ToOct ("15A") = '313541'O.</p>  |
| o_IA5_BMC_ToOct  | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/>p_String :IA5String_BMC<br/>p_DCS: TP_DataCodingScheme</p> <p><b>Description</b><br/>o_IA5_BMC_ToOct converts the string p_String from IA5String_BMC type to OCTETSTRING.<br/>p_DCS determines how this is done (refer to 3GPP TS 23.038 [34] clause 5).<br/>If a 7 bit packing is to be applied then proceed as described in 3GPP TS 23.038 [34] clause 6.1.2.2.1 and clause 6.2.1. This is the default case.<br/><br/>If 8bit data is to be used then proceed as described in 3GPP TS 23.038 [34] clause 6.2.2.<br/>If UCS2is to be used then proceed as described in 3GPP TS 23.038 [34] clause 6.2.3.<br/><br/>The type IA5_BMC implies that the length of p_String is restricted to 1..1395 octets. (Refer to 3GPP TS 23.041 [36], 3GPP TS 23.038 [34], 3GPP TS 25.324 [20])<br/><br/>This TSO will always generate a BMC encoded message of 15 page of information. If the input message stream (p_String) is less than the size of required octet, then the input message will be concatenated to generate a string of required length based on p_DCS.</p> |

| TSO Name          | Description  |
|-------------------|--|
| o_IA5_IP_ToOct    | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/> p_String: IA5String<br/> p_IP_V4: BOOLEAN</p> <p><b>Description</b><br/> o_IA5_IP_ToOct converts the string p_String from IA5String type to OCTETSTRING.<br/> In case of IPv4, p_String represents an IP address consisting of a number of fields of digits, separated by dots. Each one of the numbers of which the IP address consists is converted into one octet. The dots separating the numbers are ignored.<br/> EXAMPLE 1: o_IA5_IP_ToOct ("200.1.1.80", TRUE) = 'C8010150'O.<br/> EXAMPLE 2: o_IA5_IP_ToOct ("200.1.1.80.100", TRUE) should result in an appropriate error message.<br/> EXAMPLE 3: o_IA5_IP_ToOct ("300.1.1.80", TRUE) should result in an appropriate error message.</p> <p>In case of IPv6, p_String represents an IP address consisting of a number of fields of hexadecimal digits, separated by ":".<br/> a) In case of uncompressed IPv6 format each value separated by ";" is converted to 2 octets. The ":" separating the numbers are ignored.<br/> EXAMPLE 1: o_IA5_IP_ToOct(FEDC:BA98:7654:3210:FEDC:BA98:7654:3210, FALSE) = 'FEDCBA9876543210FEDCBA9876543210'O<br/> EXAMPLE 2: o_IA5_IP_ToOct(FEDC:BA98:7654:3210:FEDC:BA98:7654, FALSE) should result in an appropriate error message.<br/> EXAMPLE 3: o_IA5_IP_ToOct(1080:0:0:0:8:800:200C:417A,FALSE) = '10800000000000000000000800200C417A'O<br/> EXAMPLE 4: o_IA5_IP_ToOct(1080:0:0:0:8:800:20H:417A,FALSE) should result in an appropriate error message.<br/> b) In case of compressed IPv6 format the use of "::" indicates multiple groups of 16-bits of zeros. The "::" can only appear once in an address.<br/> EXAMPLE 1: o_IA5_IP_ToOct(FF01::101,FALSE) = 'FF010000000000000000000000000000101'O<br/> EXAMPLE 2: o_IA5_IP_ToOct(FEDC::7654:3210:FEDC::BA98:7654:3210, FALSE) should result in an appropriate error message.</p> <p>p_IP_V4 is a BOOLEAN. When TRUE, an IP Version 4 address is to be converted, the maximum length of which is 4 octets, otherwise an IP Version 6 address is to be converted, the maximum length of which is 16 octets. See 3GPP TS 24.008 [9], clause 10.5.6.4.</p> |
| o_IA5_DigitsToOct | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/> p_String: IA5String</p> <p><b>Description</b><br/> o_IA5_DigitsToOct converts the string p_String from IA5String type to OCTETSTRING. Each pair of characters is considered a pair of numbers to be mapped onto 1 octet. Each character of p_String shall represent a digit (0..9).<br/> In case the number of characters is odd, then a filler '1111'B is used to fill the last octet required to represent the digits. See 3GPP TS 24.008 [9], clause 10.5.4.7.</p> <p>EXAMPLE 1: o_IA5_DigitsToOct ("0613454120") = '6031541402'O.<br/> EXAMPLE 2: o_IA5_DigitsToOct ("06134541209") = '6031541402F9'O.<br/> EXAMPLE 3: o_IA5_DigitsToOct ("A6134541209") should result in an appropriate error message.</p>   |
| o_IntToOct        | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/> p_N : INTEGER<br/> p_L: INTEGER</p> <p><b>Description</b><br/> o_IntToOct converts the INTEGER `p_N` into OCTETSTRING with length = `p_L`.</p> <p>EXAMPLE 1: o_IntToOct(14,1) = '0E'O.<br/> EXAMPLE 2: o_IntToOct(18,1) = '12'O.<br/> EXAMPLE 3: o_IntToOct(18,2) = '0012'O.</p>  |

| TSO Name            | Description  |
|---------------------|--|
| o_IntToIA5          | <p><b>Type of the result:</b> IA5String</p> <p><b>Parameters:</b><br/>p_N : INTEGER; p_L: INTEGER</p> <p><b>Description</b><br/>o_IntToIA5 converts the INTEGER `p_N` into IA5 String with length = 'p_L'.<br/><br/>EXAMPLE 1: o_IntToIA5(160,3) = "160";<br/>EXAMPLE 2: o_IntToIA5(160,4) = " 160";<br/>EXAMPLE 3: o_IntToIA5(160,2) = "60".</p>  |
| o_OctetstringConcat | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/>p_Str1, p_Str2: OCTETSTRING</p> <p><b>Description</b><br/>o_OctetstringConcat Performs the concatenation of 2 octetstrings of possibly different lengths.<br/>The octet significance is from left to right, i.e. the MSB is at the lefthand side.<br/>Returns a resulting octetstring p_Str1    p_Str2.<br/><br/>EXAMPLE: o_OctetstringConcat('135'O, '9A38'O) = '1359A38'O.</p>   |
| o_OctToBit          | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/>p_OctetStr: OCTETSTRING</p> <p><b>Description</b><br/>Converts an OCTETSTRING into a BITSTRING.<br/>The size of the resulting BITSTRING is 8 times the size of the input OCTETSTRING.</p>  |
| o_OctToIA5          | <p><b>Type of the result:</b> IA5String</p> <p><b>Parameters:</b><br/>p_String : OCTETSTRING</p> <p><b>Description</b><br/>o_OctToIA5 converts the string p_String from OCTETSTRING type to IA5String.<br/>Each octet is mapped onto a pair of characters. Nibbles 0 - F are translated into "0" - "F".<br/><br/>For example:<br/>o_OctToIA5 ('3BF541'O) = "3BF541"</p>  |
| o_OctToInt          | <p><b>Type of the result:</b> INTEGER</p> <p><b>Parameters:</b><br/>p_oct : OCTETSTRING</p> <p><b>Description</b><br/>Transform an OCTETSTRING of length 1 to 4 into an unsigned 32 bits INTEGER value.<br/>If the input octet string is larger than 4, then only the first 4 octets shall be considered.</p>  |
| o_OeBit             | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/>p_BCDdigits: HEXSTRING</p> <p><b>Description</b><br/>The input parameter 'p_BCDdigits' is a BCD string (subset of HEXSTRING), the result is BITSTRING[1].<br/>The function of the o_OeBit is as the follows:</p> <ol style="list-style-type: none"> <li>1. It returns '1'B, if the length of the 'p_BCDdigits' is odd.</li> <li>2. It returns '0'B, if the length of the 'p_BCDdigits' is even.</li> </ol> <p>EXAMPLE 1: o_OeBit('12583') = '1'B.<br/>EXAMPLE 2: o_OeBit('87259957') = '0'B.</p> |

| TSO Name                             | Description  |
|--------------------------------------|--|
| o_OtherDigits                        | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/>p_BCDDigits : HEXSTRING</p> <p><b>Description</b><br/>The input parameter `p_BCDDigits` is a BCD string (subset of HEXSTRING), the result is an even string of BCD digits, with eventually a filler 'F'H used. */</p> <p>The function of the o_OtherDigits is as the follows:</p> <ol style="list-style-type: none"> <li>1. If the number of the 'p_BCDDigits' is odd, the operation removes the most significant digit, and then reverses the order of each pair of digits.</li> <li>2. If the number of the 'p_BCDDigits' is even, first the operation suffixes the `bcddigits` with 'F'H, then removes the most significant digit, and then reverses the order of each pair of digits.</li> </ol> <p>EXAMPLE 1: o_OtherDigi('12345') = '3254',<br/>EXAMPLE 2: o_OtherDigi('12345678') = '325476F8'.<br/>See o_FirstDigit for the handling of the first digit.</p> |
| o_RoutingParameterIMSIResponsePaging | <p><b>Type of the result:</b> RoutingParameter</p> <p><b>Parameters:</b><br/>p_IMSI : HEXSTRING</p> <p><b>Description</b><br/>The input parameter p_Imsi is a BCD string (subset of HEXSTRING), the result is of type RoutingParameter.</p> <p>The tso returns the RoutingParameter, which consists of DecimalToBinary [(IMSI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant.</p>   |



| TSO Name           | Description   |
|--------------------|---|
| o_SIB_PER_Encoding | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/>p_SIB : SIB</p> <p><b>Description</b><br/>It returns the unaligned PER encoding (BIT STRING) of the input system information block p_SIB (without "Encoder added (1-7) bits padding"). The bits corresponding to the encoding of the CHOICE of the SIB type shall be removed.<br/>Example:<br/>for the following SIBType1 value:</p> <pre> SysInfoType1 ::= { cn-CommonGSM-MAP-NAS-SysInfo '32F4100001'H,   cn-DomainSysInfoList   { { cn-DomainIdentity ps-domain,       cn-Type gsm-MAP : '0000'H,       cn-DRX-CycleLengthCoeff 7 },     { cn-DomainIdentity cs-domain,       cn-Type gsm-MAP : '0001'H,       cn-DRX-CycleLengthCoeff 7 } },   ue-ConnTimersAndConstants   { t-304 ms100,     n-304 7,     t-308 ms40,     t-309 8,     t-313 15,     n-313 s200,     t-314 s20,     t-315 s1800,     n-315 s1000 },   ue-IdleTimersAndConstants   { t-300 ms400,     n-300 7,     t-312 10,     n-312 s200 },   nonCriticalExtensions { } } </pre> <p>The operation returns BITSTRING:<br/>"10000110010111101000001000000000000000000101100010000000000000000100<br/>001000000000000000010100001100110000011111000001110011111111111111111111<br/>0101111010011"</p> |
| o_SIB_Segmentation | <p><b>Type of the result:</b> SegmentsOfSysInfoBlock</p> <p><b>Parameters:</b><br/>p_SIBBitString : BITSTRING</p> <p><b>Description</b><br/>The function of the o_SIB_Segmentation is as following:</p> <ol style="list-style-type: none"> <li>1. If the p_SIBBitString is less than or equal to 226 bits, the bit string is fit into a complete segment. If the segment is less than 226 bits but more than 214 bits, the segment shall be padded to 226 bits long with padding bits set to '0'B.</li> <li>2. If the input operand p_SIBBitString is longer than 226 bits it is segmented from left to right into segments, each segment except the last one is 222 bits. The last segment may be 222 bits or shorter. If the length of last segment is greater than 214 bits pad it to 222 bits with padding bits set to '0'B.</li> <li>3. The number of segments is assigned to recount field of the result.</li> <li>4. The first segment is assigned to seg1 field of the result, the second segment is assigned to the seg2 field of the result, the third segment is assigned to the seg3 field of the result, and so on till the last segment.</li> </ol>   |

| TSO Name                       | Description   |
|--------------------------------|---|
| o_SIB_SegmentationFirstSpecial | <p><b>Type of the result:</b> SegmentsOfSysInfoBlock</p> <p><b>Parameters:</b><br/> p_SIB_BitString : BITSTRING<br/> p_FirstSegLength : INTEGER</p> <p><b>Description</b><br/> The function of the o_SIB_Segmentation_FirstShort is as following:</p> <ol style="list-style-type: none"> <li>1. If the p_SIB_BitString is less than or equal to p_FirstSegLength bits, the bit string is fit into one segment.</li> <li>2. If the input operand p_SIB_BitString is longer than p_FirstSegLength bits it is segmented from left to right into segments, each segment except the first one and the last one is 222 bits . The first one is p_FirstSegLength long. The last segment may be 222 bits or shorter. If the length of last segment is greater than 214 bits pad it to 222 bits with padding bits set to '0'B.</li> <li>3. The number of segments is assigned to segCount field of the result.</li> <li>4. The first segment is assigned to seg1 field of the result, the second segment is assigned to the seg2 field of the result, the third segment is assigned to the seg3 field of the result, and so on till the last segment.</li> <li>5. The value of parameter p_FirstSegLength shall be less than 197.</li> </ol> |
| o_CheckPDUsAcknowledged        | <p><b>Type of the result:</b> BOOLEAN</p> <p><b>Parameters:</b><br/> p_NackList: NackList<br/> Contains a list of integers (possibly empty), each of which corresponds to a PDU SN. Negative acknowledgement is expected for each of these PDUs.</p> <p>p_FSN: INTEGER<br/> Contains an integer representing the first SN expected to be acknowledged.</p> <p>p_LSN: INTEGER<br/> Contains an integer representing the last SN expected to be acknowledged.</p> <p>p_SUFI_List: SuperFields<br/> This parameter contains the received SUFI list to be checked.</p> <p><b>Description:</b><br/> This TSO is used to check that the given SUFI list contains any combination of SUFIs that fulfils the following requirements:</p> <ol style="list-style-type: none"> <li>1. Negatively acknowledges all PDUs whose sequence numbers are in p_NackList. Note that the list may be empty.</li> <li>2. Positively acknowledges all other PDUs with sequence numbers greater than or equal to p_FSN, and less than or equal to p_LSN.</li> </ol> <p><b>Output:</b><br/> This TSO returns a BOOLEAN value of TRUE if the SUFI list meets all of the requirements based on the given parameters. Otherwise the TSO returns FALSE.</p>      |

### 8.7.1.1 Specific test suite operation for RLC defined in BasicM

This TSO is defined in BasicM, it is used by RLC and MAC ATSS.

**Table 152: TSO definitions for RLC SUFI handling**

| TSO Name       | Description  |
|----------------|--|
| o_SUFI_Handler | <p><b>Type of the result:</b> ResAndSUFIs</p> <p><b>Parameters:</b><br/> p_SUFI_Params: SUFI_Params<br/> p_SUFI_String: HEXSTRING</p> <p><b>Conditions:</b><br/> Inputs:<br/> p_SUFI_Params: the list of checking criteria to be applied by the TSO<br/> p_SUFI_String: the HEXSTRING received containing the SUFIs<br/> Outputs:<br/> the BOOLEAN result of the TSO:<br/> TRUE if all checking and the filling of the SuperFields structure were successful;<br/> FALSE otherwise; in this case the TSO shall produce sufficient output to allow problem analysis</p> |

**Table 153: ResAndSUFIs type and Processing of the SUFI parameters input to the TSO**

| Parameter  | Type              | Setting   | Meaning      | Comment            |
|--|-------------------|-----------|--------------|--------------------|
| Lower Bound<br>(LB)                                | BITSTRING<br>[12] | OMIT      | Do not use ! |                    |
|  |                   | AnyOrOmit | Do not use ! |                    |
|  |                   | Any       | Do not use ! |                    |
| Upper Bound<br>(UB)                                | BITSTRING<br>[12] | Value     | Use !        |                    |
|  |                   | OMIT      | Do not use ! |                    |
| NackList<br>Element i<br>(Nacki)                   | BITSTRING<br>[12] | AnyOrOmit | Do not use ! |                    |
|  |                   | Any       | Do not use ! |                    |
|  |                   | Value     | Use !        | Check negative ack |
| Window Size<br>SUFI presence<br>(WSN_<br>presence) | BOOLEAN           | OMIT      | Use !        | Check absence      |
|  |                   | AnyOrOmit | Do not use ! |                    |
|  |                   | Any       | Use !        | Check presence     |
| MRW SUFI<br>presence<br>(MRW_<br>presence)         | BOOLEAN           | Value     | Use !        | Check presence     |
|  |                   | OMIT      | Use !        | Check absence      |
|  |                   | AnyOrOmit | Do not use ! |                    |
|  |                   | Any       | Use !        | Check presence     |
|  |                   | Value     | Use !        | Check presence     |

#### 8.7.1.1.1 Pseudocode in a C like notation

The pseudocode defined below can be written in a more compact fashion. The code hereafter is to allow easy identification of the TSO's tasks. All situations leading to a FALSE result must produce a log. This is not shown in the code hereafter. Possible wrap arounds are not shown in this section. These have to be accounted for at the appropriate places.

```

/* INITIALIZATION */
Initialize_ResAndSUFIs();                               /* RESULT := TRUE, all SUFI fields are AnyOrOmit */

/* EXTRACTION OF SUFIs AND TRANSFER INTO THE TTCN SUFI STRUCTURE */
i = 0;
if (p_SUFI_String == NULL)
{
  RESULT := FALSE;                                     /* No SUFIs -> Result is FALSE */
  RETURN;
}
SUFI := Extract_SUFI(i);                                /* Let n SUFI be numbered from 0 to n-1 */
while (SUFI != NULL)                                    /* TRUE when there is a SUFI */
{

```

```

    Set_SUFI_ListRec(SUFI);                                /* Put the SUFI at the correct place in the
resulting */
/* SUFI structure; overwrite if the SUFI type has */
/* already been extracted except LIST SUFIs which all are to be collected */
    i++;
    SUFI := Extract_SUFI(i);                                /* Get next SUFI */
}

/* FOR ALL SUFI TYPES: IF EXISTING, PERFORM CONSISTENCY CHECK */
if Exists_SUFI (ACK) AND NOT CheckConsistency (ACK)
RESULT := FALSE;                                          /* ACK SUFI inconsistent -> Result is FALSE */
.....
if Exists_SUFI (WINDOW) AND NOT CheckConsistency (WINDOW)
RESULT := FALSE;                                          /* WINDOW SUFI inconsistent -> Result is FALSE */

/* TAKE THE INDIVIDUAL CHECKING PARAMETERS & PERFORM THE EXPECTED CHECKING */
/* PART 1: EXISTENCE CHECKS */
if ((WSN_presence == Any) OR (WSN_presence == TRUE) OR (WSN_presence == FALSE)) AND NOT
Exists_SUFI (WINDOW)
RESULT := FALSE;                                          /* WINDOW not ex. but should -> Result is FALSE */
if ((MRW_presence == Any) OR (MRW_presence == TRUE) OR (MRW_presence == FALSE)) AND NOT
Exists_SUFI (MRW)
RESULT := FALSE;                                          /* MRW not ex. but should -> Result is FALSE */

/* PART 2: RANGE AND NACK CHECKS OF SUFI CONTENTS*/
/* ACK: LB <= LSN received <= UB */
if NOT (LB <= Extract_SUFI_Value(ACK) -1 AND Extract_SUFI_Value(ACK) -1 <= UB)
RESULT := FALSE;                                          /* ACK value not in the expected range */
                                                                /* LB: first SN acceptable as LSN received */
                                                                /* UB: last SN acceptable as LSN received */
                                                                /* LSN received acks SNs upto LSN received -1 */

/* Bitmap */
/* for all SNs between LB and UB */
{
if (ExtractBitmap(FSN extracted, LENGTH extracted, Bitmap extracted, SN) == 1) AND (SN in NackList)
RESULT := FALSE;                                          /* if the bit in the Bitmap is not 0 */
if (ExtractBitmap(FSN extracted, LENGTH extracted, Bitmap extracted, SN) == 0) AND (SN NOT in
NackList)
RESULT := FALSE;                                          /* if the bit in the Bitmap is not 0 */
}

/* LIST */
/* The (SNI,Li) pairs identify AMD PDUs which have not been correctly received. */
/* Therefore the (SNI,Li) pairs have to be consistent with the NackList. */
/* The (SNI,Li) pairs may be contained in multiple LIST SUFIs conveyed in one STATUS PDU */

/* RLIST */

/* The CWs represent the distance between the previous indicated erroneous AMD PDU */
/* up to and including the next erroneous AMD PDU, starting from the FSN contained in the RLIST
SUFI. */
/* Therefore the FSN and the Codewords have to be consistent with the NackList. */
/* Error burst indicator has to be treated as a separate case. May not have to be implemented
currently. */
/* MRW */
/* LENGTH = 0 */
/* 1 SN_MRWi is present and the RLC SDU to be discarded extends above the configured transmission
window in the sender */
/* LENGTH = 1 ... 15 */
/* 1 ...15 SN_MRWi */
/* a) MRW configured → an SN_MRWi indicates the end of each discarded RLC SDU */
/* n SN_MRWs → n RLC SDUs discarded */
/* b) MRW not configured → an SN_MRWi indicates end of last RLC SDU to be discarded */
/* in the receiver */

/* To be implemented as far as required by the RLC ATS */
/* MRW ACK */
/* The SN_ACK must be consistent with the information sent in a previous MRW SUFI upon which the */
/* MRW_ACK represents the answer. */
/* NO MORE */
/* no checking required */
/* SUBFUNCTIONS USED*/
Check_Consistency (SUFI_type)                            /* returns TRUE when the type fulfils the */

```

```

/* requirements of the spec. TS 25.322*/
Exists_SUFI (SUFI_type) /* returns TRUE when the specified */

/* type has been extracted, therefore exists*/
ExtractBitmap(FSN extracted, LENGTH extracted, Bitmap extracted, Criterion)
/* Extract the value in the Bitmap at position Criterion */
/* Calculation based on information received in the */
/* Bitmap SUFI */
Extract_SUFI (Counter) /* returns the SUFI extracted at position counter */

/* from the input p_SUFI_String; */
/* n SUFIs from positions 0 to n-1 */
/* returns NULL if there is no further SUFI */
Extract_SUFI_Value (SUFI_type, field_type) /* extract the value of specific field type */

/* contained in a specific SUFI type */
/* There will be several flavours depending upon the */
/* result (field) type */
Initialize_ResAndSUFIs () /* Initialize RESULT and all SUFI fields */
Set_SUFI_ListRec(SUFI) /* set return values RESULT and */
/* SUFI structure SUFI_ListRec */

```

## 8.7.2 Specific test suite operation definitions for Multi RAT Handover testing

Table 5: TSO definitions for Multi RAT handover

| TSO Name                     | Description   |
|------------------------------|---|
| OC_LeastBits                 | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/> bstring : BITSTRING<br/> lg : INTEGER</p> <p><b>Description:</b><br/> It returns the `lg` least significant bits of the original `bstring`.<br/> for example:<br/> OC_LeastBits('110011000101010'B, 3) = '010'B,<br/> OC_LeastBits('110011000101010'B, 6) = '101010'B.</p> |
| OC_MostBits                  | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/> bstring : BITSTRING<br/> lg : INTEGER</p> <p><b>Description:</b><br/> It returns the `lg` most significant bits of the original `bstring`.<br/> for example:<br/> OC_MostBits ('110011000101010'B, 3) = '010'B,<br/> OC_MostBits ('110011000101010'B, 6) = '101010'B.</p>  |
| o_HO_PER_Encoding            | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/> p_Msg : DL_DCCH_Message</p> <p><b>Description:</b><br/> It returns the unaligned PER encoding (BIT STRING) of the input downlink DCCH message p_Msg (without "Encoder added (1-7) bits padding").</p>  |
| o_PacketPagingGroupCalculate | <p><b>Type of the result:</b> INTEGER</p> <p><b>Parameters:</b><br/> IMSI : HEXSTRING<br/> KC_Conf : INTEGER<br/> M : INTEGER<br/> N : INTEGER<br/> SplitPGCycle : B8</p> <p><b>Description:</b></p>  |

| TSO Name                     | Description   |
|------------------------------|---|
|                              | <p><i>It returns the calculated Packet Paging Group, according to:</i></p> $\text{PAGING\_GROUP} (0 \dots M-1) = ( ( \text{IMSI mod } 1000 \text{ div } ( \text{KC} * \text{N} ) ) * \text{N} + ( \text{IMSI mod } 1000 \text{ mod } \text{N} + \text{Max}((m * M) \text{ div } \text{SPLIT\_PG\_CYCLE}, m)) \text{ mod } M)$ <p>for <math>m = 0, \dots, \text{Min}(M, \text{SPLIT\_PG\_CYCLE}) - 1</math><br/> where<br/> KC = number of (P)CCCH in the cell = BS_PCC_CHANS for PCCCH or BS_CC_CHANS for CCCH</p> <p>M = number of paging blocks "available" on one (P)CCCH =<br/> (12 - BS_PAG_BLK_RES - BS_PBCCH_BLK) * 64 for PCCCH<br/> (9 - BS_AG_BLK_RES) * 64 for CCCH not combined<br/> (3 - BS_AG_BLK_RES) * 64 for CCCH + SDCCH combined</p> <p>N=1 for PCCCH<br/> (9 - BS_AG_BLK_RES)*BS_PA_MFRMS for CCCH not combined<br/> (3 - BS_AG_BLK_RES)*BS_PA_MFRMS for CCCH/SDCCH combined</p> <p>SPLIT_PG_CYCLE is an MS specific parameter negotiated at GPRS attach (see 3GPP TS 04.60)<br/> IMSI = International Mobile Subscriber Identity, as defined in 3GPP TS 03.03.</p> |
| o_PagingGroupCalculate       | <p><b>Type of the result:</b> INTEGER</p> <p><b>Parameters:</b><br/> p_IMSI : HEXSTRING<br/> p_CCCH_Conf : B_3<br/> p_N : INTEGER</p> <p><b>Description</b><br/> Calculate the PAGING_GROUP (0 .. N?1) = ((IMSI mod 1000) mod (BS_CC_CHANS x N)) mod N<br/> where :<br/> N = number of paging blocks "available" on one CCCH = (number of paging blocks "available" in a 51-multiframe on one CCCH) x BS_PA_MFRMS.<br/> IMSI = International Mobile Subscriber Identity, as defined in 3GPP TS 23.003 [6].<br/> mod = Modulo.<br/> div = Integer division.</p>  |
| o_TTCN_HO_CommandToBitstring | <p><b>Type of the result:</b> BITSTRING</p> <p><b>Parameters:</b><br/> p_PDU : PDU</p> <p><b>Description</b><br/> The function of the o_TTCN_HOCommandToBitstring is as the follows:<br/> - It returns the bitstring representation of the input HANDOVERCOMMAND p_PDU.</p>   |
| o_BitToOct                   | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/> p_Str: BITSTRING</p> <p><b>Description</b><br/> This TSO is used to convert the given BITSTRING into an OCTETSTRING. If the bitstring length is not a multiple of 8, 1 to 7 padding bits are added at the MSB to fill the final octet.</p>   |

### 8.7.3 Specific test suite operation for Multi RAB testing

**Table 155: TSO definitions for Multi RAB testing**

| TSO Name             | Description   |
|----------------------|---|
| o_SendContinuousData | <p><b>Type of the result:</b> BOOLEAN</p> <p><b>Parameters:</b><br/>p_RAB_Tx_Info : RAB_Tx_Info</p> <p><b>Conditions:</b><br/>Inputs:<br/>p_RAB_Tx_Info: test data, number of RBs, and RB info of each RB (RB id, SDU size and number of SDUs to be transmitted in consecutive TTIs)</p> <p><b>Outputs:</b><br/>The BOOLEAN result of the TSO:<br/>TRUE if system simulator accepts the information sent from TTCN<br/>FALSE if system simulator rejects the information sent from TTCN.</p> <p><b>Description</b><br/>When sending the data through the TSO, after the CMAC_Restriction_REQ, the TFC under test will be one corresponding the maximum CTFC value in the Restricted list, so that SS can select the number of Transport blocks and the size of Transport blocks on individual Transport channels derived from this CTFC.<br/>Starting from the beginning of the raw data buffer given in the TSO:<br/>Data to be sent on a particular Rbld is the first (number of SDUs * SDU_Size) bits<br/>All calls to TSO o_sendContinuousData in a test will always specify the exact same set of Rblds.</p> |

**Table 156: RAB\_Tx\_Info type**

| Structure Type Definition  |                 |                |   |
|--|-----------------|----------------|---|
| <b>Type Name:</b> RAB_Tx_Info  |                 |                |   |
| <b>Encoding Variation:</b>   |                 |                |   |
| <b>Comments:</b> To provide the information to SS to send data in every TTI on each RAB. Number of RBs depends on specific requirement. SS shall take care about all kind of discard info in all RLC modes and final aim is DL TFCs under test shall be selected in downlink for each TTI. |                 |                |   |
| Element name   | Type Definition | Field Encoding | Comments                                      |
| test data  | BITSTRING       |                | The raw test data buffer                      |
| no_of_rbs  | INTEGER         |                | No of Radio Bearers                           |
| rb_tx_info1  | RB_Tx_Info      |                | Info about RB id, SDU size and number of SDUs |
| rb_tx_info2  | RB_Tx_Info      |                | Info about RB id, SDU size and number of SDUs |
| rb_tx_info3  | RB_Tx_Info      |                | Info about RB id, SDU size and number of SDUs |
| rb_tx_info4  | RB_Tx_Info      |                | Info about RB id, SDU size and number of SDUs |
| rb_tx_info5  | RB_Tx_Info      |                | Info about RB id, SDU size and number of SDUs |
| rb_tx_info6  | RB_Tx_Info      |                | Info about RB id, SDU size and number of SDUs |

**Table 6: RB\_Tx\_Info type**

| Structure Type Definition    |                 |                |          |
|------------------------------|-----------------|----------------|----------|
| <b>Type Name:</b> RB_Tx_Info |                 |                |          |
| <b>Encoding Variation:</b>   |                 |                |          |
| <b>Comments:</b>             |                 |                |          |
| Element name                 | Type Definition | Field Encoding | Comments |
| rb_id                        | INTEGER         |                |          |
| sdu_size                     | INTEGER         |                |          |
| no_of_sdu                    | INTEGER         |                |          |

## 8.7.4 Specific test suite operation for InterSystem Handover testing

**Table 7: TSO definitions for InterSystem testing**

| TSO Name      | Description   |
|---------------|---|
| o_LengthofPDU | <p><b>Type of the result:</b> O1</p> <p><b>Parameters:</b><br/>p_Msg : PDU</p> <p><b>Description:</b><br/>The function of the o_LengthofPDU is as the follows:<br/>- it returns the no. of octets of the input downlink message p_Msg</p> |

## 8.7.5 Specific test suite operation for RAB\_HS testing

**Table 8: TSO definitions for RAB\_HS testing**

| TSO Name                | Description  |
|-------------------------|--|
| o_CalculateTestPoint656 | <p><b>Type of the result:</b> HSDPA_TestPoint</p> <p><b>Parameters:</b><br/>p_PhyCat:HSDSCH_physical_layer_category<br/>p_ModScheme:ModulationScheme<br/>p_NumOfPDU: INTEGER</p> <p><b>Description:</b><br/>TSO implements tables 14.1.3.4.1 for category 1 to 6, 14.1.3.4.2 for category 7 and 8, 14.1.3.4.3 for category 9, 14.1.3.4.4 for Category 10 and 14.1.3.4.5 for category 11 and 12.<br/>It accepts UE category(1 to 12), Modulation scheme(qpsk or qam16) and number of MAC-D PDU's( 1 to 70) as input.<br/>If a test point is not defined for this combination of input, then returns<br/>flag = FALSE<br/>noOfChannelisationCodes =0<br/>tbSizeIndexOnHS_SCCH =0<br/>If a test point is defined for the combination of inputs, it returns,<br/>flag = TRUE<br/>noOfChannelisationCodes =value as per relevant table<br/>tbSizeIndexOnHS_SCCH =TFRI value as per relevant table</p> <p>example:<br/>if input is physical category =1,modScheme=qpsk,Num Of PDU's =5<br/>TSO returns<br/>flag = TRUE<br/>noOfChannelisationCodes =5<br/>tbSizeIndexOnHS_SCCH =43<br/>If input is category =1,modScheme=qpsk,Num Of PDU's =10<br/>TSO returns<br/>flag = FALSE<br/>noOfChannelisationCodes =0<br/>tbSizeIndexOnHS_SCCH =0</p> |



| TSO Name                | Description  |
|-------------------------|--|
| o_CalculateTestPoint336 | <p><b>Type of the result:</b> HSDPA_TestPoint</p> <p><b>Parameters:</b><br/> p_PhyCat:HSDSCH_physical_layer_category<br/> p_ModScheme:ModulationScheme<br/> p_NumOfPDU: INTEGER</p> <p><b>Description:</b><br/> TSO implements tables 14.1.3.3.1 for category 1 to 6, 14.1.3.3.2 for category 7 and 8, 14.1.3.3.3 for category 9, 14.1.3.3.4 for Category 10 and 14.1.3.3.5 for category 11 and 12.<br/> It accepts UE category(1 to 12), Modulation scheme(qpsk or qam16) and number of MAC-D PDU's( 1 to 70) as input.<br/> If a test point is not defined for this combination of input, then returns<br/> flag = FALSE<br/> noOfChannelisationCodes =0<br/> tbSizeIndexOnHS_SCCH =0<br/> If a test point is defined for the combination of inputs, it returns,<br/> flag = TRUE<br/> noOfChannelisationCodes =value as per relevant table<br/> tbSizeIndexOnHS_SCCH =TFRI value as per relevant table</p> <p>example:<br/> if input is physical category =1,modScheme=qpsk,Num Of PDU's =10<br/> TSO returns<br/> flag = TRUE<br/> noOfChannelisationCodes =5<br/> tbSizeIndexOnHS_SCCH =45<br/> If input is category =1,modScheme=qpsk,Num Of PDU's =17<br/> TSO returns<br/> flag = FALSE<br/> noOfChannelisationCodes =0<br/> tbSizeIndexOnHS_SCCH =0</p> |

Table 9: HSDPA\_TestPoint

| Structure Type Definition  |                 |                |   |
|--|-----------------|----------------|---|
| <b>Type Name:</b> HSDPA_TestPoint  |                 |                |   |
| <b>Encoding Variation:</b>   |                 |                |   |
| <b>Comments:</b> To provide the information to SS to send data in every TTI on each RAB. Number of RBs depends on specific requirement. SS shall take care about all kind of discard info in all RLC modes and final aim is DL TFCs under test shall be selected in downlink for each TTI. |                 |                |   |
| Element name   | Type Definition | Field Encoding | Comments                                    |
| flag   | BOOLEAN         |                | TRUE if test point is applicable            |
| noOfChannelisationCodes  | INTEGER         |                | Range 1 to 15<br>Valid value iff flag =TRUE |
| tbSizeIndexOnHS_SCCH   | INTEGER         |                |   |

## 8.7.6 Specific test suite operation for Intersystem HS Testing

**Table 10: TSO definitions for ISHO\_HS testing**

| TSO Name                    | Description   |
|-----------------------------|---|
| o_TTCN_SysInfoToOctetString | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/>p_Type: INTEGER<br/>p_PDU : PDU</p> <p><b>Description:</b><br/>The function of the o_TTCN_SysInfoToOctetString is as the follows:</p> <ul style="list-style-type: none"><li>- It returns the octetstring representation of the input System Information message p_PDU.</li><li>- The parameter p_Type details the type of SI message. Expected values: 1, 3 and 13.</li></ul> |

## 8.7.7 Specific test suite operation for A-GPS testing

Table 11: TSO definitions in A-GPS

| TSO Name                    | Description   |
|-----------------------------|---|
| o_PositionEstimateToGeoInfo | <p><b>Type of the result:</b> Ext_GeographicalInformation</p> <p><b>Parameters:</b><br/>p_PosEst: PositionEstimate</p> <p><b>Description:</b><br/>Converts, according to TS 23.032, clause 7, the position estimate sent by the UE in a MEASUREMENT REPORT message from type Position Estimate to type Ext_GeographicalInformation in order to be included in the FACILITY message sent by the SS in MO-LR UE-Based test cases.</p> <p>The definition of the types is the following:<br/>PositionEstimate ::= CHOICE</p> <pre>{   ellipsoidPoint EllipsoidPoint,   ellipsoidPointUncertCircle EllipsoidPointUncertCircle,   ellipsoidPointUncertEllipse EllipsoidPointUncertEllipse,   ellipsoidPointAltitude EllipsoidPointAltitude,   ellipsoidPointAltitudeEllipse EllipsoidPointAltitudeEllipsoide }</pre> <p>with one of the following options being expected from the UE:</p> <p>EllipsoidPointUncertCircle ::= SEQUENCE</p> <pre>{   latitudeSign ENUMERATED {north(0), south(1)},   latitude INTEGER (0..8388607),   longitude INTEGER (-8388608..8388607),   uncertaintyCode INTEGER (0..127) }</pre> <p>or</p> <p>EllipsoidPointUncertEllipse ::= SEQUENCE</p> <pre>{   latitudeSign ENUMERATED {north(0), south(1)},   latitude INTEGER (0..8388607),   longitude INTEGER (-8388608..8388607),   uncertaintySemiMajor INTEGER (0..127),   uncertaintySemiMinor INTEGER (0..127),   orientationMajorAxis INTEGER (0..89),   confidence INTEGER (0..100) }</pre> <p>or</p> <p>EllipsoidPointAltitudeEllipse ::= SEQUENCE</p> <pre>{   latitudeSign ENUMERATED {north(0), south(1)},   latitude INTEGER (0..8388607),   longitude INTEGER (-8388608..8388607),   altitudeDirection ENUMERATED {height(0), depth(1)},   altitude INTEGER (0..32767),   uncertaintySemiMajor INTEGER (0..127),   uncertaintySemiMinor INTEGER (0..127),   orientationMajorAxis INTEGER (0..89),   uncertaintyAltitude INTEGER (0..127),   confidence INTEGER (0..100) }</pre> |

| TSO Name        | Description   |
|-----------------|---|
|                 | <p>The definition of the resulting type is:</p> <pre>Ext-GeographicalInformation ::= OCTET STRING (SIZE (1..maxExt-GeographicalInformation))  maxExt-GeographicalInformation INTEGER ::= 20</pre> <p>For example:</p> <pre>p_PositionEstimate:=   ellipsoidPointUncertCircle   { latitudeSign  north,     latitude      123,     longitude     4567,     uncertaintyCode 8 }</pre> <p>o_PositionEstimateToGeoInfo (p_PositionEstimate) = '10 00 00 7B 00 11 D7 08'0</p>   |
| o_IA5_ToASN1Oct | <p><b>Type of the result:</b> NameString</p> <p><b>Parameters:</b><br/>p_String: IA5String</p> <p><b>Description:</b><br/>Converts the string p_String from IA5String type to NameString according to the Data Coding Scheme '0F'0.<br/>This data coding scheme is the only one used in the AGPS ATS. It packs 7bit ASCII onto 8 bit octets.</p> <p>Applicable ASN.1 definitions:</p> <pre>LCSCClientName ::= SEQUENCE {   dataCodingScheme [0] IMPLICIT USSD-DataCodingScheme,   nameString       [2] IMPLICIT NameString }</pre> <p>-- The USSD-DataCodingScheme shall indicate use of the default alphabet through the<br/>-- following encoding<br/>-- bit 7 6 5 4 3 2 1 0<br/>-- 0 0 0 0 1 1 1 1</p> <pre>NameString ::= USSD-String (SIZE (1..maxNameStringLength))  maxNameStringLength INTEGER ::= 63  USSD-DataCodingScheme ::= OCTET STRING (SIZE (1)) -- The structure of the USSD-DataCodingScheme is defined by -- the Cell Broadcast Data Coding Scheme as described in -- TS 3GPP TS 23.038 [25]  USSD-String ::= OCTET STRING (SIZE (1..maxUSSD-StringLength)) -- The structure of the contents of the USSD-String is dependent -- on the USSD-DataCodingScheme as described in TS 3GPP TS 23.038 [25].  maxUSSD-StringLength INTEGER ::= 160</pre> <p>The ATS uses:</p> <pre>IcsClientName {   dataCodingScheme '0F'0,   -- The USSD-DataCodingScheme shall indicate use of the   -- default alphabet through the following encoding   -- bit 7 6 5 4 3 2 1 0   -- 0 0 0 0 1 1 1 1</pre> <p>For example:<br/>o_IA5_ToASN1Oct ("ERICH") = '4569728804'0</p> |

| TSO Name                 | Description  |
|--------------------------|--|
| o_ISDN_Address_ToASN1Oct | <p><b>Type of the result:</b> ISDN_AddressString</p> <p><b>Parameters:</b><br/> p_TOA: B4<br/> p_NPI: B4<br/> p_String: IA5String</p> <p><b>Description:</b><br/> Converts p_TOA plus p_NPI, and string p_String to ISDN_AddressString.<br/> TOA and NPI are mapped onto the first octet.<br/> Each pair of characters of p_String is considered a pair of numbers to be mapped onto 1 octet.<br/> Each character of p_String shall represent a digit (0..9).<br/> In case the number of characters is odd, then a filler '1111'B is used to fill the last octet required to represent the digits. See 3G TS 24008, clause 10.5.4.7</p> <p>Applicable ASN.1 definitions:</p> <pre> LCSCClientExternalID ::= SEQUENCE {     externalAddress    [0] IMPLICIT ISDN-AddressString OPTIONAL,     extensionContainer [1] IMPLICIT ExtensionContainer OPTIONAL }  ISDN-AddressString ::= AddressString (SIZE (1..maxISDN-AddressLength)) -- This type is used to represent ISDN numbers.  maxISDN-AddressLength INTEGER ::= 9  AddressString ::= OCTET STRING (SIZE (1..maxAddressLength)) -- This type is used to represent a number for addressing -- purposes. It is composed of -- a) one octet for nature of address, and numbering plan -- indicator. -- b) digits of an address encoded as TBCD-String.  -- a) The first octet includes a one bit extension indicator, a -- 3 bits nature of address indicator and a 4 bits numbering -- plan indicator, encoded as follows:  -- bit 8: 1 (no extension)  -- bits 765: nature of address indicator -- 000 unknown -- 001 international number -- 010 national significant number -- 011 network specific number -- 100 subscriber number -- 101 reserved -- 110 abbreviated number -- 111 reserved for extension  -- bits 4321: numbering plan indicator -- 0000 unknown -- 0001 ISDN/Telephony Numbering Plan (Rec ITU-T E.164) -- 0010 spare -- 0011 data numbering plan (ITU-T Rec X.121) -- 0100 telex numbering plan (ITU-T Rec F.69) -- 0101 spare -- 0110 land mobile numbering plan (ITU-T Rec E.212) -- 0111 spare -- 1000 national numbering plan -- 1001 private numbering plan -- 1111 reserved for extension  -- all other values are reserved.  -- b) The following octets representing digits of an address -- encoded as a TBCD-STRING. </pre> |

| TSO Name             | Description   |
|----------------------|---|
|                      | <p>maxAddressLength INTEGER ::= 20</p> <p>For example:<br/>o_ISDN_Address_ToASN1Oct ('0011','0011',"0123456") = '33103254F6'0</p>   |
| o_LengthofComponents | <p><b>Type of the result:</b> OCTETSTRING</p> <p><b>Parameters:</b><br/>p_Components: Components</p> <p><b>Description:</b><br/>The functionality of the o_LengthofComponents is as below:<br/>It returns the length (no. of octets) of the input constraint p_Components</p> |

## 8.7.8 Specific test suite operation for E-DCH Testing

Table 12: TSO definitions in E-DCH

| TSO Name                | Description   |
|-------------------------|---|
| o_CalculateE_DCH_TBSize | <p><b>Type of the result:</b> INTEGER</p> <p><b>Parameters:</b><br/>p_tti: E_DCH_TTI<br/>p_TableInd: E_TFCI_TableIndex<br/>p_TB_Index: INTEGER</p> <p><b>Description:</b><br/>TSO implements tables defined in 25.321 Annex B.1 (tti 2ms Index 0), Annex B.2 (tti 2ms Index 1), Annex B.3 (tti 10ms Index 0), Annex B.4 (tti 10ms Index 1).<br/>It accepts 3 input parameters:<br/>p_TTI: the TTI of E-DCH (2ms or 10ms)<br/>P_TableInd: the table index (0 or 1)<br/>p_TB_Index: the TB index in the table (0..127 for tti 2ms Index 0), (0..125 tti 2ms Index 1), (0..127 tti 10ms Index 0), (0..120 tti 10ms Index 1)<br/>The TSO then returns the corresponding TB Size from the appropriate Table and with given table index.<br/>The value returned is '0' for any erroneous conditions (e.g. p_TB_Index out of range).<br/>Example:<br/>p_tti:2ms, p_TableInd:0, p_TB_Index:13 produces the result 185</p> |

## 8.7.9 Specific test suite operation for E-DCH/HS-ENH and MBMS testing

Table 13: TSO definitions in E-DCH/HS-ENH and MBMS

| TSO Name                               | Description   |
|--|---|
| o_CalculateTBSize_MAC_ehs_OctetAligned | <p><b>Type of the result:</b> INTEGER</p> <p><b>Parameters:</b><br/>p_Kt : INTEGER</p> <p><b>Description:</b><br/>The TSO calculates the value of TB size L(p_Kt) as given in 25.321 clause 9.2.3.1 Table 9.2.3.2.<br/>Kt valid range is from 1 to 295(both included)<br/>If p_Kt &lt; 40<br/>L(p_Kt) = (14+p_Kt) * 8<br/>else<br/>L(p_Kt) = (Floor( Lmin * (P ** p_Kt)))*8<br/>Lmin = 27<br/>P = [5274/27]**[1/295]<br/>end</p> <p>Where<br/>* represents multiplication<br/>** represents power</p>   |
| o_CalculateTBSize_MAC_ehs_BitAligned   | <p><b>Type of the result:</b> INTEGER</p> <p><b>Parameters:</b><br/>p_Kt : INTEGER</p> <p><b>Description:</b><br/>The TSO calculates the value of TB size L(p_Kt) as given in 25.321 clause 9.2.3.1 Table 9.2.3.1.<br/>Kt valid range is from 1 to 295(both included)</p> <p>If k<sub>t</sub> &lt; 40<br/>L(p_Kt) = 125+ 12*p_Kt<br/>else<br/>L(p_Kt) = (Floor(Lmin*(P ** p_Kt)))<br/>P=2085/2048<br/>Lmin = 296<br/>end</p> <p>Where<br/>* represents multiplication<br/>** represents power</p>   |
| o_CalculateTestPoint336_MAC_ehs        | <p><b>Type of the result:</b> HSDPA_TestPoint</p> <p><b>Parameters:</b><br/>p_PhyCat: HSDSCH_physical_layer_category_ext;<br/>p_ModScheme: ModulationScheme;<br/>p_NumOfPDU: INTEGER</p> <p><b>Description:</b><br/>TSO implements tables 14.1.3.4b.1.1 for QPSK, 14.1.3.4b.1.2 for 16QAM and 14.1.3.4b.1.3 for 64QAM.</p> <p>It accepts as input:<br/>- UE category (13 to 18),<br/>- Modulation scheme (qpsk, qam16 or qam64) and<br/>- Number of MAC-d PDU's (1 to 70)</p> <p>If a test point is not defined for this combination of input, then returns<br/>flag = FALSE<br/>noOfChannelisationCodes = 0<br/>tbSizeIndexOnHS_SCCH = 0<br/>If a test point is defined for the combination of inputs, it returns,<br/>flag = TRUE<br/>noOfChannelisationCodes = value as per relevant table<br/>tbSizeIndexOnHS_SCCH = TFRI value as per relevant table</p> |

| TSO Name                        | Description  |
|---------------------------------|--|
|                                 | <p>Example:<br/>If input is:<br/>- physical category = 13,<br/>- modScheme = qpsk,<br/>- Num Of PDU's = 10<br/>TSO returns:<br/>flag = TRUE<br/>noOfChannelisatonCodes =11<br/>tbSizeIndexOnHS_SCCH =1</p> <p>If input is:<br/>- physical category = 13,<br/>- modScheme = qpsk,<br/>- Num Of PDU's = 50<br/>TSO returns:<br/>flag = FALSE<br/>noOfChannelisatonCodes = 0<br/>tbSizeIndexOnHS_SCCH = 0</p>   |
| o_CalculateTestPoint656_MAC_ahs | <p><b>Type of the result:</b> HSDPA_TestPoint<br/><b>Parameters:</b><br/>p_PhyCat: HSDSCH_physical_layer_category_ext;<br/>p_ModScheme: ModulationScheme;<br/>p_NumOfPDU: INTEGER</p> <p><b>Description:</b><br/>TSO implements tables 14.1.3.4b.2.1 for QPSK, 14.1.3.4b.2.2 for 16QAM and 14.1.3.4b.2.3 for 64QAM.</p> <p>It accepts as input:<br/>- UE category (13 to 18),<br/>- Modulation scheme (qpsk, qam16 or qam64) and<br/>- Number of MAC-d PDU's (1 to 64)</p> <p>If a test point is not defined for this combination of input, then returns<br/>flag = FALSE<br/>noOfChannelisatonCodes =0<br/>tbSizeIndexOnHS_SCCH =0<br/>If a test point is defined for the combination of inputs, it returns,<br/>flag = TRUE<br/>noOfChannelisatonCodes =value as per relevant table<br/>tbSizeIndexOnHS_SCCH =TFRI value as per relevant table</p> <p>Example:<br/>If input is:<br/>- physical category = 13,<br/>- modScheme = qpsk,<br/>- Num Of PDU's = 10<br/>TSO returns:<br/>flag = TRUE<br/>noOfChannelisatonCodes =15<br/>tbSizeIndexOnHS_SCCH =21</p> <p>If input is:<br/>- physical category = 13,<br/>- modScheme = qpsk,<br/>- Num Of PDU's = 50<br/>TSO returns:<br/>flag = FALSE<br/>noOfChannelisatonCodes = 0<br/>tbSizeIndexOnHS_SCCH = 0</p> |
| o_CalculateTestPointMIMO        | <p><b>Type of the result:</b> HSDPA_TestPoint<br/><b>Parameters:</b><br/>p_ModScheme: ModulationScheme<br/>p_Index: INTEGER</p> <p><b>Description:</b><br/>TSO implements table 14.1.3.4b.2.4 for QPSK and 16QAM modulations.</p>  |



| TSO Name | Description   |
|----------|---|
|          | <p>It accepts as input:</p> <ul style="list-style-type: none"> <li>- Modulation scheme (qam16 or qpsk) and</li> <li>- Test Point Index</li> </ul> <p>If a test point is not defined for this combination of input, then returns<br/> flag = FALSE<br/> noOfChannelisatonCodes =0<br/> tbSizeIndexOnHS_SCCH =0</p> <p>If a test point is defined for the combination of inputs, it returns,<br/> flag = TRUE<br/> noOfChannelisatonCodes =value as per relevant table<br/> tbSizeIndexOnHS_SCCH =TFRI value as per relevant table</p> <p>Examples:</p> <p>If input is:</p> <ul style="list-style-type: none"> <li>- modScheme = qpsk,</li> <li>- Index = 10</li> </ul> <p>TSO returns:<br/> flag = TRUE<br/> noOfChannelisatonCodes =5<br/> tbSizeIndexOnHS_SCCH =54</p> <p>If input is:</p> <ul style="list-style-type: none"> <li>- modScheme = qam16,</li> <li>- Index = 10</li> </ul> <p>TSO returns:<br/> flag = TRUE<br/> noOfChannelisatonCodes =5<br/> tbSizeIndexOnHS_SCCH =49</p> <p>If input is:</p> <ul style="list-style-type: none"> <li>- modScheme = qam16,</li> <li>- Index = 36</li> </ul> <p>TSO returns:<br/> flag = FALSE<br/> noOfChannelisatonCodes =0<br/> tbSizeIndexOnHS_SCCH =0</p> |

## 8.8 AT commands

Table 14 shows a list of AT commands. By using these commands the ATs communicate with the SS for an automatic execution. The column "ATS" indicates in which ATS the command is used.

**Table 14: AT commands used in 3GPP ATs**

| Command   | Reference           | ATS                                     |
|-----------|---------------------|---|
| +CGACT    | 3GPP TS 27.007 [23] | BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS |
| +CGATT    | 3GPP TS 27.007 [23] | BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS |
| +CGCMOD   | 3GPP TS 27.007 [23] | NAS                                     |
| +CGDCONT  | 3GPP TS 27.007 [23] | BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS |
| +CGDSCONT | 3GPP TS 27.007 [23] | NAS                                     |
| +CGEQREQ  | 3GPP TS 27.007 [23] | BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS |
| +CLCC     | 3GPP TS 27.007 [23] | NAS                                     |
| H         | 3GPP TS 27.007 [23] | NAS, RAB, RRC, SMS                      |
| +CBST     | 3GPP TS 27.007 [23] | NAS, RAB, RRC, SMS                      |
| +CMOD     | 3GPP TS 27.007 [23] | NAS, RAB, RRC, SMS                      |
| A         | 3GPP TS 27.007 [23] | NAS, RAB, RRC, SMS                      |
| D         | 3GPP TS 27.007 [23] | BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS |
| +CMGD     | 3GPP TS 27.005 [22] | SMS                                     |
| +CMGF     | 3GPP TS 27.005 [22] | SMS                                     |
| +CMGW     | 3GPP TS 27.005 [22] | SMS                                     |
| +CMSS     | 3GPP TS 27.005 [22] | NAS, RAB, RRC, SMS                      |

|       |                     |                                |
|-------|---------------------|--------------------------------|
| +CPMS | 3GPP TS 27.005 [22] | SMS                            |
| +CSCA | 3GPP TS 27.005 [22] | SMS                            |
| +CSCS | 3GPP TS 27.005 [22] | SMS                            |
| +CSMS | 3GPP TS 27.005 [22] | SMS                            |
| +CVHU | 3GPP TS 27.005 [22] | NAS, RAB, RRC, SMS, IR_U, IR_G |
| +CHUP | 3GPP TS 27.005 [22] | NAS, RAB, RRC, SMS, IR_U, IR_G |

## 8.8.1 AT command lists in ATs

### 8.8.1.1 AT commands in IR\_U ATs:

| Command  | Syntax in TTCN   | Comments  |
|----------|--|---|
| CBST     | AT+CBST=[<speed>[,<name>[,<ce>]]]<CR><br><speed>=0,7,12,14,15,16,17,39,43,47,48,49,50,51,71,75,79,80,<br>81,82,83,84,115,116,120,121<br><name>=0,1,4,5<br><ce>=0,1 | Select bearer service type, TS 27.007 clause 6.7                |
| CGACT    | AT+CGACT=1,1<CR><br>AT+CGACT=0,1<CR>   | PDP context activate or deactivate, TS 27.007 clause 10.1.10    |
| CGATT    | AT+CGATT=1<CR>   | PS attach or detach, TS 27.007 clause 10.1.9                    |
| CGDSCONT | AT+CGDSCONT= 1,<CR><br>AT+ CGDSCONT=1 , 1, "IP", 0,0,<CR>  | Establish secondary PDP Context, TS 27.007 clause 10.1.2        |
| CGEQREQ  | AT+CGEQREQ=1,2,64,64,,,0,320,"1E4","1E5",1,,3<CR><br>AT+CGEQREQ=1,3,64,64,,,0,320,"1E4","1E5",1,,<CR>  | Quality of Service Profile (Requested), TS 27.007 clause 10.1.4 |
| CHUP     | AT+CHUP<CR>  | Hang up call, TS 27.007 clause 6.5                              |
| CMOD     | AT+CMOD=0<CR><br>AT+CMOD=1<CR>   | Call mode, TS 27.007 clause 6.4                                 |
| CMSS     | AT+CMSS=000<CR><br>AT+CMSS=001<CR><br>AT+CMSS=002<CR>  | Send Message from Storage, TS 27.005 clause 3.5.2               |
| CVHU     | AT+CVHU=0<CR>  | Voice Hang up control, TS 27.007 clause 6.20                    |

### 8.8.1.2 AT commands in MAC and RLC ATs:

| Command | Syntax in TTCN | Comments  |
|---------|----------------|---|
| CGATT   | AT+CGATT=1<CR> | PS attach or detach, 3GPP TS 27.007 [23], clause 10.1.9 |

## 8.8.1.3 AT commands in NAS ATS:

| Command  | Syntax in TTCN   | Comments   |
|----------|--|--|
| CBST     | AT+CBST=[<speed>[,<name>[,<ce>]]]<CR><br><speed>=0,7,12,14,15,16,17,39,43,47,48,49,50,51,71,75,79,80,81,82,83,84,115,116,120,121<br><name>=0,1,4,5<br><ce>=0,1   | Select bearer service type, TS 27.007 clause 6.7                                   |
| CGACT    | AT+CGACT=1,1<CR><br>AT+CGACT=0,1<CR>   | PDP context activate or deactivate, 3GPP TS 27.007 [23] clause 10.1.10             |
| CGATT    | AT+CGATT=1<CR><br>AT+CGATT=0<CR>   | PS attach or detach, 3GPP TS 27.007 [23] clause 10.1.9                             |
| CGDATA   | AT+CGDATA=PPP,1<CR>  | Enter data state, 3GPP TS 27.007 [23] clause 10.1.12                               |
| CGDCONT  | AT+CGDCONT=1,"IP","ABCDEF","200.1.1.80",0,0<CR><br>AT+CGDCONT=1,"IP","GHIJK","200.1.1.90",0,0<CR>  | Define PDP Context, 3GPP TS 27.007 [23] clause 10.1.1                              |
| CGDSCONT | AT+CGDSCONT= 1,<CR><br>AT+ CGDSCONT=1 , 1, "IP", 0,0,<CR>  | Establish secondary PDP Context, 3GPP TS 27.007 [23] clause 10.1.2                 |
| CGEQMIN  | AT+CGEQMIN=1,3,32,32,,,1,320,"1E3","4E3",1,,<CR><br>AT+CGEQMIN=1,3,64,64,,,1,320,"1E3","4E3",1,,<CR><br>AT+CGEQMIN=1,2,32, 32, 32, 32, 1, 320, 1E4,6E8,1,,,<CR><br>AT+CGEQMIN=1,3,32, 32, 32, 32, 1, 320, 1E4,6E8,1,,,<CR><br>AT+CGEQMIN=1,2,32, 32, 32, 32, 1, 320, 1E3,6E8,1,,,<CR><br>AT+CGEQMIN=1,3,32, 32, 32, 32, 1, 320, 1E3,6E8,1,,,<CR><br>AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR><br>AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR> | Quality of Service Profile (Minimum acceptable), 3GPP TS 27.007 [23] clause 10.1.4 |
| CGEQREQ  | AT+CGEQREQ=1,2,64,64,,,0,320,"1E4","1E5",1,,3<CR><br>AT+CGEQREQ=1,3,64,64,,,0,320,"1E4","1E5",1,,<CR><br>AT+CGEQREQ=1,2,64, 64, 64, 64, 0, 320, 1E4,6E8,1,,,<CR><br>AT+CGEQREQ=1,3,64, 64, 64, 64, 0, 320, 1E4,6E8,1,,,<CR>  | Quality of Service Profile (Requested), 3GPP TS 27.007 [23] clause 10.1.4          |
| CHUP     | AT+CHUP<CR>  | Hang up call, 3GPP TS 27.007 [23] clause 6.5                                       |
| CLCC     | AT+CLCC<CR>  | List current calls, 3GPP TS 27.007 [23] clause 7.18                                |
| CMOD     | AT+CMOD=0<CR><br>AT+CMOD=1<CR>   | Call mode, 3GPP TS 27.007 [23] clause 6.4  |
| CMSS     | AT+CMSS=000<CR><br>AT+CMSS=001<CR><br>AT+CMSS=002<CR>  | Send Message from Storage, 3GPP TS 27.005 [22] clause 3.5.2                        |
| VTS      | AT+VTS=0,100<CR><br>AT+VTS=1,50<CR><br>AT+VTS=2,60<CR><br>AT+VTS=3,40<CR><br>AT+VTS=4,50<CR><br>AT+VTS=5,60<CR><br>AT+VTS=6,70<CR><br>AT+VTS=7,80<CR><br>AT+VTS=8,90<CR><br>AT+VTS=9,100<CR><br>AT+VTS=#,110<CR><br>AT+VTS=*,120<CR><br>AT+VTS=A,130<CR><br>AT+VTS=B,140<CR><br>AT+VTS=C,150<CR><br>AT+VTS=D,200<CR>   | DTMF and tone generation, 3GPP TS 27.007 [23] clause C.2.11                        |
| CVHU     | AT+CVHU=0<CR>  | Voice Hang up control, 3GPP TS 27.007 [23] clause 6.20                             |

## 8.8.1.4 AT commands in RAB ATS:

| Command  | Syntax in TTCN   | Comments  |
|----------|--|---|
| CBST     | AT+CBST=[<speed>[,<name>[,<ce>]]]<CR><br><speed>=0,7,12,14,15,16,17,39,43,47,48,49,50,51,71,75,79,80,81,82,83,84,115,116,120,121<br><name>=0,1,4,5<br><ce>=0,1 | Select bearer service type, 3GPP TS 27.007 [23] clause 6.7                |
| CGACT    | AT+CGACT=1,1<CR><br>AT+CGACT=0,1<CR>   | PDP context activate or deactivate, 3GPP TS 27.007 [23] clause 10.1.10    |
| CGATT    | AT+CGATT=1<CR>   | PS attach or detach, 3GPP TS 27.007 [23] clause 10.1.9                    |
| CGDCONT  | AT+CGDCONT=1,"IP","ABCDEF","200.1.1.80",0,0<CR><br>AT+CGDCONT=1,"IP","GHIJK","200.1.1.90",0,0<CR>  | Define PDP Context, 3GPP TS 27.007 [23] clause 10.1.1                     |
| CGDSCONT | AT+CGDSCONT= 1,<CR><br>AT+ CGDSCONT=1 , 1, "IP", 0,0,<CR>  | Establish secondary PDP Context, 3GPP TS 27.007 [23] clause 10.1.2        |
| CGEQREQ  | AT+CGEQREQ=1,2,64,64,,0,320,"1E4","1E5",1,,3<CR><br>AT+CGEQREQ=1,3,64,64,,0,320,"1E4","1E5",1,,<CR>  | Quality of Service Profile (Requested), 3GPP TS 27.007 [23] clause 10.1.4 |
| CHUP     | AT+CHUP<CR>  | Hang up call, 3GPP TS 27.007 [23] clause 6.5                              |
| CMOD     | AT+CMOD=0<CR><br>AT+CMOD=1<CR>   | Call mode, 3GPP TS 27.007 [23] clause 6.4                                 |
| CMSS     | AT+CMSS=000<CR><br>AT+CMSS=001<CR><br>AT+CMSS=002<CR>  | Send Message from Storage, 3GPP TS 27.005 [22] clause 3.5.2               |
| CVHU     | AT+CVHU=0<CR>  | Voice Hang up control, 3GPP TS 27.007 [23] clause 6.20                    |

## 8.8.1.5 AT commands in RRC ATS:

| Command  | Syntax in TTCN   | Comments  |
|----------|--|---|
| ATA      | ATA<CR>  | Answer a call, TS 27.007 clause 6.35                            |
| ATD      | ATD0123456902;<CR><br>ATD112;<CR><br>ATD0123456902<CR>   | Originates a call, TS 27.007 clause 6.31                        |
| ATH      | ATH<CR>  | Hang-up a single mode call, TS 27.007 clause 6.36               |
| CBST     | AT+CBST=[<speed>[,<name>[,<ce>]]]<CR><br><speed>=0,7,12,14,15,16,17,39,43,47,48,49,50,51,71,75,79,80,81,82,83,84,115,116,120,121<br><name>=0,1,4,5<br><ce>=0,1 | Select bearer service type, TS 27.007 clause 6.7                |
| CGACT    | AT+CGACT=1,1<CR><br>AT+CGACT=0,1<CR>   | PDP context activate or deactivate, TS 27.007 clause 10.1.10    |
| CGATT    | AT+CGATT=1<CR>   | PS attach or detach, TS 27.007 clause 10.1.9                    |
| CGDCONT  | AT+CGDCONT=1,"IP","ABCDEF","200.1.1.80",0,0<CR><br>AT+CGDCONT=1,"IP","GHIJK","200.1.1.90",0,0<CR>  | Define PDP Context, TS 27.007 clause 10.1.1                     |
| CGDSCONT | AT+CGDSCONT= 1,<CR><br>AT+ CGDSCONT=1 , 1, "IP", 0,0,<CR>  | Establish secondary PDP Context, TS 27.007 clause 10.1.2        |
| CGEQREQ  | AT+CGEQREQ=1,2,64,64,,,0,320,"1E4","1E5",1,,3<CR><br>AT+CGEQREQ=1,3,64,64,,,0,320,"1E4","1E5",1,,<CR>  | Quality of Service Profile (Requested), TS 27.007 clause 10.1.4 |
| CHUP     | AT+CHUP<CR>  | Hang up call, TS 27.007 clause 6.5                              |
| CMOD     | AT+CMOD=0<CR><br>AT+CMOD=1<CR>   | Call mode, TS 27.007 clause 6.4                                 |
| CMSS     | AT+CMSS=000<CR><br>AT+CMSS=001<CR><br>AT+CMSS=002<CR>  | Send Message from Storage, TS 27.005 clause 3.5.2               |
| CVHU     | AT+CVHU=0<CR>  | Voice Hang up control, TS 27.007 clause 6.20                    |

## 8.8.1.6 AT commands SMS ATS:

| Command  | Syntax in TTCN  | Comments  |
|----------|---|---|
| CBST     | AT+CBST=[<speed>[,<name>[,<ce>]]]<CR><br><speed>=0,7,12,14,15,16,17,39,43,47,48,49,50,51,71,75,79,80,81,82,83,84,115,116,120,121<br><name>=0,1,4,5<br><ce>=0,1                                    | Select bearer service type, TS 27.007 clause 6.7                |
| CGACT    | AT+CGACT=1,1<CR><br>AT+CGACT=0,1<CR>  | PDP context activate or deactivate, TS 27.007 clause 10.1.10    |
| CGATT    | AT+CGATT=1<CR>  | PS attach or detach, TS 27.007 clause 10.1.9                    |
| CGDCONT  | AT+CGDCONT=1,"IP", "ABCDEF", "200.1.1.80", 0,0<CR><br>AT+CGDCONT=1,"IP", "GHIJK", "200.1.1.90", 0,0<CR>   | Define PDP Context, TS 27.007 clause 10.1.1                     |
| CGDSCONT | AT+CGDSCONT= 1,<CR><br>AT+ CGDSCONT=1 , 1, "IP", 0,0,<CR>   | Establish secondary PDP Context, TS 27.007 clause 10.1.2        |
| CGEQREQ  | AT+CGEQREQ=1,2,64,64,,,0,320,"1E4","1E5",1,,3<CR><br>AT+CGEQREQ=1,3,64,64,,,0,320,"1E4","1E5",1,,<CR>   | Quality of Service Profile (Requested), TS 27.007 clause 10.1.4 |
| CGSMS    | AT+CGSMS=1<CR><br>AT+CGSMS=0<CR>  | Select service for MO SMS messages, TS 27.007 clause 10.1.20    |
| CHUP     | AT+CHUP<CR>   | Hang up call, TS 27.007 clause 6.5                              |
| CMGD     | AT+CMGD=001<CR><br>AT+CMGD=1,4<CR>  | Delete Message, TS 27.005 clause 3.5.4                          |
| CMGF     | AT+CMGF=1<CR>   | Message Format, TS 27.005 clause 3.2.3                          |
| CMGR     | AT+CMGR=001<CR><br>AT+CMGR=002<CR><br>AT+CMGR=003<CR><br>AT+CMGR=004<CR>  | Read Message, TS 27.005 clause 3.4.3                            |
| CMGW     | AT+CMGW= "1111111111",129, "The quick brown fox jumps over the lazy dog's back. Kaufen Sie Ihrer Frau vier bequeme Pelze. - 0123456789 - THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG'S BACK."<CR> | Write Message to Memory, TS 27.005 clause 3.5.3                 |
| CMMS     | AT+CMMS=1<CR>   | More Messages to Send, TS 27.005 clause 3.5.6                   |
| CMOD     | AT+CMOD=0<CR><br>AT+CMOD=1<CR>  | Call mode, TS 27.007 clause 6.4                                 |
| CMSS     | AT+CMSS=000<CR><br>AT+CMSS=001<CR><br>AT+CMSS=002<CR>   | Send Message from Storage, TS 27.005 clause 3.5.2               |
| CPMS     | AT+CPMS="SM","SM", "MT" <CR><br>AT+CPMS="CB", "CB", "CB" <CR>   | Preferred Message Storage, TS 27.005 clause 3.2.2               |
| CSCA     | AT+CSCA="2222222222",129<CR>  | Service Centre Address, TS 27.005 clause 3.3.1                  |
| CSCS     | AT+CSCS="GSM" <CR>  | Select TE character set, TS 27.007 clause 5.5                   |
| CSMS     | AT+CSMS=0<CR>   | Select Message Service, TS 27.005 clause 3.2.1                  |
| CVHU     | AT+CVHU=0<CR>   | Voice Hang up control, TS 27.007 clause 6.20                    |

### 8.8.1.7 AT commands in HSDPA ATS (Rel-5 or later):

| Command | Syntax in TTCN   | Comments  |
|---------|--|---|
| CGEQREQ | AT+CGEQREQ=[<cid> [,<Traffic class> [,<Maximum bitrate UL> [,<Maximum bitrate DL> [,<Guaranteed bitrate UL> [,<Guaranteed bitrate DL> [,<Delivery order> [,<Maximum SDU size> [,<SDU error ratio> [,<Residual bit error ratio> [,<Delivery of erroneous SDUs> [,<Transfer delay> [,<Traffic handling priority> ]]]]]]]]]]] <CR><br><br><cid> =1<br><Traffic class> =2, 3<br><Maximum bitrate UL> =64, 384<br><Maximum bitrate DL> = See clause 8.10.1<br><Guaranteed bitrate UL> Not used<br><Guaranteed bitrate DL> Not used<br><Delivery order> =0<br><Maximum SDU size> =320, 640<br><SDU error ratio> = "1E4"<br><Residual bit error ratio> ="1E5"<br><Delivery of erroneous SDUs> =1<br><Transfer delay> Not used<br><Traffic handling priority> =3 | Quality of Service Profile (Requested), TS 27.007 clause 10.1.4 |

### 8.8.1.8 AT commands for E-DCH testing (Rel-6 or later) and HS-ENH testing (Rel-7 or later)

| Command | Syntax in TTCN  | Comments  |
|---------|---|---|
| CGEQREQ | AT+CGEQREQ=[<cid> [,<Traffic class> [,<Maximum bitrate UL> [,<Maximum bitrate DL> [,<Guaranteed bitrate UL> [,<Guaranteed bitrate DL> [,<Delivery order> [,<Maximum SDU size> [,<SDU error ratio> [,<Residual bit error ratio> [,<Delivery of erroneous SDUs> [,<Transfer delay> [,<Traffic handling priority> ]]]]]]]]]]] <CR><br><br><cid> =1<br><Traffic class> =2, 3<br><Maximum bitrate UL> = See clause 8.10.2<br><Maximum bitrate DL> = See clause 8.10.1<br><Guaranteed bitrate UL> Not used<br><Guaranteed bitrate DL> Not used<br><Delivery order> =0<br><Maximum SDU size> =320, 640<br><SDU error ratio> = "1E4"<br><Residual bit error ratio> ="1E5"<br><Delivery of erroneous SDUs> =1<br><Transfer delay> Not used<br><Traffic handling priority> =3 | Quality of Service Profile (Requested), TS 27.007 clause 10.1.4 |

## 8.8.2 AT Command Handling in TTCN

### 8.8.2.1 AT Command Interface

The AT Command Interface resides between the UE and the System Simulator (SS). The implementation of AT commands in the UE is optional[3]. It is agreed, however, that it is the responsibility of the SS - not the ATS - to map AT commands onto appropriate MMI commands. This means that the ATSSs issue AT commands which have to be mapped appropriately and forwarded to the UE, and vice versa.

The ATSSs have been implemented in such a way that AT commands are to be answered immediately. This means that the TTCN expects the answers right away and progresses only afterwards. As a consequence only positive AT responses are assumed.

There is only one exception from the rule of immediate answering: the CGACT command. For this command the TTCN does not expect an immediate AT response. Once the CGACT command has been issued a subsequent UE behaviour is

expected. The AT response is issued by the UE only after execution of the AT command, and it will only then be accounted for by the ATSS.

### 8.8.2.2 AT Command Dialogues

In some cases AT commands trigger a dialogue between the AT command interface and the UE. An example used in the SMS ATS is the CMGW command.

```
EXAMPLE: AT+CMGW="9501231234" (write message)
> This is the message body^Z
+CMGW: 7 (index number in storage returned)
OK
```

A special character (^Z) marks the end of the dialogue.

The ATSSs generate information to be sent to the UE as one block. If the command mapping function cannot proceed with the dialogue that way, it has to divide the received block into the appropriate pieces prior to forwarding them.

### 8.8.2.3 AT Response Types

The term 'response type' shall allow a distinction between different types of contents to answer upon an AT command issued by the TTCN.

#### 8.8.2.3.1 'OK' Response

Most AT commands are to be answered with 'OK'. All exceptions are according to 3GPP 27.007 [23], for example +CGDATA is to be answered with 'CONNECT'.

#### 8.8.2.3.2 Name String

There are a number of AT commands which, in the positive case, trigger an answer string from UEs. Such strings start with the command which is being answered.

```
EXAMPLE: AT+CPMS? (check memory settings)
+CPMS: "ME",4,10,"ME",4,10,"ME",4,10
OK
```

The implementation of this type of AT commands is such that the TTCN expects and checks the beginning of the response string. This would (later) facilitate possible direct connections between SS and UE.

#### 8.8.2.3.3 Error strings

There are situations when the UE cannot react positively upon an AT command. Different types of reactions are foreseen. The strings 'ERROR' or 'CMS ERROR: <err>' may be issued by UEs.

"...subparameter values of a command are not accepted by the TA (or command itself is invalid, or command cannot be performed for some reason), result code <CR><LF>ERROR<CR><LF> is sent to the TE and no subsequent commands in the command line are processed."

"Final result code +CMS ERROR: <err> indicates an error related to mobile equipment or network. The operation is similar to ERROR result code. None of the following commands in the same command line is executed. Neither ERROR nor OK result code shall be returned. ERROR is returned normally when error is related to syntax or invalid parameters."

The chosen way of realization prevents, in general, that error strings generated by the UE are passed to the SS. This holds for both intended and unintended errors (from the tester perspective).

### 8.8.2.4 AT Command Parameters And Options

Many AT commands take parameters some of which are optional. Thus, there is a degree of freedom left to the UEs. This freedom is widely used in the AT commands used in the SMS ATS. To allow flexible parameterization PIXIT items can be used to set the parameters as understood by the UEs.



An example of such parameters are the preferred memories to be used when testing.

## 8.9 Bit padding

Three different kinds of bit padding at the RRC layer are defined in 3GPP TS 25.331 [21].

If a bit string is defined in ASN.1 and is an output from a (PER) encoder, it may need the segmentation and padding. One example is that each SIB message is PER-encoded and becomes a (PER) bit-string. A long bit-string is segmented in fixed length, for example with 222 bits. The (1 ... 7) padding bits shall be added at the last segment if it's length is between 215 and 211.

No bit padding shall be generated by the PER encoder. Contrary to ITU-T Recommendation X.691 [28], the unaligned PER encoder shall not generate any padding bit to achieve octet alignment at the end of a PER bit string.

RRC padding. The RRC padding bits shall be generated after PER encoder. If the PER bit strings are exchanged via AM or UM SAP, the (1 ... 7) padding bits shall be added to ensure the octet alignment. If the PER bit strings are exchanged via TR SAP, before the exchanges, RRC shall select the smallest transport format that fits the RRC PDU and shall add the lowest number of padding bits required to fit the size specified for the selected transport format. The RRC padding bits shall be taken into account at the calculation of the integrity checksum.

### 8.9.1 Requirements for implementation

The different kinds of bit padding occur at the different places in the testing architecture. Care must be taken, in order to ensure the correct implementation.

The bit padding for the embedded bit string in ASN.1 shall be resolved in TTCN. It is under the responsibility of the TTCN writer. Several TSO defined can resolve the necessary bit padding in the downlink direction.

The unaligned PER encoder used for TTCN shall not implement the octet alignment at the end of a PER bit string in the downlink direction.

The RRC padding should be implemented at the SS in the downlink direction both for AM/UM and TR modes according to 3GPP TS 25.331 [21], clause 12.1.3.

The SS PER decoder has no need to distinguish the extension and padding parts in the UL direction, and shall match and accept RRC PDUs with any bit string in the extension and padding parts. The remaining part of the received bit string shall be discarded regardless of the RLC mode.

## 8.10 Test PDP contexts

Table 15 defines test PDP contexts used in the generic procedures for the PS establishment and other SM tests. The test PDP contextDch1 is the default Test PDP context used in the test cases where no particular Test PDP contexts are specified and UE is in DCH state. The test PDP contextFach is the default Test PDP context used in the test cases where no particular Test PDP contexts are specified and UE is in FACH state.

**Table 15: Test PDP contexts**

|                                       | <b>PDP<br/>ContextDch</b>                      | <b>PDP<br/>ContextFach</b>                     |
|---------------------------------------|--|--|
| <b>NSAPI</b>                          | Selected by UE in Activate PDP Context Request | Selected by UE in Activate PDP Context Request |
| <b>LLC SAPI</b>                       | 0  | 0  |
| <b>QoS</b>                            | QoSDch-UL64kAM-DL64kAM                         | QoSFach- UL32kAM-DL32kAM                       |
| <b>PDP address</b>                    | PIXIT  | PIXIT  |
| <b>Radio Priority</b>                 | 1  | 1  |
| <b>Access Point Name</b>              | tsc_AccessPtNameDCH<br>"ABCDEF"                | tsc_AccessPtNameFACH<br>"GHIJK"                |
| <b>Protocol configuration options</b> | -  | -  |
| <b>Packet Flow Identifier</b>         | Best Effort                                    | Best Effort                                    |

Table 16: Test QoS

|   | QoS Dch-UL64kAM-DL64kAM   | QoS Fach- UL32kAM-DL32kAM   |
|---|---|---|
| <b>Reliability class</b>                          | '011'B<br>Unacknowledged GTP, LLC, and<br>acknowledged RLC; Protected data  | '011'B<br>Unacknowledged GTP, LLC, and<br>acknowledged RLC; Protected data  |
| <b>Delay class</b>                                | '011'B / '100'B<br>3 / 4 (Best effort)  | '011'B / '100'B<br>3 / 4 (Best effort)  |
| <b>Precedence class</b>                           | UL:'000'B, Subscribed<br>DL:'011'B<br>Class 3   | UL:'000'B, Subscribed<br>DL:'011'B<br>Class 3   |
| <b>Peak throughput</b>                            | '0100'B<br>8 000 Octets/s   | '0011'<br>Up to 4 000 octet/s   |
| <b>Mean throughput</b>                            | '11111'B<br>Best Effort   | '11111'B<br>Best Effort   |
| <b>Delivery of erroneous SDU</b>                  | '010' B<br>Erroneous SDUs are delivered ('yes')   | '010' B<br>Erroneous SDUs are delivered ('yes')   |
| <b>Delivery order</b>                             | '10'B<br>With delivery order ('yes')  | '10'B<br>With delivery order ('yes')  |
| <b>Traffic class</b>                              | '011' B / '100'B<br>Interactive / Background  | '011' B / '100'B<br>Interactive / Background  |
| <b>Maximum SDU size</b>                           | '20' O<br>320 bits]   | '20'O<br>320 bits   |
| <b>Maximum bit rate for uplink</b>                | '40' O<br>64 kbps   | '20'O<br>32 kbps  |
| <b>Maximum bit rate for downlink</b>              | '40' O<br>64 kbps   | '20'O<br>32 kbps  |
| <b>Residual BER</b>                               | '0111'<br>1X10E-5   | '0111'<br>1X10E-5   |
| <b>SDU error ratio</b>                            | '0100'B<br>1X10E-4  | '0100'B<br>1X10E-4  |
| <b>Traffic Handling priority</b>                  | UL: '00'B for Interactive,<br>Any for Background<br>DL: '11' B (for Interactive, for<br>Background to be neglected by UE) | UL: '00'B for Interactive,<br>Any for Background<br>DL: '11' B (for Interactive, for<br>Background to be neglected by UE) |
| <b>Transfer delay</b>                             | UL: Any<br>DL: '111111' B<br>spare (not applicable for Interactive /<br>Background)                                       | UL: Any<br>DL: '111111' B<br>spare (not applicable for Interactive /<br>Background)                                       |
| <b>Guaranteed bit rate for uplink</b>             | UL: Any<br>DL: '10' O<br>16 kbps  | UL: Any<br>DL: '10'O<br>32 kbps   |
| <b>Guaranteed bit rate for downlink</b>           | UL: Any<br>DL: '10' O<br>16 kbps  | UL: Any<br>DL: '10'O<br>16 kbps   |
| NOTE: Residual BER 1X10E-5 corresponds to CRC 16. |   |   |

## 8.10.1 Mapping of Quality of service and AT command for HSDPA testing

Table 17 defines the encoding of the Maximum bit rate for downlink IE in QoS and the corresponding encoding in the AT command.

**Table 17: Test QoS in HSDPA test cases (Rel-5 or later)**

| UE HS-DSCH Category | Min inter-TTI interval (TTI=2ms) | Max number of bits of an HS-DSCH TB received within an HS-DSCH TTI (NOTE 1) | Max number of MAC-d PDUs in a single MAC-hs PDU with RLC payload size 640 bits (NOTE 2) | Max bit rate (kbps) | Max bit rate for DL QoS (Octetstring) | AT command for Max bit rate of DL QoS (IA5string) |
|---------------------|----------------------------------|---|---|---------------------|---------------------------------------|---|
| 1, 2                | 3                                | 7298  | 11  | 1173                | 89                                    | 1152  |
| 3, 4                | 2                                | 7298  | 11  | 1760                | 92                                    | 1728  |
| 5, 6                | 1                                | 7298  | 11  | 3520                | AE                                    | 3520  |
| 7, 8                | 1                                | 14411   | 21  | 6720                | E0                                    | 6720  |
| 9                   | 1                                | 20251   | 30  | 9600                | FE (octet 9)<br>0A (octet 15)         | 9600  |
| 10                  | 1                                | 27952   | 42  | 13440               | FE (octet 9)<br>30 (octet 15)         | 13400   |
| 11                  | 2                                | 3630  | 5   | 800                 | 83                                    | 768   |
| 12                  | 1                                | 3630  | 5   | 1600                | 90                                    | 1600  |
| 13,<br>17(64QAM)    | 1                                | 34800   | 53  | 16960               | FE (octet 9)<br>4A (octet 15)         | 16000   |
| 14,<br>18(64QAM)    | 1                                | 42196   | 64  | 20480               | FE (octet 9)<br>4E (octet 15)         | 20000   |
| 15,<br>17(MIMO)     | 1                                | 23370   | 35  | 11200               | FE (octet 9)<br>1A (octet 15)         | 11200   |
| 16,<br>18(MIMO)     | 1                                | 27952   | 42  | 13440               | FE (octet 9)<br>30 (octet 15)         | 13400   |

NOTE 1: Refer to 3GPP TS 25.306 [16a]

NOTE 2: The maximum number of single-sized MAC-d PDUs in a single MAC-hs PDU is calculated with the formula:

- **Max number MAC-d PDU = DIV ((MAX TB size - MAC-hs header fixed part), MAC-d PDU size)**
- where MAC-d PDU size = 640 + 16 = 656
- MAC-hs header fixed part = Length of MAC-hs fixed header (VF + Queue Id + TSN) + Length of MAC-hs flexible header (SID + N + F) = 21 bits

Example of calculation for category 1:

$$\text{Max number MAC-d PDU} = \text{DIV}((7298-21), 656) = 11$$

## 8.10.2 Mapping of Quality of service and AT command for E-DCH testing

Table 18 defines the encoding of the Maximum bit rate for uplink IE in QoS and the corresponding encoding in the AT command.

Table 18: Test QoS in E-DCH test cases (Rel-6 or later)

| UE E-DCH Category | Max number of bits of an E-DCH TB transmitted within an E-DCH TTI (NOTE 1) | TTI (NOTE3) | Max number of MAC-d PDUs in a single MAC-e/es PDU with RLC payload size 320 bits (NOTE 2) | Max bit rate (kbps) | Max bit rate for UL QoS (Octetstring) | AT command for Max bit rate of UL QoS (IA5string) |
|-------------------|--|-------------|---|---------------------|---------------------------------------|---|
| 1                 | 7110   | 10ms        | 21  | 672                 | 81                                    | 640   |
| 2                 | 2798   | 2ms         | 8   | 1280                | 8B                                    | 1280  |
| 2                 | 2798   | 10ms        | 8   | 256                 | 58                                    | 256   |
| 3                 | 14484  | 10ms        | 43  | 1376                | 8C                                    | 1344  |
| 4                 | 5772   | 2ms         | 17  | 2720                | A1                                    | 2688  |
| 4                 | 5772   | 10ms        | 17  | 544                 | 7C                                    | 544   |
| 5                 | 20000  | 10ms        | 59  | 1888                | 94                                    | 1856  |
| 6                 | 11484  | 2ms         | 34  | 5440                | CC                                    | 5440  |
| 6                 | 11484  | 10ms        | 34  | 1088                | 88                                    | 1088  |
| 7                 | 22996  | 2ms         | 68  | 10880               | FE (octet 8)<br>16 (octet 17)         | 10800   |
| 7                 | 22996  | 10ms        | 68  | 2176                | 55                                    | 2176  |

NOTE 1: Refer to 3GPP TS 25.306 [16a]

NOTE 2: The maximum number of MAC-d PDUs in a single MAC-e PDU containing a single MAC-es PDU is calculated with the formula:

- **Max number MAC-d PDU = DIV ((MAX TB size - Length of MAC-e/es fixed header (DDI+N+TSN)), MAC-d PDU size)**

Example of calculation for category 1:

Max number MAC-d PDU = DIV((7110 - 18), (320+16)) = 21

NOTE 3: TTI=2ms is preferred for the test unless specified differently in TS 34.123-1[1].

## 8.11 DCH-DSCH Configurations

### 1. Configure PDSCH physical channel

```
CPHY_RL_Setup_REQ(
    physicalChannelIdentity,
    pDSCHInfo)
```

-- set up the scrambling code and transmission power level for the PDSCH identified by PhysicalChannelIdentity, and establishes the mapping between the spreading factor (and channelization codes) used for the PDSCH and TFCI(field2) transmitted in associated PDCH

### 2. Configure DSCH transport channels

```
CPHY_TrCH_Config_REQ(
    physicalChannelIdentity,
    dlconnectedTrCHList,
    dlTFCS)
```

-- set up TFS for each of DSCH's carried by the PDSCH defined in step 1 and TFCS (will be presented in TFCI(field2) of PDCH configured in step 5) for the CCTrCH consisting of these DSCH's

### 3. Configure MAC entity for DSCH

```
CMAC_Config_REQ(
    physicalChannelIdentity,
    uE_Info,
    dlconnectedTrCHList,
    dlTFCS)
```

-- set up TFS, DSCH-RNTI and TFCS (which will be presented in TFCI(field2) of PDCH configured in step 5) for DSCH's, and map logical channel to DSCH transport channel

### 4. Configure RLC entity for DTCHs

```
CRLC_Config_REQ(
    physicalChannelIdentity,
    rBInfo)
```

-- set up RLC entity on top of DTCH logical channel which is mapped onto DSCH

**5. Configure DPCH physical channel**

```
CPHY_RL_Setup_REQ(
    physicalChannelIdentity,
    dPCHInfo)
```

**6. Configure DCH transport channels**

```
CPHY_TrCH_Config_REQ(
    physicalChannelIdentity,
    dlconnectedTrCHList,
    dlTFCS)
```

-- set up TFS for each DCH carried by the DPCH defined in step 5 and TFCS (TFCI(field1 and field2)) for the CCTrCH consisting of all DCH's mapped on the DPCH.

**7. Configure MAC entity for DCH**

```
CMAC_Config_REQ(
    physicalChannelIdentity,
    dlconnectedTrCHList,
    dlTFCS)
```

-- set up TFS and TFCS (TFCI(field1) for DCH's, and TFCI(field2) for associated DSCH), and map logical channel to DCH transport channel.

**8. Configure RLC for DTCH, DCCH**

```
CRLC_Config_REQ(
    physicalChannelIdentity,
    rBInfo)
```

-- set up RLC entity on top of DTCH and DCCH logical channels which are mapped onto DCH

**8.11a DCH with HS-DSCH Configurations (Rel-5 or later)****1. Configure DPCH physical channel**

```
CPHY_RL_Setup_REQ(
    physicalChannelIdentity,
    dPCHInfo_r5 or dPCHInfo_r6 or dPCHInfo_r7 )
```

-- hs\_DPCCHInd is present in the dPCHInfo ( only for HS-DSCH serving cell)

-- set up the DL-DPCH associated with HS-PDSCH

-- set up the HS-DPCCH which is associated with the HS-PDSCH (this is done only for HS-DSCH serving cell).

**2. Configure DCH transport channels**

```
CPHY_TrCH_Config_REQ(
    physicalChannelIdentity,
    dlconnectedTrCHList,
    dlTFCS)
```

-- set up TFS for each DCH carried by the DPCH defined in step 5 and TFCS for the CCTrCH consisting of all DCH's mapped on the DPCH.

**3. Configure MAC entity for DCH**

```
CMAC_Config_REQ(
    physicalChannelIdentity,
    dlconnectedTrCHList,
    dlTFCS)
```

-- set up TFS and TFCS for DCH's, and map logical channel to DCH transport channel.

