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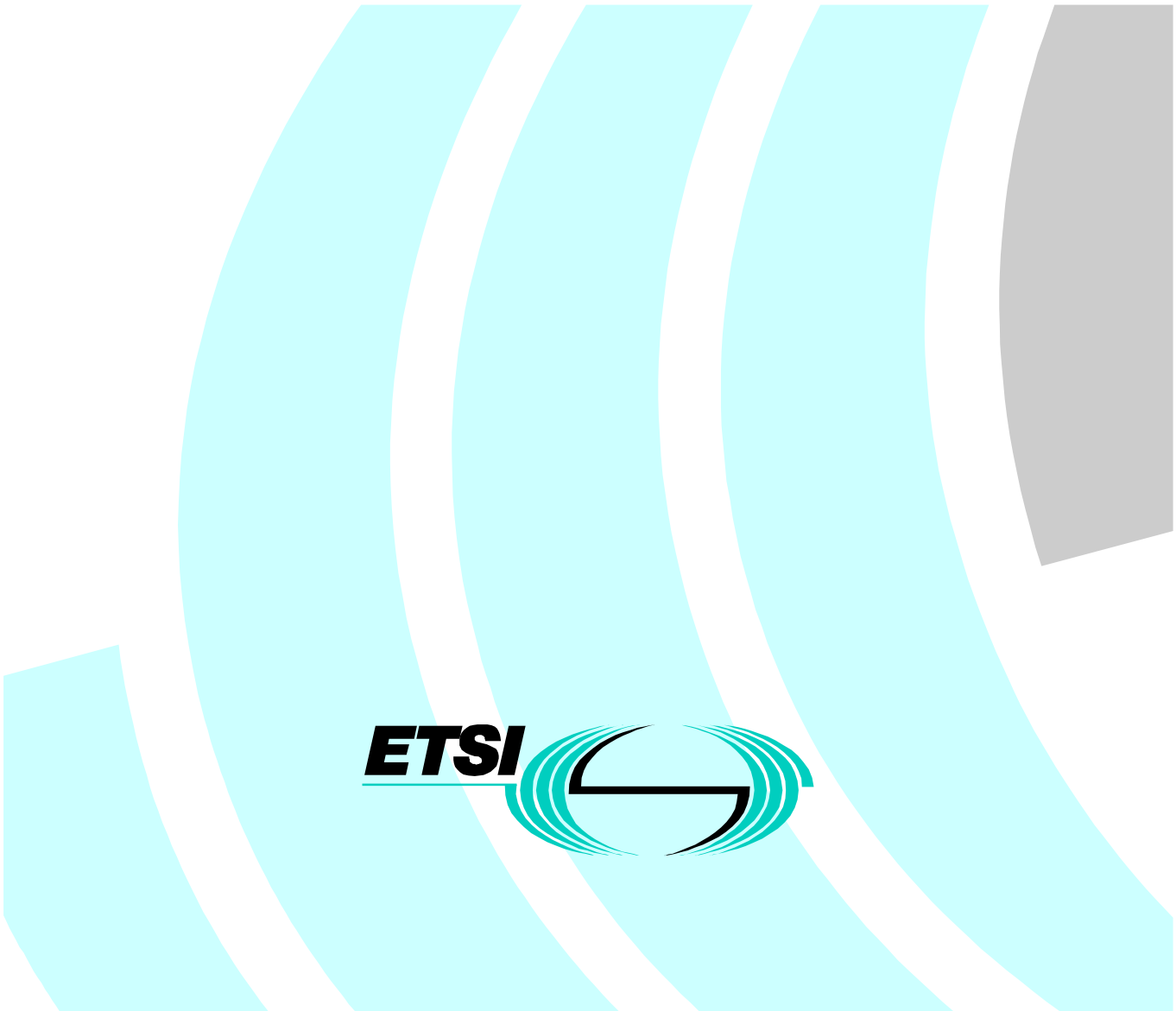
Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL); Part 1: Test Suite Structure (TSS) and Test Purposes (TP) - Medium Access Control (MAC) layer



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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Project Digital Enhanced Cordless Telecommunications (DECT), and is now submitted for the Public Enquiry phase of the ETSI standards Two-step Approval Procedure.

