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**Radio Equipment and Systems (RES);
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Common Interface (CI) Test Case Library (TCL);
Part 3: Abstract Test Suite (ATS) for Medium Access Control
(MAC) layer - Fixed radio Termination (FT)**

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI).

The DECT Test Specification multipart ETS comprises nine parts, as follows:

- Part 1: "Part 1: Test Suite Structure (TSS) and Test Purposes (TP) for Medium Access Control (MAC) layer".
- Part 2: "Part 2: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Portable radio Termination (PT)".
- Part 3: "Part 3: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Fixed radio Termination (FT)".**
- Part 4: "Part 4: Test Suite Structure (TSS) and Test Purposes (TP) - Data Link Control (DLC) layer".
- Part 5: "Part 5: Abstract Test Suite (ATS) - Data Link Control (DLC) layer".
- Part 6: "Part 6: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Portable radio Termination (PT)".
- Part 7: "Part 7: Abstract Test Suite (ATS) for Network (NWK) layer - Portable radio Termination (PT)".
- Part 8: "Part 8: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Fixed radio Termination (FT)".
- Part 9: "Part 9: Abstract Test Suite (ATS) for Network (NWK) layer - Fixed radio Termination (FT)".

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1 Scope

This European Telecommunication Standard (ETS) contains the Abstract Test Suite (ATS) to test the DECT FP MAC layer.

The objective of this test specification is to provide a basis for approval tests for DECT equipment giving a high probability of air interface inter-operability between different manufacturer's DECT equipment. This part contains the ATS specification for testing of the MAC layer at the FT.

The ISO standard for the methodology of conformance testing (ISO/IEC 9646 [21] to [27]) as well as the ETSI rules for conformance testing (ETS 300 406 [29]) are used as basis for the test methodology.

Test specifications for the Physical Layer (PHL) are provided in other DECT standards.

Annex A provides the Tree and Tabular Combined Notation (TTCN) part of this ATS.

Annex B provides the specification of the parallel test component LT_MAC.

Annex C provides the Partial Protocol Implementation eXtra Information for Testing (PIXIT) Proforma of this ATS.

Annex D provides the Protocol Conformance Test Report (PCTR) Proforma of this ATS.

2 Normative references

This ETS incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] ETS 300 175-1 (1992): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Part 1: Overview".
- [2] ETS 300 175-2 (1992): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Part 2: Physical layer".
- [3] ETS 300 175-3 (1992): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Part 3: Medium access control layer".
- [4] ETS 300 175-4 (1992): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Part 4: Data link control layer".
- [5] ETS 300 175-5 (1992): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Part 5: Network layer".
- [6] ETS 300 175-6 (1992): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Part 6: Identities and addressing".
- [7] ETS 300 175-7 (1992): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Part 7: Security features".
- [8] ETS 300 175-8 (1992): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Part 8: Speech coding and transmission".

- [9] ETS 300 175-9 (1992): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Part 9: Public access profile".
- [10] ETS 300 444: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Generic Access Profile (GAP)".
- [11] ETS 300 370: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications/Global System for Mobile communications (DECT/GSM) inter-working profile; Access and mapping (Protocol/procedure description for 3,1 kHz speech service)".
- [12] ETS 300 434: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) and Integrated Services Digital Network (ISDN) inter-working for end system configuration".
- [13] ETS 300 331: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); DECT Authentication Module (DAM)".
- [14] CCITT Recommendation G.726 (1991): "40, 32, 24, 16 kbit/s adaptive differential pulse code modulation (ADPCM)".
- [15..20] Reserved values.
- [21] ISO/IEC 9646-1 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts". (See also CCITT Recommendation X.290 (1991)).
- [22] ISO/IEC 9646-2 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract test suite specification". (See also CCITT Recommendation X.291 (1991)).
- [23] ISO/IEC 9646-3 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The tree and tabular combined notation". (See also CCITT Recommendation X.292 (1992)).
- [24] ISO/IEC 9646-4 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 4: Test realisation". (See also CCITT Recommendation X.292 (1992)).
- [25] ISO/IEC 9646-5 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the conformance assessment process". (See also CCITT Recommendation X.292 (1992)).
- [26] ISO/IEC 9646-6 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".
- [27] ISO/IEC 9646-7 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation conformance statement".
- [28] ISO 7498: "Information Processing Systems - Open Systems Interconnection - Basic Reference model".
- [29] ETS 300 406 (1995): "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

- [30] 91/263/EEC: "Council Directive of 29 April 1991 on the approximation of the laws of the Member states concerning telecommunications terminal equipment, including the mutual recognition of their conformity. (Terminal Directive)".
- [31..40] Reserved values.
- [41] I-ETS 300 176: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Approval test specification".
- [42] TBR 6: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); General terminal attachment requirements".
- [43] TBR 10: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); General terminal attachment requirements: Telephony applications".
- [44] TBR 11 (1992): "Radio Equipment and Systems (RES); Attachment requirements for terminal equipment for Digital European Cordless Telecommunications (DECT) Public Access Profile (PAP) applications".
- [45] ETS 300 323 (1994): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Public Access Profile (PAP) test specification".
- [46] ETS 300 476: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma".
- [47] ETS 300 497: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI) Test Case Library (TCL)".
- [48] ETS 300 474: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma".
- [49] ETS 300 494: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS)".
- [50] TBR 22: "Radio Equipment and Systems (RES); Attachment requirements for terminal equipment for Digital Enhanced Cordless Telecommunications (DECT) Generic Access Profile (GAP) applications".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this ETS, the definitions given in ISO/IEC 9646-1 [21] and ETS 300 175-1 [1] apply.

3.2 DECT abbreviations

For the purposes of this ETS, the following abbreviations apply:

AC	Authentication Code
CC	Call Control
CI	Common Interface
CLMS	Connectionless Message Services (CL)
CM	Co-ordination Message
COMS	Connection Oriented Message Services (CO)
CTS	Conformance Testing Services
DECT	Digital Enhanced Cordless Telecommunication
DLC	Data Link Control
DSAA	DECT Standard Authentication Algorithm
DSCA	DECT Standard Cipher Algorithm 1
ETS	European Telecommunication Standard
ISO	International Organisation for Standardisation
ETSI	European Telecommunications Standards Institute
FT	Fixed radio Termination
IPII	International Portable User Identity
IPEI	International Portable Equipment Identity
IWU	InterWorking Unit
LC	Link Control entity
MAC	Medium Access Control
ME	Management Entity
MM	Mobility Management
NWK	Network
PAP	Public Access Profile
PARK	Portable Access Rights Key
PHL	Physical Layer
PT	Portable radio Termination
RPN	Radio Fixed Part Number
SAP	Service Access Point
SARI	Secondary access rights identity
SDU	Service data unit
UAK	User Authentication Key

3.3 ISO 9646 abbreviations

For the purposes of this ETS, the following ISO abbreviations apply:

ASP	Abstract Service Primitive
ATM	Abstract Test Method
ATS	Abstract Test Suite
BI	Invalid Behaviour
BO	InOpportune Behaviour
BV	Valid Behaviour
CA	Capability tests
CP	Co-ordination Point
IUT	Implementation Under Test
LT	Lower Tester
MTC	Main Test Component
PCO	Point of Control and Observation
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statements
PIXIT	Protocol Implementation eXtra Information for Testing
PTC	Parallel Test Component

SUT	System Under Test
TP	Test Purpose
TSS	Test Suite Structure
TTCN	Tree and Tabular Combined Notation
UT	Upper Tester

4 Abstract Test Method (ATM)

This clause describes the ATM used to test the DECT MAC layer protocol at the Fixed radio Termination (FT).

4.1 Description of ATM

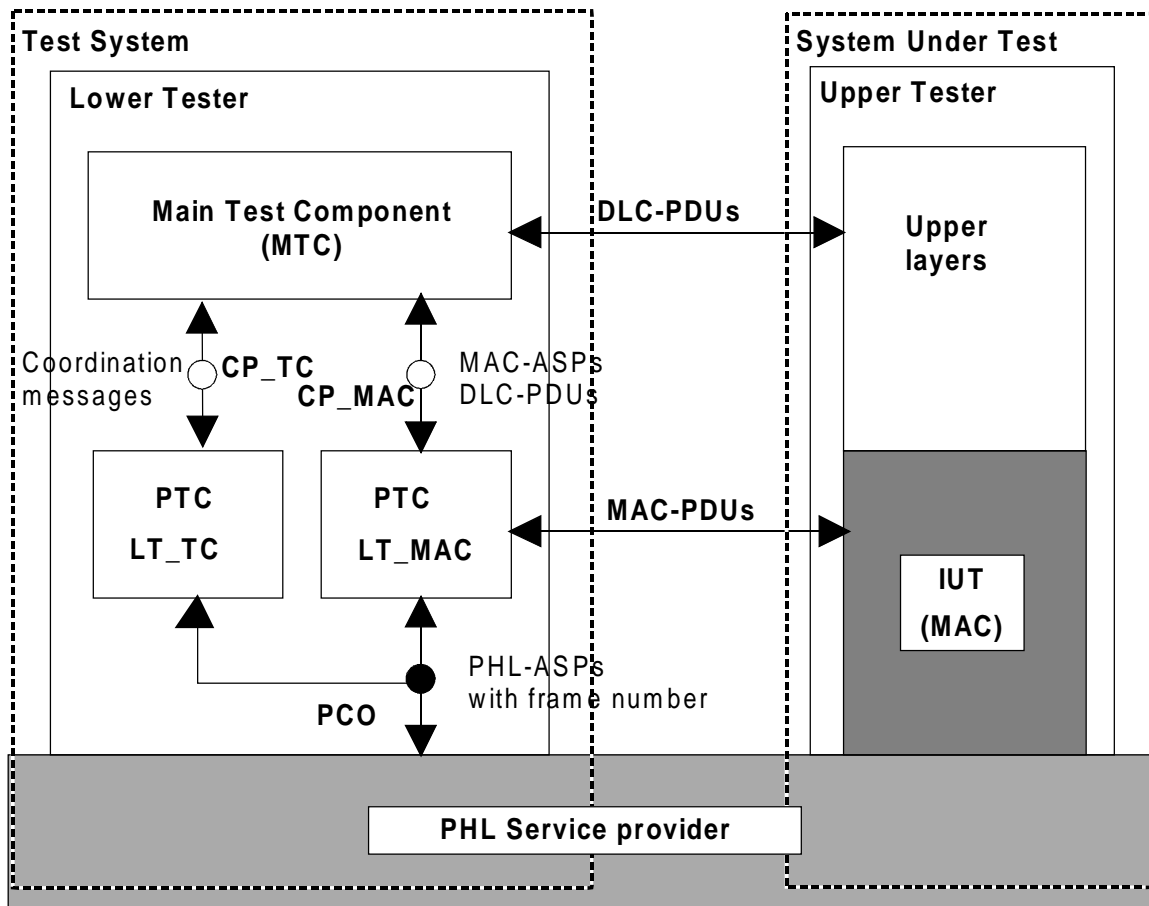


Figure 1: Remote test method, embedded variant

A single-party testing concept is used, which consists of the following abstract testing functions:

- PCO:** the PCO for MAC Layer testing is located at the D-SAP between the MAC layer and the Physical layer. All test events at the PCO are specified in terms of PHL-ASPs (frame number parameter added).
- CP_TC:** co-ordination Point Test Case (CP_TC) is located between the MTC and PTC LT_TC in the test system. It is used for passing co-ordination messages between these two testing functions.
- CP_MAC:** co-ordination Point MAC (CP_MAC) is located between the MTC and PTC LT_MAC in the test system. It is equivalent to the PCO used for DLC layer testing in part 6 of this ETS. All co-ordination messages at this CP are specified in terms of MAC-ASPs and DLC-PDUs.

PTC LT_TC: the Lower Tester Parallel Test Component LT_TC (PTC LT_TC) is located in the test system. It makes restricted use of the PCO by only observing the test events in both directions. It assigns preliminary verdicts (the MTC assigns the final verdict).

NOTE: This restricted use of the PCO is a non-ISO 9646-2 [22] application of the PCO.

PTC LT_MAC: the Lower Tester Parallel Test Component LT_MAC (PTC LT_MAC) is located in the test system. It provides indirect control and observation of the IUT during test execution, via the underlying service-provider. It does not assign any verdicts.

MTC: the Main Test Component (MTC) is located in the test system. It is responsible for creating and terminating the PTCs, managing the co-ordination points CP_TC and CP_MAC, and computation of the final test case verdict.

Upper layers: no explicit upper tester (UT) exists in the test system. However, the SUT (upper layers) needs to carry out some UT functions to achieve some effects of test co-ordination procedures.

The primitives used at the PCO (physical SAP - DSAP) are defined according to ETS 300 175-2 [2], clause 7 and associated subclauses.

The co-ordination messages used at CP_MAC co-ordination point are abstract primitives including protocol data units and frames. The abstract primitives (MAC ASPs) are defined according to ETS 300 175-3 [3], clause 8 and associated subclauses. Two abstract primitives for starting and stopping the synchronisation between the main test component and the parallel test component LT_MAC are added for the needs of the tester. The protocol data units (DLC C-plane PDUs) are defined according to ETS 300 175-4 [4], clause 7 and associated subclauses. The frames (DLC U-plane frames) are defined according to ETS 300 175-4 [4], clause 12 and associated subclauses.

4.2 Test strategy

The ATM defined in subclause 4.1 requires the use of concurrent TTCN, which is specified in Amendment 1 of ISO 9646-3 [23]. The parallel test components PTC_TC and PTC_MAC is, however, seen as two independent entities. This means that there is no communication or synchronisation between the two PTCs during the test.

PTC_TC is specified in TTCN (annex A). Since PTC_TC is only observing at the PCO, this ATS does not contain any send statements. Once the test purpose (TP) is fulfilled, the PTC_TC terminates, i.e. there are no postambles, unless required by the TP. No explicit co-ordination messages is exchanged at CP_TC. To simplify the TTCN test cases, the underlying service provider has been assigned the task of frame numbering. Consequently, a frame parameter has been added to some of the PHL-ASPs.

The requirements for PTC_MAC (annex B) are specified using ETS 300 474 [48].

The Main Test Component (MTC) creates the two PTCs (using CREATE operation), stimulates the PTC_MAC (using MAC ASPs at CP_MAC) and then waits for the two PTCs to terminate (using the DONE event). The final verdict is computed as follows:

- a PASS is assigned if PTC_TC returns a PASS verdict and the expected event is received from PTC_MAC at CP_MAC;
- a FAIL verdict is assigned if PTC_TC returns a FAIL verdict independently of what is received from PTC_MAC at CP_MAC;
- an INCONC verdict is assigned if PTC_TC returns an INCONC verdict and the expected event is received from PTC_MAC at CP_MAC; or returns a PASS verdict and an unexpected event is received from PTC_MAC at CP_MAC.

5 Untestable Test Purposes (TPs)

This clause gives a list of TPs which are not implemented in the ATS for PTC LT_TC (annex A) due to the chosen abstract test method or other restrictions.

Table 1: Untestable TPs

Test purpose	Reason
TP/PG/BV-00	No procedure can be defined to verify that the FT manages correctly the paging Extended Flag when it transmit pages.

6 ATS Conventions (only applicable for PTC LT_TC)

The ATS conventions are intended to give a better understanding of the ATS but they also describe the conventions made for the development of the ATS. These conventions shall be considered during any later maintenance or further development of the ATS.

The ATS conventions contain two clauses, the naming conventions and the implementation conventions. The naming conventions describe the structure of the naming of all ATS elements. The implementation conventions describe the functional structure of the ATS.

To define the ATS, the guidelines of the documents ETS 300 406 [29] and ETR 141 were considered.

6.1 Naming conventions

6.1.1 Declarations part

This subclause describes the naming conventions chosen for the elements of the ATS declarations part.

6.1.1.1 General

The following general rules apply for name giving in the declarations part. All type definitions (Simple type definitions, Structured type definitions, ASP type definitions and PDU type definitions) shall be written in uppercase.

All element names (Structured type definition), parameter names (ASP type definition) and field names (PDU type definition) shall be written in lowercase.

Predefined types (e.g. BITSTRING[8]) are never used in structured type definitions, ASP type definitions or PDU type definitions. Simple types are used instead.

All declarations in the test suite are listed in alphabetical order. A different order of listing should be used for only maintenance reason.

6.1.1.2 Test suite operations definition

The test suite operation identifiers are composed of substrings in lowercase letters, except for standard prefix "TSO_". Each substring is separated by an underscore character ("_").

EXAMPLE: TSO_substring.

6.1.1.3 Test suite parameter declarations

The test suite parameter identifiers are composed of substrings in lowercase letters, except for the standard prefix "TSP_". Each substring is separated by an underscore character ("_").

EXAMPLE 1: TSP_t_wait

If the test suite parameter references a PICS item, the letter "C" is added to the standard prefix.

EXAMPLE 2: TSPC_extended_rf_carriers

If the test suite parameter references a PIXIT item, the letter "X" is added to the standard prefix.

EXAMPLE 3: TSPX_pmid

Complete names as defined in the specifications are used.

6.1.1.4 Test case selection expression definition

The test case selection expression identifiers are composed of substrings in lowercase letters, beginning with the prefix "TCS_". Each substring is separated by an underscore character ("_").

6.1.1.5 Test suite constant declarations

The test suite constant identifiers are composed of substrings in lowercase letters, except for the prefix "TSC_". Each substring is separated by an underscore character ("_").

If the test suite constant represents a system parameter, the complete name defined in the protocol standard is used.

EXAMPLE: TSC_n200

6.1.1.6 Test suite variable declarations

The test suite variable identifiers are composed of substrings in lowercase letters, except for the prefix "TSV_". Each substring is separated by an underscore character ("_").

Complete names as defined in the protocol standard are used.

6.1.1.7 Test case variable declarations

The test case variable identifiers are composed of substrings in lowercase letters, except for the prefix "TCV_". Each substring is separated by an underscore character ("_").

Complete names as defined in the protocol standard are used.

6.1.1.8 Timer declarations

Two type of timers can be identified:

1) standardised:

those defined in the protocol standard, e.g. T201. They use exactly the same name as in the standard;

As there is a tolerance margin accepted for these timers, three values are needed:

- the maximum value allowed, which will use the suffix "_max";
- the minimum value allowed, which will use the suffix "_min";
- the value actually implemented, with no suffix;

EXAMPLE 1: T201_max, T201_min, and T201;

2) not standardised:

those not defined in the protocol standard, i.e. for execution use, e.g. a timer waiting for a response. These timers begin with the prefix "T_", followed by a string in lowercase letters;

EXAMPLE 2: T_resp represents a timer for controlling the response time of the IUT.

6.1.1.9 ASP type definitions

The general conventions in subclause 6.1.1.1 applies.

The identifier of an ASP type uses the same name as the name defined in the protocol standard.

EXAMPLE: PL_TX_REQ for an ASP containing a MAC layer PDU to the peer MAC layer (the IUT).

6.1.1.10 PDU type definitions

The general conventions in subclause 6.1.1.1 applies.

The PDU type identifier shall identify the related structure or type as defined in the protocol standard.

EXAMPLE: A_MT_BASIC_CONNECTION_CONTROL.

6.1.1.11 CM type definitions

The CM types are copied from the ASP types in Part 5 of this ETS without modifications.

6.1.1.12 Alias definitions

Alias definitions are not used.

6.1.2 Constraints part

This subclause describes the naming conventions chosen for the elements of the ATS constraints part.

6.1.2.1 General

Constraints shall be written with the first letter in uppercase, and the rest in lowercase.

The first part of the constraint declaration identifier name is equivalent to the corresponding type identifier used in the declaration part. The second part of the name describes the content of this constraint.

EXAMPLE: Declaration part: HEADER_FIELD;
Constraint part: Header_field_nt_no_b.

All constraints shall be listed in alphabetical order. If a different order of listing is maintained, the reason for doing so shall be specified.

6.1.3 Dynamic part

This subclause describes the naming conventions used for the elements of the ATS dynamic part.

6.1.3.1 General

All test cases shall be listed in the order in which they appear in the TSS and TP document.

6.1.3.2 Test Case identifier

The identifier of the test case is built in the same way as for the test purpose described in ETS 300 497-1 [47], subclause 5.1.1, with the exception that "TP" is replaced by "TC_FT" ("FT" for Fixed radio Termination). The identifier of a Test Case is built according table 2.

Table 2: TC naming convention

Identifier:	TC_FT_<fm>_<x>_<nn>		
	<fm> = functional module	DB	Down-link Broadcast
		PG	Paging services
		NB	Non Continuous Broadcast
		DC	Down-link Connectionless
		UC	Up-link Connectionless
		BS	Bearer setup
		CM	Connection modification
		BH	Bearer handover
		BR	Bearer release
		DT	Data transfer
		LM	Layer Management
		TM	Test Messages
	x = Type of testing	CA	Capability Tests
		BV	Valid Behaviour Tests
		BI	Invalid Behaviour Tests
	<nn> = sequential number	(00-99)	Test purpose Number

EXAMPLE: TP identifier: TP/BS/CA-00;
 TC identifier: TC_FT_BS_CA_00.

6.1.3.3 Test step identifier

The test step identifier is built of substrings in lowercase letters, preceded by a string of uppercase letters. The substrings are joined by underscore characters. The first substring indicates the main function of the Test Step; e.g. PR for preamble, PO for postamble, LTS for local tree and STP for general test step. The remaining substrings indicates the purpose of the step.

EXAMPLE: PO_release_bearer.

6.1.3.4 Default identifier

The default identifiers begin with the prefix "DF_", followed by a string in lowercase letters.

6.1.3.5 Label identifier

The identifiers in the label column is built according to table 3:

Table 3: Naming convention for verdict assignment identifier

Identifier:	<Table><nn>		
	<Table> = type of table	TB	Test Body
		CS	Check State test step
		DF	DeFault
		PO	POstamble
		PR	PReamble
		TS	TestStep
	<nn> = sequential number	(00-99)	Label number

6.1.3.6 ATS abbreviations

These abbreviations are used to shorten identifier names:

addr	address
ack	acknowledgement
bear	bearer
cap	capability
cfm	confirm
chn	channel
con	connection
ctrl	control
est	establish
ext	extension
id	identification
ind	indication
info	information
max	maximum
min	minimum
par	parameter
prop	proprietary
rel	release
req	request
rsp	response
std	standard
sys	system

6.2 Implementation conventions

6.2.1 Declaration part

The comment line of single element TTCN tables (e.g. test suite constants) is used to give a reference where the format and content of the element is described in the relevant protocol standards. Any particularity of the element format or content is described in the comment line.

The comment line in the header of multi element TTCN tables (e.g. ASPs) is used to reference to the protocol standard.

The detailed comments are used to describe any particularity of the table.

In the ASP, PDU, and CM declarations, the comments column is used to identify if a parameter (in ASPs) or field (in PDUs) is mandatory or optional:

- M: mandatory;
- O: optional.

In the ASP and PDU declarations the comments column is further used to give information about the parameter/field value, in particular if the parameter/field contains a fixed spare value.

6.2.2 Constraint part

The ASPs and PDUs are defined in a way that all relevant parameters/fields are parametrized. That improves the transparency of the constraints in the dynamic part, as all values which are relevant for the test are always present.

Generally no modified constraints are used. This allows an easier reuse and adaptation of constraints if they are reused in other test specifications.

The Comment line of a constraint always contains a reference to the relevant protocol standard.

The detailed comments footer is used to describe any particularity of the table.

6.2.3 Dynamic part

All events which are defined as a conformance requirement by the TP, causes a preliminary verdict PASS if the requirement is met.

All invalid events are handled in the default tree. Only FAIL or INCONC verdicts are assigned in the default tree.

The preamble, the test body and the postamble have different defaults, which allows a specific verdict handling, e.g. only INCONC verdicts are assigned in the preamble.

Except for local trees, test steps do not contain a default. Then there is no restrictions regarding the error handling.

All verdict assignments are labelled. According to ISO 9646-3 [23], annex E, clause E.2, labels should be written to the conformance log. This allows, for example, to identify where the test failed. To allow an exact identification of the table in which the verdict was assigned, the convention described in subclause 6.1.3.5 is applied.

To avoid deadlocks, the Parallel Test Components (PTC) LT_TC and LT_MAC shall always terminate.

TPs which are listed in the untestable TP list in clause 5 are not considered in the ATS, thus these TC identifiers are missing in the ATS and the numbering of the TCs is not always continuous.

Annex A (normative): Abstract test suite (ATS), PTC LT_TC

The ATS is written in TTCN according to ISO/IEC 9646-3 [23].

As the ATS was developed on a separate TTCN tool the TTCN tables are not completely referenced in the contents table. The ATS itself contains a Test Suite Overview part which provides additional information and references about the ATS.

NOTE: According to ISO/IEC 9646-3 [23], in case of a conflict in interpretation of the operational semantics of TTCN.GR and TTCN.MP, the operational semantics of the TTCN.GR representation takes precedence.

A.1 The machine processable ATS (TTCN.MP)

The electronic form of the machine processable file (TTCN MP format) corresponding to this ATS is contained in an ASCII text file (DE104973.MP¹) associated with this ETS.

A.2 The graphical ATS (TTCN.GR)

The graphical ATS is provided in this annex on the following pages.