**4. Configure RLC for DCCH**

```
CRLC_Config_REQ(
    rB_Identity,
    rBInfo)
```

-- set up RLC entity on top of DCCH logical channels which are mapped onto DCH

**5. Configure HS-PDSCH physical channel**

```
CPHY_RL_Setup_REQ(
    physicalChannelIdentity,
    hs_PDSCHInfo (r5 or r6 or r7[dedicated]))
```

-- set up the HS-PDSCH identified by PhysicalChannelIdentity

-- for the HS-PDSCH the configurable parameters are: the scrambling code, and

```
-- set up the HS-SCCH which is associated with the HS-PDSCH without physicalChannelIdentity
-- for the HS-SCCH the configurable parameters are: channelisation code set and H-RNTI
   hSDSCHPhysicalLayerCategory      HSDSCH_physical_layer_category,
hsdsch_physical_layer_category_ext  HSDSCH_physical_layer_category_ext,
-- needed when MAC-ehs is configured
   h_RNTI                            H_RNTI,          dlHSPDSCHInformation
DL_HSPDSCH_Information,
   ackNackRepetitionFactor          ACK_NACK_repetitionFactor,
   sttd_Indicator                   BOOLEAN,
   hs_SCCH_TxPower                  DL_TxPower,
   mimo_Parameters                  MIMO_Parameters
-- optionally present when MIMO is configured.
```

## 6. Configure HS-DSCH transport channels

### 6.a Associated with MAC-hs

```
CPHY_TrCH_Config_REQ(
   physicalChannelIdentity,
   hsDSCHMacdFlows)
-- set up the HS-DSCH transport channel which carries MAC_d flows identified by Mac_dFlowId
in the hsDSCHMacdFlows.
-- for each MAC_d flow the number of process queues of the MAC-d flow and their queue identities
are configurable;
-- for each MAChsQueue the configurable parameters are: machsQueueId; priority;
mac_hsPduSizeInfoList; reorderingReleaseTimer, discardTimer and the MAC-dFlow identity to which
this MAChsQueue belongs.
-- mimoStatus is set to TRUE if MIMO is configured.
```

### 6.b Associated with MAC-ehs [Rel-7 or later]

```
CPHY_TrCH_Config_REQ(
   physicalChannelIdentity,
   ehs_DSCH_Flows])
-- set up the HS-DSCH transport channel MAC-ehs Queues flows identified by mac_ehs_QueueId
in the EHS_DSCH_Flows.
-- for each MAC-ehsQueue the configurable parameters are: mac_ehs_QueueId;
reorderingReleaseTimerT1; mac_ehsWindowSize;
-- the number of harq process is configurable
-- mimoStatus is set to TRUE if MIMO is configured.
```

## 7. Configure MAC-hs/MAC-ehs entity for HS-DSCH

```
CMAC_MAChs_MACehs_TFRCconfigure_REQ(
   explicit TRFC config mode with:
   modulationScheme,
   channelisationCodeOffset,
   noOfChannelisatonCodes,
   tbSizeIndexOnHS_SCCH,
   minimumInterTTIinterval,
   redundancyVersion,
   hs_PDSCH_TxPower)
```

Or if MIMO is configured :

```
   explicit_MIMMO mode [ if MIMO is configured] with:
   modulationSchemeAndNumTB,
   channelisationCodeOffset,
   noOfChannelisatonCodes,
   precodingWeight2,
   primaryTB_SizeIndexOnHS_SCCH,
   secondaryTB_SizeIndexOnHS_SCCH,
   --present only if second TB is to be tx as per modulationSchemeAndNumTB
   minimumInterTTIinterval ,
   primaryRedundancyVersions,
   secondaryRedundancyVersions,
   --present only if second TB is to be tx as per modulationSchemeAndNumTB
   hs_PDSCH_TxPower
```

)

### 7.a MAC-hs

```
CMAC_Config_REQ(
   physicalChannelIdentity,
   uE_Info,
   hsDSCHMacdFlows)
-- the hsDSCHMacdFlows shall be same as that used in CPHY_TrCH_Config_REQ.
-- set up MAC_d flows identified by Mac_dFlowId in the hsDSCHMacdFlows.
```

```
-- for each MAC_d flow the number of process queues of the MAC-d flow and their queue identities
are configurable;
-- for each MAChsQueue the configurable parameters are: machsQueueId; priority;
mac_hsPduSizeInfoList; reorderingReleaseTimer, discardTimer and the MAC-dFlow identity to which
this MAChsQueue belongs.
-- set up the mapping between each MAC_d flow and the logical channels which mapped on the flow.
-- MAC-hs entity is created per cell. In case of Intra Node B Handover this entity at the UE will
not be reset whereas in the TTCN it will be released in the first cell and setup in the second
cell. As no data is sent on HS-DSCH, this implementation will not affect the signalling, as
signalling is transmitted through the associated DPCH channel.
-- mimoStatus is set to TRUE if MIMO is configured.
```

### 7.b MAC-ehs [Rel-7 or later]

```
CMAC_Config_REQ(
    physicalChannelIdentity,
    ue_Info,
    ehs_DSCH_Flows)
-- the ehs_DSCH_Flows shall be same as that used in CPHY_TrCH_Config_REQ.
-- set up ehs-DSCH flows identified by mac_ehs_QueueId in the hsDSCHMacdFlows.
-- set up the mapping between each mac-ehs flow and the logical channels which mapped on the flow.
-- MAC_ehs entity is created per cell. In case of Intra Node B Handover this entity at the UE will
not be reset whereas in the TTCN it will be released in the first cell and setup in the second cell.
As no data is sent on HS-DSCH, this implementation will not affect the signalling, as signalling is
transmitted through the associated DPCH channel.
-- mimoStatus is set to TRUE if MIMO is configured.
```

### 8. Configure RLC entity for DTCHs which is mapped on HS-DSCH

```
CRLC_Config_REQ(
    rB_Identity,
    rBInfo)
-- set up RLC entity on top of DTCH logical channel which is mapped onto MAC_d/MAC-ehs flow
```

### 9. MAC-hs/MAC-ehs reset, release of SS resources for HSDPA

```
MAC-hs/MAC-ehs reset:
    CMAC_MAChs_MACehs_Reset_REQ(
        cellId)

RL release:
    CPHY_RL_Release_REQ(
        cellId, phyChId)
-- phyChId is the identity of HS-PDSCH physical channel or the associated DPCH channel
-- the HS-SCCH physical channel shall be also released when HS-PDSCH is released
-- the HS-DPCCH physical channel shall be released when the associated DPCH is released

TrCH release:
    CPHY_TrCH_Release_REQ(
        cellId, phyChId)
-- phyChId is the identity of HS-PDSCH physical channel

MAC-hs/MAC-ehs release:
    CMAC_Config_REQ(
        cellId, phyChId)
-- phyChId is the identity of HS-PDSCH physical channel

RLC release:
    CRLC_Config_REQ(
        cellId, rbId)
-- rbId is the identity of the radio bearer providing HSDPA service
```

## 8.11aa HS-DSCH Configurations without DCH associated (Rel-6 or later)

### 1. Configure F-DPCH physical channel

```
CPHY_RL_Setup_REQ(
    physicalChannelIdentity,
    dpCHInfo_r6 or dpCHInfo_r7 )
-- hs_DPCCHInd is present in the dpCHInfo (only for HS-DSCH serving cell)
-- set up the DL-FDPCH associated with HS-PDSCH
-- set up the HS-DPCCH which is associated with the HS-PDSCH (this is done only for HS-DSCH serving
-- cell).
```

## 2. Configure HS-PDSCH physical channel

```

CPHY_RL_Setup_REQ(
    physicalChannelIdentity,
    hs_PDSCHInfo (r5 or r6 or r7[dedicated]))
-- set up the HS-PDSCH identified by PhysicalChannelIdentity
-- for the HS-PDSCH the configurable parameters are: the scrambling code, and
-- set up the HS-SCCH which is associated with the HS-PDSCH without physicalChannelIdentity
-- for the HS-SCCH the configurable parameters are: channelisation code set and H-RNTI
    hSDSCHPhysicalLayerCategory      HSDSCH_physical_layer_category,
    hsdSCH_physical_layer_category_ext HSDSCH_physical_layer_category_ext,
    -- needed when MAC-ehs is configured
    h_RNTI                            H_RNTI,
    dlHSPDSCHInformation              DL_HSPDSCH_Information,
    ackNackRepetitionFactor           ACK_NACK_repetitionFactor,
    sttd_Indicator                    BOOLEAN,
    hs_SCCH_TxPower                   DL_TxPower,
    hs_scch_LessInfo                  HS_SCCH_LessInfo_r7
    -- if hs-scch less operation[Rel-7] is enabled. Conditional to no DCH configured
    -- in UL as well.
    mimo_Parameters                   MIMO_Parameters_r7
    -- optionally present when MIMO is configured.
    -- mimo and HS-SCCH cannot be simultaneously configured.

```

## 6. Configure HS-DSCH transport channels

### 6.a Associated with MAC-hs

```

CPHY_TrCH_Config_REQ(
    physicalChannelIdentity,
    hsDSCHMacdFlows)
-- set up the HS-DSCH transport channel which carries MAC_d flows identified by Mac_dFlowId
in the hsDSCHMacdFlows.
-- for each MAC_d flow the number of process queues of the MAC-d flow and their queue identities
are configurable;
-- for each MACHsQueue the configurable parameters are: machsQueueId; priority;
mac_hsPduSizeInfoList; reorderingReleaseTimer, discardTimer and the MAC-dFlow identity to which
this MACHsQueue belongs.
-- mimoStatus is set to TRUE if MIMO is configured.

```

### 6.b Associated with MAC-ehs [Rel-7 or later]

```

CPHY_TrCH_Config_REQ(
    physicalChannelIdentity,
    ehs_DSCH_Flows])
-- set up the HS-DSCH transport channel MAC-ehs Queues flows identified by mac_ehs_QueueId
in the EHS_DSCH_Flows.
-- for each MAC-ehsQueue the configurable parameters are: mac_ehs_QueueId;
ReorderingReleaseTimerT1; mac_ehsWindowSize;
-- the number of harq process is configurable
-- mimoStatus is set to TRUE if MIMO is configured.

```

## 7. Configure MAC-hs/MAC-ehs entity for HS-DSCH

### If HS-SCCH less operation is not used:

```

CMAC_MAChs_MACehs_TFRCconfigure_REQ(
    explicit TRFC config mode with:
        modulationScheme,
        channelisationCodeOffset,
        noOfChannelisatonCodes,
        tbSizeIndexOnHS_SCCH,
        minimumInterTTIinterval,
        redundancyVersion,
        hs_PDSCH_TxPower)

```

```

Or if MIMO is configured :
    explicit_MIMMO mode [if MIMO is configured] with:
        modulationSchemeAndNumTB,
        channelisationCodeOffset,
        noOfChannelisatonCodes,
        precodingWeight2,

```



```

primaryTB_SizeIndexOnHS_SCCH,
secondaryTB_SizeIndexOnHS_SCCH,
  --present only if second TB is to be tx as per modulationSchemeAndNumTB
minimumInterTTIinterval ,
primaryRedundancyVersions,
secondaryRedundancyVersions,
  --present only if second TB is to be tx as per modulationSchemeAndNumTB
hs_PDSCH_TxPower

```

### If HS-SCCH less operation is used [Rel-7 or later]:

```

CMAC_MAChs_MAC-ehs_TFRCconfigure_REQ(
  hs_scch_LessInfo mode with:
    modulationScheme,
    channelisationCodeOffset,
    noOfChannelisationCodes,
    tbSizeIndexOnHS_SCCH,
    minimumInterTTIinterval,
    redundancyVersion,
    hs_PDSCH_TxPower)

```

### 7.a MAC-hs

```

CMAC_Config_REQ(
  physicalChannelIdentity,
  uE_Info,
  hsDSCHMacdFlows)
-- the hsDSCHMacdFlows shall be same as that used in CPHY_TrCH_Config_REQ.
-- set up MAC_d flows identified by Mac_dFlowId in the hsDSCHMacdFlows.
-- for each MAC_d flow the number of process queues of the MAC-d flow and their queue identities
  are configurable;
-- for each MAChsQueue the configurable parameters are: machsQueueId; priority;
  mac_hsPduSizeInfoList; reorderingReleaseTimer, discardTimer and the MAC-dFlow identity to which
  this MAChsQueue belongs.
-- set up the mapping between each MAC_d flow and the logical channels which mapped on the flow.
-- MAC-hs entity is created per cell. In case of Intra Node B Handover this entity at the UE will
  not be reset whereas in the TTCN it will be released in the first cell and setup in the second
  cell. As no data is sent on HS-DSCH, this implementation will not affect the signalling, as
  signalling is transmitted through the associated DPCH channel.
-- mimoStatus is set to TRUE if MIMO is configured.

```

### 7.b MAC-ehs [Rel-7 or later]

```

CMAC_Config_REQ(
  physicalChannelIdentity,
  uE_Info,
  ehs_DSCH_Flows)
-- the ehs_DSCH_Flows shall be same as that used in CPHY_TrCH_Config_REQ.
-- set up ehs-DSCH flows identified by mac_ehs_QueueId in the hsDSCHMacdFlows.
-- set up the mapping between each mac-ehs flow and the logical channels which mapped on the flow.
-- MAC_ehs entity is created per cell. In case of Intra Node B Handover this entity at the UE will
  not be reset whereas in the TTCN it will be released in the first cell and setup in the second cell.
  As no data is sent on HS-DSCH, this implementation will not affect the signalling, as signalling is
  transmitted through the associated DPCH channel.
-- mimoStatus is set to TRUE if MIMO is configured.

```

### 8. Configure RLC entity for DTCHs and/or DCCHs (if not already configured) which is mapped on HS-DSCH

```

CRLC_Config_REQ(
  rB_Identity,
  rBInfo)
-- set up RLC entity on top of DTCH/DCCH logical channel which is mapped onto MAC-d/mac-ehsQueue

```

### 9. MAC-hs/MAC-ehs reset, release of SS resources for HSDPA

```

MAC-hs/MAC-ehs reset:
  CMAC_MAChs_MACehs_Reset_REQ(
    cellId)

RL release:
  CPHY_RL_Release_REQ(
    cellId, phyChId)
-- phyChId is the identity of HS-PDSCH physical channel or the associated DPCH channel
-- the HS-SCCH physical channel shall be also released when HS-PDSCH is released

```

```
-- the HS-DPCCH physical channel shall be released when the associated DPCH is released

TrCH release:
  CPHY_TrCH_Release_REQ(
    cellId, phyChId)
-- phyChid is the identity of HS-PDSCH physical channel

MAC-hs/MAC-ehs release:
  CMAC_Config_REQ(
    cellId, phyChId)
-- phyChid is the identity of HS-PDSCH physical channel

RLC release:
  CRLC_Config_REQ(
    cellId, rbId)
-- rbid is the identity of the radio bearer providing HSDPA service
```

## 8.11b HS-DSCH Configuration Verification

In most HSDPA test cases although the HSDPA channels (HS-SCCH, HS-PDSCH, HS-DSCH & HS-DPCCH) are set up and reconfigured using RRC peer messages, no data is sent on HS-DSCH and all the signalling is transmitted through the associated DPCH physical channel.

In order to ensure that the HS-DPCCH channel has been configured, the SS shall, upon request, forward one CQI report to the TTCN.

## 8.11c HS-DSCH Configurations for enhanced Cell FACH (Rel-7 or later) [Mapping CCCH/BCCH/PCCH on HS-DSCH]

### 1. Configure HS-PDSCH physical channel

```
CPHY_RL_Setup_REQ(
  physicalChannelIdentity,
  Common_HS_PDSCH_Info)
-- set up the HS-PDSCH identified by PhysicalChannelIdentity
-- for the HS-PDSCH the configurable parameters are: the scrambling code, and
-- set up the HS-SCCH which is associated with the HS-PDSCH without physicalChannelIdentity
-- for the HS-SCCH the configurable parameters are: channelisation code set and common/dedicated H-
RNTI selected by/allocated to UE
  hSDSCHPhysicalLayerCategory      HSDSCH_physical_layer_category,
  hs_DSCH_64QAM_Support            BOOLEAN,
  -- needed only if 64QAM[Rel-7] is supported [Cat 13 and 14]
  commonOrDedicated_H_RNTI        H_RNTI,
  bcchSpecific_H_RNTI              H_RNTI,
  hs_scch_SystemInfo               HS_SCCH_SystemInfo,
  hs_dsch_PagingSystemInformation  HS_DSCH_PagingSystemInformation,
  sttd_Indicator                   BOOLEAN,
  hs_SCCH_TxPower                   DL_TxPower      -- offset related to CPICH
  hs_scch_LessInfo                  HS_SCCH_LessInfo_r7
  -- if hs-scch less operation[Rel-7] is enabled. Conditional to no DCH configured
  in UL as well.
  mimo_Parameters                    MIMO_Parameters
  -- optionally present when MIMO is configured.
  -- mimo and HS-SCCH cannot be simultaneously configured.
```

### 6. Configure HS-DSCH transport channels

```
CPHY_TrCH_Config_REQ(
  physicalChannelIdentity,
  ehs_DSCH_CommonFlows)
-- set up the HS-DSCH transport channel MAC-ehs common flows identified by mac_ehs_QueueId
in the EHS_DSCH_Flows.
-- for each MAC-ehsQueue the configurable parameters are: mac_ehs_QueueId ;reorderingReleaseTimer
T1; mac_ehsWindowSize;
the number of harq processare is configurable
```

### 7. Configure MAC-hs/MAC-ehs entity for HS-DSCH

```
CMAC_MAChs_MACehs_TFRCconfigure_REQ(
```

```
explicit TRFC config mode with:
    hs_pdsch_CodeIndex,
    hs_scch_LessTFI,
    hs_scch_LessSecondCodeApplicability,
    hs_PDSCH_TxPower)

CMAC_Config_REQ(
    physicalChannelIdentity,
    uE_Info,
    ehs_DSCH_CommonFlows)
-- the ehs_DSCH_CommonFlows shall be same as that used in CPHY_TrCH_Config_REQ.
-- set up ehs-DSCH flows identified by mac_ehs_QueueId in the hsDSCHMacdFlows.
-- set up the mapping between each ehs_DSCH_CommonFlows and the logical channels which are mapped on
the flow.
-- MAC_ehs entity is created per cell. In case of Intra Node B Handover this entity at the UE will
not be reset whereas in the TTCN it will be released in the first cell and setup in the second cell.
```

## 8.12 Pre- and postambles for GERAN to UTRAN tests

### 8.12.1 Preamble for GERAN to UTRAN tests

Before running inter-RAT test cases, radio conditions should be such that the mobile has to select the cell of the intended original RAT. The following steps should be used before running GERAN to UTRAN test cases.

1. UTRAN cell is powered OFF. The default radio conditions for a suitable GERAN cell are used for the serving cell, as defined in 3GPP TS 34.108 [3], clause 6.1.7. This step is performed while the UE is still switched OFF.
2. UE is switched ON and performs registration and attach.
3. The UTRAN cell is powered ON with an RF level such that the cell is a suitable neighbour cell, using the RF conditions defined in 3GPP TS 34.108 [3], clause 6.1.5, so that the UE will not re-select the UTRAN cell.

### 8.12.2 Postamble for GERAN to UTRAN tests

The following procedure is used after inter-RAT handover or cell change order test cases in case the test needs to be performed multiple times in a loop.

## 8.12.2.1 GERAN to UTRAN handover in CS

The test cases are defined in 3GPP TS 51.010-1 [26], clause 60.

Expected sequence

| Step | Direction |    | Message                            | Comments   |
|------|-----------|----|------------------------------------|--|
|      | UE        | SS |                                    |  |
| 1    | <--       |    | SECURITY MODE COMMAND              | Integrity protection is activated. UTRAN security keys in CS domain derived from GERAN   |
| 2    | -->       |    | SECURITY MODE COMPLETE             |  |
| 3    | <--       |    | UTRAN MOBILITY INFORMATION         | RRC  |
| 4    | -->       |    | UTRAN MOBILITY INFORMATION CONFIRM | RRC  |
| 5    | -->       |    | ROUTING AREA UPDATE REQUEST        | GMM - Update type = 'RA updating'. Not performed by CS only mobile.  |
| 5a   | <--       |    | SECURITY MODE COMMAND              | Integrity protection is activated. UTRAN security keys in PS domain derived from GERAN   |
| 5b   | -->       |    | SECURITY MODE COMPLETE             |  |
| 6    | <--       |    | ROUTING AREA UPDATE ACCEPT         | GMM - P-TMSI is included   |
| 7    | -->       |    | ROUTING AREA UPDATE COMPLETE       |  |
| 8    |           |    |                                    | The call is terminated. SS releases the RRC connection.  |
| 9    | -->       |    | RRC CONNECTION REQUEST             | RRC - establishment cause = 'registration'   |
| 10   | <--       |    | RRC CONNECTION SETUP               | RRC  |
| 11   | -->       |    | RRC CONNECTION SETUP COMPLETE      | RRC  |
| 12   | -->       |    | ROUTING AREA UPDATE REQUEST        | CS/PS mobiles: GMM - Update type" = 'combined RA/LA updating' or 'combined RA/LA updating with ISMI Attach'<br>Note: CS only mobiles will perform a normal LAU |
| 13   | <--       |    | SECURITY MODE COMMAND              | Integrity protection is activated.   |
| 14   | -->       |    | SECURITY MODE COMPLETE             |  |
| 15   | <--       |    | ROUTING AREA UPDATE ACCEPT         | P-TMSI is included   |
| 16   | -->       |    | ROUTING AREA UPDATE COMPLETE       |  |
| 17   |           |    |                                    | The SS releases the RRC connection.  |
| 18   |           |    |                                    | UE is powered OFF  |

Specific message contents

UTRAN MOBILITY INFORMATION message:

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

| Information Element                               | Value/remark |
|---|--------------|
| CN information info                               |              |
| - PLMN identity                                   | Not present  |
| - CN domain related information                   |              |
| - CN domain identity                              | PS           |
| - CN domain specific NAS system information       |              |
| - GSM-MAP NAS system information                  | 00 00H       |
| - CN domain specific DRX cycle length coefficient | 7            |

SECURITY MODE COMMAND message:

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

| Information Element | Value/remark |
|---------------------|--------------|
| Ciphering mode info | Not present  |

All remaining Specific message contents shall be referred to 34.108 clause 9 "Default Message Contents of Layer3 Messages for Layer 3 Testing".

### 8.12.2.2 GERAN to UTRAN cell change in PS (in PMM-CONNECTED)

These test cases are defined in 3GPP TS 51.010-1 [26], clause 42.4.7.

Expected sequence

| Step | Direction |     | Message                      | Comments  |
|------|-----------|-----|------------------------------|---|
|      | UE        | SS  |                              |   |
| 1    |           | --> | ROUTING AREA UPDATE REQUEST  | GMM - Update type = 'Combined RA / LA updating' or 'combined RA/LA updating with ISMI Attach' for CS/PS mobiles, and 'RA updating' for PS only mobiles.<br>Follow-on request is made. |
| 2    |           | <-- | SECURITY MODE COMMAND        | Integrity protection is activated, UTRAN security keys in PS domain derived from GERAN  |
| 3    |           | --> | SECURITY MODE COMPLETE       |   |
| 4    |           | <-- | ROUTING AREA UPDATE ACCEPT   | GMM - P-TMSI is included  |
| 5    |           | --> | ROUTING AREA UPDATE COMPLETE |   |
|      |           |     |                              | SS releases the RRC connection  |
|      |           |     |                              | UE is powered OFF.  |

### 8.12.2.3 GERAN to UTRAN DTM test cases

These test cases are defined in 3GPP TS 51.010-1 [26], clauses 41.5.1.1.1.4 and 47.3.4.

Expected sequence

| Step | Direction |    | Message                       | Comments  |
|------|-----------|----|-------------------------------|---|
|      | UE        | SS |                               |   |
|      |           |    |                               | The SS releases the RR connection   |
| 1    | -->       |    | RRC CONNECTION REQUEST        | RRC - establishment cause = 'registration'  |
| 2    | <--       |    | RRC CONNECTION SETUP          | RRC   |
| 3    | -->       |    | RRC CONNECTION SETUP COMPLETE | RRC   |
| A4   | -->       |    | ROUTING AREA UPDATE REQUEST   | UE behaviour type A, if the UE is still attached:<br>GMM - Update type = 'Combined RA / LA updating' or 'combined RA/LA updating with ISMI Attach |
| A5   | <--       |    | SECURITY MODE COMMAND         | Integrity protection is activated, UTRAN security keys in PS domain derived from GERAN  |
| A6   | -->       |    | SECURITY MODE COMPLETE        |   |
| A7   | <--       |    | ROUTING AREA UPDATE ACCEPT    | GMM - P-TMSI is included  |
| A8   | -->       |    | ROUTING AREA UPDATE COMPLETE  |   |
| B4   | -->       |    | LOCATION UPDATING REQUEST     | UE behaviour type B, if the UE has already detached   |
| B5   |           |    | AUTHENTICATION REQUEST        |   |
| B6   |           |    | AUTHENTICATION RESPONSE       |   |
| B7   | <--       |    | SECURITY MODE COMMAND         | Integrity protection is activated, UTRAN security keys in CS domain derived from GERAN  |
| B8   | -->       |    | SECURITY MODE COMPLETE        |   |
| B8a  | <--       |    | LOCATION UPDATING ACCEPT      |   |
| B8b  | -->       |    | TMSI REALLOCATION COMPLETE    |   |
| 9    |           |    |                               | SS releases the RRC connection  |
| 10   |           |    |                               | UE is powered OFF.  |

## 8.13 E-DCH configurations (Rel-6 or later)

### 8.13.1 DPCH (SRB) and E-DCH (RAB) configuration

#### 8.13.1.1 Serving E-DCH cell

##### 1. Configure DPCH physical channel

```
CPHY_RL_Setup_REQ
```

```
(
```

```
  cellId_1
  physicalChannelIdentity,
  dPCHInfo_r5OrLater
    r6 (
      ul_DPCH_Info6
    )
)
```

```
-- set up the UL-DPCH channel. When UL-DPCH is established, E-DPCH shall use the same scrambling code.
```

## 2. Configure DCH transport channels

```
CPHY_TrCH_Config_REQ(
    cellId_1
    physicalChannelIdentity,
    ulconnectedTrCHList,
    ulTFCS)
```

-- set up TFS for each DCH carried by the DPCH defined in step 5 and TFCS for the CCTrCH consisting of all DCH's mapped on the DPCH.

## 3. Configure MAC entity for DCH

```
CMAC_Config_REQ(
    physicalChannelIdentity,
    ulconnectedTrCHList,
    ulTFCS)
```

-- set up TFS and TFCS for DCH's, and map logical channel to DCH transport channel.  
uE\_Info

## 4. Configure RLC for DCCH

```
CRRLC_Config_REQ(
    rB_Identity,
    rBInfo)
```

-- set up RLC entity on top of DCCH logical channels which are mapped onto DCH

## 5. Configure E-DCH DL physical channel CPHY\_RL\_Setup\_REQ

```
(
    physicalChannelIdentity,
    e_AGCHInfo
    (
        e_AGCHInfo
        tti
        e_AGCH_PowerOffset
    )
)
```

-- set up the E-AGCH identified by PhysicalChannelIdentity  
-- E-AGCH channel is configured only in the serving E-DCH cell  
-- for E-AGCH the configurable parameters are  
e\_AGCHInfo                    E\_AGCH\_Information  
e\_AGCH\_PowerOffset         INTEGER (0..255)  
e\_RNTI\_Primary             E\_RNTI  
e\_RNTI\_Secondary          E\_RNTI  
-- The tti value shall be the same as the associated E-DPCH

```
CPHY_RL_Setup_REQ
(
    physicalChannelIdentity,
    e_HICHInfo
    (
        e_HICHInfo
        tti
        e_HICH_PowerOffset
    )
)
```

-- set up the E-HICH identified by PhysicalChannelIdentity  
-- for E-HICH the configurable parameters are  
e\_HICHInfo                    E\_HICH\_Information  
e\_HICH\_PowerOffset         INTEGER (0..255)  
-- The tti value shall be the same as the associated E-DPCH  
-- As E-HICH is having timing dependencies with DPCH, it is configured last  
CPHY\_RL\_Setup\_REQ

```
(
    physicalChannelIdentity,
    e_RGCHInfo
    (
        e_RGCHInfo
        tti
        e_RGCH_PowerOffset
    )
)
```

-- set up the E-RGCH identified by PhysicalChannelIdentity  
-- for E-RGCH the configurable parameters are  
e\_RGCHInfo                    E\_RGCH\_Information  
e\_RGCH\_PowerOffset         INTEGER (0..255)  
-- The tti value shall be the same as the associated E-DPCH

**6. Configure E-DCH UL physical channel**

```

CPHY_RL_Setup_REQ
(
    physicalChannelIdentity
    e_DPCHInfo
        (
            e_DPCCH_Info
            e_DPDCH_Info
            scramblingCodeType
            scramblingCode
            tti
            edch_PhysicalLayerCategory
        )
)
-- set up the E-DCH identified by PhysicalChannelIdentity
-- for E-DPCH the configurable parameters are
    e_DPCCH_Info          E_DPCCH_Info
    e_DPDCH_Info          E_DPDCH_Info
    tti                   E_DCH_TTI
    edch_PhysicalLayerCategory  INTEGER (1..16)
-- The scramblingCodeType and scramblingCode shall be the same as for UL-DPCH

```

**7. Configure E-DCH UL transport channels**

```

CPHY_TrCH_Config_REQ (
    physicalChannelIdentity,
    e_DCHMacdFlows
)
-- set up the E-DCH transport channel which carries one or multiple MAC_d flows, one Mac_d flow is
defined as
{
    tti                   E_DCH_TTI
    harqInfo              ENUMERATED { rv0 (0) }
    addReconf_MAC_d_Flow E_DCH_AddReconf_MAC_d_Flow
}
-- the tti parameter is the same for all Mac_d flows
-- each Mac_d flow is identified by mac-d-FlowIdentity defined in the addReconf_MAC_d_Flow
-- for each MAC_d flow the configurable parameters are: mac-d-FlowPowerOffset, mac-d-FlowMaxRetrans,
mac-d-FlowMultiplexingList, transmissionGrantType

```

**8. Mapping E-DCH cells in Node B**

```

CMAC_MACe_NodeB_CellMapping_REQ
(
    nodeB_Id
    celllist
)
-- set-up the mapping between NodeB-Id and E-DCH cells in celllist
-- a E-DCH cell is mapped to only one NodeB, and the cellId allocation is unique in a test.

```

**9. Configure MAC\_e entity for E-DCH**

```

CMAC_MACe_Config_REQ
(
    nodeB_Id
    ddiMappinglist
    e_DCHMacdFlows
    connectedToMAC_es
)
-- MAC_e entity is created per Node-B
-- the e_DCHMacdFlows shall be same as that used in CPHY_TrCH_Config_REQ
-- the field connectedToMAC_es shall be set to TRUE in serving E-DCH cell
-- the field connectedToMAC_es shall be set to FALSE in inter nodeB SHO
-- ddiMappinglist is defined as
    activationTime          SS_ActivationTime
    macHeaderManipulation  MAC_HeaderManipulation
    logicalChannelIdentity LogicalChannelIdentity
    e_DCH_MAC_d_FlowIdentity E_DCH_MAC_d_FlowIdentity
    ddi                     DDI
    rlc_PDU_SizeList       RLC_PDU_SizeList
    mac_LogicalChannelPriority MAC_LogicalChannelPriority
    logicalChannelType      LogicalChannelType

```



**10. Configure MAC\_es entity for E-DCH**

```

CMAC_MACes_Config_REQ
(
    ddiMappinglist
    macTestMode
)
-- set-up the mapping between the logical channel and the Mac_d flows
-- only one MAC_es entity is created
-- the ddiMappinglist shall be the same as that used in CMAC_MACe_Config_REQ

```

**11. Configure RLC entity for DTCHs which is mapped on E-DCH**

```

CRLC_Config_REQ
(
    rB_Identity,
    rBInfo
)
-- set up RLC entity on top of DTCH logical channel which is mapped onto MAC_d flow

```

**8.13.1.2 SHO - addition of E-DCH RL in a serving RL cell (intra node B)****1. Configure E-DCH physical channel**

-- E-DPCH is not configured: the cell is under the control of the same nodeB as the initial RL.  
-- E-AGCH channel is not configured, it is configured only in the serving E-DCH cell

```

CPHY_RL_Setup_REQ
(
    physicalChannelIdentity,
    e_HICHInfo
    (
        e_HICHInfo
        tti
        e_HICH_PowerOffset
    )
)
-- set up the E-HICH identified by PhysicalChannelIdentity
-- for E-HICH the configurable parameters are
    e_HICHInfo          E_HICH_Information
    e_HICH_PowerOffset  INTEGER (0..255)
-- The tti value shall be the same as the associated E-DPCH in the serving E-DCH cell

```

```

CPHY_RL_Setup_REQ
(
    physicalChannelIdentity,
    e_RGCHInfo
    (
        e_RGCHInfo
        tti
        e_RGCH_PowerOffset
    )
)
-- set up the E-RGCH identified by PhysicalChannelIdentity
-- for E-RGCH the configurable parameters are
    e_RGCHInfo          E_RGCH_Information
    e_RGCH_PowerOffset  INTEGER (0..255)
The tti value shall be the same as the associated E-DPCH in the serving E-DCH cell

```

**2. Mapping E-DCH cells in Node B**

```

CMAC_MACe_NodeB_CellMapping_REQ
{
    nodeB_Id
    celllist
}
-- set-up the mapping between NodeB-Id and the new E-DCH cell in celllist

```

### 8.13.1.3 SHO – addition of E-DCH RL in a non-serving RL cell (inter node B)

#### 1. Configure E-DCH DL physical channel

```

CPHY_RL_Setup_REQ
(
    physicalChannelIdentity,
    e_HICHInfo
    (
        e_HICHInfo
        tti
        e_HICH_PowerOffset
    )
)
-- set up the E-HICH identified by PhysicalChannelIdentity
-- for E-HICH the configurable parameters are
    e_HICHInfo          E_HICH_Information
    e_HICH_PowerOffset  INTEGER (0..255)
-- The tti value shall be the same as the associated E-DPCH in the serving E-DCH cell

CPHY_RL_Setup_REQ
(
    physicalChannelIdentity,
    e_RGCHInfo
    (
        e_RGCHInfo
        tti
        e_RGCH_PowerOffset
    )
)
-- set up the E-RGCH identified by PhysicalChannelIdentity
-- for E-RGCH the configurable parameters are
    e_RGCHInfo          E_RGCH_Information
    e_RGCH_PowerOffset  INTEGER (0..255)
-- The tti value shall be the same as the associated E-DPCH in the serving E-DCH cell

```

#### 2. Configure E-DCH UL physical channel

```

CPHY_RL_Setup_REQ
(
    physicalChannelIdentity,
    e_DPCHInfo
    (
        e_DPCCH_Info
        e_DPDCH_Info
        scramblingCodeType
        scramblingCode
        tti
        edch_PhysicalLayerCategory
    )
)
-- set up the E-DCH identified by PhysicalChannelIdentity, the same as in the serving E-DCh cell
-- for E-DPCH the configurable parameters are
    e_DPCCH_Info          E_DPCCH_Info,
    e_DPDCH_Info          E_DPDCH_Info,
    edch_PhysicalLayerCategory  INTEGER (1..16)
-- The scramblingCodeType and scramblingCode shall be the same as for UL-DPCH
-- The tti value shall be the same as the E-DPCH in the serving E-DCH cell
-- for E-DPCH, the scramblingCodeType and scramblingCode shall be the same as for UL_DPCH
-- E-AGCH channel is not configured

```

#### 3. Configure E-DCH transport channels

```

CPHY_TrCH_Config_REQ
(
    physicalChannelIdentity,
    e_DCHMacdFlows
)
-- set up the E-DCH transport channel which carries the same MAC_d flows as the initial RL

```

#### 4. Configure MAC\_e entity for E-DCH

```

CMAC_MACe_Config_REQ
(
    nodeB_Id
    ddiMappinglist
    e_DCHMacdFlows
    connectedToMAC_es FALSE
)
-- MAC_e entity is created per Node-B
-- the e_DCHMacdFlows shall be same as that used in CPHY_TrCH_Config_REQ
-- the field connectedToMAC_es shall be set to FALSE in inter nodeB SHO
-- ddiMappinglist is defined like in the initial RL

```

#### 5. Mapping E-DCH cells in Node B

```

CMAC_MACe_NodeB_CellMapping_REQ
(
    nodeB_Id
    celllist
)
-- set-up the mapping between the new NodeB-Id and E-DCH in the new cell

```

### 8.13.2 DPCH/HS-DSCH/E-DCH setup and release order

When setting up an HSUPA RAB, the following order of channel configuration is applied:

DL-DPCH, HS-DSCH, UL-DPCH, E-DCH.

When releasing an HSUPA RAB, the following order of channel release/ modification is applied:

E-DCH, HS-DSCH, UL-DPCH, DL-DPCH.

### 8.13.3 Serving E-DCH cell with UL DTX Configured [Rel-7]

UL-DRX is always configured when UL-DTX is started.

#### 1. Configure DPCH physical channel

```

CPHY_RL_Setup_REQ
(
    cellId_1
    physicalChannelIdentity,
    dpCHInfo_r5OrLater
    r7 {
        UL_DPCH_Info_r7
        {
            scramblingCodeType,
            scramblingCode,
            dpdchPresence notPresent
        },
        hs_DPCCHInd,
        ss_UL_DPCCH_DRX_Info
    }
)
-- set up the UL-DPCCH, hs-DPCCH channel. When UL-DPCCH is established, E-DPCH shall use the
same scrambling code. UL DPCCH DRX parameters are provided.

```

#### 2. Continue with steps 5 through 11 in clause 8.13.1.1 except for Rel-7 branches if available.

If DL\_DRX is enabled IE 'ss\_DTX\_Info' shall be provided in E\_AGCH/E\_RGCH/HS\_PDSCH configuration.

If DL\_DRX is enabled IE 'ss\_DTX\_Info' shall be provided in:

- CMAC\_MACHs\_MACehs\_TFRCconfigure\_REQ when configuring HS\_PDSCH.

For F-DPCH configuration 'ss\_DTX\_Info' shall be provided.

#### 3. Configure MAC\_e entity for E-DCH

```

CMAC_MACe_Config_REQ

```

```

(
  nodeB_Id
  ddiMappingList
  e_DCHMacdFlows
  connectedToMAC_es
  ss_DRX_MAC_Info
  {
    mac_InactivityThreshold,
    mac_dtx_Cycle_2ms,
    mac_dtx_Cycle_10ms,
    timingInfo
  }
)
-- MAC_e entity is created per Node-B
-- the e_DCHMacdFlows shall be same as that used in CPHY_TrCH_Config_REQ
-- the field connectedToMAC_es shall be set to TRUE in serving E-DCH cell
-- the field connectedToMAC_es shall be set to FALSE in inter nodeB SHO
-- ddiMappingList is defined as
      activationTime          SS_ActivationTime
      macHeaderManipulation   MAC_HeaderManipulation
      logicalChannelIdentity   LogicalChannelIdentity
      e_DCH_MAC_d_FlowIdentity E_DCH_MAC_d_FlowIdentity
      ddi                      DDI
      rlc_PDU_SizeList        RLC_PDU_SizeList
      mac_LogicalChannelPriority MAC_LogicalChannelPriority
      logicalChannelType       LogicalChannelType

```

## 8.14 Guidelines of MBMS implementations

### 8.14.1 MCCH scheduling implementation

The rules for the transmission of MCCH messages are specified in 3GPP TS 34.108 [3], clause 11.1.2. The current clause provides the implementation guidelines.

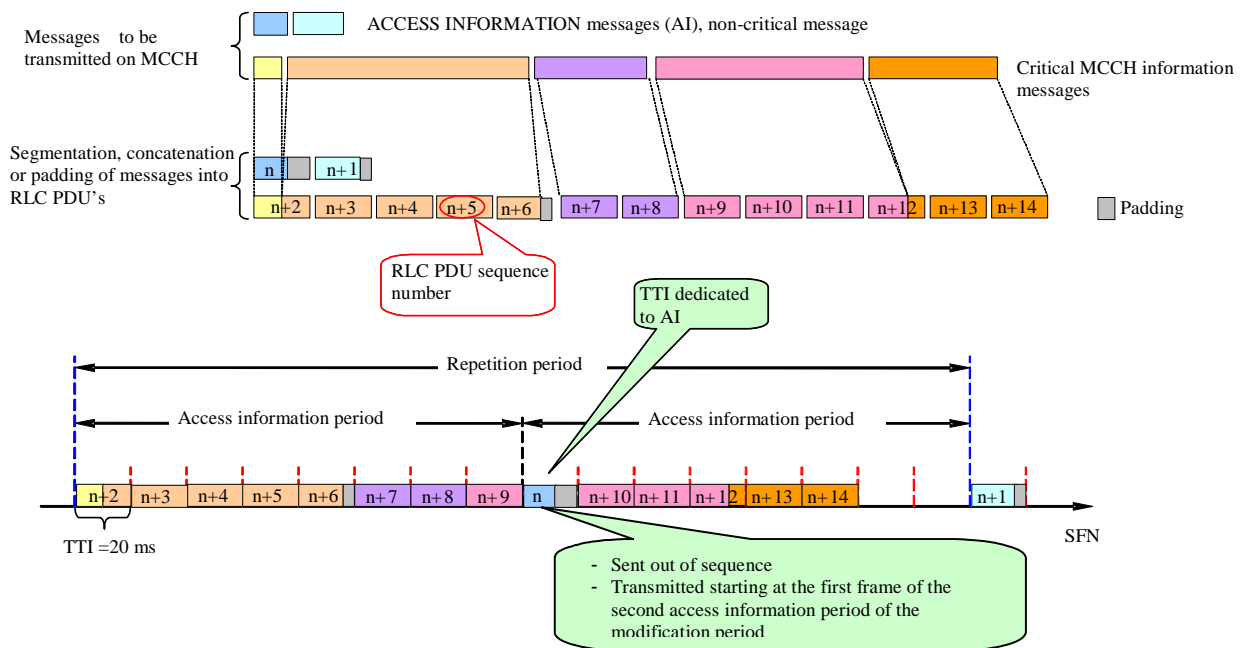


Figure 1: Segmentation and concatenation of MCCH messages into RLC PDU's

If required in the test, all ACCESS INFORMATION messages of a modification period are sent via RLC\_UM\_ACCESSInfo\_REQ. Each ACCESS INFORMATION message corresponds to an access information period in an ordered way. The ACCESS INFORMATION is transmitted on the 1<sup>st</sup> TTI of the second access information period of the modification period.

All critical MCCH messages of a modification period are sent via RLC\_UM\_CriticalMCCHMsg\_REQ. The sequence of the critical MCCH messages is segmented and concatenated without padding by a UM RLC entity configured specifically for MCCH. RLC\_UM\_ACCESSInfo\_REQ precedes RLC\_UM\_CriticalMCCHMsg\_REQ, or RLC\_UM\_CriticalMCCHMsg\_REQ can be used alone. The scenarios of RLC\_UM\_ACCESSInfo\_REQ used alone or RLC\_UM\_CriticalMCCHMsg\_REQ preceding RLC\_UM\_ACCESSInfo\_REQ are not applied.

The first RLC SN are always allocated consecutively to ACCESS INFORMATION messages, i.e. from  $n + 0$  onwards as necessary. Then an RLC SN block is consecutively allocated to the critical MCCH messages, saying the last used SN =  $(n + m) \text{MOD } 128$  in the current modification period. Renew  $n$  to  $(n + m + 1) \text{MOD } 128$  for the next modification period.

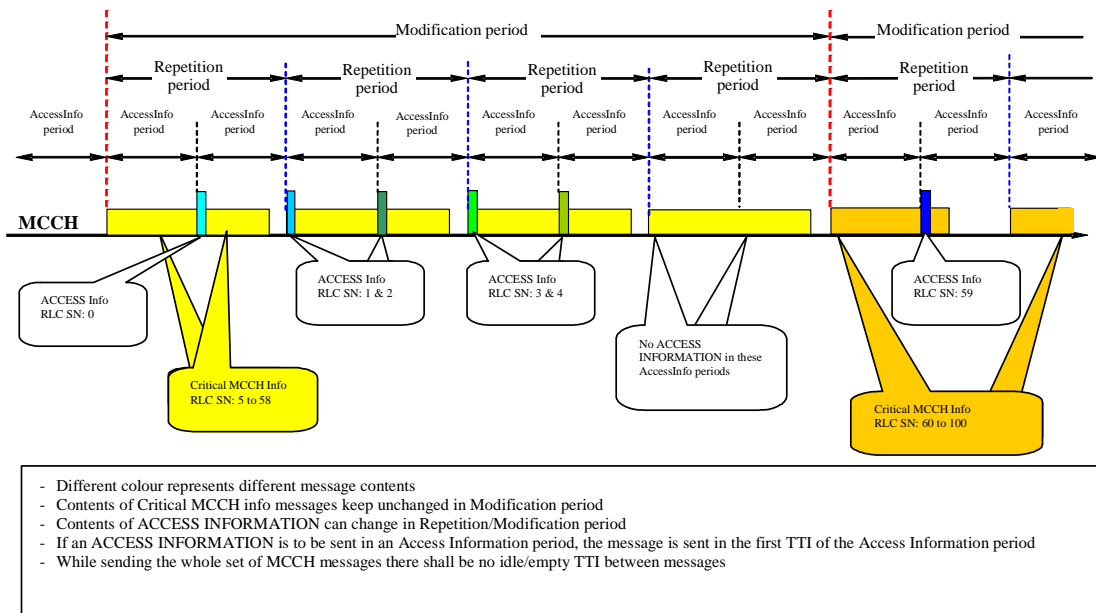


Figure 2: RLC SN allocation in MCCH scheduling

ACCESS INFORMATION messages within a modification period have different RLC SN. The SN =  $n + 0$  is allocated to the 1<sup>st</sup> ACCESS INFORMATION message. The critical MCCH messages to be transmitted in the different repetition periods within a modification period have the same RLC SN. RLC SN are incremented across the boundary of two consecutive modification periods without RLC reestablishment. The different RLC SN are allocated to the two consecutive modification periods.

In order to ensure UE can read the first ACCESS INFORMATION message, the message is sent by the TTCN in the second access information period.

### 8.14.2 MSCH scheduling and service data on MTCH

Multiple ordered SCHEDULING INFORMATION messages are sent by using RLC\_UM\_MSCH\_Msg\_REQ. Each SCHEDULING INFORMATION corresponds to a scheduling period, a 'noSend' MSCH\_Message indicates that no MBMS services are scheduled in that scheduling period for all MTCH. The first SCHEDULING INFORMATION message is sent on the scheduledSFN and successively the remaining messages are sent in every scheduling period.

The MBMS service data are fed by RLC\_UM\_TestDataReq. However the real MBMS service transmissions for multiple scheduling periods on each MTCH are controlled by CRLC\_MTCH\_Scheduling\_REQ. Within each scheduling period the information on the discontinuous service transmissions are conveyed through a list of pairs of (start, duration). The IE noServiceData as NULL being provided for a scheduling period indicates no service transmission on that MTCH.

The simulation of the continuous MBMS services is provided if an empty CRLC\_MTCH\_Scheduling\_REQ is sent without scheduling configuration parameter and scheduling information.

RLC\_UM\_MSCH\_Msg\_REQ precedes CRLC\_MTCH\_Scheduling\_REQ and RLC\_UM\_TestDataReq.

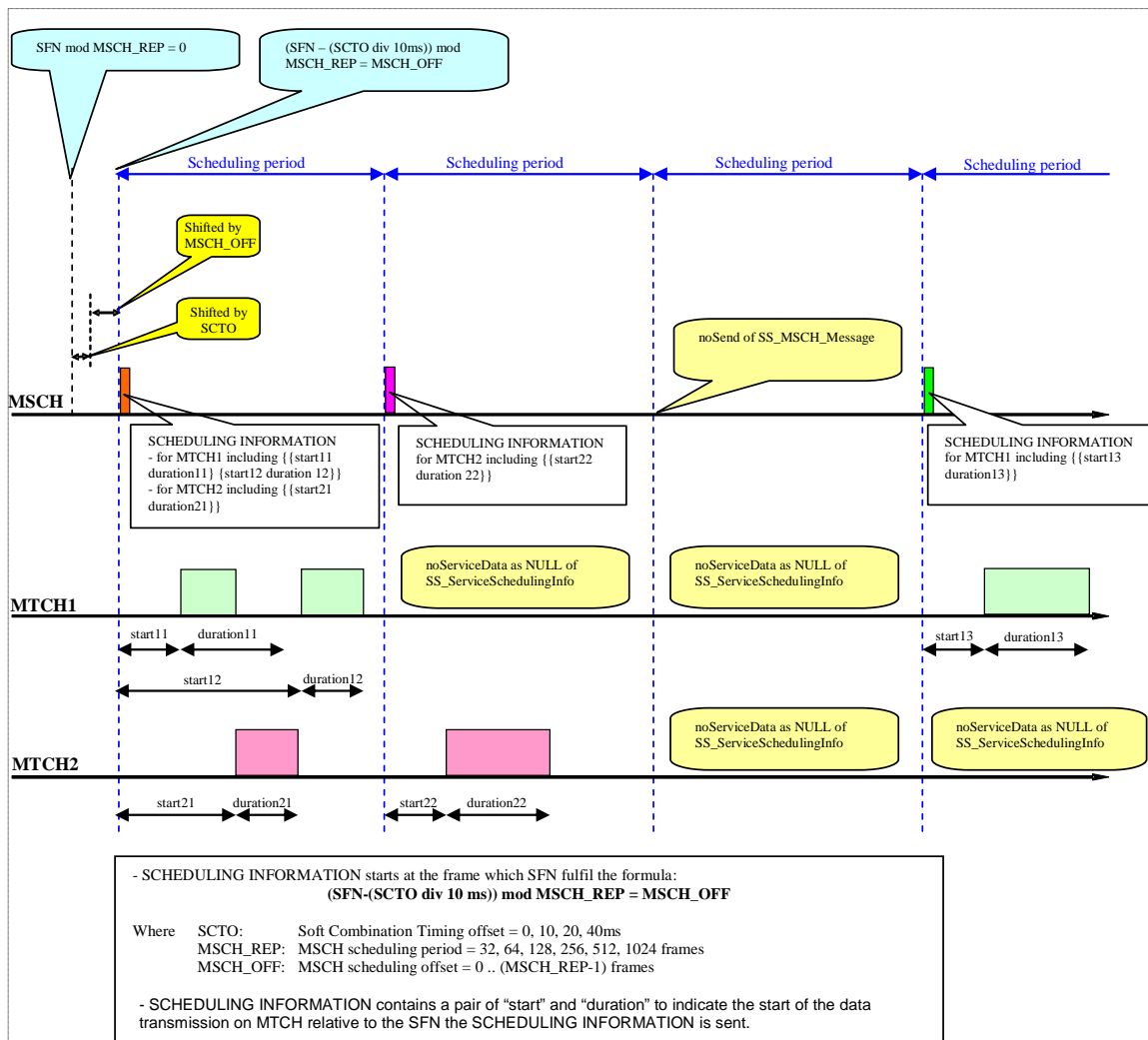


Figure 3: MSCH scheduling and MTCH data transfer

### 8.14.2.1 Scheduled service data on MTCH without MSCH configured

The scheduled service is a mechanism for synchronization of the initialization of the MBMS services announced on MCCH and the start of transmission the service data on MTCH. The mechanism can also be used at the SS side when MSCH is not configured.

In a PTM test session two separate sequences of critical MCCH messages are transmitted in an order of C4 - C2 or C5 - C3 in two consecutive modification periods. The MBMS MODIFIED SERVICES INFORMATION message in C4/C5 generally does not contain MBMS p-t-m activation time for the UE immediate reception of MBMS services. However, the SS shall not start test data transmission until on the 1<sup>st</sup> TTI of the next modification period to ensure that the UE can have a nearly full modification period to obtain critical MCCH messages and to apply the configuration required by the test.

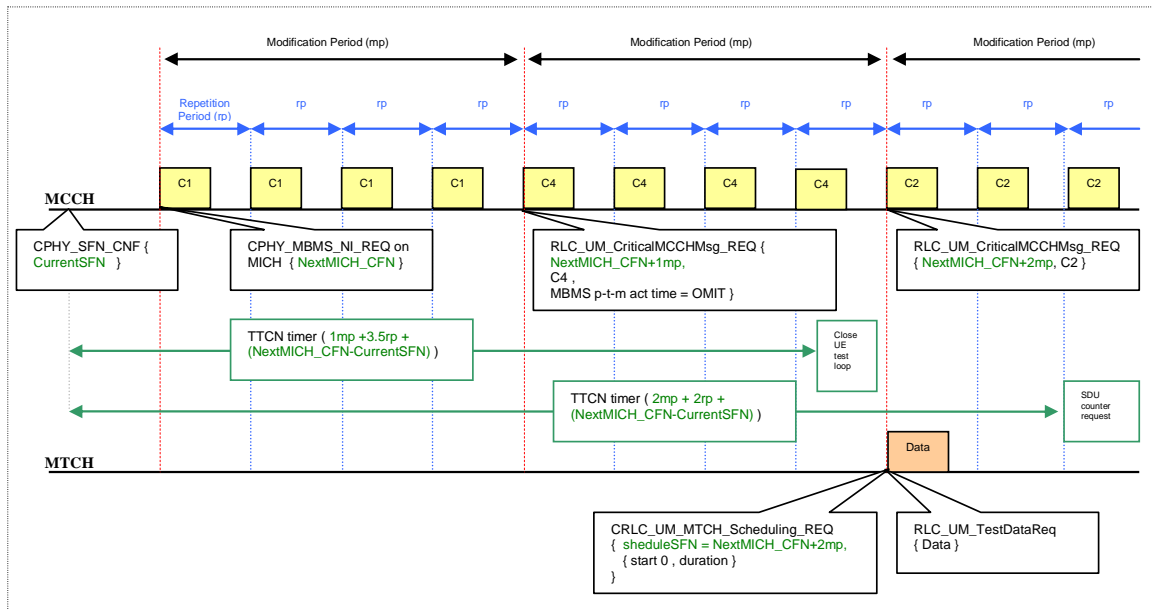
The Figure 4 illustrates the relationship of the service scheduling on MTCH and the default1 MCCH information scheduling. The SS waits until the 2<sup>nd</sup> half of the last repetition period in the modification period when the C4 messages are sent before closing test loop. The test data are transmitted on the 1<sup>st</sup> TTI of the modification period when the C2 messages are sent. The whole test sequence is:

CPHY\_SFN\_REQ, calculating next MICH CFN,

MP n:      next MICH CFN              set MICH and transmit NI,

MP n+1: next MICH CFN+1 mp set modified services list (C4 or C5), set PTM activation time if necessary,

MP n+2: next MICH CFN+2 mp set unmodified service list and transmit data (C2 or C3).



**Figure 4: Synchronized MTCH data sending, no MSCH configured**

If the test loop is already closed and the service data is to be sent the ASPs follow the order:

CPHY\_SFN\_REQ, CRLC\_MTCH\_Scheduling\_REQ and RLC\_UM\_TestDataReq.

### 8.15 Cell mapping

The following table defines the cell identities mapping between 3GPP TS 34.108 [3] and the ATS implementation.

**Table 19: Cell identities mapping**

| Cell Number in 34.108 | ATS      |
|-----------------------|----------|
| 1                     | 0        |
| 2                     | 1        |
| 3                     | 2        |
| 4                     | 3        |
| 5                     | 4        |
| 6                     | 5        |
| 7                     | 6        |
| 8                     | 7        |
| 9                     | 1        |
| 10                    | 2        |
| 11                    | Not Used |
| 21                    | 20       |
| 22                    | 21       |
| 23                    | 22       |
| 24                    | 23       |
| 25                    | 24       |
| 26                    | 25       |
| 27                    | 26       |
| 28                    | 27       |

---

## Annex A (normative): Abstract Test Suites (ATS)

This annex contains the approved ATSs.

The ATSs have been produced using the Tree and Tabular Combined Notation (TTCN) according to TR 101 666 [27].

The ATSs were developed on a separate TTCN software tool and therefore the TTCN tables are not completely referenced in the table of contents. Each ATS contains a test suite overview part which provides additional information and references.

---

### A.1 Version of specifications

Table A.1 shows the version of the test specifications which the delivered ATSs are referred to.

**Table A.1: Versions of the test and Core specifications**

|                            |                               |
|----------------------------|-------------------------------|
| <b>Core specifications</b> | 3GPP TS 25.331 [21] (V780)    |
| <b>Test specifications</b> | 3GPP TS 34.123-1 [1] (V8.4.0) |
|                            | 3GPP TS 34.123-2 [2] (V8.4.0) |
|                            | 3GPP TS 34.108 [3] (V8.4.0)   |
|                            | 3GPP TS 34.109 [4] (V7.3.0)   |

---

### A.2 NAS ATS

The approved NAS test cases are listed. An “X” in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.



Table A.2: NAS TTCN test cases

| Test case   | Description   | FDD | LCR TDD |
|-------------|---|-----|---------|
| <b>MM</b>   |   |     |         |
| 9.1         | TMSI reallocation   | X   | X       |
| 9.2.1       | Authentication accepted   | X   | X       |
| 9.2.2       | Authentication rejected   | X   |         |
| 9.2.3       | Authentication rejected by the UE (MAC code failure)  | X   | X       |
| 9.2.4       | Authentication rejected by the UE (SQN failure)   | X   | X       |
| 9.3.1       | General Identification  | X   | X       |
| 9.4.1       | Location updating / accepted  | X   |         |
| 9.4.2.1     | Location updating / rejected / IMSI invalid   | X   |         |
| 9.4.2.2.1   | Location updating / rejected / PLMN not allowed/Test 1  | X   |         |
| 9.4.2.2.2   | Location updating / rejected / PLMN not allowed / Test 2  | X   |         |
| 9.4.2.3     | Location updating / rejected / location area not allowed  | X   |         |
| 9.4.2.4.1   | Location updating / rejected / roaming not allowed in this location area / Procedure 1  | X   |         |
| 9.4.2.4.2   | Location updating / rejected / roaming not allowed in this location area / Procedure 2  | X   |         |
| 9.4.2.4.4   | Location updating / rejected / roaming not allowed in this location area / Procedure 4  | X   |         |
| 9.4.2.5     | Location updating / rejected / No Suitable Cells In Location Area   | X   |         |
| 9.4.3.3     | Location updating / abnormal cases / attempt counter equal to 4   | X   |         |
| 9.4.3.5     | Location updating / abnormal cases / Failure due to non-integrity protection  | X   |         |
| 9.4.4       | Location updating / release / expiry of T3240   | X   | X       |
| 9.4.5.2     | Location updating / periodic normal / test 1  | X   |         |
| 9.4.5.3     | Location updating / periodic normal / test 2  | X   |         |
| 9.4.5.4.1   | Location updating / periodic search for HPLMN or higher priority PLMN / UE waits time T   | X   |         |
| 9.4.5.4.6   | Location updating/periodic search of the higher priority PLMN, VPLMN in a foreign country- List of EPLMN contain HPLMN /UE is in automatic mode | X   |         |
| 9.4.7       | Location Updating / accept with replacement or deletion of Equivalent PLMN list   | X   |         |
| 9.4.8       | Location Updating after UE power off  | X   |         |
| 9.4.9       | Location Updating / Accept, Interaction between Equivalent PLMNs and Forbidden PLMNs  | X   |         |
| 9.5.2       | MM connection / establishment in security mode  | X   | X       |
| 9.5.4       | MM connection / establishment rejected  | X   | X       |
| 9.5.5       | MM connection / establishment rejected cause 4  | X   | X       |
| 9.5.7.1     | MM connection / abortion by the network / cause #6  | X   |         |
| 9.5.7.2     | MM connection / abortion by the network / cause not equal to #6   | X   |         |
| <b>CC</b>   |   |     |         |
| 10.1.2.1.1  | Outgoing call / U0 null state / MM connection requested   | X   | X       |
| 10.1.2.2.1  | Outgoing call / U0.1 MM connection pending / CM service rejected  | X   | X       |
| 10.1.2.2.2  | Outgoing call / U0.1 MM connection pending / CM service accepted  | X   | X       |
| 10.1.2.2.3  | Outgoing call / U0.1 MM connection pending / lower layer failure  | X   | X       |
| 10.1.2.3.1  | Outgoing call / U1 call initiated / receiving CALL PROCEEDING   | X   | X       |
| 10.1.2.3.2  | Outgoing call / U1 call initiated / rejecting with RELEASE COMPLETE   | X   | X       |
| 10.1.2.3.3  | Outgoing call / U1 call initiated / T303 expiry   | X   | X       |
| 10.1.2.3.7  | Outgoing call / U1 call initiated / unknown message received  | X   | X       |
| 10.1.2.4.3  | Outgoing call / U3 Mobile originating call proceeding / PROGRESS received without in band information   | X   | X       |
| 10.1.2.4.4  | Outgoing call / U3 Mobile originating call proceeding / PROGRESS with in band information   | X   | X       |
| 10.1.2.4.6  | Outgoing call / U3 Mobile originating call proceeding / DISCONNECT without in band tones  | X   | X       |
| 10.1.2.4.7  | Outgoing call / U3 Mobile originating call proceeding / RELEASE received  | X   | X       |
| 10.1.2.4.8  | Outgoing call / U3 Mobile originating call proceeding / termination requested by the user   | X   | X       |
| 10.1.2.4.9  | Outgoing call / U3 Mobile originating call proceeding / traffic channel allocation  | X   | X       |
| 10.1.2.4.10 | Outgoing call / U3 Mobile originating call proceeding / timer T310 time-out   | X   | X       |

|                                 |   |   |   |
|---------------------------------|---|---|---|
| 10.1.2.5.1                      | Outgoing call / U4 call delivered / CONNECT received                                      | X |   |
| 10.1.2.5.2                      | Outgoing call / U4 call delivered / termination requested by the user                     | X | X |
| 10.1.2.5.5                      | Outgoing call / U4 call delivered / RELEASE received                                      | X | X |
| 10.1.2.6.2                      | U10 active / RELEASE received   | X | X |
| 10.1.2.6.3                      | U10 active / DISCONNECT with in band tones  | X | X |
| 10.1.2.6.6                      | U10 active / SETUP received   | X | X |
| 10.1.2.7.1                      | U11 disconnect request / clear collision  | X | X |
| 10.1.2.7.2                      | U11 disconnect request / RELEASE received   | X | X |
| 10.1.2.7.3                      | U11 disconnect request / timer T305 time-out  | X | X |
| 10.1.2.9.1                      | Outgoing call / U19 release request / timer T308 time-out                                 | X | X |
| 10.1.3.3.1                      | Incoming call / U9 mobile terminating call confirmed / alerting or immediate connecting   | X | X |
| 10.1.3.3.2                      | Incoming call / U9 mobile terminating call confirmed / DTCH assignment                    | X | X |
| 10.1.3.3.4                      | Incoming call / U9 mobile terminating call confirmed / DISCONNECT received                | X | X |
| 10.1.3.4.1                      | Incoming call / U7 call received / call accepted  | X | X |
| 10.1.3.5.6                      | Incoming call / U8 connect request / RELEASE received                                     | X | X |
| <b>Session Management</b>       |   |   |   |
| 11.1.1.1                        | Attach initiated by context activation/QoS Offered by Network is the QoS Requested        | X | X |
| 11.3.1                          | PDP context deactivation initiated by the UE  | X | X |
| 11.3.2                          | PDP context deactivation initiated by the network   | X | X |
| <b>GPRS Mobility Management</b> |   |   |   |
| 12.2.1.1                        | PS attach / accepted  | X | X |
| 12.2.1.2                        | PS attach / rejected / IMSI invalid / illegal UE  | X |   |
| 12.2.1.3                        | PS attach / rejected / IMSI invalid / PS services not allowed                             | X | X |
| 12.2.1.4 Proc 1                 | PS attach / rejected / PLMN not allowed / test procedure 1                                | X |   |
| 12.2.1.4 Proc 2                 | PS attach / rejected / PLMN not allowed / test procedure 2                                | X |   |
| 12.2.1.5a Proc 1                | PS attach / rejected / roaming not allowed in this location area / test procedure 1       | X | X |
| 12.2.1.5a Proc 2                | PS attach / rejected / roaming not allowed in this location area / test procedure 2       | X |   |
| 12.2.1.5b                       | PS attach / rejected / No Suitable Cells In Location Area                                 | X |   |
| 12.2.1.5d                       | PS attach / rejected / PS services not allowed in this PLMN                               | X |   |
| 12.2.1.6 Proc 1                 | PS attach / abnormal cases / access barred due to access class control / test procedure 1 | X | X |
| 12.2.1.6 Proc 2                 | PS attach / abnormal cases / access barred due to access class control / test procedure 2 | X | X |
| 12.2.1.7                        | PS attach / abnormal cases / change of cell into new routing area                         | X | X |
| 12.2.1.10                       | PS attach / abnormal cases / Failure due to non-integrity protection                      | X |   |
| 12.2.1.11                       | PS attach / accepted / follow-on request pending indicator set                            | X |   |
| 12.2.2.1                        | Combined PS attach / PS and non-PS attach accepted  | X | X |
| 12.3.1.1                        | PS detach / power off / accepted  | X | X |
| 12.3.1.2                        | PS detach / accepted  | X | X |
| 12.3.1.5                        | PS detach / power off / accepted / PS/IMSI detach   | X | X |
| 12.3.2.1                        | PS detach / re-attach not required / accepted   | X | X |
| 12.3.2.7                        | PS detach / rejected / Roaming not allowed in this location area                          | X |   |
| 12.3.2.8.Proc 1                 | PS detach / rejected / PS services not allowed in this PLMN/ test1                        | X |   |
| 12.4.1.1a                       | Routing area updating / accepted  | X |   |
| 12.4.1.1b                       | Routing area updating / accepted / Signalling connection re-establishment                 | X | X |
| 12.4.1.2                        | Routing area updating / rejected / IMSI invalid / illegal ME                              | X |   |
| 12.4.1.3                        | Routing area updating / rejected / UE identity cannot be derived by the network           | X |   |
| 12.4.1.4a                       | Routing area updating / rejected / location area not allowed                              | X |   |
| 12.4.1.4b                       | Routing area updating / rejected / No Suitable Cells In Location Area                     | X |   |
| 12.4.1.4c Proc 1                | Routing area updating / rejected / PS services not allowed in this PLMN                   | X |   |
| 12.4.1.4c Proc 2                | Routing area updating / rejected / PS services not allowed in this PLMN                   | X |   |
| 12.4.1.4d Proc 1                | Routing area updating / rejected / Roaming not allowed in this location area / test 1     | X |   |
| 12.4.1.4d Proc 2                | Routing area updating / rejected / Roaming not allowed in this location area / test 2     | X |   |
| 12.4.1.5                        | Routing area updating / abnormal cases / attempt counter check /                          | X |   |

|                      |  |   |   |
|----------------------|--|---|---|
|                      | miscellaneous reject causes  |   |   |
| 12.4.2.1             | Combined routing area updating / combined RA/LA accepted   | X |   |
| 12.4.2.2             | Combined routing area updating / UE in CS operation at change of RA  | X | X |
| 12.4.2.4             | Combined routing area updating / rejected / PLMN not allowed   | X |   |
| 12.4.2.5a Proc 1     | Combined routing area updating / rejected / roaming not allowed in this location area / test procedure 1       | X |   |
| 12.4.2.5a.Proc 2     | Combined routing area updating / rejected / roaming not allowed in this location area / test procedure 2       | X |   |
| 12.4.2.6 Proc 1      | Combined routing area updating / abnormal cases / access barred due to access class control / test procedure 1 | X |   |
| 12.4.2.6.Proc 2      | Combined routing area updating / abnormal cases / access barred due to access class control / test procedure 2 | X |   |
| 12.4.3.1             | Periodic routing area updating / accepted  | X | X |
| 12.4.3.4             | Periodic routing area updating / no cell available   | X |   |
| 12.5                 | P-TMSI reallocation  | X | X |
| 12.6.1.1             | Authentication accepted  | X | X |
| 12.6.1.2             | Authentication rejected - by the network   | X | X |
| 12.6.1.3.1           | GMM cause 'MAC failure'  | X | X |
| 12.6.1.3.2           | GMM cause 'Synch failure'  | X | X |
| 12.6.1.3.3           | Authentication rejected by the UE / fraudulent network   | X |   |
| 12.7.1               | General Identification   | X | X |
| 12.9.1               | Service Request Initiated by UE Procedure  | X | X |
| 12.9.2               | Service Request Initiated by Network Procedure   | X | X |
| 12.9.3               | Service Request / rejected / Illegal MS  | X | X |
| 12.9.4               | Service Request / rejected / PS services not allowed   | X | X |
| 12.9.6               | Service Request / rejected / PLMN not allowed  | X |   |
| 12.9.7a              | Service Request / rejected / No PDP context activated  | X |   |
| 12.9.7b              | Service Request / rejected / No Suitable Cells In Location Area  | X |   |
| 12.9.7c              | Service Request / rejected / Roaming not allowed in this location area   | X |   |
| 12.9.8               | Service Request / Abnormal cases / Access barred due to access class control                                   | X | X |
| 12.9.9               | Service Request / Abnormal cases / Routing area update procedure is triggered                                  | X | X |
| 12.9.12              | Service Request / RAB re-establishment / UE initiated / Single PDP context                                     | X |   |
| 12.9.13              | Service Request / RAB re-establishment / UE initiated / multiple PDP contexts                                  | X |   |
| 12.9.14              | Service Request / RAB re-establishment / Network initiated / single PDP context                                | X | X |
| <b>General Tests</b> |  |   |   |
| 13.2.1.1             | Emergency call / with USIM / accept case   | X | X |
| 13.2.2.1             | Emergency call / without USIM / accept case  | X | X |
| 13.2.2.2             | Emergency call / without USIM / reject case  | X | X |

## A.2.1 Void

## A.2.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (NASv730.MP) which accompanies the present document.

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## A.3 SMS ATS

The approved SMS test cases are listed. An “X” in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

Table A.3: SMS TTCN test cases

| Test case | Description  | FDD | LCR TDD |
|-----------|--|-----|---------|
| 16.1.1    | SMS on CS mode / SMS mobile terminated   | X   | X       |
| 16.1.2    | SMS on CS mode / SMS mobile originated   | X   | X       |
| 16.1.9.1  | SMS on CS mode / Multiple SMS mobile originated / UE in idle mode  | X   |         |
| 16.1.9.2  | SMS on CS mode / Multiple SMS mobile originated / UE in active mode  | X   | X       |
| 16.1.10   | SMS on CS mode / Test of capabilities of simultaneously receiving a short message whilst sending a mobile originated short message | X   |         |
| 16.2.1    | SMS on PS mode / SMS mobile terminated   | X   |         |
| 16.2.2    | SMS on PS mode / SMS mobile originated   | X   |         |
| 16.2.10   | SMS on PS mode / Test of capabilities of simultaneously receiving a short message whilst sending a mobile originated short message | X   |         |
| 16.3      | Short message service cell broadcast   | X   |         |

### A.3.1 Void

### A.3.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (SMSv730.MP) which accompanies the present document.

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## A.4 RRC ATS

The approved RRC test cases are listed. An “X” in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

Table A.4: RRC TTCN test cases

| Test case | Description  | FDD | LCR TDD |
|-----------|--|-----|---------|
|           | Single Cell  |     |         |
| 6.1.1.4   | PLMN selection of RPLMN, HPLMN, UPLMN and OPLMN; Automatic mode  | X   |         |
| 6.1.1.5   | PLMN selection of "Other PLMN / access technology combinations"; Automatic mode                                    | X   |         |
| 6.1.1.7   | Cell reselection of ePLMN in manual mode   | X   |         |
| 6.1.2.1   | Cell reselection   | X   |         |
| 6.1.2.1a  | Cell reselection for inter-band operation  | X   |         |
| 6.1.2.2   | Cell reselection using Qhyst, Qoffset and Treselection   | X   |         |
| 6.1.2.3   | HCS Cell reselection   | X   |         |
| 6.1.2.4   | HCS Cell reselection using reselection timing parameters for the H criterion                                       | X   |         |
| 6.1.2.5   | HCS Cell reselection using reselection timing parameters for the R criterion                                       | X   |         |
| 6.1.2.6   | Emergency calls  | X   |         |
| 6.1.2.8   | Cell reselection: Equivalent PLMN  | X   |         |
| 6.1.2.9a  | Cell reselection using cell status and cell reservations – Type "A" USIM   | X   |         |
| 6.1.2.9b  | Cell reselection using cell status and cell reservations – Type "B" USIM   | X   |         |
| 8.1.1.1   | RRC / Paging for Connection in idle mode   | X   | X       |
| 8.1.1.2   | RRC / Paging for Connection in connected mode (CELL_PCH)   | X   |         |
| 8.1.1.3   | R RRC / Paging for Connection in connected mode (URA_PCH)  | X   |         |
| 8.1.1.4   | RRC / Paging for notification of BCCH modification in idle mode  | X   | X       |
| 8.1.1.5   | RRC / Paging for notification of BCCH modification in connected mode (CELL_PCH)                                    | X   |         |
| 8.1.1.6   | RRC / Paging for notification of BCCH modification in connected mode (URA_PCH)                                     | X   |         |
| 8.1.1.7   | RRC / Paging for connection in connected mode (CELL_DCH)   | X   | X       |
| 8.1.1.8   | RRC / Paging for Connection in connected mode (CELL_FACH)  | X   | X       |
| 8.1.1.9   | RRC / Paging for Connection in idle mode (multiple paging records)   | X   |         |
| 8.1.1.10  | RRC / Paging for Connection in connected mode (URA_PCH, multiple paging records)                                   | X   |         |
| 8.1.2.1   | RRC / RRC Connection Establishment in CELL_DCH state: Success  | X   |         |
| 8.1.2.2   | RRC / RRC Connection Establishment: Success after T300 timeout   | X   |         |
| 8.1.2.3   | RRC / RRC Connection Establishment: Failure (V300 is greater than N300)  | X   |         |
| 8.1.2.4   | RRC / RRC Connection Establishment: Reject ("wait time" is not equal to 0)   | X   |         |
| 8.1.2.7   | RRC Connection Establishment in CELL_FACH state: Success   | X   | X       |
| 8.1.2.9   | RRC / RRC Connection Establishment: Success after Physical channel failure and Invalid configuration               | X   | X       |
| 8.1.2.10  | RRC / Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH (Frequency band modification): Success  | X   |         |
| 8.1.2.10a | RRC connection establishment in CELL_DCH on another frequency in a different frequency band                        | X   |         |
| 8.1.2.11  | RRC Connection Establishment in FACH state (Frequency band modification): Success                                  | X   |         |
| 8.1.3.1   | RRC / RRC Connection Release in CELL_DCH state: Successful   | X   | X       |
| 8.1.3.3   | RRC / RRC Connection Release using on CCCH in CELL_FACH state: Failure   | X   | X       |
| 8.1.3.4   | RRC / RRC Connection Release in CELL_FACH state: Failure   | X   |         |
| 8.1.3.5   | RRC / RRC Connection Release in CELL_FACH state: Invalid message   | X   |         |
| 8.1.3.9   | RRC Connection Release in CELL_DCH state (Network Authentication Failure): Success                                 | X   |         |
| 8.1.5.1   | RRC / UE Capability in CELL_DCH state: Success   | X   | X       |
| 8.1.5.4   | RRC / UE Capability in CELL_FACH state: Success  | X   | X       |
| 8.1.6.1   | Direct Transfer in CELL_DCH state (invalid message reception and no signalling connection exists)                  | X   | X       |
| 8.1.6.3   | Measurement Report on INITIAL DIRECT TRANSFER message and UPLINK DIRECT TRANSFER message                           | X   |         |
| 8.1.7.1   | Security mode command in CELL_DCH state (CS Domain)  | X   |         |
| 8.1.7.1b  | Security mode command in CELL_DCH state (PS Domain)  | X   |         |
| 8.1.7.1c  | Security mode control in CELL_DCH state (CN Domain switch and new keys at RRC message sequence number wrap around) | X   |         |

| Test case | Description  | FDD | LCR TDD |
|-----------|--|-----|---------|
| 8.1.7.1d  | Security mode control in CELL_DCH state interrupted by a cell update   | X   |         |
| 8.1.7.2   | RRC / Security mode control in CELL_FACH state   | X   |         |
| 8.1.9     | RRC / Signalling Connection Release Indication   | X   | X       |
| 8.1.10.1  | Dynamic change of segmentation, concatenation & scheduling and handling of unsupported information blocks  | X   |         |
| 8.1.12    | RRC / Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Physical channel Failure and successful reversion to old configuration)         | X   | X       |
| 8.2.1.1   | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success   | X   | X       |
| 8.2.1.4   | RRC / Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and successful reversion to old configuration)          | X   | X       |
| 8.2.1.7   | RRC / Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception and invalid configuration)                             | X   | X       |
| 8.2.1.8   | RRC / Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Success  | X   | X       |
| 8.2.1.9   | RRC / Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Success (Cell re-selection)  | X   |         |
| 8.2.1.10  | RRC / Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH (Frequency band modification): Success  | X   | X       |
| 8.2.1.24  | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH (Frequency band modification): Success   | X   | X       |
| 8.2.1.24a | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH (Inter band handover): Success   | X   |         |
| 8.2.1.33  | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (Unsynchronised RL Reconfiguration)   | X   |         |
| 8.2.1.34  | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (Unsynchronised RL Reconfiguration with frequency modification)                         | X   |         |
| 8.2.1.34a | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (Unsynchronised RL Reconfiguration with inter band handover)                            | X   |         |
| 8.2.2.1   | RRC / Radio Bearer Reconfiguration (Hard Handover) from CELL_DCH to CELL_DCH: Success  | X   |         |
| 8.2.2.4   | RRC / Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion failure)   | X   | X       |
| 8.2.2.7   | RRC / Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (stop and continue)  | X   | X       |
| 8.2.2.8   | RRC / Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Success   | X   | X       |
| 8.2.2.9   | RRC / Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Success (Cell re-selection)   | X   | X       |
| 8.2.2.10  | RRC / Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Success   | X   |         |
| 8.2.2.11  | Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)   | X   | X       |
| 8.2.2.17  | RRC / Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Success  | X   | X       |
| 8.2.2.18  | RRC / Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Success (Cell re-selection)  | X   |         |
| 8.2.2.19  | RRC / Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (Subsequently received)  | X   |         |
| 8.2.2.23  | RRC / Radio Bearer Reconfiguration from CELL_FACH to CELL_PCH: Success   | X   |         |
| 8.2.2.31  | Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_DCH (Frequency band modification): Success  | X   |         |
| 8.2.2.35  | Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Successful channel switching with multiple PS RABs established  | X   |         |
| 8.2.2.43  | Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Seamless SRNS relocation, without pending of ciphering, frequency band modification) | X   |         |
| 8.2.3.1   | Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success   | X   |         |
| 8.2.3.7   | RRC / Radio Bearer Release for transition from CELL_DCH to   | X   | X       |

| Test case | Description  | FDD | LCR TDD |
|-----------|--|-----|---------|
|           | CELL_FACH: Success   |     |         |
| 8.2.3.8   | RRC / Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Success (Cell re-selection)  | X   |         |
| 8.2.3.9   | RRC / Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Success  | X   | X       |
| 8.2.3.11  | RRC / Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old configuration)   | X   | X       |
| 8.2.3.15  | RRC / Radio Bearer Release for transition from CELL_FACH to CELL_FACH: Success   | X   | X       |
| 8.2.3.18  | RRC / Radio Bearer Release from CELL_DCH to CELL_PCH: Success  | X   |         |
| 8.2.3.19  | RRC / Radio Bearer Release from CELL_DCH to URA_PCH: Success   | X   | X       |
| 8.2.3.29  | Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Associated with signalling connection release during multi call for PS and CS services  | X   | X       |
| 8.2.4.1   | Transport channel reconfiguration (Timing re- initialised hard handover with transmission rate modification) from CELL_DCH to CELL_DCH: Success  | X   |         |
| 8.2.4.1a  | Transport channel reconfiguration (Transmission Rate Modification) from CELL_DCH to CELL_DCH of the same cell: Success   | X   |         |
| 8.2.4.3   | RRC / Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)   | X   |         |
| 8.2.4.4   | Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and cell reselection)   | X   |         |
| 8.2.4.10  | RRC / Transport channel reconfiguration from CELL_FACH to CELL_DCH: Success  | X   |         |
| 8.2.6.1   | RRC / Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover for code modification): Success   | X   |         |
| 8.2.6.2   | RRC / Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover for code modification): Failure (Unsupported configuration)   | X   |         |
| 8.2.6.7   | RRC / Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Success  | X   | X       |
| 8.2.6.8   | RRC / Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Success (Cell re-selection)  | X   |         |
| 8.2.6.9   | RRC / Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Success  | X   |         |
| 8.2.6.11  | RRC / Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old configuration)   | X   | X       |
| 8.2.6.12  | RRC / Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)   | X   |         |
| 8.2.6.19  | RRC / Physical channel reconfiguration from CELL_DCH to CELL_PCH: Success  | X   |         |
| 8.2.6.20  | RRC / Physical channel from CELL_DCH to URA_PCH: Success   | X   | X       |
| 8.2.6.37  | Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency with timing re-initialised)  | X   |         |
| 8.2.6.37b | Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency band cell with timing re-initialised)  | X   |         |
| 8.2.6.38  | Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency with timing re-initialised): Failure (Physical channel failure and reversion to old channel) | X   |         |
| 8.2.6.39  | Physical Channel Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Seamless SRNS relocation) (without pending of ciphering)   | X   |         |
| 8.2.6.44  | Physical Channel Reconfiguration for transition from CELL_DCH to CELL_DCH: Failure (Radio link failure in new configuration)   | X   |         |
| 8.3.1.1   | RRC / Cell Update: cell reselection in CELL_FACH   | X   |         |
| 8.3.1.1a  | Cell Update: cell reselection in CELL_FACH (Cells belong to different frequency bands)   | X   |         |
| 8.3.1.2   | RRC / Cell Update: cell reselection in CELL_PCH  | X   |         |
| 8.3.1.3   | RRC / Cell Update: periodical cell update in CELL_FACH   | X   |         |
| 8.3.1.4   | RRC / Cell Update: periodical cell update in CELL_PCH  | X   |         |

| Test case | Description  | FDD | LCR TDD |
|-----------|--|-----|---------|
| 8.3.1.5   | RRC / Cell Update: UL data transmission in URA_PCH   | X   |         |
| 8.3.1.6   | RRC / Cell Update: UL data transmission in CELL_PCH  | X   |         |
| 8.3.1.9   | RRC / Cell Update: re-entering of service area after T305 expiry and being out of service area                     | X   |         |
| 8.3.1.10  | RRC / Cell Update: expiry of T307 after T305 expiry and being out of service area                                  | X   |         |
| 8.3.1.11  | RRC / Cell Update: Success after T302 time-out   | X   |         |
| 8.3.1.12  | RRC / Cell Update: Failure (After Maximum Re-transmissions)  | X   |         |
| 8.3.1.15  | RRC / Cell Update: Unrecoverable error in Acknowledged Mode RLC  | X   |         |
| 8.3.1.17  | RRC / Cell Update: Failure (UTRAN initiate an RRC connection release procedure on CCCH)                            | X   |         |
| 8.3.1.18  | RRC / Cell Update: Radio Link Failure (T314>0, T315=0), CS RAB established   | X   |         |
| 8.3.1.21  | Cell Update: Cell reselection to cell of another PLMN belonging to the equivalent PLMN list                        | X   |         |
| 8.3.1.23  | Cell Update: HCS cell reselection in CELL_FACH   | X   |         |
| 8.3.1.24  | Cell Update: HCS cell reselection in CELL_PCH  | X   |         |
| 8.3.1.25  | CELL UPDATE: Radio Link Failure (T314=0, T315=0)   | X   |         |
| 8.3.1.22  | Cell update: Restricted cell reselection to a cell belonging to forbidden LA list (Cell_FACH)                      | X   |         |
| 8.3.1.30  | Cell Update: Radio Link Failure (T314>0, T315>0), PS RAB   | X   |         |
| 8.3.1.31  | Cell Update: re-entering of service area from URA_PCH after T316 expiry but before T317 expiry                     | X   |         |
| 8.3.2.1   | RRC / URA Update: Change of URA  | X   |         |
| 8.3.2.1a  | URA Update: Change of URA (Cells belong to different frequency bands)  | X   |         |
| 8.3.2.2   | RRC / URA Update: Periodical URA update and Reception of Invalid message   | X   |         |
| 8.3.2.4   | RRC / URA Update: loss of service after expiry of timers T307 after T306   | X   |         |
| 8.3.2.7   | RRC / URA Update: Success after T303 timeout   | X   |         |
| 8.3.2.9   | RRC / URA Update: Failure ( UTRAN initiate an RRC connection release procedure on CCCH )                           |     |         |
| 8.3.2.11  | URA Update: Cell reselection to cell of another PLMN belonging to the equivalent PLMN list                         | X   |         |
| 8.3.2.12  | Restricted cell reselection to a cell belonging to forbidden LA list (URA_PCH)                                     | X   |         |
| 8.3.2.13  | URA Update: Change of URA due to HCS Cell Reselection  | X   |         |
| 8.3.3.1   | RRC / UTRAN Mobility Information: Success  | X   |         |
| 8.3.4.1   | RRC / Active set update in soft handover: Radio Link addition  | X   |         |
| 8.3.4.2   | RRC / Active set update in soft handover: Radio Link removal   | X   |         |
| 8.3.4.3   | RRC / Active set update in soft handover: Combined radio link addition and removal                                 | X   |         |
| 8.3.4.8   | Active set update in soft handover: Radio Link addition in multiple radio link environment                         | X   |         |
| 8.4.1.1   | Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_DCH state        | X   |         |
| 8.4.1.2   | RRC / Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_DCH state  | X   |         |
| 8.4.1.2B  | Measurement Control and Report: Inter-band measurement for transition from idle mode to CELL_DCH state (FDD)       | X   |         |
| 8.4.1.3   | RRC / Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_FACH state | X   |         |
| 8.4.1.5   | RRC / Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state  | X   |         |
| 8.4.1.6   | RRC / Measurement Control and Report: Inter- frequency measurement for transition from CELL_DCH to CELL_FACH state | X   |         |
| 8.4.1.7   | RRC / Measurement Control and Report: Intra- frequency measurement for transition from CELL_FACH to CELL_DCH state | X   |         |
| 8.4.1.8   | Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state (FDD)  | X   |         |
| 8.4.1.14  | RRC / Measurement Control and Report: Cell forbidden to affect reporting range                                     | X   |         |
| 8.4.1.16  | Measurement Control and Report: Traffic volume measurement for transition from idle mode to CELL_FACH state        | X   | X       |
| 8.4.1.17  | RRC / Measurement Control and Report: Traffic volume measurement for transition from idle mode to CELL_DCH state   | X   | X       |



| Test case | Description  | FDD | LCR TDD |
|-----------|--|-----|---------|
| 8.4.1.18  | RRC / Measurement Control and Report: Traffic volume measurement for transition from CELL_FACH state to CELL_DCH state | X   |         |
| 8.4.1.19  | RRC / Measurement Control and Report: Traffic volume measurement for transition from CELL_DCH to CELL_FACH state       | X   |         |
| 8.4.1.23  | RRC / Measurement Control and Report: Intra-frequency measurement for events 1C and 1D                                 | X   |         |
| 8.4.1.24  | RRC / Measurement Control and Report: Inter-frequency measurement for event 2A   | X   | X       |
| 8.4.1.24A | Measurement Control and Report: Inter-band measurement for event 2A  | X   |         |
| 8.4.1.25  | RRC / Measurement Control and Report: Inter-frequency measurement for events 2B and 2E                                 | X   |         |
| 8.4.1.25A | Measurement Control and Report: Inter-band measurement for events 2B and 2E  | X   |         |
| 8.4.1.26  | RRC / Measurement Control and Report: Inter-frequency measurement for events 2D and 2F                                 | X   |         |
| 8.4.1.27  | RRC / Measurement Control and Report: UE internal measurement for events 6A and 6B                                     | X   |         |
| 8.4.1.28  | Measurement Control and Report: UE internal measurement for events 6F (FDD) and 6G                                     | X   |         |
| 8.4.1.29  | RRC / Measurement Control and Report: Event based Traffic Volume measurement in CELL_FACH state                        | X   |         |
| 8.4.1.30  | RRC / Measurement Control and Report: Event based Traffic Volume measurement in CELL_DCH state                         | X   |         |
| 8.4.1.37  | Measurement Control and Report: UE internal measurement, event 6c  | X   |         |
| 8.4.1.38  | Measurement Control and Report: UE internal measurement, event 6d  | X   |         |
| 8.4.1.41  | Measurement Control and Report: Additional Measurements list   | X   |         |
| 8.4.1.42  | Measurement Control and Report: Change of Compressed Mode Method   | X   |         |

## A.4.1 Void

## A.4.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (RRCv730.MP) which accompanies the present document.

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## A.5 RLC ATS

The approved RLC test cases are listed. An “X” in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

Table A.5: RLC TTCN test cases

| Test case | Description  | FDD | LCR TDD |
|-----------|--|-----|---------|
| 7.2.2.3   | UM RLC / Segmentation / 7-bit Length Indicators / Padding  | X   |         |
| 7.2.2.4   | UM RLC / Segmentation / 7-bit Length Indicators / LI = 0   | X   |         |
| 7.2.2.5   | UM RLC / Segmentation / 7-bit Length Indicators / Invalid LI value                               | X   |         |
| 7.2.2.6   | UM RLC / Segmentation / 7-bit Length Indicators / LI value > PDU                                 | X   |         |
| 7.2.2.7   | UM RLC / Segmentation / 7-bit Length Indicators / First data octet LI                            | X   |         |
| 7.2.3.4   | AM RLC / Segmentation / 7-bit Length Indicators / LI = 0   | X   |         |
| 7.2.3.5   | AM RLC / Segmentation / 7-bit Length Indicators / Reserved LI value                              | X   |         |
| 7.2.3.6   | AM RLC / Segmentation / 7-bit Length Indicators / LI value > PDU                                 | X   |         |
| 7.2.3.12  | AM RLC / Correct use of Sequence Numbering   | X   | X       |
| 7.2.3.13  | AM RLC / Control of Transmit Window  | X   |         |
| 7.2.3.14  | AM RLC / Control of Receive Window   | X   |         |
| 7.2.3.15  | AM RLC / Polling for status / Last PU in transmission queue                                      | X   |         |
| 7.2.3.16  | AM RLC / Polling for status / Last PU in retransmission queue                                    | X   |         |
| 7.2.3.17  | AM RLC / Polling for status / Poll every Poll_PU PUs   | X   |         |
| 7.2.3.18  | AM RLC / Polling for status / Poll every Poll_SDU SDUs   | X   |         |
| 7.2.3.19  | AM RLC / Polling for status / Timer triggered polling (Timer_Poll_Periodic)                      | X   |         |
| 7.2.3.20  | AM RLC / Polling for status / Polling on Poll_Window of transmission window                      | X   |         |
| 7.2.3.21  | AM RLC / Polling for status / Operation of Timer_Poll timer / Timer expiry                       | X   |         |
| 7.2.3.22  | AM RLC / Polling for status / Operation of Timer_Poll timer / Stopping Timer_Poll timer          | X   |         |
| 7.2.3.23  | AM RLC / Polling for status / Operation of Timer_Poll timer / Restart of the Timer_Poll timer    | X   |         |
| 7.2.3.24  | AM RLC / Polling for status / Operation of timer Timer_Poll_Prohibit                             | X   |         |
| 7.2.3.25  | AM RLC / Receiver Status Triggers / Detection of missing PUs                                     | X   |         |
| 7.2.3.26  | AM RLC / Receiver Status Triggers / Operation of timer Timer_Status_Periodic                     | X   |         |
| 7.2.3.27  | AM RLC / Receiver Status Triggers / Operation of timer Timer_Status_Prohibit                     | X   |         |
| 7.2.3.28  | AM RLC / Status reporting / Abnormal conditions / Reception of LIST SUFI with Length set to zero | X   |         |
| 7.2.3.32  | AM RLC / SDU discard after MaxDAT number of retransmissions                                      | X   |         |
| 7.2.3.33  | AM RLC / Operation of the RLC Reset procedure / UE Originated                                    | X   |         |
| 7.2.3.34  | AM RLC / Operation of the RLC Reset procedure / UE Terminated                                    | X   | X       |
| 7.2.3.35  | AM RLC / Reconfiguration of RLC parameters by upper layers                                       | X   |         |

## A.5.1 Void

## A.5.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (RLCv730.MP) which accompanies the present document.

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## A.6 MAC ATS

The approved MAC test cases are listed. An "X" in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

**Table A.6: MAC TTCN test cases**

| Test case | Description   | FDD | LCR TDD |
|-----------|---|-----|---------|
| 7.1.1.1   | CCCH mapped to RACH/FACH / Invalid TCTF                     | X   | X       |
| 7.1.1.2   | DTCH or DCCH mapped to RACH/FACH / Invalid TCTF             | X   | X       |
| 7.1.1.3   | DTCH or DCCH mapped to RACH/FACH / Invalid C/T Field        | X   |         |
| 7.1.1.4   | DTCH or DCCH mapped to RACH/FACH / Invalid UE ID Type Field | X   |         |
| 7.1.1.5   | DTCH or DCCH mapped to RACH/FACH / Incorrect UE ID          | X   |         |
| 7.1.1.8   | DTCH or DCCH mapped to DCH / Invalid C/T Field              | X   | X       |
| 7.1.2.3.1 | Correct Selection of RACH parameters (FDD)                  | X   |         |
| 7.1.2.4a  | Access Service class selection for RACH transmission        | X   |         |
| 7.1.3.1   | Priority handling between data flows of one UE              | X   | X       |
| 7.1.3.2   | TFC Selection   | X   |         |

## A.6.1 Void

## A.6.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (MACv730.MP) which accompanies the present document.

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## A.7 BMC ATS

**Table A.7: BMC TTCN test cases**

| Test case | Description |
|-----------|-------------|
| -         | -           |

## A.7.1 Void

## A.7.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to this ATS is contained in an ASCII file (BMC.MP) which accompanies the present document.