The present document is Part 1 of a multi-Part EN covering the Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL), as identified below:

Part 1: "Test Suite Structure (TSS) and Test Purposes (TP) - Medium Access Control (MAC) layer";

Part 2: "Abstract Test Suite (ATS) - Medium Access Control (MAC) layer - Portable radio Termination (PT)";

Part 3: "Abstract Test Suite (ATS) - Medium Access Control (MAC) layer - Fixed radio Termination (FT)";

Part 4: "Test Suite Structure (TSS) and Test Purposes (TP) - Data Link Control (DLC) layer";

Part 5: "Abstract Test Suite (ATS) - Data Link Control (DLC) layer - Portable radio Termination (PT)";

Part 6: "Abstract Test Suite (ATS) - Data Link Control (DLC) layer - Fixed radio Termination (FT)";

Part 7: "Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer";

Part 8: "Abstract Test Suite (ATS) - Network (NWK) layer - Portable radio Termination (PT)";

Part 9: "Abstract Test Suite (ATS) - Network (NWK) layer - Fixed radio Termination (FT)".

Proposed national transposition dates	
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1 Scope

The present document contains the Test Suite Structure (TSS) and Test Purposes (TP) to test the DECT Packet Radio Service (DPRS) Medium Access Control (MAC) layer.

The objective of this test specification is to provide a basis for conformance tests for DECT equipment giving a high probability of air interface inter-operability between different manufacturer's DECT equipment.

The ISO standard for the methodology of conformance testing (ISO/IEC 9646-1 [6] and ISO/IEC 9646-2 [7]) as well as the ETSI rules for conformance testing (ETS 300 406 [5]) are used as a basis for the test methodology.

2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] EN 300 175-3: "Digital Enhanced Cordless Telecommunications (DECT);Common Interface (CI); Part 3: Medium access control layer".

[2] EN 300 175-6: "Digital Enhanced Cordless Telecommunications (DECT); Common interface; Part 6: Identities and addressing".

[3] EN 300 175-7: "Digital Enhanced Cordless Telecommunications (DECT); Common interface; Part 7: Security features".

[4] EN 301 649: "Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Services (DPRS)".

[5] ETS 300 406: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

[6] 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)).

[7] 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)).

[8] ISO/IEC 9646-6 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".

[9] ISO/IEC 9646-7 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation conformance statement".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

a) the terms defined in ISO/IEC 9646-7 [9]; and

b) the definitions in EN 300 175-3 [1].

3.2 Abbreviations

For the purposes of the present document, the abbreviations defined in ISO/IEC 9646-1 [6], ISO/IEC 9646-6 [8], ISO/IEC 9646-7 [9], the abbreviations defined in EN 300 175-3 [1] apply. In particular, the following definitions apply:

ARQ	Automatic Repeat Request
BI	Invalid Behaviour
BV	Valid Behaviour
C/L	Connectionless
CA	Capability tests
C_F	higher layer signalling Channel (fast)
CI	Common Interface
C-Plane	Control Plane
C_S	higher layer signalling Channel (slow)
DECT	Digital Enhanced Cordless Telecommunications
DLC	Data Link Control
FP	Fixed Part
FT	Fixed radio Termination
I	higher layer Information channel (see I_N and I_P)
I_N	higher layer Information channel (unprotected)
I_P	higher layer Information channel (protected)
IUT	Implementation Under Test
LLME	Lower Layer Management Entity
MAC	Medium Access Control
N_T	identities channel
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
PP	Portable Part
PT	Paging channel
PT	Portable radio Termination
Q_T	system information channel
RF	Radio Frequency
RFP	Radio Fixed Part
TP	Test Purposes
TSS	Test Suite Structure
U-Plane	User Plane

4 Test suite structure

4.1 Overview

MAC layer is layer 2a of the DECT protocol stack.