1) This file is located in a compressed archive file named 4973_e1.LZH. Other file formats are available on request.

I

Test Suite Overview

Test Suite Structure			
<p>Suite Name : mac_ft Standards Ref : ETS 300 175-3 [3] PICS Ref : ETS 300 476-6 PIXIT Ref : ETS 300 497-3 Annex C Test Method(s) : ETS 300 497-3 Clause 4 Comments : This ATS is part of the DECT Common Interface Test Case Library (TCL) ETS 300 497. This ATS is the TTCN part of ETS 300 497 Part 3, TCL MAC layer at Fixed Part</p> <p style="text-align: center;">ETSI files reference: 497P3V03.MP, 497P3V03.PS (Excluding this Generic comments part, the files of this version are identical to the ITA V03 version files MACFT4.MP and MACFT4.PS)</p>			
Test Group Reference	Selection Ref	Test Group Objective	Page Nr
FT/	MANDATORY	Verify the correct implementation of the FT (IUT) MAC layer.	100
FT/BH/	MANDATORY	Verify the correct implementation of connection oriented bearer handover procedures.	100
FT/BH/BV/	MANDATORY	To test the behaviour of the IUT concerning connection oriented bearer handover procedures in relation to syntactically and contextual correct behaviour of the test system.	100
FT/BH/CA/	MANDATORY	Limited testing that the observable capabilities of the IUT concerning connection oriented bearer handover procedures are in accordance with the static requirements.	104
FT/BR/	MANDATORY	Verify the correct implementation of connection oriented bearer release procedures.	106
FT/BR/CA/	MANDATORY	Limited testing that the observable capabilities of the IUT concerning connection oriented bearer release procedures are in accordance with the static requirements.	106
FT/BS/	MANDATORY	Verify the correct implementation of connection oriented bearer setup procedures.	108
FT/BS/BV/	MANDATORY	To test the behaviour of the IUT concerning connection oriented bearer setup procedures in relation to syntactically and contextual correct behaviour of the test system.	108
FT/BS/CA/	MANDATORY	Limited testing that the observable capabilities of the IUT concerning connection oriented bearer setup procedures are in accordance with the static requirements.	109
FT/DB/	MANDATORY	Verify the correct implementation of the downlink broadcast services.	110
FT/DB/BV/	MANDATORY	To test the behaviour of the IUT concerning the downlink broadcast services in relation to syntactically and contextual correct behaviour of the test system.	110

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Test Suite Structure			
Test Group Reference	Selection Ref	Test Group Objective	Page Nr
FT/DB/CA/	MANDATORY	Limited testing that the observable capabilities of the IUT concerning the downlink broadcast services are in accordance with the static requirements.	111
FT/DT/	MANDATORY	Verify the correct implementation of connection oriented data transfer procedures.	119
FT/DT/BI/	MANDATORY	To check the behaviour of the IUT concerning connection oriented data transfer procedures in response to invalid messages.	119
FT/DT/BV/	MANDATORY	To test the behaviour of the IUT concerning connection oriented data transfer procedures in relation to syntactically and contextual correct behaviour of the test system.	123
FT/DT/CA/	MANDATORY	Limited testing that the observable capabilities of the IUT concerning connection oriented data transfer procedures are in accordance with the static requirements.	125
FT/LM/	MANDATORY	Verify the correct implementation of the LLME MAC layer management procedures.	133
FT/LM/CA/	MANDATORY	Limited testing that the observable capabilities of the IUT concerning the MAC layer management are in accordance with the static requirements.	133
FT/PG/	MANDATORY	Verify the correct implementation of the paging services.	134
FT/PG/BV/	MANDATORY	To test the behaviour of the IUT concerning the paging services in relation to syntactically and contextual correct behaviour of the test system.	134
FT/PG/CA/	MANDATORY	Limited testing that the observable capabilities of the IUT concerning the paging services are in accordance with the static requirements.	135
Detailed Comments :			

Test Case Index				
Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
FT/BH/BV/	TC_FT_BH_BV_00	Intracell_supported	Check that the IUT responds rightly to a PT initiated intracell bearer handover procedure when encryption is enabled.	100
FT/BH/BV/	TC_FT_BH_BV_01	Intercell_supported	Check that the IUT responds rightly to a PT initiated intercell bearer handover procedure when encryption is enabled.	102
FT/BH/CA/	TC_FT_BH_CA_00	Intracell_supported	Check that the IUT responds rightly to a PT initiated intracell bearer handover procedure.	104
FT/BH/CA/	TC_FT_BH_CA_01	Intercell_supported	Check that the IUT responds rightly to a PT initiated intercell bearer handover procedure.	105
FT/BR/CA/	TC_FT_BR_CA_00	MANDATORY	Check that the IUT manages rightly a release of a basic duplex bearer with an unacknowledged release procedure when receiving a release message.	106
FT/BS/BV/	TC_FT_BS_BV_00	MANDATORY	Check that the IUT releases a duplex bearer in case the timer T201 expires during the time a basic bearer exists.	108
FT/BS/CA/	TC_FT_BS_CA_00	MANDATORY	Check that the IUT manages rightly the PT initiated (single) basic bearer setup procedure.	109
FT/DB/BV/	TC_FT_DB_BV_03	MANDATORY	Check that once a SARI is introduced into the FT, the E-bit within the NT message is indicating SARI list available.	110
FT/DB/CA/	TC_FT_DB_CA_00	MANDATORY	Check that the IUT transmits constantly at least in frame 14 of each multiframe, the correct NT message.	111
FT/DB/CA/	TC_FT_DB_CA_01	MANDATORY	Check that the IUT transmits constantly at least once every T205 seconds in frame 0, the correct NT message.	112
FT/DB/CA/	TC_FT_DB_CA_02	MANDATORY	Check that the IUT transmits constantly one correct QT message in frame 8 of each multiframe.	113

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Test Case Index				
Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
FT/DB/CA/	TC_FT_DB_CA_03	MANDATORY	Check that the IUT transmits constantly at least one static system information QT message in each interval of 8 multiframe and that all such messages are correct.	114
FT/DB/CA/	TC_FT_DB_CA_04	MANDATORY	Check that the IUT transmits constantly at least one fixed part capabilities QT message in each interval of 8 multiframe and that all such messages are correct.	115
FT/DB/CA/	TC_FT_DB_CA_05	Encryption_supported	Check that the IUT transmits constantly at least one multiframe number QT message in each interval of 8 multiframe and that all such messages are correct.	116
FT/DB/CA/	TC_FT_DB_CA_06	Sari_supported	Check that the IUT transmits constantly at least one SARI list content QT message in each interval of 4 multiframe and that all such messages are correct.	117
FT/DB/CA/	TC_FT_DB_CA_07	Extended_rf_supported	Check that the IUT transmits the correct "Extended RF carrier information" QT message in the multi-frame following the "Static system information" QT message with the Extended RF carrier bit set.	118
FT/DT/BI/	TC_FT_DT_BI_00	MANDATORY	Check that the IUT, when receiving IN minimum delay data, is capable to detect A-field R-CRC error and to respond with the correct Q2 bit setting (Q2 = 0).	119
FT/DT/BI/	TC_FT_DT_BI_01	MANDATORY	Check that the IUT sets the Q1 & Q2 bits correctly when it receives data with Z-field error during IN minimum delay transfer.	121

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Test Case Index				
Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
FT/DT/BV/	TC_FT_DT_BV_00	MANDATORY	Check that the IUT releases the basic connection when it cannot conclude the procedure to switch from clear mode to encrypt mode.	123
FT/DT/BV/	TC_FT_DT_BV_01	Encryption_deactivation_supported	Check that the IUT releases the basic connection when it cannot conclude the procedure to switch from encrypt mode to clear mode.	124
FT/DT/CA/	TC_FT_DT_CA_00	MANDATORY	Check that the IUT re-transmits Cs segment until it receives an acknowledgement in the same ARQ window.	125
FT/DT/CA/	TC_FT_DT_CA_01	MANDATORY	Check that the IUT does not transmit another Cs segment until the successful transmission of the current segment.	127
FT/DT/CA/	TC_FT_DT_CA_02	MANDATORY	Check that the IUT manages correctly the one bit numbering of the Cs segments.	129
FT/DT/CA/	TC_FT_DT_CA_03	Encryption_supported	Check that the IUT manages correctly the procedure to switch the basic connection from clear mode to encrypt mode.	131
FT/DT/CA/	TC_FT_DT_CA_04	Encryption_deactivation_supported	Check that the IUT manages correctly the procedure to switch the basic connection from encrypt mode to clear mode.	132
FT/LM/CA/	TC_FT_LM_CA_05	MANDATORY	Check that the IUT, after the establishment of a new bearer during bearer handover, releases one of the two bearers within a time interval of T203 seconds.	133
FT/PG/BV/	TC_FT_PG_BV_01	Blind_slot_supported	Check that the IUT periodically announces (at least every 10s) its blind slots.	134
FT/PG/CA/	TC_FT_PG_CA_00	Blind_slot_supported	Check that the IUT can transmit (FT part normal paging mode) a short page message.	135
FT/PG/CA/	TC_FT_PG_CA_01	Blind_slot_or_not_fully_b_handover_supported	Check that the FT can transmit a correct zero length page message.	136
Detailed Comments :				

Test Step Index			
Test Step Group Reference	Test Step Id	Description	Page Nr
MAIN_TC/Postambles/	PO_mtc_con_release	Release of MAC connection.	137
PTC_TC/TestSteps/	STP_basic_bearer_setup	PT initiated (single) basic bearer setup procedure.	138
PTC_TC/TestSteps/	STP_basic_bearer_handover	PT initiated (single) basic bearer handover procedure.	140
PTC_TC/TestSteps/	STP_emulate_mac	To provide a non TTCN MAC emulation according to Annex B.	141
PTC_TC/TestSteps/	STP_encryption_start	Check that the IUT manages rightly the switch from clear mode to encrypt mode.	142
PTC_TC/TestSteps/	STP_encryption_start_failed	Check that the IUT releases the bearer if it can not conclude to go crypted.	143
PTC_TC/TestSteps/	STP_encryption_stop	Check that the IUT manages rightly the switch from encrypt mode to clear mode.	144
PTC_TC/TestSteps/	STP_encryption_stop_failed	Check that the IUT releases the bearer if it can not conclude to go clear.	145
PTC_TC/TestSteps/	STP_invoke_sari_message	Check that once a SARI is introduced into the FT, the E-bit within the NT message is updated.	146
PTC_TC/TestSteps/	STP_invoke_short_page	Implicit send: the IUT transmits a short page message.	146
PTC_TC/TestSteps/	STP_invoke_zero_page	Implicit send: the IUT transmits a zero page message.	147
Detailed Comments :			

Default Index			
Default Group Reference	Default Id	Description	Page Nr
MAIN_TC/ MAIN_TC/	DF_mtc_bearer_setup	For bearer setup tests (MTC).	148
	DF_mtc_downlink_broadcast	For downlink broadcast and paging tests (MTC).	148
PTC_TC/ PTC_TC/	DF_tc_bearer_setup	For bearer setup tests (PTC_TC).	149
	DF_tc_downlink_broadcast	For downlink broadcast tests (PTC_TC).	149
PTC_TC/	DF_tc_paging	For paging tests (PTC_TC).	150
Detailed Comments :			

II

Declarations Part

Simple Type Definitions		
Type Name	Type Definition	Comments
B_1	BITSTRING[1]	
B_2	BITSTRING[2]	
B_3	BITSTRING[3]	
B_4	BITSTRING[4]	
B_6	BITSTRING[6]	
B_8	BITSTRING[8]	
B_10	BITSTRING[10]	
B_12	BITSTRING[12]	
B_16	BITSTRING[16]	
B_20	BITSTRING[20]	
B_24	BITSTRING[24]	
B_28	BITSTRING[28]	
B_36	BITSTRING[36]	
B_39	BITSTRING[39]	
B_40	BITSTRING[40]	
B_48	BITSTRING[48]	
B_216	BITSTRING[216]	
B_324	BITSTRING[324]	
CHECKSUM	OCTETSTRING[2]	Checksum
CM_CF_REQUIRED	BOOLEAN	For CP_MAC CM.
CM_CHANNEL_TYPE	INTEGER	For CP_MAC CM.
CM_CLUSTER_ID	INTEGER	For CP_MAC CM.
CM_CONNECTION	INTEGER	For CP_MAC CM.
CM_CONNECTION_HANDBOVER	BOOLEAN	For CP_MAC CM.
CM_CONNECTION_TYPE	INTEGER	For CP_MAC CM.
CM_CRC_RESULTS	INTEGER	For CP_MAC CM.
CM_CRYPTED_OR_CLEAR	BOOLEAN	For CP_MAC CM.
CM_ECN	INTEGER	For CP_MAC CM.
CM_OLD_MCEI	INTEGER	For CP_MAC CM.
CM_FMID	BITSTRING[12]	For CP_MAC CM.
CM_LONG_FLAG	BOOLEAN	For CP_MAC CM.
CM_MAX_LIFETIME	INTEGER	For CP_MAC CM.
CM_MCEI	INTEGER	For CP_MAC CM.
CM_REASON	INTEGER	For CP_MAC CM.
CM_SERVICE_TYPE	INTEGER	For CP_MAC CM.
CM_SLOT_TYPE	INTEGER	For CP_MAC CM.
CR_BIT	BITSTRING[1]	Command/Response bit
FRAME_NUMBER	INTEGER(0..15)	
H_1	HEXSTRING[1]	
I_FRAME_ID	BITSTRING[1]	Information frame indicator
INT_0_99	INTEGER(0..99)	
INT_8	INTEGER(0..255)	
LI	BITSTRING[6]	Length for C-plane frame
LLN	BITSTRING[3]	Logical Link Number
M_BIT	BITSTRING[1]	More data bit, Segmenting
N_BIT	BITSTRING[1]	extended indicator
NLF	BITSTRING[1]	New Link Flag

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Simple Type Definitions		
Type Name	Type Definition	Comments
NR	BITSTRING[3]	Receive sequence Number
NS	BITSTRING[3]	Send sequence Number
P_BIT	BITSTRING[1]	Poll bit
PACKET_START	INTEGER(0,1)	
PF_BIT	BITSTRING[1]	Poll/Final bit
PHYSICAL_PACKET_TYPE	IA5String("00","32","08j","80")	1.
RF_CHANNEL_NUMBER	INTEGER(0..9)	
RES	BITSTRING[1]	REServed bit = 1
RPN	INTEGER(1,2)	To identify the Radio Fixed Part.
RR_ID	BITSTRING[2]	Receive Ready identifier
S_FRAME_ID	BITSTRING[2]	Supervisory frame indicator
SAPI	BITSTRING[2]	Service Access Point Identifier
SLOT_NUMBER	INTEGER(0..23)	
Detailed Comments : 1. "00": Short physical packet P00 "32": Basic physical packet P32 "08j": Low capacity physical packet P08j "80": High capacity physical packet P80		

Structured Type Definition		
Type Name : A_ANY		
Comments : ETS 300 175-3 [3], subclause 7.1.2.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	
data	B_40	
ra	H_1	
Detailed Comments :		

Structured Type Definition		
Type Name : A_CT		
Comments : ETS 300 175-3 [3], subclause 7.1.2.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	
cs_segment	PDU	
ra	H_1	
Detailed Comments :		

Structured Type Definition		
Type Name : A_OTHER		
Comments : This type defines the A-field header and tail as one bitstring.		
Element Name	Type Definition	Comments
msg	B_48	Header and tail
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_MT_BASIC_CON_CTRL		
Comments : ETS 300 175-3 [3], subclause 7.2.5.2.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
mt_header	B_4	Header of MAC control
command	B_4	Command of MAC control
fmid	B_12	Fixed part MAC id
pmid	B_20	Portable part MAC id
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_MT_ENCRYPTION_CTRL		
Comments : ETS 300 175-3 [3], subclause 7.2.5.7.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
mt_header	B_4	Header of MAC control
command	B_4	Command of MAC control
fmid	B_12	Fixed part MAC id
pmid	B_20	Portable part MAC id
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_NT		
Comments : ETS 300 175-3 [3], subclause 7.2.2.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
rfpi	B_40	
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_NT_SARI		
Comments : ETS 300 175-3 [3], subclause 7.2.2.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
e_bit	B_1	
rfpi	B_39	
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_PT_MSG		
Comments : ETS 300 175-3 [3], subclause 7.2.4. To receive a page of any format.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
pt_header	PT_HEADER	Header of PT message
message	B_36	
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_PT_SHORT_PAGE		
Comments : ETS 300 175-3 [3], subclause 7.2.4.1.2.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
pt_header	PT_HEADER	Header of PT message
bs_channel_data	B_20	
info_type	B_4	Type of MAC info
mac_layer_info	B_12	
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_PT_ZERO_PAGE		
Comments : ETS 300 175-3 [3], subclause 7.2.4.1.3.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
pt_header	PT_HEADER	Header of PT message
rfpi	B_20	
info_type	B_4	Type of MAC info
mac_layer_info	B_12	
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_QT_EXT_RF_CARRIER_INFO		
Comments : ETS 300 175-3 [3], subclause 7.2.3.3.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
q_header	B_4	Header of QT message
reserved	B_28	
spr	B_2	
number_of_rf_carriers	B_6	
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_QT_FIXED_PART_CAP		
Comments : ETS 300 175-3 [3], subclause 7.2.3.4.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
q_header	B_4	Header of QT message
ext_fp_info	B_1	
reserved	B_2	
double_slot	B_1	
half_slot	B_1	
full_slot	B_1	
freq_control	B_1	
page_rep	B_1	
co_on_dummy	B_1	
cl_uplink	B_1	
cl_downlink	B_1	
basic_a_field_setup	B_1	
adv_a_field_setup	B_1	
b_field_setup	B_1	
cf_message	B_1	
in_minimum_delay	B_1	
in_normal_delay	B_1	
ip_error_detection	B_1	
ip_error_correction	B_1	
multibearer_con	B_1	
higer_layer_info	B_16	
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_QT_MULTIFRAME_NUMBER		
Comments : ETS 300 175-3 [3], subclause 7.2.3.7.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
q_header	B_4	Header of QT message
spare	B_12	
mf_number	B_24	Multiframe number
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_QT_SARI		
Comments : ETS 300 175-3 [3], subclause 7.2.3.6.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
q_header	B_4	Header of QT message
sari_msg	B_36	
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_QT_STATIC_SYS_INFO		
Comments : ETS 300 175-3 [3], subclause 7.2.3.2.		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
q_header	B_4	Header of QT message
sn	B_4	Number of slot pairs
sp	B_2	Start position
esc	B_1	Escape bit
txs	B_2	Number of transceivers
mc	B_1	Extended RF carrier information
rf_cars	B_10	RF carrier available in RFP
spr_1	B_2	Spare bits
cn	B_6	RF carrier number of this transmission
spr_2	B_2	Spare bits
pscn	B_6	Primary receiver scan number
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : A_QT		
Comments : Standard A field QT message		
Element Name	Type Definition	Comments
header_field	HEADER_FIELD	MAC layer header
q_header	B_4	Header of QT message
system_information	B_36	
ra	H_1	R-CRC A-field
Detailed Comments :		

Structured Type Definition		
Type Name : FILLSTRING		
Comments :		
Element Name	Type Definition	Comments
filloctet1	BITSTRING[8]	1 fill octet (modulo 5 or 8)
filloctet2	BITSTRING[8]	2 fill octet (modulo 5 or 8)
filloctet3	BITSTRING[8]	3 fill octet (modulo 5 or 8)
filloctet4	BITSTRING[8]	4 fill octet (modulo 5 or 8)
filloctet5	BITSTRING[8]	5 fill octet (modulo 5 or 8)
filloctet6	BITSTRING[8]	6 fill octet (modulo 5 or 8)
filloctet7	BITSTRING[8]	7 fill octet (modulo 5 or 8)
Detailed Comments :		

Structured Type Definition		
Type Name : HEADER_FIELD		
Comments : A-field header. See ETS 300 175-3 [3], subclause 7.1.		
Element Name	Type Definition	Comments
ta(tail identification)	B_3	Describes tail contents
q1_bck(q1/bck bit)	B_1	
ba(b-field identification)	B_3	
q2(q2 bit)	B_1	
Detailed Comments :		

Structured Type Definition		
Type Name : PT_HEADER		
Comments : PT header. See ETS 300 175-3 [3], subclause 7.2.4.2.		
Element Name	Type Definition	Comments
extend_flag	B_1	
bs_sdu_length_indication	B_3	
Detailed Comments :		

Test Suite Operation Definition	
Operation Name	: TSO_cimft_checksum
Result Type	: OCTETSTRING
Comments	:
Description	
Calculate Checksum of DLC FA frame	
Detailed Comments :	

Test Suite Operation Definition	
Operation Name	: TSO_cimft_emulate_mac
Result Type	: BOOLEAN
Comments	: To implement the parallel test component (PTC) LT_MAC.
Description	
<p>TSO_cimft_emulate_mac is a test suite operation which returns a BOOLEAN value to the calling tree. When this operation is called, the Lower Tester shall emulate a MAC layer until stopped by action TSC_action, as required in Annex B. If the emulation has stopped successfully (by action TSC_stop) TRUE shall be returned, otherwise a FALSE shall be returned.</p> <p>TSO_cimft_emulate_mac = TRUE when emulation has stopped successfully by action TSC_stop. TSO_cimft_emulate_mac = FALSE when emulation has stopped un-successfully.</p>	
Detailed Comments :	

Test Suite Operation Definition	
Operation Name	: TSO_cimft_fill(chn : BOOLEAN; length:INTEGER)
Result Type	: FILLSTRING
Comments	: Fill 0 to 7 octets with the fill field '11110000'B according to the channel (Cs or Cf) and the parameter length.
Description	
<pre> IF (chn = TRUE) THEN /* Cf channel */ BEGIN fill (8 - (length MOD 8)) number of octet with value '11110000'B END ELSE /* Cs channel */ BEGIN fill (5 - (length MOD 5)) number of octet with value '11110000'B END </pre>	
Detailed Comments :	

Test Suite Operation Definition	
Operation Name	: TSO_cimft_return_cr_value(iut_type,frame_type:BOOLEAN)
Result Type	: INTEGER
Comments	: Determine the value of the CR_bit for C plane FA frame according to the type of the IUT (FT or PT) and the wanted type of frame (Command or Response).
Description	
<pre> IF (iut_type = TRUE) THEN BEGIN /* IUT is a PT */ IF (frame_type = TRUE) THEN RETURN 0 /* this is a command frame */ ELSE RETURN 1 /* this is a response frame */ END ELSE BEGIN /* IUT is a FT */ IF (frame_type = TRUE) THEN RETURN 1 /* this is a command frame */ ELSE RETURN 0 /* this is a response frame */ END </pre>	
Detailed Comments	:

Test Suite Operation Definition	
Operation Name	: TSO_cimft_substring(source:BITSTRING;start_index,length:INTEGER)
Result Type	: BITSTRING
Comments	:
Description	
<p>TSO_cimft_substring(source,start_index,length) is the bitstring of length 'length' starting from index 'start_index' of the source bitstring 'source'.</p> <p>EXAMPLES: TSO_cimft_substring('01010011'B,1,4)='0101'B TSO_cimft_substring('01010011'B,4,5)='10011'B</p>	
Detailed Comments	:

Test Suite Parameter Declarations			
Parameter Name	Type	PICS/PIXIT Ref	Comments
TSPX_in_pdu	OCTETSTRING	PIXIT item C.9.8	Content of FU1 frame
TSPX_pmid	B_20	PIXIT item C.7.1	PMID of the lower tester
TSPX_rfp1	B_40	PIXIT item C.7.2	RFPI for RFP number 1
TSPX_rfp2	B_40	PIXIT item C.7.3	RFPI for RFP number 2
TSPX_t_implicit_send	INT_0_99	PIXIT item C.8.1	Max. time to wait after request for invocation of an implicit send event.
TSPX_bearer_handover	BOOLEAN	PIXIT item C.9.9	TRUE for IUT that support bearer handover within the whole FT
TSPX_blind_slot	BOOLEAN	PIXIT item C.9.1	TRUE for IUT that have blind slot
TSPX_encryption	BOOLEAN	PIXIT item C.9.2	TRUE for IUT that support encryption
TSPX_deactivation	BOOLEAN	PIXIT item C.9.3	TRUE for IUT that support encryption and encryption deactivation
TSPX_extended_rf	BOOLEAN	PIXIT item C.9.4	TRUE for IUT that support extended RF carrier
TSPX_sari	BOOLEAN	PIXIT item C.9.5	TRUE for IUT that support SARI list
TSPX_intercell_handover	BOOLEAN	PIXIT item C.9.6	TRUE for IUT that support intercell handover
TSPX_intracell_handover	BOOLEAN	PIXIT item C.9.7	TRUE for IUT that support intracell handover
Detailed Comments :			

Test Case Selection Expression Definitions		
Expression Name	Selection Expression	Comments
MANDATORY	TRUE	For all mandatory tests.
Blind_slot_supported	TSPX_blind_slot	For IUT that have blind slot
Blind_slot_or_not_fully_b_handover_supported	TSPX_blind_slot OR (NOT TSPX_bearer_handover)	For IUT that have blind slot or does not support bearer handover within the whole FT
Encryption_supported	TSPX_encryption	For IUT that support encryption
Encryption_deactivation_supported	TSPX_encryption AND TSPX_deactivation	For IUT that support encryption and encryption deactivation
Extended_rf_supported	TSPX_extended_rf	For IUT that support extended RF carrier
Sari_supported	TSPX_sari	For IUT that support SARI list
Intercell_supported	TSPX_intercell_handover	For IUT that support intercell handover
Intracell_supported	TSPX_intracell_handover	For IUT that support intracell handover
Detailed Comments :		

Test Suite Constant Declarations			
Constant Name	Type	Value	Comments
TSC_T201_value	INTEGER	5000	The period of T201 in ms
TSC_T205_value	INTEGER	10000	The period of T205 in ms
TSC_1_frame_value	INTEGER	10000	The period of one frame in us
TSC_1_mf_value	INTEGER	16 * TSC_1_frame_value	The period of one multiframe
TSC_4_mf_value	INTEGER	4 * 16 * TSC_1_frame_value	The period of 4 multiframe
TSC_8_mf_value	INTEGER	8 * 16 * TSC_1_frame_value	The period of 8 multiframe
TSC_cm_c_only	INTEGER	2	MAC connection with C channel only. For use in CM MAC_CON_REQ.
TSC_cm_cs	INTEGER	1	Number of CS channel
TSC_cm_in	INTEGER	3	MAC connection with IN channel. For use in CM MAC_CON_REQ.
TSC_cm_fs	INTEGER	1	Full slot. For use in CM MAC_CON_REQ.
TSC_cm_sbcon	INTEGER	2	Symmetric single bearer connection. For use in CM MAC_CON_REQ.
TSC_command	BOOLEAN	TRUE	For command frame
TSC_connection_sapi	INTEGER	0	Connection oriented SAPI
TSC_fmids1	B_12	TSO_cimft_substring(TSPX_rfp1,29,12)	FMID for RFP number 1. ETS 300 175-3 [3], subclause 11.7.1.
TSC_fmids2	B_12	TSO_cimft_substring(TSPX_rfp2,29,12)	FMID for RFP number 2. ETS 300 175-3 [3], subclause 11.7.1.
TSC_lln_ca	INTEGER	1	Class A LLN
TSC_response	BOOLEAN	FALSE	For response frame
TSC_rpn1	RPN	1	RFP number 1.
TSC_rpn2	RPN	2	RFP number 2
TSC_start	INTEGER	0	0. Start test case synchronisation
TSC_stop	INTEGER	1	1. Stop test case synchronisation
TSC_action2	INTEGER	2	2. generate A field CRC error
TSC_action3	INTEGER	3	3. pass to physical layer a request for generating Z field error
TSC_action4	INTEGER	4	4. Generate an incorrect message for RFPI handshake. Change the RFPI transmitted by the Lower Tester on all traffic bearers to the IUT by inverting bit a47.
TSC_action5	INTEGER	5	5. Acknowledge received Cs segment only after three receipt.
TSC_action16	INTEGER	16	16. Don't send the GRANT message

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Continued from previous page

Test Suite Constant Declarations			
Constant Name	Type	Value	Comments
TSC_action17	INTEGER	17	17. Initiate and perform an intracell bearer handover procedure.
TSC_action18	INTEGER	18	18. Initiate and perform an intercell bearer handover procedure.
Detailed Comments : Actions TSC_6 to TSC_15 and TSC_action19 to TSC_action21 are only used when testing a PT.			