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## A.8 PDCP ATS

**Table A.8: PDCP TTCN test cases**

| Test case | Description |
|-----------|-------------|
| -         | -           |

## A.8.1 Void

## A.8.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to this ATS is contained in an ASCII file (PDCP.MP) which accompanies the present document.

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## A.9 RAB ATS

The approved RAB test cases are listed. An “X” in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

Table A.9: RAB TTCN test cases

| Test case  | Description  | FDD | LCR TDD |
|------------|--|-----|---------|
| 14.2.4     | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.4a    | Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.5a    | Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.7a    | Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.9     | Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.12    | Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | X   |         |
| 14.2.13.1  | Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI  | X   |         |
| 14.2.13.2  | Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 40 ms TTI  | X   |         |
| 14.2.14.1  | Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI  | X   |         |
| 14.2.14.2  | Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 40 ms TTI  | X   |         |
| 14.2.15    | Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.16    | Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.17    | Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.23a1  | Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.23a.2 | Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / TC  | X   |         |
| 14.2.23b   | Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.23c   | Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.26    | Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | X   |         |
| 14.2.27    | Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | X   |         |
| 14.2.28    | Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.29    | Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH   | X   |         |
| 14.2.31.1  | Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / 10 ms TTI   | X   |         |
| 14.2.32.1  | Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / 10 ms TTI   | X   |         |
| 14.2.32.2  | Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / 20 ms TTI   | X   |         |
| 14.2.34.1  | Interactive or background / UL:384 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 10 ms TTI   | X   |         |
| 14.2.38a   | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH                                 | X   |         |
| 14.2.38b   | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH                                 | X   |         |
| 14.2.38c   | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH                               | X   |         |
| 14.2.38e   | Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH | X   |         |

|             |  |   |   |
|-------------|--|---|---|
| 14.2.38f    | Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH | X |   |
| 14.2.40     | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH                               | X |   |
| 14.2.41     | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH                              | X |   |
| 14.2.43.1   | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 10 ms TTI                  | X |   |
| 14.2.43.2   | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI                  | X |   |
| 14.2.49.1   | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI                    | X |   |
| 14.2.51.1   | Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH                      | X |   |
| 14.2.51a.1  | Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:8 DL:8 kbps / PS RAB   | X |   |
| 14.2.51b.1  | Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:16 DL:64 kbps / PS RAB   | X |   |
| 14.2.57     | Interactive or background / UL:64 DL:64 kbps / PS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH                                 | X |   |
| 14.2.58     | Streaming / unknown / UL:16 DL:64 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.  | X |   |
| 14.2.58a    | Streaming / unknown / UL:16 DL:128 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.                                       | X |   |
| 14.4.2.1    | One SCCPCH: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH  | X |   |
| 14.4.2.2    | Two SCCPCHs: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH   | X |   |
| 14.4.2.3    | One SCCPCH/connected mode: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH   | X |   |
| 14.4.2a.1   | One SCCPCH: Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH  | X |   |
| 14.4.2a.2   | Two SCCPCHs: Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB  | X |   |
| 14.4.2a.3   | One SCCPCH/connected mode: Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH                           | X |   |
| 14.4.3      | Interactive/Background 32 kbps RAB + SRBs for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH  | X |   |
| 14.4.4      | RB for CTCH + SRB for CCCH +SRB for BCCH   | X |   |
| 18.1.2.6    | Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   |   | X |
| 18.1.2.7    | Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH  |   | X |
| 18.1.2.13.1 | Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI   |   | X |
| 18.1.2.13.2 | Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 40 ms TTI   |   | X |
| 18.1.2.15   | Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   |   | X |
| 18.1.2.26   | Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  |   | X |
| 18.1.2.27   | Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  |   | X |

## A.9.1 Void

## A.9.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (RABv730.MP) which accompanies the present document.

## A.10 IR\_U ATS

The approved IR\_U test cases are listed. An "X" in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

**Table A.10: InterRat TTCN test cases**

| Test case | Description   | FDD | LCR_TDD |
|-----------|---|-----|---------|
| 6.2.1.1   | Selection of the correct PLMN and associated RAT  | X   |         |
| 6.2.1.6   | Selection of RAT for HPLMN; Automatic mode  | X   |         |
| 6.2.1.7   | Selection of RAT for UPLMN; Automatic mode  | X   |         |
| 6.2.1.8   | Selection of RAT for OPLMN; Automatic mode  | X   |         |
| 6.2.1.9   | Selection of "Other PLMN / access technology combinations"; Automatic mode  | X   |         |
| 6.2.2.1   | Cell reselection if cell becomes barred or S<0; UTRAN to GSM  | X   |         |
| 6.2.2.2   | Cell reselection if cell becomes barred or C1<0; GSM to; UTRAN  | X   |         |
| 6.2.2.3   | Cell reselection timings; GSM to UTRAN  | X   |         |
| 8.1.2.12  | RRC Connection Establishment: Reject with interRATInfo is set to GSM  | X   |         |
| 8.1.2.13  | RRC Connection Establishment: Reject with InterRATInfo is set to GSM and selection to the designated system fails           | X   |         |
| 8.3.7.1   | Inter system handover from UTRAN/To GSM/Speech/Success  | X   |         |
| 8.3.7.2   | Inter system handover from UTRAN/To GSM/Data/Same data rate/Success   | X   |         |
| 8.3.7.3   | Inter system handover from UTRAN/To GSM/Data/Data rate down grading/Success   | X   |         |
| 8.3.7.4   | Inter system handover from UTRAN/To GSM/Speech/Establishment/Success  | X   |         |
| 8.3.7.5   | Inter system handover from UTRAN/To GSM/Speech/Failure  | X   |         |
| 8.3.7.7   | Inter system handover from UTRAN/To GSM/Speech/Failure (L1 Synchronization)   | X   |         |
| 8.3.7.9   | Inter system handover from UTRAN/To GSM/Speech/Failure (Unsupported configuration)  | X   |         |
| 8.3.7.12  | Inter system handover from UTRAN/To GSM/Speech/Failure (Physical channel Failure and Reversion Failure)                     | X   |         |
| 8.3.7.13  | Inter system handover from UTRAN/To GSM/ success / call under establishment   | X   |         |
| 8.3.7.16  | Inter system handover from UTRAN/To GSM/Simultaneous CS and PS domain services/Success/TBF Establishment Success            | X   |         |
| 8.3.7.17  | Inter system handover from UTRAN/To GSM/DTM Support/Simultaneous CS and PS domain services/Success                          | X   |         |
| 8.3.9.1   | Cell reselection if cell becomes barred or S<0; UTRAN to GPRS (CELL_FACH)   | X   |         |
| 8.3.9.3   | Cell reselection fails if S<0; UTRAN to GPRS (CELL_FACH)  | X   |         |
| 8.3.9.5   | Cell Reselection with RAU - Qoffset value modification; UTRAN to GPRS (CELL_FACH)   | X   |         |
| 8.3.11.1  | Cell change order from UTRAN/To GPRS/CELL_DCH/Success   | X   |         |
| 8.3.11.4  | Cell change order from UTRAN/To GPRS/CELL_DCH/Failure (Physical channel & Reversion Failure)                                | X   |         |
| 8.4.1.31  | RRC / Measurement Control and Report: Inter-RAT measurement in CELL_DCH state   | X   |         |
| 8.4.1.33  | Measurement Control and Report: Inter-RAT measurement, event 3a   | X   |         |
| 8.4.1.34  | Measurement Control and Report: Inter-RAT measurement, event 3b   | X   |         |
| 8.4.1.35  | Measurement Control and Report: Inter-RAT measurement, event 3c   | X   |         |
| 8.4.1.36  | Measurement Control and Report: Inter-RAT measurement, event 3d   | X   |         |
| 8.4.1.40  | Measurement Control and Report: Inter-RAT measurement event 3C in CELL_DCH state using sparse compressed mode pattern       | X   |         |
| 8.4.1.48  | Measurement Control and Report: Combined Inter-frequency measurement for event 2b and Inter-RAT measurement, event 3a (FDD) | X   |         |
| 12.8      | GMM READY timer handling  | X   |         |

## A.10.1 Void

## A.10.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (IR\_Uv730.MP) which accompanies the present document.

# A.11 AGPS ATS

The approved AGPS test cases are listed. An “X” in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

**Table A.11: AGPS TTCN test cases**

| Test case | Description  | FDD | LCR_TDD |
|-----------|--|-----|---------|
| 17.2.2.1  | LCS Network Induced location request/ UE-Based GPS/ Emergency Call / with USIM                                     | X   |         |
| 17.2.2.2  | LCS Network Induced location request/ UE-Based GPS/ Emergency Call / without USIM                                  | X   |         |
| 17.2.2.3  | LCS Network induced location request/ UE-Assisted GPS/ Emergency call/ With USIM                                   | X   |         |
| 17.2.2.4  | LCS Network induced location request/ UE-Assisted GPS/ Emergency call/ Without USIM                                | X   |         |
| 17.2.3.2  | LCS Mobile originated location request/ UE-Based GPS/ Position estimate request/ Success                           | X   |         |
| 17.2.3.3  | LCS Mobile originated location request/ UE-Based or UE-Assisted GPS/ Assistance data request/ Success              | X   |         |
| 17.2.3.4  | LCS Mobile originated location request/ UE-Assisted GPS/ Position Estimate/ Success                                | X   |         |
| 17.2.3.8  | LCS Mobile originated location request/ UE-Based or UE-Assisted GPS/ Assistance data request/ Failure              | X   |         |
| 17.2.3.9  | LCS Mobile originated location request/ UE-Assisted GPS/ Position Estimate/ Success                                | X   |         |
| 17.2.4.1  | LCS Mobile terminated location request/ UE-Based GPS   | X   |         |
| 17.2.4.2  | LCS Mobile-terminated location request/UE-Based GPS/ Request for additional assistance data/ Success               | X   |         |
| 17.2.4.3  | LCS Mobile-terminated location request/UE-Based GPS/ Failure – Not Enough Satellites                               | X   |         |
| 17.2.4.4  | LCS Mobile terminated location request/ UE-Assisted GPS/ Success   | X   |         |
| 17.2.4.5  | LCS Mobile terminated location request/ UE-Assisted GPS/ Request for additional assistance data/ Success           | X   |         |
| 17.2.4.6  | LCS Mobile terminated location request/ UE-Based GPS/ Privacy Verification/ Location Allowed if No Response        | X   |         |
| 17.2.4.7  | LCS Mobile terminated location request/ UE-Based GPS/ Privacy Verification/ Location Not Allowed if No Response    | X   |         |
| 17.2.4.8  | LCS Mobile terminated location request/ UE-Assisted GPS/ Privacy Verification/ Location Allowed if No Response     | X   |         |
| 17.2.4.9  | LCS Mobile terminated location request/ UE-Assisted GPS/ Privacy Verification/ Location Not Allowed if No Response | X   |         |

## A.11.1 Void

## A.11.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (AGPSv730.MP) which accompanies the present document.



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## A.12 HSD\_ENH ATS

The approved HSD\_ENH test cases are listed. An “X” in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

Table A.12: HSDPA and Rel-5 enhancement TTCN test cases

| Test case | Description  | FDD | LCR_TDD |
|-----------|--|-----|---------|
| 6.1.2.10  | HCS inter-frequency cell reselection   | X   |         |
| 6.1.2.10a | HCS inter-frequency cell reselection for inter-band operation  | X   |         |
| 7.1.5.1   | MAC-hs reordering and stall avoidance  | X   |         |
| 7.1.5.2   | MAC-hs priority queue handling   | X   |         |
| 7.1.5.3   | MAC-hs PDU header handling   | X   |         |
| 7.1.5.4   | MAC-hs retransmissions   | X   |         |
| 7.1.5.5   | MAC-hs reset   | X   |         |
| 7.1.5.6   | MAC-hs transport block size selection  | X   |         |
| 8.1.2.14  | RRC Connection Establishment using the default configuration for 3.4 kbps signalling bearers   | X   |         |
| 8.1.2.15  | RRC Connection Establishment using the default configuration for 13.6 kbps signalling bearers  | X   |         |
| 8.1.6.5   | Initial Direct Transfer: Inclusion of establishment cause  | X   |         |
| 8.1.1.6a  | Paging for notification of synchronised BCCH modification in idle mode using BCCH modification time  | X   |         |
| 8.2.1.27  | RRC / Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (two radio links, start of HS-DSCH reception)   | X   |         |
| 8.2.1.28  | RRC/Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (RB mapping for both DL DCH and HS-DSCH in cell without HS-DSCH support)  | X   | X       |
| 8.2.1.29  | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (Timing re-initialized hard handover to another frequency, uplink TFCS restriction and start of HS-DSCH reception)            | X   | X       |
| 8.2.1.30  | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (Timing re-initialised hard handover to another frequency, start of HS-DSCH reception)  | X   | X       |
| 8.2.1.31  | Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Success (start of HS-DSCH reception)   | X   | X       |
| 8.2.1.32  | Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Success (start of HS-DSCH reception with frequency modification)   | X   | X       |
| 8.2.2.36  | RRC / Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Start and stop of HS-DSCH reception)   | X   |         |
| 8.2.2.38  | Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (with active HS-DSCH reception)  | X   | X       |
| 8.2.2.39  | Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Timing re-initialised hard handover to another frequency, start and stop of HS-DSCH reception)                             | X   | X       |
| 8.2.2.40  | Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_FACH and from CELL_FACH to CELL_DCH: Success (frequency band modification, start and stop of HS-DSCH reception)                          | X   | X       |
| 8.2.2.41  | Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Start and stop of HS-DSCH reception, during an active CS bearer)   | X   | X       |
| 8.2.2.42  | Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Timing re-initialised hard handover to another frequency, start and stop of HS-DSCH reception, during an active CS bearer) | X   | X       |
| 8.2.2.50  | Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (from speech to speech plus PS data with modification of downlink spreading factor)  | X   |         |
| 8.2.3.30  | RRC / Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success (stop of HS-DSCH reception)   | X   | X       |
| 8.2.3.31  | Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success (With active HS-DSCH reception)   | X   |         |
| 8.2.3.32  | Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success (Timing re-initialised hard handover to another frequency, with active HS-DSCH reception)   | X   | X       |
| 8.2.3.33  | Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success (stop of HS-DSCH reception with frequency modification)   | X   | X       |
| 8.2.3.34  | Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Success (stop of HS-DSCH reception with frequency modification)  | X   | X       |
| 8.2.3.35  | Radio Bearer Release for transition from CELL_DCH to CELL_PCH: Success (stop of HS-DSCH reception)   | X   | X       |
| 8.2.4.36  | Transport Channel Reconfiguration from CELL_DCH to CELL_DCH: Success (with active HS-DSCH reception, not changing the value of TTI during UL rate modification)  | X   |         |
| 8.2.6.39a | Physical Channel Reconfiguration for transition from CELL_DCH to   | X   |         |

|           |   |   |   |
|-----------|---|---|---|
|           | CELL_DCH: Success (serving HS-DSCH cell change without MAC-hs reset)  |   |   |
| 8.2.6.39b | Physical Channel Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (serving HS-DSCH cell change with MAC-hs reset)  | X | X |
| 8.2.6.40  | Physical Channel Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Two radio links, change of HS-PDSCH configuration)  | X |   |
| 8.2.6.40a | Physical Channel Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (change of HS-PDSCH configuration)   |   | X |
| 8.2.6.41  | Physical Channel Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Timing re-initialised hard handover to another frequency, signalling only)  | X |   |
| 8.2.6.42  | Physical Channel Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Timing re-initialized hard handover to another frequency, Serving HS-DSCH cell change)  | X | X |
| 8.2.6.46  | Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency with timing re-initialised. Serving HS-DSCH cell change): Failure (Physical channel failure and reversion to old channel) | X | X |
| 8.2.6.48  | Physical Channel Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Timing re-initialized hard handover to another frequency, serving HS-DSCH cell change, compressed mode)   | X |   |
| 8.2.6.49  | Physical Channel Reconfiguration from CELL_DCH to URA_PCH: Success (stop of HS-DSCH reception)  | X | X |
| 8.3.1.32  | Cell Update: Transition from URA_PCH to CELL_DCH, start of HS-DSCH reception  | X | X |
| 8.3.1.33  | Cell Update: Transition from CELL_PCH to CELL_DCH, start of HS-DSCH reception, frequency band modification  | X |   |
| 8.3.1.34  | Cell Update: Transition from CELL_DCH to CELL_FACH, stop of HS-DSCH reception   | X | X |
| 8.3.1.35  | Cell Update: Transition from CELL_DCH to CELL_DCH, with active HS-DSCH reception  | X | X |
| 8.3.1.36  | Cell Update: Transition from CELL_DCH to CELL_FACH (stop of HS-DSCH reception with frequency modification)  | X | X |
| 8.3.1.37  | Cell Update: Transition from CELL_DCH to CELL_DCH (with active HS-DSCH reception and frequency modification)  | X | X |
| 8.3.1.38  | Cell Update: state specific handling of Treselection and Qhyst for cell reselection in CELL_FACH  | X |   |
| 8.3.1.39  | Cell Update: state specific handling of Treselection and Qhyst for cell reselection in CELL_PCH   | X |   |
| 8.3.1.40  | Cell update: Transition from CELL_PCH to CELL_DCH, inclusion of establishment cause   | X |   |
| 8.3.4.9   | Active set update in soft handover: Radio Link removal (stop of HS-PDSCH reception)   | X |   |
| 8.3.7.14  | Inter system handover from UTRAN/To GSM/Speech/Success (stop of HS-DSCH reception)  | X |   |
| 8.3.11.9  | Inter-RAT Cell Change Order from UTRAN to GPRS/CELL_DCH/Success (stop of HS-DSCH reception)   | X |   |
| 8.3.11.10 | Inter-RAT Cell Change Order from UTRAN to GPRS/CELL_DCH/Failure (Physical channel Failure, stop of HS-DSCH reception)   | X |   |
| 8.3.11.12 | Inter-RAT cell change order from UTRAN/To GPRS/CELL_DCH/Network Assisted Cell Change/Success  | X |   |
| 8.3.11.13 | Inter-RAT cell change order from UTRAN/To GPRS/CELL_DCH/Failure (T309 expiry)   | X |   |
| 8.4.1.47  | Measurement Control and Report: Event triggered periodic measurement for event 1B (FDD)   | X |   |
| 14.2.4b   | Conversational / speech / UL:(12.2 7.4 5.9 4.75) DL:(12.2 7.4 5.9 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + DL:0.15 kbps SRB#5 for DCCH  | X |   |
| 14.2.62   | Conversational / speech / UL:(12.65 8.85 6.6) DL:(12.65 8.85 6.6) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + DL:0.15 kbps SRB#5 for DCCH.   | X |   |
| 14.6.1    | Interactive or background / UL:64 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X |   |
| 14.6.1a   | Interactive or background / UL:128 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | X |   |
| 14.6.2    | Interactive or background / UL:384 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | X |   |
| 14.6.3    | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:384 DL:[Bit rate depending on the UE category] / PS RAB +  | X |   |

|         |   |   |  |
|---------|---|---|--|
|         | UL:3.4 DL:3.4 kbps SRBs for DCCH  |   |  |
| 14.6.3a | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL: 64 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X |  |
| 14.6.4  | Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:384 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | X |  |
| 14.6.4a | Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH   | X |  |
| 14.6.5  | Interactive or background / UL:384 DL:[Bit rate depending on the UE category] / PS RAB + Interactive or background / UL:384 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | X |  |
| 14.6.5a | Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB + Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | X |  |
| 14.6.6  | Streaming / unknown / UL:128 DL: [min 128, max bit rate depending on UE category] kbps / PS RAB + Interactive or background / UL:128 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | X |  |
| 14.6.7  | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:128 DL: [guaranteed 128, max bit rate depending on UE category] kbps / PS RAB + Interactive or background / UL:128 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH | X |  |
| 14.6.8  | Conversational / speech / UL:(12.65 8.85 6.6) DL:(12.65 8.85 6.6) kbps / CS RAB + Interactive or Background / UL:384 DL:[Bit rate depending on the UE category] / PS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH + DL:0.15 kbps SRB#5 for DCCH  | X |  |

## A.12.1 Void

## A.12.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (HSD\_ENHv730.MP) which accompanies the present document.

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## A.13 HSU\_ENH ATS

The approved HSU\_ENH test cases are listed. An “X” in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

Table A.13: EDCH and Rel-6 enhancement TTCN test cases

| Test case  | Description   | FDD | LCR_TDD |
|------------|---|-----|---------|
| 6.1.1.8    | PLMN selection in shared network environment, Automatic mode  | X   |         |
| 6.1.1.9    | PLMN selection in shared network environment, Manual Mode   | X   |         |
| 6.1.2.11   | Cell reselection in shared network environment  | X   |         |
| 6.2.1.10   | Selection of PLMN and RAT in shared network environment, Automatic mode   | X   |         |
| 6.2.1.11   | Selection of PLMN and RAT in shared network environment, Manual Mode  | X   |         |
| 6.2.2.4    | Cell reselection in multi-mode shared network environment   | X   |         |
| 6.2.2.5    | Cell reselection using SIB18; UTRAN to GSM  | X   |         |
| 7.1.6.1.1  | MAC-es/e multiplexing without RRC restrictions  | X   |         |
| 7.1.6.1.2  | MAC-es/e multiplexing with RRC restrictions   | X   |         |
| 7.1.6.1.3  | Correct settings of MAC-es/e header fields  | X   |         |
| 7.1.6.2.1  | Correct settings of MAC-es/e scheduling information   | X   |         |
| 7.1.6.2.2  | Happy bit setting   | X   |         |
| 7.1.6.2.3  | MAC-es/e non-scheduled transmissions  | X   |         |
| 7.1.6.2.4  | MAC-es/e correct handling of scheduled transmissions when absolute grant varies   | X   |         |
| 7.1.6.2.5  | MAC-es/e de-activation and re-activation of HARQ processes  | X   |         |
| 7.1.6.2.6  | MAC-es/e correct handling of relative grants  | X   |         |
| 7.1.6.2.7  | MAC-es/e correct handling of absolute grants on Primary and Secondary E-RNTI  | X   |         |
| 7.1.6.2.8  | MAC-es/e combined non-scheduled and scheduled transmissions   | X   |         |
| 7.1.6.2.9  | MAC-es/e Correct handling of HARQ profile power offsets   | X   |         |
| 7.1.6.2.10 | MAC-es/e Correct handling of minimum set of E-TFCI  | X   |         |
| 7.1.6.3.1  | MAC-es/e E-TFC priority   | X   |         |
| 7.1.6.4.1  | MAC-es/e process handling   | X   |         |
| 7.1.6.4.2  | MAC-es/e maximum number of retransmissions  | X   |         |
| 7.1.6.4.3  | MAC-es/e Correct handling of MAC-es/e reset   | X   |         |
| 8.1.1.11   | Paging for Connection in idle mode (Shared Network Environment)   | X   |         |
| 8.1.2.16   | RRC Connection Establishment / Domain Specific Access Control: Success  | X   |         |
| 8.1.2.17   | RRC Connection Establishment for transition from Idle Mode to CELL_DCH: Success (start of E-DCH transmission)   | X   |         |
| 8.1.2.18   | RRC Connection Establishment using the default configuration for HS-DSCH / E-DCH signalling bearers   | X   |         |
| 8.2.1.36a  | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH using F-DPCH: Success (hard handover to another frequency, start of E-DCH transmission, F-DPCH configured)              | X   |         |
| 8.2.1.35   | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (start of E-DCH transmission)  | X   |         |
| 8.2.1.36   | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (hard handover to another frequency, start of E-DCH transmission)  | X   |         |
| 8.2.2.44   | Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (With active E-DCH transmission)  | X   |         |
| 8.2.2.44a  | Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (With active E-DCH transmission, F-DPCH configured)   | X   |         |
| 8.2.2.45   | Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_DCH and CELL_DCH to CELL_FACH: Success (start and stop of E-DCH transmission)  | X   |         |
| 8.2.2.46   | Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (hard handover to another frequency, start and stop of E-DCH transmission)                                   | X   |         |
| 8.2.2.47   | Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_DCH and CELL_DCH to CELL_FACH: Success (frequency modification, start and stop of E-DCH transmission)                    | X   |         |
| 8.2.2.47a  | Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_DCH and CELL_DCH to CELL_FACH: Success (frequency modification, start and stop of E-DCH transmission, F-DPCH Configured) | X   |         |
| 8.2.2.49   | Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_PCH: Success (stop of E-DCH transmission)   | X   |         |
| 8.2.3.36   | Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success (frequency modification, stop of E-DCH transmission)   | X   |         |
| 8.2.2.48   | Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Start and stop of E-DCH transmission)   | X   |         |
| 8.2.6.50   | Physical Channel Reconfiguration for transition from CELL_DCH to URA_PCH: Success (frequency modification, stop of E-DCH transmission)  | X   |         |
| 8.2.6.51   | Physical Channel Reconfiguration for transition from CELL_DCH to CELL_DCH: Success (serving E-DCH cell change)  | X   |         |

|           |   |   |  |
|-----------|---|---|--|
| 8.2.6.52  | Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH: Success (Timing re-initialized hard handover to another frequency, Serving E-DCH cell change, compressed mode)   | X |  |
| 8.2.6.54  | Physical Channel Reconfiguration for transition from CELL_DCH to CELL_DCH: Failure (Timing re-initialized hard handover, Serving E-DCH cell change, physical channel failure and reversion to old channel)  | X |  |
| 8.3.1.41  | Cell Update: Transition from URA_PCH to CELL_DCH: Success (start of E-DCH transmission)   | X |  |
| 8.3.1.42  | Cell Update: Transition from CELL_PCH to CELL_DCH: Success (frequency modification, start of E-DCH transmission)  | X |  |
| 8.3.1.42a | Cell Update: Transition from CELL_PCH to CELL_DCH: Success (frequency modification, start of E-DCH transmission, F-DPCH Configured)   | X |  |
| 8.3.1.43  | Cell Update: Radio Link Failure, with active E-DCH transmission   | X |  |
| 8.3.3.4   | UTRAN Mobility Information: Shared Network  | X |  |
| 8.3.4.10  | Active set update in soft handover: Radio Link addition and serving HS-DSCH / E-DCH cell change   | X |  |
| 8.3.7.1a  | Inter system handover from UTRAN/To GSM/Speech/Success with A5/3 ciphering  | X |  |
| 8.3.11.14 | Inter-RAT Cell Change Order from UTRAN to GPRS/CELL_DCH/Success (stop of E-DCH transmission)  | X |  |
| 8.4.1.49  | Measurement Control and Report: Intra-frequency measurement for event 1J  | X |  |
| 9.4.3.6   | Location updating /abnormal cases / CS domain is changed from barred to unbarred because of domain specific access control  | X |  |
| 9.5.9     | MM connection / abnormal cases / CS domain barred because of domain specific access control   | X |  |
| 12.2.1.12 | PS attach / abnormal cases / access barred due to domain specific access restriction for PS domain  | X |  |
| 12.4.2.11 | Combined routing area updating / abnormal cases / access barred due to domain specific access restriction for CS domain   | X |  |
| 12.4.2.12 | Combined routing area updating / abnormal cases / access barred due to domain specific access restriction for PS domain   | X |  |
| 12.9.15   | Service Request / abnormal cases / access barred due to domain specific access restriction for PS domain  | X |  |
| 14.7.1    | Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH on DCH  | X |  |
| 14.7.2    | Streaming or interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL:[max bit rate depending on UE category and TTI] DL:3.4 kbps SRBs for DCCH on E-DCH and DL DCH  | X |  |
| 14.7.3    | Streaming or interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] SRBs for DCCH on E-DCH and HS-DSCH  | X |  |
| 14.7.4    | Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming or interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | X |  |
| 14.7.5    | Streaming or interactive or background / UL:[max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] kbps / PS RAB + Streaming or interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL:[max bit rate depending on UE category and TTI] DL:3.4 kbps SRBs for DCCH on E-DCH and DL DCH  | X |  |
| 14.7.6    | Conversational / unknown or speech / UL:[max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] kbps / PS RAB + Streaming or Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL:[max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] SRBs for DCCH on E-DCH and HS-DSCH   | X |  |
| 14.7.7    | Conversational / unknown or speech / UL:[max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] kbps / PS RAB + Streaming or Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + Streaming or Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL:[max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] SRBs for DCCH on E-DCH and HS-DSCH | X |  |

|        |  |   |  |
|--------|--|---|--|
| 14.7.8 | Conversational / speech / UL:(12.65 8.85 6.6) DL:(12.65 8.85 6.6) kbps / CS RAB + Streaming or interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + DL:0.15 kbps SRB#5 for DCCH | X |  |
|--------|--|---|--|

### A.13.1 Void

### A.13.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (HSU\_ENHv730.MP) which accompanies the present document.

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## A.14 MBMS ATS

The approved HSU\_ENH test cases are listed. An “X” in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

Table A.14: MBMS and Rel-6 enhancement TTCN test cases

| Test case | Description   | FDD | LCR_TDD |
|-----------|---|-----|---------|
| 7.2.4.2   | MTCH duplicate avoidance and reordering / MBMS Broadcast Service  | X   |         |
| 7.2.4.3   | MCCH Out Of Sequence Delivery handling / MBMS Broadcast Service   | X   |         |
| 8.5.1.11  | MBMS PTP Session Start at MCCH Notification in Idle Mode / MBMS Selected Service  | X   |         |
| 8.5.1.12  | MBMS PTP Session Start at MCCH Notification in URA_PCH / MBMS Selected Service  | X   |         |
| 8.5.1.13  | MBMS PTP Session Start at MCCH Notification in CELL_FACH / MBMS Selected Service  | X   |         |
| 8.5.1.2   | MBMS PTP Session Start at MCCH Notification in CELL_PCH / MBMS Selected Service   | X   |         |
| 8.5.1.3   | MBMS PTM Session Start at MCCH Acquisition in CELL_FACH state / MBMS Broadcast Service  | X   |         |
| 8.5.1.4   | MBMS PTM Session Start at MCCH Notification in CELL_DCH state / MBMS Broadcast Service  | X   |         |
| 8.5.1.5   | MBMS PTM Session Start at MCCH Acquisition in CELL_DCH (for a non-MBMS service) when entering into an MBMS cell (UE capable of MBMS p-t-m reception in CELL_DCH) / MBMS Broadcast Service   | X   |         |
| 8.5.1.9   | MBMS PTM Session Start at MCCH Notification in Idle Mode / MBMS Broadcast Service   | X   |         |
| 8.5.2.2   | MBMS PTM Session Reconfiguration – Transfer Mode Change to PTP / MBMS Selected Service  | X   |         |
| 8.5.2.3   | MBMS PTP Session Reconfiguration - Transfer mode change to PTM / MBMS Selected Service  | X   |         |
| 8.5.2.4   | MBMS PTM Session Reconfiguration – MTCH data rate change / MBMS Broadcast Service   | X   |         |
| 8.5.3.1   | MBMS Session Start (Frequency Layer Convergence)/Session Stop (Frequency Layer Dispersion) in Idle mode / MBMS Selected Service   |     |         |
| 8.5.3.2   | MBMS Session Start (Frequency Layer Convergence)/Session Stop (Frequency Layer Dispersion) in CELL_PCH / MBMS Broadcast Service   | X   |         |
| 8.5.3.3   | MBMS Session Start (Frequency Layer Convergence)/Session Stop (Frequency Layer Dispersion) in CELL_FACH / MBMS Broadcast Service  | X   |         |
| 8.5.4.1   | Transmission of the MBMS Selected Services Information when entering RRC connected mode and CELL_DCH state / MBMS Selected Service  | X   |         |
| 8.5.4.2   | Modification of the MBMS Selected Services list whilst in URA_PCH & Cell_FACH / MBMS Selected Service   |     |         |
| 8.5.4.3   | Testing of the MBMS Selected Services indication from the network whilst in CELL_DCH / MBMS Selected Service  | X   |         |
| 8.5.5.1   | MBMS Counting in Idle Mode / MBMS Selected Service  | X   |         |
| 8.5.5.2   | MBMS Counting in CELL_FACH / MBMS Selected Service  | X   |         |
| 8.5.5.3   | MBMS No Counting in CELL_DCH / MBMS Selected Service  | X   |         |
| 8.5.5.4   | MBMS Counting in CELL_PCH / MBMS Selected Service   | X   |         |
| 8.5.5.7   | RRC Connection establishment for MBMS Counting :Success after T318 Timeout/ MBMS Selected Service   | X   |         |
| 8.5.5.8   | RRC Connection establishment for MBMS Counting :Success after MAC Layer Failure Indication/ MBMS Selected Service   | X   |         |
| 8.5.6.1   | MBMS Controlling Cell Change - Idle mode - Frequency Layer Convergence – HCS Not Used / MBMS Selected Service   | X   |         |
| 11.8.2    | MBMS Service Request procedure collision with Routing Area Update/ MBMS Selected Service  | X   |         |
| 12.9.16   | MBMS SERVICE REQUEST / counting / MBMS Selected Service   | X   |         |
| 12.9.17   | MBMS SERVICE REQUEST / point to point RBs / MBMS Selected Service   | X   |         |
| 14.4.5    | 64.8kbps RB for MTCH with 80 ms TTI / MBMS Broadcast Service  | X   |         |
| 14.4.6    | 129.6 kbps RB for MTCH with 80 ms TTI / MBMS Broadcast Service  | X   |         |
| 14.4.7    | 259.2 kbps RB for MTCH with 40 ms TTI / MBMS Broadcast Service  | X   |         |
| 14.6.9    | Streaming MBMS PTP / unknown / UL:16 DL: [max bit rate depending on UE category] kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / MBMS Selected Service   | X   |         |
| 14.6.10   | Streaming MBMS PTP / unknown / UL:16 DL: [max bit rate depending on UE category] kbps / PS RAB + Interactive or background / UL:64 DL: [max bit rate depending on UE category] / PS RAB + Interactive or background / UL:64 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / MBMS Selected Service | X   |         |



## A.14.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (HSU\_ENHv730.MP) which accompanies the present document.

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## A.15 HS\_ENH ATS

The approved HS\_ENH test cases are listed. An “X” in columns FDD or LCR TDD indicates the test case approved for the relevant ATS.

**Table A.13: MBMS and Rel-6 enhancement TTCN test cases**

| Test case | Description   | FDD | LCR_TDD |
|-----------|---|-----|---------|
| 7.1.5a.1  | MAC-ehs multiplexing / multiple logical channels on same queue  | X   |         |
| 7.1.5a.2  | MAC-ehs multiplexing / multiple logical channels on multiple queues   | X   |         |
| 7.1.5a.3  | MAC-ehs segmentation / UE handling of partial and full PDUs   | X   |         |
| 7.1.5a.4  | MAC-ehs reordering and stall avoidance  | X   |         |
| 8.1.2.19  | RRC Connection Establishment for transition from Idle Mode to CELL_DCH: Success (start of E-DCH transmission)   | X   |         |
| 8.2.1.38  | Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (start of discontinuous uplink transmission)   | X   |         |
| 8.2.2.52  | Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_DCH and CELL_DCH to CELL_FACH: Success (start and stop of discontinuous uplink transmission)                         | X   |         |
| 8.2.2.54  | Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_DCH and CELL_DCH to CELL_FACH: Success (frequency modification, start and stop of discontinuous uplink transmission) | X   |         |
| 8.2.2.56  | Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_PCH: Success (stop of discontinuous uplink transmission)  | X   |         |
| 8.3.11.15 | Inter-RAT Cell Change Order from UTRAN to GPRS/CELL_DCH/Success (stop of discontinuous uplink transmission)   | X   |         |

### A.15.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to the corresponding FDD or LCR\_TDD ATS is contained in an ASCII file (HS\_ENHv730.MP) which accompanies the present document.

## Annex B (normative): Partial IXIT proforma

Notwithstanding the provisions of the copyright related to the text of the present document, The Organizational Partners of 3GPP grant that users of the present document may freely reproduce the partial IXIT proforma in this annex so that it can be used for its intended purposes and may further publish the completed partial IXIT.

### B.0 Introduction

This partial IXIT proforma contained in the present document is provided for completion, when the related Abstract Test Suite is to be used against the Implementation Under Test (IUT).

Text in *italics* is comments for guidance for the production of a IXIT, and is not to be included in the actual IXIT.

The completed partial IXIT will normally be used in conjunction with the completed ICS, as it adds precision to the information provided by the ICS.

### B.1 Parameter values

#### B.1.1 BasicM test suite parameter declarations

The following parameters are common to all ATSS.

**Table B.1: BasicM PIXIT**

| Parameter name      | Description  | Type              | Default value  | Supported value |
|---------------------|--|-------------------|--|-----------------|
| px_AuthAMF          | Authentication Management Field (16 bits). The value shall be different from '1111 1111 1111 1111'B (AMFresynch).        | BITSTRING         | See note 2   |                 |
| px_AuthK            | Authentication Key (128 bits)  | BITSTRING         | '01011110010010101001100110100100001101011010101011101110100000010001011100110011111000011000010011010011000101001'B |                 |
| px_AuthN            | Value of n to initialize tcv_Auth_n (length of extended response) min 31, max 127 (3GPP TS 34.108 [3] clause 8.1.2)      | INTEGER           | 127  |                 |
| px_AuthRAND         | Random Challenge (128 bits)  | BITSTRING         | '01010101...01'B   |                 |
| px_CipherAlg        | Cipher algorithm.  | B3                | Default value: (GEA/1) '001'B  |                 |
| px_CipheringOnOff   | Security mode - TRUE if ciphering is applicable  | BOOLEAN           | TRUE   |                 |
| px_CN_DomainTested  | CN domain to be tested. This parameter is used in test cases that handle both PS and CS domains.                         | CN_DomainIdentity | ps_domain  |                 |
| px_DL_MaxCC_TB_bits | Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant. | MaxNoBits         | b163840  |                 |

| Parameter name                | Description   | Type                           | Default value      | Supported value   |
|-------------------------------|---|--------------------------------|--------------------|---|
| px_DL_MaxCCTrCH               | Maximum number of Simultaneous CCTrCH for downlink  | MaxSimultaneousCCTrCH_Count    | 8                  |   |
| px_DL_MaxTB_bits              | Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant.  | MaxNoBits                      | b163840            |   |
| px_DL_MaxTF                   | Maximum number of TF for downlink   | MaxNumberOfTF                  | tf1024             |   |
| px_DL_MaxTFS                  | Maximum number of TFC in the TFCS for downlink  | MaxNumberOfTFC_DL              | tfc1024            |   |
| px_DL_MaxTrCHs                | Maximum number of simultaneous transport channels for downlink.   | MaxSimultaneousTransChannelsDL | e32                |   |
| px_DL_MaxTTI_TB               | Maximum total number of transport blocks received within TTIs that end within the same 10 ms interval.  | MaxTransportBlocksDL           | tb512              |   |
| px_FRESH                      | Value for FRESH   | Fresh                          | See note 1         |   |
| px_FDD_OperationBand          | Applicable for FDD<br>The operation band under test as defined in 34.108 clause 5.1.1.  | INTEGER                        | 1, see note 3      | px_UARFCN_D_Mid,<br>px_UARFCN_D_Low and<br>px_UARFCN_D_High shall take the values according to the value of px_FDD_OperationBand. |
| px_IMSI_Def                   | Default IMSI value  | HEXSTRING                      | '001010123456063'H |   |
| px_IP_Version                 | IP version under test   | IP_VersionType                 | IPv4               |   |
| px_JapanMCC                   | Japan MCC to be used for Band VI  | HEXSTRING                      | '442'H             |   |
| px_PriScrmCode                | Applicable for FDD<br>Primary scrambling code   | PrimaryScramblingCode          | 100                |   |
| px_MaxAM_EntityNumberRLC_Cap  | Maximum AM Entity Number for RLC.   | MaximumAM_EntityNumberRLC_Cap  | am30               |   |
| px_MaxNoDPDCH_BitsTransmitted | Part of UL_PhysChCapabilityFDD  | MaxNoDPDCH_BitsTransmitted     | b57600             |   |
| px_MaxNoDPCH_PDSCH_Codes      | Part of DL_PhysChCapabilityFDD.<br>INTEGER (1..8).  | INTEGER                        | 8                  |   |
| px_MaxNoPhysChBitsReceived    | Part of DL_PhysChCapabilityFDD.   | MaxNoPhysChBitsReceived        | b76800             |   |
| px_MaxRLC_WindowSize          | Maximum RLC window size.  | MaximumRLC_WindowSize          | mws4095            |   |
| px_MS_ClsmkESIND              | default Early Sending Indication  | B1                             | '0'B               |   |
| px_MS_ClsmkRevLvl             | default Revision Level  | B2                             | '10'B              |   |
| px_PTMSI_Def                  | default PTMSI   | OCTETSTRING                    | 'C2345678'O        |   |
| px_PTMSI_SigDef               | default PTMSI signature (3 octets, 3GPP 24.008 [9], clause 10.5.5.8).   | OCTETSTRING                    | 'AB1234'O          |   |
| px_RAT                        | Applicable for FDD<br>This parameter is used to specify which radio access technology is being used for the current test execution. Valid values: fdd and tdd | RatType                        | fdd                |   |
| px_RRC_CS_ServTested          | CS service to be tested for RRC test cases.   | RRC_ServTested                 | Speech             |   |
| px_RRC_PS_ServTested          | PS service to be tested for RRC test cases.   | RRC_ServTested                 | ps_Interactive     |   |

| Parameter name                          | Description   | Type                           | Default value               | Supported value |
|---|---|--------------------------------|-----------------------------|-----------------|
| px_SRNC_Id                              | SRNC Id   | SRNC_Identity                  | '0000 0000 0001'B           |                 |
| px_SRNTI                                | S RNTI  | S_RNTI                         | '0000 0000 0000 0000 0001'B |                 |
| px_TCellA                               | TCell value for cell A. Except for the first created cell, the value 0 applied in ts_SS_CellCfg.  | Tcell                          | 256                         |                 |
| px_TCellB                               | TCell value for cell B. Except for the first created cell, the value 0 applied in ts_SS_CellCfg.  | Tcell                          | 512                         |                 |
| px_TCellC                               | TCell value for cell C. Except the first created cell, the value 0 applied in ts_SS_CellCfg.  | Tcell                          | 1536                        |                 |
| px_TCellD                               | TCell value for cell D. Except the first created cell, the value 0 applied in ts_SS_CellCfg.  | Tcell                          | 321                         |                 |
| px_TCellE                               | TCell value for cell E. Except the first created cell, the value 0 applied in ts_SS_CellCfg.  | Tcell                          | 833                         |                 |
| px_TCellF                               | TCell value for cell F. Except the first created cell, the value 0 applied in ts_SS_CellCfg.  | Tcell                          | 6577                        |                 |
| px_TCellG                               | TCell value for cell G. Except the first created cell, the value 0 applied in ts_SS_CellCfg.  | Tcell                          | 7253                        |                 |
| px_TCellH                               | TCell value for cell H. Except the first created cell, the value 0 applied in ts_SS_CellCfg.  | Tcell                          | 4351                        |                 |
| px_TimerDequeuePCO                      | Additional time for dequeuing PCO   | INTEGER                        | 5000 (ms)                   |                 |
| px_TMSI_Def                             | Default TMSI  | OCTETSTRING                    | '12345678'O                 |                 |
| px_TotalRLC_AM_BufferSize               | Total RLC AM buffer size.   | TotalRLC_AM_BufferSize         | NA                          |                 |
| px_UARFCN_D_Mid                         | Applicable for FDD<br>Mid Range downlink UARFCN value   | INTEGER                        | 10700                       |                 |
| px_UARFCN_D_Low                         | Applicable for FDD<br>Low Range downlink UARFCN value   | INTEGER                        | 10563                       |                 |
| px_UARFCN_D_High                        | Applicable for FDD<br>High Range downlink UARFCN value  | INTEGER                        | 10837                       |                 |
| px_UE_OpModeDef                         | Default UE operation mode (either opModeA or opModeC). (For most UEs this corresponds class-A or class-C, and can not be changed by the user) | UE_OperationMode               | opModeA                     |                 |
| px_UE_PositioningNetworkAssistedGPS_Sup | UE positioning capability: supports the network assisted GPS  | NetworkAssistedGPS_Supported   | networkBased                |                 |
| px_UE_PowerClass                        | UE_PowerClass value.  | UE_PowerClass                  | 1                           |                 |
| px_UL_MaxCC_TB_bits                     | Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant.                   | MaxNoBits                      | b163840                     |                 |
| px_UL_MaxTB_bits                        | Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant.   | MaxNoBits                      | b163840                     |                 |
| px_UL_MaxTF                             | Maximum number of TF for uplink.  | MaxNumberOfTF                  | tf1024                      |                 |
| px_UL_MaxTFS                            | Maximum number of TFC in the TFCS for uplink.   | MaxNumberOfTFC_DL              | ffc1024                     |                 |
| px_UL_MaxTrCHs                          | Maximum number of simultaneous transport channels for uplink.   | MaxSimultaneousTransChannelsUL | e32                         |                 |
| px_UL_MaxTTI_TB                         | Maximum total number of transport blocks transmitted within TTIs that start at the same time.   | MaxTransportBlocksUL           | tb512                       |                 |

| Parameter name   | Description  | Type              | Default value | Supported value |
|--|--|-------------------|---------------|-----------------|
| px_UL_ScramblingCode   | Applicable for FDD<br>UL scrambling code value to be used by UE. | UL_ScramblingCode | 0             |                 |
| NOTE 1: No default value can be proposed (Manufacturer defined value).   |  |                   |               |                 |
| NOTE 2: No default value can be proposed, because not enough information is available in 3GPP TS 34.109 [4] clause 8.1.2.  |  |                   |               |                 |
| NOTE 3: This value shall be set in synchronization with the values that are being set for the 3 other pixits viz: px_UARFCN_D_High, px_UARFCN_D_Mid, px_UARFCN_D_Low |  |                   |               |                 |

## B.1.2 L3M test suite parameters declarations

The following parameters are commonly used in the RRC and NAS ATSSs.

**Table B.2: L3M PIXIT**

| Parameter name           | Description   | Type        | Default value | Supported value |
|--------------------------|---|-------------|---------------|-----------------|
| px_3G324M_MmediaEnable   | For a Multimedia UE:<br>set to TRUE if a multimedia call is enabled;<br>set to FALSE if a speech call is enabled.   | BOOLEAN     | TRUE          |                 |
| px_BcapDataCompression   | Data compression supported (used in the Bearer Capability)  | B1          | '0'B          |                 |
| px_BcapFNUR              | Fixed Network User rate supported:<br>'00001'B: FNUR 9.6 kbit/s '00010'B:<br>FNUR 14.4 kbit/s '00011'B: FNUR 19.2<br>kbit/s '00100'B: FNUR 28.8 kbit/s<br>'00101'B: FNUR 38.4 kbit/s '00110'B:<br>FNUR 48.0 kbit/s '00111'B: FNUR 56.0<br>kbit/s '01000'B: FNUR 64.0 kbit/s<br>'01001'B: FNUR 33.6 kbit/s '01010'B:<br>FNUR 32.0 kbit/s | B5          | '00001'B      |                 |
| px_BcapITC               | Information transfer capability supported (used for the generation of the Bearer Capability)<br>0 - UDI<br>1 - RDI<br>2 - 31 kHz Audio<br>3 - Other   | Itclnt      | 2             |                 |
| px_BcapModemType         | Modem type supported (used in the Bearer Capability)  | B5          | '00110'B      |                 |
| px_BcapNumberDataBits    | Number of data bits supported (used in the Bearer Capability)   | B1          | '1'B          |                 |
| px_BcapNumberStopBits    | Number of Stops bits supported (used in the Bearer Capability)  | B1          | '1'B          |                 |
| px_BcapOtherModemType    | Other modem type supported (used in the Bearer Capability)  | B2          | '10'B         |                 |
| px_BcapParity            | Parity supported (used in the Bearer Capability)  | B3          | '011'B        |                 |
| px_BcapSACP              | Signalling access protocol supported (used in the Bearer Capability)  | B3          | '001'B        |                 |
| px_BcapSyncAsync         | Synchronous '0'B or Asynchronous '1'B mode supported by IUT   | B1          | '1'B          |                 |
| px_BcapUeFlowControl     | UE flow control.<br>0-outband,<br>1-inband,<br>2-no flow control.<br>3- X.25<br>4- X.75<br>Default: 0, outband flow control   | FlowControl | 0             |                 |
| px_CC_CallDiallingDigits | Dialling digits used to initiate a CC MO call (used with the AT dial D command).  | IA5String   | "0123456902"  |                 |
| px_CC_Serv               | Service selected for Mobile Originated  | Services    | "31kHz"       |                 |

| Parameter name   | Description   | Type            | Default value      | Supported value |
|--|---|-----------------|--------------------|-----------------|
| px_3G324M_MmediaEnable   | For a Multimedia UE:<br>set to TRUE if a multimedia call is enabled;<br>set to FALSE if a speech call is enabled.   | BOOLEAN         | TRUE               |                 |
|  | calls and Mobile Terminated calls. The possible values are ("Telephony", "EmergencyCall", "31kHz", "V110", "V120", "PIAFS", "FTM", "X31", "BTM", "3G324M_Call", "Alternate Speech/Facsimile", "3G324M_SpeechPreferred") |                 |                    |                 |
| px_DeltaSS_DelayTime   | Tdelta value (refer to 34.108 clause 4.2.3) in ms.  | INTEGER         | 55ms               |                 |
| px_EmergencyCallNumber   | Emergency Number used by UE to initiate an emergency call   | EmergencyNumber | "112"              |                 |
| px_IMEI_Def  | Default IMEI value  | HEXSTRING       | See note 1         |                 |
| px_IMEISV_Def  | Default IMEISV value  | HEXSTRING       | See note 1         |                 |
| px_IMSI_Diff   | Different IMSI from the IMSI stored in the USIM   | HEXSTRING       | '001010654321063'H |                 |
| px_SupportOpModeC  | TRUE if UE supports operation mode C, i.e. UE offers PS services only (see 3GPP 23.060 clause 4.1 and 3GPP 24.008)  | BOOLEAN         | TRUE               |                 |
| px_NwOrgPDP_Support  | This indicates if the UE implementation supports network originated PDP Context.<br>TRUE indicates, supported<br>FALSE indicate, not supported  | BOOLEAN         | FALSE              |                 |
| px_PDP_IP_AddrInfoDCH  | A string parameter that identifies the MT in the address space applicable to the PDP for DCH.   | IA5String       | "200.1.1.80"       |                 |
| px_PDP_IP_AddrInfoFACH   | A string parameter that identifies the MT in the address space applicable to the PDP for FACH.  | IA5String       | "200.1.1.90"       |                 |
| px_PTMSI_2   | Second PTMSI used for testing.  | OCTETSTRING     | 'C9876543'O        |                 |
| px_PTMSI_Sig2  | Second PTMSI signature used for testing.  | OCTETSTRING     | 'AB1234'O          |                 |
| px_TMSI_2  | Second TMSI value for testing   | OCTETSTRING     | '09876543'O        |                 |
| px_SMS_IndexOffset   | SMS index offset for the numbering of short messages, value range: (0,1)  | INTEGER         | 0                  |                 |
| NOTE 1: No default value can be proposed (Manufacturer defined value). |   |                 |                    |                 |

## B.1.3 NAS test suite parameters declarations

The following parameters are commonly used in the NAS ATS.

**Table B.3: NAS PIXIT**

| Parameter name                | Description   | Type        | Default value   | Supported value |
|-------------------------------|---|-------------|-----------------|-----------------|
| px_AuthRAND_2                 | A second Random Challenge (128 bits)  | BITSTRING   | '1010101...10'B |                 |
| px_AutocallingBlacklistNumber | Number of B-party numbers that can be stored in the list of blacklisted numbers   | INTEGER     | 20              |                 |
| px_AutocallingCause1or2       | Cause value of category 1 or 2 to be used in TC_17_1_3  | INTEGER     | 18              |                 |
| px_AutocallingNumber          | Called number to be used for auto calling   | IA5String   | "0613454120"    |                 |
| px_AutocallingRepeatCat1or2   | Number of repeat attempt done for the category 1 or 2 to be used in TC_17_1_3   | INTEGER     | 10              |                 |
| px_CC_ServNotSupp             | Not supported service selected for Mobile Originated calls and Mobile Terminated calls. The possible values are ("Telephony", "EmergencyCall", "31kHz", "V110", "V120", "PIAFS", "FTM", "X31", "BTM", "MmediaCall") | Services    | "BTM"           |                 |
| px_DTMF_BasicCharSet          | TRUE if DTMF Chars 0-9, *, # supported  | BOOLEAN     | TRUE            |                 |
| px_DTMF_OtherCharSet          | TRUE if DTMF Chars A, B, C, D supported   | BOOLEAN     | TRUE            |                 |
| px_DTMF_ToneInd               | TRUE if UE support DTMF tone indication   | BOOLEAN     | TRUE            |                 |
| px_PTMSI_Sig3                 | Second PTMSI signature used for testing   | OCTETSTRING | 'AB1239'O       |                 |
| px_UuInfo                     | User-user information for TC 10_3   | OCTETSTRING | '01020304'O     |                 |
| px_Uupd                       | User-user protocol discriminator for TC 10_3  | B8          | '00000100'B     |                 |
| px_VTS_AT_CommandSupport      | TRUE if the AT command +VTS is supported  | BOOLEAN     | TRUE            |                 |

## B.1.4 SMS test suite parameters declarations

These parameters are used in the SMS ATS.

**Table B.4: SMS PIXIT**

| Parameter name        | Description  | Type          | Default value                   | Supported value |
|-----------------------|--|---------------|---------------------------------|-----------------|
| px_BMC_CB_RepPeriod01 | CB repetition period for CB message 1  | INTEGER       | 2                               |                 |
| px_BMC_CB_RepPeriod02 | CB repetition period for CB message 2  | INTEGER       | 2                               |                 |
| px_BMC_NoOfBC_Req01   | No of broadcasts requested for CB message 1  | INTEGER       | 2                               |                 |
| px_BMC_NoOfBC_Req02   | No of broadcasts requested for CB message 2  | INTEGER       | 2                               |                 |
| px_MaxCP_DataRetx     | max. number of CP data retransmissions for SMS   | INTEGER       | 3                               |                 |
| px_SMS_CB_Data01      | Contents of the first Cell Broadcast Message sent will be converted to an OCTETSTRING  | IA5String     | "First Cell Broadcast Message"  |                 |
| px_SMS_CB_Data02      | Contents of the second Cell Broadcast Message sent will be converted to an OCTETSTRING | IA5String     | "Second Cell Broadcast Message" |                 |
| px_SMS_CB_MsgId02     | Message Id to be used for the second Cell Broadcast Message sent                       | HEXSTRING [4] | '0002'H                         |                 |
| px_SMS_CB_Store       | TRUE if Broadcast Messages are kept in BM storage                                      | BOOLEAN       | TRUE                            |                 |
| px_SMS_MsgFrmt        | SMS Message Format <mode> of TS 27.005 cl. 3.2.3                                       | IA5String     | "0"                             |                 |
| px_SMS_PrefMem1       | SMS Preferred Memory 1 <mem1> of TS 27.005 cl. 3.1                                     | IA5String     | "SM"                            |                 |
| px_SMS_PrefMem2       | SMS Preferred Memory 2 <mem2> of TS 27.005 cl. 3.1                                     | IA5String     | "SM"                            |                 |
| px_SMS_PrefMem3       | SMS Preferred Memory 3 <mem3> of TS 27.005 cl. 3.1                                     | IA5String     | "MT"                            |                 |
| px_SMS_PrefMemCB1     | SMS Preferred CB Memory 1 <mem1> of TS 27.005 cl. 3.1                                  | IA5String     | "BM"                            |                 |
| px_SMS_PrefMemCB2     | SMS Preferred CB Memory 2 <mem2> of TS 27.005 cl. 3.1                                  | IA5String     | "BM"                            |                 |
| px_SMS_PrefMemCB3     | SMS Preferred CB Memory 3 <mem3> of TS 27.005 cl. 3.1                                  | IA5String     | "BM"                            |                 |
| px_SMS_Service        | SMS Service <service> of TS 27.005 cl. 3.2.1   | IA5String     | "0"                             |                 |
| px_TC1M               | Value for timer TC1M, to be declared by the manufacturer                               | INTEGER       | 10000                           |                 |



## B.1.5 RRC\_M test suite parameters declarations

These parameters are used in the RRC and RAB ATS.

**Table B.5: RRC and RAB PIXIT**

| Parameter name       | Description  | Type              | Default value | Supported value   |
|----------------------|--|-------------------|---------------|---|
| px_DL_MaxTC_TB_bits  | Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant.   | MaxNoBits         | b163840       |   |
| px_ExecutePS_Class   | Service to be executed in RAB test cases. The allowed values are:<br>1: Interactive<br>2: BackGround<br>3: Streaming<br>0: All supported classes.<br>Any other value is not defined. | INTEGER           | 1             |   |
| px_MaxHcContextSpace | MaxHcContextSpace if RFC 2507 [30] is supported.   | MaxHcContextSpace | by1024        |   |
| px_MaxNoSCCPCH_RL    | Part of SimultaneousSCCPCH_DPCH_Reception.   | MaxNoSCCPCH_RL    | r1            |   |
| px_PrimaryBand       | The primary operation band under test, as defined in 34.108 clause 5.1.1.<br>Value 1 means Band 1, 2 means Band 2, 3 means Band 3, 6 means Band 6.                                   | INTEGER           | 1             | This pixit shall be set in synchronization with the values that are being set to other Pixit: px_UARFCN_D_Mid |
| px_SecondaryBand     | The secondary operation band under test, as defined in 34.108 clause 5.1.1.<br>Value 1 means Band 1, 2 means Band 2, 3 means Band 3, 6 means Band 6.                                 | INTEGER           | 8             |   |
| px_SMS_CB_MsgId01    | the operator shall define the CB Message ID for the CB data1 used for transmitting this CB data, different to CB-Data 2 IXIT   | HEXSTRING[4]      | '0001'H       |   |
| px_UL_MaxTC_TB_bits  | Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant.  | MaxNoBits         | b163840       |   |

The px\_ExecutePS\_Class allows the option 0 to be selected. This has been allowed in order to preserve the changes implemented in TTCN for handling all traffic classes in RAB testcase execution. System simulators are not required to support this execution and also TTCN maintenance of this path should be limited.

## B.1.6 PDCP test suite parameters declarations

These parameters are used in the PDCP ATS.

**Table B.6: PDCP PIXIT**

| Parameter name                              | Description   | Type      | Default value  | Supported value |
|---|---|-----------|--|-----------------|
| px_PDCP_TcpIpCompressedTcpN onDeltaPacket01 | IP header compressed packet type (PID=3) of px_PDCP_TcpIpUncompressedPacket01 | IP_Packet | 0000 0000 0000<br>0a00 0000 0050<br>1000 0026 3400<br>006a 6e6e 206a<br>6e6e 206a 6e6e |                 |

| Parameter name                             | Description  | Type      | Default value  | Supported value |
|--|--|-----------|--|-----------------|
| px_PDCP_TcplpCompressedTcpNonDeltaPacket02 | IP header compressed packet type (PID=3) of <u>px_PDCP_TcplpUncompressedPacket02</u> | IP_Packet | "Test_PDCP_TCPIP_Packet2_PID_Type3"  |                 |
| px_PDCP_TcplpCompressedTcpPacket01         | IP header compressed packet type (PID=2) of <u>px_PDCP_TcplpUncompressedPacket01</u> | IP_Packet | 0028 2634 0a00<br>0000 6a6e 6e20<br>6a6e 6e  |                 |
| px_PDCP_TcplpCompressedTcpPacket02         | IP header compressed packet type (PID=2) of <u>px_PDCP_TcplpUncompressedPacket02</u> | IP_Packet | "Test_PDCP_TCPIP_Packet2_PID_Type2"  |                 |
| px_PDCP_TcplpFullHeaderPacket01            | IP header compressed packet type (PID=1) of <u>px_PDCP_TcplpUncompressedPacket01</u> | IP_Packet | c500 0000 0000<br>0000 4006 7ac6<br>0000 0000 0000<br>0000 0000 0000<br>0000 0000 0000<br>0000 5010 0000<br>263e 0000 6a6e<br>6e20 6a6e 6e |                 |
| px_PDCP_TcplpFullHeaderPacket02            | IP header compressed packet type (PID=1) of <u>px_PDCP_TcplpUncompressedPacket02</u> | IP_Packet | "Test_PDCP_TCPIP_Packet2_PID_Type1"  |                 |
| px_PDCP_TcplpUncompressedPacket01          | uncompressed TCP/IP Packet01   | IP_Packet | 4500 0033 0000<br>0000 4006 7ac6<br>0000 0000 0000<br>0000 0000 0000<br>0000 0000 0000<br>0000 5010 0000<br>263e 0000 6a6e<br>6e20 6a6e 6e |                 |
| px_PDCP_TcplpUncompressedPacket02          | uncompressed TCP/IP Packet02   | IP_Packet | "Test_PDCP_TCPIP_Packet2"  |                 |
| px_PDCP_UdplpCompressedTcpNonTcpPacket01   | IP header compressed packet type (PID=4) of <u>px_PDCP_UdplpUncompressedPacket01</u> | IP_Packet | 0001 0000 763c<br>6a6e 6e20 6a6e<br>6e20 6a6e 6e   |                 |
| px_PDCP_UdplpCompressedTcpNonTcpPacket02   | IP header compressed packet type (PID=4) of <u>px_PDCP_UdplpUncompressedPacket02</u> | IP_Packet | "Test_PDCP_UDPIP_Packet2_PID_Type4"  |                 |
| px_PDCP_UdplpFullHeaderPacket01            | IP header compressed packet type (PID=1) of <u>px_PDCP_UdplpUncompressedPacket01</u> | IP_Packet | 8500 0100 0000<br>0000 4011 7ac7<br>0000 0000 0000<br>0000 0000 0000<br>0013 763c 6a6e<br>6e20 6a6e 6e20<br>6a6e 6e                        |                 |
| px_PDCP_UdplpFullHeaderPacket02            | IP header compressed packet type (PID=1) of <u>px_PDCP_UdplpUncompressedPacket02</u> | IP_Packet | "Test_PDCP_UDPIP_Packet2_PID_Type1"  |                 |
| px_PDCP_UdplpUncompressedPacket01          | uncompressed UDP/IP Packet01   | IP_Packet | 4500 0027 0000<br>0000 4011 7ac7<br>0000 0000 0000<br>0000 0000 0000<br>0013 763c 6a6e<br>6e20 6a6e 6e20<br>6a6e 6e                        |                 |
| px_PDCP_UdplpUncompressedPacket02          | uncompressed UDP/IP Packet02   | IP_Packet | "Test_PDCP_UDPIP_Packet2"  |                 |

## B.1.7 BMC test suite parameters declarations

These parameters are used in the BMC ATS.

**Table B.7: BMC PIXIT**

| Parameter name    | Description  | Type                | Default value         | Supported value |
|-------------------|--|---------------------|-----------------------|-----------------|
| px_CB_Data1       | Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6 | IA5String [1..1246] | "CB Data1"            |                 |
| px_CB_Data2       | Data to be sent in TC 7.4.2.1  | IA5String [1..1246] | "CB Data2"            |                 |
| px_SMS_CB_MsgId01 | Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6 | HEXSTRING[4]        | '0000'H               |                 |
| px_SMS_CB_MsgId02 | Data to be sent in TC 7.4.2.1  | HEXSTRING[4]        | '0000'H               |                 |
| px_gS01           | Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6 | BITSTRING[2]        | "Test_gS1"            |                 |
| px_ggS02          | Data to be sent in TC 7.4.2.1  | BITSTRING[2]        | "Test_gS2"            |                 |
| px_MsgCode01      | Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6 | BITSTRING[10]       | "Test_msgCode01"      |                 |
| px_MsgCode02      | Data to be sent in TC 7.4.2.1  | BITSTRING[10]       | "Test_msgCode02"      |                 |
| px_UpdateNumber01 | Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6 | BITSTRING[4]        | "Test_updateNumber01" |                 |
| px_UpdateNumber02 | Data to be sent in TC 7.4.2.1  | BITSTRING[4]        | "Test_updateNumber02" |                 |

## B.1.8 RRC test suite parameters declarations

These parameters are used in the RRC ATS.

**Table B.8: RRC PIXIT**

| Parameter name | Description | Type | Default value | Supported value |
|----------------|-------------|------|---------------|-----------------|
| -              | -           | -    | -             | -               |

## B.1.9 RAB test suite parameters declarations

These parameters are used in the RAB ATS.

**Table B.9: RAB PIXIT**

| Parameter Name    | Description  | Type          | Default Value          | Supported Value  |
|-------------------|--|---------------|------------------------|--|
| px_CB_Data1       | the operator shall define CBS data as IA5String together with the CB message ID used for transmitting this CB data, which is indicated by the UE after reception in a clear way according to the capabilities stored on the SIM. Furthermore, the operator shall describe the indication on the UE side (e.g. certain CBS traffic information) | IA5String_BMC |                        | the CB data range is 1..1246 Octets which refers to a IA5String of 1..1246 |
| px_DSCH_RNTI      | DSCH RNTI  | DSCH_RNTI     | '0000 0000 0000 0010'B |  |
| px_gS01           | used in the Serial No. of the CB_Data01 given as PIXIT, which differentiates between CBS messages from the same source and type  | B2            | '00'B                  |  |
| px_MsgCode01      | used in the Serial No. of the CB_Data01 given as PIXIT, which is the Geographical Scope indicates the area over which the msg code is unique   | MsgCodeType   | '0000000000'B          |  |
| px_UpdateNumber01 | used in the Serial No. of the CB_Data01 given as PIXIT, which indicates a change of the message content of the same CBS message  | B4            | '0000'B                |  |
| px_PowerDSCH      | transmission power level of DSCH   | DL_TxPower    |                        |  |

## B.1.10 RLC and MAC test suite parameters declarations

These parameters are used in the MAC ATS.

**Table B.10: RLC & MAC PIXIT**

| Parameter Name               | Description  | Type   | Default Value | Supported Value |
|------------------------------|--|--|---------------|-----------------|
| px_NumOfSegInPagResOrServReq | This Pixit is used in MAC test cases 7.1.1.2, 7.1.1.3, 7.1.1.4, 7.1.1.5 and 7.1.1.8 This indicates the number of RLC segments the Paging Response (CS Domain) or Service Request (PS domain) will be segmented in. | INTEGER  | 2             |                 |
| px_RLC_SDU_buffering         | Is used in RLC TC 7.2.3.13, indicating the way to handle RLC SDU data for UL transmission when the transmission window is full   | BOOLEAN(TRUE for buffering, FALSE for discard) |               |                 |

## B.1.11 Multi RAT test suite parameters declarations

These parameters are used in the MultiRAT ATS.

**Table B.11: MultiRAT PIXIT**

| Parameter name        | Description  | Type         | Default value  | Supported value  |
|-----------------------|--|--------------|--|--|
| px_GSM_BandUnderTest  | indicates which band is under test   | INTEGER      |  | 1 -> GSM450;<br>2 -> GSM480;<br>3 -> GSM750;<br>4 -> GSM850;<br>5 -> GSM-P-900;<br>6-> GSM-E-900;<br>7-> DCS1800;<br>8 -> PCS1900;<br>9 -> 450 & 900 MultiBand test;<br>10 -> 450 & 1800 MultiBand test;<br>11 -> 480 & 900 MultiBand test;<br>12 -> 480 & 1800 MultiBand test;<br>13 -> 900 & 1800 MultiBand test;<br>14-> GSM710;<br>15->T-GSM810; |
| px_GSM_CipheringOnOff | GSM Ciphering to be started or not   | B1           | 1  |  |
| px_GSM_CipherAlg      | GSM Cipher algorithm. <u>Allowed values are:</u><br>'000'B(A5/1),<br>'010'B(A5/3). | B3_CipherAlg | (A5/1) '000'B  |  |
| px_CipherKey          | Cipher key (64 bits)   | B64          | '010111100100101010110011010110001001000100110110101110100101010'B |  |
| px_MS_TXPWR_MAX_CCH   | MS_TXPWR_MAX_CCH   | B5           | '01010'B   |  |
| px_RXLEV_ACCESS       | minimum received   | B6           | '000000'B  |  |

| Parameter name   | Description                                     | Type | Default value      | Supported value |
|------------------|---|------|--------------------|-----------------|
| _MIN             | signal level at MS                              |      |                    |                 |
| px_SplitOnCCCH   | split paging cycle on CCCH supported indication | B1   | '0'B not supported |                 |
| px_TSC           | Training sequence code for traffic channels     | B3   | '011'B             |                 |
| px_PowerLevel    | power level value for L1 header                 | B5   |                    |                 |
| px_TimingAdvance | Timing advance value for L1 header              | B1   | '0000000'B         |                 |

## B.1.12 MMI questions

Table B.12 requests additional information needed for the execution of the MMI commands used in the ATs, the column 'ATS' indicates in which ATs the question is used.

**Table B.12: MMI questions**

| Required information for MMI question                                   | ATS  |
|---|--|
| Please switch the PLMN selection mode of the UE to automatic selection  | RRC, SMS, NAS, RAB, HSD_ENH, IR_U, AGPS, HSU_ENH, HS_ENH |
| Please switch the PLMN selection mode of the UE to manual selection     | RRC, SMS, NAS, RAB, HSD_ENH, IR_U, AGPS, HSU_ENH, HS_ENH |
| Please select the following PLMN manually: MCC = <p_MCC>, MNC = <p_MNC> | RRC, SMS, NAS, RAB, HSD_ENH, IR_U, AGPS, HSU_ENH, HS_ENH |
| Please power off the UE   | All ATs  |
| Please power on the UE  | All ATs  |
| Please switch off the UE  | All ATs  |
| Please switch on the UE   | All ATs  |
| Please insert the USIM card into the UE                                 | All ATs  |
| Please remove the USIM card into the UE                                 | All ATs  |
| Please check that the DTCH is through connected by generating a noise   | RRC, SMS, NAS, RAB, HSD_ENH, IR_U, AGPS, HSU_ENH         |
| Configure UE for an MO Telephony call                                   | RRC, SMS, NAS, RAB, HSD_ENH, IR_U, AGPS, HSU_ENH, HS_ENH |
| Configure UE for an Emergency call                                      | RRC, SMS, NAS, RAB, HSD_ENH, IR_U, AGPS, HSU_ENH, HS_ENH |
| Configure UE for an MT telephony call                                   | RRC, SMS, NAS, RAB, HSD_ENH, IR_U, AGPS, HSU_ENH, HS_ENH |
| Please set UE in operation mode C (PS services only)                    | RRC, SMS, NAS, RAB, HSD_ENH, IR_U, AGPS, HSU_ENH,        |

| Required information for MMI question   | ATS   |
|---|---|
|   | HS_ENH  |
| Please set UE in operation mode A (to support simultaneous CS and PS services)  | RRC, SMS, NAS,<br>RAB, HSD_ENH,<br>IR_U, AGPS,<br>HSU_ENH,<br>HS_ENH  |
| Please configure UE to use the following emergency number <p_EmergencyNumber>   | RRC, SMS, NAS,<br>RAB, HSD_ENH,<br>IR_U, A-GPS,<br>HSU_ENH,<br>HS_ENH |
| Please initiate a non call related supplementary service which is supported by the UE   | NAS   |
| Please insert Test USIM programmed with Access Class: <p_AccessClass>   | NAS   |
| Please insert 2nd SIM card with short IMSI  | NAS, SMS,<br>AGPS   |
| Please initiate an autocalling call with the number: <p_AutocallingNumber>  | NAS   |
| Please initiate an autocalling call with a number that will be put in the blacklisted list. The following number shall not be used: <p_AutocallingNumber>   | NAS   |
| Please reset the autocalling list of blacklisted numbers  | NAS   |
| Please initiate a DTMF tone with the character <p_Character> and the tone duration <p_ToneDuration>   | NAS   |
| Please enable call refusal on the UE  | NAS   |
| Please check that the DTMF tone indication has been generated   | NAS   |
| Please insert another USIM card as required for test case tc_9_4_5_4_6. The PLMN selector on the USIM card shall contain entries for PLMNs MCC='022'H , MNC='01F'H resp. MCC='022'H , MNC='03F'H. The latter PLMN shall be ranked better than the first one | NAS   |

| Required information for MMI question   | ATS                                   |
|---|---------------------------------------|
| Please trigger UE to initiate a Detach procedure for non-PS services only   | NAS                                   |
| Please check that the mobile indicates the reception of a message with message id: <p_MessageId > and message code: <p_MessageCode>   | SMS                                   |
| Please check the length of the received Short Message: <p_LengthMessage> and the contents of the received Short Message: <p_Message>  | SMS                                   |
| Please send an SMS COMMAND message containing a request to delete the previously submitted Short Message  | SMS                                   |
| Please send an SMS COMMAND message containing an enquiry about the previously submitted Short Message   | SMS                                   |
| Please check that NO recalled Short Message is displayed  | SMS                                   |
| Please check that the reception of a received Short Message is indicated  | SMS                                   |
| Please check that the Mobile does not indicate the reception of a new message with message id: <p_MessageId> and message code: <p_MessageCode>  | SMS                                   |
| Please check that NO reception of a received Short Message of type 0 is indicated   | SMS                                   |
| Please insert the USIM card of type B into the UE   | MAC                                   |
| Please insert the USIM card, with information given in <p_TestCase>   | RRC, NAS, IR_U,<br>HSU_ENH,<br>HS_ENH |
| Please check that the UE display the registered PLMN as PLMN <p_PLMN>   | RRC, HSU_ENH,<br>HS_ENH               |
| Please insert the USIM card, with Type A EFACC  | RRC                                   |
| Please insert the USIM card, with Type B EFACC  | RRC                                   |
| Please trigger UE to send three SNDCCP PDUs of 500 bytes each on SAPI 11  | IR_G                                  |
| Please trigger PDP Context Activation Type 2 in UE  | IR_G                                  |
| Please trigger MO-LR for position estimate  | AGPS                                  |
| Please trigger MO-LR for assistance data  | AGPS                                  |
| Please trigger MO-LR for transfer to 3rd party  | AGPS                                  |
| Please check that the UE displays the correct information about the LCS client  | AGPS                                  |
| Please accept the location request within 20 s  | AGPS                                  |
| Please deny the location request within 20 s  | AGPS                                  |
| Please do not reply to the location request   | AGPS                                  |
| Please check that the UE notifies the user of the location request  | AGPS                                  |
| If the UE does not support the RESET command defined in 34.109, please ensure that the UE has no assistance data stored before running this test case   | AGPS                                  |
| Please trigger UE to send 10 kbytes of data on SAPI 3   | IR_G                                  |
| Please trigger UE to send 1 kbyte of data on SAPI 3   | IR_G                                  |
| Please check that in the manual PLMN list the UE display: <p_PLMN_List>   | HSU_ENH                               |
| Please check that UE displays no service or no network available  | HSU_ENH                               |
| Please check that in the manual PLMN list the UE displays the PLMN with the following information:<br>- <p_PLMN_List1> offers voice call, SMS and PS data services<br>- <p_PLMN_List2> offers voice call services<br>- <p_PLMN_List3> offers PS data services | HS_ENH                                |
| Please check that in the manual PLMN list the UE indicates that:<br>- <p_PLMN1> is present on the the User Controlled PLMN List<br>- <p_PLMN2> is present on the Forbidden list<br>- <p_PLMN3> is present on the Operator Controlled PLMN List                | HS_ENH                                |



## B.1.13 A-GPS test suite parameters declarations

These parameters are used in the A-GPS ATS.

**Table B.13: A-GPS PIXIT**

| Parameter Name            | Description  | Type                         | Default Value                | Supported Value |
|---------------------------|--|------------------------------|------------------------------|-----------------|
| px_GpsScenario            | Pre-defined GPS scenario to be loaded by the upper tester in the Satellite Simulator. See 34.108, 10.7. Minimum value:0, Maximum value: 31 | GpsScenarioType              | 0                            |                 |
| px_GeoInfo                | Geographical information to be sent as Location Estimate in FACILITY message from the System Simulator.                                    | Ext_Geographical Information | 9032B9D66360B600323C3C006544 |                 |
| px_LcsClientName          | LCS Client name  | IA5String                    | OPERATOR                     |                 |
| px_LcsClientAddressTOA    | LCS Client external address TOA  | B4                           | '1001'B                      |                 |
| px_LcsClientAddressNPI    | LCS Client external address NPI  | B4                           | '0001'B                      |                 |
| px_LcsClientAddressDigits | LCS Client external address Digits   | IA5String                    | 0123456                      |                 |
| px_ResetStoredInfo        | Support of RESETUEPOSITIONINGSTO REDINFORMATION command as defined in 3GPP TS 34.109 cl. 6.10  | BOOLEAN                      | TRUE                         |                 |
| px_UeLcsNotification      | Value for UE LCS Notification timeout timer (in seconds)   | INTEGER                      | 20                           |                 |

## B.1.14 HSD\_ENH test suite parameters declarations

These parameters are used in the HSD\_ENH ATS.

**Table B.14: HSD\_ENH PIXIT**

| Parameter Name                   | Description  | Type      | Default Value | Supported Value |
|----------------------------------|--|-----------|---------------|-----------------|
| px_GERANlu_RadioAccessCapability | MS GERAN lu mode Radio Access Capability                                     | BITSTRING |               |                 |
| px_RAB_HS_Exec128_384Supp        | Execute UL 128 KBPS RAB HS test cases, when UE supports UL384                | BOOLEAN   | TRUE          |                 |
| px_RAB_HS_Exec64_384Supp         | Set to TRUE if 384kbps is supported and if tests on 64kbps shall be executed | BOOLEAN   | TRUE          |                 |
| px_RAB_HS_Exec64_128Supp         | Execute UL 64 KBPS RAB HS test cases, when UE supports UL128                 | BOOLEAN   | TRUE          |                 |

## B.1.15 HSU\_ENH test suite parameters declarations

These parameters are used in the HSU\_ENH ATS.

**Table B.15: HSU\_ENH PIXIT**

| Parameter Name                  | Description  | Type    | Default Value | Supported Value |
|---------------------------------|--|---------|---------------|-----------------|
| px_ExecNon_FDPCH_When_FDPCHSupp | To execute Non-FDPCH test case when fully FDPCH is supported | BOOLEAN | TRUE          |                 |

## B.1.16 HS\_ENH test suite parameters declarations

These parameters are used in the HS\_ENH ATS.

**Table B.16: HS\_ENH PIXIT**

| Parameter Name        | Description   | Type    | Default Value | Supported Value |
|-----------------------|---|---------|---------------|-----------------|
| px_CipherIntegrityAlg | If set to TRUE, the security algorithms UEA2/UIA2 are used.<br>If set to FALSE, the security algorithms UEA1/UIA1 are used. | BOOLEAN | TRUE          |                 |

---

## Annex C (informative): Additional information to IXIT

Notwithstanding the provisions of the copyright related to the text of the present document, The Organizational Partners of 3GPP grant that users of the present document may freely reproduce the IXIT proforma in this annex so that it can be used for its intended purposes and may further publish the completed IXIT.

Additional information may be provided when completing the IXIT questions listed in annex A.

---

### C.1 Identification Summary

Table C.1 is completed by the test laboratory. The item "Contract References" is optional.

**Table C.1: Identification Summary**

|                                   |  |
|-----------------------------------|--|
| <b>IXIT Reference Number</b>      |  |
| <b>Test Laboratory Name</b>       |  |
| <b>Date of Issue</b>              |  |
| <b>Issued to (name of client)</b> |  |
| <b>Contract References</b>        |  |

---

### C.2 Abstract Test Suite Summary

In table C.2 the test laboratory provides the version number of the protocol specification and the version number of ATS which are used in the conformance testing.

**Table C.2: ATS Summary**

|  |                         |
|--|-------------------------|
| <b>Protocol Specification</b>                | 3GPP TS 25.331          |
| <b>Version of Protocol Specification</b>     |                         |
| <b>Test Specification in prose</b>           | 3GPP TS 34.123-1        |
| <b>Version of TSS &amp; TP Specification</b> |                         |
| <b>ATS Specification</b>                     | 3GPP TS 34.123-3        |
| <b>Version of ATS Specification</b>          |                         |
| <b>Abstract Test Method</b>                  | Distributed Test Method |

---

### C.3 Test Laboratory

#### C.3.1 Test Laboratory Identification

The test laboratory provides the following information.

**Table C.3: Test Laboratory Identification**

|                                |  |
|--------------------------------|--|
| <b>Name of Test Laboratory</b> |  |
| <b>Postal Address</b>          |  |
| <b>Office address</b>          |  |
| <b>e-mail address</b>          |  |
| <b>Telephone Number</b>        |  |
| <b>FAX Number</b>              |  |

### C.3.2 Accreditation status of the test service

The test laboratory provides the following information.

**Table C.4: Accreditation status of the test service**

|                                |  |
|--------------------------------|--|
| <b>Accreditation status</b>    |  |
| <b>Accreditation Reference</b> |  |

### C.3.3 Manager of Test Laboratory

The test laboratory provides the information about the manager of test laboratory in table C.5.

**Table C.5: Manager of Test Laboratory**

|   |  |
|---|--|
| <b>Name of Manager of Test Laboratory</b> |  |
| <b>e-mail address</b>                     |  |
| <b>Telephone Number</b>                   |  |
| <b>FAX Number</b>                         |  |
| <b>E-mail Address</b>                     |  |

### C.3.4 Contact person of Test Laboratory

The test laboratory provides the information about the contact person of test laboratory in table C.6.

**Table C.6: Contact person of Test Laboratory**

|   |  |
|---|--|
| <b>Name of Contact of Test Laboratory</b> |  |
| <b>e-mail address</b>                     |  |
| <b>Telephone Number</b>                   |  |
| <b>FAX Number</b>                         |  |
| <b>E-mail Address</b>                     |  |

### C.3.5 Means of Testing

In table C.7, the test laboratory provides a statement of conformance of the Means Of Testing (MOT) to the reference standardized ATS, and identifies all restrictions for the test execution required by the MOT beyond those stated in the reference standardized ATS.

**Table C.7: Means of Testing**

| Means of Testing |
|------------------|
|------------------|

### C.3.6 Instructions for Completion

In table C.8, the test laboratory provides any specific instructions necessary for completion and return of the proforma from the client.

**Table C.8: Instruction for Completion**

| Instructions for Completion |
|-----------------------------|
|-----------------------------|

---

## C.4 Client

### C.4.1 Client Identification

The client provides the identification in table C.9.

**Table C.9: Client Identification**

|                         |  |
|-------------------------|--|
| <b>Name of Client</b>   |  |
| <b>Postal Address</b>   |  |
| <b>Office Address</b>   |  |
| <b>Telephone Number</b> |  |
| <b>FAX Number</b>       |  |

### C.4.2 Client Test Manager

In table C.10 the client provides information about the test manager.

**Table C.10: Client Test Manager**

|                                    |  |
|------------------------------------|--|
| <b>Name of Client Test Manager</b> |  |
| <b>Telephone Number</b>            |  |
| <b>FAX Number</b>                  |  |
| <b>E-mail Address</b>              |  |

### C.4.3 Client Contact person

In table C.11 the client provides information about the test contact person.

**Table C.11: Client Contact person**

|                                      |  |
|--------------------------------------|--|
| <b>Name of Client contact person</b> |  |
| <b>Telephone Number</b>              |  |
| <b>FAX Number</b>                    |  |
| <b>E-mail Address</b>                |  |

### C.4.4 Test Facilities Required

In table C.12, the client records the particular facilities required for testing, if a range of facilities is provided by the test laboratory.

**Table C.12: Test Facilities Required**

| Test Facilities Required |
|--------------------------|
|                          |

---

## C.5 System Under Test

### C.5.1 SUT Information

The client provides information about the SUT in table C.13.

**Table C.13: SUT Information**

|  |  |
|--|--|
| <b>System Name</b>                     |  |
| <b>System Version</b>                  |  |
| <b>SCS Reference</b>                   |  |
| <b>Machine Configuration</b>           |  |
| <b>Operating System Identification</b> |  |
| <b>IUT Identification</b>              |  |
| <b>ICS Reference for the IUT</b>       |  |

### C.5.2 Limitations of the SUT

In table C.14, the client provides information explaining if any of the abstract tests cannot be executed.

**Table C.14: Limitation of the SUT**

| Limitations of the SUT |
|------------------------|
|------------------------|

### C.5.3 Environmental Conditions

In table C.15 the client provides information about any tighter environmental conditions for the correct operation of the SUT.

**Table C.15: Environmental Conditions**

| Environmental Conditions |
|--------------------------|
|--------------------------|



---

## C.6 Ancillary Protocols

This clause is completed by the client in conjunction with the test laboratory.

In the following tables, the client identifies relevant information concerning each ancillary protocol in the SUT other than the IUT itself. One table for one ancillary protocol.

Based on the MOT the test laboratory should create question proforma for each ancillary protocol in the blank space following each table. The information required is dependent on the MOT and the SUT, and covers all the addressing, parameter values, timer values and facilities (relevant to ENs) as defined by the ICS for the ancillary protocol.

### C.6.1 Ancillary Protocols 1

**Table C.16: Ancillary Protocol 1**

|                                  |  |
|----------------------------------|--|
| <b>Protocol Name</b>             |  |
| <b>Version number</b>            |  |
| <b>ICS Reference (optional)</b>  |  |
| <b>IXIT Reference (optional)</b> |  |
| <b>PCTR Reference (optional)</b> |  |

### C.6.2 Ancillary Protocols 2

**Table C.17: Ancillary Protocol 2**

|                                  |  |
|----------------------------------|--|
| <b>Protocol Name</b>             |  |
| <b>Version number</b>            |  |
| <b>ICS Reference (optional)</b>  |  |
| <b>IXIT Reference (optional)</b> |  |
| <b>PCTR Reference (optional)</b> |  |

---

## Annex D (informative): PCTR Proforma

Notwithstanding the provisions of the copyright related to the text of the present document, The Organizational Partners of 3GPP grant that users of the present document may freely reproduce the PCTR proforma in this annex so that it can be used for its intended purposes and may further publish the completed PCTR.

### PROTOCOL

#### Conformance Test Report

#### (PCTR)

Universal Mobile Telecommunication System, UMTS,  
User Equipment-Network Access

#### Layer 3 Signalling Functions

|                |          |
|----------------|----------|
| Test Candidate |          |
| Name :         | SUT name |
| Model :        | model    |
| H/W version :  | hw       |
| S/W version :  | sw       |
| Serial No. :   | serienr  |

|                     |  |
|---------------------|--|
| Client              |  |
| Name :              |  |
| Street / No. :      |  |
| Postal Code / City: |  |
| Country :           |  |

*This Test Report shall not be reproduced except in full without the written permission of TEST LAB REFERENCE, and shall not be quoted out of context.*

---

# Annex E (informative): TTCN style guide for 3GPP ATS

## E.1 Introduction

This annex provides a set of coding standards and development guidelines for use in the development of TTCN abstract test suites for ensuring that user equipment for the 3GPP standard conforms to the relevant core specifications.

The following items are assumed to exist, but their specification is outside the scope of this annex.

- A complete unambiguous prose detailing all test cases to be implemented.
- A complete unambiguous set of core specifications.
- A complete unambiguous detailed description of all the messages that are to be sent.
- A tool or human process that can convert Test Suite Operation Definitions to physical processes within the test system or unit under test.
- An abstracted or generic application programmers interface to all hardware components in the system.
- A tool for the translation and/or compilation of ISO/IEC 9646 [41] series TTCN to run on a test platform.

It is recognized within the context of the 3GPP User Terminal that some of these items are not yet stabilized.

The structure of the present annex maps directly to the guidelines provided in ETR 141 [37]. Rules are repeated in the present annex for convenience, with additional information specific to 3GPP test suite development provided where relevant. For more detailed information or examples about the rules, see ETR 141 [37].