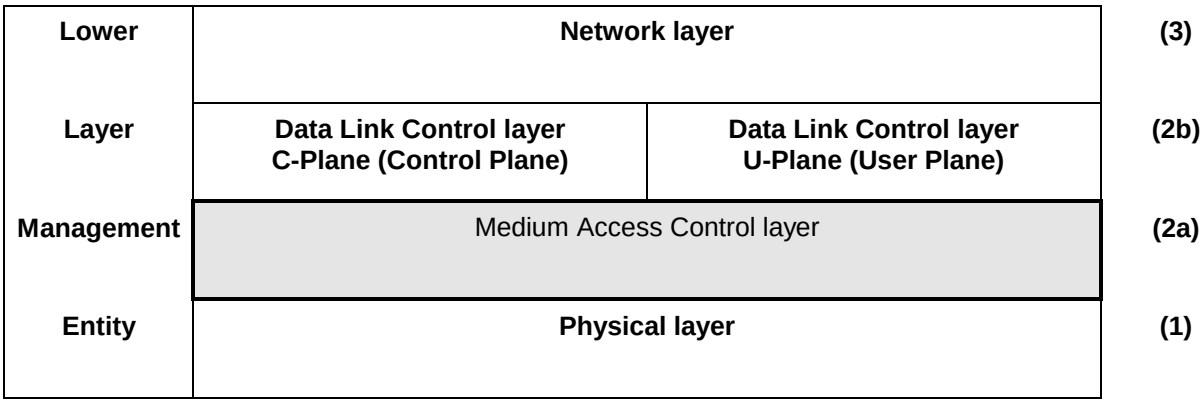

Figure 1: DECT protocol stack

MAC layer specifies three groups of services:

- the broadcast message control service;
- the connectionless message control service; and
- the multi-bearer control service.

The MAC layer also specifies the logical channels that are used by the above mentioned services, and how they are multiplexed and mapped into the service data units that are exchanged with the physical layer.

Figure 2 shows the MAC Test Suite Structure (TSS) including its subgroups defined for the conformance testing.

Test Suite	Protocol group	Protocol subgroup	Test group
MAC	General		CA
	Broadcast services	Downlink broadcast	CA
			BV
		Non continuous broadcast	CA
		Paging services	CA
			BV
	Advanced connection	Bearer setup	CA
		Connection modification	CA
		Bearer release	CA
		Bearer handover	CA
		Connection handover	CA
	C-plane services		CA
	U-plane services		CA
			BV
			BI
	Encryption		CA
	MAC layer management		CA

Figure 2: TSS for DECT MAC layer (layer 2a of DECT protocol stack)

4.2 Test suite structure (TSS)

The test suite is structured as a tree with a first level defined as MAC representing the protocol group "MAC for PP and FP".

4.3 Test groups

The test groups are organized in three levels. The first level creates seven protocol groups representing the protocol services. The second level, if the third level exists, separates the protocol services in functional modules. The last level in each branch contains one or more of the standard ISO subgroups CA, BV and BI.

4.3.1 Protocol groups

The protocol groups identifies the DECT MAC services: general services, broadcast services, advanced connection services, C-plane services, U-plane services, encryption procedures, layer management procedures, as defined in EN 300 175-3 [1].

4.3.1.1 General services

The general services protocol group contains directly the main test group CA.

4.3.1.2 Broadcast services

The broadcast services protocol group is divided in three functional modules. The first functional module identifies the downlink broadcast services. The second functional module identifies the non-continuous broadcast services. The last functional module identifies the paging services.

4.3.1.3 Advanced connection services

The advanced connection services protocol group is divided in five functional modules. The first functional module distinguishes the bearer setup subgroup. The second functional module distinguishes the connection modification subgroup. The third functional module distinguishes the bearer handover subgroup. The fourth functional module distinguishes the bearer release subgroup. The last functional module distinguishes the connection handover subgroup.

4.3.1.4 C-plane services

The C-plane services protocol group contains directly the main test group CA.

4.3.1.5 U-plane services

The U-plane services protocol group contains directly the main test groups CA, BV and BI.

4.3.1.6 Encryption

The encryption protocol group contains directly the main test group CA.

4.3.1.7 Layer management procedures

The layer management procedures protocol group contains directly the main test group CA.

4.3.2 Main test groups

The main test groups are the capability group, the valid behaviour group and the invalid behaviour group.

4.3.2.1 Capability (CA) tests

This test sub group shall provide limited testing of the major IUT capabilities aiming to insure that the claimed capabilities are correctly supported, according to the PICS.