Test Case Variable Declarations			
Variable Name	Type	Value	Comments
TCV_bool	BOOLEAN	FALSE	General purpose boolean
TCV_cm_mcei1	INTEGER	1	For use in coordination messages at CP_MAC.
TCV_count	INT_8	1	General purpose counter
TCV_frame	FRAME_NUMBER		1.
TCV_frame1	FRAME_NUMBER		For use in computation.
TCV_rf	RF_CHANNEL_NUMBER		2.
TCV_slot	SLOT_NUMBER		3.
TCV_slot_pair	SLOT_NUMBER		4.
<p>Detailed Comments : 1. Local variable for frame number. 2. Local variable for rf channel number. 3. Local variable for slot number. 4. Local variable for slot number of TDMA pair (0,12 – 1,13 – 2,14).</p>			

PCO Declarations			
PCO Name	PCO Type	Role	Comments
PHL	D_SAP	LT	PCO between MAC and Physical layer.
Detailed Comments :			

Coordination Point Declarations	
CP Name	Comments
CP_MAC	Coordination point between MTC and PTC_MAC
CP_TC	Coordination point between MTC and PTC_TC
Detailed Comments :	

Timer Declarations			
Timer Name	Duration	Unit	Comments
T201	$TSC_T201_value + (5 * (TSC_T201_value / 100))$	ms	The period of T201 + 5%
T203	$(TSC_1_mf_value + (5 * (TSC_1_mf_value / 100))) / 1000$	ms	The period of T203
T205	$TSC_T205_value + (5 * (TSC_T205_value / 100))$	ms	The period of T205 + 5%
T_DL07	2	s	Class A link establishment timer
T_10s	10	s	FT that have blind slot shall announces periodically blind slot information (at least every T_10s)
T_1_frame	$TSC_1_frame_value + (5 * (TSC_1_frame_value / 100))$	us	The period of one frame + 5%
T_1_mf	$(TSC_1_mf_value + (5 * (TSC_1_mf_value / 100))) / 1000$	ms	The period of one multiframe + 5%
T_4_mf	$(TSC_4_mf_value + (5 * (TSC_4_mf_value / 100))) / 1000$	ms	The period of 4 multiframe + 5%
T_8_mf	$(TSC_8_mf_value + (5 * (TSC_8_mf_value / 100))) / 1000$	ms	The period of 8 multiframe 5%
T_implicit_send	TSPX_t_implicit_send	s	Max. time to wait after request for invocation of an implicit send event.
T_wait_ptc_mac	10	s	Max. time to wait for a PHL-ASP at the PHL PCO after issuing a MAC-ASP to the PTC_MAC at the CP_MAC CP.
T_wait_mtc_mac	60	s	Max. time to wait for a MAC response in the MTC.

Detailed Comments :

Test Component Declarations				
Component Name	Component Role	Nr PCOs	Nr CPs	Comments
MTC_FT	MTC	0	2	Main Test Component
LT_MAC	PTC	1	1	Emulation of MAC layer
LT_TC	PTC	1	1	MAC test cases
Detailed Comments :				

Test Components Configuration Declaration**Configuration Name** : Mac_config**Comments** : Single-party context, remote test method, embedded variant using concurrent TTCN

Components Used	PCOs Used	CPs Used	Comments
MTC_FT		CP_MAC,CP_TC	MTC
LT_MAC	PHL	CP_MAC	LT which emulates MAC
LT_TC	PHL	CP_TC	LT which runs TCs

Detailed Comments :

ASP Type Definition		
ASP Name : PL_FREQ_ADJ_REQ PCO Type : D_SAP Comments : ETS 300 175-2 [2], subclause 7.1.3.		
Parameter Name	Parameter Type	Comments
frequency_adjust	B_8	1.
Detailed Comments : 1. The frequency error may be encoded as specified in ETS 300 175-3 [3], subclause 7.2.5.5.		

ASP Type Definition		
ASP Name : PL_RX_CFM PCO Type : D_SAP Comments : For D-field receptions. See ETS 300 175-2 [2], subclause 7.1.2.		
Parameter Name	Parameter Type	Comments
valid_synch_word	BOOLEAN	1.
d_field	PDU	Data field
frequency_error	B_8	2.
sliding_collision_info	BOOLEAN	3.
n	RPN	4.
frame	FRAME_NUMBER	5.
slotpair	SLOT_NUMBER	6.
Detailed Comments : 1. TRUE if synchronisation word is valid, else FALSE. 2. The frequency error may be encoded as specified in ETS 300 175-3 [3], subclause 7.2.5.5 (not required for GAP). 3. TRUE if sliding collision is detected, else FALSE. 4. The number, Radio fixed Part Number (RPN), of the radio fixed part using the physical channel 5. Non-standardised parameter indicating the frame number in which the PDU was received. 6. Number of the slotpair for access_request		

ASP Type Definition		
ASP Name : PL_RX_REQ PCO Type : D_SAP Comments : PL-RX.Reg ASP. See ETS 300 175-2 [2], subclause 7.1.2.		
Parameter Name	Parameter Type	Comments
a	PHYSICAL_PACKET_TYPE	Physical packet type
k	SLOT_NUMBER	1.
l	PACKET_START	2.
m	RF_CHANNEL_NUMBER	3.
n	RPN	4.
Detailed Comments : 1. The number of the full-slot in which transmission of the packet starts. 2. If l=0 the packet starts at bit interval f0. If l=1 then packet starts at bit interval f240. 3. The number of the RF channel used to transmit the physical packet. 4. The number, Radio fixed Part Number (RPN), of the radio fixed part using the physical channel		

ASP Type Definition

ASP Name : PL_TX_REQ

PCO Type : D_SAP

Comments : For D-field transmissions. See ETS 300 175-2 [2], subclause 7.1.1.

Parameter Name	Parameter Type	Comments
d_field	PDU	Data field
a	PHYSICAL_PACKET_TYPE	Physical packet type
k	SLOT_NUMBER	1.
l	PACKET_START	2.
m	RF_CHANNEL_NUMBER	3.
n	RPN	4.
add_z_field	BOOLEAN	Z-field is added if TRUE.
frame	FRAME_NUMBER	5.

Detailed Comments :

1. The number of the full-slot in which transmission of the packet starts.
2. If l=0 the packet starts at bit interval f0. If l=1 then packet starts at bit interval f240.
3. The number of the RF channel used to transmit the physical packet.
4. The number, Radio fixed Part Number (RPN), of the radio fixed part using the physical channel.
5. Non-standardised parameter indicating the frame number used for transmission of the PDU.

PDU Type Definition		
PDU Name : D00_CT PCO Type : D_SAP Comments : D00 field PDU for receiving a CT message in the A-field.		
Field Name	Field Type	Comments
a_field	A_CT	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_ANY PCO Type : D_SAP Comments : D00 field PDU for receiving any A field.		
Field Name	Field Type	Comments
a_field	A_ANY	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_NT PCO Type : D_SAP Comments : D00 field PDU for receiving a NT message in the A-field.		
Field Name	Field Type	Comments
a_field	A_NT	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_NT_SARI PCO Type : D_SAP Comments : D00 field PDU for receiving a NT message in the A-field with SARI indication.		
Field Name	Field Type	Comments
a_field	A_NT_SARI	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_PT_MSG PCO Type : D_SAP Comments : D00 field PDU for receiving a page of any format in the A-field		
Field Name	Field Type	Comments
a_field	A_PT_MSG	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_PT_SHORT_PAGE PCO Type : D_SAP Comments : D00 field PDU for receiving a short page in the A-field.		
Field Name	Field Type	Comments
a_field	A_PT_SHORT_PAGE	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_PT_ZERO_PAGE PCO Type : D_SAP Comments : D00 field PDU for receiving a short page in the A-field.		
Field Name	Field Type	Comments
a_field	A_PT_ZERO_PAGE	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_QT_EXT_RF_CARRIER_INFO PCO Type : D_SAP Comments : D00 field PDU for receiving a QT Extended RF Carrier Information message in the A-field.		
Field Name	Field Type	Comments
a_field	A_QT_EXT_RF_CARRIER_INFO	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_QT_FIXED_PART_CAP PCO Type : D_SAP Comments : D00 field PDU for receiving a QT Fixed Part Capability message in the A-field.		
Field Name	Field Type	Comments
a_field	A_QT_FIXED_PART_CAP	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_QT_MULTIFRAME_NUMBER PCO Type : D_SAP Comments : D00 field PDU for receiving a QT Multiframe Number message in the A-field.		
Field Name	Field Type	Comments
a_field	A_QT_MULTIFRAME_NUMBER	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_QT_SARI		
PCO Type : D_SAP		
Comments : D00 field PDU for receiving a QT SARI message in the A-field.		
Field Name	Field Type	Comments
a_field	A_QT_SARI	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_QT_STATIC_SYS_INFO		
PCO Type : D_SAP		
Comments : D00 field PDU for receiving a QT Static System Information message in the A-field.		
Field Name	Field Type	Comments
a_field	A_QT_STATIC_SYS_INFO	
Detailed Comments :		

PDU Type Definition		
PDU Name : D00_QT		
PCO Type : D_SAP		
Comments : D00 field PDU for receiving a QT message in the A-field.		
Field Name	Field Type	Comments
a_field	A_QT	
Detailed Comments :		

PDU Type Definition		
PDU Name : D32_MT_BASIC_CON_CTRL		
PCO Type : D_SAP		
Comments : D32 field PDU for receiving a MT_BASIC_CON_CONTROL message in the A-field		
Field Name	Field Type	Comments
a_field	A_MT_BASIC_CON_CTRL	
b_field	B_324	
Detailed Comments :		

PDU Type Definition		
PDU Name : D32_MT_ENCRYPTION_CTRL PCO Type : D_SAP Comments : D32 field PDU for receiving a MT_ENCRYPTION_CONTROL message in the A-field		
Field Name	Field Type	Comments
a_field	A_MT_ENCRYPTION_CTRL	
b_field	B_324	
Detailed Comments :		

PDU Type Definition		
PDU Name : D32_ANY PCO Type : D_SAP Comments : D32 field PDU fo receiving any A field.		
Field Name	Field Type	Comments
a_field	A_ANY	
b_field	B_324	
Detailed Comments :		

PDU Type Definition		
PDU Name : D32_OTHER PCO Type : D_SAP Comments : D32 field PDU for receiving any message in the A-field.		
Field Name	Field Type	Comments
a_field	A_OTHER	
b_field	B_324	
Detailed Comments :		

PDU Type Definition		
PDU Name : FU1 PCO Type : D_SAP Comments : ETS 300 175-4 [4]: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.2 FU1 frame structure		
Field Name	Field Type	Comments
higher_layer_info	OCTETSTRING[0..INFINITY]	M: Higher layer info
Detailed Comments :		

PDU Type Definition		
PDU Name : INFORMATION PCO Type : D_SAP Comments : ETS 300 175-4 [4]: § 7 Element of procedure and formats of fields for C-plane peer to peer communication		
Field Name	Field Type	Comments
nlf	NLF	M: New Link Flag
lln	LLN	M: Logical Link Number
sapi	SAPI	M: Service Access Point Identifier
cr_bit	CR_BIT	M: Command/Response bit
res	RES	M: REServed bit = 1
n_r	NR	M: Receive sequence Number
p_bit	P_BIT	M: Poll bit
n_s	NS	M: Send sequence Number
iframe_id	I_FRAME_ID	M: Information frame indicator = 0
li	LI	M: Length
m_bit	M_BIT	M: More data bit, Segmenting = 1
n_bit	N_BIT	M: extended indicator, no extension = 1
data	PDU	M: Data
fill	FILLSTRING	M: Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	CHECKSUM	M: Checksum
Detailed Comments :		

PDU Type Definition		
PDU Name : RR PCO Type : D_SAP Comments : ETS 300 175-4 [4]: §7 Element of procedure and formats of fields for C-plane peer to peer communication		
Field Name	Field Type	Comments
nlf	NLF	M: New Link Flag
lln	LLN	M: Logical Link Number
sapi	SAPI	M: Service Access Point Identifier
cr_bit	CR_BIT	M: Command/Response bit
res	RES	M: REServed bit = 1
n_r	NR	M: Receive sequence Number
pf_bit	PF_BIT	M: Poll/Final bit
rr_id	RR_ID	M: Receive Ready identifier = 00
sframe_id	S_FRAME_ID	M: Supervisory frame indicator = 01
li	LI	M: Length
m_bit	M_BIT	M: More data bit, shall be 0
n_bit	N_BIT	M: extended indicator, shall be 1
fill	FILLSTRING	M: Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	CHECKSUM	M: Checksum
Detailed Comments :		

CM Type Definition		
CM Name : MAC_DATA_IND		
Comments : This is a non-standardised ASP used instead of MAC-CO_DATA_IND and MAC-CO_DTR.Ind.		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	
receive_channel_type	CM_CHANNEL_TYPE	
sdu	PDU	
crc_results	CM_CRC_RESULTS	Optional
Detailed Comments :		

CM Type Definition		
CM Name : MAC_DATA_REQ		
Comments : This is a non-standardised ASP used instead of MAC-CO_DATA Req		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	
transmit_channel_type	CM_CHANNEL_TYPE	
sdu	PDU	
Detailed Comments :		

CM Type Definition		
CM Name : MAC_CMD		
Comments : This is a non-standardised CM type used to synchronise and to command the PTC MAC (MAC emulation).		
Parameter Name	Parameter Type	Comments
action	INTEGER	Action required (see detailed comments)
Detailed Comments : Action required: 00. Start test case synchronisation, 01. Stop test case synchronisation, 02. generate A field CRC error, 03. pass to physical layer a request for generating Z field error, 04. stop generating NT message for RFPI handshake, 05. Acknowledge received Cs segment only after three receipt, 06. generate poor carrier on this connection to force intracell handover, 07. generate poor carrier on this connection to force intercell handover, 08. Dont terminate PT initiated bearer setup with "other message" (setup failure for testing N200), 09. Repeat "WAIT message " until T200 reached on PT initiated bearer setup (setup failure for testing T200), 10. Transmit forever incorrect A field CRC in frame 0 (Timer T207 testing), 11. Transmit blind slot information with only one slot available, 12. Transmit "other bearer" and "dummy or CL bearer position" to provide only one slot pair available for the PT for initiating setup, 13. Transmit the extended RF carrier information QT message, 14. Dont acknowledge Start Encryption request when received, 15. Dont acknowledge Stop Encryption request when received, 16. Dont send the GRANT message, 17. Initiate and perform an intracell bearer handover procedure. 18. Initiate and perform an intercell bearer handover procedure. 19. Ignore any received bearer handover request messages.		

CM Type Definition		
CM Name : MAC_CON_CFM		
Comments : ETS 300 175-3 [3], subclause 8.1.1.		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	1.
connection_type	CM_CONNECTION_TYPE	Basic or advanced
ecn	CM_ECN	2.
Detailed Comments : 1 MAC Connection Endpoint 2. Exchange connection number (for advanced connection only)		

CM Type Definition		
CM Name : MAC_CON_IND		
Comments : ETS 300 175-3 [3], subclause 8.1.1.		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	1.
fmid	CM_FMID	Fixed Part MAC Identity
pmid	B_20	Portable Part MAC Identity
connection_handover	CM_CONNECTION_HANDOVER	
cf_required	CM_CF_REQUIRED	
slot_type	CM_SLOT_TYPE	
service_type	CM_SERVICE_TYPE	
max_lifetime	CM_MAX_LIFETIME	
connection	CM_CONNECTION	
connection_type	CM_CONNECTION_TYPE	Basic or advanced
ecn	CM_ECN	2.
Detailed Comments : 1 MAC Connection Endpoint 2. Exchange connection number (for advanced connection only)		

CM Type Definition		
CM Name : MAC_CON_REQ		
Comments : ETS 300 175-3 [3], subclause 8.1.1.		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	1.
fmid	CM_FMID	Fixed Part MAC Identity
pmid	B_20	Portable Part MAC Identity
connection_handover	CM_CONNECTION_HANDOVER	
old_mcei	CM_OLD_MCEI	
cf_required	CM_CF_REQUIRED	
slot_type	CM_SLOT_TYPE	
service_type	CM_SERVICE_TYPE	
max_lifetime	CM_MAX_LIFETIME	
connection	CM_CONNECTION	
rpn	RPN	
Detailed Comments : 1. MAC Connection Endpoint.		

CM Type Definition		
CM Name : MAC_DIS_IND		
Comments : ETS 300 175-3 [3], subclause 8.1.6.		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	
reason	CM_REASON	
Detailed Comments :		

CM Type Definition		
CM Name : MAC_DIS_REQ		
Comments : ETS 300 175-3 [3], subclause 8.1.6.		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	
Detailed Comments :		

CM Type Definition		
CM Name : MAC_ENC_EKS_CFM		
Comments : ETS 300 175-3 [3], subclause 8.1.8.2.		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	
crypted_or_clear	CM_CRYPTED_OR_CLEAR	
Detailed Comments :		

CM Type Definition		
CM Name : MAC_ENC_EKS_IND		
Comments : ETS 300 175-3 [3], subclause 8.1.8.2.		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	
crypted_or_clear	CM_CRYPTED_OR_CLEAR	
Detailed Comments :		

CM Type Definition		
CM Name : MAC_ENC_EKS_REQ		
Comments : ETS 300 175-3 [3], subclause 8.1.8.2.		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	
crypted_or_clear	CM_CRYPTED_OR_CLEAR	
Detailed Comments :		

CM Type Definition		
CM Name : MAC_PAGE_IND		
Comments : ETS 300 175-3 [3], subclause 8.2.1.		
Parameter Name	Parameter Type	Comments
cluster_id	CM_CLUSTER_ID	Max. permitted length of a BS SDU is 216 bits.
long_flag	CM_LONG_FLAG	
sdu	B_216	
crc_results	CM_CRC_RESULTS	
Detailed Comments :		

CM Type Definition		
CM Name : MAC_RES_DLC_IND		
Comments : ETS 300 175-3 [3], subclause 8.1.5		
Parameter Name	Parameter Type	Comments
mcei	CM_MCEI	
Detailed Comments :		

III

Constraints Part

Structured Type Constraint Declaration		
Constraint Name : A_any_q2_0		
Structured Type : A_ANY		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2. For receiving any A-field message with Q2=0.		
Element Name	Element Value	Comments
header_field	Header_field_any_no_b_q2_0	
data	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_any_q2_1		
Structured Type : A_ANY		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2. For receiving any A-field message with Q2=1.		
Element Name	Element Value	Comments
header_field	Header_field_any_no_b_q2_1	
data	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_any_with_b_q2_0		
Structured Type : A_ANY		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2. For receiving any message with Q2=0.		
Element Name	Element Value	Comments
header_field	Header_field_any_q2_0	
data	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_any_with_b_q2_1		
Structured Type : A_ANY		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2.. For receiving any message with Q2=1.		
Element Name	Element Value	Comments
header_field	Header_field_any_q2_1	
data	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_ct(pdu_:PDU)		
Structured Type : A_CT		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2.. For receiving a CS segment with a CT data packet number 0 or 1.		
Element Name	Element Value	Comments
header_field	Header_field_ct_no_b	
cs_segment	pdu_	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_ct_first_cs(pdu_:PDU)		
Structured Type : A_CT		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2. For receiving a CS segment with a CT data packet number 0.		
Element Name	Element Value	Comments
header_field	Header_field_ct_no_b_first	
cs_segment	pdu_	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_ct_second_cs(pdu_:PDU)		
Structured Type : A_CT		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2. For receiving a CS segment with a CT data packet number 1.		
Element Name	Element Value	Comments
header_field	Header_field_ct_no_b_second	
cs_segment	pdu_	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_ct_any		
Structured Type : A_CT		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2. For receiving any CS segment with a CT data packet number 0 or 1.		
Element Name	Element Value	Comments
header_field	Header_field_ct_no_b	
cs_segment	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_mt_basic_con_ctrl_access_req		
Structured Type : A_MT_BASIC_CON_CTRL		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.5.2.2.		
Element Name	Element Value	Comments
header_field	Header_field_mt_first_pp_u_type	
mt_header	'0000'B	Basic connection control
command	'0000'B	Access_request
fmid	TSC_fmid1	FMID of RFP number 1
pmid	TSPX_pmid	PMID of the PP MAC (lower tester)
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_mt_basic_con_ctrl_bearer_cfm		
Structured Type : A_MT_BASIC_CON_CTRL		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.5.2.2.		
Element Name	Element Value	Comments
header_field	Header_field_mt_u_type	
mt_header	'0000'B	Basic connection control
command	'0100'B	Bearer_confirm
fmid	TSC_fmid1	FMID of RFP number 1
pmid	TSPX_pmid	PMID of the PP MAC (lower tester)
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_mt_basic_con_ctrl_release		
Structured Type : A_MT_BASIC_CON_CTRL		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.5.2.2.		
Element Name	Element Value	Comments
header_field	Header_field_mt_u_type	
mt_header	'0000'B	MT basic connection
command	'1111'B	Release
fmid	TSC_fmid1	FMID for RFP number 1
pmid	TSPX_pmid	PMID for PP (lower tester)
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_mt_basic_con_ctrl_wait		
Structured Type : A_MT_BASIC_CON_CTRL		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.5.2.2 and 7.2.5.2.3.		
Element Name	Element Value	Comments
header_field	Header_field_mt_u_type	
mt_header	'0000'B	MT basic connection
command	'0101'B	Wait
fmid	TSC_fmid1	FMID for RFP number 1
pmid	(TSPX_pmid, '11110000111100001111'B)	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_mt_basic_handover_req(fmid_:B_12)		
Structured Type : A_MT_BASIC_CON_CTRL		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.5.2.2.		
Element Name	Element Value	Comments
header_field	Header_field_mt_first_pp_u_type	
mt_header	'0000'B	Basic connection control
command	'0001'B	Bearer handover_request
fmid	fmid_	FMID of RFP number 1
pmid	TSPX_pmid	PMID of the PP MAC (lower tester)
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_mt_enc_ctrl_start_cfm		
Structured Type : A_MT_ENCRYPTION_CTRL		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.5.2.2 and 7.2.5.7		
Element Name	Element Value	Comments
header_field	Header_field_mt_u_type	
mt_header	'0101'B	MT encryption control
command	'0001'B	Start confirm
fmid	TSC_fmid1	FMID for RFP number 1
pmid	(TSPX_pmid, '11110000111100001111'B)	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_mt_enc_ctrl_start_req		
Structured Type : A_MT_ENCRYPTION_CTRL		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.5.2.2 and 7.2.5.7		
Element Name	Element Value	Comments
header_field	Header_field_mt_u_type	
mt_header	'0101'B	MT encryption control
command	'0000'B	Start request
fmid	TSC_fmid1	FMID for RFP number 1
pmid	(TSPX_pmid, '11110000111100001111'B)	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_mt_enc_ctrl_stop_cfm		
Structured Type : A_MT_ENCRYPTION_CTRL		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.5.2.2 and 7.2.5.7		
Element Name	Element Value	Comments
header_field	Header_field_mt_u_type	
mt_header	'0101'B	MT encryption control
command	'0101'B	Stop confirm
fmid	TSC_fmid1	FMID for RFP number 1
pmid	(TSPX_pmid, '11110000111100001111'B)	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_mt_enc_ctrl_stop_req		
Structured Type : A_MT_ENCRYPTION_CTRL		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.5.2.2 and 7.2.5.7		
Element Name	Element Value	Comments
header_field	Header_field_mt_u_type	
mt_header	'0101'B	MT encryption control
command	'0100'B	Stop request
fmid	TSC_fmid1	FMID for RFP number 1
pmid	(TSPX_pmid, '11110000111100001111'B)	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_any_in_data_error		
Structured Type : A_ANY		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2.		
Element Name	Element Value	Comments
header_field	Header_field_any_with_error	
data	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_nt(actual_rspi:B_40)		
Structured Type : A_NT		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2.		
Element Name	Element Value	Comments
header_field	Header_field_nt_no_b	
rspi	actual_rspi	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_nt_sari(actual_rspi:B_40)		
Structured Type : A_NT_SARI		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2.		
Element Name	Element Value	Comments
header_field	Header_field_nt_no_b	
e_bit	'1'B	
rspi	TSO_cimft_substring(actual_rspi,2,39)	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_any_in_data		
Structured Type : A_ANY		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.2.		
Element Name	Element Value	Comments
header_field	Header_field_any_with_b	
data	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_other Structured Type : A_OTHER Derivation Path : Comments : Constraint for receiving any A-field message.		
Element Name	Element Value	Comments
msg	?	Any A-field header and tail
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_pt_any_01 Structured Type : A_PT_MSG Derivation Path : Comments : ETS 300 175-3 [3], subclause 7.2.4.1.2. Special constraint for receiving a short page with any data content.		
Element Name	Element Value	Comments
header_field	Header_field_pt_no_b	PT
pt_header	Pt_header_02	Any PT header.
message	?	Any page message
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_pt_blind_slot Structured Type : A_PT_SHORT_PAGE Derivation Path : Comments : ETS 300 175-3 [3], subclause 7.2.4.3.3. Special constraint for receiving blind slot information PT message.		
Element Name	Element Value	Comments
header_field	Header_field_pt_no_b	1.
pt_header	Pt_header_01('000'B)	
bs_channel_data	?	
info_type	'0001'B	
mac_layer_info	?	
ra	?	
Detailed Comments : 1. Zero page with extend flag set to any value.		