In the present annex, the terms 'should' and 'shall' are frequently used. For the purpose of this annex, the following definitions apply:

- **Shall** means that the rule must be adhered to for all ATS development. If a rule expressed in terms of 'shall' is not followed, either the ATS must be updated so that the rule is followed, or the rule in the coding conventions must be updated to resolve the difference.
- **Should** means that the rule is a guideline. If a rule expressed in terms of 'should' is broken, a brief comment should be provided describing why the guideline does not apply.

---

## E.2 ETR 141 rules and applicability

| <b>RULE 1: Statement of naming conventions</b> |
|--|
|--|

|  |
|--|
| Naming conventions should be explicitly stated. Naming conventions should not exist only for a single ATS, and the reader of an ATS should not be forced to "derive" the rules implicitly. The naming conventions should be part of the ATS conventions contained in the ATS specification document. |
|--|

Names used in the present annex are comprised of a prefix part and a name body part. Conventions for deriving prefixes and name bodies are described after Rule 3 in the present annex.

**RULE 2: Coverage of naming conventions**

Naming conventions stated should, as a minimum, cover the following TTCN objects:

- test suite parameters/constants/variables;
- test case variables;
- formal parameters;
- timers;
- PDU/ASP/structured types;
- PDU/ASP/structured types constraints;
- test suite operations;
- aliases;
- test case/test step identifiers.

**RULE 3: General properties of naming conventions****a) Protocol standard aligned**

When there is a relationship between objects defined in the ATS and objects defined in the protocol standard, e.g. PDU types, the same names should be used in the ATS if this does not conflict with the character set for TTCN identifiers or with other rules. In case of a conflict, similar names should be used.

**b) Distinguishing**

The naming conventions should be defined in such a way, that objects of different types appearing in the same context, e.g. as constraint values, can be easily distinguished.

**c) Structured**

When objects of a given type allow a grouping or structuring into different classes, the names of these objects should reflect the structuring, i.e. the names should be composed of 2 or more parts, indicating the particular structure elements.

**d) Self-explaining**

The names should be such that the reader can understand the meaning (type/value/contents) of an object in a given context. When suffixes composed of digits are used, it is normally useful to have some rule expressed explaining the meaning of the digits.

**e) Consistent**

The rules stated should be used consistently throughout the document, there should be no exceptions.

**f) Appropriate name length**

Following the above rules extensively may occasionally lead to very long names, especially when structuring is used. The names should still be easily readable. When TTCN graphical form (TTCN.GR) is used, very long names are very inconvenient.

NOTE: Also, test tools may not be able to implement very long identifier names, which is an important aspect in this context.

## E.2.1 Multiple words are separated by upper case letters at the start of each word

Many names consist of more words, and it shall be easy to distinguish the different words building up the same name. For all TTCN Object classes this is done using the case of the letters.

This rule is mandatory for all names appearing in the body of a dynamic behaviour table, and is recommended for all other TTCN object classes.

Generally every word a name consists of shall start with an upper case letter and the rest of this word shall be in lower case letters.

- E.g.: "channel" + "description" -> "ChannelDescription".

This rule also applies if a word starts after another upper case letter.

- E.g.: "px" + "Cell" + "A" + "Cell" + "Id" -> px\_CellACellId.

This rule also applies if the name has a prefix, which is always lower case.

- E.g.: A test case variable "sequence" + "number" -> tcv\_SequenceNumber.

This rule does not apply if the word is a unit, in which case the word retains it's original case.

- E.g.: Power level 1.5 dBm ->PowerLvl1\_5dBm.

This rule does not apply if the word in the name is an acronym, in which case the word retains it's normal case.

- If an acronym is followed by another word, an underscore shall be used to separate the acronym from the following word. If an acronym is followed by a number in order to represent an identity (e.g. channel or radio bearer identity) then this acronym is not followed by an underscore.  
E.g.: "this" + "Is" + "SIM" + "Message" + "With" + "CC" + "And" + "RR" + "Things" + "In" + "It" -> "thisIsSIM\_MessageWithCC\_AndRR\_ThingsInIt".
- An exception to acronyms retaining their case is if the name is a field / element / parameter in a structured type / PDU / ASP, in which case it must start with a lower case letter.  
E.g.: "SCH" + "info" + "element" -> "sCH\_InfoElement".
- A further exception to acronyms retaining their case is if the name is an ASN.1 constraint, in which case, in which case the first letter is upper case, and the remaining letters are lower case.

For all objects used in the body of dynamic behaviour tables, use of underscores is forbidden, except for the following situations:

- As a replacement for a '!'. E.g. Test case that maps to prose clause 7.2.3.1 -> tc\_7\_2\_3\_1.
- To separate prefixes from names.
- To separate acronyms from the following word.
- To separate a number from the following word.
- To replace hyphens when types are re-used / imported from core specifications. This applies to types imported from ASN.1 definitions, and to names derived from table definitions in core specifications.
- To separate an ASP name from the embedded PDU name when the metatype PDU is not used.  
E.g. RRC\_DataInd\_ConnAck for an RRC data indication ASP with an embedded CONNECT ACKNOWLEDGE PDU.

## E.2.2 Identifiers shall be protocol standard aligned

To support rule 3(a), the mapping guidelines in table E1 shall be used. This mapping table also supports rule 6.

**Table E.1: Mapping guidelines between protocol standards and identifiers**

| Type                        | Naming rule   |
|-----------------------------|---|
| Objects of Structured Type  | Shall be derived from the name of the Information Element in the standard, if it corresponds to this (use standard acronyms where appropriate).<br>E.g.: "Window Size super-field" -> "WindowSizeSUFI"  |
| Fields in a Structured Type | Shall be derived from the name of the same field in the corresponding Information Element in the standard. (Acronyms for the entire field name shall not be used)<br>E.g.: "Header Extension Type" -> "headerExtensionType" (not "HE")  |
| Objects of ASP type         | Shall be derived from the name of the corresponding Service Primitive in the Standard, using any relevant abbreviations from the present annex. The full name as it appears in the core specification shall be included in parentheses after the name.<br>E.g.: "CRLC-SUSPEND-Conf" -> "CRLC_SuspendCnf (CRLC-SUSPEND-Conf)"<br><br>If the metatype PDU is not used, the ASP name shall reflect both the ASP, and the embedded PDU name, using an underscore to separate the ASP part from the PDU part.<br>E.g.: DataReq_StartDTMF_Ack for an RRC-DATA-Req with an embedded START DTMF ACKNOWLEDGE PDU |
| Objects of PDU type         | Shall have exactly the same name as the Message it corresponds to in the standard. If this Message is named by more words, they shall be joined, leaving the blanks out<br>E.g.: "AMD PDU" -> "AMDPDU".   |

## E.2.3 Identifiers shall be distinguishing (use of prefixes)

To support rules 2, 3(b), 4, and 5, the prefixes shown in table E2 shall be used for TTCN objects. Prefixes are separated from the name by an underscore to improve readability by clearly separating the prefix from the name. This convention will also support searching operations. For example, a search for all uses of PIXIT parameters in the test suite is possible by searching for 'px\_'.

The optional *<protocol>* part shall be included in the name when the object is closely related to the protocol (e.g. PICS, some PIXIT parameters), it is necessary to be unambiguous or improves comprehension significantly (e.g. no need to think about protocol stacks on all used interfaces during reading). The optional *<protocol>* part shall be used for types defined in common modules.

**Table E.2: Prefixes used for TTCN objects**

| TTCN object                       | Case of first character | Prefix                                   | Comment           |
|-----------------------------------|-------------------------|--|-------------------|
| Test Suite                        | Upper                   | -  |                   |
| TTCN Module                       | Upper                   | -  |                   |
| Simple Type                       | Upper                   | [<protocol>_]                            | Note 8            |
| Structured Type                   | Upper                   | [<protocol>_]                            | Note 8            |
| Element in Structured Type        | Lower                   | -  |                   |
| ASN.1 Type                        | Upper                   | [<protocol>_]                            | Note 8            |
| Element in ASN.1 Type             | Lower                   | -  |                   |
| Test Suite Operation              | Upper                   | o_ [<protocol>_]                         | Notes 1 and 8     |
| TSO Procedural Definition         | Upper                   | o_ [<protocol>_]                         | Notes 1 and 8     |
| Formal Parameter to TSO or TSOP   | Upper                   | p_                                       |                   |
| Test Suite Parameter (PICS)       | Upper                   | pc_ [<protocol>_]                        | Note 8            |
| Test Suite Parameter (PIXIT)      | Upper                   | px_ [<protocol>_]                        | Note 8            |
| Test Case Selection Expression    | Upper                   | [<protocol>_]                            | Note 8            |
| Test Suite Constant               | Upper                   | tsc_ [<protocol>_]                       | Note 8            |
| Test Suite Variable               | Upper                   | tsv_ [<protocol>_]                       | Note 8            |
| Test Case Variable                | Upper                   | tcv_ [<protocol>_]                       | Note 8            |
| PCO Type                          | Upper                   | -  |                   |
| PCO                               | Upper                   | -  | Note 2            |
| CP                                | Upper                   | cp_                                      | Note 2            |
| Timer                             | Upper                   | t_ [<protocol>_]                         | Note 8            |
| Test Component                    | Upper                   | mtc_ [<protocol>_] or ptc_ [<protocol>_] | Notes 3 and 8     |
| Test Component Configuration      | Upper                   | -  |                   |
| ASP Type                          | Upper                   | [<protocol>_]                            | Notes 4 and 8     |
| Parameters within ASP Type        | Lower                   | -  | Note 4            |
| PDU Type                          | Upper                   | [<protocol>_]                            | Notes 4 and 8     |
| TTCN object                       | Case of first character | Prefix                                   | Comment           |
| Fields within PDU Type            | Lower                   | -  | Note 4            |
| Encoding Definition               | Upper                   | enc_                                     |                   |
| Encoding Variation                | Upper                   | var_                                     |                   |
| Invalid Field Encoding Variation  | Upper                   | inv_                                     |                   |
| CM Type                           | Upper                   | cm_                                      |                   |
| Field within CM Type              | Lower                   | -  |                   |
| Alias                             | Upper                   | a_                                       |                   |
| ASP constraint                    | Upper                   | ca[b d][s r w]_ [<protocol>_]            | Notes 5 and 8     |
| PDU constraints                   | Upper                   | c[b d][s r w]_ [<protocol> AA 108]       | Notes 5, 8 and 10 |
| Constraint (other types)          | Upper                   | c[b d][s r w]_ [<protocol>_]             | Notes 5 and 8     |
| Formal Parameter for a Constraint | Upper                   | p_                                       |                   |
| Test Case Group                   | Upper                   | <protocol>/                              | Note 8            |
| Test Step Group                   | Upper                   |  |                   |
| Test Case                         | Upper                   | tc_                                      | Note 6            |
| Test Step                         | Upper                   | (ts_ pr_ po_)<CN domain>_<protocol>_     | Notes 7, 8 and 9  |
| Local tree                        | Upper                   | lt_                                      |                   |

| Defaults | Upper  | <protocol>_ | Note 8 |
|----------|--|-------------|--------|
| NOTE 1:  | Coding rules are not specified for test suite operation procedural definitions at this stage. These rules will be defined when the need arises   |             |        |
| NOTE 2:  | A prefix is not used for PCO declarations, but is used for CP declarations. This is because PCOs and CPs will only be used in send and receive statements, and PCOs will be used more frequently than CPs. Since a PCO name or a CP name will be used on most behaviour lines, PCO names should be as short as possible - E.g. 2 to 3 characters.  |             |        |
| NOTE 3:  | The prefix is mtc if the component role is MTC, or ptc if the component role is PTC. If multiple PTCs are used, the rest of the identifier will clarify which PTC is being referred to. E.g. ptc_Cell1, ptc_Cell2.   |             |        |
| NOTE 4:  | This applies for both tabular and ASN.1 definitions.   |             |        |
| NOTE 5:  | <p>Constraint prefixes are built up from the following regular expression. c[a][b][d][s][r][w].</p> <ul style="list-style-type: none"> <li>- 'c' shall always be present to indicate that the object is a constraint.</li> <li>- 'a' shall be present for ASP constraints to distinguish them from PDU constraints.</li> <li>- 'b' shall be present if and only if the constraint is used as a base constraint. (i.e. included in the derivation path of any other constraint).</li> <li>- 'd' shall be present if the constraint is derived from another constraint.(i.e. has an entry in it's derivation path field)</li> <li>- 'b' and 'd' cannot both be used in the same constraint, thereby limiting the derivation path to 1.</li> <li>- For the purpose of the present note, the following definitions are required (see TR 101 666 [27] clause 12.6.2): <ul style="list-style-type: none"> <li>- The term 'field' is used to represent a structured type element, an ASP parameter, or a PDU field.</li> <li>- A 'bound field' is a field that either contains a SpecificValue, or is Omitted (-).</li> <li>- An 'unbound field' is a field that contains any of the following matching mechanisms: Complement, AnyValue (?), AnyOrOmit (*), ValueList, Range, SuperSet, SubSet, AnyOne (?), AnyOrNone (*), Permutation, Length, or IfPresent.</li> </ul> </li> <li>- 's' may optionally be present if the constraint is only used in send statements. 's' shall not be present if the constraint contains any unbound fields, or any fields chained to a constraint whose prefix includes 'w' or 'r'.</li> <li>- 'r' may optionally be present if the constraint is only used in receive statements.</li> <li>- 'w' may optionally be present to indicate that the constraint contains fields that are unbound. Before these constraints are used in SEND events, all unbound fields must either be bound by using a derived constraint, or explicitly assigned a value in the SEND event behaviour line.</li> <li>- Either 'w' or 'r' shall be used if any fields in the constraint are unbound or are chained to a constraint whose prefix includes 'w' or 'r'.</li> </ul> |             |        |
| NOTE 6:  | Test case names will correspond to the clause in the prose that specifies the test purpose. E.g. tc_7_2_23_2. An additional digit may be specified if more than one test case is used to achieve the test purpose. If an additional digit is required, this probably means that the test prose are not well defined.   |             |        |
| NOTE 7:  | Test steps may optionally use the prefixes pr_ or po_ to indicate that the test step is a preamble or postamble respectively.  |             |        |
| NOTE 8:  | <p>Protocol abbreviations are provided in table E3. Protocol abbreviations may optionally be used to clarify the scope of TTCN objects, or to resolve conflicts when the same name is required by multiple protocols within the ATS. The protocol abbreviation indicates that the object is related to a particular procedure (e.g. an MM procedure). This does not prevent the object from being used by an ATS testing a different protocol. If an object is specific to one ATS, this should be indicated in comments, rather than using a protocol abbreviation (e.g. if a timer is only used in RLC tests this should be stated in the comments, rather than using the abbreviation RLC in the timer name).If two different types exist in the ATS that represent the same information (e.g. IMSI) conversion operations shall be used to ensure consistency between the types. Also, conversion operations shall be used to avoid asking the same PIXIT question twice. For example, if a type is defined as an OCTETSTRING[4] for a NAS protocol, and the same type is represented as a BITSTRING[32] for RRC, a single PIXIT question shall be asked, and conversion operations shall be used to ensure that the same value is used for both types.</p>  |             |        |
| NOTE 9:  | The prefixes CS and PS may optionally be used to indicate that a test step is specific to circuit switched, or packet switched signalling respectively. For test steps specific to the Upper Tester, the prefixes AT or MMI or UT shall be used to indicate that, respectively, AT or MMI or both types of commands are used.  |             |        |
| NOTE 10: | The prefix AA shall be used for RRC PDU constraints to indicate that it is defined in 3GPP TS 34.123-1 [1] annex A. The prefix 108 shall be used for RRC PDU constraints to indicated that it is defined in 3GPP TS 34.108 [3] clause 9.   |             |        |

**Table E.3: Protocol abbreviations for prefixes**

| Protocol / prefix            |
|------------------------------|
| BMC                          |
| CC                           |
| CS                           |
| GMM                          |
| MAC                          |
| MM                           |
| PDCP                         |
| RLC                          |
| RRC                          |
| SMS                          |
| SS                           |
| SUS (Supplementary services) |
| TC                           |

## E.2.4 Identifiers should not be too long (use standard abbreviations)

To assist in keeping TTCN identifiers shorter, table E.4 provides a non-exhaustive set of standard abbreviations that shall be used when naming objects that are used in the body of dynamic behaviour tables. Consistent use of abbreviations will improve test suite readability, and assist maintenance.

**Table E.4: Standard abbreviations**

| Abbreviations | Meaning                       |
|---------------|-------------------------------|
| Acs           | access                        |
| Acp           | accept                        |
| Ack           | acknowledge                   |
| act           | activation                    |
| addr          | address                       |
| (re)alloc     | (re)allocated, (re)allocation |
| arg           | argument                      |
| ass           | assignment                    |
| auth          | authentication                |
| ava           | avail, available              |
| bCap          | bearer capability             |
| cau           | cause                         |
| clg           | calling                       |
| ch            | channel                       |
| chk           | check                         |
| ciph          | cipher, ciphering             |
| cld           | called                        |
| cismk         | classmark                     |
| cmd           | command                       |
| cmpl          | complete                      |
| cnf           | confirm                       |
| cfg           | configuration                 |
| conn          | connect                       |
| ctrl          | control                       |
| def           | default                       |
| descr         | description                   |
| disc          | disconnect                    |
| enq           | enquiry                       |
| err           | error                         |
| (re)est       | (re)establish                 |
| ext           | extended                      |
| fail          | failure                       |
| ho            | handover                      |
| id            | identity / identification     |



| Abbreviations | Meaning                    |
|---------------|----------------------------|
| ie            | information element        |
| iel           | information element length |
| ind           | indication                 |
| info          | information                |
| init          | initialize                 |
| lvl           | level                      |
| loc           | location                   |
| locUpd        | location update            |
| max           | maximum                    |
| mgmt          | management                 |
| min           | minimum                    |
| misc          | miscellaneous              |
| mod           | modification               |
| ms            | mobile station             |
| msg           | message                    |
| mt            | mobile terminal            |
| neigh         | neighbour                  |
| ntw           | network                    |
| num           | number                     |
| orig          | origin/-al                 |
| pag           | page/-ing                  |
| params        | parameters                 |
| perm          | permission                 |
| phy           | physical                   |
| qual          | quality                    |
| rand          | random                     |
| ref           | reference                  |
| reg           | register                   |
| rej           | reject                     |
| rel           | release                    |
| req           | request                    |
| rsp           | response                   |
| rx            | receiver                   |
| sel           | selection                  |
| seq           | sequence                   |
| serv          | service                    |
| st            | state                      |
| sysInfo       | system information         |
| sync          | synchronization            |
| sys           | system                     |
| tx            | transmitter                |

**RULE 4: Specific naming rules for test suite parameters/constants/variables test case variables and formal parameters**

- a) The name should reflect the purpose/objective the object is used for.  
b) If the type is not a predefined one, it is useful that the name reflects the type, too.  
c) It could be useful, that the individual naming conventions are not the same for all object classes this rule applies to. e.g. use upper case letters for test suite parameters/constants, and use one of the other possibilities presented in ETR 141 [37] example 1 for other object classes.

See also ETR 141 [37] clauses 5.1 to 5.4 for further discussion on naming test suite parameters.

**RULE 5: Specific naming rule for timers**

If the timer is not defined in the protocol to be tested, the name should reflect the objective of the timer used for testing.  
**NOTE:** There is no need to indicate the object type "timer" in the name, since timers only occur together with timer operations

**RULE 6: Specific naming rule for PDU/ASP/structured types**

As far as applicable, derivation rules or mapping tables should be used to relate the names of the types to the corresponding objects in the protocol or service definition.

NOTE: There may be types, e.g. erroneous PDU types, that do not relate to an object in the protocol or service definition.

Whenever names of types are derived from ASN.1 type definitions provided in the core specifications, the names shall remain the same as the ASN.1 specifications, and references shall be provided in the comment fields.

**RULE 7: Specific naming rule for PDU/ASP/structured types constraints**

Rules should be stated to derive the names from the names of the corresponding type definitions. It is often possible to use the type name plus an appropriate suffix reflecting the specific constraint value. In case of lengthy names, useful abbreviations or a defined numbering scheme can be chosen.

Constraint names begin with the appropriate prefix, followed by the first letter of each word in the type, followed by words describing the peculiarity of the constraint. E.g. Type = RadioBearerSetupPDU, constraint name could be cb\_RBSP\_GenericUM\_DTCH.

**RULE 8: Specific naming rule for test suite operations**

The name should reflect the operation being performed.

i.e. the name should indicate an activity, not a status. This can be achieved e.g. by using appropriate prefixes like "check", "verify", etc.

**RULE 9: Specific naming rule for aliases**

The name should reflect that aspect of its expansion, that is important in the situation where the alias is used. Derivation rules should be provided to derive the alias name from its macro expansion or from the name of an embedded ASP / PDU.

See also ETR 141 [37] clauses 6.3.6 and 9 for further guidelines on naming aliases.

**RULE 10: Specific naming rule for test steps**

The name should reflect the objective of the test step.

**RULE 11: Selecting the ASN.1 format for type definitions**

- a) If the protocol standard uses ASN.1 to specify the PDUs, the ATS specifier should also use ASN.1.
- b) If the protocol standard does not use ASN.1, check carefully whether features of ASN.1 that the tabular format of type definition does not present are necessary in the ATS, or could ease the design and understanding of the definitions as a whole. Check especially whether fields or parameters have to be specified, the order of appearance of which, in a received ASP/PDU, cannot be predicted. If any of these conditions apply, use ASN.1 for type and ASP/PDU type declarations.
- c) Use the option of "ASN.1 ASP/PDU type Definitions by Reference" whenever applicable.
- d) Example 14 shows a compatibility problem that could occur, when ASN.1 type declarations as well as tabular type declarations are used in an ATS. Use the ATS Conventions to describe how this compatibility problem is handled in the ATS, i.e. whether in expressions and assignments entities defined in ASN.1 are only related to entities defined in ASN.1 or not.

Names of ASN.1 objects shall be kept the same as the core specifications in this case, even where the names are at odds with the naming conventions adopted for other TTCN objects.

**RULE 12: Further guidelines on type definitions**

- a) Use simple type or ASN.1 type definitions whenever an object of a base type with given characteristics (length, range, etc.) will be referenced more often than once.
- b) Use the optional length indication in the field type or parameter type column of structured type and ASP/PDU type definitions whenever the base standard/profile restricts the length.
- NOTE 1: This can often be achieved by references to simple types.
- c) Map the applicable ASPs/PDUs from the service/protocol standard to corresponding ASP/PDU type definitions in the ATS.
- NOTE 2: It may happen that not all ASPs/PDUs of a service/protocol standard are applicable to a particular ATS for the related protocol. It may also happen that additional ASP/PDU type declarations are necessary, e.g. to create syntactical errors.
- d) Map the structure of ASPs/PDUs in the service/protocol standard to a corresponding structure in the ATS.
- NOTE 3: This mapping is not always one-to-one, e.g. because a field in the PDU definition of the protocol standard is always absent under the specific conditions of an ATS. But it should normally not happen, that a structured element in the protocol standard is expanded using the "<-" macro expansion, so that the individual fields are still referenced, but the structure is lost in the ATS.

**RULE 13: Specification of test suite operations**

- a) Use a test suite operation only if it cannot be substituted by other TTCN constructs.
- b) Write down the rationale/objective of the test suite operation.  
Reference standards if applicable.
- c) Classify and simplify algorithm.  
Split test suite operation if too complex.
- d) Choose an appropriate specification language depending on the rationale/objective:
  - predicates for Boolean tests;
  - abstract data types for manipulation of ASN.1 objects;
  - programming languages for simple calculation.
- e) Check/proof the test suite operation:
  - is the notation used known/explained;
  - are all alternative paths fully specified;
  - is the test suite operation returning a value in all circumstances;
  - are error situations covered (empty input variables, etc.).
- f) State some evident examples.

## E.2.5 Test suite operations must not use global data

All information required by test suite operations must be passed as formal parameters. This includes test suite variables, test case variables, test suite parameters, and constraints.

**RULE 14: General aspects of specifying constraints**

- a) Develop a design concept for the complete constraints part, particularly with respect to the "conflicting" features as indicated in items i) to iv) and including naming conventions (see ETR 141 [37] clause 6).
- b) Make extensive use of the different optional "Comment" fields in the constraint declaration tables to highlight the peculiarity of each constraint.

**RULE 15: Relation between base constraints and modified constraints**

- a) Define different base constraints for the send- and receive direction of a PDU (when applicable).
- b) Use modified constraints preferably when only a small number of fields or parameter values are altered with respect to a given base.
- NOTE 1: For SEND events the creation of a further modified constraint can sometimes be avoided, if an assignment is made in the SEND statement line, thus overwriting a particular constraint value.
- c) Design the relation between base constraints and modified constraints always in connection with parameterization of constraints (see the two subsequent subclauses).
- NOTE 2: Additional parameters in a constraint, introduced to avoid the declaration of further base/modified constraints can reduce the amount of constraints needed in an ATS, but then the constraint reference is getting more and more unreadable.
- d) When modified constraints are used, keep the length of the derivation path small. The length of the derivation path (resulting from the number of dots in it) is a kind of nesting level, and it is known from experience that a length greater than 2 is normally difficult to overview and maintain.

Modified constraints should not have a derivation path longer than 1. A modified constraint should not alter more than 5 values with respect to a given base constraint. If a constraint is used as a base constraint, it must have the prefix 'cb', to warn test suite maintainers / developers that any changes to this constraint may cause side effects.

Note that if an existing constraint without the 'cb' prefix is to be used as a base constraint, either a new, identical constraint with an 'cb' prefix must be created, or the existing constraint must be renamed to include the 'cb' prefix in all places it is referenced in the test suite.

**RULE 16: Static and dynamic chaining**

- a) Make a careful evaluation of which embedded PDUs are needed in ASPs/PDUs, in which (profile) environment the ATS may operate and which kind of parameterization for other parameters/fields is needed, to find an appropriate balance between the use of static and/or dynamic chaining in a particular ATS.
- b) When the ATS is used in different profile environments and the types and values of embedded PDUs cannot be predicted, dynamic chaining is normally the better choice.
- c) When static chaining is used, chose the name of the ASP/PDU constraint such that it reflects the peculiar value of the embedded PDU (see also the clause on naming conventions in ETR 141 [37]).

**RULE 17: Parameterization of constraints**

- a) Make a careful overall evaluation of which field/parameter values are needed in ASPs and PDUs to find an appropriate balance between the aim of a comparably small number of constraint declarations and readable and understandable constraint references.
- b) Keep the number of formal parameters small.  
Keep in mind, that the number of formal parameters in structured/ASN.1 types Constraints will add up to the total number of ASP/PDU constraints.  
A clear border for the number of formal parameters cannot be stated, but it is known from experience that a number bigger than 5 normally cannot be handled very well.

Constraints should not be passed more than five parameters. Instead, more constraints should be defined. Related parameters can be grouped in new structured types to reduce the number of parameters that must be passed to constraints.

NOTE 1: The value five has been selected based on the recommendation in ETR 141 [37] rule 17. If more parameters are required, we can update this rule, or use more than 5 parameters, and provide documentation indicating why more parameters are required.

A constraint should not be passed parameters to that are not processed in that constraint. If for example a parameter is to be passed from a PDU constraint to a structured type constraint then the PDU constraint should be made specific and not have that parameter passed. The reason for this is that no editors as yet can trace through this mechanism and it becomes very difficult in a complex suite to see exactly what is being passed.

For example:

```
PduA ::= SEQUENCE {
  infoElement1 InformationElementType1,
  infoElement2 INTEGER
}

InformationElementType1 ::= SEQUENCE {
  field1 INTEGER,
  field2 INTEGER
}

cb_PATypical( p_Field1: INTEGER; p_Field2: INTEGER ) ::= {
  infoElement1 c_IET1Typical( p_Field1 ),
  infoElement2 pField2
}

c_IET1Typical( p_Field1: INTEGER ) ::= {
  field1 p_Field1,
  field2 5
}
```

In the example constraint cb\_PATypical, passing p\_Field1 through to a nested constraint is not allowed, but the use of p\_Field2 is acceptable.

**RULE 18: Constraint values**

- a) Use comments to highlight the peculiarity of the value, especially when the value is a literal, whose meaning is not apparent.
- b) Use test suite constants instead of literals, when appropriate.  
Normally not all literals can be defined as Test Suite Constants, but a rule by thumb is: if a literal value of a given type occurs more than once (as a constraint value or more generally in an expression), then it is useful to define it as a Test Suite Constant, letting the name reflect the value.
- c) Use the length attribute when possible and when the length is not implicit in the value itself or given by the type definition (e.g. for strings containing "\*\*").

**RULE 19: Verdict assignment in relation to the test body**

Make sure that verdict assignment within a default tree is in relation to the test body. If an unsuccessful event arising in the test body is handled by the default tree, then assign a preliminary result "(FAIL)" within the corresponding behaviour line of the default tree. If the position of the unsuccessful event is not in the test body, assign a preliminary result "(INCONCLUSIVE)". If the behaviour line handling the unsuccessful event is a leaf of the default tree, assign a final verdict instead.

**RULE 20: Test body entry marker**

The entry of the test body should be marked.

**RULE 21: State variable**

For realizing test purposes dependent on protocol states, use a variable to reflect the current state of the IUT.

**RULE 22: State checking event sequences**

Combine event sequences used for checking a state of the IUT within test steps.

**RULE 23: Easy adaptation of test steps to test cases**

For easy adaptation of a test step to test case needs, parameterize the constraints used within a test step.

Test steps may be parameterized, but with no more than five parameters. See also ETR 141 [37] clause 12.2 and rule 28. Related parameters can be grouped in new structured types to reduce the number of parameters that must be passed to constraints.

NOTE 2: Again, the value five has been selected based on the recommendation in ETR 141 [37] rule 17. If more parameters are required, we can update this rule, or use more than 5 parameters, and provide documentation indicating why more parameters are required.

**RULE 24: Minimizing complexity of test steps**

Minimize the complexity of test steps either by restricting the objective of a test step to atomic confirmed service primitives or by separating event sequences, which build different "logical" units into different test steps.

**RULE 25: Nesting level of test steps**

Keep the nesting level of test steps to a minimum.

**RULE 26: Recursive tree attachment**

Avoid recursive tree attachment. Where possible, use loops instead of recursive tree attachments.

**RULE 27: Verdict assignment within test steps**

If verdicts are assigned within a test step, guarantee at least the partial (i.e. not general) re-use of the test step.

**RULE 28: Parameterized test steps**

Use parameterized test steps to ensure re-use of test steps within test cases for different needs.

**RULE 29: Combining statements in a sequence of alternatives**

If there is no Boolean expression included in an alternative sequence, a statement of type UCS (unconditional statement) should never be followed by a statement of type UCS or CS (conditional statement) within a sequence of alternatives.

**RULE 30: Using relational expressions as alternatives**

- a) A relational expression should never restrict the value range of a preceding relational expression in the same alternative sequence using the same variable.
- b) The value range of a relational expression should be different from the whole value range of all preceding relational expressions in the same alternative sequence using the same variable.

**RULE 31: Loop termination**

Do not use conditions for terminating loops, which depend only on the behaviour of the IUT.

**RULE 32: Avoiding deadlocks**

- a) Make sure that each alternative sequence of receive events contains an OTHERWISE statement (without any qualifier) for each PCO.
- b) Make sure that each alternative sequence of receive events contains at least one TIMEOUT event (implying that a corresponding timer was started).

A set of alternatives using qualifiers shall always include an alternative containing the qualifier [ TRUE ], to provide a default behaviour if none of the qualifiers match.

For example:

```
[ tcv_Value = 1 ]
  AM ! ASP_ForValue1
  ...
[ tcv_Value = 2 ]
  AM ! ASP_ForValue2
  ...
[ TRUE ]
  AM ! ASP_ForOtherValues
  ...
```

**RULE 33: Straightforward specification of test cases**

- a) Use only event sequences leading to the test body within a preamble.
- b) Handle all event sequences not leading to the test body within the default tree of the test case/step.
- c) If the very same event sequence can be used to transfer the IUT from each possible state to the idle state, then realize this event sequence as a postamble.

**RULE 34: Test component configuration declaration**

Avoid recursive test component configuration declarations.

**RULE 35: Default trees with RETURN statement**

Special care should be taken by using a RETURN statement within a default tree in order to avoid an endless loop resulting from the expansion of the default tree.

## E.3 3GPP ATS implementation guidelines

This clause provides a set of guidelines that must be followed during ATS development. In general, these guidelines are intended to prevent developers from making common errors, or discuss considerations that must be taken into account before using specific features of the TTCN language.

### E.3.1 Test case groups shall reflect the TSS&TP document

Test groups shall be used to organize the test cases in the same way as the test purposes are structured in the prose specification.

The general structure of the test groups should be in the following format.

<protocol>/<group>/<subgroup>

E.g. RLC/UM/Segmentation/LengthIndicator7bit/

### E.3.2 Test case names correspond to the clause number in the prose

Test case names are derived directly from the clause number in the prose specification. Decimal points between digits in the clause number are replaced with underscores. E.g. the test case name for the test purpose specified in clause 7.2.3.2 of 3GPP TS 34.123-1 [1] is tc\_7\_2\_3\_2. If more than one test case is required to achieve a test purpose, an additional digit may be added. See also ETR 141 [37] clause 6.3.7.

### E.3.3 Use standard template for test case and test step header

Table E.5 illustrates how the Test Case dynamic behaviour header fields should be used.

**Table E.5: Template for TTCN test case table header**

| Field  |       | Contents   |                 |         |          |
|--|-------|--|-----------------|---------|----------|
| Test Case Name:  |       | tc_NUMBER_OF_TESTCASE<br>The number of the test case, which is used in the name of the test case, is the number it has in the prose specification.<br>e.g.: "tc_26_13_1_3_1"   |                 |         |          |
| Group:   |       | Is automatically filled and cannot be changed  |                 |         |          |
| Purpose:   |       | This is taken directly from the prose specifications.  |                 |         |          |
| Configuration:   |       | As required if concurrent TTCN is being used.  |                 |         |          |
| Default  |       | The appropriate default  |                 |         |          |
| Comments:  |       | <b>First line contains:</b><br>Specification: The names and clauses of relevant core specifications.<br><b>Next line contains:</b><br>Status: OK / NOT OK (+explanation if not ok) / Version number / Validated / Reviewed, etc.<br>E.g.: Status: OK<br><b>Rest of lines give comments as:</b><br>What has to be done before running this test?<br>E.g.: 1. Generic setup procedure must be completed before running this test.<br>Any special information about what might be needed for the testing system, like specific requirements for the testing system, specific hacks, certain settings, etc. This field should be short (if long description is needed it must be put into Detailed Comments) |                 |         |          |
| Selection Ref:   |       | The appropriate test case selection expression.  |                 |         |          |
| Description:   |       | Optional. Max 4 lines. If available, this should be the title of the prose clause. Note 1  |                 |         |          |
| Nr   | Label | Behaviour Description  | Constraints Ref | Verdict | Comments |
| 1  |       | Note 3   | Note 3          |         | Note 2   |
| Detailed Comments  |       | Contains detailed information about test steps + additional information Note 2   |                 |         |          |
| NOTE 1: The description field in the test case / step header is used to generate the test suite overview, and should only include a brief overview of the test case / step with a maximum of 4 lines. For a more detailed description of the test case / step algorithm / parameters etc, the comments or detailed comments fields should be used. |       |  |                 |         |          |
| NOTE 2: The comments field for each behaviour line should usually consist of a number that is a reference to a specific numbered comment in the detailed comments field. If this extra level of indirection reduces readability, brief comments can be used in the comments field for each behaviour line.   |       |  |                 |         |          |
| NOTE 3: If entries in the behaviour description or constraints reference column contain lists with more than one element, carriage returns should be used between list elements to prevent the line from becoming too long.  |       |  |                 |         |          |

Table E.6 illustrates how the Test Case dynamic behaviour header fields should be used.

Table E.6: Template for TTCN test step table header

|  |   |                       |                 |         |          |
|--|---|-----------------------|-----------------|---------|----------|
| Test Step Name   | ts_TestStepName( p_Param1: Param1Type; p_Param2: Param2Type )   |                       |                 |         |          |
| Group  | Is automatically filled and cannot be changed   |                       |                 |         |          |
| Objective  | The objective of the test case. Provides a brief summary of the functionality of the test step.   |                       |                 |         |          |
| Default  | The appropriate default   |                       |                 |         |          |
| Comments   | <p>A detailed description of the test step, including the relevant items from the following categories:</p> <p>Algorithm<br/>A detailed description of the algorithm / principles used within the test step</p> <p>Parameters:<br/>A description of each of the parameters passed to the test step, including the purpose of the parameter, valid values, restrictions etc.</p> <p>Preconditions<br/>The required state of the UE and / or SS before using this test step, including test steps that should be executed before using the present test step, and a description of all test case variables that must contain appropriate values before using this test step.</p> <p>Postconditions<br/>The expected state of the UE and / or SS after using this test step, including a description of all test case variables that will be modified by this test step.</p> <p>NOTE: It is too difficult to maintain the list of variables required / affected by nested test steps, so it is the users responsibility to check which variables are required / affected by nested test steps.</p> |                       |                 |         |          |
| Description  | Optional. Max 4 lines. Note 1   |                       |                 |         |          |
| Nr   | Label   | Behaviour Description | Constraints Ref | Verdict | Comments |
| 1  |   | Note 3                | Note 3          |         | Note 2   |
| Detailed Comments  | Contains detailed information about test steps + additional information Note 2  |                       |                 |         |          |
| <p>NOTE 1: The description field in the test case / step header is used to generate the test suite overview, and should only include a brief overview of the test case / step with a maximum of 4 lines. For a more detailed description of the test case / step algorithm / parameters etc, the comments or detailed comments fields should be used.</p> <p>NOTE 2: The comments field for each behaviour line should usually consist of a number that is a reference to a specific numbered comment in the detailed comments field. If this extra level of indirection reduces readability, brief comments can be used in the comments field for each behaviour line.</p> <p>NOTE 3: If entries in the behaviour description or constraints reference column contain lists with more than one element, carriage returns should be used between list elements to prevent the line from becoming too long.</p> |   |                       |                 |         |          |

### E.3.4 Do not use identical tags in nested CHOICE constructions

A nested CHOICE requires tags in the different alternative type lists to differ (see ISO/IEC 8824 [29], clause 24.4, example 3, INCORRECT). "The tag shall be considered to be variable, ... becomes equal to the tag of the "Type" ... from which the value was taken".

**EXAMPLE:** components are defined in a nested CHOICE construction, but no distinguishing tags are used to make the difference between component types, i.e. tags for different types turn out to be identical.

```

Component ::= CHOICE {
  GSMLocationRegistration_Components  GSMLocationRegistration_Components,
  GSMLocationCancellation_Components  GSMLoactionCancellation_Components,
  ...
}

GSMLocationRegistration_Components ::= CHOICE {
  GSMLocationRegistration_InvokeCpt    [1] IMPLICIT GSMLocationRegistration_InvokeCpt,
  GSMLocationRegistration_RRCpt       [2] IMPLICIT GSMLocationRegistration_RRCpt,
  GSMLocationRegistration_RECpt       [3] IMPLICIT GSMLocationRegistration_RECpt,
  GSMLocationRegistration_RejectCpt   [4] IMPLICIT RejectComponent
}

```



```

GSMLocationCancellation_Components ::= CHOICE {
  gSMLocationCancellation_InviteCpt [1] IMPLICIT GSMLocationCancellation_InviteCpt,
  gSMLocationCancellation_RejectCpt [4] IMPLICIT RejectComponent
}

```

gSMLocationRegistrationInviteCpt and gSMLocationCancellation\_InviteCpt have the same tag and can therefore not distinguished anymore. Note that ITEX 3.5 does not report this error.

## E.3.5 Incorrect usage of enumerations

Enumerations may contain distinct integers only (see ISO/IEC 8824 [29]**Error! Reference source not found.**, clause 15.1).

EXAMPLE: TypeOfNumber containing a NamedValueList in which there are non-distinct values.

```

TypeOfNumber ::= ENUMERATED {
  .....,
  internationalnumber (1),
  level2RegionalNumber (1),
  nationalNumber (2),
  level1RegionalNumber (2),
  .....,
}

```

## E.3.6 Structured type as OCTETSTRING should not be used

"It is required to declare all fields of the PDUs that are defined in the relevant protocol standard, ..." TR 101 101 [38] TTCN specification clause 11.15.1.

EXAMPLE 1: The ISDN Bearer Capability Information Element (BCAP) contents is defined as OCTETSTRING.

EXAMPLE 2: Usage of data type BITSTRING [7..15] as data type of the Call Reference (= 7 bits or =15 bits, but not 8 bits for example) does not correspond to the specification !!).

## E.3.7 Wildcards in PDU constraints for structured types should not be used

Contrary to popular belief, TR 101 666 [27] does not support the use of wildcards for TTCN ASP parameters, or TTCN PDU fields whose type is structured. It is not clearly stated if wildcards are permitted for TTCN structured type elements whose type is structured but it is assumed that they are not permitted because the semantics for this are not clearly specified.

Note that this does not apply to ASN.1 Type definitions, ASPs, or PDUs.

Most tools do support wildcards for TTCN ASP parameters / TTCN PDU fields / TTCN structured type elements whose type is structured, but there is ambiguity between implementations since the semantics are not clearly specified in the core specification.

This feature is commonly used by TTCN developers, and is present in many existing test suites, including the 3GPP test suite, and in constraints that are being re-used from GERAN tests.

One problem with values '?' and '\*' in constraints where they are used to indicate values of structured types, is that they would allow any combinations of values - even incorrect ones - which is not admissible according to the specifications. It is to be kept in mind that in tabular form each field is optional! It would be better to create and use an "any"-constraint which would deal with all the fields in detail (mandatory, IF PRESENT, etc.).

For the purpose of the present annex, the following rules shall apply:

1. '?' shall not be used to indicate values of TTCN ASP parameters / TTCN PDU fields / TTCN structured type elements whose type is structured. Known TTCN implementations differ significantly in their implementation of this feature.

- 2. '\*' shall not be used for TTCN PDU fields, or TTCN ASP parameters whose type is structured (i.e. at the top level).
  - 2.1 Usage of wildcards should be avoided in structured type identifiers. Only simple type fields should use \* or ?
- 3. '\*' is permitted but discouraged for structured type elements whose type is structured. Note that this may result in ambiguous behaviour between TTCN implementations because the semantics are not specified in TR 101 666 [27].
- 4. One of the following two options shall be used as an alternative to using a '?' for a TTCN ASP parameter / TTCN PDU field / TTCN structured type element whose type is structured.

4.1 Option 1: Use '\*' instead (only applicable to structured type elements due to rules 2 and 3 above).

**WARNING:** This may result in the situation where a UE omits a mandatory field, but passes the test anyway, and / or different behaviour depending on the TTCN tool used.

4.2 Option 2 (preferred option; supported by TR 101 666 [27**Error! Reference source not found.**]): Use an 'any' constraint, in conjunction with IF PRESENT if appropriate (whole TTCN ASP parameters / TTCN PDU fields / TTCN structured type elements may be omitted according to TR 101 666 [27**Error! Reference source not found.**]). This means that the constraint value specified for the parameter / field / element shall be a reference to another constraint of the appropriate structured type, which may in turn use wildcards for each of it's elements according to the rules specified in the present annex.

- 5. A structured type formal parameter should not be used together with the IF\_PRESENT indication inside a structured type constraint. If this is required, then this shall be clearly commented.

### E.3.8 TSOs should be passed as many parameters as meaningful to facilitate their implementation

Parameters should be passed to TSOs to facilitate the TSO realization. If a TSO is used in various contexts, this should be reflected in the parameters passed to the TSO. Specifically, TSOs operating on well-defined (parameterized) constraints should take these constraints (including relevant parameters) as parameters if required.

**BAD EXAMPLE:** In this example, the TSO may be used in many contexts, but no information is passed to the TSO, which makes TSO realization difficult.

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  | L?SETUPr (...<br>tcv_invokeId := TSO_GET_INVOKEID ( ),<br>...) | Sr (SU_GR3(<br>GSM_IncomingCallMMInfo_Inv<br>voke(...))) |  |  |
|--|--|--|--|--|--|

**GOOD EXAMPLE:** In this case, the TSO is provided with information about the data object from which the invoke Id is to be extracted, and the type of component from which the invoke Id is to be extracted is identified by passing the component constraint.

|  |  |   |  |  |  |
|--|--|---|--|--|--|
|  |  | L?SETUPr (...<br>tcv_invokeId := TSO_GET_INVOKEID ( DL_DataInd_Setup.msg,<br>GSM_IncomingCallMMInfo_Inv<br>oke(...)),<br>...) | Sr (SU_GR3(<br>GSM_IncomingCallMMInfo_Inv<br>voke(...))) |  |  |
|--|--|---|--|--|--|

To calculate the invocation identification and store the result in variable tcv\_invokeId the TSO has to be provided with information about the data object from which the invoke Id is to be extracted. PDU constraint SU\_GR3 may contain several components. In the specific situation only one of these components is relevant.

Depending on the nature of the TSO, passing the received value, or a subcomponent of the received value may be more appropriate than passing the constraint.

## E.3.9 Specification of Encoding rules and variation should be indicated

TTCN does not mandate encoding rules, although TTCN foresees that applicable encoding rules and encoding variations can be indicated for the data structures used in a test suite.

There are standards defining encoding rules, e.g. the ITU-T Recommendation X.680 [39] series. However, the type of encoding called "Direct Encoding" - a bit-by-bit-mapping from the data definitions onto the data stream to be transmitted - is not defined anywhere. It therefore needs a "home".

TTCN should therefore define which encoding rules may legally be used by TTCN test suite specifiers. All the encoding rules defined in the ITU-T Recommendation X.680 [39] series should be contained in this repertoire. Additionally an encoding rule called Direct Encoding is needed in particular for tabular TTCN.

ITU-T Recommendation X.680 [39] allows to encode data objects using different length forms (short, long, indefinite). These could be used alternatively as encoding variations. Another encoding variation could be the "minimum encoding", accepting any of the length forms in reception, and using the shortest of the available forms in sending. The variation actually used has to be described somewhere (in the ATS).

## E.3.10 Use of global data should be limited

The Phase 2 ATS became extremely complex due to the global definition of data. Data should be defined locally where possible if the language allows, alternatively the names of global constraints could be given prefixes to indicate their use.

## E.3.11 Limit ATS scope to a single layer / sub-layer

Separate ATSs should be produced to test each Layer and perhaps sub Layer. By doing this preambles and common areas particular to one sub Layer can be confined to one test suite and parallel development of test suites can be facilitated.

## E.3.12 Place system information in specially designed data structures

System Information data could be stored in specially defined data structures, use of these structures to build PDUs may help to ensure that a consistent set of data is transmitted in all the channels in a cell.

## E.3.13 Place channel configuration in specially designed data structures

Likewise the configuration of a 'channel' could be stored in similar structures. This data can then be used to configure the test system and to build Assignment messages to the UE under test. This may help avoid the situation where the TTCN creates one channel and unintentionally commands the mobile to a different, non-existent, channel.

## E.3.14 PICS / PIXIT parameters

It is desirable to limit the scope of PICS / PIXIT parameters.

A default value shall be provided in the PIXIT document for all PIXIT parameters.

PICS / PIXIT parameters shall not include structured types. If a structured parameter is required, several parameters shall be used, one for each simple element within the type, and a constraint shall be created to combine the simple parameters into a structured type.

For example, to use the following structured type as a parameter.

|                           |   |                       |                 |
|---------------------------|---|-----------------------|-----------------|
| <b>Type Name</b>          | LocAreald_v   |                       |                 |
| <b>Encoding Variation</b> |   |                       |                 |
| <b>Comments</b>           | Location Area Identification Value 3GPP TS 24.008 [9] clause 10.5.1.3 |                       |                 |
| <b>Element Name</b>       | <b>Type Definition</b>  | <b>Field Encoding</b> | <b>Comments</b> |
| mcc                       | HEXSTRING[3]  |                       | MCC 3 digits    |
| mnc                       | HEXSTRING[3]  |                       | MNC 3 digits    |
| lac                       | OCTETSTRING[2]  |                       | LAC             |
| <b>Detailed Comments</b>  |   |                       |                 |

| The following three PIXIT parameters should be defined: Parameter Name | Type        | PICS/PIXIT Ref | Comments    |
|--|-------------|----------------|-------------|
| px_LACDef  | OCTETSTRING | PIXIT TC       | default LAC |
| px_MCCDef  | HEXSTRING   | PIXIT TC       | default MCC |
| px_MNCDef  | HEXSTRING   | PIXIT TC       | default MNC |

And then the following constraint can be used to combine the simple parameters into a structured parameter.

|                           |                      |                         |                 |
|---------------------------|----------------------|-------------------------|-----------------|
| <b>Constraint Name</b>    | cb_LocArealdDef_v    |                         |                 |
| <b>Structured Type</b>    | LocAreald_v          |                         |                 |
| <b>Derivation Path</b>    |                      |                         |                 |
| <b>Encoding Variation</b> |                      |                         |                 |
| <b>Comments</b>           |                      |                         |                 |
|                           |                      |                         |                 |
| <b>Element Name</b>       | <b>Element Value</b> | <b>Element Encoding</b> | <b>Comments</b> |
| mcc                       | px_MCCDef            |                         |                 |
| mnc                       | px_MNCDef            |                         |                 |
| lac                       | px_LACDef            |                         |                 |
| <b>Detailed Comments</b>  |                      |                         |                 |

## E.3.15 Dynamic vs. static choices

Don't use wildcards for static choice constraints. For example, a type that is similar for FDD and TDD should have 2 type definitions, rather than a single type that uses an ASN.1 choice. Then in the TTCN, the correct type should be selected based on test suite parameters.

E.g.:

```
[ pxUseTddMode ] AM ! TddSpecificAsp
AM ?
...
[ pxUseFddMode ] AM ! FddSpecificAsp
AM ? ...
...
```

## E.3.16 Definition of Pre-Ambles and Post Ambles

Test cases should, as far as possible, use one of a set of standard pre-ambles to place the user equipment in its initial conditions. These pre-ambles should align with the generic setup procedures in the conformance specification. All non-standard pre-ambles should be identified and added to the pre-amble library.

With pre-ambles readability is very important so they should not use other test steps to send message sequences, and they should be passed as few parameters as possible. This also makes the results log easier to read.

The prose message sequence charts should be analysed, and a catalogue of common ways in which the test cases can terminate (correctly or incorrectly) created. This catalogue should be used to create a set of post-ambles. All final verdicts should be assigned in the post-ambles.

Wherever possible, a post-amble should return the test system and the User Equipment under test to a known idle state.

## E.3.17 Use test steps to encapsulate AT and MMI commands

When the same AT or MMI command is to be used more than once within a test suite, the command should be placed within a test step, to ensure that the same information is provided consistently. The main intention of this guideline is to ensure that MMI commands provided to the user are consistent, and can be changed easily if required.

For example, a test step similar to the one illustrated in table E.7 should be created and attached so that the same information is provided to the user each time the test step is used, and the string to be sent only exists in one place within the test suite.

**Table E.7: Example test step to encapsulate AT / MMI commandsDefault behaviour**

|                       |              |  |   |                |                 |
|-----------------------|--------------|--|---|----------------|-----------------|
| <b>Test Step Name</b> |              | ts_AT_MMI_Example  |   |                |                 |
| <b>Group</b>          |              |  |   |                |                 |
| <b>Objective</b>      |              | Send an MMI command instructing the user to insert the USIM card into the UE.  |   |                |                 |
| <b>Default</b>        |              |  |   |                |                 |
| <b>Comments</b>       |              | Encapsulate an AT / MMI command within a test step to ensure that the same information is used consistently, and the information only exists in one place within the test suite. |   |                |                 |
| <b>Description</b>    |              |  |   |                |                 |
| <b>Nr</b>             | <b>Label</b> | <b>Behaviour Description</b>   | <b>Constraints Ref</b>                                      | <b>Verdict</b> | <b>Comments</b> |
| 1                     |              | Ut ! MMI_CmdReq  | ca_MMICmdReq ( " Please insert the USIM card into the UE ") |                |                 |
| 2                     |              | Ut ? MMI_CmdCnf  | ca_MMICmdCnf  |                |                 |

Defaults are test steps that are executed when ever a receive event occurs that is not expected. Not expected means that it does not match any of the defined ASP constraints at that point in the test case. The default behaviour used in test case is defined in the test case declaration. They can be defined to stop the test case by calling a standard post-amble or receive the event as OTHERWISE and RETURN back to step where the unexpected event occurred.

A strategy for dealing with unexpected behaviour involving consistent use of defaults should be developed, and applied to test cases wherever possible.

If during a test case or test step it is necessary to change the default behaviour, the ACTIVATE statement may be used.

## E.3.18 Use system failure guard timers

A timer should be set at the beginning of each test case to guard against system failure. Behaviour on expiry of this timer should be consistent for all test cases.

## E.3.19 Mapping between prose specification and individual test cases

The ATS should map one-to-one between test cases and tests as described in 3GPP TS 34.123-1 [1]. A method for ensuring that the two specifications track each other needs to be defined.

## E.3.20 Verdict assignment

### E.3.20.1 General

Final verdicts shall only be used to indicate test case errors, or when unexpected UE behaviour occurs such that it not sensible to continue the test. When a test case reaches a leaf node, the test case ends, and the current preliminary verdict is assigned. At least one preliminary verdict shall be assigned for every test case. If a test case terminates and no final or preliminary verdicts have been assigned, the current value of the predefined variable R will be 'none', and a test case error is recorded instead of a final verdict.

Labels shall be used for every line in which a verdict is posted to improve the traceability of the conformance log produced when the test case is executed. These labels should be kept short, since they appear in the dynamic behaviour tables.

All test suites shall make use of a global boolean variable, defined in the common module, called `tcv_TestBody`. `tcv_TestBody` is updated within each test case to indicate if the test body is currently being executed. `tcv_TestBody` is referenced in defaults and test steps to assign a preliminary inconclusive verdict when unexpected events occur outside of the test body, or a preliminary failure verdict when unexpected events occur within the test body.

The initial value in the declaration of the test case variable `tcv_TestBody` shall be `FALSE`. The variable will be bound to this value when the ATS is initialized, and will be re-bound to this value after termination of each test case, ready for execution of the next test case.

### E.3.20.2 Test cases

A line similar to line 3 in table E.8 shall be used in all test cases to set `tcv_TestBody` to `TRUE`. This line shall have the label `TBS` to indicate the Test Body Start point.

A line similar to line 6 in table E.8 shall be used in all test cases to set `tcv_TestBody` to `FALSE`. This line shall have the label `TBE[N]` to indicate the Test Body End point. A number `N` (with one or more digits) may optionally be appended to the label to distinguish between multiple test body end points. If the number of possible test sequences makes management of the `tcv_TestBody` variable too difficult, the variable can be set to `TRUE` at the beginning of the test. In this case, a comment shall be added to the test case noting that `tcv_TestBody` is not updated, so verdicts assigned within preambles and postambles will be treated as if they are part of the test body.

Within the test body, preliminary verdicts shall be used to indicate the result of the test purpose. Each behaviour line within the test body containing a preliminary verdict shall have a label of the form `TBXN`, where `X` is one of `P`, `F`, `I` for pass, fail, and inconclusive respectively, and `N` is a number (with one or more digits) used to distinguish multiple `TBPs`, `TBFs`, or `TBIs` in the same test case.

If an unexpected event occurs corresponding to a test case error, a final inconclusive verdict shall be assigned, and the behaviour line shall have a label `ERRN`, where `N` is a number used to distinguish multiple `ERRs`, and `ERR` indicates that a test case error has occurred. An example of this is provided in the test step clause.

Table E.8 contains an example test case illustrating these concepts.

In case of a failure event of a time consumed test case (longer than 30 minutes), the test case can be stopped by using a final verdict after the execution of the postamble.

Table E.8: Example test case illustrating use of verdicts, labels and tcv\_TestBody test case variable

| Nr                       | Label | Behaviour Description   | Constraints Ref    | Verdict | Comments |
|--------------------------|-------|---|--------------------|---------|----------|
| 1                        |       | +ts_Preambles   |                    |         |          |
| 2                        | TBS   | ( tcv_TestBody := TRUE )  |                    |         | 1        |
| 3                        |       | L ! Stimulus  | cs_Stimulus1       |         |          |
| 4                        |       | +lt_Response  |                    |         |          |
| 5                        | TBE   | (tcv_TestBody := FALSE )  |                    | (P)     | 2        |
| 6                        |       | +ts_Postambles  |                    |         |          |
|                          |       | lt_Response   |                    |         |          |
| 7                        | TBP1  | L ? Response  | cr_ValidResponse1  | (P)     | 3        |
| 8                        | TBP2  | L ? Response  | cr_ValidResponse2  | (P)     | 3        |
| 9                        | TBF1  | L ? Response  | cr_InvalidResponse | (F)     | 4        |
| 10                       | TBI1  | L ? Response  | cr_OtherResponse   | (I)     | 5        |
| <b>Detailed comments</b> |       | <ol style="list-style-type: none"> <li>1. The behaviour line setting tcv_TestBody to TRUE shall have the label TBS.</li> <li>2. The behaviour line setting tcv_TestBody to FALSE shall have the label TBE, and can optionally be used to assign a verdict indicating that the test purpose has passed or failed (i.e. if the final behaviour statement in the test body is a tree attachment).</li> <li>3. The label TBPn is used to indicate that the test purpose has been achieved via the Nth possible valid UE behaviour.</li> <li>4. The label TBFn is used to indicate that the test purpose has not been achieved, due to the Nth possible failure cause.</li> <li>5. The label TBIn is used to indicate that the test result is inconclusive for the Nth possible unexpected / unknown event.</li> </ol> |                    |         |          |

### E.3.20.3 Test steps

To promote re-use, test steps shall only assign preliminary verdicts (I) and (F). (P) verdicts shall be managed at the test case level in general, but may be used sparingly within test steps. ETR 141 [37] clause 12.4 recommends that a preliminary pass verdict should be assigned at the leaf of each passing event sequence of the test step. If a test step includes an alternative for unexpected / invalid behaviour, then either a preliminary inconclusive verdict shall be assigned if tcv\_TestBody is FALSE, or a preliminary failure verdict shall be assigned if tcv\_TestBody is TRUE.

Each behaviour line within the test step containing a preliminary verdict shall have a label of the form TSXN, where X is one of P, F or I for pass, fail, and inconclusive respectively, and N is a number (with one or more digits) used to distinguish multiple TSPs, TSFs, or TSIs in the same test step.

If an unexpected event occurs corresponding to a test case error, a final inconclusive verdict shall be assigned, and the behaviour line shall have a label ERRN, where N is a number used to distinguish multiple ERRs, and ERR indicates that a test case error has occurred.

Table E.9 contains an example test step illustrating these concepts.

**Table E.9: Example test step illustrating use of verdicts, labels and tcv\_TestBody test case variable**

| Nr                       | Label | Behaviour Description  | Constraints Ref    | Verdict | Comments |
|--------------------------|-------|--|--------------------|---------|----------|
| 1                        |       | [ p_Mode = tsc_Mode1 ]   |                    |         |          |
| 2                        |       | L ! Stimulus   | cs_Stimulus1       |         |          |
| 3                        |       | +It_Response   |                    |         |          |
| 4                        |       | [ p_Mode = tsc_Mode2 ]   |                    |         |          |
| 5                        |       | L ! Stimulus   | cs_Stimulus2       |         |          |
| 6                        |       | +It_Response   |                    |         |          |
| 7                        | ERR1  | [ TRUE ]   |                    | I       | 1        |
|                          |       | It_Response  |                    |         |          |
| 8                        |       | L ? Response   | cr_ValidResponse1  |         | 2        |
| 9                        |       | L ? Response   | cr_InvalidResponse |         |          |
| 10                       | TSI1  | [ tcv_TestBody = FALSE ]   |                    | (I)     | 3        |
| 11                       | TSF1  | [ tcv_TestBody = TRUE ]  |                    | (F)     | 4        |
| <b>Detailed comments</b> |       | <ol style="list-style-type: none"> <li>1. An invalid value for the parameter p_Mode has been passed to this test step, so a final inconclusive verdict is assigned, with a label indicating that a test case error has occurred.</li> <li>2. If the expected behaviour occurs, then the test step completes at the leaf node, and the current preliminary verdict is not changed.</li> <li>3. If unexpected / invalid behaviour occurs, and the current test step is being used as a preamble or postamble ( tcv_TestBody = FALSE ) then a preliminary inconclusive verdict is assigned.</li> <li>4. If unexpected / invalid behaviour occurs, and the current test step is being used as part of the test purpose( tcv_TestBody = TRUE ) then a preliminary failure verdict is assigned.</li> </ol> |                    |         |          |

### E.3.20.4 Defaults

Each behaviour line within a default behaviour table containing a preliminary verdict shall have a label of the form DFXN, where X is one of F or I for fail, and inconclusive respectively, and N is a number (with one or more digits) used to distinguish multiple DFFs, or DFIs in the same test step.

tcv\_TestBody shall be referenced from within default behaviour tables to assign the appropriate verdict when unexpected events occur.

Table E.10 contains an example default behaviour table illustrating these concepts.

**Table E.10: Example default behaviour table illustrating use of verdicts, labels and tcv\_TestBody test case variable**

| Nr                       | Label | Behaviour Description  | Constraints Ref    | Verdict | Comments |
|--------------------------|-------|--|--------------------|---------|----------|
| 1                        |       | L ? Response   | cr_IgnoredResponse |         | 1        |
| 2                        |       | RETURN   |                    |         |          |
| 3                        | DFI1  | L ? OTHERWISE [ tcv_TestBody = FALSE ]   |                    | (I)     | 2        |
| 4                        | DFF1  | L ? OTHERWISE [ tcv_TestBody = TRUE ]  |                    | (F)     | 3        |
| <b>Detailed comments</b> |       | <ol style="list-style-type: none"> <li>1. Valid events that are to be ignored can be included in the default behaviour, but should have no preliminary verdict assigned.</li> <li>2. If unexpected data is received in the preambles or postambles, a preliminary inconclusive verdict is assigned, and the test case is terminated.</li> <li>3. If unexpected data is received in the test body, a preliminary failure verdict is assigned, and the test case is terminated.</li> </ol> |                    |         |          |

See also ETR 141 [37] clauses 11.2, 12.4 and 14.3.

### E.3.21 Test suite and test case variables

A default value shall be provided for all test suite and test case variables.



## E.3.22 Use of macros is forbidden

The use of macros is forbidden, to support migration to TTCN3.

## E.3.23 Support for future Radio Access Technologies

To allow existing test cases to be updated in future to support other radio access technologies, test suites shall make use of a PIXIT parameter `px_RAT` of type `RatType` as shown in the following example.

| Test Case Name    |       | tc_RAT_Example1        |                 |         |  |
|-------------------|-------|------------------------|-----------------|---------|--|
| Nr                | Label | Behaviour Description  | Constraints Ref | Verdict | Comments                               |
| 1                 |       | START t_Guard( 300 )   |                 |         |  |
| 2                 |       | [ px_RAT = fdd ]       |                 |         |  |
| 3                 |       | PCO ! FDD_PDU          | c_FDD_PDU1      |         | FDD specific behaviour                 |
| 4                 | TBP1  | PCO ? COMMON_PDU       | c_COMMON_PDU1   | (P)     |  |
| 5                 |       | [ px_RAT = tdd ]       |                 |         |  |
| 6                 |       | PCO ! TDD_PDU          | c_TDD_PDU1      |         | TDD specific behaviour                 |
| 7                 | TBP2  | PCO ? COMMON_PDU       | c_COMMON_PDU1   | (P)     |  |
| 8                 |       | [ px_RAT = other_rat ] |                 | I       | Tests for this RAT not implemented yet |
| 9                 | TCE1  | [ TRUE ]               |                 | I       | Unexpected px_RAT value                |
| Detailed Comments |       |                        |                 |         |  |

In general, alternatives should be used to separate behaviour specific for each RAT, and common behaviour should be re-used as much as possible. A final inconclusive verdict shall be used for any alternatives that have not been implemented yet.

Local trees may be used as shown in the following example to improve re-use of common behaviour.

| Test Case Name    |       | tc_RAT_Example2       |                 |         |                         |
|-------------------|-------|-----------------------|-----------------|---------|-------------------------|
| Nr                | Label | Behaviour Description | Constraints Ref | Verdict | Comments                |
| 1                 |       | START t_Guard( 300 )  |                 |         |                         |
| 2                 |       | +lt_RAT_SpecificPart  |                 |         |                         |
| 3                 | TBP1  | PCO ? COMMON_PDU      | c_COMMON_PDU1   | (P)     | Common behaviour        |
|                   |       | lt_RAT_SpecificPart   |                 |         |                         |
| 4                 |       | [ px_RAT = fdd ]      |                 |         |                         |
| 5                 |       | PCO ! FDD_PDU         | c_FDD_PDU1      |         | FDD specific behaviour  |
| 6                 |       | [ px_RAT = tdd ]      |                 |         |                         |
| 7                 |       | PCO ! TDD_PDU         | c_TDD_PDU1      |         | TDD specific behaviour  |
| 8                 | TCE1  | [ TRUE ]              |                 | (I)     | Unexpected px_RAT value |
| Detailed Comments |       |                       |                 |         |                         |

## E.3.24 Managing multiple representations of the same information

When the same information is represented using multiple types within the same test suite, it is necessary to manage conversions between the types, and ensure that the information remains consistent across all of the representations.

For example, IMSI is represented as 'SEQUENCE (SIZE (6..15)) OF Digit' in the RRC ASN.1 definitions, as a HEXSTRING for input as a PIXIT parameter, and as an information element defined in TTCN tabular format for MM.

### E.3.24.1 Predefined types

Conversion operations are not required to convert the following TTCN predefined types to their counterparts in ASN.1.

- INTEGER predefined type.
- BOOLEAN predefined type.

- c) BITSTRING predefined type.
- d) HEXSTRING predefined type.
- e) OCTETSTRING predefined type.
- f) OBJECTIDENTIFIER predefined type.
- g) R\_TYPE predefined type.
- h) CharacterString predefined types.

Therefore it is valid to pass a value of type BIT STRING (ASN.1) as a formal parameter of type BITSTRING (TTCN predefined).

### E.3.24.2 Simple types

TR 101 666 [27] clause 11.2.1 states:

- "TTCN is a weakly typed language, in that values of any two types which have the same base type are considered to be type compatible (e.g. for the purposes of performing assignments or parameter passing)".

When simple types have restrictions, it is the TTCN author's responsibility to ensure that the restrictions are compatible. The TTCN compiler provides some assistance with this, but the extent of the checking is compiler specific.

### E.3.24.3 Structured types

For conversion between more complex representations, test suite operations will generally be required. If the mapping is simple enough, it may be possible to perform the conversion using a test step, which takes the common representation as a parameter, and stores the required representation in a test case variable. This may avoid the need for an extra test suite operation.

### E.3.24.4 Conversion responsibility

Two design approaches are possible for deciding where the responsibility of conversion lies: Calling party conversion and called party conversion.

The appropriate option should be selected on a case-by-case basis with the following restrictions:

- If one representation of the information is a PIXIT parameter, and this information must be passed to a test step, the called party conversion option shall be used, and the formal parameter to the test step shall always have the same type as the PIXIT parameter.
- If a test step provides multiple alternatives for different radio access technologies, which require different representations of the same information, the called party conversion convention shall be used. In this case a technology independent representation of the information shall be passed as a parameter, and the test step shall perform the conversion to the appropriate type depending on which RAT is being used.

### E.3.24.5 Option 1: Calling party conversions

For this approach, each test step provides an interface based on its internal representation. It is the responsibility of the test case / step attaching the test step to perform the conversion before the attachment.

#### E.3.24.5.1 Advantages

- The number of calls to conversion operations is minimized.
- The complexity of the attached test steps is reduced because fewer conversions are required than for the called party conversion approach.

### E.3.24.5.2 Disadvantages

- Different types are used to transfer the same information across the test step interfaces.
- The complexity of the attaching test steps / cases may be increased because conversions are required before attaching a test step.
- The attaching test steps / cases are responsible for ensuring that multiple representations contain consistent information.

### E.3.24.6 Option 2: Called party conversions

In this case, the same representation is used wherever the information must be used as a formal parameter value to a test step, and it is the responsibility of the test step to perform any conversions required.

#### E.3.24.6.1 Advantages

- The complexity in the attaching test case / step is reduced, which will often improve readability.
- The test step interfaces are cleaner, because the same representation is always passed as a formal parameter.
- Internal representations may be hidden within test steps so that calling parties do not need to have any knowledge of them.

#### E.3.24.6.2 Disadvantages

- Conversion operations may be called more times than necessary, for example if the same test step is attached twice within one test case.

## E.3.25 Assignment using constraint

According to TR 101 666 [27], the Right Hand Side (RHS) of an assignment shall not contain any unbound variables. The matching symbols, AnyValue or AnyOrOmit, in both tabular and ASN.1 constraints shall not be assigned to a test case variable, independent of the type of the test case variable.

## E.3.26 Guidelines for use of timers when tolerances are applicable

Timed events within the test suite should implement the timer tolerances specified in 3GPP TS 34.108 [**3Error! Reference source not found.**], clause 4.2.3. It is the TTCN author's responsibility to ensure that appropriate tolerance checks and tolerance values are being used.

NOTE: Tolerances are not applicable to guard timers as described in clause E.3.18 of the present document.

### E.3.26.1 Specific situations

The present clause provides recommendations for how to implement timers with tolerances for the following situations:

- a) The timed event must occur before a given time.
- b) The timed event must occur after a given time.
- c) The timed event must occur between two given times.

NOTE: A specific case of this situation is when the desired event occurs at a specific time, plus or minus a tolerance.

## E.3.26.2 Example situations

The examples below assume:

- a) The test case variable `tcv_Duration` contains the timer duration (in terms of the units used in the timer declaration).
- b) The test case variable `tcv_Tolerance` has been initialized using one of the following assignments (it is the TTCN author's responsibility to select the calculation resulting in the greatest value of `tcv_Tolerance`. Reference 3GPP TS 34.108 [3], clause 4.2.3):
  - 1) ( `tcv_Tolerance := tcv_Duration / 10` )
  - 2) ( `tcv_Tolerance := 2 * tcv_TTI + tsc_T_Delta` )  
Where `tcv_TTI` contains the applicable TTI (in ms), and `tsc_T_Delta` is 55 ms.

NOTE: The timer value parameters used when starting the timers in the examples are recommendations only. Other timer value parameter expressions may be used if appropriate.

### E.3.26.2.1 Example of situation 1

| Test Step Name           |       | ts_TimerSituation1Example  |                 |         |          |
|--------------------------|-------|--|-----------------|---------|----------|
| Purpose                  |       | To demonstrate implementation of a timed event that must occur before a given time.  |                 |         |          |
| Nr                       | Label | Behaviour Description  | Constraints Ref | Verdict | Comments |
| 1                        |       | START t_UpperBound ( tcv_Duration + tcv_Tolerance )  |                 |         | 1.       |
| 2                        |       | +It_TimedEvent   |                 |         | 2.       |
| 3                        | TSP1  | CANCEL t_UpperBound  |                 | (P)     | 3.       |
| 4                        | TSP1  | ? TIMEOUT t_UpperBound   |                 | (F)     | 4.       |
|                          |       | It_TimedEvent  |                 |         |          |
| 5                        |       | [ TRUE ]   |                 |         | 2.       |
| <b>Detailed Comments</b> |       | <ol style="list-style-type: none"> <li>1. Start the timer, allowing <code>tcv_Tolerance</code> extra units for the timed event to arrive.</li> <li>2. The timed event is observed.</li> <li>3. The timed event occurred before the timeout, so cancel the timer, and assign a preliminary pass verdict.</li> <li>4. The timer expired before the timed event occurred, so assign a preliminary failure verdict.</li> </ol> |                 |         |          |

### E.3.26.2.2 Example of situation 2

| Test Step Name           |       | ts_TimerSituation2Example   |                 |         |          |
|--------------------------|-------|---|-----------------|---------|----------|
| Purpose                  |       | To demonstrate implementation of a timed event that must occur after a given time.  |                 |         |          |
| Nr                       | Label | Behaviour Description   | Constraints Ref | Verdict | Comments |
| 1                        |       | START t_LowerBound ( tcv_Duration - tcv_Tolerance )   |                 |         | 1.       |
| 2                        |       | ? TIMEOUT t_LowerBound  |                 |         | 2.       |
| 3                        |       | +It_TimedEvent  |                 |         | 3.       |
| 4                        | TSP1  | [ TRUE ]  |                 | (P)     | 3.       |
| 5                        |       | +It_TimedEvent  |                 |         | 4.       |
| 6                        | TSP1  | CANCEL t_LowerBound   |                 | (F)     | 4.       |
|                          |       | It_TimedEvent   |                 |         |          |
| 7                        |       | [ TRUE ]  |                 |         |          |
| <b>Detailed Comments</b> |       | <ol style="list-style-type: none"> <li>1. Start the timer, allowing <code>tcv_Tolerance</code> extra units for the timed event to arrive.</li> <li>2. The timeout is observed before the timed event.</li> <li>3. The timed event is observed, so assign a preliminary pass verdict.</li> <li>4. The timed event occurred before the timeout, so cancel the timer, and assign a preliminary failure verdict.</li> </ol> |                 |         |          |

## E.3.26.2.3 Example of situation 3

| Test Step Name           |       | ts_TimerSituation3Example   |                 |         |          |
|--------------------------|-------|---|-----------------|---------|----------|
| Purpose                  |       | To demonstrate implementation of a timed event that must occur between two given times.   |                 |         |          |
| Nr                       | Label | Behaviour Description   | Constraints Ref | Verdict | Comments |
| 1                        |       | START t_UpperBound ( tcv_Duration + tcv_Tolerance ),<br>START t_LowerBound ( tcv_Duration - tcv_Tolerance )   |                 |         | 1.       |
| 2                        |       | ? TIMEOUT t_LowerBound  |                 |         | 2.       |
| 3                        |       | +!t_TimedEvent  |                 |         | 3        |
| 4                        | TSP1  | CANCEL t_UpperBound   |                 | (P)     | 3.       |
| 5                        | TSF1  | ? TIMEOUT t_UpperBound  |                 | (F)     | 4.       |
| 6                        |       | +!t_TimedEvent  |                 |         | 5.       |
| 7                        | TSF2  | CANCEL t_LowerBound , CANCEL t_UpperBound   |                 | (F)     |          |
|                          |       | !t_TimedEvent   |                 |         |          |
| 8                        |       | [ TRUE ]  |                 |         |          |
| <b>Detailed Comments</b> |       | <ol style="list-style-type: none"> <li>1. Start the upper and lower bound timers, allowing tcv_Tolerance extra units each side of the expected time for the timed event to arrive.</li> <li>2. The lower bound timeout is observed before the timed event.</li> <li>3. The timed event is observed, so cancel the upper bound timer, and a preliminary pass verdict is assigned.</li> <li>4. The upper bound timer expired before the timed event occurred, so a preliminary failure verdict is assigned.</li> <li>5. The timed event occurred before the lower bound timer expired, so a preliminary failure verdict is assigned.</li> </ol> |                 |         |          |

## Annex F (informative): Void

Void.

---

## Annex G (informative): Recommendation of an unique ICS/IXIT electronic exchange format

With standardization of ICS/IXIT file format, same Test Suite Parameter (TSP) files can be used across different System Simulators. The ICS/PIXIT will be simple ASCII text files. The assumption is that the test suite parameters are of simple type definitions only and do not include structured types (clause E.3.14).

---

### G.1 Syntax

The proposed format of the ICS/IXIT file is as follows:

[<Parameter Name> <Parameter Type> <Value>] [<#Comment>]

- At the most one TSP value can be defined in a line.
- The comment starts with # and ends with new line.
- [...] represent OPTIONAL field(s).
- <..> represent MANDATORY field(s).
- Fields will be separated by one or more space characters.

The syntax for different Parameter Types will be as follows:

- **INTEGER**

<Parameter Name>      INTEGER      <Integer Value>

- **BOOLEAN**

<Parameter Name>      BOOLEAN      <Value>

NOTE 1: Here Value will be either 'TRUE' or 'FALSE'.

- **BITSTRING**

<Parameter Name>      BITSTRING      <Value>

- **HEXSTRING**

<Parameter Name>      HEXSTRING      <Value>

- **OCTETSTRING**

<Parameter Name>      OCTETSTRING      <Value>

- **ENUMERATED**

<Parameter Name>      ENUMERATED      <Integer Value>

- **IA5String**

<Parameter Name>      IA5String      "<Value>"

NOTE 2: Here Value will be string and is mandatory to put the actual value in double quotes.

## G.2 Examples

This clause gives an example of ICS/IXIT file format.

```
# TSP file version 1.0.0
px_CS          BOOLEAN    TRUE          # TRUE if Circuit Switched is applicable
px_PTMSI_Def   OCTETSTRING 12345678     #Default PTMSI
px_RAT         ENUMERATED  0           #px_RAT is of Type RatType and is of Type of ENUMERATED
                                         {fdd(0), tdd(1)}.
px_Region      IA5String    "Europe"   #px_Region is of Type Region and is of Type IA5String
("Europe", "Japan").
px_PriScrmCodeA  INTEGER    100       #px_PriScrmCodeA is of Type PrimaryScramblingCode
and is of Type  INTEGER (0..511).
px_SRNC_Id     BITSTRING   000000000001 #px_SRNC_Id is of Type SRNC_Identity and is of Type BIT
STRING  (SIZE(12)).
px_IMSI_Def    HEXSTRING   001010123456063 #Default IMSI
```



## Annex H (informative): A-GPS ASN.1 module

```

Lcs-Definitions DEFINITIONS ::=
BEGIN

--*****
-- From ITU-T Rec. X.880 (July/1994)
--*****

Code ::= CHOICE {
    local    INTEGER,
    global   OBJECT IDENTIFIER
}

--*****
-- From 3GPP TS 29.002
--*****

NotificationToMSUser ::= ENUMERATED {
    notifyLocationAllowed (0),
    notifyAndVerify-LocationAllowedIfNoResponse (1),
    notifyAndVerify-LocationNotAllowedIfNoResponse (2),
    ...,
    locationNotAllowed (3) }
    -- exception handling:
    -- At reception of any other value than the ones listed the receiver shall ignore
    -- NotificationToMSUser.

LocationType ::= SEQUENCE {
    locationEstimateType          [0] IMPLICIT LocationEstimateType,
    ...,
    deferredLocationEventType     [1] IMPLICIT DeferredLocationEventType OPTIONAL }

LocationEstimateType ::= ENUMERATED {
    currentLocation (0),
    currentOrLastKnownLocation (1),
    initialLocation (2),
    ...,
    activateDeferredLocation (3),
    cancelDeferredLocation (4) }
    -- exception handling:
    -- a ProvideSubscriberLocation-Arg containing an unrecognized LocationEstimateType
    -- shall be rejected by the receiver with a return error cause of unexpected data value

DeferredLocationEventType ::= BIT STRING {
    msAvailable (0) } (SIZE (1..16))
    -- exception handling
    -- a ProvideSubscriberLocation-Arg containing other values than listed above in
    -- DeferredLocationEventType shall be rejected by the receiver with a return error cause of
    -- unexpected data value.

LCSCClientExternalID ::= SEQUENCE {
    externalAddress      [0] IMPLICIT ISDN-AddressString OPTIONAL,
    extensionContainer   [1] IMPLICIT ExtensionContainer OPTIONAL,
    ...
}

LCSCClientName ::= SEQUENCE {
    dataCodingScheme     [0] IMPLICIT USSD-DataCodingScheme,
    nameString           [2] IMPLICIT NameString,
    ...
}

    -- The USSD-DataCodingScheme shall indicate use of the default alphabet through the following
encoding
-- bit 7 6 5 4 3 2 1 0
--      0 0 0 0 1 1 1 1

```

```

NameString ::= USSD-String (SIZE (1..maxNameStringLength))

maxNameStringLength  INTEGER ::= 63

USSD-DataCodingScheme ::= OCTET STRING (SIZE (1))
  -- The structure of the USSD-DataCodingScheme is defined by the Cell
  -- Broadcast Data Coding Scheme as described in TS 3GPP TS 23.038 [2]

LCSRequestorID ::= SEQUENCE {
  dataCodingScheme      [0] IMPLICIT USSD-DataCodingScheme,
  requestorIDString    [1] IMPLICIT RequestorIDString,
  ...
}

RequestorIDString ::= USSD-String (SIZE (1..maxRequestorIDStringLength))

maxRequestorIDStringLength  INTEGER ::= 63

LCSCodeword ::= SEQUENCE {
  dataCodingScheme      [0] IMPLICIT USSD-DataCodingScheme,
  lcsCodewordString    [1] IMPLICIT LCSCodewordString,
  ...
}

LCSCodewordString ::= USSD-String (SIZE (1..maxLCSCodewordStringLength))

maxLCSCodewordStringLength  INTEGER ::= 20

LCSServiceTypeID ::= INTEGER (0..127)
  -- the integer values 0-63 are reserved for Standard LCS service types
  -- the integer values 64-127 are reserved for Non Standard LCS service types

USSD-String ::= OCTET STRING (SIZE (1..maxUSSD-StringLength))
  -- The structure of the contents of the USSD-String is dependent
  -- on the USSD-DataCodingScheme as described in TS 3GPP TS 23.038 [25].

maxUSSD-StringLength  INTEGER ::= 160

ISDN-AddressString ::= AddressString (SIZE (1..maxISDN-AddressLength))
  -- This type is used to represent ISDN numbers.

maxISDN-AddressLength  INTEGER ::= 9

AddressString ::= OCTET STRING (SIZE (1..maxAddressLength))
  -- This type is used to represent a number for addressing purposes. It is
  -- composed of
  -- a) one octet for nature of address, and numbering plan indicator.
  -- b) digits of an address encoded as TBCD-String.

  -- a) The first octet includes a one bit extension indicator, a
  --     3 bits nature of address indicator and a 4 bits numbering
  --     plan indicator, encoded as follows:

  -- bit 8: 1 (no extension)

  -- bits      765: nature of address indicator
  --             000 unknown
  --             001 international number
  --             010 national significant number
  --             011 network specific number
  --             100 subscriber number
  --             101 reserved
  --             110 abbreviated number
  --             111 reserved for extension

  -- bits      4321: numbering plan indicator
  --             0000 unknown
  --             0001 ISDN/Telephony Numbering Plan (Rec ITU-T E.164)
  --             0010 spare
  --             0011 data numbering plan (ITU-T Rec X.121)
  --             0100 telex numbering plan (ITU-T Rec F.69)
  --             0101 spare

```

```
--          0110          land mobile numbering plan (ITU-T Rec E.212)
--          0111          spare
--          1000          national numbering plan
--          1001          private numbering plan
--          1111          reserved for extension
```

```
-- all other values are reserved.
```

```
-- b) The following octets representing digits of an address
--     encoded as a TBCD-STRING.
```

```
maxAddressLength INTEGER ::= 20
```

```
LCS-QoS ::= SEQUENCE {
  horizontal-accuracy          [0] IMPLICIT Horizontal-Accuracy  OPTIONAL,
  verticalCoordinateRequest    [1] IMPLICIT NULL                OPTIONAL,
  vertical-accuracy           [2] IMPLICIT Vertical-Accuracy    OPTIONAL,
  responseTime                 [3] IMPLICIT ResponseTime        OPTIONAL,
  extensionContainer           [4] IMPLICIT ExtensionContainer   OPTIONAL,
  ...
}
```

```
Horizontal-Accuracy ::= OCTET STRING (SIZE (1))
```

```
-- bit 8 = 0
-- bits 7-1 = 7 bit Uncertainty Code defined in 3GPP TS 23.032. The horizontal location
-- error should be less than the error indicated by the uncertainty code with 67%
-- confidence.
```

```
Vertical-Accuracy ::= OCTET STRING (SIZE (1))
```

```
-- bit 8 = 0
-- bits 7-1 = 7 bit Vertical Uncertainty Code defined in 3GPP TS 23.032.
-- The vertical location error should be less than the error indicated
-- by the uncertainty code with 67% confidence.
```

```
ResponseTime ::= SEQUENCE {
```

```
  responseTimeCategory      ResponseTimeCategory,
  ...
```

```
}
```

```
-- note: an expandable SEQUENCE simplifies later addition of a numeric response time.
```

```
ResponseTimeCategory ::= ENUMERATED {
```

```
  lowdelay (0),
  delaytolerant (1),
  ...
```

```
}
```

```
-- exception handling:
```

```
-- an unrecognized value shall be treated the same as value 1 (delaytolerant)
```

```
SupportedGADShapes ::= BIT STRING {
```

```
  ellipsoidPoint (0),
  ellipsoidPointWithUncertaintyCircle (1),
  ellipsoidPointWithUncertaintyEllipse (2),
  polygon (3),
  ellipsoidPointWithAltitude (4),
  ellipsoidPointWithAltitudeAndUncertaintyElipsoid (5),
  ellipsoidArc (6) } (SIZE (7..16))
```

```
-- A node shall mark in the BIT STRING all Shapes defined in 3GPP TS 23.032 it supports.
```

```
-- exception handling: bits 7 to 15 shall be ignored if received.
```

```
Ext-GeographicalInformation ::= OCTET STRING (SIZE (1..maxExt-GeographicalInformation))
```

```
-- Refers to geographical Information defined in 3GPP TS 23.032.
```

```
-- This is composed of 1 or more octets with an internal structure according to
```

```
-- 3GPP TS 23.032
```

```
-- Octet 1: Type of shape, only the following shapes in 3GPP TS 23.032 are allowed:
```

```
-- (a) Ellipsoid point with uncertainty circle
-- (b) Ellipsoid point with uncertainty ellipse
-- (c) Ellipsoid point with altitude and uncertainty ellipsoid
-- (d) Ellipsoid Arc
-- (e) Ellipsoid Point
```

```
-- Any other value in octet 1 shall be treated as invalid
```

```
-- Octets 2 to 8 for case (a) Ellipsoid point with uncertainty circle
```

```
-- Degrees of Latitude          3 octets
```

```
-- Degrees of Longitude         3 octets
```

```
-- Uncertainty code             1 octet
```

```
-- Octets 2 to 11 for case (b) Ellipsoid point with uncertainty ellipse:
```

```

-- Degrees of Latitude          3 octets
-- Degrees of Longitude        3 octets
-- Uncertainty semi-major axis  1 octet
-- Uncertainty semi-minor axis  1 octet
-- Angle of major axis         1 octet
-- Confidence                   1 octet
-- Octets 2 to 14 for case (c) Ellipsoid point with altitude and uncertainty ellipsoid
-- Degrees of Latitude          3 octets
-- Degrees of Longitude        3 octets
-- Altitude                     2 octets
-- Uncertainty semi-major axis  1 octet
-- Uncertainty semi-minor axis  1 octet
-- Angle of major axis         1 octet
-- Uncertainty altitude        1 octet
-- Confidence                   1 octet
-- Octets 2 to 13 for case (d) Ellipsoid Arc
-- Degrees of Latitude          3 octets
-- Degrees of Longitude        3 octets
-- Inner radius                 2 octets
-- Uncertainty radius           1 octet
-- Offset angle                 1 octet
-- Included angle               1 octet
-- Confidence                   1 octet
-- Octets 2 to 7 for case (e) Ellipsoid Point
-- Degrees of Latitude          3 octets
-- Degrees of Longitude        3 octets
--
-- An Ext-GeographicalInformation parameter comprising more than one octet and
-- containing any other shape or an incorrect number of octets or coding according
-- to 3GPP TS 23.032 shall be treated as invalid data by a receiver.
--
-- An Ext-GeographicalInformation parameter comprising one octet shall be discarded
-- by the receiver if an Add-GeographicalInformation parameter is received
-- in the same message.
--
-- An Ext-GeographicalInformation parameter comprising one octet shall be treated as
-- invalid data by the receiver if an Add-GeographicalInformation parameter is not
-- received in the same message.

```

```

maxExt-GeographicalInformation INTEGER ::= 20
-- the maximum length allows for further shapes in 3GPP TS 23.032 to be included in later
-- versions of 3GPP TS 29.002

```

```

Add-GeographicalInformation ::= OCTET STRING (SIZE (1..maxAdd-GeographicalInformation))
-- Refers to geographical information defined in 3GPP TS 23.032.
-- This is composed of 1 or more octets with an internal structure according to
-- 3GPP TS 23.032
-- Octet 1: Type of shape, all the shapes defined in 3GPP TS 23.032 are allowed:
-- Octets 2 to n (where n is the total number of octets necessary to encode the shape
-- according to 3GPP TS 23.032) are used to encode the shape itself in accordance with the
-- encoding defined in 3GPP TS 23.032
--
-- An Add-GeographicalInformation parameter, whether valid or invalid, received
-- together with a valid Ext-GeographicalInformation parameter in the same message
-- shall be discarded.
--
-- An Add-GeographicalInformation parameter containing any shape not defined in
-- 3GPP TS 23.032 or an incorrect number of octets or coding according to
-- 3GPP TS 23.032 shall be treated as invalid data by a receiver if not received
-- together with a valid Ext-GeographicalInformation parameter in the same message.