4.3.2.2 Valid Behaviour (BV) tests

This test sub group shall verify that the IUT reacts in conformity with the EN, after receipt or exchange of a valid Protocol Data Units (PDUs). Valid PDUs means that the exchange of messages and the content of the exchanged messages are considered as valid.

4.3.2.3 Invalid Behaviour (BI) tests

This test sub group shall verify that the IUT reacts in conformity with the EN, after receipt of a syntactically invalid PDU.

5 Test Purposes (TP)

5.1 Introduction

5.1.1 TP definition conventions

The TPs are defined following particular rules as shown in table 1.

Table 1: TP definition rules

TP Id according to the TP naming conventions	**Reference.** **Initial condition.** **Stimulus.** **Expected behaviour.**
TP Id	The TP Id is a unique identifier it shall be specified according to the TP naming conventions defined in the subclause below.
Reference	The reference should contain the references of the subject to be validated by the actual TP (specification reference, clause, paragraph).
Condition	The condition defines in which initial state the IUT has to be to apply the actual TP.
Stimulus	The stimulus defines the test event to which the TP is related.
Expected behaviour	Definition of the events that are expected from the IUT to conform to the base specification.

5.1.2 TP naming conventions

The identifier of the TP is built according to table 2.

Table 2: TP naming convention

Identifier:	**TP/<fm>/<x>-<nn>**		
	<fm> = functional module	DB	Downlink Broadcast
		PG	Paging services
		NB	Non Continuous Broadcast
		BS	Bearer setup
		CM	Connection modification
		BH	Bearer handover
		BR	Bearer release
		CH	Connection handover
		DT	C-plane services
		UP	U-plane services
		EN	Encryption
		LM	Layer Management
	x = Type of testing	CA	Capability Tests
		BV	Valid Behaviour Tests
		BI	Invalid Behaviour Tests
	<nn> = sequential number	(00-99)	Test Purpose Number

5.1.3 Sources of TP definitions

All TPs are specified according to EN 300 175-3 [1] with respect to the requirements expressed in EN 301 649 [4].

5.2 Test purposes for FT part

5.2.1 TP presentation

Test purposes are presented by a logical grouping related to MAC services. The naming is in line with the test suite structure. Existing test purposes in the CI test case library are highlighted by a greyed name column.

5.2.2 General services

5.2.2.1 MAC service and procedure concerned

M.1 General		
	General	EN 300 175-3 [1]: 4.2, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 7.1.2, 7.1.4, 11.3.3, 11.7, 11.8, 11.9

5.2.2.2 Test purposes

No specific test purposes are defined for the M.1 General service. Format, Coding, Multiplex, Scrambling, etc.. are implicitly tested in other tests defined in the present document.

5.2.3 Broadcast services

5.2.3.1 Downlink broadcast

Test group objective:	Verify the correct implementation of the Downlink broadcast services.

5.2.3.1.1 MAC service and procedure concerned

M.3 Continuous broadcast		
	Downlink broadcast	EN 300 175-3 [1]: 7.2.2, 7.2.3.2, 7.2.3.3, 7.2.3.4, 7.2.3.5
M.11 Encryption activation		
	Encryption process - initialization and synchronization	EN 300 175-7 [3]: 6.4.4, 6.4.5
M.15 SARI support		
	Downlink broadcast	EN 300 175-3 [1]: 7.2.3.6

5.2.3.1.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the Downlink broadcast services are in accordance with the static conformance requirements.