Structured Type Constraint Declaration		
Constraint Name : A_pt_short_page_01 Structured Type : A_PT_SHORT_PAGE Derivation Path : Comments : ETS 300 175-3 [3], subclause 7.2.4.1.2. Special constraint for receiving a short page with any data content.		
Element Name	Element Value	Comments
header_field	Header_field_pt_no_b	1.
pt_header	Pt_header_01('001'B)	
bs_channel_data	?	
info_type	?	
mac_layer_info	?	
ra	?	
Detailed Comments : 1. Short page with extend flag set to any value.		

Structured Type Constraint Declaration		
Constraint Name : A_pt_zero_page_any(rfpi:B_40) Structured Type : A_PT_ZERO_PAGE Derivation Path : Comments : ETS 300 175-3 [3], subclause 7.2.4.1.3. Special constraint for receiving a zero page message.		
Element Name	Element Value	Comments
header_field	Header_field_pt_no_b	1.
pt_header	Pt_header_01('000'B)	
rfpi	TSO_cimft_substring(rfpi,20,20)	
info_type	?	
mac_layer_info	?	
ra	?	
Detailed Comments : 1. Zero page with extend flag set to any value.		

Structured Type Constraint Declaration		
Constraint Name : A_qt_ext_rf_carrier_info Structured Type : A_QT_EXT_RF_CARRIER_INFO Derivation Path : Comments : ETS 300 175-3 [3], subclause 7.2.3.3.		
Element Name	Element Value	Comments
header_field	Header_field_qt_no_b	Qh value
q_header	'0010'B	
reserved	?	
spr	'00'B	
number_of_rf_carriers	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_qt_fixed_part_cap		
Structured Type : A_QT_FIXED_PART_CAP		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.3.4.		
Element Name	Element Value	Comments
header_field	Header_field_qt_no_b	
q_header	'0011'B	
ext_fp_info	?	
reserved	'00'B	
double_slot	?	
half_slot	?	
full_slot	'1'B	
freq_control	?	
page_rep	?	
co_on_dummy	?	
cl_uplink	?	
cl_downlink	?	
basic_a_field_setup	'1'B	
adv_a_field_setup	?	
b_field_setup	?	
cf_message	?	
in_minimum_delay	'1'B	
in_normal_delay	?	
ip_error_detection	?	
ip_error_correction	?	
multibearer_con	?	
higer_layer_info	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_qt_multiframe_number		
Structured Type : A_QT_MULTIFRAME_NUMBER		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.3.7.		
Element Name	Element Value	Comments
header_field	Header_field_qt_no_b	
q_header	'0110'B	
spare	'111100001111'B	
mf_number	?	Multiframe number
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_qt_sari		
Structured Type : A_QT_SARI		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.3.6.		
Element Name	Element Value	Comments
header_field	Header_field_qt_no_b	
q_header	'0101'B	Qh value
sari_msg	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_qt_static_sys_info		
Structured Type : A_QT_STATIC_SYS_INFO		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.2.3.2.		
Element Name	Element Value	Comments
header_field	Header_field_qt_no_b	
q_header	'000?'B	Qh value
sn	?	Number of slot pairs
sp	'00'B	Start position
esc	?	Escape bit
txs	?	Number of transceivers
mc	?	Extended RF carrier information
rf_cars	?	RF carrier available in RFP
spr_1	'00'B	Spare bits
cn	?	RF carrier number of this transmission
spr_2	'00'B	Spare bits
pscn	?	Primary receiver scan number
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_qt_static_sys_info_rf Structured Type : A_QT_STATIC_SYS_INFO Derivation Path : Comments : ETS 300 175-3 [3], subclause 7.2.3.2.		
Element Name	Element Value	Comments
header_field	Header_field_qt_no_b	
q_header	'000?'B	Qh value
sn	?	Number of slot pairs
sp	'00'B	Start position
esc	?	Escape bit
txs	?	Number of transceivers
mc	'1'B	Extended RF carrier information
rf_cars	?	RF carrier available in RFP
spr_1	'00'B	Spare bits
cn	?	RF carrier number of this transmission
spr_2	'00'B	Spare bits
pscn	?	Primary receiver scan number
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : A_qt Structured Type : A_QT Derivation Path : Comments : Standard A field QT message		
Element Name	Element Value	Comments
header_field	Header_field_qt_no_b	
q_header	?	Qh value
system_information	?	
ra	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Fillstring		
Structured Type : FILLSTRING		
Derivation Path :		
Comments :		
Element Name	Element Value	Comments
filloctet1	'11110000'B IF_PRESENT	1 fill octet (modulo 5 or 8)
filloctet2	'11110000'B IF_PRESENT	2 fill octet (modulo 5 or 8)
filloctet3	'11110000'B IF_PRESENT	3 fill octet (modulo 5 or 8)
filloctet4	'11110000'B IF_PRESENT	4 fill octet (modulo 5 or 8)
filloctet5	'11110000'B IF_PRESENT	5 fill octet (modulo 5 or 8)
filloctet6	'11110000'B IF_PRESENT	6 fill octet (modulo 5 or 8)
filloctet7	'11110000'B IF_PRESENT	7 fill octet (modulo 5 or 8)
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_any_no_b_q2_0		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1		
Element Name	Element Value	Comments
ta	?	Any type
q1_bck	?	
ba	'111'B	No B-field
q2	'0'B	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_any_no_b_q2_1		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1		
Element Name	Element Value	Comments
ta	?	Any type
q1_bck	?	
ba	'111'B	No B-field
q2	'1'B	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_any_q2_0		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1		
Element Name	Element Value	Comments
ta	?	Any type
q1_bck	?	
ba	?	
q2	'0'B	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_any_q2_1		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1		
Element Name	Element Value	Comments
ta	?	Any type
q1_bck	?	
ba	?	
q2	'1'B	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_ct_no_b		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1		
Element Name	Element Value	Comments
ta	'00?'B	CT
q1_bck	?	
ba	'111'B	
q2	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_ct_no_b_second		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1		
Element Name	Element Value	Comments
ta	'001'B	CT
q1_bck	?	
ba	'111'B	No B field
q2	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_ct_no_b_first		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1		
Element Name	Element Value	Comments
ta	'000'B	CT
q1_bck	?	
ba	'111'B	No B field
q2	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_mt_first_pp_u_type		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1.		
Element Name	Element Value	Comments
ta	'111'B	First PP transmission
q1_bck	'0'B	
ba	'000'B	U-type
q2	'1'B	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_mt_u_type		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1.		
Element Name	Element Value	Comments
ta	'110'B	MT
q1_bck	'0'B	
ba	'000'B	U-type
q2	'1'B	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_nt_no_b		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1		
Element Name	Element Value	Comments
ta	'011'B	NT
q1_bck	'0'B	
ba	'111'B	No B-field
q2	'0'B	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_any_with_b		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1		
Element Name	Element Value	Comments
ta	?	Any message type
q1_bck	?	
ba	'000'B	U type IN data
q2	?	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_any_with_error		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1		
Element Name	Element Value	Comments
ta	?	Any Type
q1_bck	'1'B	
ba	?	Any U Type
q2	'1'B	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_pt_no_b		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1.		
Element Name	Element Value	Comments
ta	'111'B	PT
q1_bck	'0'B	
ba	'111'B	No B-field
q2	'0'B	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Header_field_qt_no_b		
Structured Type : HEADER_FIELD		
Derivation Path :		
Comments : ETS 300 175-3 [3], subclause 7.1.		
Element Name	Element Value	Comments
ta	'100'B	PT
q1_bck	'0'B	
ba	'111'B	No B-field
q2	'0'B	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Pt_header_01(length:B_3)		
Structured Type : PT_HEADER		
Derivation Path :		
Comments : Special constraint for receiving a pt header with the extend flag set to any value. ETS 300 175-3 [3], subclause 7.2.4.2.		
Element Name	Element Value	Comments
extend_flag	?	Any value
bs_sdu_length_indication	length	
Detailed Comments :		

Structured Type Constraint Declaration		
Constraint Name : Pt_header_02		
Structured Type : PT_HEADER		
Derivation Path :		
Comments : Special constraint for receiving any PT header. ETS 300 175-3 [3], subclause 7.2.4.2.		
Element Name	Element Value	Comments
extend_flag	?	Any value
bs_sdu_length_indication	?	Any value
Detailed Comments :		

ASP Constraint Declaration		
Constraint Name : PI_freq_adj_req		
ASP Type : PL_FREQ_ADJ_REQ		
Derivation Path :		
Comments : Only for use in defaults.		
Parameter Name	Parameter Value	Comments
frequency_adjust	?	Any value.
Detailed Comments :		

ASP Constraint Declaration		
Constraint Name : PI_rx_cfm(mac_pdu:PDU; rpn:RPN; tdma_frame:FRAME_NUMBER)		
ASP Type : PL_RX_CFM		
Derivation Path :		
Comments : For receiving a PL-RX.Cfm ASP with any PDU from the IUT.		
Parameter Name	Parameter Value	Comments
valid_synch_word	TRUE	Valid synchronisation word
d_field	mac_pdu	
frequency_error	OMIT	Not used
sliding_collision_info	FALSE	Sliding collision not detected
n	rpn	
frame	tdma_frame	
slotpair	?	
Detailed Comments :		

ASP Constraint Declaration		
Constraint Name : PI_rx_cfm_01		
ASP Type : PL_RX_CFM		
Derivation Path :		
Comments : Special constraints for receiving any PL-RX.Cfm ASP (for use in defaults).		
Parameter Name	Parameter Value	Comments
valid_synch_word	TRUE	Valid synchronisation word
d_field	?	Any PDU
frequency_error	OMIT	Not used
sliding_collision_info	FALSE	Sliding collision not detected
n	?	Any RPN
frame	?	Any frame
slotpair	?	
Detailed Comments :		

ASP Constraint Declaration		
Constraint Name : PI_rx_cfm_02(mac_pdu:PDU; rpn:RPN)		
ASP Type : PL_RX_CFM		
Derivation Path :		
Comments : Special constraint for receiving a PL-RX.Cfm ASP with a PDU from the IUT in any frame.		
Parameter Name	Parameter Value	Comments
valid_synch_word	TRUE	Valid synchronisation word
d_field	mac_pdu	
frequency_error	OMIT	Not used
sliding_collision_info	FALSE	Sliding collision not detected
n	rpn	
frame	?	Any frame
slotpair	?	
Detailed Comments :		

ASP Constraint Declaration		
Constraint Name : PI_rx_cfm_03(rpn:RPN)		
ASP Type : PL_RX_CFM		
Derivation Path :		
Comments : Special constraint for receiving a PL-RX.Cfm ASP with any PDU from the IUT in any frame in a parametrised RPN.		
Parameter Name	Parameter Value	Comments
valid_synch_word	TRUE	Valid synchronisation word
d_field	?	Any PDU
frequency_error	OMIT	Not used
sliding_collision_info	FALSE	Sliding collision not detected
n	rpn	
frame	?	Any frame
slotpair	?	
Detailed Comments :		

ASP Constraint Declaration		
Constraint Name : PI_rx_cfm_04(mac_pdu:PDU; rpn:RPN; tdma_frame:FRAME_NUMBER; slot : SLOT_NUMBER)		
ASP Type : PL_RX_CFM		
Derivation Path :		
Comments : For receiving a PL-RX.Cfm ASP with any PDU from the IUT.		
Parameter Name	Parameter Value	Comments
valid_synch_word	TRUE	Valid synchronisation word
d_field	mac_pdu	Not used
frequency_error	OMIT	
sliding_collision_info	FALSE	
n	rpn	
frame	tdma_frame	
slotpair	slot	
Detailed Comments :		

ASP Constraint Declaration		
Constraint Name : PI_rx_req_01		
ASP Type : PL_RX_REQ		
Derivation Path :		
Comments : Special constraint for receiving any PL-RX.Req ASP from PTC_MAC (for use in defaults).		
Parameter Name	Parameter Value	Comments
a	?	Any physical packet type
k	?	Any slot
l	?	Any packet start
m	?	Any RF carrier
n	?	Any RPN
Detailed Comments :		

ASP Constraint Declaration		
Constraint Name : PI_tx_req(mac_pdu:PDU; physical_packet_type:PHYSICAL_PACKET_TYPE; slot:SLOT_NUMBER; packet_start:PACKET_START; rf_chn:RF_CHANNEL_NUMBER; rpn:RPN; tdma_frame:FRAME_NUMBER)		
ASP Type : PL_TX_REQ		
Derivation Path :		
Comments : For receiving a PL-TX.Req ASP from PTC_MAC containing any PDU.		
Parameter Name	Parameter Value	Comments
d_field	mac_pdu	Z-field added
a	physical_packet_type	
k	slot	
l	packet_start	
m	rf_chn	
n	rpn	
add_z_field	TRUE	
frame	tdma_frame	
Detailed Comments :		

ASP Constraint Declaration		
Constraint Name : PI_tx_req_01 ASP Type : PL_TX_REQ Derivation Path : Comments : Special constraint for receiving any PL-TX.Reg ASP from PTC_MAC (for use in defaults).		
Parameter Name	Parameter Value	Comments
d_field	?	Any MAC PDU
a	?	Any physical packet type
k	?	Any slot
l	?	Any packet start
m	?	Any RF carrier
n	?	Any RPN
add_z_field	TRUE	Z-field added
frame	?	Any frame
Detailed Comments :		

ASP Constraint Declaration		
Constraint Name : PI_tx_req_02(mac_pdu:PDU; physical_packet_type:PHYSICAL_PACKET_TYPE; packet_start:PACKET_START; rpn:RPN) ASP Type : PL_TX_REQ Derivation Path : Comments : Special constraint for receiving a PL-TX.Reg ASP from PTC_MAC on any normal normal PP transmit channel, containing any PDU.		
Parameter Name	Parameter Value	Comments
d_field	mac_pdu	
a	physical_packet_type	
k	(12..23)	Any normal PP transmit slot
l	packet_start	
m	?	Any RF carrier
n	rpn	
add_z_field	TRUE	Z-field added
frame	?	Any frame
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_any_q2_0		
PDU Type : D00_ANY		
Derivation Path :		
Comments : NT message in A-field		
Field Name	Field Value	Comments
a_field	A_any_q2_0	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_any_q2_1		
PDU Type : D00_ANY		
Derivation Path :		
Comments : NT message in A-field		
Field Name	Field Value	Comments
a_field	A_any_q2_1	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_ct(pdu_:PDU)		
PDU Type : D00_CT		
Derivation Path :		
Comments : CT message in A-field		
Field Name	Field Value	Comments
a_field	A_ct(pdu_)	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_ct_first(pdu_:PDU)		
PDU Type : D00_CT		
Derivation Path :		
Comments : CT message in A-field		
Field Name	Field Value	Comments
a_field	A_ct_first_cs(pdu_)	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_ct_second(pdu_:PDU) PDU Type : D00_CT Derivation Path : Comments : CT message in A-field		
Field Name	Field Value	Comments
a_field	A_ct_second_cs(pdu_)	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_ct_other PDU Type : D00_CT Derivation Path : Comments : CT message in A-field		
Field Name	Field Value	Comments
a_field	A_ct_any	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_nt(rfpi:B_40) PDU Type : D00_NT Derivation Path : Comments : NT message in A-field		
Field Name	Field Value	Comments
a_field	A_nt(rfpi)	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_nt_sari(rfpi:B_40) PDU Type : D00_NT_SARI Derivation Path : Comments : NT message in A-field with SARI list available indication.		
Field Name	Field Value	Comments
a_field	A_nt_sari(rfpi)	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_pt_any_01		
PDU Type : D00_PT_MSG		
Derivation Path :		
Comments : PT page of any format in A-field.		
Field Name	Field Value	Comments
a_field	A_pt_any_01	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_pt_blind_slot		
PDU Type : D00_PT_SHORT_PAGE		
Derivation Path :		
Comments : PT short page in A-field.		
Field Name	Field Value	Comments
a_field	A_pt_blind_slot	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_pt_short_page_01		
PDU Type : D00_PT_SHORT_PAGE		
Derivation Path :		
Comments : PT short page in A-field.		
Field Name	Field Value	Comments
a_field	A_pt_short_page_01	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_pt_zero_page_01(rfpi:B_40)		
PDU Type : D00_PT_ZERO_PAGE		
Derivation Path :		
Comments : PT zero page in A-field.		
Field Name	Field Value	Comments
a_field	A_pt_zero_page_any(rfpi)	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_qt_ext_rf_carrier_info PDU Type : D00_QT_EXT_RF_CARRIER_INFO Derivation Path : Comments :		
Field Name	Field Value	Comments
a_field	A_qt_ext_rf_carrier_info	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_qt_fixed_part_cap PDU Type : D00_QT_FIXED_PART_CAP Derivation Path : Comments :		
Field Name	Field Value	Comments
a_field	A_qt_fixed_part_cap	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_qt_multiframe_number PDU Type : D00_QT_MULTIFRAME_NUMBER Derivation Path : Comments :		
Field Name	Field Value	Comments
a_field	A_qt_multiframe_number	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_qt_sari PDU Type : D00_QT_SARI Derivation Path : Comments :		
Field Name	Field Value	Comments
a_field	A_qt_sari	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_qt_static_sys_info		
PDU Type : D00_QT_STATIC_SYS_INFO		
Derivation Path :		
Comments :		
Field Name	Field Value	Comments
a_field	A_qt_static_sys_info	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_qt_static_sys_info_rf		
PDU Type : D00_QT_STATIC_SYS_INFO		
Derivation Path :		
Comments :		
Field Name	Field Value	Comments
a_field	A_qt_static_sys_info_rf	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_qt		
PDU Type : D00_QT		
Derivation Path :		
Comments :		
Field Name	Field Value	Comments
a_field	A_qt	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_any_q2_0		
PDU Type : D32_ANY		
Derivation Path :		
Comments : IN data in B field of a NT message.		
Field Name	Field Value	Comments
a_field	A_any_with_b_q2_0	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_any_q2_1		
PDU Type : D32_ANY		
Derivation Path :		
Comments : IN data in B filed of a NT message.		
Field Name	Field Value	Comments
a_field	A_any_with_b_q2_1	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_mt_basic_con_ctrl_access_req		
PDU Type : D32_MT_BASIC_CON_CTRL		
Derivation Path :		
Comments : ACCESS_REQUEST message in A-field.		
Field Name	Field Value	Comments
a_field	A_mt_basic_con_ctrl_access_req	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_mt_basic_con_ctrl_bearer_cfm		
PDU Type : D32_MT_BASIC_CON_CTRL		
Derivation Path :		
Comments : BEARER_CONFIRM message in A-field.		
Field Name	Field Value	Comments
a_field	A_mt_basic_con_ctrl_bearer_cfm	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_mt_basic_con_ctrl_release		
PDU Type : D32_MT_BASIC_CON_CTRL		
Derivation Path :		
Comments : RELEASE message in A-field.		
Field Name	Field Value	Comments
a_field	A_mt_basic_con_ctrl_release	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_mt_basic_con_ctrl_wait		
PDU Type : D32_MT_BASIC_CON_CTRL		
Derivation Path :		
Comments : WAIT message in A-field.		
Field Name	Field Value	Comments
a_field	A_mt_basic_con_ctrl_wait	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_mt_basic_handover_req(fmid_:B_12)		
PDU Type : D32_MT_BASIC_CON_CTRL		
Derivation Path :		
Comments : HANDOVER_REQUEST message in A-field.		
Field Name	Field Value	Comments
a_field	A_mt_basic_handover_req(fmid_)	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_mt_enc_ctrl_start_cfm		
PDU Type : D32_MT_ENCRYPTION_CTRL		
Derivation Path :		
Comments : Encryption Start Confirm message in A-field.		
Field Name	Field Value	Comments
a_field	A_mt_enc_ctrl_start_cfm	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_mt_enc_ctrl_start_req		
PDU Type : D32_MT_ENCRYPTION_CTRL		
Derivation Path :		
Comments : Encryption Start Request message in A-field.		
Field Name	Field Value	Comments
a_field	A_mt_enc_ctrl_start_req	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_mt_enc_ctrl_stop_cfm		
PDU Type : D32_MT_ENCRYPTION_CTRL		
Derivation Path :		
Comments : Encryption Stop Confirm message in A-field.		
Field Name	Field Value	Comments
a_field	A_mt_enc_ctrl_stop_cfm	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_mt_enc_ctrl_stop_req		
PDU Type : D32_MT_ENCRYPTION_CTRL		
Derivation Path :		
Comments : Encryption Stop Request message in A-field.		
Field Name	Field Value	Comments
a_field	A_mt_enc_ctrl_stop_req	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_any_in_data		
PDU Type : D32_ANY		
Derivation Path :		
Comments : IN data in B field of a MAC message.		
Field Name	Field Value	Comments
a_field	A_any_in_data	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D00_any_in_data_error		
PDU Type : D00_ANY		
Derivation Path :		
Comments : IN data in B field of a NT message.		
Field Name	Field Value	Comments
a_field	A_any_in_data_error	
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_any_in_data_error		
PDU Type : D32_ANY		
Derivation Path :		
Comments : IN data in B filed of a NT message.		
Field Name	Field Value	Comments
a_field	A_any_in_data_error	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : D32_other		
PDU Type : D32_OTHER		
Derivation Path :		
Comments : "OTHER" message in A-field.		
Field Name	Field Value	Comments
a_field	A_other	
b_field	?	Any B-field
Detailed Comments :		

PDU Constraint Declaration		
Constraint Name : Fu1s(data_:OCTETSTRING)		
PDU Type : FU1		
Derivation Path :		
Comments : ETS 300 175-4: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.2 FU1 frame structure		
Field Name	Field Value	Comments
higher_layer_info	data_	Higher layer info
Detailed Comments :		

PDU Constraint Declaration

Constraint Name : ls_ca_no_pdu(nlf_,nr_,ns_:INTEGER)
PDU Type : INFORMATION
Derivation Path :
Comments : Information Class A frame with no L3 PDU included, Sending constraint.