```

```

maxAdd-GeographicalInformation INTEGER ::= 91
-- the maximum length allows support for all the shapes currently defined in 3GPP TS 23.032

```

```

--*****
-- Derived from ITU-T Rec. Q.773 (June/1997)
--*****

```

```

Component ::= CHOICE {
    invoke          [1] IMPLICIT Invoke,
    returnResultLast [2] IMPLICIT ReturnResult,
    returnError     [3] IMPLICIT ReturnError,
    reject          [4] IMPLICIT Reject
}

```

-- The used part of Q.773 is almost the same as the component portion of TC messages. The only  
 -- difference is that returnResultNotLast is not used. (see 24.080, clause 3.6.1)

```

Invoke ::= SEQUENCE {
    invokeID      InvokeIdType,
    linkedID      [0] IMPLICIT InvokeIdType OPTIONAL,
    operationCode Code,
                -- local:116 for lcsNotification
                -- local:115 for lcs-MOLR

    parameter     InvokeArgument OPTIONAL
}

ReturnResult ::= SEQUENCE {
    invokeID      InvokeIdType,
    result        SEQUENCE {
        operationCode Code,
                -- local:116 for lcsNotification
                -- local:115 for lcs-MOLR

        parameter     ReturnRes
                    } OPTIONAL
}

ReturnError ::= SEQUENCE {
    invokeID      InvokeIdType,
    errorCode     Code,
                -- local:34 for SystemFailure
                -- local:36 for UnexpectedDataValue
                -- local:35 for DataMissing
                -- local:21 for FacilityNotSupported
                -- local:19 for SS-SubscriptionViolation
                -- local:54 for PositionMethodFailure

    parameter     ReturnErrPara OPTIONAL
}

Reject ::= SEQUENCE {
    invokeID CHOICE {
        derivable      InvokeIdType,
        not-derivable  NULL },
    problem CHOICE {
        generalProblem      [0] IMPLICIT GeneralProblem,
        invokeProblem       [1] IMPLICIT InvokeProblem,
        returnResultProblem [2] IMPLICIT ReturnResultProblem,
        returnErrorProblem  [3] IMPLICIT ReturnErrorProblem }
}

InvokeIdType ::= INTEGER (-128..127)

GeneralProblem ::= INTEGER {
    unrecognizedComponent (0),
    mistypedComponent (1),
    badlyStructuredComponent (2) }

InvokeProblem ::= INTEGER {duplicateInvokeID (0),
    unrecognizedOperation (1),
    mistypedParameter (2),
    resourceLimitation (3),
    initiatingRelease (4),
    unrecognizedLinkedID (5),
    linkedResponseUnexpected (6),
    unexpectedLinkedOperation (7) }

ReturnResultProblem ::= INTEGER {unrecognizedInvokeID (0),
    returnResultUnexpected (1),
    mistypedParameter (2) }

ReturnErrorProblem ::= INTEGER {unrecognizedInvokeID (0),
    returnErrorUnexpected (1),
    unrecognizedError (2),
    unexpectedError (3),
    mistypedParameter (4) }

```

```

--*****
--Derived from SS-DataTypes in 3GPP TS 24.080 ver.540
--*****

```

Components ::= SET OF Component

```

InvokeArgument ::= CHOICE {
    lcsNotification [0] EXPLICIT LocationNotificationArg,
    lcs-MOLR        [1] EXPLICIT LCS-MOLRArg
}

```

```

ReturnRes ::= CHOICE {
    lcsNotificationRes [0] EXPLICIT LocationNotificationRes,
    lcsMOLRRes        [1] EXPLICIT LCS-MOLRRes
}

```

```

ReturnErrPara ::= CHOICE {
    lcsNotificationErrPara [0] EXPLICIT LcsNotificationErrPara,
    lcs-MOLR-ResErrPara    [1] EXPLICIT Lcs-MOLR-ErrPara
}

```

```

LocationNotificationArg ::= SEQUENCE {
    notificationType [0] IMPLICIT NotificationToMSUser,
    locationType     [1] IMPLICIT LocationType,
    lcsClientExternalID [2] IMPLICIT LCSClientExternalID OPTIONAL,
    lcsClientName     [3] IMPLICIT LCSClientName      OPTIONAL,
    ...,
    lcsRequestorID    [4] IMPLICIT LCSRequestorID     OPTIONAL,
    lcsCodeword       [5] IMPLICIT LCSCodeword        OPTIONAL,
    lcsServiceTypeID  [6] IMPLICIT LCSServiceTypeID   OPTIONAL
}
-- exception handling:
-- At reception of an unrecognized notificationType value the receiver shall reject the
-- operation with a return error cause of unexpected data value.
-- At reception of an unrecognized locationType value the receiver shall reject the
-- operation with a return error cause of unexpected data value.

```

```

LocationNotificationRes ::= SEQUENCE {
    verificationResponse [0] IMPLICIT VerificationResponse OPTIONAL,
    ...
}

```

```

VerificationResponse ::= ENUMERATED {
    permissionDenied (0),
    permissionGranted (1),
    ...
}
-- exception handling:
-- an unrecognized value shall be treated the same as value 0 (permissionDenied)

```

```

LcsNotificationErrPara ::= CHOICE {
    systemFailure [0] EXPLICIT SystemFailureParam,
    unexpectedDataValue [1] EXPLICIT UnexpectedDataParam
}
-- This is derived from information object "lcs-LocationNotification"

```

```

LCS-MOLRArg ::= SEQUENCE {
    molr-Type [0] IMPLICIT MOLR-Type,
    locationMethod [1] IMPLICIT LocationMethod OPTIONAL,
    lcs-QoS [2] IMPLICIT LCS-QoS OPTIONAL,
    lcsClientExternalID [3] IMPLICIT LCSClientExternalID OPTIONAL,
    mlc-Number [4] IMPLICIT ISDN-AddressString OPTIONAL,
    gpsAssistanceData [5] IMPLICIT GPSAssistanceData OPTIONAL,
    ...,
    supportedGADShapes [6] IMPLICIT SupportedGADShapes OPTIONAL
}

```

```
-- The parameter locationMethod shall be included if and only if the
-- molr-Type is set to value deCipherringKeys or assistanceData.
-- The parameter gpsAssistanceData shall be included if and only if the
-- molr-Type is set to value assistanceData and
-- locationMethod is set to value assistedGPS.
```

```
MOLR-Type ::= ENUMERATED {
  locationEstimate (0), assistanceData (1), deCipherringKeys (2),
  ...
}
-- exception handling:
-- an unrecognized value shall be rejected by the receiver with a return error cause of
-- unexpected data value.
```

```
LocationMethod ::= ENUMERATED {
  msBasedEOTD (0), msAssistedEOTD (1), assistedGPS (2),
  ...,
  msBasedOTDOA (3)
}
-- exception handling:
-- When this parameter is received with value msBasedEOTD or msAssistedEOTD and the MS
-- is camped on an UMTS Service Area then the receiver shall reject it
-- with a return error cause of unexpected data value.
-- When this parameter is received with value msBasedOTDOA and the MS
-- is camped on a GSM Cell then the receiver shall reject it with
-- a return error cause of unexpected data value.
-- an unrecognized value shall be rejected by the receiver with
-- a return error cause of unexpected data value.
```

```
GPSAssistanceData ::= OCTET STRING (SIZE (1..38))

-- Octets 1 to 38 are coded in the same way as the octets 3 to 7+2n
-- of Requested GPS Data IE in 3GPP TS 49.031.
```

```
LCS-MOLRRes ::= SEQUENCE {
  locationEstimate [0] IMPLICIT Ext-GeographicalInformation OPTIONAL,
  decipherringKeys [1] IMPLICIT DecipherringKeys OPTIONAL,
  ...,
  add-LocationEstimate [2] IMPLICIT Add-GeographicalInformation OPTIONAL
}

-- Parameters locationEstimate or add-LocationEstimate (one but not both)
-- shall be included if and only if the
-- molr-Type in LocationRequestArg was set to value locationEstimate.
-- Parameter add-LocationEstimate shall not be included
-- if the supportedGADShapes parameter was not received in the LCS-MOLRArg.
-- The locationEstimate and the add-locationEstimate parameters shall not be
-- sent if the supportedGADShapes parameter has been received in LCS-MOLRArg
-- and the shape encoded in locationEstimate or add-LocationEstimate
-- is not marked as supported in supportedGADShapes.
-- In such a case LCS-MOLRArg shall be rejected with error
-- FacilityNotSupported with additional indication
-- shapeOfLocationEstimateNotSupported.
-- Parameter decipherringKeys shall be included if and only if the molr-Type
-- in LocationRequestArg was set to value deCipherringKeys.
```

```
DecipherringKeys ::= OCTET STRING (SIZE (15))

-- Octets in DecipherringKeys are coded in the same way as the octets 3 to 17
-- of Decipherring Key IE in 3GPP TS 49.031. I.e. these octets contain
-- Current Decipherring Key, Next Decipherring Key and Cipherring Key Flag.
```

```
Lcs-MOLR-ErrPara ::= CHOICE {
  systemFailure [0] EXPLICIT SystemFailureParam,
  unexpectedDataValue [1] EXPLICIT UnexpectedDataParam,
  dataMissing [2] EXPLICIT DataMissingParam,
  facilityNotSupported [3] EXPLICIT FacilityNotSupParam,
  ss-SubscriptionViolation [4] EXPLICIT SS-SubscriptionViolationParam,
  positionMethodFailure [5] EXPLICIT PositionMethodFailure-Param
}
-- This is derived from information object "lcs-MOLR"
```

```

--*****
-- Derived from MAP-Errors 3GPP 29.002
--*****

SystemFailureParam ::= CHOICE {
    networkResource          NetworkResource,
    -- networkResource must not be used in version 3
    extensibleSystemFailureParam  ExtensibleSystemFailureParam
    -- extensibleSystemFailureParam must not be used in version <3
}

NetworkResource ::= ENUMERATED {
    plmn (0),
    hlr (1),
    vlr (2),
    pvlr (3),
    controllingMSC (4),
    vmsc (5),
    eir (6),
    rss (7)}

ExtensibleSystemFailureParam ::= SEQUENCE {
    networkResource          NetworkResource  OPTIONAL,
    extensionContainer      ExtensionContainer  OPTIONAL
}

UnexpectedDataParam ::= SEQUENCE {
    extensionContainer      ExtensionContainer  OPTIONAL
}

DataMissingParam ::= SEQUENCE {
    extensionContainer      ExtensionContainer  OPTIONAL
}

FacilityNotSupParam ::= SEQUENCE {
    extensionContainer      ExtensionContainer  OPTIONAL,
    ...,
    shapeOfLocationEstimateNotSupported [0] IMPLICIT NULL  OPTIONAL,
    neededLcsCapabilityNotSupportedInServingNode [1] IMPLICIT NULL  OPTIONAL
}

SS-SubscriptionViolationParam ::= SEQUENCE {
    extensionContainer      ExtensionContainer  OPTIONAL
}

PositionMethodFailure-Param ::= SEQUENCE {
    positionMethodFailure-Diagnostic [0] IMPLICIT PositionMethodFailure-Diagnostic  OPTIONAL,
    extensionContainer      [1] IMPLICIT ExtensionContainer  OPTIONAL,
    ...
}

PositionMethodFailure-Diagnostic ::= ENUMERATED {
    congestion (0),
    insufficientResources (1),
    insufficientMeasurementData (2),
    inconsistentMeasurementData (3),
    locationProcedureNotCompleted (4),
    locationProcedureNotSupportedByTargetMS (5),
    qosNotAttainable (6),
    positionMethodNotAvailableInNetwork (7),
    positionMethodNotAvailableInLocationArea (8),
    ...
}
-- exception handling:
-- any unrecognized value shall be ignored

```



```
ExtensionContainer ::= SEQUENCE {  
    privateExtensionList [0] IMPLICIT PrivateExtensionList OPTIONAL,  
    pcs-Extensions [1] IMPLICIT PCS-Extensions OPTIONAL,  
    ...  
}
```

```
PrivateExtensionList ::= SEQUENCE SIZE (1..maxNumOfPrivateExtensions) OF  
    PrivateExtension
```

```
PrivateExtension ::= SEQUENCE {  
    extId OBJECT IDENTIFIER,  
    extType OCTET STRING OPTIONAL}
```

```
maxNumOfPrivateExtensions INTEGER ::= 10
```

```
PCS-Extensions ::= SEQUENCE {...}
```

```
END
```

---

## Annex I (Informative): Guidance on test execution

This clause provides the guidance on test execution of the different ATSSs.

---

### I.1 Void

### I.2 FDD test execution on different frequency bands

#### I.2.1 FDD Band VI, XIII, XIV

A test case requires more than two radio frequencies shall avoid to execute on FDD Band VI, XIII and XIV. A list is given below.

6.1.1.4, 6.1.1.5, 6.1.1.7, 6.1.1.8, 6.1.1.9, 6.1.1.10, 6.1.1.11, 6.1.1.12, 6.1.1.13, 6.1.1.15, 6.1.2.3, 6.1.2.4, 6.1.2.6, 6.1.2.8, 6.1.2.11, 8.2.6.38, 8.3.1.21, 8.3.2.11, 8.4.1.42, 9.4.2.5, 9.4.5.4.1, 9.4.5.4.6, 9.4.8, 12.4.1.4b, 12.4.2.4

For interBand test case execution on Band VI, the Mobile Country Code of the two cells is set to the same value according to TS 34.108 clause 5.1.1.6. The used test USIM follows TS 34.108 clause 8.3.2.2. This is applied to the test cases: 6.1.2.1a, 6.1.2.10a, 8.1.2.10a, 8.2.1.24a, 8.2.1.34a, 8.2.6.37b, 8.3.1.1a, 8.3.2.1a, 8.4.1.2B, 8.4.1.24A, 8.4.1.25A.

#### I.2.2 FDD Band XII

A test case requires more than three radio frequencies shall avoid to execute on FDD Band XII. A list is given below.

6.1.1.4, 6.1.1.8, 6.1.1.9, 6.1.1.10, 6.1.1.12, 6.1.1.13, 6.1.1.15, 9.4.5.4.1.

---

### I.3 Void

### I.4 InterRAT test execution

The test purpose and the test method of the test case 8.3.7.1, 8.3.7.1a and 8.3.7.1b are same. The test cases differ from each other in the ciphering algorithms applied in the UTRAN and GERAN cell. The necessary test coverage is achieved by executing once according to the following:

8.3.7.1b for UE in Rel-7 or later,

8.3.7.1a for UE in Rel-6, (for earlier UE if A5/3 is supported),

8.3.7.1 for UE in R99, Rel-4 or Rel-5.

The test purpose and the test method of the test case 8.3.11.1, 8.3.11.1a and 8.3.11.1b are same. The test cases differ from each other in the ciphering algorithms applied in the UTRAN and GPRS cell. The necessary test coverage is achieved by executing once according to the following:

8.3.11.1a and 8.3.11.1b: for UE in Rel-7 or later,

8.3.11.1 for UE in R99, Rel-4, Rel-5 or Rel-6

## Annex J (informative): Change history

| Meeting | TSG doc   | CR  | Rev | Subject  | Cat | Old vers | New vers | WG doc    |
|---------|-----------|-----|-----|--|-----|----------|----------|-----------|
| TP-18   | TP-020301 |     |     | Approval of the specification  |     | 2.0.0    | 3.0.0    |           |
| TP-24   | -         | -   | -   | One correction performed in the NAS ATS part (the other ATS parts remain in v.3.6.0)   |     | 3.6.0    | 3.6.1    | -         |
| TP-20   | -         | -   | -   | Regeneration of RRC and RLC ATS  |     | 3.2.0    | 3.2.1    | -         |
| TP-21   | TP-030199 | -   | -   | Add new approved TTCN test cases in test case list in Annex A  | F   | 3.2.1    | 3.3.0    | -         |
| TP-23   | TP-040044 | -   | -   | Updating Annex A   | F   | 3.4.0    | 3.5.0    | -         |
| TP-23   | -         | -   | -   | Editorial clean-up by ETSI   |     | 3.5.0    | 3.5.1    | -         |
| TP-23   | -         | -   | -   | Sections 8.3.28 - 8.3.31 were misplaced  |     | 3.5.1    | 3.5.2    | -         |
| TP-19   | TP-030051 | 001 | -   | Change to test case 9.2.3 required for approval  | F   | 3.0.0    | 3.1.0    | T1-030120 |
| TP-19   | TP-030051 | 002 | -   | Change to test case 9.2.4 required for approval  | F   | 3.0.0    | 3.1.0    | T1-030121 |
| TP-19   | TP-030051 | 003 | -   | Change to test case 10.1.3.4.1 required for approval   | F   | 3.0.0    | 3.1.0    | T1-030122 |
| TP-19   | TP-030051 | 004 | -   | Inclusion of RLC test case 7.2.2.3 to RLC ATS V3.0.0   | F   | 3.0.0    | 3.1.0    | T1-030123 |
| TP-19   | TP-030051 | 005 | -   | Inclusion of RLC test case 7.2.2.4 to RLC ATS V3.0.0   | F   | 3.0.0    | 3.1.0    | T1-030124 |
| TP-19   | TP-030051 | 006 | -   | Inclusion of RLC test case 7.2.2.7 to RLC ATS V3.0.0   | F   | 3.0.0    | 3.1.0    | T1-030125 |
| TP-19   | TP-030051 | 007 | -   | Inclusion of RLC test case 7.2.3.4 to RLC ATS V3.0.0   | F   | 3.0.0    | 3.1.0    | T1-030126 |
| TP-19   | TP-030051 | 008 | -   | Inclusion of RLC test case 7.2.3.5 to RLC ATS V3.0.0   | F   | 3.0.0    | 3.1.0    | T1-030127 |
| TP-19   | TP-030051 | 009 | -   | Changes to TS34.123-3 V200 to introduce TC_8_1_1_4   | F   | 3.0.0    | 3.1.0    | T1-030128 |
| TP-19   | TP-030051 | 010 | -   | TTCN changes to the approved test cases in V300  | F   | 3.0.0    | 3.1.0    | T1-030129 |
| TP-19   | TP-030051 | 011 | 1   | CR 34.123-3, V300 as T1S030009rev1   | F   | 3.0.0    | 3.1.0    | T1-030260 |
| TP-19   | TP-030051 | 012 | -   | Introducing Test Case 8.1.2.7  | F   | 3.0.0    | 3.1.0    | T1-030245 |
| TP-19   | TP-030051 | 013 | -   | Introduction of Test Case 8.2.1.1  | F   | 3.0.0    | 3.1.0    | T1-030246 |
| TP-19   | TP-030051 | 014 | -   | Introduction of Test Case 8.2.3.1  | F   | 3.0.0    | 3.1.0    | T1-030247 |
| TP-19   | TP-030051 | 015 | -   | Addition of RRC test case 8.1.9 to RRC ATS V3.0.0<br>NOTE: There was a missing TTCN fix in TP-030051. In the TTCN line 6 of TC_8_1_2_1, replace +ts_SendDefSysInfo( tsc_CellA) with +ts_SendSysInfoWithSpecialSIB11( tsc_CellA, tcv_SIB11IntraFreqRepQuantityRACH). Otherwise, a good UE would be failed at the regression test. | F   | 3.0.0    | 3.1.0    | T1-030248 |
| TP-20   | TP-030104 | 016 | -   | Test Case 7.1.1.2  | F   | 3.1.0    | 3.2.0    | T1-030397 |
| TP-20   | TP-030104 | 017 | -   | Test Case 7.1.1.8  | F   | 3.1.0    | 3.2.0    | T1-030399 |
| TP-20   | TP-030104 | 018 | -   | Test Case 8.1.1.2  | F   | 3.1.0    | 3.2.0    | T1-030401 |
| TP-20   | TP-030104 | 019 | -   | Test Case 8.1.1.3  | F   | 3.1.0    | 3.2.0    | T1-030403 |
| TP-20   | TP-030104 | 020 | -   | Test Case 8.1.1.8  | F   | 3.1.0    | 3.2.0    | T1-030411 |
| TP-20   | TP-030104 | 021 | -   | Test Case 8.2.1.8  | F   | 3.1.0    | 3.2.0    | T1-030413 |
| TP-20   | TP-030104 | 022 | -   | Test Case 8.2.1.10   | F   | 3.1.0    | 3.2.0    | T1-030415 |
| TP-20   | TP-030104 | 023 | -   | Test Case 8.1.5.1  | F   | 3.1.0    | 3.2.0    | T1-030425 |
| TP-20   | TP-030104 | 024 | -   | Test Case 8.1.5.4  | F   | 3.1.0    | 3.2.0    | T1-030427 |
| TP-20   | TP-030104 | 025 | -   | Test Case 8.2.3.7  | F   | 3.1.0    | 3.2.0    | T1-030429 |
| TP-20   | TP-030104 | 026 | -   | Addition of RLC test case 7.2.3.6 to RLC ATS V3.1.0  | B   | 3.1.0    | 3.2.0    | T1-030438 |
| TP-20   | TP-030104 | 027 | -   | Addition of RLC test case 7.2.3.25 to RLC ATS V3.1.0   | B   | 3.1.0    | 3.2.0    | T1-030440 |
| TP-20   | TP-030104 | 028 | -   | Addition of RLC test case 7.2.3.14 to RLC ATS V3.1.0   | B   | 3.1.0    | 3.2.0    | T1-030442 |
| TP-20   | TP-030104 | 029 | -   | Addition of RLC test case 7.2.3.15 to RLC ATS V3.1.0   | B   | 3.1.0    | 3.2.0    | T1-030444 |
| TP-20   | TP-030104 | 030 | -   | Addition of RLC test case 7.2.3.16 to RLC ATS V3.1.0   | B   | 3.1.0    | 3.2.0    | T1-030446 |
| TP-20   | TP-030104 | 031 | -   | Addition of RLC test case 7.2.3.33 to RLC ATS V3.1.0   | B   | 3.1.0    | 3.2.0    | T1-030448 |
| TP-20   | TP-030104 | 032 | -   | Addition of NAS test case 10.1.2.5.1 to NAS ATS V3.1.0   | B   | 3.1.0    | 3.2.0    | T1-030450 |
| TP-20   | TP-030104 | 033 | -   | 7.1.1.1  | B   | 3.1.0    | 3.2.0    | T1-030452 |
| TP-20   | TP-030104 | 034 | -   | 7.1.1.3  | B   | 3.1.0    | 3.2.0    | T1-030454 |
| TP-20   | TP-030104 | 035 | -   | 7.1.1.4  | B   | 3.1.0    | 3.2.0    | T1-030456 |
| TP-20   | TP-030104 | 036 | -   | Introduction of Test Case 7.1.1.5  | B   | 3.1.0    | 3.2.0    | T1-030458 |
| TP-20   | TP-030104 | 037 | -   | Test Case 8.2.3.15   | F   | 3.1.0    | 3.2.0    | T1-030464 |
| TP-20   | TP-030104 | 038 | -   | Test Case 8.2.3.18   | F   | 3.1.0    | 3.2.0    | T1-030466 |
| TP-20   | TP-030104 | 039 | -   | Test Case 8.2.3.19   | F   | 3.1.0    | 3.2.0    | T1-030468 |
| TP-20   | TP-030104 | 040 | -   | Test Case 12.3.1.2   | F   | 3.1.0    | 3.2.0    | T1-030474 |

| Meet-<br>ing | TSG doc   | CR  | Rev | Subject   | Cat | Old<br>vers | New<br>vers | WG doc    |
|--------------|-----------|-----|-----|---|-----|-------------|-------------|-----------|
| TP-20        | TP-030104 | 041 | -   | Test Case 8.3.3.1   | F   | 3.1.0       | 3.2.0       | T1-030479 |
| TP-20        | TP-030104 | 042 | -   | Addition of RLC test case 7.2.3.13 to RLC ATS V3.1.0  | B   | 3.1.0       | 3.2.0       | T1-030484 |
| TP-20        | TP-030104 | 043 | -   | Addition of RLC test case 7.2.3.18 to RLC ATS V3.1.0  | B   | 3.1.0       | 3.2.0       | T1-030486 |
| TP-20        | TP-030104 | 044 | -   | Addition of RLC test case 7.2.2.5 to RLC ATS V3.0.0   | B   | 3.1.0       | 3.2.0       | T1-030490 |
| TP-20        | TP-030104 | 045 | -   | Addition of RLC test case 7.2.2.6 to RLC ATS V3.0.0   | B   | 3.1.0       | 3.2.0       | T1-030492 |
| TP-20        | TP-030104 | 046 | -   | Addition of RLC test case 7.2.3.17 to RLC ATS V3.0.0  | B   | 3.1.0       | 3.2.0       | T1-030495 |
| TP-20        | TP-030104 | 047 | -   | Addition of RLC test case 7.2.3.20 to RLC ATS V3.0.0  | B   | 3.1.0       | 3.2.0       | T1-030496 |
| TP-20        | TP-030104 | 048 | -   | Addition of RLC test case 7.2.3.34 to RLC ATS V3.0.0  | B   | 3.1.0       | 3.2.0       | T1-030498 |
| TP-20        | TP-030104 | 049 | -   | Addition of SM test case 11.1.1.1 to NAS ATS V3.1.0   | B   | 3.1.0       | 3.2.0       | T1-030500 |
| TP-20        | TP-030104 | 050 | -   | Addition of RLC test case 7.2.3.23 to RLC ATS V3.1.0  | B   | 3.1.0       | 3.2.0       | T1-030535 |
| TP-20        | TP-030104 | 051 | -   | Addition of RLC test case 7.2.3.24 to RLC ATS V3.1.0  | B   | 3.1.0       | 3.2.0       | T1-030537 |
| TP-20        | TP-030104 | 052 | -   | Addition of RLC test case 7.2.3.26 to RLC ATS V3.1.0  | B   | 3.1.0       | 3.2.0       | T1-030539 |
| TP-20        | TP-030104 | 053 | -   | Addition of RLC test case 7.2.3.27 to RLC ATS V3.1.0  | B   | 3.1.0       | 3.2.0       | T1-030541 |
| TP-20        | TP-030104 | 054 | -   | Addition of SM test case 11.3.1 to NAS ATS V3.1.0   | B   | 3.1.0       | 3.2.0       | T1-030576 |
| TP-20        | TP-030104 | 055 | -   | Addition of SM test case 11.3.2 to NAS ATS V3.1.0   | B   | 3.1.0       | 3.2.0       | T1-030577 |
| TP-20        | TP-030104 | 056 | -   | Addition of GMM test case 12.3.1.5 to NAS ATS V3.1.0  | B   | 3.1.0       | 3.2.0       | T1-030578 |
| TP-20        | TP-030104 | 057 | -   | Addition of GMM test case 12.7 to NAS ATS V3.1.0  | B   | 3.1.0       | 3.2.0       | T1-030580 |
| TP-20        | TP-030104 | 058 | -   | Test Case 8.2.1.9   | F   | 3.1.0       | 3.2.0       | T1-030594 |
| TP-20        | TP-030104 | 059 | -   | Test Case 8.2.3.8   | F   | 3.1.0       | 3.2.0       | T1-030596 |
| TP-20        | TP-030104 | 060 | -   | Test Case 12.3.1.1  | F   | 3.1.0       | 3.2.0       | T1-030614 |
| TP-20        | TP-030104 | 062 | -   | Test Case 12.9.2  | F   | 3.1.0       | 3.2.0       | T1-030626 |
| TP-20        | TP-030104 | 063 | -   | Addition of GMM test case 12.3.2.1 to NAS ATS V3.1.0  | B   | 3.1.0       | 3.2.0       | T1-030638 |
| TP-20        | TP-030104 | 064 | -   | CR for correction of generic test step in RLC ATS V3.1.0  | F   | 3.1.0       | 3.2.0       | T1-030654 |
| TP-20        | TP-030104 | 065 | -   | ASP Enhancement   | F   | 3.1.0       | 3.2.0       | T1-030665 |
| TP-20        | TP-030104 | 066 | -   | Test Case 8.1.2.2   | F   | 3.1.0       | 3.2.0       | T1-030395 |
| TP-20        | TP-030104 | 067 | -   | Test Case 8.1.2.9   | F   | 3.1.0       | 3.2.0       | T1-030396 |
| TP-20        | TP-030110 | 068 | -   | Add new approved test cases in test case list in Annex A  | F   | 3.1.0       | 3.2.0       | --        |
| TP-20        | TP-030141 | 069 | -   | Test Case 8.1.3.3   | F   | 3.1.0       | 3.2.0       | T1-030460 |
| TP-21        | TP-030194 | 070 | -   | Corrections to Package 1 test cases in RRC ATS v3.2.1 for PS mode   | F   | 3.2.1       | 3.3.0       | T1-031054 |
| TP-21        | TP-030194 | 071 | -   | Corrections to Package 1 test cases in RRC ATS v3.2.1 for Integrity   | F   | 3.2.1       | 3.3.0       | T1-031055 |
| TP-21        | TP-030194 | 072 | -   | Corrections to Package 1 test cases in RRC ATS v3.2.1 for configuration of Radio Bearer -3                              | F   | 3.2.1       | 3.3.0       | T1-031140 |
| TP-21        | TP-030194 | 073 | -   | CR to 34.123-3 R99, Moving baseline from March 02 to March 03 and error corrections                                     | F   | 3.2.1       | 3.3.0       | T1-031242 |
| TP-21        | TP-030194 | 074 | -   | CR to 34.123-3, R99, Update and remove unnecessary PIXIT parameters, so they are aligned with the 3GPP conformance TTCN | F   | 3.2.1       | 3.3.0       | T1-031278 |
| TP-21        | TP-030194 | 079 | -   | Changes to TS34.123-3 V310 to introduce TC_8_1_1_5  | F   | 3.1.0       | 3.3.0       | T1-030405 |
| TP-21        | TP-030194 | 080 | -   | Changes to TS34.123-3 V310 to introduce TC_8_1_1_6  | F   | 3.1.0       | 3.3.0       | T1-030407 |
| TP-21        | TP-030194 | 084 | -   | Changes to TS34.123-3 V310 to introduce TC_12_2_1_1   | F   | 3.1.0       | 3.3.0       | T1-030423 |
| TP-21        | TP-030194 | 119 | -   | Changes to TS34.123-3 V310 to introduce TC_8_3_4_1  | F   | 3.1.0       | 3.3.0       | T1-030602 |
| TP-21        | TP-030194 | 120 | -   | Changes to TS34.123-3 V310 to introduce TC_8_3_4_2  | F   | 3.1.0       | 3.3.0       | T1-030604 |
| TP-21        | TP-030194 | 121 | -   | Changes to TS34.123-3 V310 to introduce TC_8_3_4_3  | F   | 3.1.0       | 3.3.0       | T1-030606 |
| TP-21        | TP-030194 | 122 | -   | Changes to TS34.123-3 V310 to introduce TC_8_4_1_1  | F   | 3.1.0       | 3.3.0       | T1-030608 |
| TP-21        | TP-030194 | 124 | -   | Changes to TS34.123-3 V310 to introduce TC_12_9_1   | F   | 3.1.0       | 3.3.0       | T1-030624 |
| TP-21        | TP-030194 | 127 | -   | CR to 34.123-3 V310 to introduce test case 7.2.3.19   | B   | 3.1.0       | 3.3.0       | T1-030657 |
| TP-21        | TP-030194 | 128 | -   | CR to 34.123-3 V320 to introduce test case 14.2.13.1  | B   | 3.2.0       | 3.3.0       | T1-030877 |
| TP-21        | TP-030194 | 129 | -   | CR to 34.123-3 V320 to introduce test case 7.2.2.2  | B   | 3.2.0       | 3.3.0       | T1-030879 |
| TP-21        | TP-030194 | 130 | -   | CR to 34.123-3 V320 to introduce test case 7.2.3.2  | B   | 3.2.0       | 3.3.0       | T1-030881 |

| Meeting | TSG doc   | CR  | Rev | Subject  | Cat | Old vers | New vers | WG doc    |
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| TP-21   | TP-030194 | 131 | -   | Changes to TS34.123-3 V320 to introduce TC_8_2_3_9   | B   | 3.2.0    | 3.3.0    | T1-030896 |
| TP-21   | TP-030194 | 132 | -   | Changes to TS34.123-3 V320 to introduce TC_7_2_3_21  | F   | 3.2.0    | 3.3.0    | T1-030897 |
| TP-21   | TP-030194 | 133 | -   | Changes to TS34.123-3 V320 to introduce TC_7_2_3_22  | F   | 3.2.0    | 3.3.0    | T1-030898 |
| TP-21   | TP-030194 | 134 | -   | CR to 34.123-3 V320 to introduce test case TC_8_2_6_20   | F   | 3.2.1    | 3.3.0    | T1-030928 |
| TP-21   | TP-030194 | 135 | -   | CR to 34.123-3 V320 to introduce test case TC_9.2.1  | B   | 3.2.1    | 3.3.0    | T1-031016 |
| TP-21   | TP-030194 | 136 | -   | CR to 34.123-3 V320 to introduce test case TC_9.3.1  | B   | 3.2.1    | 3.3.0    | T1-031018 |
| TP-21   | TP-030194 | 137 | -   | CR to 34.123-3 V320 to introduce test case TC_9_4_5_2  | B   | 3.2.1    | 3.3.0    | T1-031020 |
| TP-21   | TP-030194 | 138 | -   | CR to 34.123-3 V320 to introduce test case TC_9.5.2  | B   | 3.2.1    | 3.3.0    | T1-031022 |
| TP-21   | TP-030194 | 139 | -   | Changes to TS34.123-3 V321 to introduce TC_8_1_1_7   | F   | 3.2.1    | 3.3.0    | T1-031141 |
| TP-21   | TP-030208 | 140 | -   | Addition of RRC test case 8.2.2.1 to 34.123-3  | F   | 3.2.1    | 3.3.0    | T1-031280 |
| TP-21   | TP-030208 | 141 | -   | Addition of RRC test case 8.2.2.11 to 34.123-3   | F   | 3.2.1    | 3.3.0    | T1-031281 |
| TP-21   | TP-030208 | 142 | -   | Addition of RRC test case 8.2.6.1 to 34.123-3  | F   | 3.2.1    | 3.3.0    | T1-031282 |
| TP-22   | TP-030284 | 142 | 2   | ASP changes and MMI string corrections   | F   | 3.3.0    | 3.4.0    | T1-031707 |
| TP-21   | TP-030208 | 143 | -   | Addition of RRC test case 8.2.2.17 to 34.123-3   | F   | 3.2.1    | 3.3.0    | T1-031283 |
| TP-21   | TP-030208 | 144 | -   | Addition of RRC test case 8.2.4.10 to 34.123-3   | F   | 3.2.1    | 3.3.0    | T1-031284 |
| TP-21   | TP-030208 | 145 | -   | Addition of RRC test case 8.2.6.7 to 34.123-3  | F   | 3.2.1    | 3.3.0    | T1-031285 |
| TP-21   | TP-030208 | 146 | -   | Addition of RRC test case 8.2.2.8 to 34.123-3  | F   | 3.2.1    | 3.3.0    | T1-031286 |
| TP-21   | TP-030208 | 147 | -   | Addition of RRC test case 8.2.2.10 to 34.123-3   | F   | 3.2.1    | 3.3.0    | T1-031287 |
| TP-21   | TP-030208 | 148 | -   | Test case 12.5   | F   | 3.2.1    | 3.3.0    | T1-031288 |
| TP-21   | TP-030209 | 149 | -   | CR to 34.123-3 V321 to introduce test case TC_8_2_2_23   | F   | 3.2.1    | 3.3.0    | T1-031289 |
| TP-23   | TP-040042 | 151 | -   | GERAN ASP changes  | F   | 3.4.0    | 3.5.0    | T1-040412 |
| TP-23   | TP-040043 | 152 |     | Addition of NAS test case 9.1 to NAS ATS V3.4.0  | B   | 3.3.0    | 3.5.0    | T1-031755 |
| TP-23   | TP-040043 | 153 |     | Addition of NAS test case 9.2.2 to NAS ATS V3.4.0  | B   | 3.3.0    | 3.5.0    | T1-031757 |
| TP-23   | TP-040043 | 154 |     | Addition of NAS test case 9.4.1 to NAS ATS V3.4.0  | B   | 3.3.0    | 3.5.0    | T1-031759 |
| TP-23   | TP-040043 | 155 |     | Addition of NAS test case 9.4.2.1 to NAS ATS V3.4.0  | B   | 3.3.0    | 3.5.0    | T1-031761 |
| TP-21   | TP-030209 | 156 | -   | CR to 34.123-3 V321 to introduce test case TC_8_2_6_19   | F   | 3.2.1    | 3.3.0    | T1-031296 |
| TP-23   | TP-040043 | 156 |     | Addition of NAS test case 9.4.2.4.1 to NAS ATS V3.4.0  | B   | 3.3.0    | 3.5.0    | T1-031763 |
| TP-21   | TP-030209 | 157 | -   | CR to 34.123-3 V321 to introduce test case TC_8_2_2_7  | F   | 3.2.1    | 3.3.0    | T1-031297 |
| TP-23   | TP-040043 | 157 |     | Addition of NAS test case 9.4.4 to NAS ATS V3.4.0  | B   | 3.3.0    | 3.5.0    | T1-031765 |
| TP-21   | TP-030209 | 158 | -   | CR to 34.123-3 V321 to introduce test case TC_8_2_2_9  | F   | 3.2.1    | 3.3.0    | T1-031298 |
| TP-23   | TP-040043 | 158 |     | Addition of NAS test case 9.4.5.3 to NAS ATS V3.4.0  | B   | 3.3.0    | 3.5.0    | T1-031767 |
| TP-21   | TP-030209 | 159 | -   | CR to 34.123-3 V321 to introduce test case TC_8_3_1_11   | F   | 3.2.1    | 3.3.0    | T1-031299 |
| TP-23   | TP-040043 | 159 |     | Addition of RRC test case 8.3.7.1 to RRC ATS V3.4.0  | B   | 3.3.0    | 3.5.0    | T1-031771 |
| TP-21   | TP-030209 | 160 | -   | CR to 34.123-3 V321 to introduce test case TC_8_2_6_8  | F   | 3.2.1    | 3.3.0    | T1-031300 |
| TP-23   | TP-040043 | 160 |     | Addition of RRC test case 8.3.7.2 to RRC ATS V3.4.0  | F   | 3.4.0    | 3.5.0    | T1-031918 |
| TP-21   | TP-030209 | 161 | -   | CR to 34.123-3 V321 to introduce test case TC_8_4_1_16   | F   | 3.2.1    | 3.3.0    | T1-031301 |
| TP-23   | TP-040043 | 161 |     | Addition of RRC test case 8.3.7.4 to RRC ATS V3.4.0  | F   | 3.4.0    | 3.5.0    | T1-031772 |
| TP-23   | TP-040043 | 162 |     | Addition of NAS test case 12.2.1.7 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.5.0    | T1s040029 |
| TP-23   | TP-040043 | 163 |     | Addition of RAB test case 14.2.27 to RAB ATS V3.4.0  | B   | 3.4.0    | 3.5.0    | T1s040033 |
| TP-23   | TP-040043 | 164 |     | Introducing test case 12_6_1_1 to NASv330  | B   | 3.4.0    | 3.5.0    | T1-031745 |
| TP-23   | TP-040043 | 165 |     | Introducing test case 8.2.4.3 to RRCv330   | F   | 3.4.0    | 3.5.0    | T1-031747 |
| TP-23   | TP-040043 | 166 |     | Introducing test case 8.2.4.4 to RRCv330   | F   | 3.3.0    | 3.5.0    | T1-031749 |
| TP-23   | TP-040043 | 167 |     | Introduction of Package 2 test case 8.3.1.21   | F   | 3.4.0    | 3.5.0    | T1s040049 |
| TP-23   | TP-040043 | 168 |     | Addition of NAS test case 9.4.2.2.1 to NAS ATS V3.4.0  | B   | 3.3.0    |          | T1s040025 |
| TP-23   | TP-040043 | 169 |     | Addition of NAS test case 9.4.2.2.2 to NAS ATS V3.4.0  | B   | 3.4.0    | 3.5.0    | T1s040027 |
| TP-23   | TP-040043 | 170 |     | Addition of NAS test case 9.4.9 to NAS ATS V3.4.0  | B   | 3.4.0    | 3.5.0    | T1s040014 |
| TP-23   | TP-040043 | 171 |     | Addition of RAB test case 14.2.26 to RAB ATS V3.4.0  | B   | 3.4.0    | 3.5.0    | T1s040002 |
| TP-23   | TP-040043 | 171 |     | Addition of NAS test case 9.4.2.5 to NAS ATS V3.4.0  | B   | 3.4.0    | 3.5.0    | T1s040082 |
| TP-23   | TP-040043 | 172 |     | Addition of RAB test case 14.2.4 to TS 34.123-3, V3.4.0  | B   | 3.4.0    | 3.5.0    | T1s040004 |
| TP-23   | TP-040043 | 172 |     | Correction to RRC Package 1 TC 8.2.1.8 and 8.2.1.9 for the mismatch between Radio Bearer setup and PDP context Activation Accept message | B   | 3.4.0    | 3.5.0    | T1s040071 |
| TP-23   | TP-040043 | 173 |     | Incorrect timer poll value used for SS RLC transmit entity in tcs 8.2.1.8, 8.2.1.9 (Revision of T1-031782)                               | F   | 3.3.0    | 3.5.0    | T1-031842 |

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| TP-23   | TP-040043 | 174 |     | Correction of Poll bit checking in tc 7.2.3.13 (Revision of T1-031839)  | F   | 3.3.0    | 3.5.0    | T1-031921 |
| TP-23   | TP-040043 | 175 |     | Modification to Radio Bearer Release message in tc 8.2.3.18 and 8.2.3.19  | F   | 3.3.0    | 3.5.0    | T1-031924 |
| TP-23   | TP-040043 | 176 |     | Maximum allowed UL TX power should not be present in tcs 8.2.2.8, 8.2.2.9 and 8.2.2.23  | F   | 3.3.0    | 3.5.0    | T1-031925 |
| TP-23   | TP-040043 | 177 |     | New C-RNTI should not be present in tc 8.2.6.20   | F   | 3.3.0    | 3.5.0    | T1-031787 |
| TP-23   | TP-040043 | 178 |     | Unnecessary waiting time for reconfiguration in tc 8.2.2.23   | F   | 3.3.0    | 3.5.0    | T1-031788 |
| TP-23   | TP-040043 | 179 |     | Modification to validate TI flag and TI value in TCs 11.3.1 and 11.3.2  | F   | 3.3.0    | 3.5.0    | T1-031795 |
| TP-23   | TP-040043 | 180 |     | Change U-RNTI and remove UTRAN DRX cycle length coefficient tc 8.3.3.1  | F   | 3.3.0    | 3.5.0    | T1-031841 |
| TP-23   | TP-040043 | 181 |     | Corrections of Status PDU checking in tc 7.2.3.34   | F   | 3.3.0    | 3.5.0    | T1-031786 |
| TP-23   | TP-040043 | 182 |     | Correction of number of negatively acknowledged PDUs in tc 7.2.3.16   | F   | 3.3.0    | 3.5.0    | T1-031789 |
| TP-23   | TP-040043 | 183 |     | Correction of sequence number checking and Verdict assessments in tc 7.2.3.17   | F   | 3.3.0    | 3.5.0    | T1-031790 |
| TP-23   | TP-040043 | 184 |     | Introducing test case 8.3.1.1 to RRCv340  | F   | 3.3.0    | 3.5.0    | T1-031733 |
| TP-23   | TP-040043 | 184 |     | Poll Bit and Status PDU content checking in tc 7.2.3.14   | F   | 3.3.0    | 3.5.0    | T1-031791 |
| TP-23   | TP-040043 | 185 |     | Additional verdicts assigned in tc 7.2.3.20   | F   | 3.3.0    | 3.5.0    | T1-031792 |
| TP-23   | TP-040043 | 186 |     | SERVICE ACCEPT message NOT to be sent to UE in GMM idle state in tc 11.3.1 and 11.3.2   | F   | 3.3.0    | 3.5.0    | T1-031794 |
| TP-23   | TP-040043 | 187 |     | Change to performing integrity protection in tc 12.2.1.1  | F   | 3.3.0    | 3.5.0    | T1-031778 |
| TP-23   | TP-040043 | 188 |     | Correction of Poll bit checking in tc 7.2.3.18  | F   | 3.3.0    | 3.5.0    | T1-031781 |
| TP-23   | TP-040019 | 189 |     | Addition of RAB test case 14.2.29 to RAB ATS V3.4.0   | B   | 3.4.0    | 3.5.0    | T1s040199 |
| TP-23   | TP-040019 | 190 |     | Addition of RAB test case 14.2.31.1 to RAB ATS V3.4.0   | B   | 3.4.0    | 3.5.0    | T1s040198 |
| TP-23   | TP-040019 | 191 |     | Addition of RAB test case 14.2.32.1 to RAB ATS V3.4.0   | B   | 3.4.0    | 3.5.0    | T1s040197 |
| TP-23   | TP-040043 | 192 |     | Introducing test case 8.3.1.22 to RRCv340   | F   | 3.3.0    | 3.5.0    | T1-031797 |
| TP-23   | TP-040019 | 193 |     | Addition of RAB test case 14.4.3 to RAB ATS V3.4.0  | B   | 3.4.0    | 3.5.0    | T1s040196 |
| TP-23   | TP-040043 | 195 |     | Introducing test case 8.2.2.18 to RRCv340   | F   | 3.4.0    | 3.5.0    | T1-031932 |
| TP-23   | TP-040043 | 205 |     | Addition of RRC test case 8.3.2.1 to RRC ATS V3.4.0   | B   | 3.4.0    | 3.5.0    | T1-031823 |
| TP-23   | TP-040043 | 206 |     | Addition of RRC test case 8.3.2.4 to RRC ATS V3.4.0   | B   | 3.3.0    | 3.5.0    | T1-031825 |
| TP-23   | TP-040043 | 207 |     | Addition of RRC test case 8.3.2.7 to RRC ATS V3.4.0   | F   | 3.4.0    | 3.5.0    | T1-031827 |
| TP-23   | TP-040043 | 210 |     | Addition of NAS test case 12.2.2.1 to NAS ATS V3.4.0  | F   | 3.4.0    | 3.5.0    | T1-031936 |
| TP-23   | TP-040043 | 211 |     | Addition of NAS test case 12.4.3.1 to NAS ATS V3.4.0  | B   | 3.4.0    | 3.5.0    | T1-031937 |
| TP-23   | TP-040043 | 216 |     | Revised CR for Changes to Introducing test case 8.2.6.9 required for approval to RRCv340  | F   | 3.4.0    | 3.5.0    | T1s040088 |
| TP-23   | TP-040043 | 220 |     | Addition of RRC test case 8.4.1.17 to RRC ATS V3.4.0  | B   | 3.4.0    | 3.5.0    | T1-031940 |
| TP-23   | TP-040043 | 221 |     | Addition of RRC test case 8.2.2.19 to RRC ATS V3.4.0  | B   | 3.4.0    | 3.5.0    | T1-031939 |
| TP-23   | TP-040043 | 222 |     | Addition of NAS test case 12.2.1.3 to NAS ATS V3.4.0  | B   | 3.4.0    | 3.5.0    | T1-031938 |
| TP-23   | TP-040043 | 224 |     | Addition of RRC test case 8.3.1.31 to RRC ATS V3.4.0  | B   | 3.3.0    | 3.5.0    | T1-031909 |
| TP-23   | TP-040043 | 226 |     | Validation of TMSI status in ATTACH REQUEST message for tc 12.3.1.5   | F   | 3.4.0    | 3.5.0    | T1-031913 |
| TP-23   | TP-040043 | 227 |     | Validation of optional old PTMSI signature in ATTACH REQUEST message for tc 12.2.1.1  | F   | 3.3.0    | 3.5.0    | T1-031914 |
| TP-23   | TP-040043 | 230 |     | Validation of CS CKSN in paging response in tc 9.2.1  | F   | 3.3.0    | 3.5.0    | T1-031922 |
| TP-23   | TP-040043 | 232 |     | To add verified GCF package 1 RRC test case 8.3.1.3 to the approved RRC ATS V3.4.0  |     | 3.4.0    | 3.5.0    | T1-031926 |
| TP-23   | TP-040043 | 233 |     | Introducing test case 8.3.1.4 to RRCv340  | F   | 3.4.0    | 3.5.0    | T1s040087 |
| TP-24   | TP-040117 | 233 |     | Clarification of Section 8.5.1 Authentication: Explicitly stating that Authentication after IDT is an optional/dependent procedure. | F   | 3.5.2    | 3.6.0    | T1-040761 |
| TP-23   | TP-040043 | 234 |     | Introducing test case 12_4_2_1 to NASv340   | F   | 3.4.0    | 3.5.0    | T1-031930 |
| TP-24   | TP-040117 | 234 |     | GERAN generic procedures and TTCN encoding rules for CSN.1 specific encoding  | F   | 3.5.2    | 3.6.0    | T1-040940 |
| TP-22   | TP-030285 | 251 | -   | Updating Annex A  | F   | 3.3.0    | 3.4.0    | -         |
| TP-22   | TP-030284 | 252 | -   | Security ASP changes  | F   | 3.3.0    | 3.4.0    | T1-031732 |
| TP-24   | TP-040118 | 255 |     | Addition of MAC test case 7.1.3.1 to MAC ATS V3.5.1   | B   | 3.5.1    | 3.6.0    | T1s040295 |
| TP-24   | TP-040118 | 256 |     | Addition of RAB test case 14.2.49.1 to RAB ATS V3.5.1   | B   | 3.5.1    | 3.6.0    | T1s040254 |
| TP-24   | TP-040118 | 257 |     | Addition of GCF P1 test case 8.4.1.2 to RRC ATS   | B   | 3.5.1    | 3.6.0    | T1s040252 |

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|         |           |     |     | V3.5.1   |     |          |          |           |
| TP-24   | TP-040118 | 258 |     | Revised CR for P3 NAS test case 13.2.2.1 to NAS ATS V3.5.1 (revision of T1-040239) | B   | 3.5.1    | 3.6.0    | T1s040330 |
| TP-24   | TP-040118 | 259 |     | Revised CR for P3 NAS test case 13.2.2.2 to NAS ATS V3.5.1 (revision of T1-040241) | B   | 3.5.1    | 3.6.0    | T1s040331 |
| TP-24   | TP-040118 | 260 |     | Addition of GCF P3 test case 8.4.1.31 to RRC ATS v3.5.1                            | B   | 3.5.1    | 3.6.0    | T1s040285 |
| TP-24   | TP-040118 | 261 |     | Revised CR for addition of GCF P2 test case 12.4.2.2 to NAS ATS V3.5.1             | B   | 3.5.1    | 3.6.0    | T1s040283 |
| TP-24   | TP-040118 | 262 |     | Addition of RRC test case 8.3.2.11 to RRC ATS V3.5.1                               | B   | 3.5.1    | 3.6.0    | T1s040262 |
| TP-24   | TP-040118 | 263 |     | Addition of RRC test case 8.4.1.30 to RRC ATS V3.5.1                               | B   | 3.5.1    | 3.6.0    | T1s040260 |
| TP-24   | TP-040118 | 264 |     | Addition of RRC test case 8.4.1.29 to RRC ATS V3.5.1                               | B   | 3.5.1    | 3.6.0    | T1s040258 |
| TP-24   | TP-040118 | 265 |     | Addition of RAB test case 14.2.7a to RAB ATS V3.5.1                                | B   | 3.5.1    | 3.6.0    | T1s040249 |
| TP-24   | TP-040118 | 266 |     | Addition of RAB test case 14.2.5a to RAB ATS V3.5.1                                | B   | 3.5.1    | 3.6.0    | T1s040247 |
| TP-24   | TP-040118 | 267 |     | Addition of RAB test case 14.2.4a to RAB ATS V3.5.1                                | B   | 3.5.1    | 3.6.0    | T1s040245 |
| TP-24   | TP-040118 | 268 |     | Addition of GCF P1 test case 12.4.1.1a to NAS ATS V3.5.1                           | B   | 3.5.1    | 3.6.0    | T1s040266 |
| TP-24   | TP-040118 | 269 |     | Test Case 13.2.1.1   | B   | 3.5.1    | 3.6.0    | T1s040237 |
| TP-24   | TP-040118 | 270 |     | Addition of GCF P3 test case 10.1.2.6.6 to NAS ATS V3.4.0                          | B   | 3.4.0    | 3.6.0    | T1s040234 |
| TP-24   | TP-040118 | 271 |     | Addition of GCF P3 test case 10.1.2.7.2 to NAS ATS V3.4.0                          | B   | 3.4.0    | 3.6.0    | T1s040233 |
| TP-24   | TP-040118 | 272 |     | Addition of GCF P3 test case 10.1.2.5.5 to NAS ATS V3.4.0                          | B   | 3.4.0    | 3.6.0    | T1s040231 |
| TP-24   | TP-040118 | 273 |     | Addition of GCF P3 test case 10.1.2.6.2 to NAS ATS V3.4.0                          | B   | 3.4.0    | 3.6.0    | T1s040232 |
| TP-24   | TP-040118 | 274 |     | Addition of GCF P3 test case 10.1.2.4.10 to NAS ATS V3.4.0                         | B   | 3.4.0    | 3.6.0    | T1s040230 |
| TP-24   | TP-040118 | 275 |     | Addition of GCF P3 test case 10.1.2.3.3 to NAS ATS V3.4.0                          | B   | 3.4.0    | 3.6.0    | T1s040229 |
| TP-24   | TP-040118 | 276 |     | Addition of NAS test case 8.3.1.2 to RRC ATS V3.4.0 (revision of T1-031735)        | B   | 3.4.0    | 3.6.0    | T1s040226 |
| TP-24   | TP-040118 | 277 |     | Addition of NAS test case 8.3.1.5 to RRC ATS V3.4.0 (revision of T1-031807)        | B   | 3.4.0    | 3.6.0    | T1s040227 |
| TP-24   | TP-040118 | 278 |     | Addition of NAS test case 8.3.1.6 to RRC ATS V3.4.0 (revision of T1-031809)        | B   | 3.4.0    | 3.6.0    | T1s040228 |
| TP-24   | TP-040118 | 279 |     | Addition of GCF P3 test case 14.2.12 to RAB ATS V3.4.0                             | B   | 3.4.0    | 3.6.0    | T1s040225 |
| TP-24   | TP-040118 | 280 |     | Addition of NAS test case 10.1.3.3.1 to NAS ATS V3.4.0 (Revision of T1s040170)     | B   | 3.4.0    | 3.6.0    | T1s040222 |
| TP-24   | TP-040118 | 281 |     | Addition of RRC test case 8.1.10.1 to RRC ATS V3.4.0                               | B   | 3.4.0    | 3.6.0    | T1s040223 |
| TP-24   | TP-040118 | 282 |     | Addition of GCF P2 test case 8.4.1.18 to RRC ATS V3.4.0                            | B   | 3.4.0    | 3.6.0    | T1s040215 |
| TP-24   | TP-040118 | 283 |     | Addition of GCF P2 test case 8.4.1.19 to RRC ATS V3.4.0                            | B   | 3.4.0    | 3.6.0    | T1s040216 |
| TP-24   | TP-040118 | 284 |     | Addition of NAS test case 10.1.3.5.6 to NAS ATS V3.4.0                             | B   | 3.4.0    | 3.6.0    | T1s040213 |
| TP-24   | TP-040118 | 285 |     | Addition of NAS test case 10.1.2.2.2 to NAS ATS V3.4.0                             | B   | 3.4.0    | 3.6.0    | T1s040209 |
| TP-24   | TP-040118 | 286 |     | Addition of RRC test case 8.4.1.26 to RRC ATS V3.4.0                               | B   | 3.4.0    | 3.6.0    | T1s040207 |
| TP-24   | TP-040118 | 287 |     | Addition of GCF P1 test case 8.4.1.3 to RRC ATS V3.4.0                             | B   | 3.4.0    | 3.6.0    | T1s040205 |
| TP-24   | TP-040118 | 288 |     | Addition of RRC test case 8.3.7.3 to RRC ATS V3.4.0                                | B   | 3.4.0    | 3.6.0    | T1-040084 |
| TP-24   | TP-040118 | 289 |     | Introducing package 2 test case 8.3.1.10 to RRCv340 (revision of T1-031739)        | B   | 3.4.0    | 3.6.0    | T1s040204 |
| TP-24   | TP-040118 | 290 |     | Introducing package 2 test case 8.3.1.9 to RRCv340 (revision of T1-031737)         | B   | 3.4.0    | 3.6.0    | T1s040203 |
| TP-24   | TP-040118 | 291 |     | Addition of NAS test case 10.1.2.1.1 to NAS ATS V3.4.0                             | B   | 3.4.0    | 3.6.0    | T1s040178 |
| TP-24   | TP-040118 | 292 |     | Addition of NAS test case 10.1.3.3.2 to NAS ATS V3.4.0                             | B   | 3.4.0    | 3.6.0    | T1s040172 |
| TP-24   | TP-040118 | 293 |     | Addition of NAS test case 10.1.3.3.4 to NAS ATS V3.4.0                             | B   | 3.4.0    | 3.6.0    | T1s040174 |
| TP-24   | TP-040118 | 294 |     | Addition of NAS test case 10.1.2.7.3 to NAS ATS V3.4.0                             | B   | 3.4.0    | 3.6.0    | T1s040161 |
| TP-24   | TP-040118 | 295 |     | Addition of NAS test case 10.1.2.5.2 to NAS ATS V3.4.0                             | B   | 3.4.0    | 3.6.0    | T1s040149 |
| TP-24   | TP-040118 | 296 |     | Addition of RAB test case 14.2.23a.1 to RAB ATS                                    | B   | 3.4.0    | 3.6.0    | T1s040065 |

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|         |           |     |     | V3.4.0   |     |          |          |           |
| TP-24   | TP-040118 | 297 |     | Addition of RAB test case 14.2.23b to RAB ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040067 |
| TP-24   | TP-040118 | 298 |     | Addition of RAB test case 14.2.23c to RAB ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040069 |
| TP-24   | TP-040118 | 299 |     | Addition of RAB test case 14.2.14.1 to RAB ATS V3.4.0  | B   | 3.4.0    | 3.6.0    | T1s040055 |
| TP-24   | TP-040118 | 300 |     | Addition of RAB test case 14.2.14.2 to RAB ATS V3.4.0  | B   | 3.4.0    | 3.6.0    | T1s040057 |
| TP-24   | TP-040118 | 301 |     | Addition of RAB test case 14.2.15 to RAB ATS V3.4.0  | B   | 3.4.0    | 3.6.0    | T1s040059 |
| TP-24   | TP-040118 | 302 |     | Addition of RAB test case 14.2.16 to RAB ATS V3.4.0  | B   | 3.4.0    | 3.6.0    | T1s040061 |
| TP-24   | TP-040118 | 303 |     | Addition of RAB test case 14.2.17 to RAB ATS V3.4.0  | B   | 3.4.0    | 3.6.0    | T1s040063 |
| TP-24   | TP-040118 | 304 |     | Addition of RAB test case 14.2.13.2 to RAB ATS V3.4.0  | B   | 3.4.0    | 3.6.0    | T1s040053 |
| TP-24   | TP-040118 | 305 |     | Addition of NAS test case 10.1.2.4.9 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040129 |
| TP-24   | TP-040118 | 306 |     | Addition of NAS test case 10.1.2.4.4 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040121 |
| TP-24   | TP-040118 | 307 |     | Addition of NAS test case 10.1.2.4.6 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040123 |
| TP-24   | TP-040118 | 308 |     | Addition of NAS test case 10.1.2.6.3 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040139 |
| TP-24   | TP-040118 | 309 |     | Addition of NAS test case 10.1.2.4.7 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040099 |
| TP-24   | TP-040118 | 310 |     | Addition of NAS test case 10.1.2.4.8 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040101 |
| TP-24   | TP-040118 | 311 |     | Addition of NAS test case 10.1.2.9.1 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040107 |
| TP-24   | TP-040118 | 312 |     | Addition of NAS test case 10.1.2.3.1 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040091 |
| TP-24   | TP-040118 | 313 |     | Addition of NAS test case 10.1.2.4.3 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040093 |
| TP-24   | TP-040118 | 314 |     | Addition of NAS test case 9.4.2.3 to NAS ATS V3.4.0  | B   | 3.4.0    | 3.6.0    | T1s040080 |
| TP-24   | TP-040118 | 315 |     | Addition of NAS test case 9.4.8 to NAS ATS V3.4.0  | B   | 3.4.0    | 3.6.0    | T1s040023 |
| TP-24   | TP-040118 | 316 |     | Addition of NAS test case 12.6.1.2 to NAS ATS V3.4.0   | B   | 3.4.0    | 3.6.0    | T1s040016 |
| TP-24   | TP-040119 | 317 |     | Quality of Service (QoS) initialisation when setting up a PS call  | F   | 3.5.1    | 3.6.0    | T1s040320 |
| TP-24   | TP-040119 | 318 |     | Correction to RRC Package 2 TC 8.3.1.4 to stop the timer t_WaitS after receiving expected UTRAN MOBILITY INFORMATION CONFIRM message from UE.                                      | F   | 3.5.1    | 3.6.0    | T1s040322 |
| TP-24   | TP-040119 | 319 |     | Corrections to RRC package 1 and 2 test cases from sections 8.1.x, 8.2.x and 8.3.x to add a delay before SS reconfigures MAC according to the new C-RNTI or U-RNTI assigned to UE. | F   | 3.5.1    | 3.6.0    | T1s040323 |
| TP-24   | TP-040119 | 320 |     | Correction to RRC TC 8.3.1.3 on the contents of CELL UPDATE CONFIRM message  | F   | 3.5.1    | 3.6.0    | T1s040324 |
| TP-24   | TP-040119 | 321 |     | Correction to RRC Package 1 TC 8.1.1.2 and 8.1.1.3 to add delay before switching to CELL_PCH or URA_PCH  | F   | 3.5.1    | 3.6.0    | T1s040321 |
| TP-24   | TP-040119 | 322 |     | Correction to Package 2 GMM test case 12.2.1.3 for supporting USIM removal without power off   | F   | 3.5.2    | 3.6.0    | T1s040289 |
| TP-24   | TP-040119 | 323 |     | Correction to Package 3 NAS CC test cases 10_1_2_5_5, 10_1_2_6_2 and 10_1_2_7_2 to validate the current TI value.  | F   | 3.5.1    | 3.6.0    | T1s040297 |
| TP-24   | TP-040119 | 324 |     | Correction to Package 3 NAS CC test cases 10.1.2.6.6; introducing PIXIT parameter for UE Call waiting support.   | F   | 3.5.1    | 3.6.0    | T1s040298 |
| TP-24   | TP-040119 | 325 |     | Correction to Package 1 SM test case 11.1.1.1 in handling Modify PDP Context procedure.  | F   | 3.5.1    | 3.6.0    | T1s040299 |
| TP-24   | TP-040119 | 326 |     | Correction to Radio Bearer setup message for Package 1 RAB test case 14.2.13.1 and package 2 RAB test case 14.2.15.  | F   | 3.5.1    | 3.6.0    | T1s040300 |
| TP-24   | TP-040119 | 327 |     | Correction to Package 3 RAB test case 14.2.14.1 Radio Bearer setup in the SS.  | F   | 3.5.1    | 3.6.0    | T1s040301 |
| TP-24   | TP-040119 | 328 |     | Correction to RRC TC 8.2.2.18 and 8.2.2.17 on contents of radio bearer reconfiguration message and comments in test steps of TC 8.2.2.18.  | F   | 3.5.1    | 3.6.0    | T1s040302 |
| TP-24   | TP-040119 | 329 |     | Correction to RRC Package 2 TC 8.3.1.3 to delete the Radio Bearer BCCH mapped to FACH(RB_BCCH_FACH) in the old cell before configuring in the new cell.                            | F   | 3.5.1    | 3.6.0    | T1s040303 |



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| TP-24   | TP-040119 | 330 |     | Correction to Package 3 NAS MM test case 9.4.2.2.2 to disable cell C ATT flag   | F   | 3.5.1    | 3.6.0    | T1s040304 |
| TP-24   | TP-040119 | 331 |     | Correction to Package 2 NAS MM test case 9.4.9; introducing postamble to remove PLMN2 from USIM forbidden PLMN list.  | F   | 3.5.2    | 3.6.0    | T1s040305 |
| TP-24   | TP-040119 | 332 |     | Modification to RLC 7.2.3.33 TTCN to meet Test Procedure 'f' in Prose 34.123-1-571.   | F   | 3.5.1    | 3.6.0    | T1s040306 |
| TP-24   | TP-040119 | 333 |     | Correction to Package 3 NAS CC test case 10.1.2.7.3 for assigning FAIL verdict on receiving unexpected RELEASE message.   | F   | 3.5.1    | 3.6.0    | T1s040288 |
| TP-24   | TP-040119 | 334 |     | Correction to RRC TC 8.2.2.10 on contents of radio bearer reconfiguration message.  | F   | 3.5.1    | 3.6.0    | T1s040291 |
| TP-24   | TP-040119 | 335 |     | Correction to RRC Package 2 TC 8.4.1.16 and 8.4.1.17 for contents of SIB 11 and Measurement reporting Interval.   | F   | 3.5.1    | 3.6.0    | T1s040292 |
| TP-24   | TP-040119 | 336 |     | Correction to common test step "ts_SS_2_FACH_1_RACH_ModifyDCH_Cfg" of RRC ATS to release unused RLC entity, related to test cases 8.4.1.18 and 8.4.1.19                               | F   | 3.5.1    | 3.6.0    | T1s040293 |
| TP-24   | TP-040119 | 337 |     | Correction to Package 1 SM TC 11.1.1.1, 11.3.1 and 11.3.2 to harmonize the timer handling and to account for T1-040514, T1s040243 and T1s040244 concerning RAB release and detaching. | F   | 3.5.1    | 3.6.0    | T1s040287 |
| TP-24   | TP-040119 | 338 |     | Correction to Approved Package 1 TC 11.1.1.1  | F   | 3.5.0    | 3.6.0    | T1S040284 |
| TP-24   | TP-040119 | 339 |     | Correction to package 2 TC 9.1 to handle PS attach and detach.  | F   | 3.5.2    | 3.6.0    | T1s040282 |
| TP-24   | TP-040119 | 340 |     | Correction to Approved RRC Package 1 TC 8.4.1.1   | F   | 3.5.0    | 3.6.0    | T1s040279 |
| TP-24   | TP-040119 | 341 |     | Changes to the test step ts_CC_InitTCV_MO   | F   | 3.5.1    | 3.6.0    | T1s040277 |
| TP-24   | TP-040119 | 342 |     | Correction to Package 1 GMM test case 12.3.1.2 for P-TMSI signature check at Step 12.   | F   | 3.5.1    | 3.6.0    | T1s040278 |
| TP-24   | TP-040119 | 343 |     | Regression error corrections to wk12 and wk15.  | F   | 3.5.1    | 3.6.0    | T1s040274 |
| TP-24   | TP-040119 | 344 |     | Correction to Package 2 MM TC 9.4.9 to handle situation when pc_PS is TRUE also.  | F   | 3.5.2    | 3.6.0    | T1s040273 |
| TP-24   | TP-040119 | 345 |     | Correction to GFC P1 RAB test case 14.2.4   | F   | 3.5.1    | 3.6.0    | T1s040272 |
| TP-24   | TP-040119 | 346 |     | Correction to GFC P3 RAB test cases 14.2.26 and 14.2.27   | F   | 3.5.1    | 3.6.0    | T1s040251 |
| TP-24   | TP-040119 | 347 |     | Correction to Approved RRC Package 1 TC 8.3.4.2 and 8.3.4.3   | F   | 3.5.0    | 3.6.0    | T1s040235 |
| TP-24   | TP-040119 | 348 |     | Correction to Approved RRC Package 1 TC 8.3.4.1   | F   | 3.5.0    | 3.6.0    | T1s040224 |
| TP-24   | TP-040119 | 349 |     | Correction to RRC Package 2 TC 8.2.2.7 for radio bearer messages with specified IEs and correction of default PS RAB and SRBs RLC configurations in RRC ATS. (Revision of T1s040165). | F   | 3.4.0    | 3.6.0    | T1s040219 |
| TP-24   | TP-040119 | 350 |     | Correction to NAS Package 1 TC 12.5 for selecting UE operation mode C only when mode A not supported and validating RRC connection establishment cause                                | F   | 3.4.0    | 3.6.0    | T1s040220 |
| TP-24   | TP-040119 | 351 |     | Correction to RRC Package 1 TC 8.1.2.1 modification to UE system specific capabilities (Revision of T1s040078).   | F   | 3.4.0    | 3.6.0    | T1s040221 |
| TP-24   | TP-040119 | 352 |     | Error correction lists to iWD-wk04 and iWD-wk07   | F   | 3.4.0    | 3.6.0    | T1s040188 |
| TP-24   | TP-040119 | 353 |     | TTCN corrections to Generic Setup Procedures  | F   | 3.4.0    | 3.6.0    | T1s040189 |
| TP-24   | TP-040119 | 354 |     | General correction to approved GCF P1 (Cell FACH) MAC test cases  | F   | 3.4.0    | 3.6.0    | T1s040185 |
| TP-24   | TP-040119 | 355 |     | Correction to RRC Package 1 TC 8.2.1.8 and 8.2.1.9 for the mismatch between Radio Bearer setup and PDP context Activation Request message (Revision of T1s040071).                    | F   | 3.4.0    | 3.6.0    | T1s040163 |
| TP-24   | TP-040119 | 356 |     | Modification to ATT flag usage in TC 12.3.1.5. (Re-submission of T1-031923 on v3.4.0)   | F   | 3.4.0    | 3.6.0    | T1s040164 |
| TP-24   | TP-040119 | 357 |     | Corrections to RRC Package 1 TC 8.1.2.9 to modify timers and RRC Setup Request Constraints  | F   | 3.4.0    | 3.6.0    | T1s040077 |
| TP-24   | TP-040119 | 358 |     | Corrections to Package 1 test case tc_8_1_1_1   | F   | 3.4.0    | 3.6.0    | T1s040079 |
| TP-24   | TP-040123 | 359 |     | Updating Annex A  | F   | 3.5.2    | 3.6.0    | -         |
| TP-25   | TP-040162 | 359 |     | ASP updating and other corrections  | F   | 3.6.1    | 3.7.0    | T1-041407 |
| TP-25   | TP-040149 | 360 | -   | Addition of GCF P3 test case 16.1.1 to SMS ATS V3.5.1   | B   | 3.5.1    | 3.7.0    | T1s040264 |
| TP-25   | TP-040149 | 361 | -   | Addition of GCF P3 test case 16.1.9.1 to SMS ATS V3.5.1   | B   | 3.5.1    | 3.7.0    | T1s040307 |
| TP-25   | TP-040149 | 362 | -   | Addition of GCF P3 test case 16.1.9.2 to SMS ATS V3.5.1   | B   | 3.6.1    | 3.7.0    | T1s040309 |
| TP-25   | TP-040149 | 363 | -   | Addition of GCF P3 test case 16.1.10 to SMS ATS V3.5.1  | B   | 3.6.1    | 3.7.0    | T1s040311 |

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| TP-25   | TP-040149 | 364 | -   | Addition of GCF P3 test case 16.2.1 to SMS ATS V3.6.1   | B   | 3.5.1    | 3.7.0    | T1s040313 |
| TP-25   | TP-040149 | 365 | -   | Addition of GCF P3 test case 16.2.2 to SMS ATS V3.5.1   | B   | 3.6.1    | 3.7.0    | T1s040315 |
| TP-25   | TP-040149 | 366 | -   | Addition of GCF P3 test case 16.2.10 to SMS ATS V3.5.1  | B   | 3.6.0    | 3.7.0    | T1s040317 |
| TP-25   | TP-040149 | 367 | -   | Addition of P2 NAS test case 9.4.2.4 proc 2 to NAS ATS V3.5.1 (revision of T1-040109)                                   | B   | 3.6.0    | 3.7.0    | T1s040329 |
| TP-25   | TP-040149 | 368 | -   | Addition of NAS test case 12.4.2.5a.2 to NAS ATS V3.5.1   | B   | 3.5.1    | 3.7.0    | T1s040337 |
| TP-25   | TP-040149 | 369 | -   | Revised CR for addition of GCF P3 test case 8.2.4.1a to RRC ATS V3.5.1  | B   | 3.5.1    | 3.7.0    | T1s040339 |
| TP-25   | TP-040149 | 370 | -   | Revised CR for Addition of P2 test case 6.2.1.1 to IR_U ATS v3.5.1 (Revision of T1s040325)                              | B   | 3.6.1    | 3.7.0    | T1s040345 |
| TP-25   | TP-040149 | 371 | -   | Revised CR for Addition of P2 test case 6.2.1.6 to IR_U ATS v3.5.1 (Revision of T1s040327)                              | B   | 3.5.1    | 3.7.0    | T1s040346 |
| TP-25   | TP-040149 | 372 | -   | Addition of RRC test case 8.4.1.40 to RRC ATS V3.5.1  | B   | 3.5.1    | 3.7.0    | T1s040352 |
| TP-25   | TP-040149 | 373 | -   | Addition of RRC Package 3 test case 8.4.1.33 to IR_U ATS V3.5.1   | B   | 3.5.1    | 3.7.0    | T1s040358 |
| TP-25   | TP-040149 | 374 | -   | Revised CR for addition of GCF P3 test case 16.1.2 to SMS ATS V3.5.1  | B   | 3.6.1    | 3.7.0    | T1s040360 |
| TP-25   | TP-040149 | 375 | -   | Revised CR for the addition of GCF P3 test case 8.4.1.35 to IR_U ATS V3.5.1   | B   | 3.6.1    | 3.7.0    | T1s040361 |
| TP-25   | TP-040149 | 376 | -   | CR for the addition of GCF P3 test case 8.4.1.36 to IR_U ATS V3.6.1   | B   | 3.6.1    | 3.7.0    | T1s040364 |
| TP-25   | TP-040149 | 377 | -   | Addition of GCF P3 test case 8.3.2.12 to RRC ATS V3.6.1   | B   | 3.6.1    | 3.7.0    | T1s040385 |
| TP-25   | TP-040149 | 378 | -   | Addition of RAB Package 3 test case 14.2.57 to RAB ATS V3.6.1   | B   | 3.6.1    | 3.7.0    | T1s040387 |
| TP-25   | TP-040149 | 379 | -   | Addition of GCF P3 test case 14.2.58 to RAB ATS V3.6.1  | B   | 3.6.1    | 3.7.0    | T1s040395 |
| TP-25   | TP-040149 | 380 | -   | Addition of GCF P1 test cases 8.1.7.1 to RRC ATS v3.6.1   | B   | 3.6.1    | 3.7.0    | T1s040398 |
| TP-25   | TP-040149 | 381 | -   | Addition of GCF P1 test case 8.1.7.2 to RRC ATS v3.6.1  | B   | 3.5.1    | 3.7.0    | T1s040400 |
| TP-25   | TP-040149 | 382 | -   | Addition of RAB Package 2 test case 14.4.2.1 to RAB ATS V3.6.1  | B   | 3.5.1    | 3.7.0    | T1s040430 |
| TP-25   | TP-040149 | 383 | -   | Addition of RAB Package 3 test case 14.2.38a to RAB ATS V3.6.1  | B   | 3.5.1    | 3.7.0    | T1s040432 |
| TP-25   | TP-040149 | 384 | -   | Addition of RAB Package 3 test case 14.2.38e to RAB ATS V3.6.1  | B   | 3.5.1    | 3.7.0    | T1s040433 |
| TP-25   | TP-040149 | 385 | -   | Addition of RAB Package 2 test case 14.4.2.2 to RAB ATS V3.6.1  | B   | 3.5.1    | 3.7.0    | T1s040462 |
| TP-25   | TP-040149 | 386 | -   | Addition of RAB Package 2 test case 14.4.2.3 to RAB ATS V3.6.1  | B   | 3.6.1    | 3.7.0    | T1s040464 |
| TP-25   | TP-040149 | 387 | -   | Addition of RAB test case 14.2.51.1 to RAB ATS V3.6.0   | B   | 3.6.0    | 3.7.0    | T1s040466 |
| TP-25   | TP-040149 | 388 | -   | Addition of RAB test case 14.2.51a.1 to RAB ATS V3.6.0  | B   | 3.6.0    | 3.7.0    | T1s040468 |
| TP-25   | TP-040149 | 389 | -   | Addition of P3 test case 8.4.1.27 to RRC ATS V3.6.1   | B   | 3.6.1    | 3.7.0    | T1s040470 |
| TP-25   | TP-040149 | 390 | -   | Revision CR to introduce GCF P3 Test Case 8.4.1.24 to ATS v3.6.0  | B   | 3.5.1    | 3.7.0    | T1s040482 |
| TP-25   | TP-040149 | 391 | -   | Revision CR to introduce GCF P3 Test Case 8.4.1.25 to ATS v3.6.0  | B   | 3.5.1    | 3.7.0    | T1s040483 |
| TP-25   | TP-040149 | 392 | -   | Addition of NAS test case 9.4.7 to NAS ATS V3.6.0   | B   | 3.6.1    | 3.7.0    | T1s040513 |
| TP-25   | TP-040149 | 393 | -   | Addition of GCF P3 test case 8.4.1.34 to IR_U ATS v3.6.1  | B   | 3.6.1    | 3.7.0    | T1s040479 |
| TP-25   | TP-040148 | 394 | -   | TTCN correction to P2 test case 8.1.10.1  | F   | 3.5.2    | 3.7.0    | T1s040236 |
| TP-25   | TP-040148 | 395 | -   | Correction to Approved RRC Package 1 TC 8.3.1.1   | F   | 3.5.1    | 3.7.0    | T1s040334 |
| TP-25   | TP-040148 | 396 | -   | Correction to Package 2 NAS MM test case 9.4.2.2.1 to validate of LOCATION UPDATE REQUEST message and disable ATT flag. | F   | 3.5.1    | 3.7.0    | T1s040335 |
| TP-25   | TP-040148 | 397 | -   | Correction to RRC Package 2 TC 8.4.1.18 and TC 8.4.1.19 for inconsistency in System Information Block 12.               | F   | 3.5.1    | 3.7.0    | T1s040336 |
| TP-25   | TP-040148 | 398 | -   | Correction to Approved Package 1 RRC TC 8.1.2.2   | F   | 3.5.1    | 3.7.0    | T1s040341 |
| TP-25   | TP-040148 | 399 | -   | Corrections to RRC test case 6.2.1.1  | F   | 3.5.1    | 3.7.0    | T1s040347 |
| TP-25   | TP-040148 | 400 | -   | Corrections to RRC test case 6.2.1.6  | F   | 3.5.1    | 3.7.0    | T1s040349 |
| TP-25   | TP-040148 | 401 | -   | Correction to Approved RRC Package 1 TC 8.3.4.2   | F   | 3.5.0    | 3.7.0    | T1s040351 |
| TP-25   | TP-040148 | 402 | -   | Correction to Approved RRC Package 2 TC 8.2.4.3   | F   | 3.5.0    | 3.7.0    | T1s040363 |
| TP-25   | TP-040148 | 403 | -   | Correction to Approved RRC Package 1 TC 8.3.4.3   | F   | 3.6.0    | 3.7.0    | T1s040366 |

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| TP-25   | TP-040148 | 404 | -   | Regression error corrections to wk17, wk20 and wk23.  | F   | 3.6.1    | 3.7.0    | T1s040367 |
| TP-25   | TP-040148 | 405 | -   | TTCN Correction to GCF P2 IR_U 8.3.7.1 & 8.3.7.4  | F   | 3.6.0    | 3.7.0    | T1s040374 |
| TP-25   | TP-040148 | 406 | -   | Correction to Package 2 NAS CCMM test cases 9.4.8; for removal of 'USIM removal possible while UE is powered' support.                                  | F   | 3.6.1    | 3.7.0    | T1s040375 |
| TP-25   | TP-040148 | 407 | -   | Correction to RRC TC 8.3.2.4 on value of the wait timer started for the UE to enter Idle mode.  | F   | 3.6.1    | 3.7.0    | T1s040376 |
| TP-25   | TP-040148 | 408 | -   | Correction to RRC Package 2 TC 8.2.1.9 to handle cell update before configuring radio bearer from DCH to FACH.  | F   | 3.6.1    | 3.7.0    | T1s040377 |
| TP-25   | TP-040148 | 409 | -   | Correction to RRC TC 8.2.6.19 and 8.2.6.20 to add delay before switching to CELL_PCH/URA_PCH  | F   | 3.6.1    | 3.7.0    | T1s040378 |
| TP-25   | TP-040148 | 410 | -   | Correction to Package 3 RAB test case 14.2.27, 14.2.29, 14.2.31.1 and 14.2.32.1 for the dl_TxPower in DL DPCH Info during Radio Bearer Setup at the SS. | F   | 3.6.1    | 3.7.0    | T1s040383 |
| TP-25   | TP-040148 | 411 | -   | Correction to Package 2 RAB test case 14.4.3  | F   | 3.6.1    | 3.7.0    | T1s040384 |
| TP-25   | TP-040148 | 412 | -   | Correction to test steps "ts_ReceiveFirstSDUs_RB10" and "ts_ReceiveFirstSDUs_RB13" of Package 3 RAB test case 14.2.49.1                                 | F   | 3.6.1    | 3.7.0    | T1s040389 |
| TP-25   | TP-040148 | 413 | -   | Correction to GMM Package 2 approved TC 12.6.1.2 in handling Attach procedure.  | F   | 3.6.1    | 3.7.0    | T1s040402 |
| TP-25   | TP-040148 | 414 | -   | Delay to ensure the proper transmission of Cell Update Confirm in 8.3.4.2.  | F   | 3.6.1    | 3.7.0    | T1s040403 |
| TP-25   | TP-040148 | 415 | -   | Guard timer setting if registration is made to a PLMN different from the normal one   | F   | 3.6.1    | 3.7.0    | T1s040420 |
| TP-25   | TP-040148 | 416 | -   | Correction to RRC Package 2 TC 8.3.1.31.  | F   | 3.6.1    | 3.7.0    | T1s040422 |
| TP-25   | TP-040148 | 417 | -   | Correction to Package 2 RAB test case 14.4.3 to assign tcv_CN_Domain.   | F   | 3.6.1    | 3.7.0    | T1s040423 |
| TP-25   | TP-040148 | 418 | -   | Addition of a delay after reception of an RRC Connection Release Complete Message   | F   | 3.6.1    | 3.7.0    | T1s040424 |
| TP-25   | TP-040148 | 419 | -   | General correction for test cases where UE is switched off Cell(s) released and reconfigured  | F   | 3.6.1    | 3.7.0    | T1s040425 |
| TP-25   | TP-040148 | 420 | -   | Corrections to RRC Package 3 TC 8.4.1.29 and 8.4.1.30.  | F   | 3.6.1    | 3.7.0    | T1s040429 |
| TP-25   | TP-040148 | 421 | -   | Correction to RRC TC 8.2.3.8 in ts_RRC_ReceiveRB_SetupCmpl.   | F   | 3.6.1    | 3.7.0    | T1s040478 |
| TP-25   | TP-040148 | 422 | -   | Correction to Approved RRC Package 2 TC 8.3.1.22  | F   | 3.6.0    | 3.7.0    | T1s040426 |
| TP-25   | TP-040148 | 423 | -   | TTCN Correction to test case 8.4.1.1 to RRC ATS V3.6.0  | F   | 3.6.0    | 3.7.0    | T1s040390 |
| TP-25   | TP-040167 | 424 | -   | Addition of NAS test case 9.4.3.5 to NAS ATS V3.6.0   | B   | 3.6.0    | 3.7.0    | T1s040460 |
| TP-25   | TP-040167 | 425 | -   | Addition of GCF P4 test case 10.1.2.2.1 ATS V3.6.0  | B   | 3.6.0    | 3.7.0    | T1s040410 |
| TP-25   | TP-040167 | 426 | -   | Addition of GCF P4 test case 9.5.5 ATS V3.6.0   | B   | 3.6.0    | 3.7.0    | T1s040408 |
| TP-25   | TP-040167 | 427 | -   | Addition of NAS test case 12.6.1.3.2 to NAS ATS V3.6.0  | B   | 3.6.0    | 3.7.0    | T1s040456 |
| TP-25   | TP-040167 | 428 | -   | Addition of NAS test case 12.9.14 to NAS ATS V3.6.0   | B   | 3.6.0    | 3.7.0    | T1s040458 |
| TP-25   | TP-040167 | 429 | -   | Addition of NAS test case 12.4.1.3 to NAS ATS V3.6.0  | B   | 3.6.0    | 3.7.0    | T1s040452 |
| TP-25   | TP-040167 | 430 | -   | Addition of NAS test case 12.9.3 to NAS ATS V3.6.0  | B   | 3.6.0    | 3.7.0    | T1s040519 |
| TP-25   | TP-040167 | 431 | -   | Addition of NAS test case 12.9.4 to NAS ATS V3.6.0  | B   | 3.6.0    | 3.7.0    | T1s040521 |
| TP-25   | TP-040167 | 432 | -   | Addition of RRC test case 8.2.2.4 to RRC ATS V3.6.0   | B   | 3.6.0    | 3.7.0    | T1s040515 |
| TP-25   | TP-040167 | 433 | -   | Addition of RRC test case 8.2.6.12 to RRC ATS V3.6.0  | B   | 3.6.0    | 3.7.0    | T1s040517 |
| TP-25   | TP-040167 | 434 | -   | Addition of RAB test case 14.2.38c to RAB ATS V3.6.0  | B   | 3.6.0    | 3.7.0    | T1s040527 |
| TP-25   | TP-040167 | 435 | -   | Addition of RAB test case 14.2.38f to RAB ATS V3.6.0  | B   | 3.6.0    | 3.7.0    | T1s040529 |
| TP-25   | TP-040167 | 436 | -   | Addition of RAB test case 14.2.40 to RAB ATS V3.6.0   | B   | 3.6.0    | 3.7.0    | T1s040523 |
| TP-25   | TP-040167 | 437 | -   | Addition of RAB test case 14.2.41 to RAB ATS V3.6.0   | B   | 3.6.0    | 3.7.0    | T1s040525 |
| TP-25   | TP-040167 | 438 | -   | Addition of RRC Package 4 test case 8.1.3.5 to RRC ATS V3.6.1   | B   | 3.6.1    | 3.7.0    | T1s040500 |
| TP-25   | TP-040167 | 439 | -   | Addition of RRC Package 4 test case 8.2.1.4 to RRC ATS V3.6.1   | B   | 3.6.1    | 3.7.0    | T1s040502 |
| TP-25   | TP-040167 | 440 | -   | Addition of RRC Package 4 test case 8.2.1.7 to RRC ATS V3.6.1   | B   | 3.6.1    | 3.7.0    | T1s040504 |
| TP-25   | TP-040167 | 441 | -   | Addition of RRC Package 4 test case 8.1.2.3 to RRC ATS V3.6.1   | B   | 3.6.1    | 3.7.0    | T1s040498 |
| TP-25   | TP-040167 | 442 | -   | Addition of P4 RRC test case 8.3.2.9  | B   | 3.6.1    | 3.7.0    | T1s040495 |
| TP-25   | TP-040167 | 443 | -   | Addition of P4 RRC test case 8.2.6.2  | B   | 3.6.1    | 3.7.0    | T1s040573 |
| TP-25   | TP-040167 | 444 | -   | Addition of P4 RRC test case 8.3.1.17   | B   | 3.6.1    | 3.7.0    | T1s040493 |
| TP-25   | TP-040167 | 445 | -   | Addition of P4 RRC test case 8.1.6.1  | B   | 3.6.1    | 3.7.0    | T1s040489 |