Test purposes:	
TP/FT/DB/CA-00	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 6.2.2.1 Initial state: Active_idle. Check that the IUT transmits constantly at least in frame 14 of each multiframe, the correct N_T message.
TP/FT/DB/CA-01	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 6.2.2.1 to 9.1.3.1 Initial state: Active_idle. Check that the IUT transmits constantly at least once every T205 seconds in frame 0, the correct N_T message.
TP/FT/DB/CA-02	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 6.2.2.1 to 7.2.3 Initial state: Active_idle. Check that the IUT transmits constantly one correct Q_T message in frame 8 of each multiframe.
TP/FT/DB/CA-03	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 6.2.2.1 to 7.2.3.2 Initial state: Active_idle. Check that the IUT transmits constantly at least one static system information Q_T message in each interval of 8 multiframes and that all such messages are correct.
TP/FT/DB/CA-04	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 6.2.2.1 to 7.2.3.4 Initial state: Active_idle. Check that the IUT transmits constantly at least one fixed Part capabilities Q_T message in each interval of 8 multiframes and that all such messages are correct.
TP/FT/DB/CA-05	DPRS services M.3 Continuous broadcast and M.11 Encryption activation EN 300 175-3 [1]: 6.2.2.1 to 7.2.3 Only for FT supporting encryption. Initial state: Active_idle. Check that the IUT transmits constantly at least one multiframe number Q_T message in each interval of 8 multiframes and that all such messages are correct.
TP/FT/DB/CA-06	DPRS service M.15 SARI support EN 300 175-3 [1]: 6.2.2.1 to 7.2.3.6 Only for FT supporting SARI. Initial state: Active_idle. Check that the IUT transmits constantly at least one SARI list content Q_T message in each interval of 4 multiframes and that all such messages are correct.
TP/FT/DB/CA-07	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 6.2.2.1 to 7.2.3.3 Only for FT supporting extended RF. Initial state: Active_idle. Check that the IUT transmits the correct "Extended RF carrier information" Q message in the multi-frame following the "Static system information" Q_T message with the Extended RF carrier bit set.
TP/FT/DB/CA-51	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 7.2.4.3.9 Only for FT supporting RFP status. Initial state: Active_idle. Check that the IUT broadcasts the RFP status message at least once every 10 seconds.
TP/FT/DB/CA-52	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 6.2.2.1 to 7.2.3.5 Only for FT supporting extended fixed Part capabilities. Initial state: Active_idle. Check that the IUT broadcasts the extended fixed Part capabilities message at least once in every 8 multi frames.

5.2.3.1.3 BV test purposes

Subgroup objective:	To test the behaviour of the IUT concerning the Downlink broadcast services in relation to syntactically and contextual correct behaviour of the test system.

Test purposes:	
TP/FT/DB/BV-03	DPRS service M.15 SARI support EN 300 175-3 [1]: 6.2.2.1 to 7.2.2; EN 300 175-6 [2]: 7.1 Initial state: Inactive. Check that once a SARI is introduced into the FT, the E-bit within the N_T message is indicating SARI list available.

5.2.3.2 Non continuous broadcast

Test group objective:	Verify the correct implementation of the Non continuous broadcast services.

5.2.3.2.1 MAC service and procedure concerned

M.2 Non continuous broadcast		
	Request for specific Q-channel information	EN 300 175-3 [1]: 9.3.1.2
	Request for a new dummy	EN 300 175-3 [1]: 9.3.2.

5.2.3.2.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the non continuous broadcast services are in accordance with the static conformance requirements.

Test purposes:	
TP/FT/NB/CA-data00	DPRS service M.2 Non continuous broadcast EN 300 175-3 [1]: 9.3.1.2 Initial state: Active_idle. Check that the IUT reply correctly to a request for extended system information initiated by the Tester acting as a PT.
TP/FT/NB/CA-data01	DPRS service M.2 Non continuous broadcast EN 300 175-3 [1]: 9.3.1.2 Initial state: Active_idle. Check that the IUT reply correctly to a request for a new dummy (ignore or install) initiated by the Tester acting as a PT.

5.2.3.3 Paging services

Test group objective:	Verify the correct implementation of the paging services.

5.2.3.3.1 MAC service and procedure concerned

M.4 Paging broadcast		
	Normal paging	EN 300 175-3 [1]: 9.1.3, 11.3.3.1
	High duty cycle paging	EN 300 175-3 [1]: 9.1.3, 11.3.3.1
	Low duty cycle paging	EN 300 175-3 [1]: 9.1.3, 11.3.3.1

5.2.3.3.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the paging services are in accordance with the static conformance requirements.