Field Name	Field Value	Comments
nlf	INT_TO_BIT(nlf_,1)	New Link Flag
lln	INT_TO_BIT(TSC_lln_ca,3)	Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)	Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cimft_return_cr_value(FALSE,TSC_command),1)	Command/Response bit (IUT is FT part)
res	'1'B	REServed bit = 1
n_r	INT_TO_BIT(nr_,3)	Receive sequence Number
p_bit	'0'B	Poll bit
n_s	INT_TO_BIT(ns_,3)	Send sequence Number
iframe_id	'0'B	Information frame indicator = 0
li	INT_TO_BIT(0,6)	Length
m_bit	'0'B	More data bit, Segmenting = 1
n_bit	'1'B	extended indicator, no extension = 1
data	-	Data
fill	TSO_cimft_fill(FALSE,0)	Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_cimft_checksum()	Checksum

Detailed Comments :

PDU Constraint Declaration		
Constraint Name : Rrr_ca(nlf_,nr_:INTEGER) PDU Type : RR Derivation Path : Comments : Receive Ready Class A frame, Sending constraint.		
Field Name	Field Value	Comments
nlf	INT_TO_BIT(nlf_,1)	New Link Flag
lln	INT_TO_BIT(TSC_lln_ca,3)	Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)	Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cimft_return_cr_value(FALSE,TSC_response),1)	Command/Response bit (IUT is FT part)
res	'1'B	REServed bit = 1
n_r	INT_TO_BIT(nr_,3)	Receive sequence Number
pf_bit	'0'B	Poll/Final bit
rr_id	'00'B	Receive Ready identifier = 00
sframe_id	'01'B	Supervisory frame indicator = 01
li	?	Length
m_bit	'0'B	More data bit, shall be 0
n_bit	'1'B	extended indicator, shall be 1
fill	Fillstring	Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	?	Checksum
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_data_ind(mcei_:CM_MCEI;pdu_:PDU) CM Type : MAC_DATA_IND Derivation Path : Comments : Special constraint for receiving any MAC-DATA.IND CM (MAC ASP) at CP_MAC (for use in defaults).		
Parameter Name	Parameter Value	Comments
mcei	mcei_	
receive_channel_type	?	
sdu	pdu_	
crc_results	?	
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_data_ind_01 CM Type : MAC_DATA_IND Derivation Path : Comments : Special constraint for receiving any MAC-DATA.IND CM (MAC ASP) at CP_MAC (for use in defaults).		
Parameter Name	Parameter Value	Comments
mcei	?	
receive_channel_type	?	
sdu	?	
crc_results	?	
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_cmd(action_:INTEGER) CM Type : MAC_CMD Derivation Path : Comments : Special constraint for sending command to the PTC MAC at the coordination point CP_MAC. See Annex B for a specification of the commands.		
Parameter Name	Parameter Value	Comments
action	action_	
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_con_cfm(mcei_:CM_MCEI; connection_type_:CM_CONNECTION_TYPE)		
CM Type : MAC_CON_CFM		
Derivation Path :		
Comments : Base constraint for receiving a MAC-CON.CFM CM (MAC ASP) at CP_MAC.		
Parameter Name	Parameter Value	Comments
mcei connection_type ecn	mcei_ connection_type_ ? IF_PRESENT	Ignore. Only used for advanced connections.
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_con_cfm_01		
CM Type : MAC_CON_CFM		
Derivation Path :		
Comments : Special constraint for receiving any MAC-CON.CFM CM (MAC ASP) at CP_MAC (for use in defaults).		
Parameter Name	Parameter Value	Comments
mcei connection_type ecn	? ? ? IF_PRESENT	Ignore. Only used for advanced connections.
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_con_ind_01		
CM Type : MAC_CON_IND		
Derivation Path :		
Comments : Special constraint for receiving any MAC-CON.IND CM (MAC ASP) at CP_MAC (for use in defaults).		
Parameter Name	Parameter Value	Comments
mcei fmid pmid connection_handover cf_required slot_type service_type max_lifetime connection connection_type ecn	? ? IF_PRESENT ? ? ? ? ? ? IF_PRESENT ? ? ? IF_PRESENT	Ignore. Only used for advanced connections.
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_con_req(mcei_:CM_MCEI; pmid_:B_20; connection_handover_:CM_CONNECTION_HANDOVER; cf_required_:CM_CF_REQUIRED; slot_type_:CM_SLOT_TYPE; service_type_:CM_SERVICE_TYPE; connection_:CM_CONNECTION; rpn_:RPN) CM Type : MAC_CON_REQ Derivation Path : Comments : Base constraint for sending a MAC-CON.REQ CM (MAC ASP) at CP_MAC.		
Parameter Name	Parameter Value	Comments
mcei fmid	mcei_ OMIT	Only needed for FT initiated "Fast setup".
pmid connection_handover cf_required slot_type service_type max_lifetime	pmid_ connection_handover_ cf_required_ slot_type_ service_type_ OMIT	
connection rpn	connection_ rpn_	Only applies to the IP_error_correction service.
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_data_req(mcei_:CM_MCEI; service_type_:CM_SERVICE_TYPE;data_:PDU) CM Type : MAC_DATA_REQ Derivation Path : Comments : This is a non-standardised ASP used instead of MAC-CO_DATA.Reg		
Parameter Name	Parameter Value	Comments
mcei transmit_channel_type sdu	mcei_ service_type_ data_	
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_dis_ind_01 CM Type : MAC_DIS_IND Derivation Path : Comments : Special constraint for receiving any MAC-DIS.IND CM (MAC ASP) at CP_MAC (for use in defaults).		
Parameter Name	Parameter Value	Comments
mcei reason	? ? IF_PRESENT	
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_dis_req(mcei_:CM_MCEI)		
CM Type : MAC_DIS_REQ		
Derivation Path :		
Comments : Base constraint for sending a MAC-DIS.REQ CM (MAC ASP) at CP_MAC.		
Parameter Name	Parameter Value	Comments
mcei	mcei_	
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_enc_eks_cfm_01		
CM Type : MAC_ENC_EKS_CFM		
Derivation Path :		
Comments : Special constraint for receiving any MAC-ENC_EKS.CFM CM (MAC ASP) at CP_MAC (for use in defaults).		
Parameter Name	Parameter Value	Comments
mcei	?	
crypted_or_clear	?	
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_enc_eks_ind_01		
CM Type : MAC_ENC_EKS_IND		
Derivation Path :		
Comments : Special constraint for receiving any MAC-ENC_EKS.IND CM (MAC ASP) at CP_MAC (for use in defaults).		
Parameter Name	Parameter Value	Comments
mcei	?	
crypted_or_clear	?	
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_enc_eks_req(mcei_:CM_MCEI;bool_:CM_CRYPTED_OR_CLEAR)		
CM Type : MAC_ENC_EKS_REQ		
Derivation Path :		
Comments : Special constraint for sending MAC-ENC_EKS.REQ CM (MAC ASP) at CP_MAC.		
Parameter Name	Parameter Value	Comments
mcei	mcei_	
crypted_or_clear	bool_	
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_page_ind_01		
CM Type : MAC_PAGE_IND		
Derivation Path :		
Comments : Special constraint for receiving any MAC-PAGE.IND CM (MAC ASP) at CP_MAC.		
Parameter Name	Parameter Value	Comments
cluster_id	?	
long_flag	? IF_PRESENT	
sdu	?	
crc_results	? IF_PRESENT	
Detailed Comments :		

CM Constraint Declaration		
Constraint Name : Mac_res_dlc_ind(mcei_:CM_MCEI)		
CM Type : MAC_RES_DLC_IND		
Derivation Path :		
Comments : Base constraint for receiving a MAC-RES_DLC.IND CM (MAC ASP) at CP_MAC.		
Parameter Name	Parameter Value	Comments
mcei	mcei_	
Detailed Comments :		

IV

Dynamic Part

Test Case Dynamic Behaviour

Test Case Name : TC_FT_BH_BV_00
Group : FT/BH/BV/
Purpose : Only for FT supporting intracell bearer handover.
Initial state: Active_traffic or Active_traffic_and_idle.
Check that the IUT responds rightly to a PT initiated intracell bearer handover procedure when encryption is enabled.
Configuration : Mac_config
Default : DF_mtc_bearer_setup
Comments : ETS 300 175-3 [3]: 10.6 C/O bearer handover and subclauses; ETS 300 175-7 [7]: 6.4.7 Handover of the encryption process. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1,TSC_cm_i n)		3.
5		CP_MAC ! MAC_ENC_EKS_REQ START T_wait_mtc_mac	Mac_enc_eks_req(TCV_cm_mcei1,TRUE)		4.
6		CP_MAC ? MAC_ENC_EKS_CFM CANCEL T_wait_mtc_mac	Mac_enc_eks_cfm_01		5.
7		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action17)		6.
8		? DONE(LT_TC)			7.
9		+PO_mtc_con_release(TCV_cm_mcei1)			8.
10		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		9.
11	TB01	? DONE(LT_MAC)		R	10.
		LTS_tc			
12		ACTIVATE(DF_tc_bearer_setup)			
13		START T_wait_ptc_mac			11.
14		+STP_basic_bearer_setup			12.
15		START T_wait_ptc_mac			11.
16		+STP_basic_bearer_handover(TSC_fmid1,TSC_rpn1)			13.
17		START T_wait_ptc_mac			11.
18		PHL ? PL_TX_REQ (TCV_frame := PL_TX_REQ.frame) CANCEL T_wait_ptc_mac , START T_1_frame	Pl_tx_req_02(D32_mt_enc_ctrl_start_r eq, "32", 0, TSC_rpn1)		14.
19		(TCV_frame := (TCV_frame+1) MOD 16)			
20	TB02	PHL ? PL_RX_CFM CANCEL T_1_frame	Pl_rx_cfm(D32_mt_enc_ctrl_start_c fm,TSC_rpn1,TCV_frame)	(P)	15.
21	TB03	? TIMEOUT T_1_frame		F	
		LTS_mac			
22		+STP_emulate_mac			

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Test Case Dynamic Behaviour

- Detailed Comments** :
1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type.
 3. Bearer successfully established.
 4. Request PTC_MAC to enable encryption.
 5. Confirm from PTC_MAC: Encryption is enabled.
 6. Request the PTC_MAC to initiate and perform an intracell bearer handover procedure.
 7. Wait for PTC_TC to terminate.
 8. Request PTC_MAC to release any established bearer.
 9. Request the PTC_MAC to stop.
 10. Wait for PTC_MAC to terminate.
 11. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
 12. Verify the basic bearer setup procedure.
 13. Verify the PT initiated bearer handover procedure.
 14. Start encryption MT message.
 15. Encryption control confirm MT message.

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_BH_BV_01 Group : FT/BH/BV/ Purpose : Only for FT supporting intercell bearer handover. Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT responds rightly to a PT initiated intercell bearer handover procedure when encryption is enabled. Configuration : Mac_config Default : DF_mtc_bearer_setup Comments : ETS 300 175-3 [3]: 10.6 C/O bearer handover and subclauses; ETS 300 175-7 [7]: 6.4.7 Handover of the encryption process. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1, TSC_cm_in)		3.
5		CP_MAC ! MAC_ENC_EKS_REQ START T_wait_mtc_mac	Mac_enc_eks_req(TCV_cm_mcei1, TRUE)		4.
6		CP_MAC ? MAC_ENC_EKS_CFM CANCEL T_wait_mtc_mac	Mac_enc_eks_cfm_01		5.
7		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action18)		6.
8		? DONE(LT_TC)			7.
9		+PO_mtc_con_release(TCV_cm_mcei1)			8.
10		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		9.
11	TB01	? DONE(LT_MAC)		R	10.
		LTS_tc			
12		ACTIVATE(DF_tc_bearer_setup)			
13		START T_wait_ptc_mac			11.
14		+STP_basic_bearer_setup			12.
15		START T_wait_ptc_mac			11.
16		+STP_basic_bearer_handover(TSC_fmid2, TSC_rpn2)			13.
17		START T_wait_ptc_mac			11.
18		PHL ? PL_TX_REQ (TCV_frame := PL_TX_REQ.frame) CANCEL T_wait_ptc_mac , START T_1_frame	Pl_tx_req_02(D32_mt_enc_ctrl_start_req, "32", 0, TSC_rpn2)		14.
19		(TCV_frame := (TCV_frame+1) MOD 16)			
20	TB02	PHL ? PL_RX_CFM CANCEL T_1_frame	Pl_rx_cfm(D32_mt_enc_ctrl_start_cfm, TSC_rpn2, TCV_frame)	(P)	15.
21	TB03	? TIMEOUT T_1_frame		F	
		LTS_mac			
22		+STP_emulate_mac			

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Test Case Dynamic Behaviour

- Detailed Comments** :
1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type.
 3. Bearer successfully established.
 4. Request PTC_MAC to enable encryption.
 5. Confirm from PTC_MAC: Encryption is enabled.
 6. Request the PTC_MAC to initiate and perform an intercell bearer handover procedure.
 7. Wait for PTC_TC to terminate.
 8. Request PTC_MAC to release any established bearer.
 9. Request the PTC_MAC to stop.
 10. Wait for PTC_MAC to terminate.
 11. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
 12. Verify the basic bearer setup procedure.
 13. Verify the PT initiated bearer handover procedure.
 14. Start encryption MT message.
 15. Encryption control confirm MT message.

Test Case Dynamic Behaviour

Test Case Name : TC_FT_BH_CA_00
Group : FT/BH/CA/
Purpose : Only for FT supporting intracell bearer handover.
 Initial state: Active_traffic or Active_traffic_and_idle.
 Check that the IUT responds rightly to a PT initiated intracell bearer handover procedure.
Configuration : Mac_config
Default : DF_mtc_bearer_setup
Comments : ETS 300 175-3 [3]: 10.6 C/O bearer handover and subclauses. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1, TSC_cm_i n)		3.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action17)		4.
6		? DONE(LT_TC)			5.
7		+PO_mtc_con_release(TCV_cm_mcei1)			6.
8		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		7.
9	TB01	? DONE(LT_MAC)		R	8.
10		LTS_tc ACTIVATE(DF_tc_bearer_setup)			
11		START T_wait_ptc_mac			9.
12		+STP_basic_bearer_setup			10.
13		START T_wait_ptc_mac			9.
14		+STP_basic_bearer_handover(TSC_fmid1, TSC_rpn1)			11.
15		LTS_mac +STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type.
 3. Bearer successfully established.
 4. Request the PTC_MAC to initiate and perform an intracell bearer handover procedure.
 5. Wait for PTC_TC to terminate.
 6. Request PTC_MAC to release any established bearer.
 7. Request the PTC_MAC to stop.
 8. Wait for PTC_MAC to terminate.
 9. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
 10. Verify the basic bearer setup procedure.
 11. Verify the PT initiated bearer handover procedure.

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_BH_CA_01 Group : FT/BH/CA/ Purpose : Only for FT supporting intercell bearer handover. Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT responds rightly to a PT initiated intercell bearer handover procedure. Configuration : Mac_config Default : DF_mtc_bearer_setup Comments : ETS 300 175-3 [3]: 10.6 C/O bearer handover and subclauses. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1, TSC_cm_in)		3.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action18)		4.
6		? DONE(LT_TC)			5.
7		+PO_mtc_con_release(TCV_cm_mcei1)			6.
8		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		7.
9	TB01	? DONE(LT_MAC)		R	8.
10		LTS_tc ACTIVATE(DF_tc_bearer_setup)			
11		START T_wait_ptc_mac			9.
12		+STP_basic_bearer_setup			10.
13		START T_wait_ptc_mac			9.
14		+STP_basic_bearer_handover(TSC_fmid2, TSC_rpn2)			11.
15		LTS_mac +STP_emulate_mac			
Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type. 3. Bearer successfully established. 4. Request the PTC_MAC to initiate and perform an intercell bearer handover procedure. 5. Wait for PTC_TC to terminate. 6. Request PTC_MAC to release any established bearer. 7. Request the PTC_MAC to stop. 8. Wait for PTC_MAC to terminate. 9. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates. 10. Verify the basic bearer setup procedure. 11. Verify the PT initiated bearer handover procedure.					

Test Case Dynamic Behaviour

Test Case Name : TC_FT_BR_CA_00
Group : FT/BR/CA/
Purpose : Initial state: Active_traffic or Active_traffic_and_idle.
Check that the IUT manages rightly a release of a basic duplex bearer with an unacknowledged release procedure when receiving a release message.
Configuration : Mac_config
Default : DF_mtc_bearer_setup
Comments : ETS 300 175-3 [3]: 10.7.2.1 Unacknowledged release procedure.The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1, TSC_cm_in)		3.
5		CP_MAC ! MAC_DIS_REQ	Mac_dis_req(TCV_cm_mcei1)		4.
6		? DONE(LT_TC)			5.
7		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		6.
8	TB01	? DONE(LT_MAC)		R	7.
9		LTS_tc ACTIVATE(DF_tc_bearer_setup)			
10		START T_wait_ptc_mac			8.
11		+STP_basic_bearer_setup			9.
12		START T_wait_ptc_mac			8.
13		PHL ? PL_TX_REQ CANCEL T_wait_ptc_mac, START T_1_frame	Pl_tx_req_02(D32_mt_basic_con_ctrl_release, "32", 0, TSC_rpn1)		10.
14		PHL ? PL_TX_REQ START T_1_frame	Pl_tx_req_02(D32_mt_basic_con_ctrl_release, "32", 0, TSC_rpn1)		11.
15	TB02	PHL ? PL_RX_CFM CANCEL T_1_frame	Pl_rx_cfm_03(TSC_rpn1)	(F)	12.
16	TB03	?TIMEOUT T_1_frame		(P)	13.
17	TB04	?TIMEOUT T_1_frame		(I)	14.
18		LTS_mac +STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type.
3. Bearer successfully established.
4. Request the PTC_MAC to release the connection.
5. Wait for PTC_TC to terminate.
6. Request the PTC_MAC to stop.
7. Wait for PTC_MAC to terminate.
8. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
9. Verify the basic bearer setup procedure.

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Test Case Dynamic Behaviour

Detailed Comments : ...

10. First RELEASE message.
11. Second RELEASE message in next frame.
12. The IUT did not release the channel.
13. The IUT have released the channel.
14. Second RELEASE not received.

Test Case Dynamic Behaviour

Test Case Name : TC_FT_BS_BV_00
Group : FT/BS/BV/
Purpose : Initial state: Active_traffic or Active_traffic_and_idle.
Check that the IUT releases a duplex bearer in case the timer T201 expires during the time a basic bearer exists.
Configuration : Mac_config
Default : DF_mtc_bearer_setup
Comments : ETS 300 175-3 [3]: 10.5.1.1 Basic bearer setup procedure – 11.5.1 RFPI handshake. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1, TSC_cm_in)		3.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action4)		4.
6		CP_MAC ! MAC_DATA_REQ	Mac_data_req(TCV_cm_mcei1, TSC_cm_in, Fu1s(TSPX_in_pdu))		5.
7		? DONE(LT_TC)			6.
8		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		7.
9	TB01	? DONE(LT_MAC)		R	8.
10		LTS_tc ACTIVATE(DF_tc_bearer_setup)			
11		START T_wait_ptc_mac			9.
12		+STP_basic_bearer_setup			10.
13		START T_wait_ptc_mac			9.
14		PHL ? PL_TX_REQ CANCEL T_wait_ptc_mac, START T201	Pl_tx_req_02(D32_any_in_data, "32", 0, TSC_rpn1)		11.
15	TB02	PHL ? PL_RX_CFM CANCEL T201	Pl_rx_cfm_02(D32_mt_basic_con_ctrl_release, TSC_rpn1)	(P)	12.
16	TB03	? TIMEOUT T201		F	13.
17		LTS_mac +STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type.
3. Bearer successfully established.
4. Request the PTC_MAC to generate an incorrect message for RFPI handshake.
5. Request the PTC_MAC to transmit the specified SDU containing IN data.
6. Wait for PTC_TC to terminate.
7. Request the PTC_MAC to stop.
8. Wait for PTC_MAC to terminate.
9. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
10. Verify the basic bearer setup procedure.
11. Start timer T201 when the SDU containing the IN data is passed to the service provider

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Test Case Dynamic Behaviour	
Detailed Comments : ... (PTC_MAC stop RFPI handshake immediately afterwards). 12. First RELEASE message received. 13. No RELEASE message received before T201 timed out.	

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_BS_CA_00 Group : FT/BS/CA/ Purpose : Initial state: Active_idle. Check that the IUT manages rightly the PT initiated (single) basic bearer setup procedure. Configuration : Mac_config Default : DF_mtc_bearer_setup Comments : ETS 300 175-3 [3], subclause 10.5.1.1. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1,TSC_cm_i n)		3.
5		? DONE(LT_TC)			4.
6		+PO_mtc_con_release(TCV_cm_mcei1)			5.
7		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		6.
8	TB01	? DONE(LT_MAC)		R	7.
9		LTS_tc ACTIVATE(DF_tc_bearer_setup)			
10		START T_wait_ptc_mac			8.
11		+STP_basic_bearer_setup			9.
12		LTS_mac +STP_emulate_mac			
Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type. 3. Bearer successfully established. 4. Wait for PTC_TC to terminate. 5. Request PTC_MAC to release any established bearer. 6. Request the PTC_MAC to stop. 7. Wait for PTC_MAC to terminate. 8. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates. 9. Verify the basic bearer setup procedure.					

Test Case Dynamic Behaviour

Test Case Name : TC_FT_DB_BV_03
Group : FT/DB/BV/
Purpose : Initial state: Inactive.
Check that once a SARI is introduced into the FT, the E-bit within the NT message is indicating SARI list available.
Configuration : Mac_config
Default : DF_mtc_downlink_broadcast
Comments : ETS 300 175-3 [3]: 6.2.2.1 Tail Multiplexer (T-MUX) – 7.2.2 Identities information (NT); ETS 300 175-6 [6]: 7.1 RFPI E-bit. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_downlink_broadcast)			
8		+STP_invoke_sari_message			5.
		LTS_mac			
9		+STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
2. Wait for PTC_TC to terminate.
3. Request the PTC_MAC to stop.
4. Wait for PTC_MAC to terminate.
5. Expected event :Implicit send: A SARI is introduced into the FT.

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_DB_CA_00 Group : FT/DB/CA/ Purpose : Check that the IUT transmits constantly at least in frame 14 of each multiframe, the correct NT message. Configuration : Mac_config Default : DF_mtc_downlink_broadcast Comments : In this test case, the test purpose is verified for the IUTs dummy bearer. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_downlink_broadcast)			
8		START T_wait_ptc_mac			5.
9		REPEAT LTS_rcv_nt UNTIL [TCV_count=30]			6.
10	TB02	? TIMEOUT T_wait_ptc_mac		I	5.
		LTS_rcv_nt			
11		START T_1_mf			7.
12	TB03	PHL ? PL_RX_CFM CANCEL T_1_mf	PI_rx_cfm(D00_nt(TSPX_rfp1), TSC_rpn1, 14)	(P)	8.
13		(TCV_count := TCV_count + 1)			
14	TB04	? TIMEOUT T_1_mf		F	9.
		LTS_mac			
15		+STP_emulate_mac			
Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Wait for PTC_TC to terminate. 3. Request the PTC_MAC to stop. 4. Wait for PTC_MAC to terminate. 5. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates. 6. It is verified that the IUT transmits the correct NT message in frame 14 in 30 (arbitrary number) consecutive multiframes. 7. Timer T_1_mf (=1 multiframe = 160 ms) is used to verify that the ASPs are exchanged within a period of one multiframe. 8. Correct NT message received in frame 14. 9. A period of one multiframe passed without receiving the correct NT message.					

Test Case Dynamic Behaviour

Test Case Name : TC_FT_DB_CA_01
Group : FT/DB/CA/
Purpose : Initial state: Active_idle.
Check that the IUT transmits constantly at least once every T205 seconds in frame 0, the correct NT message.
Configuration : Mac_config
Default : DF_mtc_downlink_broadcast
Comments : ETS 300 175-3 [3]: 6.2.2.1 Tail Multiplexer (T-MUX) – 9.1.3.1 RFP paging broadcast. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_downlink_broadcast)			
8		START T_wait_ptc_mac			5.
9		REPEAT LTS_rcv_nt UNTIL [TCV_count=30]			6.
10	TB02	? TIMEOUT T_wait_ptc_mac		I	5.
		LTS_rcv_nt			
11		START T205			
12	TB03	PHL ? PL_RX_CFM CANCEL T205	PI_rx_cfm(D00_nt(TSPX_rfp1), TSC_rpn1, 0)	(P)	7.
13		(TCV_count := TCV_count + 1)			
14	TB04	? TIMEOUT T205		F	8.
		LTS_mac			
15		+STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
2. Wait for PTC_TC to terminate.
3. Request the PTC_MAC to stop.
4. Wait for PTC_MAC to terminate.
5. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
6. It is verified that the IUT transmits the correct NT message in frame 0 in 30 (arbitrary number) consecutive multiframes.
7. Correct NT message received in frame 0.
8. A period of T205 seconds passed without receiving the correct NT message in frame 0.