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| TP-25   | TP-040167 | 446  | -   | Addition of GCF P4 test case 8.3.1.12 to RRC ATS V3.6.0                            | B   | 3.6.0    | 3.7.0    | T1s040446 |
| TP-25   | TP-040167 | 447  | -   | Addition of GCF P4 test case 8.2.6.11 to RRC ATS V3.6.0                            | B   | 3.6.0    | 3.7.0    | T1s040444 |
| TP-25   | TP-040167 | 448  | -   | Addition of GCF P4 test case 9.5.4 ATS V3.6.0                                      | B   | 3.6.0    | 3.7.0    | T1s040440 |
| TP-25   | TP-040167 | 449  | -   | Addition of P3 test case 8.4.1.37 to RRC ATS V3.6.1                                | B   | 3.6.1    | 3.7.0    | T1s040474 |
| TP-25   | TP-040167 | 450  | -   | Addition of P3 test case 8.4.1.38 to RRC ATS V3.6.1                                | B   | 3.6.1    | 3.7.0    | T1s040476 |
| TP-25   | TP-040167 | 451  | -   | Addition of GCF P4 test case 12.2.1.2 ATS V3.6.0                                   | B   | 3.6.0    | 3.7.0    | T1s040450 |
| TP-25   | TP-040167 | 452  | -   | Addition of RAB Package 3 test case 14.2.38b to RAB ATS V3.6.1                     | B   | 3.6.1    | 3.7.0    | T1s040533 |
| TP-25   | TP-040167 | 453  | -   | Modification to MAC Package 2 test case 7.1.3.1                                    | F   | 3.6.1    | 3.7.0    | T1s040531 |
| TP-25   | TP-040167 | 454  | -   | Correction to NAS test cases 9.4.2.3 (P2), 9.4.2.4 Proc 2 (P2), and 12.4.1.1a (P1) | F   | 3.6.1    | 3.7.0    | T1s040514 |
| TP-25   | TP-040167 | 455  | -   | Correction to Package 3 SMS test case 16.2.1.                                      | F   | 3.6.1    | 3.7.0    | T1s040497 |
| TP-25   | TP-040167 | 456  | -   | Correction to GCF P1 test case 8.3.1.1   | F   | 3.6.0    | 3.7.0    | T1s040484 |
| TP-25   | TP-040193 | 460  | -   | Updating Annex A   | F   | 3.6.1    | 3.7.0    | -         |
| TP-26   | TP-040237 | 461  | -   | ASP update and other corrections   | F   | 3.7.0    | 3.8.0    | T1-041975 |
| TP-26   | TP-040237 | 462  | -   | Addition of AT command lists used in ATSSs   | F   | 3.7.0    | 3.8.0    | T1-041976 |
| TP-26   | TP-040237 | 463  | -   | ASP change for Radio Link Modification   | F   | 3.7.0    | 3.8.0    | T1-041694 |
| TP-26   | TP-040241 | 1050 | -   | Addition of GCF P4 test case 8.2.2.35 to RRC ATS V3.7.0                            | B   | 3.7.0    | 3.8.0    | T1s040743 |
| TP-26   | TP-040241 | 1051 | -   | Addition of RRC test case 8.3.1.18 to RRC ATS V3.7.0                               | B   | 3.7.0    | 3.8.0    | T1s040448 |
| TP-26   | TP-040241 | 1052 | -   | Addition of GCF P1 test case 8.4.1.5 to RRC ATS v3.7.0                             | B   | 3.7.0    | 3.8.0    | T1s040739 |
| TP-26   | TP-040241 | 1053 | -   | Addition of GCF P4 test case 8.1.7.1d to RRC ATS v3.7.0                            | B   | 3.7.0    | 3.8.0    | T1s040717 |
| TP-26   | TP-040241 | 1054 | -   | Addition of RRC Package 3 test case 6.1.1.5 to RRC ATS V3.7.0                      | B   | 3.7.0    | 3.8.0    | T1s040698 |
| TP-26   | TP-040241 | 1055 | -   | Addition of GCF P4 test case 12.2.1.4.1 ATS V3.7.0                                 | B   | 3.7.0    | 3.8.0    | T1s040690 |
| TP-26   | TP-040241 | 1056 | -   | Addition of GCF P4 test case 12.4.1.4a ATS V3.7.0                                  | B   | 3.7.0    | 3.8.0    | T1s040679 |
| TP-26   | TP-040241 | 1057 | -   | Addition of RRC test case 8.2.3.29 to RRC ATS V3.7.0 (Revision of T1s040688)       | B   | 3.7.0    | 3.8.0    | T1s040703 |
| TP-26   | TP-040241 | 1058 | -   | Changes to GCF package 2 IR_U test case 12.8 required for approval                 | B   | 3.7.0    | 3.8.0    | T1s040615 |
| TP-26   | TP-040241 | 1059 | -   | Addition of P4 test case 8.3.11.1 to IR_U ATS v3.7.0, (Revision of T1s040633).     | B   | 3.7.0    | 3.8.0    | T1s040684 |
| TP-26   | TP-040241 | 1060 | -   | Addition of GCF P4 test cases 8.1.7.1c to RRC ATS v3.7.0                           | B   | 3.7.0    | 3.8.0    | T1s040677 |
| TP-26   | TP-040241 | 1061 | -   | Correction to Package 4 test case 12.9.7b ATS V3.7.0                               | B   | 3.7.0    | 3.8.0    | T1s040674 |
| TP-26   | TP-040241 | 1062 | -   | Addition of GCF P4 test case 12.4.1.4b ATS V3.7.0                                  | B   | 3.7.0    | 3.8.0    | T1s040628 |
| TP-26   | TP-040241 | 1063 | -   | Correction to Package 4 GMM test case 12.4.1.1b (Revised CR T1s040467)             | B   | 3.7.0    | 3.8.0    | T1s040656 |
| TP-26   | TP-040241 | 1064 | -   | Addition of RRC test case 8.3.1.24 to RRC ATS V3.7.0                               | B   | 3.7.0    | 3.8.0    | T1s040671 |
| TP-26   | TP-040241 | 1065 | -   | Addition of RRC test case 8.3.2.2 to RRC ATS V3.7.0                                | B   | 3.7.0    | 3.8.0    | T1s040669 |
| TP-26   | TP-040241 | 1066 | -   | Addition of NAS test case 12.4.1.4c2 to NAS ATS V3.7.0                             | B   | 3.7.0    | 3.8.0    | T1s040664 |
| TP-26   | TP-040241 | 1067 | -   | Addition of RRC test case 8.3.1.25 to RRC ATS V3.7.0                               | B   | 3.7.0    | 3.8.0    | T1s040658 |
| TP-26   | TP-040241 | 1068 | -   | Addition of NAS test case 12.6.1.3.3 to NAS ATS V3.7.0                             | B   | 3.7.0    | 3.8.0    | T1s040651 |
| TP-26   | TP-040241 | 1069 | -   | Addition of RRC test case 8.3.2.13 to RRC ATS V3.7.0                               | B   | 3.7.0    | 3.8.0    | T1s040653 |
| TP-26   | TP-040241 | 1070 | -   | Addition of P4 test case 8.1.3.4 to the RRC ATS V3.7.0                             | B   | 3.7.0    | 3.8.0    | T1s040649 |
| TP-26   | TP-040241 | 1071 | -   | Addition of P4 test case 8.3.7.13 to IR_U ATS v3.7.0                               | B   | 3.7.0    | 3.8.0    | T1s040638 |
| TP-26   | TP-040241 | 1072 | -   | Addition of P4 test case 8.3.7.7 to IR_U ATS v3.7.0                                | B   | 3.7.0    | 3.8.0    | T1s040640 |
| TP-26   | TP-040241 | 1073 | -   | Addition of NAS test case 12.9.8 to NAS ATS V3.7.0                                 | B   | 3.7.0    | 3.8.0    | T1s040613 |
| TP-26   | TP-040241 | 1074 | -   | Addition of NAS test case 12.4.1.4d1 to NAS ATS V3.7.0                             | B   | 3.7.0    | 3.8.0    | T1s040635 |
| TP-26   | TP-040241 | 1075 | -   | Addition of P2 test case 6.2.1.9 to IR_U ATS v3.7.0                                | B   | 3.7.0    | 3.8.0    | T1s040604 |
| TP-26   | TP-040241 | 1076 | -   | Addition of GCF P4 test case 12.2.1.5b ATS V3.7.0                                  | B   | 3.7.0    | 3.8.0    | T1s040595 |
| TP-26   | TP-040241 | 1077 | -   | Addition of GCF P4 test case 12.9.7c ATS V3.7.0                                    | B   | 3.7.0    | 3.8.0    | T1s040587 |
| TP-26   | TP-040241 | 1078 | -   | Addition of GCF P4 test case 8.2.2.31 to RRC ATS V3.7.0                            | B   | 3.7.0    | 3.8.0    | T1s040485 |
| TP-26   | TP-040241 | 1079 | -   | Addition of RAB Package 4 test case 14.4.2a.3 to RAB ATS V3.7.0                    | B   | 3.7.0    | 3.8.0    | T1s040626 |
| TP-26   | TP-040241 | 1080 | -   | Addition of RAB Package 4 test case 14.4.2a.2 to RAB ATS V3.7.0                    | B   | 3.7.0    | 3.8.0    | T1s040624 |

| Meeting | TSG doc   | CR   | Rev | Subject  | Cat | Old vers | New vers | WG doc    |
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| TP-26   | TP-040241 | 1081 | -   | Addition of RAB Package 4 test case 14.4.2a.1 to RAB ATS V3.7.0  | B   | 3.7.0    | 3.8.0    | T1s040622 |
| TP-26   | TP-040241 | 1082 | -   | Addition of RRC Package 4 test case 8.2.3.11 to RRC ATS V3.7.0   | B   | 3.7.0    | 3.8.0    | T1s040620 |
| TP-26   | TP-040241 | 1083 | -   | Addition of NAS test case 12.4.3.4 to NAS ATS V3.7.0   | B   | 3.7.0    | 3.8.0    | T1s040609 |
| TP-26   | TP-040241 | 1084 | -   | Addition of NAS test case 12.9.6 to NAS ATS V3.7.0   | B   | 3.7.0    | 3.8.0    | T1s040607 |
| TP-26   | TP-040241 | 1085 | -   | Changes to GCF package 4 IR_U test case 8.3.7.9 required for approval.   | B   | 3.7.0    | 3.8.0    | T1s040552 |
| TP-26   | TP-040241 | 1086 | -   | Changes to GCF package 4 IR_U test case 8.3.7.5 required for approval.   | B   | 3.7.0    | 3.8.0    | T1s040548 |
| TP-26   | TP-040241 | 1087 | -   | Addition of GCF P4 test case 12.4.1.2 ATS V3.6.0   | B   | 3.7.0    | 3.8.0    | T1s040585 |
| TP-26   | TP-040241 | 1088 | -   | Addition of GCF P4 test case 10.1.2.2.3 ATS V3.6.0   | B   | 3.7.0    | 3.8.0    | T1s040412 |
| TP-26   | TP-040241 | 1089 | -   | Addition of GCF P4 test case 9.5.7.1 ATS V3.6.0  | B   | 3.7.0    | 3.8.0    | T1s040404 |
| TP-26   | TP-040241 | 1090 | -   | Addition of GCF P4 test cases 8.1.12 to RRC ATS v3.6.1   | B   | 3.7.0    | 3.8.0    | T1s040602 |
| TP-26   | TP-040241 | 1091 | -   | Addition of GCF P4 test cases 8.1.7.1b to RRC ATS v3.6.1   | B   | 3.7.0    | 3.8.0    | T1s040600 |
| TP-26   | TP-040241 | 1092 | -   | Addition of GCF P4 test case 12.2.1.6.2 ATS V3.6.0   | B   | 3.7.0    | 3.8.0    | T1s040436 |
| TP-26   | TP-040241 | 1093 | -   | Addition of GCF P4 test case 12.2.1.5a.1 ATS V3.6.0  | B   | 3.7.0    | 3.8.0    | T1s040434 |
| TP-26   | TP-040241 | 1094 | -   | Addition of GCF P4 test case 8.3.1.15 to RRC ATS V3.6.0  | B   | 3.7.0    | 3.8.0    | T1s040487 |
| TP-26   | TP-040241 | 1095 | -   | Addition of GCF P4 test case 8.1.2.4 ATS V3.6.0  | B   | 3.7.0    | 3.8.0    | T1s040442 |
| TP-26   | TP-040241 | 1096 | -   | Addition of NAS test case 12.4.1.4d2 to NAS ATS V3.6.0   | B   | 3.7.0    | 3.8.0    | T1s040579 |
| TP-26   | TP-040241 | 1097 | -   | Addition of GCF P3 test case 6.1.1.7 ATS V3.6.0  | B   | 3.7.0    | 3.8.0    | T1s040427 |
| TP-26   | TP-040241 | 1098 | -   | Addition of GCF P3 test case 12.4.2.5a.1 ATS V3.6.0  | B   | 3.7.0    | 3.8.0    | T1s040472 |
| TP-26   | TP-040241 | 1099 | -   | Re-submission of GCF package 2 IR_U test case 6.2.2.1 for approval.  | B   | 3.7.0    | 3.8.0    | T1s040534 |
| TP-26   | TP-040241 | 1100 | -   | Addition of RAB test case 14.2.51b.1 to RAB ATS V3.6.0   | B   | 3.7.0    | 3.8.0    | T1s040570 |
| TP-26   | TP-040241 | 1101 | -   | Addition of RRC test case 10.1.2.3.7 to RRC ATS V3.6.1   | B   | 3.7.0    | 3.8.0    | T1s040508 |
| TP-26   | TP-040241 | 1102 | -   | Addition of RRC test case 10.1.2.7.1 to RRC ATS V3.6.1   | B   | 3.7.0    | 3.8.0    | T1s040510 |
| TP-26   | TP-040241 | 1103 | -   | Addition of RRC test case 10.1.2.3.2 to RRC ATS V3.6.1   | B   | 3.7.0    | 3.8.0    | T1s040506 |
| TP-26   | TP-040241 | 1104 | -   | Addition of NAS Package 4 test case 12.2.1.6 Proc1 to NAS ATS V3.6.1   | B   | 3.7.0    | 3.8.0    | T1s040565 |
| TP-26   | TP-040241 | 1105 | -   | Addition of NAS Package 4 test case 12.2.1.4 proc2 to NAS ATS V3.6.1   | B   | 3.7.0    | 3.8.0    | T1s040561 |
| TP-26   | TP-040241 | 1106 | -   | Addition of NAS Package 4 test case 12.2.1.5a Proc2 to NAS ATS V3.6.1  | B   | 3.7.0    | 3.8.0    | T1s040563 |
| TP-26   | TP-040241 | 1107 | -   | Addition of NAS Package 4 test case 12.2.1.10 to NAS ATS V3.6.1  | B   | 3.7.0    | 3.8.0    | T1s040559 |
| TP-26   | TP-040241 | 1108 | -   | Addition of RAB test case 14.2.23a2 to RAB ATS V3.6.0  | B   | 3.7.0    | 3.8.0    | T1s040556 |
| TP-26   | TP-040241 | 1109 | -   | Addition of NAS test case 12.6.1.3.1 to NAS ATS V3.6.0   | B   | 3.7.0    | 3.8.0    | T1s040454 |
| TP-26   | TP-040241 | 1110 | -   | Addition of GCF P2 RRC 8.4.1.7 - Revision of T1s040381   | B   | 3.7.0    | 3.8.0    | T1s040766 |
| TP-26   | TP-040242 | 1111 | -   | Correction to RRC P3 TC 8.4.1.37   | F   | 3.7.0    | 3.8.0    | T1s040735 |
| TP-26   | TP-040242 | 1112 | -   | Correction to RRC P2 TC 8.3.1.31 for the timer value before step 5.  | F   | 3.7.0    | 3.8.0    | T1s040736 |
| TP-26   | TP-040242 | 1113 | -   | Correction to approved GCF P4 test cases 8.1.7.1c  | F   | 3.7.0    | 3.8.0    | T1s040734 |
| TP-26   | TP-040242 | 1114 | -   | Correction to approved package 4 NAS Test case tc_12_6_1_3_2   | F   | 3.7.0    | 3.8.0    | T1s040737 |
| TP-26   | TP-040242 | 1115 | -   | Corrections to RRC Package 1 TC 8.4.1.1.   | F   | 3.7.0    | 3.8.0    | T1s040738 |
| TP-26   | TP-040242 | 1116 | -   | Correction to the RRC default message handler on Dc SAP for Deactivate PDP Context Request message in RRC ATS. | F   | 3.7.0    | 3.8.0    | T1s040731 |
| TP-26   | TP-040242 | 1117 | -   | Correction to TTCN for MultiRAB test cases.  | F   | 3.7.0    | 3.8.0    | T1s040732 |
| TP-26   | TP-040242 | 1118 | -   | Correction to approved package 4 NAS Test case tc_12_6_1_3_1   | F   | 3.7.0    | 3.8.0    | T1s040733 |
| TP-26   | TP-040242 | 1119 | -   | Summary of regression errors in the wk45 ATS.  | F   | 3.7.0    | 3.8.0    | T1s040723 |
| TP-26   | TP-040242 | 1120 | -   | Correction to RRC P4 TC 8.1.7.1b for comments in test steps.   | F   | 3.7.0    | 3.8.0    | T1s040711 |
| TP-26   | TP-040242 | 1121 | -   | Correction to GCF P3 NAS test Cases 13.2.1.1, 13.2.2.1 and 13.2.2.2  | F   | 3.7.0    | 3.8.0    | T1s040712 |
| TP-26   | TP-040242 | 1122 | -   | Correction to GCF P4 NAS test Case 12.2.1.6.2  | F   | 3.7.0    | 3.8.0    | T1s040713 |
| TP-26   | TP-040242 | 1123 | -   | Correction to RAB test case 14.4.2.3 and 14.4.2a.3.  | F   | 3.7.0    | 3.8.0    | T1s040714 |
| TP-26   | TP-040242 | 1124 | -   | Correction to RRC Package 2 TC 8.3.1.3.  | F   | 3.7.0    | 3.8.0    | T1s040722 |

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| TP-26   | TP-040242 | 1125 | -   | Correction to AT Command used for GCF P1 NAS test Case 10.1.2.5.1   | F   | 3.7.0    | 3.8.0    | T1s040724 |
| TP-26   | TP-040242 | 1126 | -   | Correction in TTCN for execution of Opmode C UE.  | F   | 3.7.0    | 3.8.0    | T1s040725 |
| TP-26   | TP-040242 | 1127 | -   | Correction to RRC Package 4 TC 8.1.2.3  | F   | 3.7.0    | 3.8.0    | T1s040726 |
| TP-26   | TP-040242 | 1128 | -   | Correction to RRC test cases 8.1.2.1 and 8.1.2.7  | F   | 3.7.0    | 3.8.0    | T1s040727 |
| TP-26   | TP-040242 | 1130 | -   | Correction to RRC test cases 8.1.3.1, 8.1.3.3, 8.1.3.4 and 8.1.3.5  | F   | 3.7.0    | 3.8.0    | T1s040729 |
| TP-26   | TP-040242 | 1131 | -   | Correction to RRC Package 1 TC 8.1.2.9  | F   | 3.7.0    | 3.8.0    | T1s040730 |
| TP-26   | TP-040242 | 1132 | -   | Correction to Package 2 RRC test case 8.3.1.4   | F   | 3.7.0    | 3.8.0    | T1s040721 |
| TP-26   | TP-040242 | 1133 | -   | Correction to Package 3 RRC inter-RAT measurement test cases 8.4.1.31 + 8.4.1.33 + 8.4.1.34 + 8.4.1.35 + 8.4.1.36 + 8.4.1.40  | F   | 3.7.0    | 3.8.0    | T1s040715 |
| TP-26   | TP-040242 | 1134 | -   | Correction to approved NAS test case 12.9.4   | F   | 3.7.0    | 3.8.0    | T1s040716 |
| TP-26   | TP-040242 | 1135 | -   | Correction to Approved RRC Package 2 TC 8.3.7.2   | F   | 3.7.0    | 3.8.0    | T1s040709 |
| TP-26   | TP-040242 | 1136 | -   | Correction to Approved RRC Package 3 TC 8.2.4.1a  | F   | 3.7.0    | 3.8.0    | T1s040708 |
| TP-26   | TP-040242 | 1137 | -   | Correction to Approved RRC Package 3 TC 8.4.1.31  | F   | 3.7.0    | 3.8.0    | T1s040707 |
| TP-26   | TP-040242 | 1138 | -   | Correction to GCF P2 test cases 6.2.1.1, 6.2.1.6 and 6.2.1.9 to IR_U ATS v3.7.0 to check the displayed PLMN.                  | F   | 3.7.0    | 3.8.0    | T1s040693 |
| TP-26   | TP-040242 | 1139 | -   | Correction to Package 2 RAB test case 14.4.2.2 and 14.4.2.3.  | F   | 3.7.0    | 3.8.0    | T1s040697 |
| TP-26   | TP-040242 | 1140 | -   | Correction to GCF P4 NAS test Case 12.4.1.2 (Revision of T1-040673)   | F   | 3.7.0    | 3.8.0    | T1s040696 |
| TP-26   | TP-040242 | 1141 | -   | Correction of GCF P1 test case 7.2.3.23   | F   | 3.7.0    | 3.8.0    | T1s040694 |
| TP-26   | TP-040242 | 1142 | -   | Global correction of Structured Type Constraints containing wildcards violating coding convention E.3.7                       | F   | 3.7.0    | 3.8.0    | T1s040695 |
| TP-26   | TP-040242 | 1143 | -   | Correction to GCF P4 RRC test Case 8.3.1.15   | F   | 3.7.0    | 3.8.0    | T1s040675 |
| TP-26   | TP-040242 | 1144 | -   | Extension to Guard Timer for Approved NAS GMM Test Cases  | F   | 3.7.0    | 3.8.0    | T1s040692 |
| TP-26   | TP-040242 | 1145 | -   | Correction to RRC TC 8.1.12 for handling correct number of RRC Connection Release Complete message based on the value of N308 | F   | 3.7.0    | 3.8.0    | T1s040687 |
| TP-26   | TP-040242 | 1146 | -   | Corrections Required for the wk42 ATS   | F   | 3.7.0    | 3.8.0    | T1s040682 |
| TP-26   | TP-040242 | 1147 | -   | Corrections to release of SS resources for a cell during test case execution  | F   | 3.7.0    | 3.8.0    | T1s040681 |
| TP-26   | TP-040242 | 1148 | -   | Correction to approved RRC Package 1 8.3.1.1  | F   | 3.7.0    | 3.8.0    | T1s040668 |
| TP-26   | TP-040242 | 1149 | -   | Correction to approved RRC Package 4 TC 8.2.6.11  | F   | 3.7.0    | 3.8.0    | T1s040667 |
| TP-26   | TP-040242 | 1150 | -   | Regression test error corrections to TTCN deliveries of wk40  | F   | 3.7.0    | 3.8.0    | T1s040666 |
| TP-26   | TP-040242 | 1151 | -   | Correction of GCF P1 test case 7.2.3.14   | F   | 3.7.0    | 3.8.0    | T1s040660 |
| TP-26   | TP-040242 | 1152 | -   | Correction of GCF P1 test case 11.1.1.1   | F   | 3.7.0    | 3.8.0    | T1s040661 |
| TP-26   | TP-040242 | 1153 | -   | Correction of GCF P3 SMS test cases 16.1.1, 16.1.2, 16.1.9.1, 16.1.9.2, 16.1.10, 16.2.1, 16.2.2, 16.2.10                      | F   | 3.7.0    | 3.8.0    | T1s040662 |
| TP-26   | TP-040242 | 1154 | -   | Corrections Required for the wk40 ATS   | F   | 3.7.0    | 3.8.0    | T1s040663 |
| TP-26   | TP-040242 | 1155 | -   | Correction to Approved RRC Package 2 TC 8.2.4.3   | F   | 3.7.0    | 3.8.0    | T1s040655 |
| TP-26   | TP-040242 | 1156 | -   | Correction to Package 3 SMS test cases.   | F   | 3.7.0    | 3.8.0    | T1s040637 |
| TP-26   | TP-040242 | 1157 | -   | Correction to approved package 4 NAS Test case tc_12_4_1_4d2  | F   | 3.7.0    | 3.8.0    | T1s040648 |
| TP-26   | TP-040242 | 1158 | -   | Correction to Package 4 NAS test case 12.2.1.2 for increasing the guard timer.  | F   | 3.7.0    | 3.8.0    | T1s040630 |
| TP-26   | TP-040242 | 1159 | -   | Regression error corrections to TTCN deliveries of wk34 and wk37  | F   | 3.7.0    | 3.8.0    | T1s040636 |
| TP-26   | TP-040242 | 1160 | -   | Summary of regression errors in the wk37 ATS.   | F   | 3.7.0    | 3.8.0    | T1s040617 |
| TP-26   | TP-040242 | 1161 | -   | Correction to RRC Package 1 test cases 8.1.7.1 and 8.1.7.2 (Revision of T1s040532)  | F   | 3.7.0    | 3.8.0    | T1s040618 |
| TP-26   | TP-040242 | 1162 | -   | Corrections Required for the wk37 ATS (Revision of T1s040606)   | F   | 3.7.0    | 3.8.0    | T1s040619 |
| TP-26   | TP-040242 | 1163 | -   | Correction to Package 2 RRC test case 8.3.2.11 to increase the timer while waiting for URA Update.                            | F   | 3.7.0    | 3.8.0    | T1s040599 |
| TP-26   | TP-040242 | 1164 | -   | Correction to Approved RRC Package 1 TC 8.1.2.2   | F   | 3.7.0    | 3.8.0    | T1s040584 |
| TP-26   | TP-040242 | 1165 | -   | Radiolink removal and subsequent addition to align the TTCN with 34.123-1   | F   | 3.7.0    | 3.8.0    | T1s040583 |
| TP-26   | TP-040242 | 1166 | -   | TTCN Correction to Test Case 14.2.12 and 14.2.16  | F   | 3.7.0    | 3.8.0    | T1s040581 |
| TP-26   | TP-040242 | 1167 | -   | Correction to Approved RRC Package 2 TC 8.4.1.2   | F   | 3.7.0    | 3.8.0    | T1s040582 |
| TP-26   | TP-040242 | 1168 | -   | Corrections to GCF package 2 IR_U test case 6.2.1.1   | F   | 3.7.0    | 3.8.0    | T1s040536 |
| TP-26   | TP-040242 | 1169 | -   | Corrections to GCF package 2 IR_U test case 6.2.1.6   | F   | 3.7.0    | 3.8.0    | T1s040538 |
| TP-26   | TP-040242 | 1170 | -   | Correction of GCF package 2 IR_U test case 8.3.7.1.   | F   | 3.7.0    | 3.8.0    | T1s040540 |
| TP-26   | TP-040242 | 1171 | -   | Correction of GCF package 2 IR_U test case 8.3.7.2.   | F   | 3.7.0    | 3.8.0    | T1s040542 |
| TP-26   | TP-040242 | 1172 | -   | Correction of GCF package 2 IR_U test case 8.3.7.3.   | F   | 3.7.0    | 3.8.0    | T1s040544 |
| TP-26   | TP-040242 | 1173 | -   | Correction of GCF package 2 IR_U test case 8.3.7.4.   | F   | 3.7.0    | 3.8.0    | T1s040546 |
| TP-26   | TP-040242 | 1174 | -   | Correction of GCF package 2 IR_U test case 8.4.1.40.  | F   | 3.7.0    | 3.8.0    | T1s040554 |

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| TP-26   | TP-040242 | 1175 | -   | TTCN changes to approved package 1 RRC testcase 8.4.1.3   | F   | 3.7.0    | 3.8.0    | T1s040576 |
| TP-26   | TP-040242 | 1176 | -   | Correction to MultiRAB test cases 14.2.38a, 14.2.38b and 14.2.38e   | F   | 3.7.0    | 3.8.0    | T1s040575 |
| TP-26   | TP-040242 | 1177 | -   | Correction to Approved RRC Package 2 TC 8.4.1.2   | F   | 3.7.0    | 3.8.0    | T1s040572 |
| TP-26   | TP-040242 | 1178 | -   | Addition of verdicts in RRC default message handler on Dc SAP for Deactivate PDP Context Request message in RRC ATS.(Revision of T1s040512) | F   | 3.7.0    | 3.8.0    | T1s040569 |
| TP-26   | TP-040242 | 1179 | -   | Regression error corrections to TTCN deliveries of wk26 and wk31  | F   | 3.7.0    | 3.8.0    | T1s040558 |
| TP-26   | TP-040242 | 1180 | -   | Modification to MAC Package 2 test case 7.1.3.1   | F   | 3.7.0    | 3.8.0    | T1s040531 |
| TP-26   | TP-040242 | 1181 | -   | Correction to NAS test cases 9.4.2.3 (P2), 9.4.2.4 Proc 2 (P2), and 12.4.1.1a (P1)  | F   | 3.7.0    | 3.8.0    | T1s040514 |
| TP-26   | TP-040242 | 1182 | -   | Correction to Package 3 SMS test case 16.2.1.   | F   | 3.7.0    | 3.8.0    | T1s040497 |
| TP-26   | TP-040242 | 1183 | -   | Correction to GCF P1 test case 8.3.1.1  | F   | 3.7.0    | 3.8.0    | T1s040484 |
| TP-26   | TP-040242 | 1184 | -   | Regression test error corrections to TTCN deliveries of wk42  | F   | 3.7.0    | 3.8.0    | T1s040699 |
| TP-26   | TP-040238 | 1185 | -   | Updating Annex A  | F   | 3.7.0    | 3.8.0    | -         |
| TP-27   | TP-050039 | 1185 |     | RRC Connection Establishment: Reject with InterRATInfo is set to GSM and selection to the designated system fails                           | B   | 3.8.0    | 5.0.0    | T1s050056 |
| TP-27   | TP-050039 | 1186 |     | RRC Connection Establishment: Reject with interRATInfo is set to GSM  | B   | 3.8.0    | 5.0.0    | T1s050054 |
| TP-27   | TP-050039 | 1187 |     | MM connection / abortion by the network / cause not equal to #6   | B   | 3.8.0    | 5.0.0    | T1s050044 |
| TP-27   | TP-050039 | 1188 |     | PS detach / rejected / PS services not allowed in this PLMN/ test1  | B   | 3.8.0    | 5.0.0    | T1s050046 |
| TP-27   | TP-050039 | 1189 |     | Routing area updating / abnormal cases / attempt counter check / miscellaneous reject causes  | B   | 3.8.0    | 5.0.0    | T1s050018 |
| TP-27   | TP-050039 | 1190 |     | RRC / Paging for Connection in connected mode (URA_PCH, multiple paging records)  | B   | 3.8.0    | 5.0.0    | T1s050038 |
| TP-27   | TP-050039 | 1191 |     | Combined routing area updating / abnormal cases / access barred due to access class control / test procedure 1                              | B   | 3.8.0    | 5.0.0    | T1s050036 |
| TP-27   | TP-050039 | 1192 |     | Combined routing area updating / abnormal cases / access barred due to access class control / test procedure 2                              | B   | 3.8.0    | 5.0.0    | T1s050034 |
| TP-27   | TP-050039 | 1193 |     | Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / 20 ms TTI                                      | B   | 3.8.0    | 5.0.0    | T1s050025 |
| TP-27   | TP-050039 | 1194 |     | Measurement Report on INITIAL DIRECT TRANSFER message and UPLINK DIRECT TRANSFER message  | B   | 3.8.0    | 5.0.0    | T1s050031 |
| TP-27   | TP-050039 | 1195 |     | Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | B   | 3.8.0    | 5.0.0    | T1s050023 |
| TP-27   | TP-050039 | 1196 |     | Interactive or background / UL:384 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 10 ms TTI                                      | B   | 3.8.0    | 5.0.0    | T1s050010 |
| TP-27   | TP-050039 | 1197 |     | Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH  | B   | 3.8.0    | 5.0.0    | T1s050008 |
| TP-27   | TP-050039 | 1198 |     | Cell change order from UTRAN/To GPRS/CELL_DCH/Failure (Physical channel & Reversion Failure)  | B   | 3.8.0    | 5.0.0    | T1s050001 |
| TP-27   | TP-050039 | 1199 |     | RRC Connection Release in CELL_DCH state (Network Authentication Failure): Success  | B   | 3.8.0    | 5.0.0    | T1s050006 |
| TP-27   | TP-050039 | 1200 |     | Inter system handover from UTRAN/To GSM/Speech/Failure (Physical channel Failure and Reversion Failure)                                     | B   | 3.8.0    | 5.0.0    | T1s040798 |
| TP-27   | TP-050039 | 1201 |     | Cell reselection using cell status and cell reservations  | B   | 3.8.0    | 5.0.0    | T1s040794 |
| TP-27   | TP-050039 | 1202 |     | RRC / Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH (Frequency band modification): Success                           | B   | 3.8.0    | 5.0.0    | T1s040796 |
| TP-27   | TP-050039 | 1203 |     | Correct Selection of RACH parameters (FDD)  | B   | 3.8.0    | 5.0.0    | T1s040755 |
| TP-27   | TP-050039 | 1204 |     | Measurement Control and Report: Additional Measurements list  | B   | 3.8.0    | 5.0.0    | T1s040791 |
| TP-27   | TP-050039 | 1205 |     | PS attach / rejected / PS services not allowed in this PLMN   | B   | 3.8.0    | 5.0.0    | T1s040779 |
| TP-27   | TP-050039 | 1206 |     | Access Service class selection for RACH transmission  | B   | 3.8.0    | 5.0.0    | T1s040757 |
| TP-27   | TP-050039 | 1207 |     | Selection of RAT for UPLMN; Automatic mode  | B   | 3.8.0    | 5.0.0    | T1s040746 |
| TP-27   | TP-050039 | 1208 |     | Selection of RAT for OPLMN; Automatic mode  | B   | 3.8.0    | 5.0.0    | T1s040748 |
| TP-27   | TP-050039 | 1209 |     | Cell reselection if cell becomes barred or S<0; UTRAN to GPRS (CELL_FACH)   | B   | 3.8.0    | 5.0.0    | T1s040701 |

| Meet-<br>ing | TSG doc   | CR   | Rev | Subject  | Cat | Old<br>vers | New<br>vers | WG doc    |
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| TP-27        | TP-050039 | 1210 |     | Service Request / RAB re-establishment / UE initiated / multiple PDP contexts  | B   | 3.8.0       | 5.0.0       | T1s040719 |
| TP-27        | TP-050040 | 1211 |     | Summary of regression errors in the wk04 ATS   | F   | 3.8.0       | 5.0.0       | T1s050063 |
| TP-27        | TP-050040 | 1212 |     | Summary of regression errors in the wk04 ATS.  | F   | 3.8.0       | 5.0.0       | T1s050062 |
| TP-27        | TP-050040 | 1213 |     | Correction to RRC P2 TC 8.4.1.7  | F   | 3.8.0       | 5.0.0       | T1s050040 |
| TP-27        | TP-050040 | 1214 |     | Summary of regression errors in the wk04 ATS.  | F   | 3.8.0       | 5.0.0       | T1s050061 |
| TP-27        | TP-050040 | 1215 |     | Summary of regression errors in the wk04 ATS.  | F   | 3.8.0       | 5.0.0       | T1s050058 |
| TP-27        | TP-050040 | 1216 |     | Correction to approved package 4 NAS Test case 12_6_1_3_3  | F   | 3.8.0       | 5.0.0       | T1s050052 |
| TP-27        | TP-050040 | 1217 |     | Correction to Approved RRC Package 3 TC 8.4.1.38   | F   | 3.8.0       | 5.0.0       | T1s050051 |
| TP-27        | TP-050040 | 1218 |     | Correction to Approved NAS Package 3 TC 9.4.7  | F   | 3.8.0       | 5.0.0       | T1s050053 |
| TP-27        | TP-050040 | 1219 |     | Correction to Approved RRC Package 2 TC 8.3.7.2 / 8.3.7.3  | F   | 3.8.0       | 5.0.0       | T1s050050 |
| TP-27        | TP-050040 | 1220 |     | Correction to Approved RRC Package 3 TC 8.4.1.36   | F   | 3.8.0       | 5.0.0       | T1s050048 |
| TP-27        | TP-050040 | 1221 |     | Correction to Approved IR_U Package 2 test case 6.2.2.1  | F   | 3.8.0       | 5.0.0       | T1s050042 |
| TP-27        | TP-050040 | 1222 |     | Correction to Approved IR_U Package 4 Test Case 8.3.7.12   | F   | 3.8.0       | 5.0.0       | T1s050043 |
| TP-27        | TP-050040 | 1223 |     | Correction to test step "ts_AT_TerminateCall".   | F   | 3.8.0       | 5.0.0       | T1s050041 |
| TP-27        | TP-050040 | 1224 |     | Wk51 regression error report on unapproved and approved Idlemode testcases 6.1.2.x   | F   | 3.8.0       | 5.0.0       | T1s050027 |
| TP-27        | TP-050040 | 1225 |     | Correction to approved package 3 NAS Test case 9_4_7   | F   | 3.8.0       | 5.0.0       | T1s050030 |
| TP-27        | TP-050040 | 1226 |     | Summary of regression errors in the wk51 ATS.  | F   | 3.8.0       | 5.0.0       | T1s050028 |
| TP-27        | TP-050040 | 1227 |     | Correction to RRC P1 TC 8.4.1.3  | F   | 3.8.0       | 5.0.0       | T1s050020 |
| TP-27        | TP-050040 | 1228 |     | Correction to RRC P2 TC 8.3.1.22 for removing check of "FOR" field value from ROUTING AREA UPDATING REQUEST message.   | F   | 3.8.0       | 5.0.0       | T1s050021 |
| TP-27        | TP-050040 | 1229 |     | Correction to Package 4 NAS test case 12.9.14  | F   | 3.8.0       | 5.0.0       | T1s050022 |
| TP-27        | TP-050040 | 1230 |     | Summary of regression errors in the wk51 ATS.  | F   | 3.8.0       | 5.0.0       | T1s050033 |
| TP-27        | TP-050040 | 1231 |     | Correction to 34.123-3, section 16, SMS test cases regarding Validity Period Formats   | F   | 3.8.0       | 5.0.0       | T1s050029 |
| TP-27        | TP-050040 | 1232 |     | Additional Corrections required for 14.4.2.2 test cases in the RAB ATS.  | F   | 3.8.0       | 5.0.0       | T1s050017 |
| TP-27        | TP-050040 | 1233 |     | Revised corrections to approved IR_U test cases 6_2_1_1, 6_2_1_7 and 6_2_1_8.  | F   | 3.8.0       | 5.0.0       | T1s050012 |
| TP-27        | TP-050040 | 1234 |     | Corrections required for "Combinations on SCCPCH" test cases in the RAB ATS.   | F   | 3.8.0       | 5.0.0       | T1s040801 |
| TP-27        | TP-050040 | 1235 |     | Correction to RRC P1 TC 8.4.1.5  | F   | 3.8.0       | 5.0.0       | T1s040797 |
| TP-27        | TP-050040 | 1236 |     | Additional Corrections Required for the wk47 ATS   | F   | 3.8.0       | 5.0.0       | T1s040765 |
| TP-27        | TP-050040 | 1237 |     | Correction to Package 4 NAS test case 12.2.1.5a Proc1  | F   | 3.8.0       | 5.0.0       | T1s040773 |
| TP-27        | TP-050040 | 1238 |     | Summary of regression errors in the wk49 ATS.  | F   | 3.8.0       | 5.0.0       | T1s040790 |
| TP-27        | TP-050040 | 1239 |     | Summary of regression errors in wk49 ATS.  | F   | 3.8.0       | 5.0.0       | T1s040789 |
| TP-27        | TP-050040 | 1240 |     | Correction to Approved RRC Package 4 TC 8.3.11.1   | F   | 3.8.0       | 5.0.0       | T1s040788 |
| TP-27        | TP-050040 | 1241 |     | Correction required to Package 4 NAS test case 12.9.13.  | F   | 3.8.0       | 5.0.0       | T1s040787 |
| TP-27        | TP-050040 | 1242 |     | Correction to approved GCF P4 NAS test case 12.9.8: improvement of incomplete implementation of T1-041930  | F   | 3.8.0       | 5.0.0       | T1s040786 |
| TP-27        | TP-050040 | 1243 |     | Correction to SIB1 contents for approved RRC Idle Mode and InterRAT test cases.  | F   | 3.8.0       | 5.0.0       | T1s040774 |
| TP-27        | TP-050040 | 1244 |     | Correction to Package 4 NAS test cases 12.4.3.4.   | F   | 3.8.0       | 5.0.0       | T1s040781 |
| TP-27        | TP-050040 | 1245 |     | Corrections to RRC Package 3 TC 8.4.1.26 to change the Downlink Power level settings of Cell A at Time Instant 'T1'.   | F   | 3.8.0       | 5.0.0       | T1s040782 |
| TP-27        | TP-050040 | 1246 |     | Correction to GMM Test cases for removing check of "FOR" field value from ATTACH REQUEST and ROUTING AREA UPDATING REQUEST messages. (Revision to TTCN CR T1s040763) | F   | 3.8.0       | 5.0.0       | T1s040783 |
| TP-27        | TP-050040 | 1247 |     | Correction to RRC P1 TC 8.4.1.5 (Revision of T1s040739)  | F   | 3.8.0       | 5.0.0       | T1s040770 |
| TP-27        | TP-050040 | 1248 |     | Corrections required to rlc_SizeIndex in the RAB ATS   | F   | 3.8.0       | 5.0.0       | T1s040772 |
| TP-27        | TP-050040 | 1249 |     | Corrections to RRC 8.3.2.x for Special LI  | F   | 3.8.0       | 5.0.0       | T1s040769 |
| TP-27        | TP-050040 | 1250 |     | Summary of regression errors in the wk47 ATS.  | F   | 3.8.0       | 5.0.0       | T1s040768 |
| TP-27        | TP-050040 | 1251 |     | Summary of regression errors in the wk47 ATS.  | F   | 3.8.0       | 5.0.0       | T1s040760 |
| TP-27        | TP-050040 | 1252 |     | Correction to Package 2 RRC test case 8.3.2.11 to increase the wait time while checking that UE does not send URA Update.  | F   | 3.8.0       | 5.0.0       | T1s040752 |
| TP-27        | TP-050040 | 1253 |     | Correction to RRC Test Case 8.3.1.22.  | F   | 3.8.0       | 5.0.0       | T1s040753 |



| Meet-<br>ing | TSG doc   | CR   | Rev | Subject   | Cat | Old<br>vers | New<br>vers | WG doc      |
|--------------|-----------|------|-----|---|-----|-------------|-------------|-------------|
| TP-27        | TP-050040 | 1254 |     | Correction to approved package 2 NAS Test case 9.4.2.3  | F   | 3.8.0       | 5.0.0       | T1s040761   |
| TP-27        | TP-050040 | 1255 |     | Corrections to RRC Package 1 TC 8.3.1.1 to add a delay before SS reconfigures MAC according to the new C-RNTI or U-RNTI assigned to UE. | F   | 3.8.0       | 5.0.0       | T1s040762   |
| TP-27        | TP-050040 | 1256 |     | Summary of regression errors in the wk47 ATS.   | F   | 3.8.0       | 5.0.0       | T1s040750   |
| TP-27        | TP-050040 | 1257 |     | Corrections Required for the wk47 ATS   | F   | 3.8.0       | 5.0.0       | T1s040758   |
| TP-27        | TP-050040 | 1258 |     | Summary of regression errors in IR_U wk47 ATS.  | F   | 3.8.0       | 5.0.0       | T1s040754   |
| TP-27        | TP-050040 | 1259 |     | Correction to package 1 test case 8.3.4.3.  | F   | 3.8.0       | 5.0.0       | T1s040742   |
| TP-27        | TP-050040 | 1260 |     | Correction to approved package 4 NAS Test cases 12.2.1.6 proc1, 12.2.1.6 proc2 and 12.9.8   | F   | 3.8.0       | 5.0.0       | T1s040745   |
| TP-27        | TP-050037 | 1261 | -   | Add new verified TTCN test cases CR to 34.123-3 (prose) in Annex A  | F   | 3.8.0       | 5.0.0       | -           |
| TP-27        | TP-050036 | 1263 | -   | Corrections Required for "Combinations on SCCPCH" configurations.   | F   | 3.8.0       | 5.0.0       | T1-050201r3 |
| TP-27        | TP-050036 | 1264 | -   | Introduce ASP for HSDPA   | B   | 3.8.0       | 5.0.0       | T1-050036   |
| TP-27        | TP-050036 | 1265 | -   | Introduce ASP for LCR TDD   | B   | 3.8.0       | 5.0.0       | T1-050037   |
| TP-27        | TP-050036 | 1266 | -   | Replacement of 34.123-3 Release 99 by a pointer to the newly created Release 5 version  | F   | 3.8.0       | 3.9.0       | T1-050250   |
| TP-27        | TP-050036 | 1267 | -   | Corrections of encoding rules and postambles  | F   | 3.8.0       | 5.0.0       | T1-050282   |
| TP-27        | TP-050036 | 1268 | -   | Introduce ASP for A-GPS   | B   | 3.8.0       | 5.0.0       | T1-050284   |
| RP-28        | RP-050365 | 1270 | -   | Addition of NAS WI 12 test case 12.3.2.7 to NAS ATS V5.0.0  | B   | 5.0.0       | 5.1.0       | R5s050128   |
| RP-28        | RP-050365 | 1271 | -   | Addition of WI-012 NAS test case 12.9.7a to NAS ATS V5.0.0  | B   | 5.0.0       | 5.1.0       | R5s050134   |
| RP-28        | RP-050365 | 1272 | -   | Addition of NAS WI 12 test case 12.9.9 to NAS ATS V3.8.0  | B   | 5.0.0       | 5.1.0       | R5s050080   |
| RP-28        | RP-050365 | 1273 | -   | Addition of WI-010 P3 RAB test case 14.2.43.1 to RAB ATS V5.0.0   | B   | 5.0.0       | 5.1.0       | R5s050100   |
| RP-28        | RP-050365 | 1274 | -   | Addition of WI-012 RAB test case 14.2.43.2 to RAB ATS V5.0.0  | B   | 5.0.0       | 5.1.0       | R5s050098   |
| RP-28        | RP-050365 | 1275 | -   | Addition of WI-012 RAB test case 14.2.58a to RAB ATS V5.0.0   | B   | 5.0.0       | 5.1.0       | R5s050096   |
| RP-28        | RP-050365 | 1276 | -   | Addition of WI-012 RLC test case 7.2.3.28 to RLC ATS V3.8.0   | B   | 5.0.0       | 5.1.0       | R5s050066   |
| RP-28        | RP-050365 | 1277 | -   | Addition of WI-012 RLC test case 7.2.3.32 to RLC ATS V3.8.0   | B   | 5.0.0       | 5.1.0       | R5s050068   |
| RP-28        | RP-050365 | 1278 | -   | Addition of WI-012 RLC test case 7.2.3.35 to RLC ATS V3.8.0   | B   | 5.0.0       | 5.1.0       | R5s050070   |
| RP-28        | RP-050365 | 1279 | -   | Addition of WI12 test case 8.1.1.9 to RRC ATS v5.0.0 (Revision of R5s050125)  | B   | 5.0.0       | 5.1.0       | R5s050141   |
| RP-28        | RP-050365 | 1280 | -   | Addition of WI12 test cases 8.1.2.11 to RRC ATS v3.8.0  | B   | 5.0.0       | 5.1.0       | R5s050074   |
| RP-28        | RP-050365 | 1281 | -   | Addition of RRC WI-012 test case 8.3.1.30 to RRC ATS V5.0.0   | B   | 5.0.0       | 5.1.0       | R5s050138   |
| RP-28        | RP-050365 | 1282 | -   | Addition of WI-012 test case 8.3.7.16 to IR_U ATS 3.8.0.  | B   | 5.0.0       | 5.1.0       | R5s050076   |
| RP-28        | RP-050365 | 1283 | -   | Regression changes on TC 8.3.9.5 - WK09   | B   | 5.0.0       | 5.1.0       | R5s050112   |
| RP-28        | RP-050365 | 1284 | -   | Addition of RRC WI-012 test case 8.4.1.6 to RRC ATS V5.0.0  | B   | 5.0.0       | 5.1.0       | R5s050132   |
| RP-28        | RP-050365 | 1285 | -   | Addition of WI-012 NAS test case 9.4.5.4.6 to NAS ATS V5.0.0  | B   | 5.0.0       | 5.1.0       | R5s050136   |
| RP-28        | RP-050365 | 1286 | -   | Addition of NAS P4 test case 12.4.1.4c Proc1 to NAS ATS V5.0.0  | B   | 5.0.0       | 5.1.0       | R5s050170   |
| RP-28        | RP-050365 | 1287 | -   | Revision and Addition of WI-10 (P2) test cases 6.2.2.2 to IR_U ATS v5.0.0   | B   | 5.0.0       | 5.1.0       | R5s050173   |
| RP-28        | RP-050281 | 1289 | -   | Summary of regression errors for IR_U_r3_wk17.  | F   | 5.0.0       | 5.1.0       | R5s050146   |
| RP-28        | RP-050281 | 1290 | -   | Correction to Approved RRC Package 4 TC 8.4.1.40  | F   | 5.0.0       | 5.1.0       | R5s050169   |
| RP-28        | RP-050281 | 1291 | -   | Correction of a missing LB entity in LB setup introduced in Rel-5 in the definition of CLOSE UE TEST LOOP                               | F   | 5.0.0       | 5.1.0       | R5s050168   |
| RP-28        | RP-050281 | 1292 | -   | Correction to approved testcase 8.2.2.4 and 8.2.4.4   | F   | 5.0.0       | 5.1.0       | R5s050165   |
| RP-28        | RP-050281 | 1293 | -   | Summary of additional regression errors in the wk17 ATS.  | F   | 5.0.0       | 5.1.0       | R5s050166   |
| RP-28        | RP-050281 | 1294 | -   | Correction to approved testcase 8.2.1.9   | F   | 5.0.0       | 5.1.0       | R5s050163   |
| RP-28        | RP-050281 | 1295 | -   | Correction in TTCN to support Band II UE for UE capability Information  | F   | 5.0.0       | 5.1.0       | R5s050167   |
| RP-28        | RP-050281 | 1296 | -   | Correction to value of periodic RA update timer IE in Attach Accept message   | F   | 5.0.0       | 5.1.0       | R5s050152   |
| RP-28        | RP-050281 | 1297 | -   | Correction to Order of AT commands used for initiation of PS call   | F   | 5.0.0       | 5.1.0       | R5s050153   |
| RP-28        | RP-050281 | 1298 | -   | Correction to approved testcase 8.1.7.1b  | F   | 5.0.0       | 5.1.0       | R5s050154   |

| Meeting | TSG doc   | CR   | Rev | Subject   | Cat | Old vers | New vers | WG doc    |
|---------|-----------|------|-----|---|-----|----------|----------|-----------|
| RP-28   | RP-050281 | 1299 | -   | Regression Error Report based on wk17ATS  | F   | 5.0.0    | 5.1.0    | R5s050164 |
| RP-28   | RP-050281 | 1300 | -   | Correction in TTCN to enable ciphering for 3G to 2G handover.                                     | F   | 5.0.0    | 5.1.0    | R5s050149 |
| RP-28   | RP-050281 | 1301 | -   | Correction to approved RRC testcases 8.1.3.3 and 8.1.3.4  | F   | 5.0.0    | 5.1.0    | R5s050148 |
| RP-28   | RP-050281 | 1302 | -   | Correction to GCF WI-10 test case 8.4.1.3   | F   | 5.0.0    | 5.1.0    | R5s050140 |
| RP-28   | RP-050281 | 1303 | -   | Corrections to WI-010 P3 RAB test cases 14.2.12, 14.2.16 & 14.2.17                                | F   | 5.0.0    | 5.1.0    | R5s050127 |
| RP-28   | RP-050281 | 1304 | -   | Correction required for WI-010 P3 RAB Testcase 14.2.38c.  | F   | 5.0.0    | 5.1.0    | R5s050124 |
| RP-28   | RP-050281 | 1305 | -   | Correction to GCF Package 3 RRC test case 8.3.1.24  | F   | 5.0.0    | 5.1.0    | R5s050123 |
| RP-28   | RP-050281 | 1306 | -   | Summary of additional regression errors in the wk09 ATS.  | F   | 5.0.0    | 5.1.0    | R5s050116 |
| RP-28   | RP-050281 | 1307 | -   | Correction to approved RRC Package 4 TC 8.3.1.18  | F   | 5.0.0    | 5.1.0    | R5s050117 |
| RP-28   | RP-050281 | 1308 | -   | Correction to WI-12 Test Case 8.3.7.16  | F   | 5.0.0    | 5.1.0    | R5s050115 |
| RP-28   | RP-050282 | 1309 | -   | Correction to RRC P3 TC 8.3.2.13  | F   | 5.0.0    | 5.1.0    | R5s050113 |
| RP-28   | RP-050282 | 1310 | -   | Regression Error Report based on wk09 ATS   | F   | 5.0.0    | 5.1.0    | R5s050114 |
| RP-28   | RP-050282 | 1311 | -   | Summary of regression errors for IR_U_wk09.   | F   | 5.0.0    | 5.1.0    | R5s050110 |
| RP-28   | RP-050282 | 1312 | -   | Correction to RRC P2 TC 8.3.1.21  | F   | 5.0.0    | 5.1.0    | R5s050111 |
| RP-28   | RP-050282 | 1313 | -   | Correction to Approved NAS Package 4 TC 12.4.1.4a   | F   | 5.0.0    | 5.1.0    | R5s050109 |
| RP-28   | RP-050283 | 1314 | -   | Summary of regression errors in the wk09 ATS.   | F   | 5.0.0    | 5.1.0    | R5s050106 |
| RP-28   | RP-050282 | 1315 | -   | Correction for the MM test step "ts_GMM_RAU_AcceptEPLMN"  | F   | 5.0.0    | 5.1.0    | R5s050105 |
| RP-28   | RP-050282 | 1316 | -   | Correction to SMS Test Suite for AT Commands  | F   | 5.0.0    | 5.1.0    | R5s050104 |
| RP-28   | RP-050282 | 1317 | -   | Changes required to support Release 5   | F   | 5.0.0    | 5.1.0    | R5s050095 |
| RP-28   | RP-050282 | 1318 | -   | Correction to approved package WI-12 NAS Test case 9_5_7_2  | F   | 5.0.0    | 5.1.0    | R5s050103 |
| RP-28   | RP-050283 | 1319 | -   | Correction to approved testcase 8.1.10.1  | F   | 5.0.0    | 5.1.0    | R5s050102 |
| RP-28   | RP-050282 | 1320 | -   | Handling of L2 Acknowledgement on GERAN side.   | F   | 5.0.0    | 5.1.0    | R5s050094 |
| RP-28   | RP-050282 | 1321 | -   | Correction to Approved RRC Package 4 TC 8.3.1.18  | F   | 5.0.0    | 5.1.0    | R5s050093 |
| RP-28   | RP-050282 | 1322 | -   | Correction to IR_U P4 Approved test case 8.3.11.4   | F   | 5.0.0    | 5.1.0    | R5s050091 |
| RP-28   | RP-050282 | 1323 | -   | Summary of iWD_07 regression test errors  | F   | 5.0.0    | 5.1.0    | R5s050078 |
| RP-28   | RP-050282 | 1324 | -   | Corrections to section 16 SMS test cases to improve AT command handling                           | F   | 5.0.0    | 5.1.0    | R5s050090 |
| RP-28   | RP-050282 | 1325 | -   | Correction to approved GCF P4 test cases 8.1.7.1c   | F   | 5.0.0    | 5.1.0    | R5s050086 |
| RP-28   | RP-050282 | 1326 | -   | Summary of regression errors in the wk07 ATS.   | F   | 5.0.0    | 5.1.0    | R5s050088 |
| RP-28   | RP-050282 | 1327 | -   | Correction to approved NAS WI 12 test case 12.4.1.5.  | F   | 5.0.0    | 5.1.0    | R5s050083 |
| RP-28   | RP-050282 | 1328 | -   | Correction to approved GCF P4 test cases 8.1.7.1d   | F   | 5.0.0    | 5.1.0    | R5s050087 |
| RP-28   | RP-050282 | 1329 | -   | Correction to approved package 2 NAS Test case 9_5_2  | F   | 5.0.0    | 5.1.0    | R5s050082 |
| RP-28   | RP-050282 | 1330 | -   | Correction to RRC P1 TC 8.4.1.1, 8.4.1.3 and P3 TC 8.4.1.29                                       | F   | 5.0.0    | 5.1.0    | R5s050065 |
| RP-28   | RP-050365 | 1331 | -   | Revision of RRC WI-14 test case 8.2.3.30 to RRC ATS v5.0.0  | B   | 5.0.0    | 5.1.0    | R5s050179 |
| RP-28   | RP-050365 | 1332 | -   | Addition of RRC WI-014 test case 8.2.4.36 to RRC ATS V5.0.0 (Revision of R5s050161)               | B   | 5.0.0    | 5.1.0    | R5s050199 |
| RP-28   | RP-050366 | 1333 | 1   | Add new verified and e-mail approved TTCN test cases in the TC lists in 34.123-3 (prose), Annex A | F   | 5.0.0    | 5.1.0    | -         |
| RP-28   | RP-050278 | 1334 | -   | Correction to specification version references  | F   | 5.0.0    | 5.1.0    | R5-050639 |
| RP-29   | RP-050527 | 1334 | -   | Addition of WI-10 NAS test case 12.4.2.4 to NAS ATS V5.1.0  | B   | 5.1.0    | 5.2.0    | R5s050295 |
| RP-28   | RP-050278 | 1335 | -   | Modifying AT Commands, ASPs, TSOs and PIXITs  | F   | 5.0.0    | 5.1.0    | R5-050955 |
| RP-29   | RP-050527 | 1335 | -   | Addition of WI12 test case 8.2.1.24 to RRC ATS V5.1.0   | B   | 5.1.0    | 5.2.0    | R5s050259 |
| RP-28   | RP-050278 | 1336 | -   | HSDPA ASP Modification  | F   | 5.0.0    | 5.1.0    | R5-050975 |
| RP-29   | RP-050527 | 1336 | -   | Addition of WI12 test case 8.2.1.34 to RRC ATS V5.1.0   | B   | 5.1.0    | 5.2.0    | R5s050261 |
| RP-28   | RP-050278 | 1337 | -   | Modifying G_L2_SYSINFO_REQ ASP  | F   | 5.0.0    | 5.1.0    | R5-050980 |
| RP-29   | RP-050527 | 1337 | -   | Addition of RRC WI-012 test case 8.2.1.33 to RRC ATS V5.1.0                                       | B   | 5.1.0    | 5.2.0    | R5s050242 |
| RP-28   | RP-050278 | 1338 | -   | CR to 34.123-3 Rel-5: Addition of a new ASP required for test case tc_8_1_7_1d                    | F   | 5.0.0    | 5.1.0    | R5-050983 |
| RP-29   | RP-050527 | 1338 | -   | Addition of NAS WI-012 test case 12.2.1.11 to NAS ATS V5.0.0                                      | B   | 5.1.0    | 5.2.0    | R5s050236 |
| RP-29   | RP-050527 | 1339 | -   | Addition of WI-10 RRC test case 8.4.1.14 to RRC ATS V5.0.0  | B   | 5.1.0    | 5.2.0    | R5s050228 |
| RP-29   | RP-050527 | 1340 | -   | Addition of RRC WI-14 test case 8.2.6.42 to RRC ATS v5.0.0  | B   | 5.1.0    | 5.2.0    | R5s050225 |
| RP-29   | RP-050527 | 1341 | -   | Addition of WI-010 (P4) test case 8.3.9.3 to IR_U ATS V5.0.0                                      | B   | 5.1.0    | 5.2.0    | R5s050219 |
| RP-29   | RP-050527 | 1342 | -   | Addition of RRC WI-010 (P2) test case 8.2.4.1 to  | B   | 5.1.0    | 5.2.0    | R5s050210 |

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|         |           |      |     | RRC ATS V5.0.0  |     |          |          |           |
| RP-29   | RP-050527 | 1343 | -   | Addition of RRC WI-014 test case 8.3.1.32 to RRC ATS V5.0.0                               | B   | 5.1.0    | 5.2.0    | R5s050217 |
| RP-29   | RP-050527 | 1344 | -   | Addition of RRC WI-014 test case 8.2.1.28 to RRC ATS V5.0.0                               | B   | 5.1.0    | 5.2.0    | R5s050212 |
| RP-29   | RP-050527 | 1345 | -   | Addition of RRC WI-14 test case 8.2.1.32 to RRC ATS v5.0.0                                | B   | 5.1.0    | 5.2.0    | R5s050206 |
| RP-29   | RP-050527 | 1346 | -   | Addition of RRC WI-14 test case 8.2.1.31 to RRC ATS v5.0.0                                | B   | 5.1.0    | 5.2.0    | R5s050204 |
| RP-29   | RP-050527 | 1347 | -   | Addition of RRC WI-014 test case 8.2.2.38 to RRC ATS V5.0.0 (Revision of R5s050157)       | B   | 5.1.0    | 5.2.0    | R5s050197 |
| RP-29   | RP-050527 | 1348 | -   | Addition of WI-010 RRC test case 6.1.2.1 to RRC ATS V5.0.0                                | B   | 5.1.0    | 5.2.0    | R5s050189 |
| RP-29   | RP-050527 | 1349 | -   | Addition of RRC WI-14 test case 8.2.1.30 to RRC ATS v5.0.0                                | B   | 5.1.0    | 5.2.0    | R5s050184 |
| RP-29   | RP-050527 | 1350 | -   | Addition of RRC WI-10 test case 8.3.1.23 to RRC ATS V5.0.0                                | B   | 5.1.0    | 5.2.0    | R5s050175 |
| RP-29   | RP-050527 | 1351 | -   | Addition of RRC WI-14 test case 8.2.1.29 to RRC ATS v5.0.0                                | B   | 5.1.0    | 5.2.0    | R5s050182 |
| RP-29   | RP-050527 | 1352 | -   | Addition of WI-014 test case 8.3.1.34 to HS_ENH ATS V5.1.0                                | B   | 5.1.0    | 5.2.0    | R5s050347 |
| RP-29   | RP-050527 | 1353 | -   | Addition of WI14 test case 8.3.1.35 to HS_ENH ATS V5.1.0                                  | B   | 5.1.0    | 5.2.0    | R5s050321 |
| RP-29   | RP-050528 | 1354 | -   | Addition of WI14 test case 8.2.6.40 to HS_ENH ATS V5.1.0                                  | B   | 5.1.0    | 5.2.0    | R5s050323 |
| RP-29   | RP-050528 | 1355 | -   | Addition of WI-014 MAC test case 7.1.5.4 to HS_ENH ATS V5.1.0                             | B   | 5.1.0    | 5.2.0    | R5s050318 |
| RP-29   | RP-050528 | 1356 | -   | Addition of WI14 test case 7.1.5.3 to HS_ENH ATS V5.1.0                                   | B   | 5.1.0    | 5.2.0    | R5s050315 |
| RP-29   | RP-050528 | 1357 | -   | Revision (of R5s0500248) to introduce test case 8_2_2_40 based on wk31 ATS                | B   | 5.1.0    | 5.2.0    | R5s050339 |
| RP-29   | RP-050528 | 1358 | -   | Revision (of R5s050253) to introduce test case 8_3_1_33 based on wk31 ATS                 | B   | 5.1.0    | 5.2.0    | R5s050341 |
| RP-29   | RP-050528 | 1359 | -   | Revision (of R5s050250) to introduce test case 14_6_1 based on wk31 ATS                   | B   | 5.1.0    | 5.2.0    | R5s050345 |
| RP-29   | RP-050528 | 1360 | -   | Addition of WI14 test case 7.1.5.5 to HS_ENH ATS V5.1.0 (Revision of R5s050276)           | B   | 5.1.0    | 5.2.0    | R5s050313 |
| RP-29   | RP-050528 | 1361 | -   | Addition of WI14 test case 7.1.5.1 to HS_ENH ATS V5.1.0 (Revision of R5s050257)           | B   | 5.1.0    | 5.2.0    | R5s050311 |
| RP-29   | RP-050528 | 1362 | -   | Addition of WI-014 test case 8.2.1.27 to HS_ENH ATS V5.1.0 (Revision of CR R5s050263)     | B   | 5.1.0    | 5.2.0    | R5s050307 |
| RP-29   | RP-050528 | 1363 | -   | Addition of WI-014 test case 8.2.6.49 to HS_ENH ATS V5.1.0 (Revision of R5s050265)        | B   | 5.1.0    | 5.2.0    | R5s050309 |
| RP-29   | RP-050528 | 1364 | -   | Re-submission of WI-014 test case 8.3.11.9 to HS_ENH ATS V5.1.0. (Revision of R5s050150). | B   | 5.1.0    | 5.2.0    | R5s050349 |
| RP-29   | RP-050528 | 1365 | -   | Addition of WI-014 test case 8.2.2.36 to HS_ENH ATS V5.1.0 (Revision of CR R5s050267)     | B   | 5.1.0    | 5.2.0    | R5s050360 |
| RP-29   | RP-050529 | 1366 | -   | Correction required in HSDPA constraint cbr_108_RRC_ConnReq_r5                            | F   | 5.1.0    | 5.2.0    | R5s050351 |
| RP-29   | RP-050529 | 1367 | -   | Correction to approved WI-010 MM Test Cases 9_4_2_2_1 and 9_4_2_2_2                       | F   | 5.1.0    | 5.2.0    | R5s050337 |
| RP-29   | RP-050529 | 1368 | -   | Corrections to test step ts_C4_CheckCellPCH and ts_C4_CheckCellPCH_r5                     | F   | 5.1.0    | 5.2.0    | R5s050326 |
| RP-29   | RP-050529 | 1369 | -   | Correction to GCF P1(WI-10) approved RRC test case 8.1.1.2                                | F   | 5.1.0    | 5.2.0    | R5s050320 |
| RP-29   | RP-050529 | 1370 | -   | Correction required in HSDPA step ts_RRC_RAB_EstPS_MO_P25                                 | F   | 5.1.0    | 5.2.0    | R5s050317 |
| RP-29   | RP-050529 | 1371 | -   | Upgrade HSENH ATS to full R5  | F   | 5.1.0    | 5.2.0    | R5s050294 |
| RP-29   | RP-050529 | 1372 | -   | Correction to GCF approved RRC test case 8.3.1.18   | F   | 5.1.0    | 5.2.0    | R5s050293 |
| RP-29   | RP-050529 | 1373 | -   | Correction asn.1 calculated values.   | F   | 5.1.0    | 5.2.0    | R5s050255 |
| RP-29   | RP-050529 | 1374 | -   | Corrections to teststep ts_C5_CheckURA_PCH  | F   | 5.1.0    | 5.2.0    | R5s050280 |
| RP-29   | RP-050529 | 1375 | -   | Correction to approved testcases 8.3.1.5 and 8.3.1.6                                      | F   | 5.1.0    | 5.2.0    | R5s050287 |
| RP-29   | RP-050529 | 1376 | -   | Correction to Inter-RAT Test cases  | F   | 5.1.0    | 5.2.0    | R5s050288 |
| RP-29   | RP-050529 | 1377 | -   | Correction to the SMS Test Case 16.1.10 and 16.2.10                                       | F   | 5.1.0    | 5.2.0    | R5s050291 |
| RP-29   | RP-050529 | 1378 | -   | Summary of regression errors in the wk27 ATS.   | F   | 5.1.0    | 5.2.0    | R5s050292 |
| RP-29   | RP-050529 | 1379 | -   | Correction to test step ts_CRLC_DL_CipherCfgRB  | F   | 5.1.0    | 5.2.0    | R5s050290 |
| RP-29   | RP-050529 | 1380 | -   | Correction to GCF WI-12 approved NAS test case 9.4.5.4.6                                  | F   | 5.1.0    | 5.2.0    | R5s050281 |
| RP-29   | RP-050529 | 1381 | -   | Correction to GCF WI-10 approved IR_U test case 8.4.1.31                                  | F   | 5.1.0    | 5.2.0    | R5s050289 |
| RP-29   | RP-050529 | 1382 | -   | Corrections to Approved WI10 test case 9.4.5.2  | F   | 5.1.0    | 5.2.0    | R5s050282 |
| RP-29   | RP-050529 | 1383 | -   | Correction to GCF WI-10 test case 8.4.1.5   | F   | 5.1.0    | 5.2.0    | R5s050234 |

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| RP-29   | RP-050529 | 1384 | -   | Correction to the RRC test case 8.4.1.14  | F   | 5.1.0    | 5.2.0    | R5s050278 |
| RP-29   | RP-050529 | 1385 | -   | Corrections to teststep ts_HO_SS_ReconfDCH_HS_ToFACH used for WI-14 Test Cases                  | F   | 5.1.0    | 5.2.0    | R5s050279 |
| RP-29   | RP-050530 | 1386 | -   | Correction to 8_1_x series approved testcases   | F   | 5.1.0    | 5.2.0    | R5s050271 |
| RP-29   | RP-050530 | 1387 | -   | Correction to test step ts_RRC_ReceiveRB_SetupCmpl to handle IE "Start" for the ciphering path  | F   | 5.1.0    | 5.2.0    | R5s050272 |
| RP-29   | RP-050530 | 1388 | -   | Correction to approved Inter-RAT IR_U testcase 8.3.7.13   | F   | 5.1.0    | 5.2.0    | R5s050273 |
| RP-29   | RP-050530 | 1389 | -   | Correction to approved testcase 8.2.4.1   | F   | 5.1.0    | 5.2.0    | R5s050274 |
| RP-29   | RP-050530 | 1390 | -   | Correction required for WI-010 P4 RRC Testcase 6.1.2.9.   | F   | 5.1.0    | 5.2.0    | R5s050275 |
| RP-29   | RP-050530 | 1391 | -   | Correction to GCF WI-12 approved RRC test case 8.3.1.30, 8.4.1.6 and NAS test case 12.3.2.7     | F   | 5.1.0    | 5.2.0    | R5s050270 |
| RP-29   | RP-050530 | 1392 | -   | Correction to Approved RRC Package 4 TC 8.4.1.33  | F   | 5.1.0    | 5.2.0    | R5s050269 |
| RP-29   | RP-050530 | 1393 | -   | Guard timer setting needs to be longer in test case 9.4.2.4 Procedure 2.                        | F   | 5.1.0    | 5.2.0    | R5s050252 |
| RP-29   | RP-050530 | 1394 | -   | Corrections to WI-012 approved testcases 8.2.2.9 & 8.2.6.12                                     | F   | 5.1.0    | 5.2.0    | R5s050246 |
| RP-29   | RP-050530 | 1395 | -   | Corrections to WI-014 approved testcases 8.2.1.28, 8.2.4.36 & 8.2.1.30                          | F   | 5.1.0    | 5.2.0    | R5s050247 |
| RP-29   | RP-050530 | 1396 | -   | Correction in Approved Test Case 12.2.2.1 of NAS_wk07.mp in iWD-TVB2003-03_D05wk07.zip          | F   | 5.1.0    | 5.2.0    | R5s050245 |
| RP-29   | RP-050530 | 1397 | -   | Correction to GCF WI-12 approved RRC test case 8.1.6.3  | F   | 5.1.0    | 5.2.0    | R5s050233 |
| RP-29   | RP-050530 | 1398 | -   | Multiple PICs definitions   | F   | 5.1.0    | 5.2.0    | R5s050241 |
| RP-29   | RP-050530 | 1399 | -   | ASN.1 changes required for introduction of band V & band VI                                     | F   | 5.1.0    | 5.2.0    | R5s050215 |
| RP-29   | RP-050530 | 1400 | -   | Summary of regression errors in the wk21 IR_U and IR_G ATS.                                     | F   | 5.1.0    | 5.2.0    | R5s050240 |
| RP-29   | RP-050530 | 1401 | -   | Correction to GCF WI-10 and WI-12 IR_U and IR_G test cases                                      | F   | 5.1.0    | 5.2.0    | R5s050239 |
| RP-29   | RP-050530 | 1402 | -   | Correction to IdleMode P1 TC 6.1.2.1  | F   | 5.1.0    | 5.2.0    | R5s050238 |
| RP-29   | RP-050530 | 1403 | -   | Summary of regression errors in the wk21 IR_U ATS.  | F   | 5.1.0    | 5.2.0    | R5s050230 |
| RP-29   | RP-050530 | 1404 | -   | Correction to GCF WI-10 test case 8.3.1.1   | F   | 5.1.0    | 5.2.0    | R5s050224 |
| RP-29   | RP-050530 | 1405 | -   | Correction to approved WI-010 RRC Test case 6_1_2_1   | F   | 5.1.0    | 5.2.0    | R5s050221 |
| RP-29   | RP-050531 | 1406 | -   | Correction to approved WI-010 RRC Test case 6_1_2_9   | F   | 5.1.0    | 5.2.0    | R5s050227 |
| RP-29   | RP-050531 | 1407 | -   | Correction to GCF WI-10 test case 8.2.1.10, 8.3.4.1, 8.3.4.2, 12.4.2.5a Proc 2                  | F   | 5.1.0    | 5.2.0    | R5s050144 |
| RP-29   | RP-050531 | 1408 | -   | Correction to WI 12 approved testcase 8.3.1.30  | F   | 5.1.0    | 5.2.0    | R5s050222 |
| RP-29   | RP-050531 | 1409 | -   | Correction to approved testcase 8.2.6.19 and 8.2.6.20   | F   | 5.1.0    | 5.2.0    | R5s050223 |
| RP-29   | RP-050531 | 1410 | -   | Correction to GCF high priority MAC test case 7.1.2.4a  | F   | 5.1.0    | 5.2.0    | R5s050214 |
| RP-29   | RP-050531 | 1411 | -   | Correction to approved testcase 14.2.51b.1  | F   | 5.1.0    | 5.2.0    | R5s050209 |
| RP-29   | RP-050531 | 1412 | -   | Correction to approved testcase 8.3.7.12  | F   | 5.1.0    | 5.2.0    | R5s050203 |
| RP-29   | RP-050531 | 1413 | -   | Correction to GCF high priority NAS test case 12.4.1.4b   | F   | 5.1.0    | 5.2.0    | R5s050181 |
| RP-29   | RP-050531 | 1414 | -   | Regression Error Report based on wk19ATS  | F   | 5.1.0    | 5.2.0    | R5s050202 |
| RP-29   | RP-050531 | 1415 | -   | Summary of regression errors in the wk19 ATS.   | F   | 5.1.0    | 5.2.0    | R5s050196 |
| RP-29   | RP-050531 | 1416 | -   | Correction to approved testcase 14.2.58   | F   | 5.1.0    | 5.2.0    | R5s050194 |
| RP-29   | RP-050531 | 1417 | -   | Correction to WI-12 test case 12.9.7a   | F   | 5.1.0    | 5.2.0    | R5s050195 |
| RP-29   | RP-050531 | 1418 | -   | Summary of regression errors in the wk19 ATS.   | F   | 5.1.0    | 5.2.0    | R5s050186 |
| RP-29   | RP-050531 | 1419 | -   | Correction to IE "radioPrioTOM8" in Attach Accept message.                                      | F   | 5.1.0    | 5.2.0    | R5s050193 |
| RP-29   | RP-050531 | 1420 | -   | Correction to softhandover test cases in RRC ATS v5.0.0   | F   | 5.1.0    | 5.2.0    | R5s050191 |
| RP-29   | RP-050531 | 1421 | -   | Correction to RRC and RAB ATS v5.0.0 – regression errors  | F   | 5.1.0    | 5.2.0    | R5s050192 |
| RP-29   | RP-050531 | 1422 | -   | Correction of syntax error in approved test cases   | F   | 5.1.0    | 5.2.0    | R5s050178 |
| RP-29   | RP-050531 | 1423 | -   | Correction to the approved IR_U test cases 8.4.1.33, 8.4.1.34, 8.4.1.35, 8.4.1.36 and 8.4.1.40. | F   | 5.1.0    | 5.2.0    | R5s050187 |
| RP-29   | RP-050531 | 1424 | -   | Correction to RRC Package 2 TC 8.4.1.23   | F   | 5.1.0    | 5.2.0    | R5s050188 |
| RP-29   | RP-050531 | 1425 | -   | Correction to RRC P4 TC 8.4.1.41  | F   | 5.1.0    | 5.2.0    | R5s050172 |
| RP-29   | RP-050532 | 1426 | -   | Correction to approved testcase 14.2.38c and 14.2.40  | F   | 5.1.0    | 5.2.0    | R5s050177 |
| RP-29   | RP-050532 | 1427 | -   | Summary of regression errors in the wk31 ATS.   | F   | 5.1.0    | 5.2.0    | R5s050354 |
| RP-29   | RP-050532 | 1428 | -   | Corrections to Approved Test case 8_2_1_29 based on wk31 ATS                                    | F   | 5.1.0    | 5.2.0    | R5s050327 |
| RP-29   | RP-050532 | 1429 | -   | Corrections to Approved test case 8_2_1_30 based on wk31 ATS                                    | F   | 5.1.0    | 5.2.0    | R5s050329 |

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| RP-29   | RP-050532 | 1430 | -   | Corrections to Approved test case 8_2_1_31 based on wk31 ATS  | F   | 5.1.0    | 5.2.0    | R5s050331 |
| RP-29   | RP-050532 | 1431 | -   | Corrections to Approved test case 8_2_1_32 based on wk31 ATS  | F   | 5.1.0    | 5.2.0    | R5s050333 |
| RP-29   | RP-050532 | 1432 | -   | Corrections to Approved test case 8_2_6_42 based on wk31 ATS  | F   | 5.1.0    | 5.2.0    | R5s050335 |
| RP-29   | RP-050532 | 1433 | -   | Corrections to Approved test case 8_2_3_30 based on wk31 ATS  | F   | 5.1.0    | 5.2.0    | R5s050343 |
| RP-29   | RP-050532 | 1434 | -   | Corrections to Approved Testcase 8_2_1_28 based on wk31 ATS   | F   | 5.1.0    | 5.2.0    | R5s050297 |
| RP-29   | RP-050532 | 1435 | -   | Corrections to Approved Testcase 8_2_2_38 based on wk31 ATS   | F   | 5.1.0    | 5.2.0    | R5s050299 |
| RP-29   | RP-050532 | 1436 | -   | Corrections to Approved Testcase 8_2_3_30 based on wk31 ATS   | F   | 5.1.0    | 5.2.0    | R5s050301 |
| RP-29   | RP-050532 | 1437 | -   | Corrections to Approved Testcase 8_2_4_36 based on wk31 ATS   | F   | 5.1.0    | 5.2.0    | R5s050303 |
| RP-29   | RP-050532 | 1438 | -   | Corrections to Approved Testcase 8_3_1_32 based on wk31 ATS   | F   | 5.1.0    | 5.2.0    | R5s050305 |
| RP-29   | RP-050562 | 1439 | -   | Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A.                | F   | 5.1.0    | 5.2.0    | -         |
| RP-29   | RP-050526 | 1440 | -   | Clarifying L2 Tests - Update TSOs and PIXITs – New configurations for WI-13/14 TCs                              | F   | 5.1.0    | 5.2.0    | R5-051510 |
| RP-30   | RP-050713 | 1441 | -   | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A | F   | 5.2.0    | 5.3.0    | -         |
| RP-30   | RP-050766 | 1442 | -   | Addition of GCF WI-015 AGPS test case 17.2.4.7 to AGPS ATS V5.2.0   | B   | 5.2.0    | 5.3.0    | R5s050480 |
| RP-30   | RP-050766 | 1443 | -   | Addition of GCF WI-015 AGPS test case 17.2.4.6 to AGPS ATS V5.2.0   | B   | 5.2.0    | 5.3.0    | R5s050478 |
| RP-30   | RP-050766 | 1444 | -   | Addition of GCF WI-015 AGPS test case 17.2.4.10 to AGPS ATS V5.2.0  | B   | 5.2.0    | 5.3.0    | R5s050476 |
| RP-30   | RP-050766 | 1445 | -   | Addition of GCF WI-015 AGPS test case 17.2.4.3 to RLC ATS V5.1.0  | B   | 5.2.0    | 5.3.0    | R5s050419 |
| RP-30   | RP-050766 | 1446 | -   | Addition of GCF WI-015 AGPS test case 17.2.4.1 to RLC ATS V5.1.0  | B   | 5.2.0    | 5.3.0    | R5s050410 |
| RP-30   | RP-050768 | 1447 | -   | Addition of GCF WI-14/2 test case 8.2.3.32 to HS_ENH ATS V5.2.0 (Revision of R5s050451)                         | B   | 5.2.0    | 5.3.0    | R5s050495 |
| RP-30   | RP-050768 | 1448 | -   | Addition of GCF WI-14/2 test case 8.2.3.34 to HS_ENH ATS V5.2.0   | B   | 5.2.0    | 5.3.0    | R5s050449 |
| RP-30   | RP-050768 | 1449 | -   | Addition of GCF WI-014 test case 8.2.2.41 to HS_ENH ATS V5.2.0 (Revision of R5s050455)                          | B   | 5.2.0    | 5.3.0    | R5s050466 |
| RP-30   | RP-050768 | 1450 | -   | Addition of GCF WI-014 RAB test case 14.6.3a to HS_ENH ATS V5.2.0   | B   | 5.2.0    | 5.3.0    | R5s050464 |
| RP-30   | RP-050768 | 1451 | -   | Addition of GCF WI-014 RAB test case 14.6.3 to HS_ENH ATS V5.2.0  | B   | 5.2.0    | 5.3.0    | R5s050462 |
| RP-30   | RP-050768 | 1452 | -   | Addition of GCF WI-014 test case 8.3.4.9 to HS_ENH ATS V5.2.0   | B   | 5.2.0    | 5.3.0    | R5s050457 |
| RP-30   | RP-050768 | 1453 | -   | Addition of GCF WI-014 test case 8.2.3.31 to HS_ENH ATS V5.2.0  | B   | 5.2.0    | 5.3.0    | R5s050444 |
| RP-30   | RP-050768 | 1454 | -   | Addition of GCF WI-014 RAB test case 14.6.2 to HS_ENH ATS V5.1.0  | B   | 5.2.0    | 5.3.0    | R5s050424 |
| RP-30   | RP-050768 | 1455 | -   | Additional Changes to GCF WI-014 test case 8.3.1.37   | B   | 5.2.0    | 5.3.0    | R5s050421 |
| RP-30   | RP-050768 | 1456 | -   | Addition of GCF WI-014 test case 8.3.11.10 to RRC ATS V5.1.0  | B   | 5.2.0    | 5.3.0    | R5s050412 |
| RP-30   | RP-050768 | 1457 | -   | Addition of GCF WI-014 test case 8.2.3.35 to HS_ENH ATS V5.1.0  | B   | 5.2.0    | 5.3.0    | R5s050407 |
| RP-30   | RP-050768 | 1458 | -   | Addition of GCF WI-14/2 test case 8.2.6.46 to HS_ENH ATS V5.1.0   | B   | 5.2.0    | 5.3.0    | R5s050405 |
| RP-30   | RP-050768 | 1459 | -   | Addition of GCF WI-14/2 test case 8.2.6.41 to HS_ENH ATS V5.1.0   | B   | 5.2.0    | 5.3.0    | R5s050403 |
| RP-30   | RP-050768 | 1460 | -   | Addition of GCF WI-14/2 test case 8.3.1.36 to HS_ENH ATS V5.1.0   | B   | 5.2.0    | 5.3.0    | R5s050385 |
| RP-30   | RP-050768 | 1461 | -   | Addition of RRC GCF WI-14 test case 7.1.5.6 to RRC ATS v5.1.0   | B   | 5.2.0    | 5.3.0    | R5s050379 |
| RP-30   | RP-050775 | 1462 | -   | Addition of BMC GCF WI-10/3 test case 14.4.4 to RAB ATS V5.1.0  | B   | 5.2.0    | 5.3.0    | R5s050401 |
| RP-30   | RP-050775 | 1463 | -   | Revision of R5s050442 - Addition of GCF WI-10 Idle Mode Test Case 6.1.1.4 to RRC ATS 5.2.0                      | B   | 5.2.0    | 5.3.0    | R5s050453 |
| RP-30   | RP-050775 | 1464 | -   | Addition of NAS GCF WI-12 test case 9.4.3.3 to NAS ATS V5.1.0   | B   | 5.2.0    | 5.3.0    | R5s050416 |
| RP-30   | RP-050775 | 1465 | -   | Addition of Cell Broadcast GCF WI-12 test case 16.3 to SMS ATS V5.1.0   | B   | 5.2.0    | 5.3.0    | R5s050399 |

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| RP-30   | RP-050775 | 1466 | -   | Addition of NAS GCF WI-10 P4 test case 12.9.12 to NAS ATS V5.1.0   | B   | 5.2.0    | 5.3.0    | R5s050395 |
| RP-30   | RP-050775 | 1467 | -   | Addition of NAS GCF WI-12 test case 9.4.2.4 proc 4 to NAS ATS V5.1.0   | B   | 5.2.0    | 5.3.0    | R5s050231 |
| RP-30   | RP-050778 | 1468 | -   | Addition of GCF WI-013 RRC test case 8.1.2.15 to HS_ENH ATS V5.2.0   | B   | 5.2.0    | 5.3.0    | R5s050473 |
| RP-30   | RP-050778 | 1469 | -   | Addition of GCF WI-013 RRC test case 8.1.2.14 to HS_ENH ATS V5.2.0   | B   | 5.2.0    | 5.3.0    | R5s050471 |
| RP-30   | RP-050778 | 1470 | -   | Addition of GCF WI-013 test case 8.3.11.13 to HS_ENH_r5 ATS V5.2.0.  | B   | 5.2.0    | 5.3.0    | R5s050437 |
| RP-30   | RP-050778 | 1471 | -   | Addition of GCF WI-13 RRC test case 8.1.6.5 to HS_ENH ATS V5.2.0   | B   | 5.2.0    | 5.3.0    | R5s050497 |
| RP-30   | RP-050778 | 1472 | -   | Addition of GCF WI-013 RRC test case 8.3.1.40 to HS_ENH ATS V5.2.0   | B   | 5.2.0    | 5.3.0    | R5s050500 |
| RP-30   | RP-050768 | 1473 | -   | Removal of use of deprecated alternative value in RRC Connection Release message (Cell DCH) in HS_ENH suite                        | F   | 5.2.0    | 5.3.0    | R5s050487 |
| RP-30   | RP-050768 | 1474 | -   | Removal of use of deprecated alternative value in RRC Connection Setup message (Cell FACH) in HS_ENH suite                         | F   | 5.2.0    | 5.3.0    | R5s050489 |
| RP-30   | RP-050768 | 1475 | -   | Correction to GCF WI-14/2 HSDPA RRC test case 8.3.1.37   | F   | 5.2.0    | 5.3.0    | R5s050492 |
| RP-30   | RP-050768 | 1476 | -   | Additional changes required for addition of GCF WI-014 test case 8.3.11.10 to RRC ATS V5.2.0.                                      | F   | 5.2.0    | 5.3.0    | R5s050460 |
| RP-30   | RP-050768 | 1477 | -   | Correction to GCF WI-14/2 test case 8.3.1.36   | F   | 5.2.0    | 5.3.0    | R5s050439 |
| RP-30   | RP-050768 | 1478 | -   | Corrections to GCF WI-014/1 test cases 8.3.1.34  | F   | 5.2.0    | 5.3.0    | R5s050427 |
| RP-30   | RP-050768 | 1479 | -   | Correction to RRC HSDPA test case 8.2.2.40   | F   | 5.2.0    | 5.3.0    | R5s050431 |
| RP-30   | RP-050773 | 1480 | -   | Removal of use of deprecated alternative value in RRC Connection Release message (Cell DCH) in all GCF WI-10 and WI-12 test suites | F   | 5.2.0    | 5.3.0    | R5s050488 |
| RP-30   | RP-050773 | 1481 | -   | Correction to GCF WI-12 RRC test case 8.4.1.6  | F   | 5.2.0    | 5.3.0    | R5s050486 |
| RP-30   | RP-050773 | 1482 | -   | Corrections to RLC test cases to add check for the PIXIT px_CipheringOnOff   | F   | 5.2.0    | 5.3.0    | R5s050485 |
| RP-30   | RP-050773 | 1483 | -   | Removal of use of deprecated alternative value in RRC Connection Setup message (Cell FACH) in all GCF WI-10 and WI-12 test suites  | F   | 5.2.0    | 5.3.0    | R5s050490 |
| RP-30   | RP-050773 | 1484 | -   | Correction to the GCF WI-10 NAS test case 12.2.1.2   | F   | 5.2.0    | 5.3.0    | R5s050491 |
| RP-30   | RP-050773 | 1485 | -   | Correction to GCF WI-10 MAC test case 7.1.2.3.1  | F   | 5.2.0    | 5.3.0    | R5s050494 |
| RP-30   | RP-050773 | 1486 | -   | Correction to GCF WI-10 Idle Mode Test Case 6.1.2.1  | F   | 5.2.0    | 5.3.0    | R5s050469 |
| RP-30   | RP-050773 | 1487 | -   | Corrections required to GCF WI-10 approved test case 8.3.1.18  | F   | 5.2.0    | 5.3.0    | R5s050448 |
| RP-30   | RP-050773 | 1488 | -   | Corrections required to GCF WI-14 approved HSDPA test cases  | F   | 5.2.0    | 5.3.0    | R5s050435 |
| RP-30   | RP-050773 | 1489 | -   | TTCN correction to RRC TC 8.2.4.1  | F   | 5.2.0    | 5.3.0    | R5s050436 |
| RP-30   | RP-050773 | 1490 | -   | Corrections required to GCF W-10 approved test case 8.4.1.40   | F   | 5.2.0    | 5.3.0    | R5s050434 |
| RP-30   | RP-050773 | 1491 | -   | Correction to the NAS Test Case 12.9.7a  | F   | 5.2.0    | 5.3.0    | R5s050429 |
| RP-30   | RP-050773 | 1492 | -   | Correction to the IR_U Test Case 8.3.7.3   | F   | 5.2.0    | 5.3.0    | R5s050430 |
| RP-30   | RP-050773 | 1493 | -   | Correction to MultiRAB Test Cases  | F   | 5.2.0    | 5.3.0    | R5s050432 |
| RP-30   | RP-050773 | 1494 | -   | Correction to GCF WI-10/2 RRC test case 8.3.1.21   | F   | 5.2.0    | 5.3.0    | R5s050426 |
| RP-30   | RP-050773 | 1495 | -   | Summary of regression errors in the wk38 ATS   | F   | 5.2.0    | 5.3.0    | R5s050428 |
| RP-30   | RP-050773 | 1496 | -   | Summary of regression errors in wk38 of RRC ATS  | F   | 5.2.0    | 5.3.0    | R5s050414 |
| RP-30   | RP-050773 | 1497 | -   | Correction in TTCN for test case 7.2.3.19  | F   | 5.2.0    | 5.3.0    | R5s050415 |
| RP-30   | RP-050773 | 1498 | -   | Regression Error report based on wk36 ATS  | F   | 5.2.0    | 5.3.0    | R5s050409 |
| RP-30   | RP-050773 | 1499 | -   | Summary of regression results for wk36 version of IR_U ATS V5.1.0  | F   | 5.2.0    | 5.3.0    | R5s050384 |
| RP-30   | RP-050774 | 1500 | -   | Corrections required to GCF WI-10 approved test cases 6.2.1.7 and 6.2.1.8  | F   | 5.2.0    | 5.3.0    | R5s050394 |
| RP-30   | RP-050774 | 1501 | -   | Corrections required to GCF WI-10 approved test cases 8.3.7.5, 8.3.7.7 and 8.3.7.12  | F   | 5.2.0    | 5.3.0    | R5s050397 |
| RP-30   | RP-050774 | 1502 | -   | Correction to teststep ts_RRC_NAS_SessionActPS_MO_DCH_ToFACH.  | F   | 5.2.0    | 5.3.0    | R5s050390 |
| RP-30   | RP-050774 | 1503 | -   | Correction to GCF WI-10/4 RRC test case 8.1.3.9  | F   | 5.2.0    | 5.3.0    | R5s050378 |
| RP-30   | RP-050774 | 1504 | -   | Summary of regression errors in the wk36 ATS   | F   | 5.2.0    | 5.3.0    | R5s050391 |
| RP-30   | RP-050774 | 1505 | -   | Summary of regression errors in the wk36 IR_U ATS.   | F   | 5.2.0    | 5.3.0    | R5s050392 |
| RP-30   | RP-050774 | 1506 | -   | Correction to HS_ENH_wk36 – Regression errors  | F   | 5.2.0    | 5.3.0    | R5s050389 |
| RP-30   | RP-050774 | 1507 | -   | Correction to GCF WI-12 RRC test case 8.4.1.6  | F   | 5.2.0    | 5.3.0    | R5s050376 |
| RP-30   | RP-050774 | 1508 | -   | Correction to Inter-RAT IR_U test case 8.3.11.4  | F   | 5.2.0    | 5.3.0    | R5s050377 |
| RP-30   | RP-050774 | 1509 | -   | Correction to generic procedure C.1 (Idle mode check)  | F   | 5.2.0    | 5.3.0    | R5s050375 |
| RP-30   | RP-050774 | 1510 | -   | Summary of regression errors in the wk31 ATS   | F   | 5.2.0    | 5.3.0    | R5s050367 |
| RP-30   | RP-050774 | 1511 | -   | Correction to the test case 14.2.43.1  | F   | 5.2.0    | 5.3.0    | R5s050368 |

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| RP-30   | RP-050774 | 1512 | -   | Correction to the NAS Test Case 12.9.13  | F   | 5.2.0    | 5.3.0    | R5s050374 |
| RP-30   | RP-050774 | 1513 | -   | Correction to all approved Test Cases using ciphering                              | F   | 5.2.0    | 5.3.0    | R5s050373 |
| RP-30   | RP-050774 | 1514 | -   | Corrections required for approved GCF WI-10 RRC test cases 8.3.1.21 and 8.3.2.11   | F   | 5.2.0    | 5.3.0    | R5s050369 |
| RP-30   | RP-050774 | 1515 | -   | Corrections required for approved GCF WI-10 NAS test cases 9.4.2.3 and 9.4.2.5     | F   | 5.2.0    | 5.3.0    | R5s050370 |
| RP-30   | RP-050774 | 1516 | -   | Summary of regression errors in the wk31 ATS Batch 2.                              | F   | 5.2.0    | 5.3.0    | R5s050372 |
| RP-30   | RP-050774 | 1517 | -   | Correction to GCF WI-010 test case 6.1.2.1 for manual attach UE                    | F   | 5.2.0    | 5.3.0    | R5s050366 |
| RP-30   | RP-050774 | 1518 | -   | Correction to agreed testcase 8.2.6.8  | F   | 5.2.0    | 5.3.0    | R5s050357 |
| RP-30   | RP-050774 | 1519 | -   | Correction to agreed IR_U_wk31 MRAT testcases 8.3.9.1 and 8.3.9.5                  | F   | 5.2.0    | 5.3.0    | R5s050358 |
| RP-30   | RP-050775 | 1520 | -   | Correction to P1 NAS Test Case 11.3.1 for AT command confirmation                  | F   | 5.2.0    | 5.3.0    | R5s050359 |
| RP-30   | RP-050775 | 1521 | -   | Correction of the NAS Test Case 12.9.14  | F   | 5.2.0    | 5.3.0    | R5s050362 |
| RP-30   | RP-050775 | 1522 | -   | Correction to the test step ts_RRC_ReceiverRB_RelCmpl                              | F   | 5.2.0    | 5.3.0    | R5s050363 |
| RP-30   | RP-050775 | 1523 | -   | Corrections required for QOS constraint in R99 ATS                                 | F   | 5.2.0    | 5.3.0    | R5s050364 |
| RP-30   | RP-050775 | 1524 | -   | Corrections required for QOS constraint in HSDPA/Rel-5 enhancement ATS             | F   | 5.2.0    | 5.3.0    | R5s050365 |
| RP-30   | RP-050775 | 1525 | -   | Summary of regression errors in the wk42 ATS.                                      | F   | 5.2.0    | 5.3.0    | R5s050499 |
| RP-30   | RP-050775 | 1526 | -   | Correction to Approved RRC TC 8.3.11.1   | F   | 5.2.0    | 5.3.0    | R5s050459 |
| RP-30   | RP-050769 | 1527 | -   | Update PIXIT and TSO, clarifications of a TSO and an AT / MMI commands in 34.123-3 | F   | 5.2.0    | 5.3.0    | R5-052110 |
| RP-30   | RP-050775 | 1528 | -   | Correction to iWD_wk38 IR_U ATS  | F   | 5.2.0    | 5.3.0    | R5s050470 |
| RP-31   | RP-060158 | 1529 | -   | Addition of GCF WI-015 AGPS test case 17.2.2.1 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050561 |
| RP-31   | RP-060158 | 1530 | -   | Addition of GCF WI-015 AGPS test case 17.2.2.2 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050563 |
| RP-31   | RP-060158 | 1531 | -   | Addition of GCF WI-015 AGPS test case 17.2.2.3 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050565 |
| RP-31   | RP-060158 | 1532 | -   | Addition of GCF WI-015 AGPS test case 17.2.2.4 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050587 |
| RP-31   | RP-060158 | 1533 | -   | Addition of GCF WI-015 AGPS test case 17.2.3.2 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050567 |
| RP-31   | RP-060158 | 1534 | -   | Addition of GCF WI-015 AGPS test case 17.2.3.3 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050589 |
| RP-31   | RP-060158 | 1535 | -   | Addition of GCF WI-015 AGPS test case 17.2.3.4 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050591 |
| RP-31   | RP-060158 | 1536 | -   | Addition of GCF WI-015 AGPS test case 17.2.3.8 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050593 |
| RP-31   | RP-060158 | 1537 | -   | Addition of GCF WI-015 AGPS test case 17.2.3.9 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050569 |
| RP-31   | RP-060158 | 1538 | -   | Addition of GCF WI-015 AGPS test case 17.2.4.2 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050595 |
| RP-31   | RP-060158 | 1539 | -   | Addition of GCF WI-015 AGPS test case 17.2.4.4 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050572 |
| RP-31   | RP-060158 | 1540 | -   | Addition of GCF WI-015 AGPS test case 17.2.4.5 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050574 |
| RP-31   | RP-060158 | 1541 | -   | Addition of GCF WI-015 AGPS test case 17.2.4.8 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050576 |
| RP-31   | RP-060158 | 1542 | -   | Addition of GCF WI-015 AGPS test case 17.2.4.9 to AGPS ATS V5.2.0                  | B   | 5.3.0    | 5.4.0    | R5s050578 |
| RP-31   | RP-060148 | 1543 | -   | Addition of GCF WI-014 RAB test case 14.6.4 to HS_ENH ATS V5.3.0                   | B   | 5.3.0    | 5.4.0    | R5s050604 |
| RP-31   | RP-060148 | 1544 | -   | Addition of GCF WI-014 RAB test case 14.6.4a to HS_ENH ATS V5.3.0                  | B   | 5.3.0    | 5.4.0    | R5s050606 |
| RP-31   | RP-060148 | 1545 | -   | Addition of GCF WI-014 RAB test case 14.6.5 to HS_ENH ATS V5.3.0                   | B   | 5.3.0    | 5.4.0    | R5s050608 |
| RP-31   | RP-060148 | 1546 | -   | Addition of GCF WI-014 RAB test case 14.6.5a to HS_ENH ATS V5.3.0                  | B   | 5.3.0    | 5.4.0    | R5s050610 |
| RP-31   | RP-060148 | 1547 | -   | Addition of GCF WI-014/1 test case 7.1.5.2 to HS_ENH ATS V5.2.0                    | B   | 5.3.0    | 5.4.0    | R5s050534 |
| RP-31   | RP-060148 | 1548 | -   | Addition of RRC GCF WI-14 test case 8.2.2.39 to RRC ATS v5.2.0                     | B   | 5.3.0    | 5.4.0    | R5s050510 |
| RP-31   | RP-060148 | 1549 | -   | Addition of GCF WI-014 test case 8.2.2.42 to HS_ENH ATS V5.2.0                     | B   | 5.3.0    | 5.4.0    | R5s050536 |
| RP-31   | RP-060148 | 1550 | -   | Addition of GCF WI-014/2 test case 8.2.3.33 to HS_ENH ATS V5.2.0                   | B   | 5.3.0    | 5.4.0    | R5s050540 |
| RP-31   | RP-060148 | 1551 | -   | Addition of GCF WI-014 RRC test case 8.2.6.39a to HS_ENH ATS V5.2.0                | B   | 5.3.0    | 5.4.0    | R5s050516 |

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| RP-31   | RP-060148 | 1552 | -   | Addition of GCF WI-014 RRC test case 8.2.6.39b to HS_ENH ATS V5.3.0                   | B   | 5.3.0    | 5.4.0    | R5s050598 |
| RP-31   | RP-060148 | 1553 | -   | Addition of GCF WI 14/2 test case 8.3.7.14 to HS_ENH ATS V5.3.0                       | B   | 5.3.0    | 5.4.0    | R5s050618 |
| RP-31   | RP-060158 | 1554 | -   | Addition of GCF WI-10/1 test case 6.1.2.2 to RRC ATS v5.2.0                           | B   | 5.3.0    | 5.4.0    | R5s050556 |
| RP-31   | RP-060158 | 1555 | -   | Addition of RRC GCF WI-10 test case 6.1.2.3 to RRC ATS v5.3.0                         | B   | 5.3.0    | 5.4.0    | R5s050614 |
| RP-31   | RP-060158 | 1556 | -   | Addition of GCF WI-10 Idle Mode test case 6.1.2.5                                     | B   | 5.3.0    | 5.4.0    | R5s060017 |
| RP-31   | RP-060158 | 1557 | -   | Addition of GCF WI-10 RRC test case 6.1.2.6 to RRC ATS V5.2.0                         | B   | 5.3.0    | 5.4.0    | R5s050584 |
| RP-31   | RP-060158 | 1558 | -   | Addition of GCF WI-10/2 RRC test case 6.1.2.8 to RRC ATS V5.2.0                       | B   | 5.3.0    | 5.4.0    | R5s050547 |
| RP-31   | RP-060158 | 1559 | -   | Addition of GCF WI-010/2 test case 6.2.2.3 to IR_U ATS V5.2.0                         | B   | 5.3.0    | 5.4.0    | R5s050483 |
| RP-31   | RP-060158 | 1560 | -   | Addition of GCF WI-12 test case 8.4.1.48  | B   | 5.3.0    | 5.4.0    | R5s050612 |
| RP-31   | RP-060165 | 1561 | -   | Addition of GCF WI-13 test case 6.1.2.10  | B   | 5.3.0    | 5.4.0    | R5s060013 |
| RP-31   | RP-060165 | 1562 | -   | Addition of GCF WI-013 RRC test case 8.3.1.38 to HS_ENH ATS V5.3.0                    | B   | 5.3.0    | 5.4.0    | R5s050600 |
| RP-31   | RP-060165 | 1563 | -   | Addition of GCF WI-013 RRC test case 8.3.1.39 to HS_ENH ATS V5.3.0                    | B   | 5.3.0    | 5.4.0    | R5s050602 |
| RP-31   | RP-060149 | 1564 | -   | Summary of regression errors in the wk03 HSD_ENH ATS                                  | F   | 5.3.0    | 5.4.0    | R5s060011 |
| RP-31   | RP-060149 | 1565 | -   | Corrections to GCF WI-014 RAB testcases 14.6.4 and 14.6.4a                            | F   | 5.3.0    | 5.4.0    | R5s060038 |
| RP-31   | RP-060149 | 1566 | -   | Corrections to Approved GCF WI-014 RRC testcases 8.2.3.33                             | F   | 5.3.0    | 5.4.0    | R5s060035 |
| RP-31   | RP-060149 | 1567 | -   | Summary of regression errors in wk03 HSDPA ATS.                                       | F   | 5.3.0    | 5.4.0    | R5s060030 |
| RP-31   | RP-060149 | 1568 | -   | Wk49 regression errors in HS_ENH ATS  | F   | 5.3.0    | 5.4.0    | R5s050623 |
| RP-31   | RP-060149 | 1569 | -   | Summary of regression errors in the wk49 HS_ENH ATS                                   | F   | 5.3.0    | 5.4.0    | R5s050621 |
| RP-31   | RP-060149 | 1570 | -   | Summary of regression errors in the wk49 HS_ENH ATS                                   | F   | 5.3.0    | 5.4.0    | R5s050617 |
| RP-31   | RP-060149 | 1571 | -   | Correction to GCF WI14 test case 8.3.4.9  | F   | 5.3.0    | 5.4.0    | R5s050620 |
| RP-31   | RP-060149 | 1572 | -   | Summary of regression errors in the wk49 HS_ENH ATS                                   | F   | 5.3.0    | 5.4.0    | R5s050581 |
| RP-31   | RP-060149 | 1573 | -   | Correction to GCF WI14 test case 14.6.1 and 14.6.2                                    | F   | 5.3.0    | 5.4.0    | R5s050560 |
| RP-31   | RP-060149 | 1574 | -   | Summary of regression errors in the wk47 HS_ENH ATS                                   | F   | 5.3.0    | 5.4.0    | R5s050532 |
| RP-31   | RP-060149 | 1575 | -   | Summary of regression errors in the wk47 HSDPA ATS                                    | F   | 5.3.0    | 5.4.0    | R5s050550 |
| RP-31   | RP-060149 | 1576 | -   | Summary of regression errors in the HSENH_r5_wk42 ATS.                                | F   | 5.3.0    | 5.4.0    | R5s050529 |
| RP-31   | RP-060149 | 1577 | -   | Correction to GCF WI-014/2 test case 8.2.2.41   | F   | 5.3.0    | 5.4.0    | R5s050525 |
| RP-31   | RP-060149 | 1578 | -   | Summary of regression errors in the wk42 HS_ENH ATS                                   | F   | 5.3.0    | 5.4.0    | R5s050513 |
| RP-31   | RP-060149 | 1579 | -   | Corrections to Testcase 8.3.1.35  | F   | 5.3.0    | 5.4.0    | R5s050518 |
| RP-31   | RP-060149 | 1580 | -   | Update to HS_ENH_r5 ATS to allow 64k uplink data rate to be tested for RRC Testcases. | F   | 5.3.0    | 5.4.0    | R5s050519 |
| RP-31   | RP-060149 | 1581 | -   | Errors identified in RAB HSDPA testcases in wk42 ATS.                                 | F   | 5.3.0    | 5.4.0    | R5s050520 |
| RP-31   | RP-060149 | 1582 | -   | Summary of regression errors in the wk42 HSDPA ATS                                    | F   | 5.3.0    | 5.4.0    | R5s050503 |
| RP-31   | RP-060159 | 1583 | -   | Correction to GCF WI-10 test case 8.4.1.14  | F   | 5.3.0    | 5.4.0    | R5s050512 |
| RP-31   | RP-060159 | 1584 | -   | TTCN correction to Approved RRC TCs 8.3.4.1, 8.3.4.2 and 8.3.4.3                      | F   | 5.3.0    | 5.4.0    | R5s060044 |
| RP-31   | RP-060159 | 1585 | -   | Summary of regression errors in wk03 RRC and RAB ATS.                                 | F   | 5.3.0    | 5.4.0    | R5s060042 |
| RP-31   | RP-060159 | 1586 | -   | Correction of GCF WI-10 RRC test case 8.4.1.2,8.4.1.24,8.4.1.25                       | F   | 5.3.0    | 5.4.0    | R5s060043 |
| RP-31   | RP-060159 | 1587 | -   | Summary of regression errors in the wk03 GCF WI-10 and GCF WI-12 ATS                  | F   | 5.3.0    | 5.4.0    | R5s060010 |
| RP-31   | RP-060159 | 1588 | -   | Correction to GCF WI-10 RRC Test Case 6.1.1.4   | F   | 5.3.0    | 5.4.0    | R5s060024 |
| RP-31   | RP-060159 | 1589 | -   | Correction to GCF WI-12 Testcase 9.4.5.4.6  | F   | 5.3.0    | 5.4.0    | R5s060025 |
| RP-31   | RP-060159 | 1590 | -   | Correction to GCF WI-10 NAS Test Case 12.4.1.4a                                       | F   | 5.3.0    | 5.4.0    | R5s060040 |
| RP-31   | RP-060159 | 1591 | -   | Correction of GCF WI-10 RRC test case 8.1.7.1d  | F   | 5.3.0    | 5.4.0    | R5s060039 |
| RP-31   | RP-060159 | 1592 | -   | Corrections to approved GCF WI-12/1 Inter-RAT test case 8.4.1.48                      | F   | 5.3.0    | 5.4.0    | R5s060029 |
| RP-31   | RP-060159 | 1593 | -   | Corrections to approved GCF WI-10/3 InterRAT test case 8.4.1.31                       | F   | 5.3.0    | 5.4.0    | R5s060028 |
| RP-31   | RP-060159 | 1594 | -   | Corrections to GCF WI-012 GMM testcase 12.9.9   | F   | 5.3.0    | 5.4.0    | R5s060037 |



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|---------|-----------|------|-----|---|-----|----------|----------|-----------|
| RP-31   | RP-060159 | 1595 | -   | Corrections to Approved GCF WI-012 RRC testcases 8.2.1.24 & 8.2.1.34                                      | F   | 5.3.0    | 5.4.0    | R5s060036 |
| RP-31   | RP-060159 | 1596 | -   | Correction of GCF WI-10 RRC test case 8.4.1.26  | F   | 5.3.0    | 5.4.0    | R5s060033 |
| RP-31   | RP-060159 | 1597 | -   | Correction of GCF WI-12 MM test case 9.4.3.3  | F   | 5.3.0    | 5.4.0    | R5s060032 |
| RP-31   | RP-060159 | 1598 | -   | Summary of regression errors in wk49 ATS.   | F   | 5.3.0    | 5.4.0    | R5s060009 |
| RP-31   | RP-060159 | 1599 | -   | Correction to GCF WI-12 RLC Test Case 7.2.3.35  | F   | 5.3.0    | 5.4.0    | R5s060008 |
| RP-31   | RP-060159 | 1600 | -   | Correction to GCF WI-10 test case 6.1.2.9   | F   | 5.3.0    | 5.4.0    | R5s060007 |
| RP-31   | RP-060159 | 1601 | -   | Correction to GCF WI-10 test case 8.1.3.9   | F   | 5.3.0    | 5.4.0    | R5s060003 |
| RP-31   | RP-060159 | 1602 | -   | Summary of regression errors in the wk49 IR_U ATS.  | F   | 5.3.0    | 5.4.0    | R5s060006 |
| RP-31   | RP-060160 | 1603 | -   | Summary of regression errors in the wk47 ATS.   | F   | 5.3.0    | 5.4.0    | R5s050551 |
| RP-31   | RP-060160 | 1604 | -   | TTCN correction to Approved GMM TC 12.4.2.4   | F   | 5.3.0    | 5.4.0    | R5s060004 |
| RP-31   | RP-060160 | 1605 | -   | Corrections to GCF WI-012 approved testcases 9.4.3.3  | F   | 5.3.0    | 5.4.0    | R5s060002 |
| RP-31   | RP-060160 | 1606 | -   | Correction to GCF WI-10 RRC Test Case 8.1.7.1c  | F   | 5.3.0    | 5.4.0    | R5s060001 |
| RP-31   | RP-060160 | 1607 | -   | TTCN Correction for GCF WI-10 RRC test case 6.1.2.8   | F   | 5.3.0    | 5.4.0    | R5s050586 |
| RP-31   | RP-060160 | 1608 | -   | TTCN correction to Approved IRAT TCs 8.3.7.1, 8.3.7.2, 8.3.7.3, 8.3.7.4, 8.3.7.13, 8.3.7.16 and 8.3.11.1. | F   | 5.3.0    | 5.4.0    | R5s050622 |
| RP-31   | RP-060160 | 1609 | -   | Correction to approved RRC test cases 8.1.6.3, 8.4.1.1, 8.4.1.3 and 8.4.1.29 on Wk49 ATS                  | F   | 5.3.0    | 5.4.0    | R5s050571 |
| RP-31   | RP-060160 | 1610 | -   | Correction to GCF WI 10 RLC testcase 7.2.2.2  | F   | 5.3.0    | 5.4.0    | R5s050583 |
| RP-31   | RP-060160 | 1611 | -   | Summary of regression errors in the wk49 GCF WI-10 and GCF WI-12 ATS                                      | F   | 5.3.0    | 5.4.0    | R5s050580 |
| RP-31   | RP-060160 | 1612 | -   | Corrections to approved GCF WI-010 / GCF WI-012 test cases 14.2.51b.1 and 14.2.58a                        | F   | 5.3.0    | 5.4.0    | R5s050597 |
| RP-31   | RP-060160 | 1613 | -   | TTCN correction to Approved IRAT TC 8.3.7.16  | F   | 5.3.0    | 5.4.0    | R5s050552 |
| RP-31   | RP-060160 | 1614 | -   | Correction to GCF WI-10 approved RRC Test Case 8.1.7.1d   | F   | 5.3.0    | 5.4.0    | R5s050582 |
| RP-31   | RP-060160 | 1615 | -   | Correction to GCF Test Case 8.4.1.2, 8.4.1.24, 8.4.1.25, 8.4.1.6, 8.4.1.8 and HSDPA Test Cases            | F   | 5.3.0    | 5.4.0    | R5s050545 |
| RP-31   | RP-060160 | 1616 | -   | Summary of regression errors in the wk47 GCF WI-10 and GCF WI-12 ATS                                      | F   | 5.3.0    | 5.4.0    | R5s050533 |
| RP-31   | RP-060160 | 1617 | -   | Correction to the GCF WI 10 testcase 7.2.3.13   | F   | 5.3.0    | 5.4.0    | R5s050538 |
| RP-31   | RP-060160 | 1618 | -   | Correction to GCF WI 10 MAC test case 7.1.2.3.1   | F   | 5.3.0    | 5.4.0    | R5s050539 |
| RP-31   | RP-060160 | 1619 | -   | Correction to IR_U test cases 8.3.7.1, 8.3.7.2, 8.3.7.3, 8.3.7.12 and 8.3.7.16                            | F   | 5.3.0    | 5.4.0    | R5s050493 |
| RP-31   | RP-060160 | 1620 | -   | Correction to GCF WI 10 test case 7.1.2.4a  | F   | 5.3.0    | 5.4.0    | R5s050555 |
| RP-31   | RP-060160 | 1621 | -   | Corrections to GCF WI-012 approved test case 16.3   | F   | 5.3.0    | 5.4.0    | R5s050554 |
| RP-31   | RP-060160 | 1622 | -   | Correction to approved GCF WI-010 Test Case 16.1.1  | F   | 5.3.0    | 5.4.0    | R5s050549 |
| RP-31   | RP-060161 | 1623 | -   | TTCN correction to Approved RRC TC 8.1.2.7  | F   | 5.3.0    | 5.4.0    | R5s050553 |
| RP-31   | RP-060161 | 1624 | -   | Correction to GCF WI-10 RRC Test Case 8.3.1.18  | F   | 5.3.0    | 5.4.0    | R5s050543 |
| RP-31   | RP-060161 | 1625 | -   | Correction to GCF WI-10 RRC Test Case 8.1.1.9   | F   | 5.3.0    | 5.4.0    | R5s050544 |
| RP-31   | RP-060161 | 1626 | -   | Correction to GCF WI-12 test case 8.1.6.3   | F   | 5.3.0    | 5.4.0    | R5s050531 |
| RP-31   | RP-060161 | 1627 | -   | Summary of regression errors in the wk42 ATS.   | F   | 5.3.0    | 5.4.0    | R5s050528 |
| RP-31   | RP-060161 | 1628 | -   | Correction to GCF WI-10/3 Testcase 12.4.2.4   | F   | 5.3.0    | 5.4.0    | R5s050505 |
| RP-31   | RP-060161 | 1629 | -   | Correction to test step ts_Exit_Testcase used in MultiRAB test cases                                      | F   | 5.3.0    | 5.4.0    | R5s050514 |
| RP-31   | RP-060161 | 1630 | -   | Correction to GCF WI-010/1 test case 7.1.2.4a   | F   | 5.3.0    | 5.4.0    | R5s050524 |
| RP-31   | RP-060161 | 1631 | -   | Correction to the GCF WI 12 NAS Test Case 9.4.3.3   | F   | 5.3.0    | 5.4.0    | R5s050515 |
| RP-31   | RP-060161 | 1632 | -   | Correction to GCF WI 10 and GCF WI 12 ATS to support IPv6 format for PDP Context                          | F   | 5.3.0    | 5.4.0    | R5s050521 |
| RP-31   | RP-060161 | 1633 | -   | Summary of regression errors in the wk42 GCF WI-10 and GCF WI-12 ATS                                      | F   | 5.3.0    | 5.4.0    | R5s050482 |
| RP-31   | RP-060161 | 1634 | -   | Correction to GCF WI-13 test case 8.1.2.14  | F   | 5.3.0    | 5.4.0    | R5s050526 |
| RP-31   | RP-060161 | 1635 | -   | Correction to GCF WI-13 test case 8.1.2.15  | F   | 5.3.0    | 5.4.0    | R5s050527 |
| RP-31   | RP-060161 | 1636 | -   | Correction to GCF WI-12 test case 9.4.3.3   | F   | 5.3.0    | 5.4.0    | R5s050509 |
| RP-31   | RP-060161 | 1637 | -   | Correction to GCF WI-10 test case 8.1.3.9   | F   | 5.3.0    | 5.4.0    | R5s050507 |
| RP-31   | RP-060161 | 1638 | -   | Corrections of TC_16_2_1, TC_16_2_2, TC_16_1_9_1, TC_16_1_9_2   | F   | 5.3.0    | 5.4.0    | R5s050506 |
| RP-31   | RP-060161 | 1639 | -   | Correction to GCF WI-10 RAB Test Case 14.2.38c  | F   | 5.3.0    | 5.4.0    | R5s050504 |
| RP-31   | RP-060165 | 1640 | -   | Correction to GCF WI 13/1 RRC testcases 8.3.1.38 and 8.3.1.39   | F   | 5.3.0    | 5.4.0    | R5s060023 |
| RP-31   | RP-060165 | 1641 | -   | Corrections to Approved GCF WI-013 RRC testcase 8_1_2_14 & WI-014 RRC testcase 8_2_2_42                   | F   | 5.3.0    | 5.4.0    | R5s060034 |
| RP-31   | RP-060165 | 1642 | -   | Summary of regression errors in wk03 HSDPA ATS (GCF WI-13).   | F   | 5.3.0    | 5.4.0    | R5s060031 |
| RP-31   | RP-060165 | 1643 | -   | Corrections to GCF WI-013 test cases 8.1.6.5 and 8.3.1.40   | F   | 5.3.0    | 5.4.0    | R5s050523 |
| RP-31   | RP-060165 | 1644 | -   | Correction to Rel-5 (HSENH) ATS to support IPv6 format for PDP Context.                                   | F   | 5.3.0    | 5.4.0    | R5s050522 |

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| RP-31   | RP-060162 | 1645 | -   | Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A                               | F   | 5.3.0    | 5.4.0    | -         |
| RP-31   | RP-060166 | 1646 | -   | Introduce ASP for HSUPA in 34.123-3   | B   | 5.3.0    | 5.4.0    | R5-060560 |
| RP-31   | RP-060147 | 1647 | -   | Introduce ASP for HSDPA of LCR TDD  | B   | 5.3.0    | 5.4.0    | R5-060317 |
| RP-31   | RP-060147 | 1648 | -   | Updating Information in section 8.2.4 (Table 35)  | F   | 5.3.0    | 5.4.0    | R5-060287 |
| RP-31   | RP-060154 | 1649 | -   | Correction of default value for IXIT parameter 'px_CipherAlg'.  | F   | 5.3.0    | 5.4.0    | R5-060178 |
| RP-31   | RP-060154 | 1650 | -   | New ASP for DTM and other corrections in 34.123-3 – Release 99  | F   | 5.3.0    | 5.4.0    | R5-060505 |
| RP-31   | RP-060164 | 1651 | -   | Update configurations, introduce frequency band indicator for SS in 34.123-3 - Release 5.                                     | F   | 5.3.0    | 5.4.0    | R5-060316 |
| RP-32   | RP-060338 | 1652 | -   | Update HSDPA test configuration   | F   | 5.4.0    | 5.5.0    | R5-061004 |
| RP-32   | RP-060338 | 1653 | -   | Change of ASP and IEs for LCR TDD   | F   | 5.4.0    | 5.5.0    | R5-061300 |
| RP-32   | RP-060333 | 1654 | -   | Update E-DCH test model and ASP (CR to 34.123-3)  | F   | 5.4.0    | 5.5.0    | R5-061285 |
| RP-32   | RP-060324 | 1655 | -   | Update PIXIT  | F   | 5.4.0    | 5.5.0    | R5-061003 |
| RP-32   | RP-060324 | 1656 | -   | Correction to ASP CPHY_TFCI_Detected_IND  | F   | 5.4.0    | 5.5.0    | R5-061377 |
| RP-32   | RP-060321 | 1657 | -   | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A               | F   | 5.4.0    | 5.5.0    | -         |
| RP-32   | RP-060339 | 1658 | -   | Addition of GCF WI14 test case 8.2.6.48 to HSD_ENH ATS V5.4.0   | B   | 5.4.0    | 5.5.0    | R5s060139 |
| RP-32   | RP-060327 | 1659 | -   | Addition of GCF WI-12 test case 8.3.4.8   | B   | 5.4.0    | 5.5.0    | R5s060019 |
| RP-32   | RP-060327 | 1660 | -   | Addition of GCF WI12 RRC test case 8.2.2.43 to RRC ATS v5.3.0   | B   | 5.4.0    | 5.5.0    | R5s060084 |
| RP-32   | RP-060327 | 1661 | -   | Addition of GCF WI12 RRC test case 8.2.6.39 to RRC ATS v5.4.0 (Revision of R5s060076)   | B   | 5.4.0    | 5.5.0    | R5s060080 |
| RP-32   | RP-060327 | 1662 | -   | Addition of GCF WI12 RRC test case 8.2.6.44 to RRC ATS v5.4.0 (Revision of R5s060078)   | B   | 5.4.0    | 5.5.0    | R5s060082 |
| RP-32   | RP-060327 | 1663 | -   | Addition of GCF WI-10 MM test case 9.4.5.4.1  | B   | 5.4.0    | 5.5.0    | R5s060066 |
| RP-32   | RP-060330 | 1664 | -   | Addition of GCF WI-13 RRC test case 8.4.1.47 to HSD_ENH ATS v5.3.0  | B   | 5.4.0    | 5.5.0    | R5s060070 |
| RP-32   | RP-060330 | 1665 | -   | Addition of GCF WI13 Inter-RAT cell change order from UTRAN test case 8.3.11.12 to HSD_ENH ATS v5.4.0 (Revision of R5s060092) | B   | 5.4.0    | 5.5.0    | R5s060094 |
| RP-32   | RP-060339 | 1666 | -   | Correction to GCF WI14 RAB test case 14_6_1, 14_6_2, 14_6_3, 14_6_3a, 14_6_4, 14_6_4a, 14_6_5, 14_6_5a                        | F   | 5.4.0    | 5.5.0    | R5s060059 |
| RP-32   | RP-060339 | 1667 | -   | Correction to GCF WI14 test case 8_3_1_34 and 8_3_1_36  | F   | 5.4.0    | 5.5.0    | R5s060061 |
| RP-32   | RP-060339 | 1668 | -   | Change of the relative channel powers for HS-PDSCH and HS-SCCH  | F   | 5.4.0    | 5.5.0    | R5s060074 |
| RP-32   | RP-060339 | 1669 | -   | Corrections to RAB testcase 14.6.3a   | F   | 5.4.0    | 5.5.0    | R5s060121 |
| RP-32   | RP-060339 | 1670 | -   | Correction to teststep ts_RRC_MultiCallEstPS_MO_HSDPA, ts_RRC_NAS_SessionActPS_MO_P9_P10_HS                                   | F   | 5.4.0    | 5.5.0    | R5s060114 |
| RP-32   | RP-060339 | 1671 | -   | Corrections to GCF WI 14 RRC test case 8.2.3.34   | F   | 5.4.0    | 5.5.0    | R5s060115 |
| RP-32   | RP-060330 | 1672 | -   | Revised summary of regression errors in IR_U and HSD_ENH_R5 ATS (wk03, 2006)  | F   | 5.4.0    | 5.5.0    | R5s060088 |
| RP-32   | RP-060330 | 1673 | -   | Correction to GCF WI13 test case 6.1.2.10   | F   | 5.4.0    | 5.5.0    | R5s060075 |
| RP-32   | RP-060330 | 1674 | -   | Correction to GCF WI-13 Idle Mode test case 6.1.2.10  | F   | 5.4.0    | 5.5.0    | R5s060089 |
| RP-32   | RP-060330 | 1675 | -   | Corrections to Approved GCF WI-013 RRC testcases 8.4.1.47   | F   | 5.4.0    | 5.5.0    | R5s060135 |
| RP-32   | RP-060330 | 1676 | -   | Additional CR for agreed TC 8.3.11.12 (8.3.11.13 implicitly affected)   | F   | 5.4.0    | 5.5.0    | R5s060118 |
| RP-32   | RP-060325 | 1677 | -   | Correction to GCF WI-10 RRC Test Case 6.2.2.2   | F   | 5.4.0    | 5.5.0    | R5s060050 |
| RP-32   | RP-060325 | 1678 | -   | Correction of GCF WI-10 test case 8.4.1.5   | F   | 5.4.0    | 5.5.0    | R5s060049 |
| RP-32   | RP-060325 | 1679 | -   | Summary of regression errors in the wk06 ATS.   | F   | 5.4.0    | 5.5.0    | R5s060056 |
| RP-32   | RP-060325 | 1680 | -   | Corrections to Security procedure to make UL SRB3 ciphering preconfiguration optional   | F   | 5.4.0    | 5.5.0    | R5s060057 |
| RP-32   | RP-060325 | 1681 | -   | Summary of regression errors in the wk06 GCF WI-10 and GCF WI-12 ATS  | F   | 5.4.0    | 5.5.0    | R5s060047 |
| RP-32   | RP-060325 | 1682 | -   | Correction to the test step ts_DownlinkTBFEstablishment   | F   | 5.4.0    | 5.5.0    | R5s060060 |
| RP-32   | RP-060325 | 1683 | -   | Change to expected value of Qos "DeliveryOrder" IE.   | F   | 5.4.0    | 5.5.0    | R5s060058 |
| RP-32   | RP-060325 | 1684 | -   | Clarification of the usage of 4 PICS parameters   | F   | 5.4.0    | 5.5.0    | R5s060053 |
| RP-32   | RP-060325 | 1685 | -   | Correction to approved GCF WI-10/2 InterRAT test case 6.2.2.2   | F   | 5.4.0    | 5.5.0    | R5s060055 |
| RP-32   | RP-060325 | 1686 | -   | Correction to approved GCF WI-10/2 InterRAT test case 6.2.2.1   | F   | 5.4.0    | 5.5.0    | R5s060054 |
| RP-32   | RP-060325 | 1687 | -   | Corrections to IRU Measurement test cases for handling of UL only and DI only compressed mode branches                        | F   | 5.4.0    | 5.5.0    | R5s060051 |

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|---------|-----------|------|-----|---|-----|----------|----------|-----------|
| RP-32   | RP-060325 | 1688 | -   | Generic correction to test step 'ts_MM_IMSI_Detach'   | F   | 5.4.0    | 5.5.0    | R5s060069 |
| RP-32   | RP-060325 | 1689 | -   | Correction to GCF WI-12 RAB Test Case 14.2.9  | F   | 5.4.0    | 5.5.0    | R5s060068 |
| RP-32   | RP-060325 | 1690 | -   | Summary of regression errors in the wk09 GCF WI-10 and GCF WI-12 ATS  | F   | 5.4.0    | 5.5.0    | R5s060073 |
| RP-32   | RP-060325 | 1691 | -   | Corrections to GCF WI-10 IR_U test case 6.2.1.7 and 6.2.1.8   | F   | 5.4.0    | 5.5.0    | R5s060072 |
| RP-32   | RP-060325 | 1692 | -   | Correction to RRC test cases 8.1.1.1 and 8.1.1.9  | F   | 5.4.0    | 5.5.0    | R5s060086 |
| RP-32   | RP-060325 | 1693 | -   | Correction to WI10 Idle Mode test case 6.1.2.6  | F   | 5.4.0    | 5.5.0    | R5s060087 |
| RP-32   | RP-060325 | 1694 | -   | Correction to the IR_U test case 6.2.2.3  | F   | 5.4.0    | 5.5.0    | R5s060091 |
| RP-32   | RP-060325 | 1695 | -   | Correction to SM GCF WI 10 test case 11.3.1   | F   | 5.4.0    | 5.5.0    | R5s060090 |
| RP-32   | RP-060325 | 1696 | -   | Correction to GCF WI-12 Testcase 9.4.3.3  | F   | 5.4.0    | 5.5.0    | R5s060101 |
| RP-32   | RP-060326 | 1697 | -   | Correction to GCF WI-12 Testcase 9.4.5.4.6  | F   | 5.4.0    | 5.5.0    | R5s060102 |
| RP-32   | RP-060326 | 1698 | -   | Correction to GCF WI-10 Testcase 8.1.7.1c   | F   | 5.4.0    | 5.5.0    | R5s060103 |
| RP-32   | RP-060326 | 1699 | -   | Correction to GCF WI-15 Test Cases  | F   | 5.4.0    | 5.5.0    | R5s060104 |
| RP-32   | RP-060326 | 1700 | -   | TTCN correction to Approved RRC TCs 8.3.4.1, 8.3.4.2 and 8.3.4.3  | F   | 5.4.0    | 5.5.0    | R5s060096 |
| RP-32   | RP-060326 | 1701 | -   | TTCN correction to Approved RRC TC 8.4.1.14   | F   | 5.4.0    | 5.5.0    | R5s060095 |
| RP-32   | RP-060326 | 1702 | -   | Correction of approved IR_U test case 8.3.11.1.   | F   | 5.4.0    | 5.5.0    | R5s060097 |
| RP-32   | RP-060326 | 1703 | -   | Correction of approved HSD_ENH_R5 test cases 8.3.11.9, 8.3.11.13 and of 8.3.11.12 (under approval).   | F   | 5.4.0    | 5.5.0    | R5s060098 |
| RP-32   | RP-060326 | 1704 | -   | Correction to GCF WI-10 GMM test case 12.4.2.4  | F   | 5.4.0    | 5.5.0    | R5s060110 |
| RP-32   | RP-060326 | 1705 | -   | Correction in TTCN for RLC Test cases 7.2.3.21, 7.2.3.22 and 7.2.3.24   | F   | 5.4.0    | 5.5.0    | R5s060109 |
| RP-32   | RP-060326 | 1706 | -   | Correction to RRC GCF WI 12 test case 8.3.1.30  | F   | 5.4.0    | 5.5.0    | R5s060106 |
| RP-32   | RP-060326 | 1707 | -   | Corrections to RAB testcase 14.2.41   | F   | 5.4.0    | 5.5.0    | R5s060120 |
| RP-32   | RP-060326 | 1708 | -   | Correction to GCF WI-10 RRC Test Case 8.1.1.9   | F   | 5.4.0    | 5.5.0    | R5s060119 |
| RP-32   | RP-060326 | 1709 | -   | Correction to the constraints used for the Radio Bearer Reconfiguration Message   | F   | 5.4.0    | 5.5.0    | R5s060113 |
| RP-32   | RP-060326 | 1710 | -   | Correction to RRC test cases 8.3.1.21 and 8.3.2.11  | F   | 5.4.0    | 5.5.0    | R5s060112 |
| RP-32   | RP-060326 | 1711 | -   | Summary of regression errors in the wk11 ATS.   | F   | 5.4.0    | 5.5.0    | R5s060111 |
| RP-32   | RP-060326 | 1712 | -   | Corrections to TTCN test cases due to the review of 34.123-2 and, related, the implementation of test case selection expressions in the TTCN. | F   | 5.4.0    | 5.5.0    | R5s060116 |
| RP-32   | RP-060326 | 1713 | -   | Empty all PCOs when TC begins   | F   | 5.4.0    | 5.5.0    | R5s060064 |
| RP-32   | RP-060326 | 1714 | -   | Correction to QOS parameters for UMTS only mobiles  | F   | 5.4.0    | 5.5.0    | R5s060041 |
| RP-32   | RP-060326 | 1715 | -   | Correction to GCF Test Case 8.4.1.25  | F   | 5.4.0    | 5.5.0    | R5s060141 |
| RP-32   | RP-060326 | 1716 | -   | Correction to GCF WI-10 Testcase 7.2.3.21   | F   | 5.4.0    | 5.5.0    | R5s060126 |
| RP-32   | RP-060327 | 1717 | -   | Correction to GCF WI-12 Testcase 9.4.3.3  | F   | 5.4.0    | 5.5.0    | R5s060127 |
| RP-32   | RP-060327 | 1718 | -   | Correction to GCF WI-10 IR-U Test Case 6.2.2.3  | F   | 5.4.0    | 5.5.0    | R5s060128 |
| RP-32   | RP-060327 | 1719 | -   | Correction to the RRC test case 6.1.2.8   | F   | 5.4.0    | 5.5.0    | R5s060123 |
| RP-32   | RP-060327 | 1720 | -   | Correction to GCF WI-12 NAS Test Case 9.4.3.3   | F   | 5.4.0    | 5.5.0    | R5s060122 |
| RP-32   | RP-060327 | 1721 | -   | Correction to GCF WI-10 SMS Test Case 16.x  | F   | 5.4.0    | 5.5.0    | R5s060136 |
| RP-32   | RP-060327 | 1722 | -   | Correction to the IR_U test case 8.3.11.1   | F   | 5.4.0    | 5.5.0    | R5s060130 |
| RP-32   | RP-060327 | 1723 | -   | Correction to the approved IR_U test cases 8.3.7.1 and 8.3.7.3  | F   | 5.4.0    | 5.5.0    | R5s060131 |
| RP-32   | RP-060327 | 1724 | -   | Correction to the GCF WI-12 test case 8.4.1.48  | F   | 5.4.0    | 5.5.0    | R5s060134 |
| RP-32   | RP-060327 | 1725 | -   | Correction to the common security teststeps to add the default test step  | F   | 5.4.0    | 5.5.0    | R5s060133 |
| RP-32   | RP-060327 | 1726 | -   | Correction to Cell Broadcast test case 16.3   | F   | 5.4.0    | 5.5.0    | R5s060125 |
| RP-32   | RP-060327 | 1727 | -   | Correction to the RRC test case 8.1.1.9   | F   | 5.4.0    | 5.5.0    | R5s060124 |
| RP-32   | RP-060327 | 1728 | -   | Correction to the RRC compressed mode testcases   | F   | 5.4.0    | 5.5.0    | R5s060132 |
| RP-32   | RP-060327 | 1729 | -   | Correction of erroneous determination of OP-Mode in multiple ATSS   | F   | 5.4.0    | 5.5.0    | R5s060117 |
| RP-33   | RP-060548 | 1730 | -   | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A                               | F   | 5.5.0    | 5.6.0    | -         |
| RP-33   | RP-060555 | 1731 | -   | Correction to the RRC testcase 8.4.1.23   | F   | 5.5.0    | 5.6.0    | R5s060225 |
| RP-33   | RP-060555 | 1732 | -   | Correction to the RRC testcase 8.4.1.25   | F   | 5.5.0    | 5.6.0    | R5s060226 |
| RP-33   | RP-060555 | 1733 | -   | Correction to the GMM test case 12.9.7b   | F   | 5.5.0    | 5.6.0    | R5s060223 |
| RP-33   | RP-060555 | 1734 | -   | Correction of Inter RAT testcase 12.8   | F   | 5.5.0    | 5.6.0    | R5s060222 |
| RP-33   | RP-060555 | 1735 | -   | Summary of regression errors in wk29 GCF WI-10 ATS  | F   | 5.5.0    | 5.6.0    | R5s060227 |
| RP-33   | RP-060555 | 1736 | -   | Correction to GCF WI-010/1 approved test case 7.2.3.27  | F   | 5.5.0    | 5.6.0    | R5s060230 |
| RP-33   | RP-060555 | 1737 | -   | Correction to GCF WI-12/1 approved test case 8.2.2.43   | F   | 5.5.0    | 5.6.0    | R5s060231 |
| RP-33   | RP-060569 | 1738 | -   | Correction to test cases 14.6.4   | F   | 5.5.0    | 5.6.0    | R5s060229 |
| RP-33   | RP-060555 | 1739 | -   | Correction to test cases 8.2.2.35 & tcv_BcapMmedia  | F   | 5.5.0    | 5.6.0    | R5s060232 |
| RP-33   | RP-060555 | 1740 | -   | Correction to GCF WI10 RRC Test Case 8.4.1.5  | F   | 5.5.0    | 5.6.0    | R5s060218 |
| RP-33   | RP-060555 | 1741 | -   | Correction to approved GCF WI-12 RAB test case 14.2.58a   | F   | 5.5.0    | 5.6.0    | R5s060221 |

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| RP-33   | RP-060555 | 1742 | -   | Correction to approved GCF WI-12 RRC test cases 8.2.6.39 and 8.2.6.44 | F   | 5.5.0    | 5.6.0    | R5s060220 |
| RP-33   | RP-060555 | 1743 | -   | Correction to approved GCF WI-10 RLC test case 7.2.3.17               | F   | 5.5.0    | 5.6.0    | R5s060219 |
| RP-33   | RP-060555 | 1744 | -   | Summary of Regression Errors in NAS wk29 ATS                          | F   | 5.5.0    | 5.6.0    | R5s060217 |
| RP-33   | RP-060569 | 1745 | -   | Correction GCF WI-14 HSDPA Test Case 8.2.1.27                         | F   | 5.5.0    | 5.6.0    | R5s060214 |
| RP-33   | RP-060569 | 1746 | -   | Correction to test cases 14.6.6                                       | F   | 5.5.0    | 5.6.0    | R5s060215 |
| RP-33   | RP-060555 | 1747 | -   | Summary of Regression Errors in WK29 ATS                              | F   | 5.5.0    | 5.6.0    | R5s060212 |
| RP-33   | RP-060555 | 1748 | -   | ASP enhancement for HSUPA testing                                     | F   | 5.5.0    | 5.6.0    | R5s060196 |
| RP-33   | RP-060569 | 1749 | -   | Summary of regression errors in the wk27 HSD Suite                    | F   | 5.5.0    | 5.6.0    | R5s060209 |
| RP-33   | RP-060555 | 1750 | -   | Summary of regression errors in the wk27 RLC ATS                      | F   | 5.5.0    | 5.6.0    | R5s060210 |
| RP-33   | RP-060555 | 1751 | -   | Corrections to GCF WI-12/1 approved test case 7.1.3.2                 | F   | 5.5.0    | 5.6.0    | R5s060208 |
| RP-33   | RP-060554 | 1752 | -   | Addition of GCF WI10 RRC test case 8.4.1.8 to RRC ATS v5.5.0          | B   | 5.5.0    | 5.6.0    | R5s060201 |
| RP-33   | RP-060555 | 1753 | -   | Corrections to GCF WI-12/1 approved test case 12.9.7a.                | F   | 5.5.0    | 5.6.0    | R5s060206 |
| RP-33   | RP-060569 | 1754 | -   | Summary of Regression Errors in HSDPA ATS                             | F   | 5.5.0    | 5.6.0    | R5s060207 |
| RP-33   | RP-060555 | 1755 | -   | Summary of regression errors in the wk27 GCF WI-10 and GCF WI-12 ATS  | F   | 5.5.0    | 5.6.0    | R5s060205 |
| RP-33   | RP-060555 | 1756 | -   | Correction to GCF WI-10 Idle Mode test case 6.1.2.5                   | F   | 5.5.0    | 5.6.0    | R5s060203 |
| RP-33   | RP-060556 | 1757 | -   | Correction to GCF WI-10 RRC test case 8.3.4.3                         | F   | 5.5.0    | 5.6.0    | R5s060204 |
| RP-33   | RP-060556 | 1758 | -   | Regression Error report for RRC & MAC ATS                             | F   | 5.5.0    | 5.6.0    | R5s060199 |
| RP-33   | RP-060559 | 1759 | -   | Regression Error report for HSD_ENH_r5 ATS                            | F   | 5.5.0    | 5.6.0    | R5s060200 |
| RP-33   | RP-060559 | 1760 | -   | Correction of CC procedure for multimedia calls                       | F   | 5.5.0    | 5.6.0    | R5s060063 |
| RP-33   | RP-060556 | 1761 | -   | Corrections to GCF WI-10 RRC Test Case 8.4.1.24 and 8.4.1.25          | F   | 5.5.0    | 5.6.0    | R5s060198 |
| RP-33   | RP-060554 | 1762 | -   | Addition of GCF WI-015 AGPS test case 17.2.3.7 to AGPS ATS V5.5.0     | B   | 5.5.0    | 5.6.0    | R5s060193 |
| RP-33   | RP-060554 | 1763 | -   | Addition of GCF WI-015 AGPS test case 17.2.3.6 to AGPS ATS V5.5.0     | B   | 5.5.0    | 5.6.0    | R5s060192 |
| RP-33   | RP-060556 | 1764 | -   | Correction to GCF WI-12 NAS Test Case 12.9.9                          | F   | 5.5.0    | 5.6.0    | R5s060197 |
| RP-33   | RP-060556 | 1765 | -   | Correction to the RRC testcase 8.2.3.8                                | F   | 5.5.0    | 5.6.0    | R5s060190 |
| RP-33   | RP-060556 | 1766 | -   | Correction to the RRC testcase 8.2.4.1                                | F   | 5.5.0    | 5.6.0    | R5s060191 |
| RP-33   | RP-060556 | 1767 | -   | Correction of GCF WI-10 RRC Test Case 8.3.1.10 and 8.3.2.4            | F   | 5.5.0    | 5.6.0    | R5s060186 |
| RP-33   | RP-060556 | 1768 | -   | Correction to the Security procedure                                  | F   | 5.5.0    | 5.6.0    | R5s060189 |
| RP-33   | RP-060556 | 1769 | -   | Correction to GCF WI-10 NAS Test Case 11.1.1.1                        | F   | 5.5.0    | 5.6.0    | R5s060178 |
| RP-33   | RP-060556 | 1770 | -   | Correction to GCF WI-12 RRC Test Case 8.1.1.10                        | F   | 5.5.0    | 5.6.0    | R5s060187 |
| RP-33   | RP-060556 | 1771 | -   | Correction to the test step ts_ToStateMOCCompressMode_CS_6_9_PS_6_10  | F   | 5.5.0    | 5.6.0    | R5s060188 |
| RP-33   | RP-060561 | 1772 | -   | Moving baseline to the June 06, Rel-6                                 | F   | 5.5.0    | 5.6.0    | R5s060183 |
| RP-33   | RP-060556 | 1773 | -   | Corrections to GCF WI-10 SMS Test Cases 16.1.1 and 16.1.2             | F   | 5.5.0    | 5.6.0    | R5s060185 |
| RP-33   | RP-060559 | 1774 | -   | Corrections to GCF WI-13 Test Case 8.3.11.13                          | F   | 5.5.0    | 5.6.0    | R5s060184 |
| RP-33   | RP-060556 | 1775 | -   | Correction GCF WI-12 Inter-RAT Test Case 8.4.1.48                     | F   | 5.5.0    | 5.6.0    | R5s060182 |
| RP-33   | RP-060569 | 1776 | -   | Corrections to GCF WI 14 test case 14.6.4                             | F   | 5.5.0    | 5.6.0    | R5s060181 |
| RP-33   | RP-060556 | 1777 | -   | Correction of GCF WI-10 Idle Mode Testcase 6.1.2.6                    | F   | 5.5.0    | 5.6.0    | R5s060180 |
| RP-33   | RP-060556 | 1778 | -   | Correction of value for t_IdlePageTimer timer                         | F   | 5.5.0    | 5.6.0    | R5s060175 |
| RP-33   | RP-060556 | 1779 | -   | Correction to GCF WI-12 NAS Test Case 12.9.9                          | F   | 5.5.0    | 5.6.0    | R5s060176 |
| RP-33   | RP-060556 | 1780 | -   | Correction to Approved GCF WI-10 NAS test case 12.9.6                 | F   | 5.5.0    | 5.6.0    | R5s060179 |
| RP-33   | RP-060556 | 1781 | -   | Summary of regression errors in wk23 GCF WI-10 and GCF WI-12 ATS      | F   | 5.5.0    | 5.6.0    | R5s060177 |
| RP-33   | RP-060556 | 1782 | -   | Correction to the test step ts_U2GCellChange_RAUpdate                 | F   | 5.5.0    | 5.6.0    | R5s060174 |
| RP-33   | RP-060556 | 1783 | -   | Corrections to GCF WI 12/1 IR_U test case 8_4_1_48                    | F   | 5.5.0    | 5.6.0    | R5s060173 |
| RP-33   | RP-060569 | 1784 | -   | Correction to test case 8.2.6.48                                      | F   | 5.5.0    | 5.6.0    | R5s060170 |
| RP-33   | RP-060559 | 1785 | -   | Correction to test case 8.1.6.5                                       | F   | 5.5.0    | 5.6.0    | R5s060171 |
| RP-33   | RP-060557 | 1786 | -   | Correction to test step ts_SS_Rel                                     | F   | 5.5.0    | 5.6.0    | R5s060172 |
| RP-33   | RP-060557 | 1787 | -   | Correction to the GCF WI-12 RRC testcase 8.1.6.3                      | F   | 5.5.0    | 5.6.0    | R5s060169 |
| RP-33   | RP-060557 | 1788 | -   | Correction to the GCF WI-10 NAS test case 12.4.2.4                    | F   | 5.5.0    | 5.6.0    | R5s060166 |
| RP-33   | RP-060557 | 1789 | -   | Correction to the GCF WI-10 RRC test case 8.4.1.2                     | F   | 5.5.0    | 5.6.0    | R5s060167 |
| RP-33   | RP-060557 | 1790 | -   | Summary of regression errors in the wk21 GCF WI-10 and WI-12 ATS      | F   | 5.5.0    | 5.6.0    | R5s060168 |
| RP-33   | RP-060569 | 1791 | -   | Summary of regression errors in the wk21 HSD_ENH ATS                  | F   | 5.5.0    | 5.6.0    | R5s060165 |
| RP-33   | RP-060569 | 1792 | -   | Correction to GCF WI14 test case 8.2.6.39a and 8.2.6.39b              | F   | 5.5.0    | 5.6.0    | R5s060164 |
| RP-33   | RP-060557 | 1793 | -   | Correction of GCF WI-12 and 10 NAS Test cases 9.4.5.4.6 and 9.4.5.4.1 | F   | 5.5.0    | 5.6.0    | R5s060163 |

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| RP-33   | RP-060554 | 1794 | -   | Addition of GCF WI-012 MAC test case 7.1.3.2 to MAC ATS V5.4.0  | B   | 5.5.0    | 5.6.0    | R5s060161 |
| RP-33   | RP-060557 | 1795 | -   | Correction of GCF WI-10 IR_U Testcase 8.3.11.4  | F   | 5.5.0    | 5.6.0    | R5s060158 |
| RP-33   | RP-060569 | 1796 | -   | Addition of GCF WI14/3 test case 14.6.6 to HSD_ENH ATS V5.4.0   | B   | 5.5.0    | 5.6.0    | R5s060159 |
| RP-33   | RP-060569 | 1797 | -   | Correction of GCF WI-14 HSDPA Testcase 8.3.11.10  | F   | 5.5.0    | 5.6.0    | R5s060156 |
| RP-33   | RP-060557 | 1798 | -   | Correction of GCF WI-12 RRC Testcase 8.3.1.30   | F   | 5.5.0    | 5.6.0    | R5s060157 |
| RP-33   | RP-060569 | 1799 | -   | Addition of GCF WI14/3 test case 14.6.1a to HSD_ENH ATS V5.4.0  | B   | 5.5.0    | 5.6.0    | R5s060154 |
| RP-33   | RP-060557 | 1800 | -   | Summary of regression errors in the wk18 GCF WI-10 and GCF WI-12 ATS  | F   | 5.5.0    | 5.6.0    | R5s060148 |
| RP-33   | RP-060557 | 1801 | -   | Correction to common teststeps ts_RRC_ReceiveUE_CapabilityInfo and ts_Check_UE_Capability                       | F   | 5.5.0    | 5.6.0    | R5s060146 |
| RP-33   | RP-060557 | 1802 | -   | Correction to the constraint cbr_108_RRC_SecModeCmpl in approved teststep ts_RRC_Security                       | F   | 5.5.0    | 5.6.0    | R5s060147 |
| RP-33   | RP-060569 | 1803 | -   | Correction to test step ts_RRC_ConnRel_AfterSwitchOff_r5  | F   | 5.5.0    | 5.6.0    | R5s060153 |
| RP-33   | RP-060569 | 1804 | -   | Correction of GCF WI-14 HSDPA MAC test case 7.1.5.4   | F   | 5.5.0    | 5.6.0    | R5s060149 |
| RP-33   | RP-060557 | 1805 | -   | Proposed enhancement for calculation of DPCH Frame Offset   | F   | 5.5.0    | 5.6.0    | R5s060150 |
| RP-33   | RP-060557 | 1806 | -   | Correction of PLMN presentation in test step ts_MMI_PLMN_SelPerf  | F   | 5.5.0    | 5.6.0    | R5s060152 |
| RP-33   | RP-060557 | 1807 | -   | Correction to InterRAT Idle Mode frequency lists  | F   | 5.5.0    | 5.6.0    | R5s060151 |
| RP-33   | RP-060557 | 1808 | -   | Correction to GCF WI-10 Idle Mode test case 6.1.2.3   | F   | 5.5.0    | 5.6.0    | R5s060144 |
| RP-33   | RP-060557 | 1809 | -   | Correction of integrity error in TC 8.1.7.1d  | F   | 5.5.0    | 5.6.0    | R5s060145 |
| RP-33   | RP-060569 | 1810 | -   | TTCN correction to MAC-hs testcase 7.1.5.6  | F   | 5.5.0    | 5.6.0    | R5s060143 |
| RP-33   | RP-060558 | 1811 | -   | Summary of regression errors in wk29 IRAT ATSS.   | F   | 5.5.0    | 5.6.0    | R5s060236 |
| RP-33   | RP-060558 | 1812 | -   | Correction to Approved GCF WI-10 NAS test case 12.4.1.1a  | F   | 5.5.0    | 5.6.0    | R5s060243 |
| RP-33   | RP-060558 | 1813 | -   | Summary of Regression Errors in RRC wk34 ATS  | F   | 5.5.0    | 5.6.0    | R5s060248 |
| RP-33   | RP-060558 | 1814 | -   | Summary of Regression Errors in NAS wk34 ATS  | F   | 5.5.0    | 5.6.0    | R5s060249 |
| RP-33   | RP-060558 | 1815 | -   | Summary of Regression Errors in SMS wk34 ATS  | F   | 5.5.0    | 5.6.0    | R5s060250 |
| RP-33   | RP-060559 | 1816 | -   | Summary of Regression Errors in HSD_ENH wk34 ATS  | F   | 5.5.0    | 5.6.0    | R5s060256 |
| RP-33   | RP-060558 | 1817 | -   | Correction to GCF WI-12 IR_U Test Case 8.4.1.48   | F   | 5.5.0    | 5.6.0    | R5s060253 |
| RP-33   | RP-060558 | 1818 | -   | Summary of regression errors in wk34 GCF WI-10 and GCF WI-12 ATS  | F   | 5.5.0    | 5.6.0    | R5s060255 |
| RP-33   | RP-060558 | 1819 | -   | Correction to UE capability constraints   | F   | 5.5.0    | 5.6.0    | R5s060254 |
| RP-33   | RP-060558 | 1820 | -   | Addition of GCF WI-017 test case 8.3.7.17 to IR_U_r3 ATS V5.5.0.  | B   | 5.5.0    | 5.6.0    | R5s060234 |
| RP-33   | RP-060564 | 1821 | -   | CR to 34.123-3: ASP changes for EDCH test   | F   | 5.5.0    | 5.6.0    | R5-062325 |
| RP-33   | RP-060551 | 1822 | -   | New ASP and updated ASP to resolve SRB3 UL ciphering  | F   | 5.5.0    | 5.6.0    | R5-062534 |
| RP-33   | RP-060553 | 1823 | -   | Production of pointer version 5.6.0 of TS 34.123-3 with no technical contents                                   | F   | 5.5.0    | 5.6.0    | R5-062535 |
| RP-33   | RP-060560 | 1824 | -   | Upgrade TS 34.123-3 to version 6.0.0  | F   | 5.5.0    | 6.0.0    | R5-062536 |
| RP-33   | RP-060551 | 1825 | -   | CR to 34.123-3: Update TSO and PIXIT  | F   | 5.5.0    | 5.6.0    | R5-062395 |
| RP-33   | RP-060551 | 1826 | -   | CR to 34.123-3: SFN offset issue in the CFN timing-maintained test  | F   | 5.5.0    | 5.6.0    | R5-062046 |
| RP-33   | RP-060560 | 1827 | -   | CR to 34.123-3: GERAN additional bands for interRAT test  | F   | 5.5.0    | 5.6.0    | R5-062537 |
| RP-34   | RP-060744 | 1828 | -   | CR to 34.123-3, Corrections of ASP and EDCH configurations  | F   | 6.0.0    | 6.1.0    | R5-063063 |
| RP-34   | RP-060734 | 1829 | -   | CR to 34.123-3: New PIXIT for band VI test  | F   | 6.0.0    | 6.1.0    | R5-063375 |
| RP-34   | RP-060734 | 1830 | -   | CR to 34.123-3: New annex guidance to TC executions   | F   | 6.0.0    | 6.1.0    | R5-063546 |
| RP-34   | RP-060741 | 1831 | -   | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A | F   | 6.0.0    | 6.1.0    | -         |
| RP-34   | RP-060745 | 1832 | -   | Addition of E-DCH MAC test case 7.1.6.2.3 to HSU_ENH ATS v5.5.0   | B   | 6.0.0    | 6.1.0    | R5s060311 |
| RP-34   | RP-060745 | 1833 | -   | Addition of EDCH test case 8.2.6.50 to HSU ATS v5.5.0   | B   | 6.0.0    | 6.1.0    | R5s060304 |
| RP-34   | RP-060745 | 1834 | -   | Addition of E-DCH RRC test case 8.3.1.41 to HSU_ENH ATS v5.5.0  | B   | 6.0.0    | 6.1.0    | R5s060286 |
| RP-34   | RP-060745 | 1835 | -   | Addition of E-DCH InterRAT test case 8.3.11.14 to HSU_ENH_r6 ATS.   | B   | 6.0.0    | 6.1.0    | R5s060272 |
| RP-34   | RP-060745 | 1836 | -   | Addition of GCF WI-25 E-DCH test case 14.7.1 to HSU_ENH_r6 ATS.   | B   | 6.0.0    | 6.1.0    | R5s060259 |

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| RP-34   | RP-060745 | 1837 | -   | Addition of GCF WI-25 E-DCH test case 8.2.1.35 to HSU_ENH_r6 ATS.        | B   | 6.0.0    | 6.1.0    | R5s060270 |
| RP-34   | RP-060736 | 1838 | -   | Addition of GCF WI10 RRC test case 8.2.6.38 to RRC ATS v6.0.0            | B   | 6.0.0    | 6.1.0    | R5s060295 |
| RP-34   | RP-060736 | 1839 | -   | Addition of GCF WI10 RRC test case 8.4.1.28 to RRC ATS v6.0.0            | B   | 6.0.0    | 6.1.0    | R5s060265 |
| RP-34   | RP-060736 | 1840 | -   | Addition of GCF WI10 RRC test case 6.1.2.4 to RRC ATS v6.0.0             | B   | 6.0.0    | 6.1.0    | R5s060257 |
| RP-34   | RP-060738 | 1841 | -   | Addition of HSDPA RAB test case 14.6.7 to HSD_ENH ATS v5.5.0             | B   | 6.0.0    | 6.1.0    | R5s060313 |
| RP-34   | RP-060740 | 1842 | -   | Addition of DSAC test case 8.1.2.16 to HSU_ENH_r6 ATS.                   | B   | 6.0.0    | 6.1.0    | R5s060288 |
| RP-34   | RP-060740 | 1843 | -   | Addition of DSAC test case 12.4.2.12 to HSU_ENH_r6 ATS                   | B   | 6.0.0    | 6.1.0    | R5s060283 |
| RP-34   | RP-060740 | 1844 | -   | Addition of DSAC test case 12.4.2.11 to HSU_ENH_r6 ATS.                  | B   | 6.0.0    | 6.1.0    | R5s060281 |
| RP-34   | RP-060740 | 1845 | -   | Addition of GCF WI-24 DSAC test case 12.9.15 to HSU ATS v6.0.0           | B   | 6.0.0    | 6.1.0    | R5s060263 |
| RP-34   | RP-060740 | 1846 | -   | Addition of DSAC test case 9.4.3.6 to HSU_ENH_ATS V5.5.0                 | B   | 6.0.0    | 6.1.0    | R5s060251 |
| RP-34   | RP-060740 | 1847 | -   | Addition of DSAC test case 12.2.1.12 to HSU_ENH_ATS V6.0.0               | B   | 6.0.0    | 6.1.0    | R5s060246 |
| RP-34   | RP-060740 | 1848 | -   | Addition of DSAC test case 9.5.9 to HSU_ENH_ATS V6.0.0                   | B   | 6.0.0    | 6.1.0    | R5s060244 |
| RP-34   | RP-060736 | 1849 | -   | Correction to GCF WI-10 IR-U Test Case 8.3.7.1                           | F   | 6.0.0    | 6.1.0    | R5s060338 |
| RP-34   | RP-060736 | 1850 | -   | Summary of regression errors in wk38 GCF WI-10 and WI-12 ATS             | F   | 6.0.0    | 6.1.0    | R5s060337 |
| RP-34   | RP-060736 | 1851 | -   | Correction to SMS testcase 16.2.1  | F   | 6.0.0    | 6.1.0    | R5s060320 |
| RP-34   | RP-060736 | 1852 | -   | Correction to the NAS Test Case 12.9.12 and 12.9.13                      | F   | 6.0.0    | 6.1.0    | R5s060334 |
| RP-34   | RP-060736 | 1853 | -   | Corrections to GCF WI-10 Test Cases 8.1.10.1 and 7.1.1.8                 | F   | 6.0.0    | 6.1.0    | R5s060332 |
| RP-34   | RP-060736 | 1854 | -   | Introduction of Band 6 to test cases                                     | F   | 6.0.0    | 6.1.0    | R5s060324 |
| RP-34   | RP-060736 | 1855 | -   | Summary of Regression Errors in RLC wk38 ATS                             | F   | 6.0.0    | 6.1.0    | R5s060331 |
| RP-34   | RP-060736 | 1856 | -   | Corrections to GCF WI-12 RRC Test Cases 8.2.6.39 & 8.2.6.44              | F   | 6.0.0    | 6.1.0    | R5s060330 |
| RP-34   | RP-060736 | 1857 | -   | Correction to GCF WI-10 RRC Test Case 6.1.1.7                            | F   | 6.0.0    | 6.1.0    | R5s060325 |
| RP-34   | RP-060736 | 1858 | -   | Correction to approved GCF WI-12/1 RAB test case 14.2.58a                | F   | 6.0.0    | 6.1.0    | R5s060321 |
| RP-34   | RP-060736 | 1859 | -   | Summary of regression errors in the wk38 InterRAT ATSS.                  | F   | 6.0.0    | 6.1.0    | R5s060315 |
| RP-34   | RP-060736 | 1860 | -   | Summary of regression errors in wk38 GCF WI-10 and GCF WI-12 ATS         | F   | 6.0.0    | 6.1.0    | R5s060309 |
| RP-34   | RP-060736 | 1861 | -   | Correction to the RRC test case 8.4.1.8                                  | F   | 6.0.0    | 6.1.0    | R5s060307 |
| RP-34   | RP-060736 | 1862 | -   | Corrections to GCF WI-10 RAB testcases 14.4.2.3 and 14.4.2a.3            | F   | 6.0.0    | 6.1.0    | R5s060308 |
| RP-34   | RP-060736 | 1863 | -   | Correction to IR_U testcase 8.4.1.48                                     | F   | 6.0.0    | 6.1.0    | R5s060302 |
| RP-34   | RP-060736 | 1864 | -   | Correction of GCF WI-10 RRC testcase 8.1.10.1                            | F   | 6.0.0    | 6.1.0    | R5s060303 |
| RP-34   | RP-060736 | 1865 | -   | Correction to GCF WI-12 RRC Test Case 8.3.1.30                           | F   | 6.0.0    | 6.1.0    | R5s060306 |
| RP-34   | RP-060737 | 1866 | -   | Correction to IR_U testcases for XID negotiation                         | F   | 6.0.0    | 6.1.0    | R5s060298 |
| RP-34   | RP-060737 | 1867 | -   | Correction to RRC testcase 8.2.2.9                                       | F   | 6.0.0    | 6.1.0    | R5s060299 |
| RP-34   | RP-060737 | 1868 | -   | Correction to RRC testcase 8.3.1.30                                      | F   | 6.0.0    | 6.1.0    | R5s060300 |
| RP-34   | RP-060737 | 1869 | -   | iWD_wk36 ATS Regression Errors Corrections                               | F   | 6.0.0    | 6.1.0    | R5s060294 |
| RP-34   | RP-060737 | 1870 | -   | Summary of regression errors in the wk36 IR_U_r3 ATS.                    | F   | 6.0.0    | 6.1.0    | R5s060290 |
| RP-34   | RP-060737 | 1871 | -   | TTCN Correction to GCF WI-10 RRC Test Cases 8.1.1.4, 8.1.1.5 and 8.1.1.6 | F   | 6.0.0    | 6.1.0    | R5s060292 |
| RP-34   | RP-060737 | 1872 | -   | TTCN correction to GCF WI-10 RRC Test Cases 8.1.2.2 and 8.1.2.9          | F   | 6.0.0    | 6.1.0    | R5s060293 |
| RP-34   | RP-060737 | 1873 | -   | Correction to WI 10/2 RRC testcase 8.4.1.8                               | F   | 6.0.0    | 6.1.0    | R5s060285 |
| RP-34   | RP-060737 | 1874 | -   | Summary of regression errors in wk36 GCF WI-10 and GCF WI-12 ATS         | F   | 6.0.0    | 6.1.0    | R5s060274 |
| RP-34   | RP-060737 | 1875 | -   | Summary of Regression Errors in wk36 ATS                                 | F   | 6.0.0    | 6.1.0    | R5s060280 |
| RP-34   | RP-060737 | 1876 | -   | Correction to approved GCF WI-010 Test Case 16.2.1                       | F   | 6.0.0    | 6.1.0    | R5s060278 |
| RP-34   | RP-060737 | 1877 | -   | Correction to GCF WI-12 RRC Test Case 8.2.2.43                           | F   | 6.0.0    | 6.1.0    | R5s060279 |
| RP-34   | RP-060737 | 1878 | -   | Correction to testcase 14.2.58   | F   | 6.0.0    | 6.1.0    | R5s060267 |
| RP-34   | RP-060737 | 1879 | -   | TTCN CR to extend Guard Timer for GCF WI-10 and 12 RRC & RAB Test Cases  | F   | 6.0.0    | 6.1.0    | R5s060261 |
| RP-34   | RP-060738 | 1880 | -   | Correction to testcase 8.2.6.48  | F   | 6.0.0    | 6.1.0    | R5s060335 |
| RP-34   | RP-060738 | 1881 | -   | Correction of PDP_Context_Status mandatory IE for Rel 5 and above        | F   | 6.0.0    | 6.1.0    | R5s060333 |
| RP-34   | RP-060738 | 1882 | -   | Corrections to GCF WI-14/1 test case 8.3.11.9                            | F   | 6.0.0    | 6.1.0    | R5s060323 |

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| RP-34   | RP-060738 | 1883 | -   | Corrections to GCF WI 14/1 test case 8.2.3.35                      | F   | 6.0.0    | 6.1.0    | R5s060310 |
| RP-34   | RP-060738 | 1884 | -   | Correction to GCF WI 14 RRC testcases in Non Ciphering path.       | F   | 6.0.0    | 6.1.0    | R5s060301 |
| RP-34   | RP-060738 | 1885 | -   | Correction to HSDPA MRAT testcase 8.3.7.14                         | F   | 6.0.0    | 6.1.0    | R5s060297 |
| RP-34   | RP-060738 | 1886 | -   | Summary of regression errors in wk36 HSD_ENH ATS                   | F   | 6.0.0    | 6.1.0    | R5s060277 |
| RP-34   | RP-060738 | 1887 | -   | TTCN CR to extend Guard Timer for GCF WI-14 RAB Test Case          | F   | 6.0.0    | 6.1.0    | R5s060262 |
| RP-34   | RP-060745 | 1888 | -   | Addition of E-DCH MAC test case 7.1.6.2.7 to HSU_ENH ATS v6.0.0    | B   | 6.0.0    | 6.1.0    | R5s060343 |
| RP-34   | RP-060745 | 1889 | -   | Addition of E-DCH MAC test case 7.1.6.2.4 to HSU_ENH ATS v6.0.0    | B   | 6.0.0    | 6.1.0    | R5s060347 |
| RP-34   | RP-060737 | 1890 | -   | Correction to approved GCF WI-10/3 RRC test case 6.1.2.6           | F   | 6.0.0    | 6.1.0    | R5s060339 |
| RP-34   | RP-060737 | 1891 | -   | Correction to GCF WI-10 Idle Mode Test Case 6.1.2.8                | F   | 6.0.0    | 6.1.0    | R5s060340 |
| RP-34   | RP-060737 | 1892 | -   | Correction to GCF WI-10 RRC Test Case 8.3.1.31                     | F   | 6.0.0    | 6.1.0    | R5s060342 |
| RP-34   | RP-060737 | 1896 | -   | Corrections of approved GCF WI-12 test case 8.2.2.43.              | F   | 6.0.0    | 6.1.0    | R5s060317 |
| RP-34   | RP-060737 | 1897 | -   | Correction to GCF WI-10 RRC Test Case 8.4.1.8                      | F   | 6.0.0    | 6.1.0    | R5s060322 |
| RP-35   | RP-070099 | 1898 |     | Addition of GCF WI-25 HSUPA MAC Test Case 7.1.6.4.3                | B   | 6.1.0    | 6.2.0    | R5s060401 |
| RP-35   | RP-070099 | 1899 |     | Addition of GCF WI-25 RAB Test Case 14.7.4                         | B   | 6.1.0    | 6.2.0    | R5s060399 |
| RP-35   | RP-070099 | 1900 |     | Addition of GCF WI-25 HSUPA Test Case 7.1.6.2.10                   | B   | 6.1.0    | 6.2.0    | R5s060378 |
| RP-35   | RP-070099 | 1901 |     | Addition of GCF WI-25 HSUPA MAC Test Case 7.1.6.4.2                | B   | 6.1.0    | 6.2.0    | R5s060395 |
| RP-35   | RP-070099 | 1902 |     | Addition of GCF WI-25 HSUPA Test Case 8.2.2.45                     | B   | 6.1.0    | 6.2.0    | R5s060384 |
| RP-35   | RP-070099 | 1903 |     | Addition of GCF WI-25 HSUPA MAC Test Case 7.1.6.1.3                | B   | 6.1.0    | 6.2.0    | R5s060380 |
| RP-35   | RP-070099 | 1904 |     | Addition of GCF WI-25 HSUPA MAC Test Case 7.1.6.2.8                | B   | 6.1.0    | 6.2.0    | R5s060376 |
| RP-35   | RP-070099 | 1905 |     | Addition of GCF WI-25 HSUPA Test Case 7.1.6.2.9                    | B   | 6.1.0    | 6.2.0    | R5s060381 |
| RP-35   | RP-070106 | 1906 |     | Addition of GCF WI-10 Idle mode test case 6.1.2.9a                 | B   | 6.1.0    | 6.2.0    | R5s070027 |
| RP-35   | RP-070106 | 1907 |     | Addition of GCF WI-10 Idle mode test case 6.1.2.9b                 | B   | 6.1.0    | 6.2.0    | R5s070029 |
| RP-35   | RP-070110 | 1908 |     | Addition of WB-AMR RAB test case 14.2.4b to HSD_ENH_r5 ATS V6.1.0  | B   | 6.1.0    | 6.2.0    | R5s070033 |
| RP-35   | RP-070099 | 1909 |     | Addition of E-DCH RAB test case 14.7.5 to HSU_ENH_r6 ATS V6.0.0    | B   | 6.1.0    | 6.2.0    | R5s060328 |
| RP-35   | RP-070099 | 1910 |     | Addition of E-DCH RAB test case 14.7.2 to HSU_ENH_r6 ATS V6.0.0    | B   | 6.1.0    | 6.2.0    | R5s060326 |
| RP-35   | RP-070099 | 1911 |     | Addition of E-DCH MAC test case 7.1.6.3.1 to HSU_ENH_r6 ATS V6.0.0 | B   | 6.1.0    | 6.2.0    | R5s060364 |
| RP-35   | RP-070099 | 1912 |     | Addition of E-DCH MAC test case 7.1.6.1.2 to HSU_ENH_r6 ATS V6.0.0 | B   | 6.1.0    | 6.2.0    | R5s060362 |
| RP-35   | RP-070099 | 1913 |     | Addition of E-DCH MAC test case 7.1.6.1.1 to HSU_ENH_r6 ATS V6.0.0 | B   | 6.1.0    | 6.2.0    | R5s060360 |
| RP-35   | RP-070099 | 1914 |     | Correction to GCF WI-025 test case 8.3.1.41                        | F   | 6.1.0    | 6.2.0    | R5s060404 |
| RP-35   | RP-070099 | 1915 |     | Correction to GCF WI-25 RAB Test Case 14.7.5                       | F   | 6.1.0    | 6.2.0    | R5s060408 |
| RP-35   | RP-070106 | 1916 |     | Summary of Regression Errors in NAS wk49 ATS                       | F   | 6.1.0    | 6.2.0    | R5s060406 |
| RP-35   | RP-070106 | 1917 |     | Summary of regression errors in wk49 ATS                           | F   | 6.1.0    | 6.2.0    | R5s060405 |
| RP-35   | RP-070106 | 1918 |     | Correction to GCF WI-10 SMS test case 16.3                         | F   | 6.1.0    | 6.2.0    | R5s070005 |
| RP-35   | RP-070106 | 1919 |     | Correction to GCF WI-10 SMS test cases 16.1.1 and 16.1.2           | F   | 6.1.0    | 6.2.0    | R5s070006 |
| RP-35   | RP-070106 | 1920 |     | Correction to GCF WI-10 RRC test case 6.1.2.3                      | F   | 6.1.0    | 6.2.0    | R5s070007 |
| RP-35   | RP-070106 | 1921 |     | Summary of regression errors in wk49 IRAT ATSS.                    | F   | 6.1.0    | 6.2.0    | R5s070004 |
| RP-35   | RP-070106 | 1922 |     | Correction to GCF WI-10 NAS Test Case 12.9.12                      | F   | 6.1.0    | 6.2.0    | R5s070001 |
| RP-35   | RP-070106 | 1923 |     | Correction to GCF WI-10 RRC Test Case 8.4.1.25 and 8.4.1.48        | F   | 6.1.0    | 6.2.0    | R5s070002 |
| RP-35   | RP-070106 | 1924 |     | Correction to GCF WI-10 RAB Test Case 14.2.58                      | F   | 6.1.0    | 6.2.0    | R5s070003 |
| RP-35   | RP-070099 | 1925 |     | Correction to GCF WI-025 test case 14.7.4                          | F   | 6.1.0    | 6.2.0    | R5s070019 |
| RP-35   | RP-070106 | 1926 |     | Correction to GCF WI-10 RRC Test Case 8.4.1.2                      | F   | 6.1.0    | 6.2.0    | R5s070026 |
| RP-35   | RP-070106 | 1927 |     | Correction to GCF WI-10 IR-U Test Case 12.8                        | F   | 6.1.0    | 6.2.0    | R5s070025 |
| RP-35   | RP-070106 | 1928 |     | Corrections to GCF WI-17 DTM test case 8.3.7.17                    | F   | 6.1.0    | 6.2.0    | R5s070023 |
| RP-35   | RP-070106 | 1929 |     | Correction to approved test case 8.4.1.8                           | F   | 6.1.0    | 6.2.0    | R5s070020 |
| RP-35   | RP-070106 | 1930 |     | Correction to approved test case 8.2.6.38                          | F   | 6.1.0    | 6.2.0    | R5s070021 |
| RP-35   | RP-070106 | 1931 |     | Correction to the NAS test case 9.2.2                              | F   | 6.1.0    | 6.2.0    | R5s070011 |
| RP-35   | RP-070106 | 1932 |     | Correction to NAS test cases 12.4.1.1b and 12.9.9                  | F   | 6.1.0    | 6.2.0    | R5s070012 |
| RP-35   | RP-070106 | 1933 |     | Correction to RRC testcase 8.4.1.2                                 | F   | 6.1.0    | 6.2.0    | R5s070013 |
| RP-35   | RP-070106 | 1934 |     | Correction to DSAC testcases 12.9.15, 12.4.2.11 and 12.4.2.12      | F   | 6.1.0    | 6.2.0    | R5s070014 |
| RP-35   | RP-070107 | 1935 |     | Correction to AGPS ASP Retri_GPS_AssistanceData_CNF                | F   | 6.1.0    | 6.2.0    | R5s070015 |
| RP-35   | RP-070107 | 1936 |     | Correction to the RRC testcase 8.3.4.8                             | F   | 6.1.0    | 6.2.0    | R5s070017 |

| Meeting | TSG doc   | CR   | Rev | Subject   | Cat | Old vers | New vers | WG doc    |
|---------|-----------|------|-----|---|-----|----------|----------|-----------|
| RP-35   | RP-070107 | 1937 |     | Summary of Regression Errors in wk49 ATSS   | F   | 6.1.0    | 6.2.0    | R5s070018 |
| RP-35   | RP-070107 | 1938 |     | Introduction of Band 8  | F   | 6.1.0    | 6.2.0    | R5s070008 |
| RP-35   | RP-070107 | 1939 |     | Correction of CC procedure for multimedia calls   | F   | 6.1.0    | 6.2.0    | R5s070010 |
| RP-35   | RP-070110 | 1940 |     | Correction to RRC TC 8.3.4.9 to avoid possible radio link failure.  | F   | 6.1.0    | 6.2.0    | R5s070022 |
| RP-35   | RP-070110 | 1941 |     | Correction to GCF WI-14 HSDPA Test Case 14.6.4a   | F   | 6.1.0    | 6.2.0    | R5s070024 |
| RP-35   | RP-070107 | 1942 |     | Step enhancement for the introduction of InterBand Test cases   | F   | 6.1.0    | 6.2.0    | R5s070031 |
| RP-35   | RP-070107 | 1943 |     | Correction to GCF WI-10 RRC Test Case 8.3.1.5   | F   | 6.1.0    | 6.2.0    | R5s070039 |
| RP-35   | RP-070107 | 1944 |     | Correction to Inter-RAT testcase 8.3.7.3  | F   | 6.1.0    | 6.2.0    | R5s070038 |
| RP-35   | RP-070110 | 1945 |     | Correction to GCF WI-13 Test Case 8.3.1.40  | F   | 6.1.0    | 6.2.0    | R5s070040 |
| RP-35   | RP-070110 | 1946 |     | Correction to Idle mode testcase 6.1.2.10   | F   | 6.1.0    | 6.2.0    | R5s070036 |
| RP-35   | RP-070112 | 1947 |     | Correction to DSAC RRC testcase 8.1.2.16  | F   | 6.1.0    | 6.2.0    | R5s070037 |
| RP-35   | RP-070110 | 1948 |     | Correction to test case 8.2.6.39b & 8.3.4.9   | F   | 6.1.0    | 6.2.0    | R5s070041 |
| RP-35   | RP-070107 | 1949 |     | Correction to the NAS Test Case 12.3.2.1  | F   | 6.1.0    | 6.2.0    | R5s060352 |
| RP-35   | RP-070107 | 1950 |     | Correction to GCF WI-012 test case 12.3.2.7   | F   | 6.1.0    | 6.2.0    | R5s060351 |
| RP-35   | RP-070107 | 1951 |     | Correction to approved GCF WI-10 test case 8.3.7.1.   | F   | 6.1.0    | 6.2.0    | R5s060345 |
| RP-35   | RP-070107 | 1952 |     | Correction of approved GCF WI-010 test case 8.1.7.1c  | F   | 6.1.0    | 6.2.0    | R5s060316 |
| RP-35   | RP-070107 | 1953 |     | Correction to GCF WI-12 MAC Test Case 7.1.3.2   | F   | 6.1.0    | 6.2.0    | R5s060354 |
| RP-35   | RP-070107 | 1954 |     | Correction to QOS checking for UE not support AT commands to start MO PS call                                   | F   | 6.1.0    | 6.2.0    | R5s060353 |
| RP-35   | RP-070112 | 1955 |     | Correction to GCF WI-24 DSAC Test Case 12.4.2.11  | F   | 6.1.0    | 6.2.0    | R5s060355 |
| RP-35   | RP-070107 | 1956 |     | Summary of regression errors in wk43 ATS  | F   | 6.1.0    | 6.2.0    | R5s060341 |
| RP-35   | RP-070107 | 1957 |     | Correction to GCF WI 10/2 RRC testcase 8.4.1.8  | F   | 6.1.0    | 6.2.0    | R5s060389 |
| RP-35   | RP-070107 | 1958 |     | TTCN correction to GMM Test Case 12.4.1.4b  | F   | 6.1.0    | 6.2.0    | R5s060357 |
| RP-35   | RP-070107 | 1959 |     | Summary of regression errors in wk47 IRAT ATSS.   | F   | 6.1.0    | 6.2.0    | R5s060372 |
| RP-35   | RP-070107 | 1960 |     | Change of PDU type definition REGISTER used in MM test cases  | F   | 6.1.0    | 6.2.0    | R5s060388 |
| RP-35   | RP-070107 | 1961 |     | Correction to GCF WI-10 RRC Test Case 8.4.1.25  | F   | 6.1.0    | 6.2.0    | R5s060374 |
| RP-35   | RP-070108 | 1962 |     | Summary of Regression Errors in NAS wk47 ATS – Batch2   | F   | 6.1.0    | 6.2.0    | R5s060371 |
| RP-35   | RP-070108 | 1963 |     | Summary of Regression Errors in NAS wk47 ATS  | F   | 6.1.0    | 6.2.0    | R5s060369 |
| RP-35   | RP-070108 | 1964 |     | Summary of Regression Errors in RAB wk47 ATS  | F   | 6.1.0    | 6.2.0    | R5s060370 |
| RP-35   | RP-070108 | 1965 |     | Correction to GCF WI-10 RRC Test Case 8.1.2.4   | F   | 6.1.0    | 6.2.0    | R5s060367 |
| RP-35   | RP-070108 | 1966 |     | Correction to GCF WI-10 RRC Test Case 6.1.2.1   | F   | 6.1.0    | 6.2.0    | R5s060366 |
| RP-35   | RP-070110 | 1967 |     | TTCN correction to GCF WI-014 RRC HSDPA Test Case 8.3.1.35  | F   | 6.1.0    | 6.2.0    | R5s060359 |
| RP-35   | RP-070110 | 1968 |     | Summary of Regression Errors in HSDPA wk47 ATS  | F   | 6.1.0    | 6.2.0    | R5s060368 |
| RP-35   | RP-070099 | 1969 |     | Corrections to E-DCH test case 14.7.1   | F   | 6.1.0    | 6.2.0    | R5s060403 |
| RP-35   | RP-070099 | 1970 |     | Corrections to E-DCH test case 7.1.6.2.3 and 7.1.6.2.7  | F   | 6.1.0    | 6.2.0    | R5s060394 |
| RP-35   | RP-070099 | 1971 |     | Summary of Regression Errors in HSU wk47 ATS  | F   | 6.1.0    | 6.2.0    | R5s060375 |
| RP-35   | RP-070108 | 1972 |     | Correction to approved test case 8.4.1.2, 8.4.1.6, 8.4.1.24   | F   | 6.1.0    | 6.2.0    | R5s060391 |
| RP-35   | RP-070110 | 1973 |     | Summary of regression errors in wk47 ATS  | F   | 6.1.0    | 6.2.0    | R5s060393 |
| RP-35   | RP-070110 | 1974 |     | Correction to approved GCF WI-014 test case 8.2.6.48  | F   | 6.1.0    | 6.2.0    | R5s060392 |
| RP-35   | RP-070108 | 1975 |     | Correction to RRC constraint 'cr_RRC_RrcConnSetupCmplRadioCap_BandList2' for Band VIII                          | F   | 6.1.0    | 6.2.0    | R5s070035 |
| RP-35   | RP-070108 | 1976 |     | Addition of GCF WI-010 P4 test case 8.2.6.37 to RRC ATS V6.1.0  | B   | 6.1.0    | 6.2.0    | R5s070050 |
| RP-35   | RP-070108 | 1977 |     | Correction to GCF WI-10 NAS test cases using SETUP ul constraints   | F   | 6.1.0    | 6.2.0    | R5s070043 |
| RP-35   | RP-070108 | 1978 |     | Correction to GCF WI-10 NAS test cases 9.1 and 12.9.7c  | F   | 6.1.0    | 6.2.0    | R5s070044 |
| RP-35   | RP-070108 | 1979 |     | Correction to GCF WI-10 NAS test case 9.4.2.2 Procedure 2   | F   | 6.1.0    | 6.2.0    | R5s070045 |
| RP-35   | RP-070100 | 1981 |     | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A | F   | 6.1.0    | 6.2.0    | -         |
| RP-35   | RP-070108 | 1982 |     | Correction to the MAC suite for Band VI   | F   | 6.1.0    | 6.2.0    | R5s070052 |
| RP-35   | RP-070108 | 1983 |     | Summary of regression errors in 07wk03 ATSS   | F   | 6.1.0    | 6.2.0    | R5s070053 |
| RP-35   | RP-070108 | 1984 |     | Cell setup issue in 15 Idle Mode, RRC and NAS test cases  | F   | 6.1.0    | 6.2.0    | R5s070054 |
| RP-35   | RP-070108 | 1985 |     | Correction to RRC testcase 6.1.2.6  | F   | 6.1.0    | 6.2.0    | R5s070059 |
| RP-35   | RP-070108 | 1986 |     | Correction to constraint cr_UE_CapabilityInfoAM_BandList2 for Band VIII   | F   | 6.1.0    | 6.2.0    | R5s070061 |
| RP-35   | RP-070108 | 1987 |     | Corrections to wk03 AGPS ATS  | F   | 6.1.0    | 6.2.0    | R5s070032 |
| RP-35   | RP-070108 | 1988 |     | Recovering LAI checking in RRC CONNECTION REQUEST in 8.1.2.x. test cases  | F   | 6.1.0    | 6.2.0    | R5s070057 |