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_DB_CA_02 Group : FT/DB/CA/ Purpose : Initial state: Active_idle. Check that the IUT transmits constantly one correct QT message in frame 8 of each multiframe. Configuration : Mac_config Default : DF_mtc_downlink_broadcast Comments : ETS 300 175-3 [3]: 6.2.2.1 Tail Multiplexer (T-MUX) – 7.2.3 System information and multiframe marker (QT). The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_downlink_broadcast)			
8		START T_wait_ptc_mac			5.
9		REPEAT LTS_rcv_qt UNTIL [TCV_count=30]			6.
10	TB02	? TIMEOUT T_wait_ptc_mac		I	5.
		LTS_rcv_qt			
11		START T_1_mf			7.
12	TB03	PHL ? PL_RX_CFM CANCEL T_1_mf	PI_rx_cfm(D00_qt, TSC_rpn1, 8)	(P)	8.
13		(TCV_count := TCV_count + 1)			
14	TB04	? TIMEOUT T_1_mf		F	9.
		LTS_mac			
15		+STP_emulate_mac			
Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Wait for PTC_TC to terminate. 3. Request the PTC_MAC to stop. 4. Wait for PTC_MAC to terminate. 5. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates. 6. It is verified that the IUT transmits one correct QT message in frame 8 in 30 (arbitrary number) consecutive multiframes. 7. Timer T_1_mf (=1 multiframe = 160 ms) is used to verify that the ASPs are exchanged within a period of one multiframe. 8. Correct QT message received in frame 8. 9. A period of one multiframe passed without receiving the correct QT message.					

Test Case Dynamic Behaviour

Test Case Name : TC_FT_DB_CA_03
Group : FT/DB/CA/
Purpose : Initial state: Active_idle.
Check that the IUT transmits constantly at least one static system information QT message in each interval of 8 multiframes and that all such messages are correct.
Configuration : Mac_config
Default : DF_mtc_downlink_broadcast
Comments : ETS 300 175-3 [3]: 6.2.2.1 Tail Multiplexer (T-MUX) – 7.2.3.2 Static system information. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_downlink_broadcast)			
8		START T_wait_ptc_mac			5.
9		REPEAT LTS_rcv_qt UNTIL [TCV_count=30]			6.
10	TB02	? TIMEOUT T_wait_ptc_mac		I	5.
		LTS_rcv_qt			
11		START T_8_mf			7.
12	TB03	PHL ? PL_RX_CFM CANCEL T_8_mf	Pl_rx_cfm(D00_qt_static_sys_info, TSC_rpn1, 8)	(P)	8.
13		(TCV_count := TCV_count + 1)			
14	TB04	? TIMEOUT T_8_mf		F	9.
		LTS_mac			
15		+STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
2. Wait for PTC_TC to terminate.
3. Request the PTC_MAC to stop.
4. Wait for PTC_MAC to terminate.
5. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
6. It is verified that the IUT transmits at least one static QT message in each interval of 8 multiframes for 30 (arbitrary number) consecutive periods of 8 multiframes.
7. Timer T_8_mf (=8 multiframes) is used to verify that the ASPs are exchanged within a period of 8 multiframes.
8. Static system information QT message received in frame 8.
9. A period of 8 multiframes passed without receiving a static system information QT message.

Test Case Dynamic Behaviour

Test Case Name : TC_FT_DB_CA_04
Group : FT/DB/CA/
Purpose : Initial state: Active_idle.
 Check that the IUT transmits constantly at least one fixed part capabilities QT message in each interval of 8 multiframe and that all such messages are correct.
Configuration : Mac_config
Default : DF_mtc_downlink_broadcast
Comments : ETS 300 175-3 [3]: 6.2.2.1 Tail Multiplexer (T-MUX) – 7.2.3.4 Fixed part capabilities. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_downlink_broadcast)			
8		START T_wait_ptc_mac			5.
9		REPEAT LTS_rcv_qt UNTIL [TCV_count=30]			6.
10	TB02	? TIMEOUT T_wait_ptc_mac		I	5.
		LTS_rcv_qt			
11		START T_8_mf			7.
12	TB03	PHL ? PL_RX_CFM CANCEL T_8_mf	Pl_rx_cfm(D00_qt_fixed_part_cap, TSC_rpn1, 8)	(P)	8.
13		(TCV_count := TCV_count + 1)			
14	TB04	? TIMEOUT T_8_mf		F	9.
		LTS_mac			
15		+STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
 2. Wait for PTC_TC to terminate.
 3. Request the PTC_MAC to stop.
 4. Wait for PTC_MAC to terminate.
 5. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
 6. It is verified that the IUT transmits one correct fixed part capabilities QT message in each interval of 8 multiframe for 30 (arbitrary number) consecutive periods of 8 multiframe.
 7. Timer T_8_mf (=8 multiframe) is used to verify that the ASPs are exchanged within a period of 8 multiframe.
 8. Correct fixed part capabilities QT message received in frame 8.
 9. A period of 8 multiframe passed without receiving the correct fixed part capabilities QT message.

Test Case Dynamic Behaviour

Test Case Name : TC_FT_DB_CA_05
Group : FT/DB/CA/
Purpose : Only for FT supporting encryption.
Initial state: Active_idle.
Check that the IUT transmits constantly at least one multiframe number QT message in each interval of 8 multiframe and that all such messages are correct.
Configuration : Mac_config
Default : DF_mtc_downlink_broadcast
Comments : ETS 300 175-3 [3]: 6.2.2.1 Tail Multiplexer (T-MUX) – 7.2.3 System information and multiframe marker (QT). The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_downlink_broadcast)			
8		START T_wait_ptc_mac			5.
9	TB02	REPEAT LTS_rcv_qt UNTIL [TCV_count=30]			6.
10	TB03	? TIMEOUT T_wait_ptc_mac		I	5.
		LTS_rcv_qt			
11		START T_8_mf			7.
12	TB04	PHL ? PL_RX_CFM CANCEL T_8_mf	Pl_rx_cfm(D00_qt_multiframe_number, TSC_rpn1, 8)	(P)	
13		(TCV_count := TCV_count + 1)			
14	TB05	? TIMEOUT T_8_mf		F	9.
15		LTS_mac +STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
2. Wait for PTC_TC to terminate.
3. Request the PTC_MAC to stop.
4. Wait for PTC_MAC to terminate.
5. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
6. It is verified that the IUT transmits one correct multiframe number QT message in each interval of 8 multiframe for 30 (arbitrary number) consecutive periods of 8 multiframe.
7. Timer T_8_mf (=8 multiframe) is used to verify that the ASPs are exchanged within a period of 8 multiframe.
8. Correct multiframe number QT message received in frame 8.
9. A period of 8 multiframe passed without receiving the correct multiframe number QT message.

Test Case Dynamic Behaviour

Test Case Name : TC_FT_DB_CA_06
Group : FT/DB/CA/
Purpose : Only for FT supporting SARI.
Initial state: Active_idle.
Check that the IUT transmits constantly at least one SARI list content QT message in each interval of 4 multiframes and that all such messages are correct.
Configuration : Mac_config
Default : DF_mtc_downlink_broadcast
Comments : ETS 300 175-3 [3]: 6.2.2.1 Tail Multiplexer (T-MUX) – 7.2.3.6 Secondary access rights identities.
The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_downlink_broadcast)			
8		START T_wait_ptc_mac			5.
9		REPEAT LTS_rcv_qt UNTIL [TCV_count=30]			6.
10	TB02	? TIMEOUT T_wait_ptc_mac		I	5.
		LTS_rcv_qt			
11		START T_4_mf			7.
12	TB03	PHL ? PL_RX_CFM CANCEL T_4_mf	Pl_rx_cfm(D00_qt_sari, TSC_rpn1, 8)	(P)	8.
13		(TCV_count := TCV_count + 1)			
14	TB04	? TIMEOUT T_4_mf		F	9.
		LTS_mac			
15		+STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
2. Wait for PTC_TC to terminate.
3. Request the PTC_MAC to stop.
4. Wait for PTC_MAC to terminate.
5. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
6. It is verified that the IUT transmits one SARI list content QT message in each interval of 4 multiframes for 30 (arbitrary number) consecutive periods of 4 multiframes.
7. Timer T_4_mf (=4 multiframes) is used to verify that the ASPs are exchanged within a period of 4 multiframe.
8. SARI list content QT message received in frame 8.
9. A period of 4 multiframes passed without receiving a SARI list content QT message.

Test Case Dynamic Behaviour

Test Case Name : TC_FT_DB_CA_07
Group : FT/DB/CA/
Purpose : Only for FT supporting extended RF.
Initial state: Active_idle.
Check that the IUT transmits the correct "Extended RF carrier information" QT message in the multi-frame following the "Static system information" QT message with the Extended RF carrier bit set.
Configuration : Mac_config
Default : DF_mtc_downlink_broadcast
Comments : ETS 300 175-3 [3]: 6.2.2.1 Tail Multiplexer (T-MUX) – 7.2.3.3 Extended RF carrier information. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_downlink_broadcast)			
8		START T_wait_ptc_mac , START T_8_mf			5.
9		PHL ? PL_RX_CFM CANCEL T_8_mf , START T_1_mf	Pl_rx_cfm(D00_qt_static_sys_info_r f, TSC_rpn1, 8)		6.
10	TB02	PHL ? PL_RX_CFM CANCEL T_1_mf	Pl_rx_cfm(D00_qt_ext_rf_carrier_in fo, TSC_rpn1, 8)	(P)	7.
11	TB03	? TIMEOUT T_1_mf		F	8.
12	TB04	? TIMEOUT T_8_mf		F	9.
		LTS_mac			
13		+STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
2. Wait for PTC_TC to terminate.
3. Request the PTC_MAC to stop.
4. Wait for PTC_MAC to terminate.
5. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates. The static system information QT message shall be transmitted at least once in each interval of 8 multiframe.
6. Static system information QT message with the extended RF carrier bit set received in frame 8.
7. Correct extended RF carrier information QT message received in the multiframe following the multiframe in which the static system information QT message was received.
8. Expected extended RF carrier information QT message not received.
9. Expected static system information QT message not received.

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_DT_BI_00					
Group : FT/DT/BI/					
Purpose : Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT, when receiving IN minimum delay data, is capable to detect A-field R-CRC error and to respond with the correct Q2 bit setting (Q2 = 0).					
Configuration : Mac_config					
Default : DF_mtc_bearer_setup					
Comments : ETS 300 175-3 [3]: 10.8.1.3 Q1 and Q2 settings for IN and IP error detection services and subclauses. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1, TSC_cm_i n)		3.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action2)		4.
6		CP_MAC ! MAC_DATA_REQ	Mac_data_req(TCV_cm_mcei1, TSC_cm_i n, Fu1s(TSPX_in_pdu))		5.
7		? DONE(LT_TC)			6.
8		+PO_mtc_con_release(TCV_cm_mcei1)			7.
9		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		8.
10	TB01	? DONE(LT_MAC)		R	9.
		LTS_tc			
11		ACTIVATE(DF_tc_bearer_setup)			
12		START T_wait_ptc_mac			10.
13		+STP_basic_bearer_setup			11.
14		PHL ? PL_TX_REQ (TCV_frame := PL_TX_REQ.frame) START T_1_frame	Pl_tx_req_02(D32_any_in_data, "32", 0, TSC_rpn1)		12.
15		(TCV_frame := (TCV_frame+1) MOD 16)			
16	TB02	PHL ? PL_RX_CFM CANCEL T_1_frame	Pl_rx_cfm(D00_any_q2_0, TSC_rpn1, TCV_frame)	(P)	13.
17	TB03	PHL ? PL_RX_CFM CANCEL T_1_frame	Pl_rx_cfm(D32_any_q2_0, TSC_rpn1, TCV_frame)	(P)	13.
18	TB04	PHL ? PL_RX_CFM CANCEL T_1_frame	Pl_rx_cfm(D00_any_q2_1, TSC_rpn1, TCV_frame)	(F)	14.
19	TB05	PHL ? PL_RX_CFM CANCEL T_1_frame	Pl_rx_cfm(D32_any_q2_1, TSC_rpn1, TCV_frame)	(F)	14.
20	TB06	? TIMEOUT T_1_frame		F	15.
		LTS_mac			

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Test Case Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
21		+STP_emulate_mac			
Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type. 3. Bearer successfully established. 4. Request PTC_MAC to generate A field CRC error on the next data sending request. 5. Request PTC_MAC to send some IN data. 6. Wait for PTC_TC to terminate. 7. Request PTC_MAC to release any established bearer. 8. Request the PTC_MAC to stop. 9. Wait for PTC_MAC to terminate. 10. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates. 11. Verify the basic bearer setup procedure. 12. PTC_MAC sends IN data as requested in 5. 13. Expected event: The IUT indicates the A field CRC error in D00 or D32 packet. 14. The IUT does not indicate the A field CRC error in the same ARQ window. Fail verdict. 15. No response from IUT. Fail verdict.					

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_DT_BI_01					
Group : FT/DT/BI/					
Purpose : Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT sets the Q1 & Q2 bits correctly when it receives data with Z-field error during IN minimum delay transfer.					
Configuration : Mac_config					
Default : DF_mtc_bearer_setup					
Comments : ETS 300 175-3 [3]: 10.8.1.3 Q1 and Q2 settings for IN and IP error detection services and subclauses. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1,TSC_cm_i n)		3.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action3)		4.
6		CP_MAC ! MAC_DATA_REQ	Mac_data_req(TCV_cm_mcei1,TSC_cm_i n, Fu1s(TSPX_in_pdu))		5.
7		? DONE(LT_TC)			6.
8		+PO_mtc_con_release (TCV_cm_mcei1)			7.
9		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		8.
10	TB01	? DONE(LT_MAC)		R	9.
		LTS_tc			
11		ACTIVATE(DF_tc_bearer_setup)			
12		START T_wait_ptc_mac			10.
13		+STP_basic_bearer_setup			11.
14		PHL ? PL_TX_REQ (TCV_frame := PL_TX_REQ.frame) START T_1_frame	Pl_tx_req_02(D32_any_in_data, "32",0,TSC_rpn1)		12.
15		(TCV_frame := (TCV_frame+1) MOD 16)			
16	TB02	PHL ? PL_RX_CFM CANCEL T_1_frame	Pl_rx_cfm(D32_any_in_data_error, TSC_rpn1, TCV_frame)	(P)	13.
17	TB03	PHL ? PL_RX_CFM CANCEL T_1_frame	Pl_rx_cfm(D00_any_in_data_error, TSC_rpn1, TCV_frame)	(P)	13.
18	TB04	? TIMEOUT T_1_frame		F	14.
		LTS_mac			
19		+STP_emulate_mac			
Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type. 3. Bearer successfully established. 4. Request PTC_MAC to generate Z field CRC error on the next data sending request.					

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Test Case Dynamic Behaviour

Detailed Comments : ...

5. Request PTC_MAC to send some IN data.
6. Wait for PTC_TC to terminate.
7. Request PTC_MAC to release any established bearer.
8. Request the PTC_MAC to stop.
9. Wait for PTC_MAC to terminate.
10. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
11. Verify the basic bearer setup procedure.
12. PTC_MAC sends IN data as requested in 5.
13. Expected event: The IUT indicates the Z field CRC error in D00 or D32 packet.
14. The IUT does not indicate the Z field CRC error in the same ARQ window. Fail verdict.
15. No response from IUT. Fail verdict.

Test Case Dynamic Behaviour

Test Case Name : TC_FT_DT_BV_00
Group : FT/DT/BV/
Purpose : Initial state: Active_traffic or Active_traffic_and_idle.
 Check that the IUT releases the basic connection when it cannot conclude the procedure to switch from clear mode to encrypt mode.
Configuration : Mac_config
Default : DF_mtc_bearer_setup
Comments : ETS 300 175-7 [7]: 6.4.6 Encryption mode control – 6.4.6.3 Procedures for switching to encrypt mode. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1,TSC_cm_i n)		3.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action16)		4.
6		CP_MAC ! MAC_ENC_EKS_REQ	Mac_enc_eks_req(TCV_cm_mcei1,TRUE)		5.
7		? DONE(LT_TC)			6.
8		+PO_mtc_con_release(TCV_cm_mcei1)			7.
9		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		8.
10	TB01	? DONE(LT_MAC)		R	9.
11		LTS_tc ACTIVATE(DF_tc_bearer_setup)			
12		START T_wait_ptc_mac			10.
13		+STP_basic_bearer_setup			11.
14		+STP_encryption_start_failed			12.
15		LTS_mac +STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type.
 3. Bearer successfully established.
 4. Request PTC_MAC to unacknowledge the START_CONFIRM message.
 5. Request PTC_MAC to start encryption process.
 6. Wait for PTC_TC to terminate.
 7. Request PTC_MAC to release any established bearer.
 8. Request the PTC_MAC to stop.
 9. Wait for PTC_MAC to terminate.
 10. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
 11. Verify the basic bearer setup procedure.
 12. Verify the expected behaviour described in a test step.

Test Case Dynamic Behaviour

Test Case Name : TC_FT_DT_BV_01
Group : FT/DT/BV/
Purpose : Only for IUT supporting encryption deactivation.
 Initial state: Active_traffic or Active_traffic_and_idle.
 Check that the IUT releases the basic connection when it cannot conclude the procedure to switch from encrypt mode to clear mode.
Configuration : Mac_config
Default : DF_mtc_bearer_setup
Comments : ETS 300 175-7 [7]: 6.4.6 Encryption mode control – 6.4.6.4 Procedures for switching to clear mode. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1,TSC_cm_i n)		3.
5		CP_MAC ! MAC_ENC_EKS_REQ START T_wait_mtc_mac	Mac_enc_eks_req(TCV_cm_mcei1,TRUE)		4.
6		CP_MAC ? MAC_ENC_EKS_CFM CANCEL T_wait_mtc_mac	Mac_enc_eks_cfm_01		5.
7		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action16)		6.
8		CP_MAC ! MAC_ENC_EKS_REQ	Mac_enc_eks_req(TCV_cm_mcei1,FALSE)		7.
9		? DONE(LT_TC)			8.
10		+PO_mtc_con_release(TCV_cm_mcei1)			9.
11		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		10.
12	TB01	? DONE(LT_MAC)		R	11.
		LTS_tc			
13		ACTIVATE(DF_tc_bearer_setup)			
14		START T_wait_ptc_mac			12.
15		+STP_basic_bearer_setup			13.
16		+STP_encryption_stop_failed			14.
		LTS_mac			
17		+STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type.
 3. Bearer successfully established.
 4. Request PTC_MAC to start encryption process.
 5. Confirmation received from PTC_MAC. Connection is encrypted.
 6. Request PTC_MAC to unacknowledge the received STOP_CONFIRM message.
 7. Request PTC_MAC to stop encryption process.
 8. Wait for PTC_TC to terminate.
 9. Request PTC_MAC to release any established bearer.
 10. Request the PTC_MAC to stop.
 11. Wait for PTC_MAC to terminate.
 12. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
 13. Verify the basic bearer setup procedure.
 14. Verify the expected behaviour described in a test step.

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_DT_CA_00					
Group : FT/DT/CA/					
Purpose : Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT re-transmits Cs segment until it receives an acknowledgement in the same ARQ window.					
Configuration : Mac_config					
Default : DF_mtc_bearer_setup					
Comments : ETS 300 175-3 [3]: 10.8.1.1 Cs-channel data and subclauses. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_c_only, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1, TSC_cm_c_only)		3.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action5)		4.
6		CP_MAC ! MAC_DATA_REQ	Mac_data_req(TCV_cm_mcei1, TSC_cm_cs, ls_ca_no_pdu(1,0,0))		5.
7		? DONE(LT_TC)			6.
8		+PO_mtc_con_release(TCV_cm_mcei1)			7.
9		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		8.
10	TB01	? DONE(LT_MAC)		R	9.
		LTS_tc			
		ACTIVATE(DF_tc_bearer_setup)			
11		START T_wait_ptc_mac			10.
12		+STP_basic_bearer_setup			11.
13		PHL ? PL_RX_CFM (TCV_frame := PL_RX_CFM.frame) START T_1_frame	Pl_rx_cfm(D00_ct(Rrr_ca(1,0)), TSC_rpn1, TCV_frame)		12.
14		(TCV_frame := (TCV_frame+1) MOD 16)			
15		PHL ? PL_RX_CFM START T_1_frame	Pl_rx_cfm(D00_ct(Rrr_ca(1,0)), TSC_rpn1, TCV_frame)		13.
16		(TCV_frame := (TCV_frame+1) MOD 16)			
17		PHL ? PL_RX_CFM START T_1_frame	Pl_rx_cfm(D00_ct(Rrr_ca(1,0)), TSC_rpn1, TCV_frame)		14.
18		PHL ? PL_RX_CFM CANCEL T_1_frame	Pl_rx_cfm_02(D00_ct(Rrr_ca(1,0)), TSC_rpn1)	F	15.
19	TB02				
20	TB03	? TIMEOUT T_1_frame		(P)	16.
21	TB04	? TIMEOUT T_1_frame		F	17.

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Test Case Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
22	TB05	? TIMEOUT T_1_frame		F	18.
23		LTS_mac +STP_emulate_mac			
<p>Detailed Comments :</p> <ol style="list-style-type: none"> 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type. 3. Bearer successfully established. 4. Request PTC_MAC to acknowledge received Cs segment only after three receipt.. 5. Request PTC_MAC to send Class A establishment request. 6. Wait for PTC_TC to terminate. 7. Request PTC_MAC to release any established bearer. 8. Request the PTC_MAC to stop. 9. Wait for PTC_MAC to terminate. 10. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates. 11. Verify the basic bearer setup procedure. 12. First RR received from IUT. 13. Second RR received from IUT. 14. Third RR received from IUT. 15. Too much re-transmission of the RR by the IUT. Fail verdict. 16. Expected event: no new re-transmission of the RR. 17. No second RR received from IUT. Fail verdict. 18. No third RR received from IUT. Fail verdict. 					

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_DT_CA_01					
Group : FT/DT/CA/					
Purpose : Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT does not transmit another Cs segment until the successful transmission of the current segment.					
Configuration : Mac_config					
Default : DF_mtc_bearer_setup					
Comments : ETS 300 175-3 [3]: 10.8.1.1 Cs-channel data and subclauses. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_c_only, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1, TSC_cm_c_only)		3.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action5)		4.
6		CP_MAC ! MAC_DATA_REQ	Mac_data_req(TCV_cm_mcei1, TSC_cm_cs, ls_ca_no_pdu(1,0,0))		5.
7		? DONE(LT_TC)			6.
8		+PO_mtc_con_release(TCV_cm_mcei1)			7.
9		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		8.
10	TB01	? DONE(LT_MAC)		R	9.
		LTS_tc			
11		ACTIVATE(DF_tc_bearer_setup)			
12		START T_wait_ptc_mac			10.
13		+STP_basic_bearer_setup			11.
14		PHL ? PL_RX_CFM (TCV_frame := PL_RX_CFM.frame) START T_1_frame	Pl_rx_cfm(D00_ct(Rrr_ca(1,0)), TSC_rpn1, TCV_frame)		12.
15		(TCV_frame := (TCV_frame+1) MOD 16)			
16		PHL ? PL_RX_CFM START T_1_frame	Pl_rx_cfm(D00_ct(Rrr_ca(1,0)), TSC_rpn1, TCV_frame)		13.
17		(TCV_frame := (TCV_frame+1) MOD 16)			
18		PHL ? PL_RX_CFM START T_1_mf	Pl_rx_cfm(D00_ct(Rrr_ca(1,0)), TSC_rpn1, TCV_frame)		14.
19	TB02	PHL ? PL_RX_CFM CANCEL T_1_mf	Pl_rx_cfm_02(D00_ct_other,TSC_rpn1)	(P)	15.
20	TB03	PHL ? PL_RX_CFM CANCEL T_1_mf	Pl_rx_cfm_02(D00_ct(Rrr_ca(1,0)), TSC_rpn1)	F	16.
21	TB04	? TIMEOUT T_1_mf		F	17.

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Test Case Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
22	TB05	? TIMEOUT T_1_frame		F	18.
23	TB06	? TIMEOUT T_1_frame		F	19.
24		LTS_mac +STP_emulate_mac			
<p>Detailed Comments :</p> <ol style="list-style-type: none"> 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type. 3. Bearer successfully established. 4. Request PTC_MAC to acknowledge received Cs segment only after three receipt.. 5. Request PTC_MAC to send Class A establishment request. 6. Wait for PTC_TC to terminate. 7. Request PTC_MAC to release any established bearer. 8. Request the PTC_MAC to stop. 9. Wait for PTC_MAC to terminate. 10. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates. 11. Verify the basic bearer setup procedure. 12. First RR received from IUT. 13. Second RR received from IUT. 14. Third RR received from IUT. 15. Expected event: new CS segment transmitted 16. Too much re-transmission of the RR by the IUT. Fail verdict. 17. No new CS segment transmitted. Fail verdict. 18. No second RR received from IUT. Fail verdict. 19. No third RR received from IUT. Fail verdict. 					

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_DT_CA_02 Group : FT/DT/CA/ Purpose : Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT manages correctly the one bit numbering of the Cs segments. Configuration : Mac_config Default : DF_mtc_bearer_setup Comments : ETS 300 175-3 [3]: 10.8.1.1 Cs-channel data and subclauses. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_c_only, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1, TSC_cm_c_only)		3.
5		CP_MAC ! MAC_DATA_REQ START T_wait_mtc_mac	Mac_data_req(TCV_cm_mcei1, TSC_cm_cs, ls_ca_no_pdu(1,0,0))		4.
6		CP_MAC ? MAC_DATA_IND CANCEL T_wait_mtc_mac	Mac_data_ind(TCV_cm_mcei1, Rrr_ca(1,0))		5.
7		CP_MAC ! MAC_DATA_REQ	Mac_data_req(TCV_cm_mcei1, TSC_cm_cs, ls_ca_no_pdu(1,0,0))		6.
8		? DONE(LT_TC)			7.
9		+PO_mtc_con_release(TCV_cm_mcei1)			8.
10		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		9.
11	TB01	? DONE(LT_MAC)		R	10.
12		LTS_tc ACTIVATE(DF_tc_bearer_setup)			
13		START T_wait_ptc_mac			11.
14		+STP_basic_bearer_setup			12.
15		START T_DL07			13.
16		PHL ? PL_RX_CFM START T_DL07	Pl_rx_cfm_02(D00_ct_first(Rrr_ca(1,0)) , TSC_rpn1)		14.
17	TB02	PHL ? PL_RX_CFM CANCEL T_DL07	Pl_rx_cfm_02(D00_ct_second(Rrr_ca(1,0)), TSC_rpn1)	(P)	15.
18	TB03	? TIMEOUT T_DL07		F	16.
19	TB04	? TIMEOUT T_DL07		F	17.
20		LTS_mac +STP_emulate_mac			

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Test Case Dynamic Behaviour

- Detailed Comments** :
1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type.
 3. Bearer successfully established.
 4. Request PTC_MAC to send Class A establishment request.
 5. Received data from PTC_MAC. Acknowledgement of Class A establishment (RR).
 6. Request PTC_MAC to send Class A re-establishment request.
 7. Wait for PTC_TC to terminate.
 8. Request PTC_MAC to release any established bearer.
 9. Request the PTC_MAC to stop.
 10. Wait for PTC_MAC to terminate.
 11. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
 12. Verify the basic bearer setup procedure.
 13. Start Class A establishment timer.
 14. First CS segment received containing RR Class A establishment acknowledgement.
 15. Expected event: Second CS segment received containing RR Class A re-establishment acknowledgement.
 16. No response received for the link re-establishment.
 17. No response received for the link establishment.

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_DT_CA_03 Group : FT/DT/CA/ Purpose : Only for FT supporting encryption. Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT manages correctly the procedure to switch the basic connection from clear mode to encrypt mode. Configuration : Mac_config Default : DF_mtc_bearer_setup Comments : ETS 300 175-7 [7]: 6.4.6 Encryption mode control – 6.4.6.3 Procedures for switching to encrypt mode. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1,TSC_cm_i n)		3.
5		CP_MAC ! MAC_ENC_EKS_REQ	Mac_enc_eks_req(TCV_cm_mcei1,TRUE)		4.
6		? DONE(LT_TC)			5.
7		+PO_mtc_con_release(TCV_cm_mcei1)			6.
8		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		7.
9	TB01	? DONE(LT_MAC)		R	8.
		LTS_tc			
10		ACTIVATE(DF_tc_bearer_setup)			
11		START T_wait_ptc_mac			9.
12		+STP_basic_bearer_setup			10.
13		+STP_encryption_start			11.
		LTS_mac			
14		+STP_emulate_mac			
Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type. 3. Bearer successfully established. 4. Request PTC_MAC to start encryption process. 5. Wait for PTC_TC to terminate. 6. Request PTC_MAC to release any established bearer. 7. Request the PTC_MAC to stop. 8. Wait for PTC_MAC to terminate. 9. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates. 10. Verify the basic bearer setup procedure. 11. Verify the expected behaviour described in a test step.					

Test Case Dynamic Behaviour

Test Case Name : TC_FT_DT_CA_04
Group : FT/DT/CA/
Purpose : Only for IUT supporting encryption deactivation.
 Initial state: Active_traffic or Active_traffic_and_idle.
 Check that the IUT manages correctly the procedure to switch the basic connection from encrypt mode to clear mode.
Configuration : Mac_config
Default : DF_mtc_bearer_setup
Comments : ETS 300 175-7 [7]: 6.4.6 Encryption mode control – 6.4.6.4 Procedures for switching to clear mode. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1,TSC_cm_i n)		3.
5		CP_MAC ! MAC_ENC_EKS_REQ START T_wait_mtc_mac	Mac_enc_eks_req(TCV_cm_mcei1,TRUE)		4.
6		CP_MAC ? MAC_ENC_EKS_CFM CANCEL T_wait_mtc_mac	Mac_enc_eks_cfm_01		5.
7		CP_MAC ! MAC_ENC_EKS_REQ	Mac_enc_eks_req(TCV_cm_mcei1,FALSE)		6.
8		? DONE(LT_TC)			7.
9		+PO_mtc_con_release(TCV_cm_mcei1)			8.
10		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		9.
11	TB01	? DONE(LT_MAC)		R	10.
		LTS_tc			
12		ACTIVATE(DF_tc_bearer_setup)			
13		START T_wait_ptc_mac			11.
14		+STP_basic_bearer_setup			12.
15		+STP_encryption_stop			13.
		LTS_mac			
16		+STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type.
 3. Bearer successfully established.
 4. Request PTC_MAC to start encryption process.
 5. Confirmation received from PTC_MAC. Connection is encrypted.
 6. Request PTC_MAC to stop encryption process.
 7. Wait for PTC_TC to terminate.
 8. Request PTC_MAC to release any established bearer.
 9. Request the PTC_MAC to stop.
 10. Wait for PTC_MAC to terminate.
 11. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates.
 12. Verify the basic bearer setup procedure.
 13. Verify the expected behaviour described in a test step.

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_LM_CA_05 Group : FT/LM/CA/ Purpose : Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT, after the establishment of a new bearer during bearer handover, releases one of the two bearers within a time interval of T203 seconds. Configuration : Mac_config Default : DF_mtc_bearer_setup Comments : ETS 300 175-3 [3]: 10.6.2 Duplex bearer handover procedure. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac, LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CP_MAC ! MAC_CON_REQ START T_wait_mtc_mac	Mac_con_req(TCV_cm_mcei1, TSPX_pmid, FALSE, FALSE, TSC_cm_fs, TSC_cm_in, TSC_cm_sbcon, TSC_rpn1)		2.
4		CP_MAC ? MAC_CON_CFM CANCEL T_wait_mtc_mac	Mac_con_cfm(TCV_cm_mcei1, TSC_cm_in)		3.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_action17)		4.
6		? DONE(LT_TC)			5.
7		+PO_mtc_con_release(TCV_cm_mcei1)			6.
8		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		7.
9	TB01	? DONE(LT_MAC)		R	8.
10		LTS_tc ACTIVATE(DF_tc_bearer_setup)			
11		START T_wait_ptc_mac			9.
12		+STP_basic_bearer_setup			10.
13		START T_wait_ptc_mac			9.
14		+STP_basic_bearer_handover(TSC_fm1d1, TSC_rpn1)			11.
15		START T203			12.
16	TB02	PHL ? PL_RX_CFM CANCEL T203	Pl_rx_cfm_02(D32_mt_basic_con_ctrl_release, TSC_rpn1)	(P)	13.
17	TB03	? TIMEOUT T203		F	
18		LTS_mac +STP_emulate_mac			
Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Request the PTC_MAC to establish a symmetric single bearer connection of the specified type. 3. Bearer successfully established. 4. Request the PTC_MAC to initiate and perform an intracell bearer handover procedure. 5. Wait for PTC_TC to terminate. 6. Request PTC_MAC to release any established bearer. 7. Request the PTC_MAC to stop. 8. Wait for PTC_MAC to terminate. 9. Timer T_wait_ptc_mac is used to make sure that PTC_TC always terminates. 10. Verify the basic bearer setup procedure. 11. Verify the PT initiated bearer handover procedure. 12. Start timer T203 immediately after the bearer handover is completed ("other" message received). 13. RELEASE message received.					

Test Case Dynamic Behaviour

Test Case Name : TC_FT_PG_BV_01
Group : FT/PG/BV/
Purpose : Only for FT that shall transmit blind slot information.
 Initial state: Active_idle.
 Check that the IUT periodically announces (at least every 10s) its blind slots.
Configuration : Mac_config
Default : DF_mtc_downlink_broadcast
Comments : ETS 300 175-3 [3]: 11.8 RFP idle receiver scan sequence. The test is passed if the expected page is received in two consecutive periods of 10 seconds. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_paging)			
8		START T_10s			
9		PHL ? PL_RX_CFM START T_10s	Pl_rx_cfm(D00_pt_blind_slot, TSC_rpn1, 0)		5.
10	TB02	PHL ? PL_RX_CFM CANCEL T_10s	Pl_rx_cfm(D00_pt_blind_slot, TSC_rpn1, 0)	(P)	6.
11	TB03	?TIMEOUT T_10s		F	7.
12	TB04	?TIMEOUT T_10s		F	7.
		LTS_mac			
13		+STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
 2. Wait for PTC_TC to terminate.
 3. Request the PTC_MAC to stop.
 4. Wait for PTC_MAC to terminate.
 5. First blind full slot information PT message received (zero length).
 6. Second blind full slot information PT message received (zero length).
 7. Blind full slot information PT message not received.

Test Case Dynamic Behaviour					
Test Case Name : TC_FT_PG_CA_00 Group : FT/PG/CA/ Purpose : Initial state: Active_idle. Check that the IUT can transmit (FT part normal paging mode) a short page message. Configuration : Mac_config Default : DF_mtc_downlink_broadcast Comments : ETS 300 175-3 [3]: 9.1.3 Paging broadcast procedure and subclauses. In this test case, the test purpose is verified for the IUTs dummy bearer. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	CREATE(LT_MAC:LTS_mac,LT_TC:LTS_tc)			
2		CP_MAC ! MAC_CMD START T_wait_mtc_mac	Mac_cmd(TSC_start)		1.
3		CP_MAC ? MAC_PAGE_IND CANCEL T_wait_mtc_mac	Mac_page_ind_01		2.
4		? DONE(LT_TC)			3.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		4.
6		? DONE(LT_MAC)		R	5.
7		LTS_tc ACTIVATE(DF_tc_paging)			
8		+STP_invoke_short_page			6.
9		LTS_mac +STP_emulate_mac			
Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour). 2. Wait for a MAC-PAGE.IND ASP. 3. Wait for PTC_TC to terminate. 4. Request the PTC_MAC to stop. 5. Wait for PTC_MAC to terminate. 6. Expected event: Implicit send: IUT shall transmit a short page message in normal paging mode.					

Test Case Dynamic Behaviour

Test Case Name : TC_FT_PG_CA_01
Group : FT/PG/CA/
Purpose : Only for FT that have blind slots or moving dummy bearer. or does not support bearer handover within the whole FT.
Initial state: Active_Idle.
Check that the FT can transmit a correct zero length page message.
Configuration : Mac_config
Default : DF_mtc_downlink_broadcast
Comments : ETS 300 175-3 [3]: 9.1.3 Paging broadcast procedure and subclauses. The behaviour of PTC_MAC (LTS_mac) is specified in Annex B.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CREATE(LT_MAC:LTS_mac)			
2		CP_MAC ! MAC_CMD	Mac_cmd(TSC_start)		1.
3		CREATE(LT_TC:LTS_tc)			
4		? DONE(LT_TC)			2.
5		CP_MAC ! MAC_CMD	Mac_cmd(TSC_stop)		3.
6	TB01	? DONE(LT_MAC)		R	4.
		LTS_tc			
7		ACTIVATE(DF_tc_paging)			
8		+STP_invoke_zero_page			5.
		LTS_mac			
9		+STP_emulate_mac			

Detailed Comments : 1. Activate PTC_MAC (see Annex B for a specification of the behaviour).
2. Wait for PTC_TC to terminate.
3. Request the PTC_MAC to stop.
4. Wait for PTC_MAC to terminate.
5. Expected event: Implicit send: IUT shall transmit a zero length page message.

Test Step Dynamic Behaviour					
Test Step Name : PO_mtc_con_release(mcei_:CM_MCEI)					
Group : MAIN_TC/Postambles/					
Objective : Release established connection					
Default :					
Comments :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CP_MAC ! MAC_DIS_REQ	Mac_dis_req(mcei_)		1.
Detailed Comments : 1. Request the PTC_MAC to release the established connection.					

Test Step Dynamic Behaviour					
Test Step Name : STP_basic_bearer_setup Group : PTC_TC/TestSteps/ Objective : PT initiated (single) basic bearer setup procedure. Default : DF_tc_bearer_setup Comments : ETS 300 175-3 [3], subclause 10.5.1.1.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ? PL_TX_REQ (TCV_slot:=PL_TX_REQ.k, TCV_slot_pair := TCV_slot - 12, TCV_rf:=PL_TX_REQ.m, TCV_frame:=PL_TX_REQ.frame) CANCEL T_wait_ptc_mac , START T_1_mf	PI_tx_req_02(D32_mt_basic_con_ctrl_acc ess_req, "32", 0, TSC_rpn1)		1.
2		(TCV_frame := (TCV_frame+1) MOD 16)			2.
3	BCL1	+LTS_cfm			
4		PHL ? PL_RX_CFM START T_1_mf	PI_rx_cfm_04(D32_mt_basic_con_ctrl_wai t, TSC_rpn1, TCV_frame, TCV_slot_pair)		3.
5		+LTS_next_PT_frame_MT			4.
6		PHL ? PL_TX_REQ START T_1_mf	PI_tx_req(D32_mt_basic_con_ctrl_wai t, "32", TCV_slot, 0, TCV_rf, TSC_rpn1, TCV_frame)		5.
7		(TCV_frame := (TCV_frame+1) MOD 16)			2.
8		GOTO BCL1			6.
9	TB01	? TIMEOUT T_1_mf		(I)	7.
10		LTS_cfm PHL ? PL_RX_CFM START T_1_mf	PI_rx_cfm_04(D32_mt_basic_con_ctrl_bea rer_cfm, TSC_rpn1, TCV_frame, TCV_slot_pair)		8.
11	TB02	PHL ? PL_TX_REQ CANCEL T_1_mf	PI_tx_req(D32_mt_basic_con_ctrl_rele ase, "32", TCV_slot, 0, TCV_rf, TSC_rpn1, TCV_frame)	(I)	8.
12		PHL ? PL_TX_REQ START T_1_mf	PI_tx_req(D32_other, "32", TCV_slot, 0, TCV_rf, TSC_rpn1, TCV_frame)		9.
13		(TCV_frame := (TCV_frame+1) MOD 16)			2.
14	TB03	PHL ? PL_RX_CFM CANCEL T_1_mf	PI_rx_cfm_04(D32_other, TSC_rpn1, TCV_frame, TCV_slot_pair)	(P)	10.
15		(TCV_frame := (TCV_frame+1) MOD 16)			2.
16	TB04	? TIMEOUT T_1_mf		(I)	7.
17		LTS_next_PT_frame_MT [(TCV_frame MOD 2)=0]			
18		(TCV_frame:=(TCV_frame+2) MOD 16)			11.
19		[(TCV_frame MOD 2)<>0]			
20		(TCV_frame:=(TCV_frame+1) MOD 16)			11.

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Test Step Dynamic Behaviour

- Detailed Comments** :
1. LT_MAC sends ACCESS_REQUEST in the second half frame (slot 12-23) on any RF channel. Record slot, RF-carrier and frame number.
 2. Calculate next frame number.
 3. IUT responds with a WAIT message. The first WAIT message send by the IUT shall be in the TDMA half frame following the reception of ACCESS_REQUEST (i.e. in slot 0-11 of the next frame).
 4. Calculate the next frame for PT transmission of a MT message, according to the T-MUX algorithm in ETS 300 175-3 [3], subclause 6.2.2.1.2.
 5. LT_MAC responds with a WAIT message in the next frame for PT transmission of a MT tail (T-MUX algorithm).
 6. Repeat until the IUT sends BEARER_CONFIRM.
 7. Timer T_1_mf (=1 multiframe = 160 ms) is used to verify that the ASPs are exchanged within a period of one multiframe.
 8. IUT responds with a BEARER_CONFIRM.
 9. The LT_MAC sends OTHER message in the next TDMA half frame following the reception of BEARER_CONFIRM (i.e. in slot 12-23 of the same frame). An other message is any A-field message except RELEASE.
 10. IUT responds with OTHER message in the next TDMA half frame (i.e. in slot 0-11 of the next frame).
 11. Shall be an even numbered frame (i.e. 0, 2, 4, 6, 8,10, 12, or 14).

Test Step Dynamic Behaviour					
Test Step Name : STP_basic_bearer_handover(fmid_:B_12;rpn_:RPN)					
Group : PTC_TC/TestSteps/					
Objective : PT initiated (single) basic bearer handover procedure.					
Default : DF_tc_bearer_setup					
Comments : ETS 300 175-3 [3], subclause 10.5.1.1.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ? PL_TX_REQ (TCV_slot:=PL_TX_REQ.k, TCV_slot_pair := TCV_slot - 12, TCV_rf:=PL_TX_REQ.m, TCV_frame:=PL_TX_REQ.frame) CANCEL T_wait_ptc_mac , START T_1_mf	PI_tx_req_02(D32_mt_basic_handover_re q(fmid_), "32", 0, rpn_)		1.
2		(TCV_frame := (TCV_frame+1) MOD 16)			2.
3	BCL1	+LTS_cfm			
4		PHL ? PL_RX_CFM START T_1_mf	PI_rx_cfm_04(D32_mt_basic_con_ctrl_wai t, rpn_, TCV_frame, TCV_slot_pair)		3.
5		+LTS_next_PT_frame_MT			4.
6		PHL ? PL_TX_REQ START T_1_mf	PI_tx_req(D32_mt_basic_con_ctrl_wai t, "32", TCV_slot, 0, TCV_rf, rpn_, TCV_frame)		5.
7		(TCV_frame := (TCV_frame+1) MOD 16)			2.
8		GOTO BCL1			6.
9	TB01	? TIMEOUT T_1_mf		(I)	7.
10		LTS_cfm			
10		PHL ? PL_RX_CFM START T_1_mf	PI_rx_cfm_04(D32_mt_basic_con_ctrl_bea rer_cfm, rpn_, TCV_frame, TCV_slot_pair)		8.
11	TB02	PHL ? PL_TX_REQ CANCEL T_1_mf	PI_tx_req(D32_mt_basic_con_ctrl_rele ase, "32", TCV_slot, 0, TCV_rf, rpn_, TCV_frame)	(I)	8.
12		PHL ? PL_TX_REQ START T_1_mf	PI_tx_req(D32_other, "32", TCV_slot, 0, TCV_rf, rpn_,TCV_frame)		9.
13		(TCV_frame := (TCV_frame+1) MOD 16)			2.
14	TB03	PHL ? PL_RX_CFM CANCEL T_1_mf	PI_rx_cfm_04(D32_other, rpn_, TCV_frame, TCV_slot_pair)	(P)	10.
15		(TCV_frame := (TCV_frame+1) MOD 16)			2.
16	TB04	? TIMEOUT T_1_mf		(I)	7.
17		LTS_next_PT_frame_MT [(TCV_frame MOD 2)=0]			
18		(TCV_frame:=(TCV_frame+2) MOD 16)			11.
19		[(TCV_frame MOD 2)<>0]			
20		(TCV_frame:=(TCV_frame+1) MOD 16)			11.
Detailed Comments : 1. LT_MAC sends BEARER_HANDOVER_REQUEST in the second half frame (slot 12-23) on any RF channel. Record slot, RF-carrier and frame number. 2. Calculate next frame number.					

Continued on next page

Continued from previous page

Test Step Dynamic Behaviour	
Detailed Comments :	<p>...</p> <p>3. IUT responds with a WAIT message. The first WAIT message send by the IUT shall be in the TDMA half frame following the reception of ACCESS_REQUEST (i.e. in slot 0-11 of the next frame).</p> <p>4. Calculate the next frame for PT transmission of a MT message, according to the T-MUX algorithm in ETS 300 175-3 [3], subclause 6.2.2.1.2.</p> <p>5. LT_MAC responds with a WAIT message in the next frame for PT transmission of a MT tail (T-MUX algorithm).</p> <p>6. Repeat until the IUT sends BEARER_CONFIRM.</p> <p>7. Timer T_1_mf (=1 multiframe = 160 ms) is used to verify that the ASPs are exchanged within a period of one multiframe.</p> <p>8. IUT responds with a BEARER_CONFIRM.</p> <p>9. The LT_MAC sends OTHER message in the next TDMA half frame following the reception of BEARER_CONFIRM (i.e. in slot 12-23 of the same frame). An other message is any A-field message except RELEASE.</p> <p>10. IUT responds with OTHER message in the next TDMA half frame (i.e. in slot 0-11 of the next frame).</p> <p>11. Shall be an even numbered frame (i.e. 0, 2, 4, 6, 8,10, 12, or 14).</p>

Test Step Dynamic Behaviour					
Test Step Name : STP_emulate_mac					
Group : PTC_TC/TestSteps/					
Objective : To provide a non TTCN MAC emulation according to Annex B.					
Default :					
Comments :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		(TCV_bool := TSO_cimft_emulate_mac())			
2	ST01	[TCV_bool]		(PASS)	
3	ST02	[NOT TCV_bool]		(I)	
Detailed Comments :					

Test Step Dynamic Behaviour

Test Step Name : STP_encryption_start
Group : PTC_TC/TestSteps/
Objective : Check that the IUT manages rightly the switch from clear mode to encrypt mode.
Default : DF_tc_bearer_setup
Comments : ETS 300 175-7 [7] Encryption process

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ? PL_TX_REQ (TCV_frame := PL_TX_REQ.frame , TCV_count := 1) START T_1_mf	Pl_tx_req_02(D32_mt_enc_ctrl_start_req, "32", 0, TSC_rpn1)		1.
2	LOOP	PHL ? PL_RX_CFM (TCV_frame1 := PL_RX_CFM.frame)	Pl_rx_cfm_02(D32_mt_enc_ctrl_start_cfm ,TSC_rpn1)		2.
3		[TCV_frame1 = TCV_frame + 1]			
4	ST01	CANCEL T_1_mf		(P)	3.
5		[TCV_frame1 <> TCV_frame + 1]			
6	ST02	CANCEL T_1_mf		F	4.
7		PHL ? PL_TX_REQ (TCV_frame1 := PL_TX_REQ.frame)	Pl_tx_req_02(D32_mt_enc_ctrl_start_req, "32", 0, TSC_rpn1)		5.
8		[TCV_frame1 = TCV_frame + 2]			
9		[TCV_count < 5]			
10		(TCV_count := TCV_count + 1, TCV_frame := TCV_frame1)			6.
11		START T_1_mf			
12		GOTO LOOP			
13		[TCV_count >= 5]			
14	ST03	CANCEL T_1_mf		(I)	7.
15		[TCV_frame1 <> TCV_frame + 2]			
16	ST04	CANCEL T_1_mf		(I)	8.
17	ST05	?TIMEOUT T_1_mf		F	9.

Detailed Comments :

1. PTC_MAC sends the first START_REQUEST message.
2. START_CONFIRM received. Now, control it.
3. Expected event: START_CONFIRM received in good odd frame.
4. START_CONFIRM received in wrong frame. Fail verdict.
5. START_REQUEST re-transmission. No START_CONFIRM received.
6. Update working variables and go to wait START_CONFIRM.
7. Too much re-transmission of START_REQUEST. PTC_MAC problem. Inconclusive verdict.
8. START_REQUEST not in good even frame. PTC_MAC problem. Inconclusive verdict.
9. No response received from the IUT. Fail verdict.

Test Step Dynamic Behaviour					
Test Step Name : STP_encryption_start_failed					
Group : PTC_TC/TestSteps/					
Objective : Check that the IUT releases the bearer if it can not conclude to go crypted.					
Default : DF_tc_bearer_setup					
Comments : ETS 300 175-7 [7] Encryption process					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ? PL_TX_REQ (TCV_frame := PL_TX_REQ.frame , TCV_count := 1) START T_1_mf	Pl_tx_req_02(D32_mt_enc_ctrl_start_req, "32", 0, TSC_rpn1)		1.
2	LOOP	PHL ? PL_RX_CFM (TCV_frame1 := PL_RX_CFM.frame)	Pl_rx_cfm_02(D32_mt_basic_con_ctrl_rele ase,TSC_rpn1)		2.
3		[TCV_frame1 > TCV_frame + 11]			
4	ST01	CANCEL T_1_mf		(P)	3.
5		[TCV_frame1 <= TCV_frame + 11]			
6	ST02	CANCEL T_1_mf		F	4.
7		PHL ? PL_TX_REQ (TCV_frame1 := PL_TX_REQ.frame)	Pl_tx_req_02(D32_mt_enc_ctrl_start_req, "32", 0, TSC_rpn1)		5.
8		[TCV_frame1 = TCV_frame + 2]			
9		[TCV_count < 5]			
10		(TCV_count := TCV_count + 1, TCV_frame := TCV_frame1)			6.
11		START T_1_mf			
12		GOTO LOOP			
13		[TCV_count >= 5]			
14	ST03	CANCEL T_1_mf		(I)	7.
15		[TCV_frame1 <> TCV_frame + 2]			
16	ST04	CANCEL T_1_mf		(I)	8.
17	ST05	?TIMEOUT T_1_mf		F	9.
Detailed Comments : 1. PTC_MAC sends the first START_REQUEST message. 2. Release received. Now, control it. 3. Expected event: Release received at the good time. 4. Release received before 2S+11. Not enough re-transmission of START_CONFIRM. 5. START_REQUEST re-transmission. No START_CONFIRM received. 6. Update working variables and go to wait release. 7. Too much re-transmission of START_REQUEST. PTC_MAC problem. Inconclusive verdict. 8. START_REQUEST not in good even frame. PTC_MAC problem. Inconclusive verdict. 9. No response received from the IUT. Fail verdict.					