| Meeting | TSG doc   | CR   | Rev | Subject  | Cat | Old vers | New vers | WG doc    |
|---------|-----------|------|-----|--|-----|----------|----------|-----------|
| RP-35   | RP-070108 | 1989 |     | Correction to RRC testcase 8.4.1.2                                     | F   | 6.1.0    | 6.2.0    | R5s070056 |
| RP-35   | RP-070108 | 1990 |     | Cleaning of UE capability check procedure and band PICS                | F   | 6.1.0    | 6.2.0    | R5s070042 |
| RP-35   | RP-070109 | 1991 |     | Correction to remove dependency on px_CipheringOnOff in L2 test cases  | F   | 6.1.0    | 6.2.0    | R5s070055 |
| RP-35   | RP-070110 | 1992 |     | Correction to HSDPA testcase 8.2.4.36                                  | F   | 6.1.0    | 6.2.0    | R5s070060 |
| RP-35   | RP-070099 | 1993 |     | Addition of GCF WI 25 RRC test case 8.2.3.36 to HSU_ENH_r6 ATS V6.1.0. | B   | 6.1.0    | 6.2.0    | R5s070062 |
| RP-35   | RP-070099 | 1994 |     | Addition of GCF WI-25 EDCH RRC test case 8.2.2.46                      | B   | 6.1.0    | 6.2.0    | R5s070064 |
| RP-35   | RP-070109 | 1995 |     | Correction to RLC Test case 7.2.3.35                                   | F   | 6.1.0    | 6.2.0    | R5s070058 |
| RP-35   | RP-070098 | 1996 |     | Activation time in EDCH ASP and ASP order                              | F   | 6.1.0    | 6.2.0    | R5-070033 |
| RP-35   | RP-070087 | 1997 |     | MBMS test model and ASP  | F   | 6.1.0    | 6.2.0    | R5-070460 |
| RP-35   | RP-070103 | 1998 |     | Correction of Band VIII test and Max. number of Almanac data           | F   | 6.1.0    | 6.2.0    | R5-070400 |
| RP-35   | RP-070105 | 1999 |     | Documentation of a test configuration and other corrections            | F   | 6.1.0    | 6.2.0    | R5-070401 |
| RP-35   | RP-070103 | 2000 |     | Corrections to AGPS asn.1 module                                       | F   | 6.1.0    | 6.2.0    | R5-070091 |
| RP-36   | RP-070359 | 2001 |     | Addition of GCF WI 25 test case 8.3.4.10 to HSU_ENH_r6 ATS V6.1.0.     | B   | 6.2.0    | 6.3.0    | R5s070047 |
| RP-36   | RP-070359 | 2002 |     | Addition of RRC test case 8.2.6.54 to HSD_ENH_r5 ATS V6.1.0            | B   | 6.2.0    | 6.3.0    | R5s070112 |
| RP-36   | RP-070359 | 2003 |     | Addition of GCF WI-25 EDCH test case 8.2.2.48                          | B   | 6.2.0    | 6.3.0    | R5s070079 |
| RP-36   | RP-070359 | 2004 |     | Addition of GCF WI-25 EDCH test case 8.2.6.51                          | B   | 6.2.0    | 6.3.0    | R5s070140 |
| RP-36   | RP-070359 | 2005 |     | Addition of E-DCH test case 7.1.6.2.2 to HSUPA ATS v6.1.0              | B   | 6.2.0    | 6.3.0    | R5s070103 |
| RP-36   | RP-070347 | 2006 |     | Addition of GCF WI-047 test case 8.4.1.25A to RRC ATS.                 | B   | 6.2.0    | 6.3.0    | R5s070126 |
| RP-36   | RP-070347 | 2007 |     | Addition of GCF WI-047 test case 8.4.1.2B to RRC ATS.                  | B   | 6.2.0    | 6.3.0    | R5s070122 |
| RP-36   | RP-070347 | 2008 |     | Addition of GCF WI-047 test case 8.2.1.34a to RRC ATS.                 | B   | 6.2.0    | 6.3.0    | R5s070120 |
| RP-36   | RP-070347 | 2009 |     | Addition of GCF WI-047 test case 8.2.1.24a to RRC ATS.                 | B   | 6.2.0    | 6.3.0    | R5s070118 |
| RP-36   | RP-070347 | 2010 |     | Addition of GCF WI-047 test case 6.1.2.10a to HSDPA ATS.               | B   | 6.2.0    | 6.3.0    | R5s070085 |
| RP-36   | RP-070347 | 2011 |     | Addition of GCF WI-047 test case 8.1.2.10a to RRC ATS.                 | B   | 6.2.0    | 6.3.0    | R5s070083 |
| RP-36   | RP-070347 | 2012 |     | Addition of GCF WI-047 test case 6.1.2.1a to RRC ATS.                  | B   | 6.2.0    | 6.3.0    | R5s070081 |
| RP-36   | RP-070347 | 2013 |     | Addition of GCF WI10 RRC test case 8.4.1.42 to RRC ATS v6.1.0          | B   | 6.2.0    | 6.3.0    | R5s070109 |
| RP-36   | RP-070352 | 2014 |     | Addition of WB-AMR RAB test case 14.6.8 to HSD_ENH_r5 ATS V6.1.0       | B   | 6.2.0    | 6.3.0    | R5s070072 |
| RP-36   | RP-070352 | 2015 |     | Addition of WB-AMR RAB test case 14.2.62 to HSD_ENH_r5 ATS V6.1.0      | B   | 6.2.0    | 6.3.0    | R5s070077 |
| RP-36   | RP-070359 | 2016 |     | Summary of regression errors in 07wk08 HSUPA ATS                       | F   | 6.2.0    | 6.3.0    | R5s070069 |
| RP-36   | RP-070359 | 2017 |     | Correction to E-DCH testcases using rv0                                | F   | 6.2.0    | 6.3.0    | R5s070071 |
| RP-36   | RP-070359 | 2018 |     | Correction to approved 8.3.1.41 test case                              | F   | 6.2.0    | 6.3.0    | R5s070130 |
| RP-36   | RP-070359 | 2019 |     | Correction to test steps ts_InitVariablesHSU & ts_SS_RelDPCH_E_HS      | F   | 6.2.0    | 6.3.0    | R5s070098 |
| RP-36   | RP-070359 | 2020 |     | Correction to E-DCH testcases 7.1.6.4.3                                | F   | 6.2.0    | 6.3.0    | R5s070095 |
| RP-36   | RP-070359 | 2021 |     | Correction to GCF WI-25 test case 7.1.6.2.2                            | F   | 6.2.0    | 6.3.0    | R5s070138 |
| RP-36   | RP-070359 | 2022 |     | Correction to E-DCH testcases 8.2.2.46 & 8.2.3.36                      | F   | 6.2.0    | 6.3.0    | R5s070115 |
| RP-36   | RP-070347 | 2023 |     | Correction to GCF WI-10 NAS Test Case 12.4.1.4a                        | F   | 6.2.0    | 6.3.0    | R5s070128 |
| RP-36   | RP-070347 | 2024 |     | Correction to GCF WI-10 Test Cases 9.4.5.4.1, 6.1.2.9a and 6.1.2.9b    | F   | 6.2.0    | 6.3.0    | R5s070129 |
| RP-36   | RP-070347 | 2025 |     | Summary of regression errors in wk11 ATS                               | F   | 6.2.0    | 6.3.0    | R5s070111 |
| RP-36   | RP-070347 | 2026 |     | Summary of regression errors in wk08 ATS                               | F   | 6.2.0    | 6.3.0    | R5s070090 |
| RP-36   | RP-070347 | 2027 |     | Correction to GCF WI-10 RRC Test Case 12.9.6 , 12.4.2.4 , 12.2.1.4.1   | F   | 6.2.0    | 6.3.0    | R5s070092 |
| RP-36   | RP-070347 | 2028 |     | Summary of Regression Errors in wk08 ATSS                              | F   | 6.2.0    | 6.3.0    | R5s070087 |
| RP-36   | RP-070347 | 2029 |     | Improvement on Guard Timer Timeout Handling                            | F   | 6.2.0    | 6.3.0    | R5s070093 |
| RP-36   | RP-070347 | 2030 |     | Summary of Regression errors in wk 11 IR_U ATS                         | F   | 6.2.0    | 6.3.0    | R5s070134 |
| RP-36   | RP-070347 | 2031 |     | Correction to GCF WI-10 NAS test case 9.4.2.2 Procedure 2              | F   | 6.2.0    | 6.3.0    | R5s070100 |
| RP-36   | RP-070347 | 2032 |     | Correction to RRC testcase 8.4.1.8 & 8.4.1.28                          | F   | 6.2.0    | 6.3.0    | R5s070097 |
| RP-36   | RP-070348 | 2033 |     | Correction to RRC testcase 8.4.1.2 & 8.4.1.6                           | F   | 6.2.0    | 6.3.0    | R5s070096 |
| RP-36   | RP-070348 | 2034 |     | Removal of pc_MS_ClsmkFreqCap  | F   | 6.2.0    | 6.3.0    | R5s070094 |
| RP-36   | RP-070348 | 2035 |     | Summary of regression errors in 07wk03 IRAT ATSS                       | F   | 6.2.0    | 6.3.0    | R5s070049 |
| RP-36   | RP-070348 | 2036 |     | Alignment of TTCN implementation of default radio configurations       | F   | 6.2.0    | 6.3.0    | R5s070135 |

| Meeting | TSG doc   | CR   | Rev | Subject   | Cat | Old vers | New vers | WG doc    |
|---------|-----------|------|-----|---|-----|----------|----------|-----------|
| RP-36   | RP-070348 | 2037 |     | Corrections to AGPS test cases 17.2.x (GCF WI-015)  | F   | 6.2.0    | 6.3.0    | R5s070075 |
| RP-36   | RP-070348 | 2038 |     | Correction to RAB Test cases 14.4.2.1 and 14.4.2a.1   | F   | 6.2.0    | 6.3.0    | R5s070099 |
| RP-36   | RP-070348 | 2039 |     | Correction to MRAT Idle mode testcases 6.2.1.1 and 6.2.1.6  | F   | 6.2.0    | 6.3.0    | R5s070066 |
| RP-36   | RP-070348 | 2040 |     | Further correction to QOS checking for UE not support AT commands to start MO PS call                           | F   | 6.2.0    | 6.3.0    | R5s070139 |
| RP-36   | RP-070348 | 2041 |     | Rel-6 baseline upgrade  | F   | 6.2.0    | 6.3.0    | R5s070132 |
| RP-36   | RP-070348 | 2042 |     | Summary of regression errors in wk11 ATS  | F   | 6.2.0    | 6.3.0    | R5s070142 |
| RP-36   | RP-070348 | 2043 |     | Summary of regression errors in the wk08 HSDPA InterRAT ATS   | F   | 6.2.0    | 6.3.0    | R5s070067 |
| RP-36   | RP-070348 | 2044 |     | Correction to GCF WI-10 Idle Mode test case 6.1.1.7   | F   | 6.2.0    | 6.3.0    | R5s070114 |
| RP-36   | RP-070348 | 2045 |     | Correction to GCF WI-10 NAS Test Case 12.2.1.6 Proc 1 and 2   | F   | 6.2.0    | 6.3.0    | R5s070107 |
| RP-36   | RP-070348 | 2046 |     | Correction to GCF WI-10 SMS Test Case 16.2.1  | F   | 6.2.0    | 6.3.0    | R5s070117 |
| RP-36   | RP-070348 | 2047 |     | Corrections to the GCF WI-010 P4 test case 8.2.6.37   | F   | 6.2.0    | 6.3.0    | R5s070074 |
| RP-36   | RP-070352 | 2048 |     | Correction to UM constraints used with type CRLC_Config_Req   | F   | 6.2.0    | 6.3.0    | R5s070070 |
| RP-36   | RP-070352 | 2049 |     | Summary of regression errors in wk-11 MAC ATS   | F   | 6.2.0    | 6.3.0    | R5s070131 |
| RP-36   | RP-070352 | 2050 |     | Correction to approved 8.2.6.39a and 8.2.6.39b test cases   | F   | 6.2.0    | 6.3.0    | R5s070076 |
| RP-36   | RP-070352 | 2051 |     | Correction to WB-AMR RAB test cases 14.2.62, 14.2.4b and 14.6.8   | F   | 6.2.0    | 6.3.0    | R5s070136 |
| RP-36   | RP-070352 | 2052 |     | Correction of approved GCF WI14 test case 8.3.7.14.   | F   | 6.2.0    | 6.3.0    | R5s070105 |
| RP-36   | RP-070352 | 2053 |     | Corrections to WB-AMR RAB test cases 14.2.4b and 14.2.62  | F   | 6.2.0    | 6.3.0    | R5s070108 |
| RP-36   | RP-070348 | 2054 |     | Correction to GCF WI-10 NAS Test Case 12.8  | F   | 6.2.0    | 6.3.0    | R5s070143 |
| RP-36   | RP-070348 | 2055 |     | Correction to GCF WI-10 RRC test case 8.2.6.8   | F   | 6.2.0    | 6.3.0    | R5s070137 |
| RP-36   | RP-070359 | 2056 |     | Correction to GCF WI-25 test case 7.1.6.2.2   | F   | 6.2.0    | 6.3.0    | R5s070144 |
| RP-36   | RP-070348 | 2057 |     | Correction to GCF WI-10 Test Case 8.2.6.37 , 8.2.6.38   | F   | 6.2.0    | 6.3.0    | R5s070145 |
| RP-36   | RP-070347 | 2058 |     | Addition of GCF WI-047 test case 8.4.1.24A to RRC ATS.  | B   | 6.2.0    | 6.3.0    | R5s070124 |
| RP-36   | RP-070348 | 2059 |     | Correction to GCF WI-10 Idle Mode Test Case 6.1.2.6   | F   | 6.2.0    | 6.3.0    | R5s070146 |
| RP-36   | RP-070347 | 2060 |     | Addition of GCF WI-047 test case 8.2.6.37b to RRC ATS   | B   | 6.2.0    | 6.3.0    | R5s070149 |
| RP-36   | RP-070359 | 2061 |     | Correction to approved 7.1.6.4.3 test case  | F   | 6.2.0    | 6.3.0    | R5s070148 |
| RP-36   | RP-070352 | 2062 |     | Corrections to GCF WI-13 and WI-14 WB-AMR Test Cases 14.2.4b, 14.2.62 and 14.6.8                                | F   | 6.2.0    | 6.3.0    | R5s070147 |
| RP-36   | RP-070355 | 2063 |     | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A | F   | 6.2.0    | 6.3.0    | -         |
| RP-36   | RP-070358 | 2064 |     | ASP enhancement for configuration of stand-alone UL-DPCH  | F   | 6.2.0    | 6.3.0    | R5-071030 |
| RP-36   | RP-070346 | 2065 |     | Documentation of TSO and recovering erroneously removed IE in ASP   | F   | 6.2.0    | 6.3.0    | R5-071433 |
| RP-36   | RP-070354 | 2066 |     | Editorial corrections in the reference list   | F   | 6.2.0    | 6.3.0    | R5-071445 |
| RP-36   | RP-070361 | 2067 |     | Allocation of channel Id for MBMS test  | F   | 6.2.0    | 6.3.0    | R5-071461 |
| RP-36   | RP-070346 | 2068 |     | Guideline on MCC setting for the Primary band cell  | F   | 6.2.0    | 6.3.0    | R5-071478 |
| RP-37   | RP-070605 | 2069 | -   | Add a new ASP for MBMS test   | F   | 6.3.0    | 6.4.0    | R5-072050 |
| RP-37   | RP-070593 | 2070 | -   | RoHC test model and ASP   | F   | 6.3.0    | 6.4.0    | R5-072051 |
| RP-37   | RP-070589 | 2071 | -   | Addition of ASP for FMO & addition of IE paging cycle splitting   | F   | 6.3.0    | 6.4.0    | R5-072466 |
| RP-37   | RP-070593 | 2072 | -   | Correction to RB identities mapping   | F   | 6.3.0    | 6.4.0    | R5-072337 |
| RP-37   | RP-070598 | 2073 | -   | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A | F   | 6.3.0    | 6.4.0    | -         |
| RP-37   | RP-070590 | 2074 | -   | TTCN Correction in testcases 8.3.7.16, 8.3.7.17   | F   | 6.3.0    | 6.4.0    | R5s070209 |
| RP-37   | RP-070590 | 2075 | -   | Correction to GCF WI-10 RRC test case 8.4.1.14  | F   | 6.3.0    | 6.4.0    | R5s070199 |
| RP-37   | RP-070595 | 2076 | -   | Corrections to GCF WI-14 HSD Test Cases 8.3.1.40  | F   | 6.3.0    | 6.4.0    | R5s070179 |
| RP-37   | RP-070590 | 2077 | -   | TTCN Correction in testcases 8.1.7.1c, 8.2.6.39, 8.2.6.44, 8.3.1.25, 8.3.1.30                                   | F   | 6.3.0    | 6.4.0    | R5s070187 |
| RP-37   | RP-070590 | 2078 | -   | Correction to RRC testcase 8.2.6.37 & 8.2.6.38  | F   | 6.3.0    | 6.4.0    | R5s070198 |
| RP-37   | RP-070590 | 2079 | -   | Correction to IR_U and IR_G test suites to support split paging cycle on CCCH                                   | F   | 6.3.0    | 6.4.0    | R5s070190 |
| RP-37   | RP-070603 | 2080 | -   | Correction to GCF WI-25 HSUPA test case 8.2.6.54  | F   | 6.3.0    | 6.4.0    | R5s070173 |
| RP-37   | RP-070590 | 2081 | -   | Correction to test step "ts_AT_CmdCBST" for setting correct speed in case of 3G324M Call.                       | F   | 6.3.0    | 6.4.0    | R5s070200 |
| RP-37   | RP-070590 | 2082 | -   | Correction to the test cases to enable Fach Measurement Occasion in the SS                                      | F   | 6.3.0    | 6.4.0    | R5s070189 |
| RP-37   | RP-070590 | 2083 | -   | Corrections to GCF WI-10 Test Cases 8.4.1.14  | F   | 6.3.0    | 6.4.0    | R5s070172 |
| RP-37   | RP-070590 | 2084 | -   | Corrections to GCF WI-14 RAB Testcase 14.6.3, 14.6.3a, 14.6.4, 14.6.4a, 14.6.7, 14.6.8                          | F   | 6.3.0    | 6.4.0    | R5s070195 |

| Meeting | TSG doc   | CR   | Rev | Subject   | Cat | Old vers | New vers | WG doc    |
|---------|-----------|------|-----|---|-----|----------|----------|-----------|
| RP-37   | RP-070590 | 2085 | -   | Correction to PDU loopback control timer used in RAB test cases                                     | F   | 6.3.0    | 6.4.0    | R5s070197 |
| RP-37   | RP-070590 | 2086 | -   | TTCN Correction in SMS testcase 16.1.1  | F   | 6.3.0    | 6.4.0    | R5s070188 |
| RP-37   | RP-070606 | 2087 | -   | Enhancement for new MBMS cells  | F   | 6.3.0    | 6.4.0    | R5s070184 |
| RP-37   | RP-070590 | 2088 | -   | Correction to GCF WI-15 AGPS test cases (17.2.4.1 to 9)   | F   | 6.3.0    | 6.4.0    | R5s070196 |
| RP-37   | RP-070590 | 2089 | -   | Corrections to GCF Interband Test Cases 6.1.2.1a and 6.1.2.10a for Band9                            | F   | 6.3.0    | 6.4.0    | R5s070191 |
| RP-37   | RP-070590 | 2090 | -   | Corrections to GCF WI-10 Test Cases 8.4.1.8   | F   | 6.3.0    | 6.4.0    | R5s070180 |
| RP-37   | RP-070590 | 2091 | -   | Correction to Interband Test Cases 8.4.1.24A  | F   | 6.3.0    | 6.4.0    | R5s070177 |
| RP-37   | RP-070590 | 2092 | -   | Corrections to GCF WI-12 Test Case 8.2.2.43   | F   | 6.3.0    | 6.4.0    | R5s070192 |
| RP-37   | RP-070590 | 2093 | -   | Summary of Regression Errors in wk23 ATSS   | F   | 6.3.0    | 6.4.0    | R5s070183 |
| RP-37   | RP-070590 | 2094 | -   | Summary of regression errors in wk23 ATS  | F   | 6.3.0    | 6.4.0    | R5s070166 |
| RP-37   | RP-070590 | 2095 | -   | TTCN Correction in testcases 8.2.2.41, 8.2.2.42, 8.2.3.31, 8.2.3.32, 8.2.3.33, 8.2.3.34, 8.2.3.35   | F   | 6.3.0    | 6.4.0    | R5s070175 |
| RP-37   | RP-070590 | 2096 | -   | Summary of regression errors in the wk23 IR_U ATS.  | F   | 6.3.0    | 6.4.0    | R5s070171 |
| RP-37   | RP-070591 | 2097 | -   | Correction to MAC testcase 7.1.3.2  | F   | 6.3.0    | 6.4.0    | R5s070167 |
| RP-37   | RP-070603 | 2098 | -   | Correction to E-DCH RRC testcase 8.3.4.10   | F   | 6.3.0    | 6.4.0    | R5s070170 |
| RP-37   | RP-070591 | 2099 | -   | Correction to RRC testcase 8.2.6.37, 8.2.6.37b & 8.4.1.14   | F   | 6.3.0    | 6.4.0    | R5s070169 |
| RP-37   | RP-070595 | 2100 | -   | Correction to RRC testcase 8.4.1.47   | F   | 6.3.0    | 6.4.0    | R5s070168 |
| RP-37   | RP-070595 | 2101 | -   | Correction to DSAC test cases   | F   | 6.3.0    | 6.4.0    | R5s070165 |
| RP-37   | RP-070595 | 2102 | -   | Summary of Regression Errors in wk21 ATSS   | F   | 6.3.0    | 6.4.0    | R5s070164 |
| RP-37   | RP-070591 | 2103 | -   | Summary of regression errors in wk21 ATS  | F   | 6.3.0    | 6.4.0    | R5s070163 |
| RP-37   | RP-070591 | 2104 | -   | Summary of Regression Errors in wk17 ATSS   | F   | 6.3.0    | 6.4.0    | R5s070157 |
| RP-37   | RP-070591 | 2105 | -   | Corrections to GCF WI-10 Test Cases 8.4.1.8   | F   | 6.3.0    | 6.4.0    | R5s070161 |
| RP-37   | RP-070591 | 2106 | -   | Correction of approved GCF WI12 test case 8.2.6.44.   | F   | 6.3.0    | 6.4.0    | R5s070162 |
| RP-37   | RP-070603 | 2107 | -   | Addition of GCF WI-25 HSUPA test case 7.1.6.2.1 to HSU ATS v6.2.0                                   | B   | 6.3.0    | 6.4.0    | R5s070158 |
| RP-37   | RP-070603 | 2108 | -   | Addition of WB-AMR RAB test case 14.7.8 to HSU_ENH_r6 ATS V6.1.0                                    | B   | 6.3.0    | 6.4.0    | R5s070151 |
| RP-37   | RP-070591 | 2109 | -   | Summary of regression errors in wk18 ATS  | F   | 6.3.0    | 6.4.0    | R5s070154 |
| RP-37   | RP-070591 | 2110 | -   | Corrections to GCF WI-10 NAS Test Cases 9.4.8   | F   | 6.3.0    | 6.4.0    | R5s070155 |
| RP-37   | RP-070591 | 2111 | -   | Correction to BMC Test Cases 16.3 and 14.4.4  | F   | 6.3.0    | 6.4.0    | R5s070156 |
| RP-37   | RP-070591 | 2112 | -   | Correction of approved GCF WI12 test case 8.1.2.13.   | F   | 6.3.0    | 6.4.0    | R5s070153 |
| RP-37   | RP-070591 | 2113 | -   | Corrections to GCF WI-10 NAS Test Cases 8.3.9.1   | F   | 6.3.0    | 6.4.0    | R5s070213 |
| RP-37   | RP-070591 | 2114 | -   | Corrections to GCF WI-10 RRC test case 8.4.1.28   | F   | 6.3.0    | 6.4.0    | R5s070214 |
| RP-37   | RP-070591 | 2115 | -   | Cell setup issue in 16 Idle Mode, RRC and NAS test cases  | F   | 6.3.0    | 6.4.0    | R5s070210 |
| RP-37   | RP-070591 | 2116 | -   | Summary of regression errors in wk28 ATS  | F   | 6.3.0    | 6.4.0    | R5s070215 |
| RP-37   | RP-070591 | 2117 | -   | Addition of GCF WI-047 test case 8.3.1.1a to RRC ATS.   | B   | 6.3.0    | 6.4.0    | R5s070185 |
| RP-37   | RP-070591 | 2118 | -   | TTCN Correction in testcase 6.2.2.2   | F   | 6.3.0    | 6.4.0    | R5s070216 |
| RP-37   | RP-070591 | 2119 | -   | Addition of GCF WI-047 test case 8.3.2.1a to RRC ATS.   | B   | 6.3.0    | 6.4.0    | R5s070193 |
| RP-37   | RP-070603 | 2120 | -   | Addition of GCF WI-25 HSUPA test case 8.4.1.49 to HSU ATS v6.3.0                                    | B   | 6.3.0    | 6.4.0    | R5s070202 |
| RP-38   | RP-070873 | 2121 |     | Correction of max bit rate in QoS and AT commands for different UE categories and other maintenance | F   | 6.4.0    | 6.5.0    | R5-073030 |
| RP-38   | RP-070873 | 2122 |     | Application of synchronized data sending on MTCH and other maintenance for MBMS                     | F   | 6.4.0    | 6.5.0    | R5-073032 |
| RP-38   | RP-070860 | 2123 |     | Handling RLP XID in CSD call  | F   | 6.4.0    | 6.5.0    | R5-073467 |
| RP-38   | RP-070860 | 2124 |     | R99 routine maintenance for PIXIT etc   | F   | 6.4.0    | 6.5.0    | R5-073435 |
| RP-38   | RP-070864 | 2125 |     | To add new RRC test case 8.2.1.8 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070283 |
| RP-38   | RP-070864 | 2126 |     | To add new GMM test case 12.7 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070444 |
| RP-38   | RP-070864 | 2127 |     | To add new RRC test case 8.1.1.1 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070281 |
| RP-38   | RP-070864 | 2128 |     | To add new GMM test case 12.2.1.1 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070291 |
| RP-38   | RP-070864 | 2129 |     | To add new test case 16.1.1 to the LCR TDD SMS ATS  | B   | 6.4.0    | 6.5.0    | R5s070293 |
| RP-38   | RP-070864 | 2130 |     | To add new SM test case 11.1.1.1 to the LCR TDD NAS ATS   | B   | 6.4.0    | 6.5.0    | R5s070301 |
| RP-38   | RP-070864 | 2131 |     | To add new test case 18.1.2.6 to the LCR TDD RAB ATS  | B   | 6.4.0    | 6.5.0    | R5s070295 |
| RP-38   | RP-070864 | 2132 |     | To add new test case 7.1.1.1 to the LCR TDD MAC ATS   | B   | 6.4.0    | 6.5.0    | R5s070297 |
| RP-38   | RP-070864 | 2133 |     | To add new test case 7.2.3.12 to the LCR TDD RLC ATS  | B   | 6.4.0    | 6.5.0    | R5s070299 |
| RP-38   | RP-070864 | 2134 |     | To add new test case 13.2.1.1 to the LCR TDD NAS  | B   | 6.4.0    | 6.5.0    | R5s070303 |

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|         |           |      |     | ATS   |     |          |          |           |
| RP-38   | RP-070864 | 2135 |     | To add new RRC test case 8.1.1.4 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070309 |
| RP-38   | RP-070864 | 2136 |     | To add new RRC test case 8.1.12 to the LCR TDD RRC ATS    | B   | 6.4.0    | 6.5.0    | R5s070307 |
| RP-38   | RP-070864 | 2137 |     | To add new RRC test case 8.1.5.4 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070323 |
| RP-38   | RP-070864 | 2138 |     | To add new RRC test case 8.1.9 to the LCR TDD RRC ATS     | B   | 6.4.0    | 6.5.0    | R5s070325 |
| RP-38   | RP-070864 | 2139 |     | To add new RRC test case 8.2.2.11 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070331 |
| RP-38   | RP-070864 | 2140 |     | To add new RRC test case 8.1.5.1 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070321 |
| RP-38   | RP-070864 | 2141 |     | To add new RRC test case 8.2.2.9 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070329 |
| RP-38   | RP-070864 | 2142 |     | To add new RRC test case 8.2.2.8 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070327 |
| RP-38   | RP-070864 | 2143 |     | To add new RRC test case 8.2.3.7 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070335 |
| RP-38   | RP-070864 | 2144 |     | To add new RRC test case 8.2.3.11 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070339 |
| RP-38   | RP-070865 | 2145 |     | To add new RRC test case 8.2.3.9 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070337 |
| RP-38   | RP-070865 | 2146 |     | To add new RRC test case 8.2.2.17 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070333 |
| RP-38   | RP-070865 | 2147 |     | To add new RRC test case 8.2.6.7 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070347 |
| RP-38   | RP-070865 | 2148 |     | To add new RRC test case 8.2.3.29 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070345 |
| RP-38   | RP-070865 | 2149 |     | To add new RRC test case 8.2.6.11 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070349 |
| RP-38   | RP-070865 | 2150 |     | To add new RRC test case 8.2.3.15 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070341 |
| RP-38   | RP-070865 | 2151 |     | To add new RRC test case 8.4.1.17 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070353 |
| RP-38   | RP-070865 | 2152 |     | To add new MM test case 9.2.1 to the LCR TDD NAS ATS      | B   | 6.4.0    | 6.5.0    | R5s070358 |
| RP-38   | RP-070865 | 2153 |     | To add new RRC test case 8.2.6.20 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070351 |
| RP-38   | RP-070865 | 2154 |     | To add new RRC test case 8.4.1.24 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070355 |
| RP-38   | RP-070865 | 2155 |     | To add new MM test case 9.5.2 to the LCR TDD NAS ATS      | B   | 6.4.0    | 6.5.0    | R5s070362 |
| RP-38   | RP-070865 | 2156 |     | To add new MM test case 9.4.4 to the LCR TDD NAS ATS      | B   | 6.4.0    | 6.5.0    | R5s070360 |
| RP-38   | RP-070865 | 2157 |     | To add new CC test case 10.1.2.2.2 to the LCR TDD NAS ATS | B   | 6.4.0    | 6.5.0    | R5s070368 |
| RP-38   | RP-070865 | 2158 |     | To add new CC test case 10.1.2.2.3 to the LCR TDD NAS ATS | B   | 6.4.0    | 6.5.0    | R5s070370 |
| RP-38   | RP-070865 | 2159 |     | To add new test case 13.2.2.2 to the LCR TDD NAS ATS      | B   | 6.4.0    | 6.5.0    | R5s070480 |
| RP-38   | RP-070865 | 2160 |     | To add new RRC test case 8.4.1.16 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070285 |
| RP-38   | RP-070865 | 2161 |     | To add new CC test case 10.1.2.2.1 to the LCR TDD NAS ATS | B   | 6.4.0    | 6.5.0    | R5s070366 |
| RP-38   | RP-070865 | 2162 |     | To add new CC test case 10.1.2.4.6 to the LCR TDD NAS ATS | B   | 6.4.0    | 6.5.0    | R5s070384 |
| RP-38   | RP-070865 | 2163 |     | To add new CC test case 10.1.2.7.3 to the LCR TDD NAS ATS | B   | 6.4.0    | 6.5.0    | R5s070408 |
| RP-38   | RP-070865 | 2164 |     | To add new GMM test case 12.4.3.1 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070440 |
| RP-38   | RP-070866 | 2165 |     | To add new GMM test case 12.5 to the LCR TDD NAS ATS      | B   | 6.4.0    | 6.5.0    | R5s070442 |
| RP-38   | RP-070866 | 2166 |     | To add new test case 7.1.1.8 to the LCR TDD MAC ATS       | B   | 6.4.0    | 6.5.0    | R5s070470 |
| RP-38   | RP-070866 | 2167 |     | To add new test case 7.2.3.34 to the LCR TDD RLC ATS      | B   | 6.4.0    | 6.5.0    | R5s070474 |
| RP-38   | RP-070866 | 2168 |     | To add new CC test case 10.1.3.3.1 to the LCR TDD NAS ATS | B   | 6.4.0    | 6.5.0    | R5s070412 |
| RP-38   | RP-070866 | 2169 |     | To add new GMM test case 12.3.1.1 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070428 |
| RP-38   | RP-070866 | 2170 |     | To add new RRC test case 8.1.1.7 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070311 |

| Meeting | TSG doc   | CR   | Rev | Subject  | Cat | Old vers | New vers | WG doc    |
|---------|-----------|------|-----|--|-----|----------|----------|-----------|
| RP-38   | RP-070866 | 2171 |     | To add new MM test case 9.1 to the LCR TDD NAS ATS         | B   | 6.4.0    | 6.5.0    | R5s070287 |
| RP-38   | RP-070866 | 2172 |     | To add new CC test case 10.1.2.4.8 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070388 |
| RP-38   | RP-070866 | 2173 |     | To add new GMM test case 12.4.1.1b to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070436 |
| RP-38   | RP-070866 | 2174 |     | To add new SM test case 11.3.1 to the LCR TDD NAS ATS      | B   | 6.4.0    | 6.5.0    | R5s070476 |
| RP-38   | RP-070866 | 2175 |     | To add new GMM test case 12.3.1.2 to the LCR TDD NAS ATS   | B   | 6.4.0    | 6.5.0    | R5s070430 |
| RP-38   | RP-070866 | 2176 |     | To add new test case 16.1.9.2 to the LCR TDD SMS ATS       | B   | 6.4.0    | 6.5.0    | R5s070458 |
| RP-38   | RP-070866 | 2177 |     | To add new CC test case 10.1.2.3.3 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070376 |
| RP-38   | RP-070866 | 2178 |     | To add new CC test case 10.1.2.3.7 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070378 |
| RP-38   | RP-070866 | 2179 |     | To add new CC test case 10.1.2.3.2 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070374 |
| RP-38   | RP-070866 | 2180 |     | To add new CC test case 10.1.2.7.2 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070406 |
| RP-38   | RP-070866 | 2181 |     | To add new GMM test case 12.9.4 to the LCR TDD NAS ATS     | B   | 6.4.0    | 6.5.0    | R5s070452 |
| RP-38   | RP-070866 | 2182 |     | To add new GMM test case 12.9.2 to the LCR TDD NAS ATS     | B   | 6.4.0    | 6.5.0    | R5s070448 |
| RP-38   | RP-070866 | 2183 |     | To add new CC test case 10.1.3.3.4 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070416 |
| RP-38   | RP-070866 | 2184 |     | To add new RRC test case 8.1.3.3 to the LCR TDD RRC ATS    | B   | 6.4.0    | 6.5.0    | R5s070319 |
| RP-38   | RP-070867 | 2185 |     | To add new CC test case 10.1.3.3.2 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070414 |
| RP-38   | RP-070867 | 2186 |     | To add new GMM test case 12.4.2.2 to the LCR TDD NAS ATS   | B   | 6.4.0    | 6.5.0    | R5s070438 |
| RP-38   | RP-070867 | 2187 |     | To add new CC test case 10.1.2.4.9 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070390 |
| RP-38   | RP-070867 | 2188 |     | To add new test case 18.1.2.13.2 to the LCR TDD RAB ATS    | B   | 6.4.0    | 6.5.0    | R5s070462 |
| RP-38   | RP-070867 | 2189 |     | To add new CC test case 10.1.2.4.10 to the LCR TDD NAS ATS | B   | 6.4.0    | 6.5.0    | R5s070392 |
| RP-38   | RP-070867 | 2190 |     | To add new CC test case 10.1.2.4.7 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070386 |
| RP-38   | RP-070867 | 2191 |     | To add new RRC test case 8.1.3.1 to the LCR TDD RRC ATS    | B   | 6.4.0    | 6.5.0    | R5s070317 |
| RP-38   | RP-070867 | 2192 |     | To add new CC test case 10.1.2.1.1 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070289 |
| RP-38   | RP-070867 | 2193 |     | To add new CC test case 10.1.2.4.4 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070382 |
| RP-38   | RP-070867 | 2194 |     | To add new test case 18.1.2.7 to the LCR TDD RAB ATS       | B   | 6.4.0    | 6.5.0    | R5s070460 |
| RP-38   | RP-070867 | 2195 |     | To add new CC test case 10.1.2.6.2 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070398 |
| RP-38   | RP-070867 | 2196 |     | To add new GMM test case 12.2.1.3 to the LCR TDD NAS ATS   | B   | 6.4.0    | 6.5.0    | R5s070422 |
| RP-38   | RP-070867 | 2197 |     | To add new GMM test case 12.9.1 to the LCR TDD NAS ATS     | B   | 6.4.0    | 6.5.0    | R5s070446 |
| RP-38   | RP-070867 | 2198 |     | To add new CC test case 10.1.2.5.2 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070394 |
| RP-38   | RP-070867 | 2199 |     | To add new CC test case 10.1.2.6.3 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070400 |
| RP-38   | RP-070867 | 2200 |     | To add new CC test case 10.1.2.6.6 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070402 |
| RP-38   | RP-070867 | 2201 |     | To add new CC test case 10.1.2.9.1 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070410 |
| RP-38   | RP-070867 | 2202 |     | To add new MM test case 9.5.4 to the LCR TDD NAS ATS       | B   | 6.4.0    | 6.5.0    | R5s070364 |
| RP-38   | RP-070867 | 2203 |     | To add new CC test case 10.1.2.4.3 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070380 |
| RP-38   | RP-070867 | 2204 |     | To add new CC test case 10.1.2.3.1 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070372 |
| RP-38   | RP-070868 | 2205 |     | To add new CC test case 10.1.2.5.5 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070396 |
| RP-38   | RP-070868 | 2206 |     | To add new test case 18.1.2.15 to the LCR TDD RAB ATS      | B   | 6.4.0    | 6.5.0    | R5s070464 |
| RP-38   | RP-070868 | 2207 |     | To add new RRC test case 8.1.1.8 to the LCR TDD            | B   | 6.4.0    | 6.5.0    | R5s070313 |

| Meeting | TSG doc   | CR   | Rev | Subject   | Cat | Old vers | New vers | WG doc    |
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|         |           |      |     | RRC ATS   |     |          |          |           |
| RP-38   | RP-070868 | 2208 |     | To add new GMM test case 12.9.14 to the LCR TDD NAS ATS   | B   | 6.4.0    | 6.5.0    | R5s070454 |
| RP-38   | RP-070868 | 2209 |     | To add new test case 13.2.2.1 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070478 |
| RP-38   | RP-070868 | 2210 |     | To add new RRC test case 8.2.3.19 to the LCR TDD RRC ATS  | B   | 6.4.0    | 6.5.0    | R5s070343 |
| RP-38   | RP-070868 | 2211 |     | To add new test case 16.1.2 to the LCR TDD SMS ATS  | B   | 6.4.0    | 6.5.0    | R5s070456 |
| RP-38   | RP-070868 | 2212 |     | To add new CC test case 10.1.2.7.1 to the LCR TDD NAS ATS   | B   | 6.4.0    | 6.5.0    | R5s070404 |
| RP-38   | RP-070868 | 2213 |     | To add new GMM test case 12.2.1.7 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070424 |
| RP-38   | RP-070868 | 2214 |     | To add new test case 18.1.2.26 to the LCR TDD RAB ATS   | B   | 6.4.0    | 6.5.0    | R5s070466 |
| RP-38   | RP-070868 | 2215 |     | To add new CC test case 10.1.3.5.6 to the LCR TDD NAS ATS   | B   | 6.4.0    | 6.5.0    | R5s070420 |
| RP-38   | RP-070868 | 2216 |     | To add new test case 7.1.3.1 to the LCR TDD MAC ATS   | B   | 6.4.0    | 6.5.0    | R5s070472 |
| RP-38   | RP-070868 | 2217 |     | To add new GMM test case 12.9.3 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070450 |
| RP-38   | RP-070868 | 2218 |     | To add new RRC test case 8.1.2.7 to the LCR TDD RRC ATS   | B   | 6.4.0    | 6.5.0    | R5s070315 |
| RP-38   | RP-070868 | 2219 |     | To add new CC test case 10.1.3.4.1 to the LCR TDD NAS ATS   | B   | 6.4.0    | 6.5.0    | R5s070418 |
| RP-38   | RP-070868 | 2220 |     | To add new GMM test case 12.2.2.1 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070426 |
| RP-38   | RP-070868 | 2221 |     | To add new test case 7.1.1.2 to the LCR TDD MAC ATS   | B   | 6.4.0    | 6.5.0    | R5s070468 |
| RP-38   | RP-070868 | 2222 |     | To add new GMM test case 12.3.2.1 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070434 |
| RP-38   | RP-070868 | 2223 |     | To add new GMM test case 12.3.1.5 to the LCR TDD NAS ATS  | B   | 6.4.0    | 6.5.0    | R5s070432 |
| RP-38   | RP-070868 | 2224 |     | To add new NAS test case 9.3.1 to the LCR TDD NAS ATS   | B   | 6.4.0    | 6.5.0    | R5s070217 |
| RP-38   | RP-070890 | 2225 |     | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A | F   | 6.4.0    | 6.5.0    | -         |
| RP-38   | RP-070862 | 2226 |     | Corrections to GCF WI-10 and Interband RRC testcase 8.2.6.37 and 8.2.6.37b                                      | F   | 6.4.0    | 6.5.0    | R5s070357 |
| RP-38   | RP-070861 | 2227 |     | Correction to testcase 8.4.1.49 & 8.3.4.10  | F   | 6.4.0    | 6.5.0    | R5s070483 |
| RP-38   | RP-070861 | 2228 |     | Correction to GCF WI-010 RRC test case 8.3.1.6  | F   | 6.4.0    | 6.5.0    | R5s070482 |
| RP-38   | RP-070861 | 2229 |     | Handling of A5_1 for UE not supporting GSM.   | F   | 6.4.0    | 6.5.0    | R5s070484 |
| RP-38   | RP-070862 | 2230 |     | TTCN Correction in HSUPA testcases  | F   | 6.4.0    | 6.5.0    | R5s070276 |
| RP-38   | RP-070861 | 2231 |     | Corrections to GCF WI-10 RRC test case 6.1.2.1  | F   | 6.4.0    | 6.5.0    | R5s070225 |
| RP-38   | RP-070861 | 2232 |     | Introduction of wait timer for RRC Connection Request in preamble   | F   | 6.4.0    | 6.5.0    | R5s070221 |
| RP-38   | RP-070861 | 2233 |     | Correction to GCF WI-013 InterRAT test case 8.3.11.13   | F   | 6.4.0    | 6.5.0    | R5s070222 |
| RP-38   | RP-070870 | 2234 |     | Corrections to GCF WI-014 WB-AMR test case 14.6.8   | F   | 6.4.0    | 6.5.0    | R5s070224 |
| RP-38   | RP-070861 | 2235 |     | Corrections to GCF WI-10 IR_U test cases 6.2.1.X, 8.3.7.1, 8.3.7.3  | F   | 6.4.0    | 6.5.0    | R5s070219 |
| RP-38   | RP-070861 | 2236 |     | Correction to AGPS test cases 17.2.3.2, 17.2.3.3, 17.2.3.4, 17.2.3.8, 17.2.3.9                                  | F   | 6.4.0    | 6.5.0    | R5s070220 |
| RP-38   | RP-070861 | 2237 |     | Correction to the RRC test case 8.2.2.43, 8.2.6.39 and 8.2.6.44   | F   | 6.4.0    | 6.5.0    | R5s070226 |
| RP-38   | RP-070875 | 2238 |     | Addition of GCF WI-25 EDCH RRC test case 8.2.1.36   | B   | 6.4.0    | 6.5.0    | R5s070248 |
| RP-38   | RP-070875 | 2239 |     | Addition of GCF WI-25 HSUPA test case 8.2.2.44 to HSU ATS v6.3.0  | B   | 6.4.0    | 6.5.0    | R5s070245 |
| RP-38   | RP-070875 | 2240 |     | Addition of GCF WI-25 EDCH RRC test case 8.2.2.47   | B   | 6.4.0    | 6.5.0    | R5s070243 |
| RP-38   | RP-070861 | 2241 |     | Wk36 Regression errors in testcase 6.2.1.8  | F   | 6.4.0    | 6.5.0    | R5s070257 |
| RP-38   | RP-070861 | 2242 |     | Summary of regression errors in wk36 ATS  | F   | 6.4.0    | 6.5.0    | R5s070255 |
| RP-38   | RP-070875 | 2243 |     | Modification of UL and DL max bit rate in QoS for HSPA  | F   | 6.4.0    | 6.5.0    | R5s070254 |
| RP-38   | RP-070875 | 2244 |     | Addition of GCF WI-024 test case 6.2.2.4 to HSU_ENH_r6 ATS V6.3.0.  | B   | 6.4.0    | 6.5.0    | R5s070227 |
| RP-38   | RP-070875 | 2245 |     | Modification of Logical Channel Id for RB25 in multical scenario  | F   | 6.4.0    | 6.5.0    | R5s070256 |
| RP-38   | RP-070875 | 2246 |     | Addition of GCF WI-024 test case 6.2.2.5 to HSU_ENH_r6 ATS V6.3.0.  | B   | 6.4.0    | 6.5.0    | R5s070235 |
| RP-38   | RP-070861 | 2247 |     | Addition of RRC test case 8.2.2.50  | B   | 6.4.0    | 6.5.0    | R5s070263 |
| RP-38   | RP-070875 | 2248 |     | Asn.1 6d0 patch for the support of F-DPCH Support   | F   | 6.4.0    | 6.5.0    | R5s070223 |

| Meeting | TSG doc   | CR   | Rev | Subject   | Cat | Old vers | New vers | WG doc      |
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|         |           |      |     | Indicator   |     |          |          |             |
| RP-38   | RP-070861 | 2249 |     | Summary of regression errors in wk38 ATS  | F   | 6.4.0    | 6.5.0    | R5s070258   |
| RP-38   | RP-070870 | 2250 |     | Correction to GCF WI-14 Test Case 8.2.6.48  | F   | 6.4.0    | 6.5.0    | R5s070267   |
| RP-38   | RP-070861 | 2251 |     | Corrections to GCF WI-10 RRC test case 6.1.2.1  | F   | 6.4.0    | 6.5.0    | R5s070266   |
| RP-38   | RP-070875 | 2252 |     | TTCN Correction in GMM testcase 12.9.15   | F   | 6.4.0    | 6.5.0    | R5s070269   |
| RP-38   | RP-070861 | 2253 |     | TTCN Correction in testcases 9.5.4, 9.5.5, 9.5.7.1  | F   | 6.4.0    | 6.5.0    | R5s070268   |
| RP-38   | RP-070875 | 2254 |     | Introduce a more strict detection of the usage of RACH TF2 for UL CCCH transmission                                   | F   | 6.4.0    | 6.5.0    | R5s070270   |
| RP-38   | RP-070875 | 2255 |     | Correction to GCF WI-25 test cases 8.3.1.41 and 8.2.6.50  | F   | 6.4.0    | 6.5.0    | R5s070272   |
| RP-38   | RP-070875 | 2256 |     | Removal of GSM ciphering algorithm A5/2   | F   | 6.4.0    | 6.5.0    | R5s070275   |
| RP-38   | RP-070861 | 2257 |     | Correction to RRC testcase 8.4.1.42   | F   | 6.4.0    | 6.5.0    | R5s070306   |
| RP-38   | RP-070861 | 2258 |     | Correction to GCF Testcase 8.1.2.1, 8.1.2.7, 8.1.2.11, 8.1.5.1, 8.1.5.4, 8.1.7.1, 8.1.7.1b, 8.1.7.1c, 8.1.7.2, 8.1.12 | F   | 6.4.0    | 6.5.0    | R5s070279   |
| RP-38   | RP-070861 | 2259 |     | Correction to RRC testcase 8.1.10.1   | F   | 6.4.0    | 6.5.0    | R5s070305   |
| RP-38   | RP-070861 | 2260 |     | Summary of regression errors in wk38 ATS  | F   | 6.4.0    | 6.5.0    | R5s070271   |
| RP-38   | RP-070861 | 2261 |     | Correction to the TTCN to Handle optional Packet Resource Request message   | F   | 6.4.0    | 6.5.0    | R5s070277   |
| RP-38   | RP-070862 | 2262 |     | Summary of regression errors in wk38 ATS  | F   | 6.4.0    | 6.5.0    | R5s070278   |
| RP-39   | RP-080097 | 2263 |     | Update RLP and MBMS RLC test models   | F   | 6.5.0    | 6.6.0    | R5-080364   |
| RP-39   | RP-080098 | 2264 |     | Correction to AT commands used in 3GPP ATSS   | F   | 6.5.0    | 6.6.0    | R5-080218   |
| RP-39   | RP-080091 | 2265 |     | Corrections to the PIXIT items  | F   | 6.5.0    | 6.6.0    | R5-080269   |
| RP-39   | RP-080098 | 2266 |     | Removal of PDF version in formal deliveries   | F   | 6.5.0    | 6.6.0    | R5-080566   |
| RP-39   | RP-080110 | 2267 |     | Introducing Rel-7 test model  | F   | 6.5.0    | 6.6.0    | R5-080044r3 |
| RP-39   | RP-080090 | 2269 |     | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A       | F   | 6.5.0    | 6.6.0    | -           |
| RP-39   | RP-080099 | 2270 |     | Summary of regression errors in MBMS wk03 ATS   | F   | 6.5.0    | 6.6.0    | R5s080013   |
| RP-39   | RP-080092 | 2271 |     | Correction to GCF WI-010 RRC test case 8.3.3.1  | F   | 6.5.0    | 6.6.0    | R5s080007   |
| RP-39   | RP-080094 | 2272 |     | Correction to testcase 7.1.5.6  | F   | 6.5.0    | 6.6.0    | R5s080005   |
| RP-39   | RP-080099 | 2273 |     | Upgrade RRC asn.1 for tc 8.5.2.1 – UE supporting MBMS service change for a ptp RB                                     | F   | 6.5.0    | 6.6.0    | R5s080012   |
| RP-39   | RP-080092 | 2274 |     | Summary of regression errors in wk49 ATS  | F   | 6.5.0    | 6.6.0    | R5s080002   |
| RP-39   | RP-080092 | 2275 |     | Correction to PDU definition DTMINFORMATION in IRU ATS  | F   | 6.5.0    | 6.6.0    | R5s080003   |
| RP-39   | RP-080099 | 2276 |     | Correction to SIB5 in MBMS ATS  | F   | 6.5.0    | 6.6.0    | R5s080006   |
| RP-39   | RP-080099 | 2277 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.3.2  | B   | 6.5.0    | 6.6.0    | R5s070571   |
| RP-39   | RP-080099 | 2278 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.5.2  | B   | 6.5.0    | 6.6.0    | R5s070584   |
| RP-39   | RP-080099 | 2279 |     | Addition to MBMS RRC test case 8.5.5.1  | B   | 6.5.0    | 6.6.0    | R5s070596   |
| RP-39   | RP-080099 | 2280 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.5.3  | B   | 6.5.0    | 6.6.0    | R5s070586   |
| RP-39   | RP-080099 | 2281 |     | Corrections to GCF WI-24 Network Sharing test case 6.2.2.4  | F   | 6.5.0    | 6.6.0    | R5s070592   |
| RP-39   | RP-080099 | 2282 |     | Addition of RRC test case 6.1.1.9 to HSU_ENH_r6 ATS V6.4.0  | B   | 6.5.0    | 6.6.0    | R5s070526   |
| RP-39   | RP-080092 | 2283 |     | TTCN Correction in 8.3.1.30   | F   | 6.5.0    | 6.6.0    | R5s070593   |
| RP-39   | RP-080099 | 2284 |     | Addition of RRC test case 6.1.1.8 to HSU_ENH_r6 ATS V6.4.0  | B   | 6.5.0    | 6.6.0    | R5s070524   |
| RP-39   | RP-080092 | 2285 |     | Summary of regression errors in wk49 ATS  | F   | 6.5.0    | 6.6.0    | R5s070562   |
| RP-39   | RP-080092 | 2286 |     | Summary of regression errors in wk49 ATS  | F   | 6.5.0    | 6.6.0    | R5s070600   |
| RP-39   | RP-080099 | 2287 |     | Addition of RRC test case 8.3.3.4 to HSU_ENH_r6 ATS   | B   | 6.5.0    | 6.6.0    | R5s070508   |
| RP-39   | RP-080099 | 2288 |     | Addition of GCF WI-25 EDCH RRC test case 8.2.2.49   | B   | 6.5.0    | 6.6.0    | R5s070504   |
| RP-39   | RP-080099 | 2289 |     | Addition of GCF WI-024 test case 6.2.1.10 to HSU_ENH_r6 ATS V6.5.0.   | B   | 6.5.0    | 6.6.0    | R5s070273   |
| RP-39   | RP-080099 | 2290 |     | Addition to MBMS RRC test case 8.5.5.7  | B   | 6.5.0    | 6.6.0    | R5s070598   |
| RP-39   | RP-080099 | 2291 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.1.12   | B   | 6.5.0    | 6.6.0    | R5s070563   |
| RP-39   | RP-080099 | 2292 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.1.2  | B   | 6.5.0    | 6.6.0    | R5s070569   |
| RP-39   | RP-080092 | 2293 |     | Summary of regression errors in wk49 ATS  | F   | 6.5.0    | 6.6.0    | R5s070591   |
| RP-39   | RP-080099 | 2294 |     | Addition of GCF WI-25 EDCH RRC test case 8.2.1.36a  | B   | 6.5.0    | 6.6.0    | R5s070594   |
| RP-39   | RP-080099 | 2295 |     | Addition of RRC test case 8.1.1.11 to HSU_ENH_r6 ATS  | B   | 6.5.0    | 6.6.0    | R5s070530   |
| RP-39   | RP-080099 | 2296 |     | Addition of GCF WI 49 MBMS NAS test case 12.9.17  | B   | 6.5.0    | 6.6.0    | R5s070528   |
| RP-39   | RP-080099 | 2297 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.4.1  | B   | 6.5.0    | 6.6.0    | R5s070573   |
| RP-39   | RP-080100 | 2298 |     | Addition of GCF WI-25 EDCH RRC test case 8.2.6.52   | B   | 6.5.0    | 6.6.0    | R5s070522   |
| RP-39   | RP-080100 | 2299 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.5.4  | B   | 6.5.0    | 6.6.0    | R5s070588   |
| RP-39   | RP-080100 | 2300 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.1.13   | B   | 6.5.0    | 6.6.0    | R5s070565   |
| RP-39   | RP-080100 | 2301 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.1.9  | B   | 6.5.0    | 6.6.0    | R5s070582   |
| RP-39   | RP-080100 | 2302 |     | Addition of GCF WI-25 EDCH RRC Testcase 8.1.2.18 to HSU_ENH_r6 ATS v6.5.0   | B   | 6.5.0    | 6.6.0    | R5s070575   |
| RP-39   | RP-080092 | 2303 |     | Summary of regression errors in wk47 ATS  | F   | 6.5.0    | 6.6.0    | R5s070520   |

| Meeting | TSG doc   | CR   | Rev | Subject   | Cat | Old vers | New vers | WG doc    |
|---------|-----------|------|-----|---|-----|----------|----------|-----------|
| RP-39   | RP-080100 | 2304 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.1.11   | B   | 6.5.0    | 6.6.0    | R5s070567 |
| RP-39   | RP-080100 | 2305 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.1.3  | B   | 6.5.0    | 6.6.0    | R5s070516 |
| RP-39   | RP-080100 | 2306 |     | Correction to GCF WI-25 Test Case 8.2.2.47  | F   | 6.5.0    | 6.6.0    | R5s070521 |
| RP-39   | RP-080100 | 2307 |     | Addition of GCF WI 25 EDCH RRC test case 8.3.1.42a  | B   | 6.5.0    | 6.6.0    | R5s070510 |
| RP-39   | RP-080100 | 2308 |     | Addition of GCF WI-25 EDCH RRC test case 8.3.1.43   | B   | 6.5.0    | 6.6.0    | R5s070512 |
| RP-39   | RP-080100 | 2309 |     | Addition of GCF WI 25 EDCH RAB test case 14.7.3   | B   | 6.5.0    | 6.6.0    | R5s070559 |
| RP-39   | RP-080100 | 2310 |     | Addition of GCF WI 25 EDCH RRC test case 8.2.2.47a  | B   | 6.5.0    | 6.6.0    | R5s070557 |
| RP-39   | RP-080100 | 2311 |     | Addition of GCF WI-25 EDCH RRC test case 8.3.1.42   | B   | 6.5.0    | 6.6.0    | R5s070499 |
| RP-39   | RP-080094 | 2312 |     | TTCN Correction in testcase 8.3.1.34  | F   | 6.5.0    | 6.6.0    | R5s070497 |
| RP-39   | RP-080100 | 2313 |     | Addition of GCF WI-25 EDCH RRC Testcase 8.1.2.17 to HSU_ENH_r6 ATS v6.4.0                                       | B   | 6.5.0    | 6.6.0    | R5s070514 |
| RP-39   | RP-080100 | 2314 |     | Addition of GCF WI 49 MBMS RRC test case 14.4.5   | B   | 6.5.0    | 6.6.0    | R5s070518 |
| RP-39   | RP-080100 | 2315 |     | Addition of GCF WI-24 Network Sharing test case 6.1.2.11 to HSU_ENH_r6 ATS v6.4.0                               | B   | 6.5.0    | 6.6.0    | R5s070501 |
| RP-39   | RP-080100 | 2316 |     | Addition of GCF WI-25 EDCH RRC test case 8.2.2.44a  | B   | 6.5.0    | 6.6.0    | R5s070506 |
| RP-39   | RP-080100 | 2317 |     | Summary of regression errors in the wk43 InterRAT ATSS.   | F   | 6.5.0    | 6.6.0    | R5s070486 |
| RP-39   | RP-080092 | 2318 |     | TTCN Correction in testcase 8.4.1.42  | F   | 6.5.0    | 6.6.0    | R5s070498 |
| RP-39   | RP-080092 | 2319 |     | Correction to the TTCN to update ASP G_CL1_ComingFN_REQ   | F   | 6.5.0    | 6.6.0    | R5s070496 |
| RP-39   | RP-080092 | 2320 |     | Summary of regression errors in wk43 ATS  | F   | 6.5.0    | 6.6.0    | R5s070280 |
| RP-39   | RP-080100 | 2321 |     | Corrections to GCF WI-24 Network Sharing test case 6.2.2.4  | F   | 6.5.0    | 6.6.0    | R5s070494 |
| RP-39   | RP-080092 | 2322 |     | Summary of regression errors in wk43 ATS  | F   | 6.5.0    | 6.6.0    | R5s070495 |
| RP-39   | RP-080092 | 2323 |     | Correction to testcase 8.2.6.37, 8.2.6.37b & 8.3.4.3  | F   | 6.5.0    | 6.6.0    | R5s070485 |
| RP-39   | RP-080100 | 2324 |     | Addition of MBMS RAB test case 14.4.7   | B   | 6.5.0    | 6.6.0    | R5s070233 |
| RP-39   | RP-080101 | 2325 |     | Addition of MBMS RAB test case 14.4.6   | B   | 6.5.0    | 6.6.0    | R5s070241 |
| RP-39   | RP-080101 | 2326 |     | Addition of MBMS RRC test case 8.5.1.5  | B   | 6.5.0    | 6.6.0    | R5s070252 |
| RP-39   | RP-080101 | 2327 |     | Addition of MBMS RRC test case 8.5.1.4  | B   | 6.5.0    | 6.6.0    | R5s070250 |
| RP-39   | RP-080101 | 2328 |     | Addition of MBMS RRC test case 8_5_4_3  | B   | 6.5.0    | 6.6.0    | R5s080010 |
| RP-39   | RP-080101 | 2329 |     | Addition of GCF WI 49 RRC MBMS test case 8.5.2.2  | B   | 6.5.0    | 6.6.0    | R5s080008 |
| RP-39   | RP-080092 | 2330 |     | Summary of regression errors in wk03 ATS  | F   | 6.5.0    | 6.6.0    | R5s080035 |
| RP-39   | RP-080092 | 2331 |     | Correction to GCF WI-10 RRC Testcase 8.4.1.42   | F   | 6.5.0    | 6.6.0    | R5s080023 |
| RP-39   | RP-080101 | 2332 |     | Addition of GCF WI 25 HSUPA RAB test case 14.7.7  | B   | 6.5.0    | 6.6.0    | R5s080033 |
| RP-39   | RP-080101 | 2333 |     | Addition of GCF WI 25 HSUPA RAB test case 14.7.6  | B   | 6.5.0    | 6.6.0    | R5s080031 |
| RP-39   | RP-080092 | 2334 |     | TTCN Correction in testcase 8.1.1.9   | F   | 6.5.0    | 6.6.0    | R5s080028 |
| RP-39   | RP-080094 | 2335 |     | TTCN Correction in testcase 8.1.6.5   | F   | 6.5.0    | 6.6.0    | R5s080024 |
| RP-39   | RP-080092 | 2336 |     | Correction to testcase 8.4.1.42   | F   | 6.5.0    | 6.6.0    | R5s080027 |
| RP-39   | RP-080092 | 2337 |     | Correction to testcase 8.3.4.1 & 8.3.4.2  | F   | 6.5.0    | 6.6.0    | R5s080026 |
| RP-39   | RP-080092 | 2338 |     | Correction to Interband Testcase 8.3.1.1a   | F   | 6.5.0    | 6.6.0    | R5s080022 |
| RP-39   | RP-080092 | 2339 |     | Correction to testcase 12.4.1.4c2   | F   | 6.5.0    | 6.6.0    | R5s080025 |
| RP-39   | RP-080098 | 2268 |     | Production of pointer version 6.6.0 of TS 34.123-3 with no technical contents                                   | F   | 6.5.0    | 6.6.0    | R5-080554 |
| RP-39   |           |      |     | Upgraded to Rel-7 without technical change (on request of RAN5)   |     | 6.6.0    | 7.0.0    |           |
| RP-40   | RP-080430 | 2381 |     | ASP corrections for Rel-7 test model  |     | 7.0.0    | 7.1.0    | R5-081510 |
| RP-40   | RP-080429 | 2382 |     | ASP improvement when configuring MICH and PICH  |     | 7.0.0    | 7.1.0    | R5-081523 |
| RP-40   | RP-080363 | 2383 |     | R99 TSO routine maintenance   |     | 7.0.0    | 7.1.0    | R5-081058 |
| RP-40   | RP-080430 | 2384 |     | PIXIT for UE LCS Notification timeout timer added   |     | 7.0.0    | 7.1.0    | R5-081571 |
| RP-40   | RP-080370 | 2385 |     | Guidance of test execution when Introducing Operating Bands XII, XIII and XIV                                   |     | 7.0.0    | 7.1.0    | R5-081536 |
| RP-40   | RP-080366 | 2340 |     | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A |     | 7.0.0    | 7.1.0    | -         |
| RP-40   | RP-080367 | 2341 |     | Addition of GCF WI 49 RRC MBMS test case 8.5.2.3  |     | 7.0.0    | 7.1.0    | R5s080016 |
| RP-40   | RP-080367 | 2342 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.5.8  |     | 7.0.0    | 7.1.0    | R5s080018 |
| RP-40   | RP-080367 | 2343 |     | Addition of GCF WI 49 MBMS test case 7.2.4.2  |     | 7.0.0    | 7.1.0    | R5s080020 |
| RP-40   | RP-080367 | 2344 |     | Addition to MBMS RLC test case 7.2.4.3  |     | 7.0.0    | 7.1.0    | R5s080029 |
| RP-40   | RP-080367 | 2345 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.4.2  |     | 7.0.0    | 7.1.0    | R5s080038 |
| RP-40   | RP-080367 | 2346 |     | Addition of GCF WI 49 RRC MBMS test case 12.9.16  |     | 7.0.0    | 7.1.0    | R5s080041 |
| RP-40   | RP-080367 | 2347 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.3.1  |     | 7.0.0    | 7.1.0    | R5s080043 |
| RP-40   | RP-080367 | 2348 |     | Addition of GCF WI 24 RRC test case 8.1.1.6a  |     | 7.0.0    | 7.1.0    | R5s080050 |
| RP-40   | RP-080367 | 2349 |     | Addition of InterRAT test case 8.3.7.1a   |     | 7.0.0    | 7.1.0    | R5s080053 |
| RP-40   | RP-080367 | 2350 |     | Addition of GCF WI-49-MBMS RRC test case 8.5.6.1  |     | 7.0.0    | 7.1.0    | R5s080047 |
| RP-40   | RP-080367 | 2351 |     | Addition of E-DCH MAC test case 7.1.6.4.1 to HSU_ENH_r6 ATS   |     | 7.0.0    | 7.1.0    | R5s080060 |
| RP-40   | RP-080367 | 2352 |     | Addition of GCF WI 49 MBMS NAS test case 11.8.2   |     | 7.0.0    | 7.1.0    | R5s080065 |
| RP-40   | RP-080367 | 2353 |     | Addition of GCF WI 49 RRC MBMS test case 8.5.3.3  |     | 7.0.0    | 7.1.0    | R5s080080 |
| RP-40   | RP-080367 | 2354 |     | Addition of GCF WI 49 MBMS RRC test case 8.5.2.4  |     | 7.0.0    | 7.1.0    | R5s080083 |



| Meeting | TSG doc   | CR   | Rev | Subject   | Cat | Old vers | New vers | WG doc    |
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| RP-40   | RP-080367 | 2355 |     | Addition of MBMS RAB test case 14.6.10  |     | 7.0.0    | 7.1.0    | R5s080088 |
| RP-40   | RP-080367 | 2356 |     | Addition of MBMS RAB test case 14.6.9 and 14.6.10   |     | 7.0.0    | 7.1.0    | R5s080086 |
| RP-40   | RP-080367 | 2357 |     | Correction to Selection Expression for test cases 16.1.9.1 and 16.1.9.2   |     | 7.0.0    | 7.1.0    | R5s080037 |
| RP-40   | RP-080367 | 2358 |     | Correction to Testcase selection expressions of 8.1.7.1c, 8.2.6.39, 8.2.6.44, 8.3.1.25, 8.3.1.30, 8.2.3.36      |     | 7.0.0    | 7.1.0    | R5s080040 |
| RP-40   | RP-080367 | 2359 |     | Correction to GCF WI-14 HSDPA RRC Testcase 8.2.2.42   |     | 7.0.0    | 7.1.0    | R5s080045 |
| RP-40   | RP-080367 | 2360 |     | Correction to GCF WI-14 HSDPA RRC Testcase 8.2.3.33   |     | 7.0.0    | 7.1.0    | R5s080046 |
| RP-40   | RP-080368 | 2361 |     | TTCN Correction in testcases 8.1.1.7, 8.1.1.8, 8.1.1.10   |     | 7.0.0    | 7.1.0    | R5s080049 |
| RP-40   | RP-080368 | 2362 |     | Correction to Rel-5 RAB test cases  |     | 7.0.0    | 7.1.0    | R5s080052 |
| RP-40   | RP-080368 | 2363 |     | Summary of regression errors in wk07 ATS  |     | 7.0.0    | 7.1.0    | R5s080055 |
| RP-40   | RP-080368 | 2364 |     | Correction to GCF WI-49 MBMS RRC test case 8.5.1.5  |     | 7.0.0    | 7.1.0    | R5s080057 |
| RP-40   | RP-080368 | 2365 |     | Summary of regression errors in wk07 MBMS ATS   |     | 7.0.0    | 7.1.0    | R5s080058 |
| RP-40   | RP-080368 | 2366 |     | Correction to E-DCH RRC testcase 8.2.6.52   |     | 7.0.0    | 7.1.0    | R5s080059 |
| RP-40   | RP-080368 | 2367 |     | Summary of regression errors in MBMS wk10 ATS   |     | 7.0.0    | 7.1.0    | R5s080064 |
| RP-40   | RP-080368 | 2368 |     | Summary of regression errors in wk10 ATS  |     | 7.0.0    | 7.1.0    | R5s080062 |
| RP-40   | RP-080368 | 2369 |     | Correction of UE radio access capability extension  |     | 7.0.0    | 7.1.0    | R5s080070 |
| RP-40   | RP-080368 | 2370 |     | Summary of regression errors in 08wk10 MBMS ATS   |     | 7.0.0    | 7.1.0    | R5s080071 |
| RP-40   | RP-080368 | 2371 |     | Correction to Selection Expression for test cases 9.4.5.2, 9.5.2, 9.5.4, 9.5.5 and 9.5.7.1                      |     | 7.0.0    | 7.1.0    | R5s080075 |
| RP-40   | RP-080368 | 2372 |     | ASP update for Explicit TFC restriction   |     | 7.0.0    | 7.1.0    | R5s080068 |
| RP-40   | RP-080368 | 2373 |     | Correction to RAB test cases  |     | 7.0.0    | 7.1.0    | R5s080056 |
| RP-40   | RP-080368 | 2374 |     | Correction of handling of Structured Type- and Tabular Pdu types constraints in all 3GPP UMTS ATSS.             |     | 7.0.0    | 7.1.0    | R5s080069 |
| RP-40   | RP-080368 | 2375 |     | Configuration of associated physical channels.  |     | 7.0.0    | 7.1.0    | R5s080074 |
| RP-40   | RP-080368 | 2376 |     | Correction to MICH configuration.   |     | 7.0.0    | 7.1.0    | R5s080076 |
| RP-40   | RP-080368 | 2377 |     | Summary of regression errors in D08wk10 for GCF WI-025  |     | 7.0.0    | 7.1.0    | R5s080082 |
| RP-40   | RP-080368 | 2378 |     | Baseline upgrade to March-08 Rel-7  |     | 7.0.0    | 7.1.0    | R5s080067 |
| RP-40   | RP-080368 | 2379 |     | Correction to GCF WI-49 MBMS RRC test case 7.2.4.3  |     | 7.0.0    | 7.1.0    | R5s080090 |
| RP-40   | RP-080368 | 2380 |     | Correction to SMS test cases 16.2.1 and 16.2.2  |     | 7.0.0    | 7.1.0    | R5s080079 |
| RP-41   | RP-080613 | 2386 | -   | Documentation of TTCN routine maintenance   | F   | 7.1.0    | 7.2.0    | R5-083585 |
| RP-41   | RP-080613 | 2387 | -   | ASP corrections for Rel-7   | F   | 7.1.0    | 7.2.0    | R5-083637 |
| RP-41   | RP-080653 | 2388 |     | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A | F   | 7.1.0    | 7.2.0    | -         |
| RP-41   | RP-080613 | 2389 |     | Correction to the HSDPA RRC testcase 8.2.1.29, 8.2.1.31 and 8.2.1.32  | F   | 7.1.0    | 7.2.0    | R5s080102 |
| RP-41   | RP-080613 | 2390 |     | Summary of regression errors in wk17 ATS  | F   | 7.1.0    | 7.2.0    | R5s080092 |
| RP-41   | RP-080613 | 2391 | -   | Correction to Selection Expression for test case 12.3.1.5   | F   | 7.1.0    | 7.2.0    | R5s080103 |
| RP-41   | RP-080613 | 2392 | -   | Correction to RRC test case 8.3.2.1a  | F   | 7.1.0    | 7.2.0    | R5s080094 |
| RP-41   | RP-080613 | 2393 | -   | Correction to RAB "Combinations on SCCPCH" Test Cases   | F   | 7.1.0    | 7.2.0    | R5s080099 |
| RP-41   | RP-080613 | 2394 | -   | Regression CR for Wk16 on IR_U Test cases   | F   | 7.1.0    | 7.2.0    | R5s080091 |
| RP-41   | RP-080613 | 2395 | -   | Correction to the IR_U test case 6.2.2.3  | F   | 7.1.0    | 7.2.0    | R5s080097 |
| RP-41   | RP-080613 | 2396 | -   | Correction to the RRC testcase 8.3.1.18   | F   | 7.1.0    | 7.2.0    | R5s080095 |
| RP-41   | RP-080613 | 2397 | -   | Correction to RLP implementation in wk17 ATS.   | F   | 7.1.0    | 7.2.0    | R5s080098 |
| RP-41   | RP-080613 | 2398 | -   | Corrections to GCF WI-010 RRC test cases 8_1_7_1  | F   | 7.1.0    | 7.2.0    | R5s080100 |
| RP-41   | RP-080613 | 2399 | -   | Upgrade RRC asn.1 for Rel-7   | F   | 7.1.0    | 7.2.0    | R5s080093 |
| RP-41   | RP-080613 | 2400 | -   | Correction to test cases 8.3.1.34, 8.3.1.35, 8.3.1.36 and 8.3.1.37  | F   | 7.1.0    | 7.2.0    | R5s080104 |
| RP-41   | RP-080613 | 2401 | -   | Correction to GCF testcase 8.4.1.2  | F   | 7.1.0    | 7.2.0    | R5s080072 |
| RP-41   | RP-080613 | 2402 | -   | Addition of GCF WI-24 Network Sharing test case 6.2.1.11 to HSU_ENH_r6 ATS v7.0.0                               | F   | 7.1.0    | 7.2.0    | R5s080077 |
| RP-41   | RP-080613 | 2403 | -   | TTCN Correction in test cases 8.1.1.7, 8.1.1.8, 8.1.1.10, 8.1.2.16  | F   | 7.1.0    | 7.2.0    | R5s080105 |
| RP-41   | RP-080613 | 2404 | -   | Correction to HSUPA RRC Test case 8.3.1.42a   | F   | 7.1.0    | 7.2.0    | R5s080108 |
| RP-41   | RP-080613 | 2405 | -   | Summary of regression errors in wk21 ATS  | F   | 7.1.0    | 7.2.0    | R5s080110 |
| RP-41   | RP-080613 | 2406 | -   | Addition of GCF WI-025 EDCH MAC test case 7.1.6.2.5 to HSU_ENH_r6 ATS v7.0.0                                    | F   | 7.1.0    | 7.2.0    | R5s080106 |
| RP-41   | RP-080613 | 2407 | -   | Renaming of test suite parameter pc_MS_ClsmkA5_3 to pc_MS_ClsmkA5_3_Boot  | F   | 7.1.0    | 7.2.0    | R5s080112 |
| RP-41   | RP-080613 | 2408 | -   | Correction to E-DCH GCF WI-25 test case 8.2.2.45  | F   | 7.1.0    | 7.2.0    | R5s080113 |
| RP-41   | RP-080614 | 2409 | -   | Correction to GCF WI-10 RAB test cases  | F   | 7.1.0    | 7.2.0    | R5s080118 |

| Meeting | TSG doc   | CR   | Rev | Subject   | Cat | Old vers | New vers | WG doc    |
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| RP-41   | RP-080614 | 2410 | -   | Correction to common test steps used in HSD ATS   | F   | 7.1.0    | 7.2.0    | R5s080129 |
| RP-41   | RP-080614 | 2411 | -   | Addition of GCF WI-068 Enhanced Layer2 MAC-ehs test case 7.1.5a.3 to HS_ENH_r7 ATS v7.1.0                                   | F   | 7.1.0    | 7.2.0    | R5s080126 |
| RP-41   | RP-080614 | 2412 | -   | Addition of GCF WI-068 Enhanced Layer2 MAC-ehs test case 7.1.5a.2 to HS_ENH_r7 ATS v7.1.0                                   | F   | 7.1.0    | 7.2.0    | R5s080124 |
| RP-41   | RP-080614 | 2413 | -   | Addition of GCF WI-068 Enhanced Layer2 MAC-ehs test case 7.1.5a.1 to HS_ENH_r7 ATS v7.1.0                                   | F   | 7.1.0    | 7.2.0    | R5s080122 |
| RP-41   | RP-080614 | 2414 | -   | Correction to testcase 8.2.2.18   | F   | 7.1.0    | 7.2.0    | R5s080132 |
| RP-41   | RP-080614 | 2415 | -   | Correction to RLP handling in default procedures  | F   | 7.1.0    | 7.2.0    | R5s080133 |
| RP-41   | RP-080614 | 2416 | -   | Corrections to GCF WI-024 Network Sharing test case 6.2.1.11  | F   | 7.1.0    | 7.2.0    | R5s080131 |
| RP-41   | RP-080614 | 2417 | -   | Correction to the definition of the structure "SI6RO".  | F   | 7.1.0    | 7.2.0    | R5s080128 |
| RP-41   | RP-080614 | 2418 | -   | ASP update for Rel-7 test model   | F   | 7.1.0    | 7.2.0    | R5s080121 |
| RP-41   | RP-080614 | 2419 | -   | Correction of Traffic Volume Measurement Procedure for GCF WI-010 RRC TCs   | F   | 7.1.0    | 7.2.0    | R5s080120 |
| RP-41   | RP-080614 | 2420 | -   | TTCN Correction in test case 8.2.2.43   | F   | 7.1.0    | 7.2.0    | R5s080141 |
| RP-41   | RP-080614 | 2421 | -   | Correction to Test cases tc_16_1_1,tc_16_1_2,tc_16_1_9_2,tc_9_5_7_2,tc_10_1_2_6_6,tc_10_1_2_7_1,tc_10_1_2_7_2,tc_10_1_2_7_3 | F   | 7.1.0    | 7.2.0    | R5s080136 |
| RP-41   | RP-080614 | 2422 | -   | TTCN Correction in test case 8.1.1.11   | F   | 7.1.0    | 7.2.0    | R5s080140 |
| RP-41   | RP-080614 | 2423 | -   | Addition of GCF Enhanced Layer2 MAC-ehs test case 7.1.5a.4 to HS_ENH_r7 ATS v7.1.0  | F   | 7.1.0    | 7.2.0    | R5s080134 |
| RP-41   | RP-080614 | 2424 | -   | Summary of regression errors in wk27 ATS  | F   | 7.1.0    | 7.2.0    | R5s080142 |
| RP-41   | RP-080614 | 2425 | -   | Correction to Test cases tc_8_3_7_2 and tc_8_3_7_3  | F   | 7.1.0    | 7.2.0    | R5s080147 |
| RP-41   | RP-080614 | 2426 | -   | Correction to TTCN for the RRC test cases 8.1.3.9, 8.2.6.37, 8.2.6.37b  | F   | 7.1.0    | 7.2.0    | R5s080149 |
| RP-41   | RP-080614 | 2427 | -   | Correction to HSUPA test case 14.7.6 and 14.7.7   | F   | 7.1.0    | 7.2.0    | R5s080150 |
| RP-42   | RP-080960 | 2428 | -   | CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A             | F   | 7.2.0    | 7.3.0    | -         |
| RP-42   | RP-080957 | 2429 | -   | Summary of regression errors in MBMS wk21 ATS   | F   | 7.2.0    | 7.3.0    | R5s080111 |
| RP-42   | RP-080957 | 2430 | -   | Correction to GCF WI 10 and WI 14 RRC test cases  | F   | 7.2.0    | 7.3.0    | R5s080156 |
| RP-42   | RP-080957 | 2431 | -   | Summary of regression errors in wk27 ATSS   | F   | 7.2.0    | 7.3.0    | R5s080154 |
| RP-42   | RP-080957 | 2432 | -   | Correction to RRC test case 8.4.1.2   | F   | 7.2.0    | 7.3.0    | R5s080155 |
| RP-42   | RP-080957 | 2433 | -   | Correction to RAB R5 test cases   | F   | 7.2.0    | 7.3.0    | R5s080153 |
| RP-42   | RP-080957 | 2434 | -   | Correction to the test step ts_TestPointExecute_Rb25  | F   | 7.2.0    | 7.3.0    | R5s080157 |
| RP-42   | RP-080957 | 2435 | -   | Correction to Rel-7 MAC test case 7.1.5a.4  | F   | 7.2.0    | 7.3.0    | R5s080159 |
| RP-42   | RP-080957 | 2436 | -   | Correction to Rel-7 MAC test cases 7.1.5a.1 and 7.1.5a.2  | F   | 7.2.0    | 7.3.0    | R5s080160 |
| RP-42   | RP-080957 | 2437 | -   | Correction to RAB Test cases  | F   | 7.2.0    | 7.3.0    | R5s080158 |
| RP-42   | RP-080957 | 2438 | -   | Addition of GCF WI-025 HSUPA testcase 7.1.6.2.6 to HSU_ENH_r6 ATS v7.1.0  | B   | 7.2.0    | 7.3.0    | R5s080161 |
| RP-42   | RP-080957 | 2439 | -   | Summary of regression errors in wk36 ATS  | F   | 7.2.0    | 7.3.0    | R5s080163 |
| RP-42   | RP-080957 | 2440 | -   | Correction to testcase 14.7.6 & 14.7.7  | F   | 7.2.0    | 7.3.0    | R5s080166 |
| RP-42   | RP-080957 | 2441 | -   | Correction to testcase 8.4.1.27   | F   | 7.2.0    | 7.3.0    | R5s080164 |
| RP-42   | RP-080957 | 2442 | -   | Summary of regression errors in wk36 ATS  | F   | 7.2.0    | 7.3.0    | R5s080173 |
| RP-42   | RP-080957 | 2443 | -   | TTCN Correction in test cases 8.2.6.39,8.2.6.44,8.3.1.25 and 8.3.1.30   | F   | 7.2.0    | 7.3.0    | R5s080170 |
| RP-42   | RP-080957 | 2444 | -   | Correction to GCF WI-10 IR_U Testcase 8.3.9.1   | F   | 7.2.0    | 7.3.0    | R5s080172 |
| RP-42   | RP-080957 | 2445 | -   | Correction to GCF WI 25 HSUPA MAC test case 7.1.6.2.9   | F   | 7.2.0    | 7.3.0    | R5s080169 |
| RP-42   | RP-080957 | 2446 | -   | Addition of Rel7 CPC RRC testcase 8.2.1.38 to HS_ENH_r6 ATS v7.1.0  | B   | 7.2.0    | 7.3.0    | R5s080174 |
| RP-42   | RP-080957 | 2447 | -   | Addition of Rel7 CPC RRC testcase 8.1.2.19 to HS_ENH_r7 ATS v7.2.0  | B   | 7.2.0    | 7.3.0    | R5s080178 |
| RP-42   | RP-080957 | 2448 | -   | Correction to GCF WI 25 HSUPA RRC test cases  | F   | 7.2.0    | 7.3.0    | R5s080181 |
| RP-42   | RP-080958 | 2449 | -   | Correction to No. of HARQ Process in RAB test cases for HSDPA CAT 10 UE   | F   | 7.2.0    | 7.3.0    | R5s080183 |
| RP-42   | RP-080958 | 2450 | -   | Correction in the preamble test step ts_GMM_IdleUpdated to include USIM insertion related MMI command.                      | F   | 7.2.0    | 7.3.0    | R5s080184 |
| RP-42   | RP-080958 | 2451 | -   | Correction to RRC test cases for RLP  | F   | 7.2.0    | 7.3.0    | R5s080182 |
| RP-42   | RP-080958 | 2452 | -   | Addition of Rel7 CPC RRC testcase 8.2.2.56 to HS_ENH_r7 ATS v7.2.0  | B   | 7.2.0    | 7.3.0    | R5s080176 |
| RP-42   | RP-080958 | 2453 | -   | TTCN Correction to Test case tc_8_4_1_42  | F   | 7.2.0    | 7.3.0    | R5s080185 |
| RP-42   | RP-080958 | 2454 | -   | TTCN Correction to Test cases tc_8_2_6_39 and tc_8_2_6_44   | F   | 7.2.0    | 7.3.0    | R5s080180 |
| RP-42   | RP-080958 | 2455 | -   | Correction to the test step used to send CLOSE UE TEST LOOP in MBMS testcases   | F   | 7.2.0    | 7.3.0    | R5s080287 |
| RP-42   | RP-080958 | 2456 | -   | Correction to GCF WI 14 HSDPA RRC test case 8.3.1.34  | F   | 7.2.0    | 7.3.0    | R5s080290 |

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|---------|-----------|------|-----|--|-----|----------|----------|-----------|
| RP-42   | RP-080958 | 2457 | -   | Addition of Rel7 CPC RRC InterRAT testcase 8.3.11.15 to HS_ENH_r7 ATS v7.2.0 | B   | 7.2.0    | 7.3.0    | R5s080291 |
| RP-42   | RP-080958 | 2458 | -   | Addition of Rel7 CPC RRC testcase 8.2.2.54 to HS_ENH_r7 ATS v7.2.0           | B   | 7.2.0    | 7.3.0    | R5s080295 |
| RP-42   | RP-080958 | 2459 | -   | Correction to the CPC testcase 8.2.1.38                                      | F   | 7.2.0    | 7.3.0    | R5s080297 |
| RP-42   | RP-080958 | 2460 | -   | Correction to the CPC testcase 8.1.2.19                                      | F   | 7.2.0    | 7.3.0    | R5s080298 |
| RP-42   | RP-080958 | 2461 | -   | Addition of Rel7 CPC RRC testcase 8.2.2.52 to HS_ENH_r7 ATS v7.2.0           | B   | 7.2.0    | 7.3.0    | R5s080288 |
| RP-42   | RP-080958 | 2462 | -   | New PIXIT for RAB test cases execution                                       | F   | 7.2.0    | 7.3.0    | R5-085056 |
| RP-42   | RP-080958 | 2463 | -   | Rel-7 test model enhancement for LCR TDD                                     | F   | 7.2.0    | 7.3.0    | R5-085436 |
| RP-42   | RP-080958 | 2464 | -   | Rel-7 test model routine maintenance   | F   | 7.2.0    | 7.3.0    | R5-085437 |
| RP-42   | RP-081067 | 2465 |     | To add new RAB test case 18.1.2.13.1 to the LCR TDD RAB ATS                  | B   | 7.2.0    | 7.3.0    | R5s080232 |
| RP-42   | RP-081067 | 2466 |     | To add new HSD_ENH test case 8.3.1.37 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080284 |
| RP-42   | RP-081067 | 2467 |     | To add new HSD_ENH test case 8.3.1.36 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080282 |
| RP-42   | RP-081067 | 2468 |     | To add new HSD_ENH test case 8.3.1.35 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080280 |
| RP-42   | RP-081067 | 2469 |     | To add new HSD_ENH test case 8.3.1.34 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080278 |
| RP-42   | RP-081067 | 2470 |     | To add new HSD_ENH test case 8.3.1.32 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080276 |
| RP-42   | RP-081067 | 2471 |     | To add new HSD_ENH test case 8.2.6.49 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080274 |
| RP-42   | RP-081067 | 2472 |     | To add new HSD_ENH test case 8.2.6.46 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080272 |
| RP-42   | RP-081067 | 2473 |     | To add new HSD_ENH test case 8.2.6.42 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080270 |
| RP-42   | RP-081067 | 2474 |     | To add new HSD_ENH test case 8.2.6.40a to the LCR TDD HSD_ENH ATS            | B   | 7.2.0    | 7.3.0    | R5s080268 |
| RP-42   | RP-081067 | 2475 |     | To add new HSD_ENH test case 8.2.6.39b to the LCR TDD HSD_ENH ATS            | B   | 7.2.0    | 7.3.0    | R5s080266 |
| RP-42   | RP-081067 | 2476 |     | To add new HSD_ENH test case 8.2.3.35 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080264 |
| RP-42   | RP-081067 | 2477 |     | To add new HSD_ENH test case 8.2.3.34 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080262 |
| RP-42   | RP-081067 | 2478 |     | To add new HSD_ENH test case 8.2.3.33 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080260 |
| RP-42   | RP-081067 | 2479 |     | To add new HSD_ENH test case 8.2.3.32 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080258 |
| RP-42   | RP-081067 | 2480 |     | To add new HSD_ENH test case 8.2.3.30 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080256 |
| RP-42   | RP-081067 | 2481 |     | To add new HSD_ENH test case 8.2.2.42 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080254 |
| RP-42   | RP-081067 | 2482 |     | To add new HSD_ENH test case 8.2.2.41 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080252 |
| RP-42   | RP-081067 | 2483 |     | To add new HSD_ENH test case 8.2.2.40 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080250 |
| RP-42   | RP-081067 | 2484 |     | To add new HSD_ENH test case 8.2.2.39 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080248 |
| RP-42   | RP-081067 | 2485 |     | To add new HSD_ENH test case 8.2.2.38 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080246 |
| RP-42   | RP-081067 | 2486 |     | To add new HSD_ENH test case 8.2.1.32 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080244 |
| RP-42   | RP-081067 | 2487 |     | To add new HSD_ENH test case 8.2.1.31 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080242 |
| RP-42   | RP-081067 | 2488 |     | To add new HSD_ENH test case 8.2.1.30 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080240 |
| RP-42   | RP-081067 | 2489 |     | To add new HSD_ENH test case 8.2.1.29 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080238 |
| RP-42   | RP-081068 | 2490 |     | To add new HSD_ENH test case 8.2.1.28 to the LCR TDD HSD_ENH ATS             | B   | 7.2.0    | 7.3.0    | R5s080236 |
| RP-42   | RP-081068 | 2491 |     | To add new RAB test case 18.1.2.27 to the LCR TDD RAB ATS                    | B   | 7.2.0    | 7.3.0    | R5s080234 |
| RP-42   | RP-081068 | 2492 |     | To add new NAS test case 12.9.9 to the LCR TDD NAS ATS                       | B   | 7.2.0    | 7.3.0    | R5s080230 |
| RP-42   | RP-081068 | 2493 |     | To add new NAS test case 12.9.8 to the LCR TDD NAS ATS                       | B   | 7.2.0    | 7.3.0    | R5s080228 |
| RP-42   | RP-081068 | 2494 |     | To add new NAS test case 12.6.1.3.2 to the LCR TDD NAS ATS                   | B   | 7.2.0    | 7.3.0    | R5s080226 |
| RP-42   | RP-081068 | 2495 |     | To add new NAS test case 12.6.1.3.1 to the LCR TDD NAS ATS                   | B   | 7.2.0    | 7.3.0    | R5s080224 |

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| RP-42   | RP-081068 | 2496 |     | To add new NAS test case 12.6.1.2 to the LCR TDD NAS ATS    | B   | 7.2.0    | 7.3.0    | R5s080222 |
| RP-42   | RP-081068 | 2497 |     | To add new NAS test case 12.6.1.1 to the LCR TDD NAS ATS    | B   | 7.2.0    | 7.3.0    | R5s080220 |
| RP-42   | RP-081068 | 2498 |     | To add new NAS test case 12.2.1.6.2 to the LCR TDD NAS ATS  | B   | 7.2.0    | 7.3.0    | R5s080218 |
| RP-42   | RP-081068 | 2499 |     | To add new NAS test case 12.2.1.6.1 to the LCR TDD NAS ATS  | B   | 7.2.0    | 7.3.0    | R5s080216 |
| RP-42   | RP-081068 | 2500 |     | To add new NAS test case 12.2.1.5a.2 to the LCR TDD NAS ATS | B   | 7.2.0    | 7.3.0    | R5s080214 |
| RP-42   | RP-081068 | 2501 |     | To add new NAS test case 11.3.2 to the LCR TDD NAS ATS      | B   | 7.2.0    | 7.3.0    | R5s080212 |
| RP-42   | RP-081068 | 2502 |     | To add new NAS test case 9.5.5 to the LCR TDD NAS ATS       | B   | 7.2.0    | 7.3.0    | R5s080210 |
| RP-42   | RP-081068 | 2503 |     | To add new NAS test case 9.2.4 to the LCR TDD NAS ATS       | B   | 7.2.0    | 7.3.0    | R5s080206 |
| RP-42   | RP-081068 | 2504 |     | To add new NAS test case 9.2.3 to the LCR TDD NAS ATS       | B   | 7.2.0    | 7.3.0    | R5s080204 |
| RP-42   | RP-081068 | 2505 |     | To add new RRC test case 8.2.2.7 to the LCR TDD RRC ATS     | B   | 7.2.0    | 7.3.0    | R5s080202 |
| RP-42   | RP-081068 | 2506 |     | To add new RRC test case 8.2.2.4 to the LCR TDD RRC ATS     | B   | 7.2.0    | 7.3.0    | R5s080200 |
| RP-42   | RP-081068 | 2507 |     | To add new RRC test case 8.2.1.24 to the LCR TDD RRC ATS    | B   | 7.2.0    | 7.3.0    | R5s080198 |
| RP-42   | RP-081068 | 2508 |     | To add new RRC test case 8.2.1.10 to the LCR TDD RRC ATS    | B   | 7.2.0    | 7.3.0    | R5s080196 |
| RP-42   | RP-081068 | 2509 |     | To add new RRC test case 8.2.1.7 to the LCR TDD RRC ATS     | B   | 7.2.0    | 7.3.0    | R5s080194 |
| RP-42   | RP-081068 | 2510 |     | To add new RRC test case 8.2.1.4 to the LCR TDD RRC ATS     | B   | 7.2.0    | 7.3.0    | R5s080192 |
| RP-42   | RP-081068 | 2511 |     | To add new RRC test case 8.2.1.1 to the LCR TDD RRC ATS     | B   | 7.2.0    | 7.3.0    | R5s080190 |
| RP-42   | RP-081068 | 2512 |     | To add new RRC test case 8.1.6.1 to the LCR TDD RRC ATS     | B   | 7.2.0    | 7.3.0    | R5s080188 |
| RP-42   | RP-081068 | 2513 |     | To add new RRC test case 8.1.2.9 to the LCR TDD RRC ATS     | B   | 7.2.0    | 7.3.0    | R5s080186 |

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## History

| <b>Document history</b> |              |             |
|-------------------------|--------------|-------------|
| V7.0.0                  | April 2008   | Publication |
| V7.1.0                  | July 2008    | Publication |
| V7.2.0                  | October 2008 | Publication |
| V7.3.0                  | January 2009 | Publication |
|                         |              |             |