Test Step Dynamic Behaviour

Test Step Name : STP_encryption_stop
Group : PTC_TC/TestSteps/
Objective : Check that the IUT manages rightly the switch from encrypt mode to clear mode.
Default : DF_tc_bearer_setup
Comments : ETS 300 175-7 [7] Encryption process

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ? PL_TX_REQ (TCV_frame := PL_TX_REQ.frame , TCV_count := 1) START T_1_mf	Pl_tx_req_02(D32_mt_enc_ctrl_stop_req, "32", 0, TSC_rpn1)		1.
2	LOOP	PHL ? PL_RX_CFM (TCV_frame1 := PL_RX_CFM.frame)	Pl_rx_cfm_02(D32_mt_enc_ctrl_stop_cfm ,TSC_rpn1)		2.
3		[TCV_frame1 = TCV_frame + 1]			
4	ST01	CANCEL T_1_mf		(P)	3.
5		[TCV_frame1 <> TCV_frame + 1]			
6	ST02	CANCEL T_1_mf		F	4.
7		PHL ? PL_TX_REQ (TCV_frame1 := PL_TX_REQ.frame)	Pl_tx_req_02(D32_mt_enc_ctrl_stop_req, "32", 0, TSC_rpn1)		5.
8		[TCV_frame1 = TCV_frame + 2]			
9		[TCV_count < 5]			
10		(TCV_count := TCV_count + 1, TCV_frame := TCV_frame1)			6.
11		START T_1_mf			
12		GOTO LOOP			
13		[TCV_count >= 5]			
14	ST03	CANCEL T_1_mf		(I)	7.
15		[TCV_frame1 <> TCV_frame + 2]			
16	ST04	CANCEL T_1_mf		(I)	8.
17	ST05	?TIMEOUT T_1_mf		F	9.

Detailed Comments : 1. PTC_MAC sends the first STOP_REQUEST message.
2. STOP_CONFIRM received. Now, control it.
3. Expected event: STOP_CONFIRM received in good odd frame.
4. STOP_CONFIRM received in wrong frame. Fail verdict.
5. STOP_REQUEST re-transmission. No STOP_CONFIRM received.
6. Update working variables and go to wait STOP_CONFIRM.
7. Too much re-transmission of STOP_REQUEST. PTC_MAC problem. Inconclusive verdict.
8. STOP_REQUEST not in good even frame. PTC_MAC problem. Inconclusive verdict.
9. No response received from the IUT. Fail verdict.

Test Step Dynamic Behaviour

Test Step Name : STP_encryption_stop_failed
Group : PTC_TC/TestSteps/
Objective : Check that the IUT releases the bearer if it can not conclude to go clear.
Default : DF_tc_bearer_setup
Comments : ETS 300 175-7 [7] Encryption process

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ? PL_TX_REQ (TCV_frame := PL_TX_REQ.frame , TCV_count := 1) START T_1_mf	Pl_tx_req_02(D32_mt_enc_ctrl_stop_req, "32", 0, TSC_rpn1)		1.
2	LOOP	PHL ? PL_RX_CFM (TCV_frame1 := PL_RX_CFM.frame)	Pl_rx_cfm_02(D32_mt_basic_con_ctrl_rele ase,TSC_rpn1)		2.
3		[TCV_frame1 > TCV_frame + 11]			
4	ST01	CANCEL T_1_mf		(P)	3.
5		[TCV_frame1 <= TCV_frame + 11]			
6	ST02	CANCEL T_1_mf		F	4.
7		PHL ? PL_TX_REQ (TCV_frame1 := PL_TX_REQ.frame)	Pl_tx_req_02(D32_mt_enc_ctrl_stop_req, "32", 0, TSC_rpn1)		5.
8		[TCV_frame1 = TCV_frame + 2]			
9		[TCV_count < 5]			
10		(TCV_count := TCV_count + 1, TCV_frame := TCV_frame1)			6.
11		START T_1_mf			
12		GOTO LOOP			
13		[TCV_count >= 5]			
14	ST03	CANCEL T_1_mf		(I)	7.
15		[TCV_frame1 <> TCV_frame + 2]			
16	ST04	CANCEL T_1_mf		(I)	8.
17	ST05	?TIMEOUT T_1_mf		F	9.

Detailed Comments : 1. PTC_MAC sends the first STOP_REQUEST message.
2. Release received. Now, control it.
3. Expected event: Release received at the good time.
4. Release received before 2S+11. Not enough re-transmission of STOP_CONFIRM.
5. STOP_REQUEST re-transmission. No START_CONFIRM received.
6. Update working variables and go to wait release.
7. Too much re-transmission of STOP_REQUEST. PTC_MAC problem. Inconclusive verdict.
8. STOP_REQUEST not in good even frame. PTC_MAC problem. Inconclusive verdict.
9. No response received from the IUT. Fail verdict.

Test Step Dynamic Behaviour					
Test Step Name : STP_invoke_sari_message					
Group : PTC_TC/TestSteps/					
Objective : Check that once a SARI is introduced into the FT, the E-bit within the NT message is updated.					
Default : DF_tc_downlink_broadcast					
Comments : ETS 300 175-6 [6]: 7.1 RFPI E-bit.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		<IUT ! PL_RX_CFM>	PI_rx_cfm_02(D00_nt_sari(TSPX_rfp1), TSC_rpn1)		1.
2		START T_implicit_send			
3	ST01	PHL ? PL_RX_CFM CANCEL T_implicit_send	PI_rx_cfm_02(D00_nt_sari(TSPX_rfp1), TSC_rpn1)	(P)	2.
4	ST02	?TIMEOUT T_implicit_send		I	3.
Detailed Comments : 1. Implicit send: A SARI is introduced into the FT. 1. Correct NT message with the E-bit set received. 3. Implicit send failed.					

Test Step Dynamic Behaviour					
Test Step Name : STP_invoke_short_page					
Group : PTC_TC/TestSteps/					
Objective : Implicit send: the IUT transmits a short page message.					
Default : DF_tc_paging					
Comments : ETS 300 175-3 [3]: 9.1.3 Paging broadcast procedure and subclauses.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		<IUT ! PL_RX_CFM>	PI_rx_cfm(D00_pt_short_page_01, TSC_rpn1, 0)		1.
2		START T_implicit_send			
3	ST01	PHL ? PL_RX_CFM CANCEL T_implicit_send	PI_rx_cfm(D00_pt_short_page_01, TSC_rpn1, 0)	(P)	2.
4	ST02	PHL ? PL_RX_CFM CANCEL T_implicit_send	PI_rx_cfm_02(D00_pt_any_01, TSC_rpn1)	F	3.
5	ST03	?TIMEOUT T_implicit_send		I	4.
Detailed Comments : 1. Implicit send: IUT shall transmit a short page message in normal paging mode. 2. Short page received. 3. An unexpected PT message was received. 4. Implicit send failed.					

Test Step Dynamic Behaviour

Test Step Name : STP_invoke_zero_page
Group : PTC_TC/TestSteps/
Objective : Implicit send: the IUT transmits a zero page message.
Default : DF_tc_paging
Comments : ETS 300 175-3 [3]: 9.1.3 Paging broadcast procedure and subclauses.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		<IUT ! PL_RX_CFM>	Pl_rx_cfm(D00_pt_zero_page_01(TSPX_rfp1), TSC_rpn1, 0)		1.
2		START T_implicit_send			
3	TB02	PHL ? PL_RX_CFM CANCEL T_implicit_send	Pl_rx_cfm(D00_pt_zero_page_01(TSPX_rfp1), TSC_rpn1, 0)	(P)	2.
4	TB03	PHL ? PL_RX_CFM CANCEL T_implicit_send	Pl_rx_cfm_02(D00_pt_any_01, TSC_rpn1)	F	3.
5	TB04	?TIMEOUT T_implicit_send		I	4.

Detailed Comments : 1. Implicit send: IUT shall transmit a zero length page message.
2. Zero length page received.
3. An unexpected PT message was received.
4. Implicit send failed.

Default Dynamic Behaviour					
Default Name : DF_mtc_bearer_setup					
Group : MAIN_TC/					
Objective : To catch any unexpected events at the MTC during bearer setup (BS) tests.					
Comments :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DF01	? TIMEOUT T_wait_mtc_mac		I	1.
2	DF02	CP_MAC ? MAC_CON_CFM	Mac_con_cfm_01	I	2.
3	DF03	CP_MAC ? MAC_DIS_IND	Mac_dis_ind_01	I	3.
4	DF04	CP_MAC ? MAC_RES_DLC_IND	Mac_res_dlc_ind(TCV_cm_mcei1)	(I)	4.
5		CP_MAC ! MAC_DIS_REQ	Mac_dis_req(TCV_cm_mcei1)		
6	DF05	CP_MAC ? MAC_CON_IND	Mac_con_ind_01	I	5.
7		CP_MAC ? MAC_DATA_IND	Mac_data_ind_01		Ignore
8		RETURN			
9	DF06	CP_MAC ? MAC_ENC_EKS_CFM	Mac_enc_eks_cfm_01	I	5.
10	DF07	CP_MAC ? MAC_ENC_EKS_IND	Mac_enc_eks_ind_01	I	5.
11		CP_MAC ? MAC_PAGE_IND	Mac_page_ind_01		Ignore
12		RETURN			
13	DF08	CP_MAC ? OTHERWISE		I	5.
14	DF09	CP_TC ? OTHERWISE		I	6.
Detailed Comments : 1. No response from PTC_MAC. 2. One or more of the parameter values are invalid. 3. PTC_MAC indicates that connection cannot be established or wanted service is not supported or wanted connection is not allowed. 4. Bearer setup failed. 5. Unexpected event. 6. No events expected at coordination point CP_TC.					

Default Dynamic Behaviour					
Default Name : DF_mtc_downlink_broadcast					
Group : MAIN_TC/					
Objective : To catch any unexpected events at the MTC during downlink broadcast (DB) tests.					
Comments :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DF01	? TIMEOUT T_wait_mtc_mac		I	1.
2	DF02	CP_MAC ? MAC_CON_CFM	Mac_con_cfm_01	I	2.
3	DF03	CP_MAC ? MAC_CON_IND	Mac_con_ind_01	I	2.
4	DF04	CP_MAC ? MAC_DATA_IND	Mac_data_ind_01	I	2.
5	DF05	CP_MAC ? MAC_DIS_IND	Mac_dis_ind_01	I	2.
6	DF06	CP_MAC ? MAC_ENC_EKS_CFM	Mac_enc_eks_cfm_01	I	2.
7	DF07	CP_MAC ? MAC_ENC_EKS_IND	Mac_enc_eks_ind_01	I	2.
8		CP_MAC ? MAC_PAGE_IND	Mac_page_ind_01		Ignore
9		RETURN			
10	DF08	CP_MAC ? OTHERWISE		I	2.
11	DF09	CP_TC ? OTHERWISE		I	3.
Detailed Comments : 1. No response from PTC_MAC. 2. Unexpected event. 3. No events expected at coordination point CP_TC.					

Default Dynamic Behaviour					
Default Name : DF_tc_bearer_setup					
Group : PTC_TC/					
Objective : To catch any unexpected events at PTC_TC during bearer setup tests.					
Comments :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DF01	? TIMEOUT T_wait_ptc_mac		I	1.
2	DF02	? TIMEOUT T_1_mf		F	1.
3	DF03	PHL ? PL_FREQ_ADJ_REQ CANCEL	PI_freq_adj_req	I	2.
4		PHL ? PL_RX_CFM	PI_rx_cfm_01		3.
5		RETURN			
6		PHL ? PL_RX_REQ	PI_rx_req_01		3.
7		RETURN			
8	DF05	PHL ? PL_TX_REQ CANCEL	PI_tx_req_01	I	2.
9	DF06	PHL ? OTHERWISE CANCEL		F	
Detailed Comments : 1. No response from IUT. 2. Unexpected event from PTC_MAC. 3. Ignore these ASPs.					

Default Dynamic Behaviour					
Default Name : DF_tc_downlink_broadcast					
Group : PTC_TC/					
Objective : To catch any unexpected events at PTC_TC during downlink broadcast (DB) tests.					
Comments :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DF01	? TIMEOUT T_wait_ptc_mac		I	1.
2	DF02	? TIMEOUT T_1_mf		F	1.
3	DF03	PHL ? PL_FREQ_ADJ_REQ CANCEL	PI_freq_adj_req	I	2.
4		PHL ? PL_RX_CFM	PI_rx_cfm_01		3.
5		RETURN			
6		PHL ? PL_RX_REQ	PI_rx_req_01		3.
7		RETURN			
8	DF05	PHL ? PL_TX_REQ CANCEL	PI_tx_req_01	I	2.
9	DF06	PHL ? OTHERWISE CANCEL		F	
Detailed Comments : 1. No response from IUT. 2. Unexpected event from PTC_MAC. 3. Ignore these ASPs.					

Default Dynamic Behaviour

Default Name : DF_tc_paging
Group : PTC_TC/
Objective : To catch any unexpected events at PTC_TC during paging (PG) tests.
Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DF01	? TIMEOUT T_wait_ptc_mac		I	1.
2	DF02	? TIMEOUT T_1_mf		F	1.
3	DF03	PHL ? PL_FREQ_ADJ_REQ CANCEL	Pl_freq_adj_req	I	2.
4		PHL ? PL_RX_CFM	Pl_rx_cfm_01		3.
5		RETURN			
6		PHL ? PL_RX_REQ	Pl_rx_req_01		3.
7		RETURN			
8	DF05	PHL ? PL_TX_REQ CANCEL	Pl_tx_req_01	I	2.
9	DF06	PHL ? OTHERWISE CANCEL		F	

Detailed Comments : 1. No response from IUT.
2. Unexpected event from PTC_MAC.
3. Ignore these ASPs.

Annex B (normative): Specification of PTC LT_MAC

B.1 General requirements

The PTC LT_MAC (MAC emulation) shall, as a minimum, fulfil all requirements with profile status M in the profile Requirement List (profile RL) in ETS 300 474 [48], clause 7.

B.2 Additional requirements

A number of commands have been defined to control the behaviour of PTC LT_MAC (the MAC emulation). In the annex A, these are implemented as a co-ordination message with a parameter to specify the required action. The test system shall support the actions specified in table B.1.

Table B.1: Actions to be supported by the test system

Action	Ref. to ETS 300 175-3 [3]	Requirement
TSC_action2	6.2.5.1	Corrupt the A-field R-CRC in the next transmitted A-field.
TSC_action3	ETS 300 175-2 [2]: 4.8	Corrupt the Z-field in the next transmitted A-field.
TSC_action4	11.5.1	Generate an incorrect message for RFPI handshake. Change the RFPI transmitted by the Lower Tester on all traffic bearers to the IUT by inverting bit a47.
TSC_action5	10.8.1.1	Do not acknowledge until CS segment have been received three times.
TSC_action16	ETS 300 175-7 [7]: 6.4.6	Do not acknowledge receipt of the START.CONF or STOP.CONF MT message, i.e. do not send corresponding START.GRANT or STOP.GRANT MT message.
TSC_action17	10.5.1 - 10.6.2	Initiate bearer handover to the same RFP (intracell)
TSC_action18	10.5.1 - 10.6.2	Initiate bearer handover to a different RFP (intercell)
TSC_start	11.3.2	Try to enter state Idle_Locked.
TSC_stop	11.5.1	1) Stop all transmission; and then 2) Wait T201 seconds.

NOTE: These actions are defined as Test Suite Constants in the ATS (annex A).

Annex C (normative): Partial PIXIT proforma for DECT MAC

Notwithstanding the provisions of the copyright clause related to the text of this ETS, ETSI grants that users of this ETS may freely reproduce the PIXIT proforma in this annex so that it can be used for its intended purposes and may further publish the completed PIXIT.

The PIXIT Proforma is based on ISO/IEC 9646-6 [26]. Any additional information needed can be found in this international standard document.

C.1 Identification summary

Table C.1

PIXIT Number:	
Test Laboratory Name:	
Date of Issue:	
Issued to:	

C.2 ATS summary

Table C.2

Protocol Specification:	ETS 300 175-3
Protocol to be tested:	
ATS Specification:	ETS 300 497-3
Abstract Test Method:	ETS 300 497-3 clause 4

C.3 Test laboratory

Table C.3

Test Laboratory Identification:	
Test Laboratory Manager:	
Means of Testing:	
SAP Address:	

C.4 Client identification

Table C.4

Client Identification:	
Client Test manager:	
Test Facilities required:	

C.5 SUT

Table C.5

Name:	
Version:	
SCS Number:	
Machine configuration:	
Operating System Identification:	
IUT Identification:	
PICS Reference for IUT:	
Limitations of the SUT:	
Environmental Conditions:	

C.6 Protocol layer information

C.6.1 Protocol identification

Table C.6

Name:	DECT - Medium Access Control Layer ETS 300 175-3 FT part
Version:	
PICS References:	

C.6.2 IUT information

Table C.7: Addresses

Item	Parameter	Parameter Type	Explanation	Value
1	TSPX_pmid	B_20 - (Bitstring[20])	PMID for RFP	
2	TSPX_rfp1	B_40 - (Bitstring[40])	RFPI for RFP number 1 (ETS 300 175-6 [6])	
3	TSPX_rfp2	B_40 - (Bitstring[40])	RFPI for RFP number 2 (ETS 300 175-6 [6])	

Table C.8: Timer values

Item	Parameter	Parameter Type	Explanation	Value
1	TSPX_t_implicit_send	INT_0_99 - INTEGER (0..99)	Max. time to wait after request for invocation of an implicit send event (In second).	

Table C.9: Procedural information

Item	Parameter	Parameter Type	Explanation	Value
1	TSPX_blind_slot	BOOLEAN	TRUE for IUT that have blind slot.	TRUE FALSE
2	TSPX_encryption	BOOLEAN	Does the IUT support encryption process.	TRUE FALSE
3	TSPX_deactivation	BOOLEAN	Does the IUT support encryption deactivation process.	TRUE FALSE
4	TSPX_extended_rf	BOOLEAN	Does the IUT support extended RF carrier.	TRUE FALSE
5	TSPX_sari	BOOLEAN	Does the IUT support SARI list.	TRUE FALSE
6	TSPX_intercell_handover	BOOLEAN	Does the IUT support intercell handover.	TRUE FALSE
7	TSPX_intracell_handover	BOOLEAN	Does the IUT support intracell handover.	TRUE FALSE
8	TSPX_in_pdu	OCTETSTRING	Indicate in the following lines an acceptable information field for a FU1 frame sent by the tester.	
9	TSPX_bearer_handover	BOOLEAN	Does the IUT support bearer handover withing the whole FT?	TRUE FALSE

Table C.10: Implicit send events

Item	PIXIT (see Note)	Parameter Type	Indication how the implicit send event can be invoked
1	TSPX_invoke_short_page	Implicit Send	Indicate in the following lines the procedure to force the IUT to transmit a paging message in short page format.
2	TSPX_invoke_zero_page	Implicit Send	Indicate in the following lines the procedure to force the IUT to transmit a paging message in zero page format.
3	TSPX_invoke_sari_message	Implicit Send	Indicate in the following lines the procedure to force the IUT to transmit the NT message with E bit set (A SARI is introduced).

NOTE: The PIXIT names are related to the test steps where the Implicit send events are handled, e.g. the PIXIT TSPX_invoke_abnormal_release is related to the test step STP_invoke_abnormal_release.

Annex D (normative): Protocol Conformance Test Report (PCTR) Proforma For DECT MAC

Notwithstanding the provisions of the copyright clause related to the text of this ETS, ETSI grants that users of this ETS 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.

The PCTR Proforma is based on ISO/IEC 9646-6 [26]. Any additional information needed can be found in this international standard document.

D.1 Identification summary

D.1.1 Protocol conformance test report

Table D.1

PCTR Number:	
PCTR Date:	
Corresponding SCTR Number:	
Corresponding SCTR Date:	
Test Laboratory Identification:	
Test Laboratory Manager:	
Signature:	

D.1.2 IUT identification

Table D.2

Name:	
Version:	
Protocol specification:	
PICS:	
Previous PCTR if any:	

D.1.3 Testing environment

Table D.3

PIXIT Number:	
ATS Specification:	ETS 300 497-3
Abstract Test Method:	ETS 300 497-3 clause 4
Means of Testing identification:	
Date of testing:	
Conformance Log reference(s):	
Retention Date for Log reference(s):	

D.1.4 Limits and reservation

Additional information relevant to the technical contents or further use of the test report, or the rights and obligations of the test laboratory and the client, may be given here. Such information may include restriction on the publication of the report.

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D.1.5 Comments

Additional comments may be given by either the client or the test laboratory on any of the contents of the PCTR, for example, to note disagreement between the two parties.

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D.2 IUT Conformance status

This IUT has or has not been shown by conformance assessment to be non conforming to the specified protocol specification.

Strike the appropriate words in this sentence. If the PICS for this IUT is consistent with the static conformance requirements (as specified in clause 3 in this report) and there are no "FAIL" verdicts to be recorded (in clause 6) strike the words "has or". otherwise strike the words "or has not".

D.3 Static conformance summary

The PICS for this IUT is or is not consistent with the static conformance requirements in the specified protocol.

Strike the appropriate words in this sentence.

D.4 Dynamic conformance summary

The test campaign did or did not reveal errors in the IUT.

Strike the appropriate words in this sentence. If there are no "FAIL" verdicts to be recorded (in clause 6 of this report) strike the words "did or". otherwise strike the words "or did not".

Summary of the results of groups of test:

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D.5 Static conformance review report

If clause 3 indicates non-conformance, this subclause itemises the mismatches between the PICS and the static conformance requirements of the specified protocol specification.

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D.6 Test campaign report

Table D.4

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause 7)
TC_FT_BH_BV_00	Yes/No	Yes/No		
TC_FT_BH_BV_01	Yes/No	Yes/No		
TC_FT_BH_CA_00	Yes/No	Yes/No		
TC_FT_BH_CA_01	Yes/No	Yes/No		
TC_FT_BR_CA_00	Yes/No	Yes/No		
TC_FT_BS_BV_00	Yes/No	Yes/No		
TC_FT_BS_CA_00	Yes/No	Yes/No		
TC_FT_DB_BV_03	Yes/No	Yes/No		
TC_FT_DB_CA_00	Yes/No	Yes/No		
TC_FT_DB_CA_01	Yes/No	Yes/No		
TC_FT_DB_CA_02	Yes/No	Yes/No		
TC_FT_DB_CA_03	Yes/No	Yes/No		
TC_FT_DB_CA_04	Yes/No	Yes/No		
TC_FT_DB_CA_05	Yes/No	Yes/No		
TC_FT_DB_CA_06	Yes/No	Yes/No		
TC_FT_DB_CA_07	Yes/No	Yes/No		
TC_FT_DT_BI_00	Yes/No	Yes/No		
TC_FT_DT_BI_01	Yes/No	Yes/No		
TC_FT_DT_BV_00	Yes/No	Yes/No		
TC_FT_DT_BV_01	Yes/No	Yes/No		
TC_FT_DT_CA_00	Yes/No	Yes/No		
TC_FT_DT_CA_01	Yes/No	Yes/No		
TC_FT_DT_CA_02	Yes/No	Yes/No		
TC_FT_DT_CA_03	Yes/No	Yes/No		
TC_FT_DT_CA_04	Yes/No	Yes/No		
TC_FT_LM_CA_05	Yes/No	Yes/No		
TC_FT_PG_BV_01	Yes/No	Yes/No		
TC_FT_PG_CA_00	Yes/No	Yes/No		
TC_FT_PG_CA_01	Yes/No	Yes/No		

D.7 Observations

Additional information relevant to the technical content of the PCTR are given here.

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Annex E (informative): Bibliography

- 1) EWOS/ETSI Project Team No 5: "Project Report and Technical Report. OSI Conformance Testing Methodology and Procedures in Europe".
- 2) ETR 022 (1991): "Advanced Testing Methods (ATM); Vocabulary of terms used in communications protocols conformance testing".
- 3) ETR 141: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; The Tree and Tabular Combined Notation (TTCN) style guide".
- 4) CEPT Recommendation T/SGT SF2 (89) 6/0: "Draft Recommendation T/SF Services and Facilities of Digital European Cordless Telecommunications".
- 5) ETR 015: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Reference document".
- 6) ETR 041: "Transmission and Multiplexing (TM); Digital European Cordless Telecommunications (DECT); Transmission aspects 3,1 kHz telephony Interworking with other networks".
- 7) ETR 042: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); A Guide to DECT features that influence the traffic capacity and the maintenance of high radio link transmission quality, including the results of simulations".
- 8) ETR 043: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Services and Facilities requirements specification".
- 9) ETR 056: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); System description document".

History

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