Test purposes:	
TP/FT/PG/CA-00	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 9.1.3 Initial state: Active_idle. Check that the IUT can transmit a short page message.
TP/FT/PG/CA-01	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 9.1.3 Only for FT that has 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.
TP/FT/PG/CA-data00	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 9.1.3 Initial state: Active_idle. Check that the IUT can transmit a full page message.
TP/FT/PG/CA-data01	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 9.1.3 Initial state: Active_idle. Check that the IUT can transmit a long page (36 bits) message.

5.2.3.3.3 BV test purposes

Subgroup objective:	To test the behaviour of the IUT in relation to syntactically and contextual correct behaviour of the test system.

Test purposes:	
TP/FT/PG/BV-01	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 11.8 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.
TP/FT/PG/BV-data00	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 9.1.3 Initial state: Active_idle. Check that the IUT uses directly a frame number 2, 4, 6, 10, 12 of a multiframe when fast paging is required. (IUT has to be configured to avoid frame 0)
TP/FT/PG/BV-data01	DPRS service M.4 Paging broadcast EN 301 649 [4]: 10.7.4 Initial state: Active_idle. Check that the IUT, to resume a suspended connection, sends a MAC resume page message to invite the PT to initiate the resume connection procedure.
TP/FT/PG/BV-data02	DPRS service M.4 Paging broadcast EN 301 649 [4]: 10.9.3 Initial state: Active_idle. Check that the IUT, announces a new connectionless downlink bearers for SI_P data by broadcast of the MAC layer information "Dummy or C/L bearer" or "C/L bearer position" at least each 4 multiframes.

5.2.4 Advanced connection

5.2.4.1 Bearer setup procedures

Test group objective:	Verify the correct implementation of Bearer setup procedures

5.2.4.1.1 MAC service and procedure concerned

M.5 Advanced connection		
	PT initiated pilot bearer setup	EN 300 175-3 [1]: 10.5.1.3.1
	FT initiated pilot bearer setup (Fast setup)	EN 300 175-3 [1]: 10.5.1.3.2
	Additional bearer setup (duplex)	EN 300 175-3 [1]: 10.2.4.3, 10.5.1.3
	Additional bearer setup (double simplex)	EN 300 175-3 [1]: 10.2.4.3, 10.5.1.4

5.2.4.1.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the advanced connection procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/FT/BS/CA-data00	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.5.1.3.1 Initial state: Active_Idle Check that the IUT manages rightly the PT initiated B-field single bearer setup procedure.
TP/FT/BS/CA-data01	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.5.1.3.2 Initial state: Active_Idle Check that the IUT manages rightly the FT initiated B-field single bearer fast setup procedure without wait messages.
TP/FT/BS/CA-data02	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.5.1.3.2 Initial state: Active_Idle Check that the IUT manages rightly the FT initiated B-field single bearer fast setup procedure with wait messages.
TP/FT/BS/CA-data03	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.5.1.3 Initial state: Active_idle. Check that the IUT manages rightly the PT initiated B-field duplex bearer setup procedure for additional bearers of a symmetric multibearer connection.
TP/FT/BS/CA-data04	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.5.1.4 Initial state: Active_idle. Check that the IUT is able to handle double simplex bearer setup procedure, initiated by the tester for additional bearers of an asymmetric multibearer connection.

5.2.4.2 Connection modification procedures

Test group objective:	Verify the correct implementation of connection modification procedures

5.2.4.2.1 MAC service and procedure concerned

M.5 Advanced connection		
	Connection modification	EN 300 175-3 [1]: 10.3

5.2.4.2.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the connection modification procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/FT/CM/CA-data00	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.3 Initial State: Active_Traffic. Verify that the IUT is able to handle correctly a connection modification changing the number of bearers used in a symmetric multibearer connection
TP/FT/CM/CA-data01	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.3 Initial State: Active_Traffic. Verify that the IUT is able to handle correctly a connection modification changing the number of bearers used in an asymmetric multibearer connection

5.2.4.3 Bearer release procedures

Test group objective:	Verify the correct implementation of bearer release procedures

5.2.4.3.1 MAC service and procedure concerned

M.5 Advanced connection		
	Unacknowledged bearer release	EN 300 175-3 [1]: 10.7.2.1
	Acknowledged bearer release	EN 300 175-3 [1]: 10.7.2.2
	Bandwidth reversal fast release	EN 300 175-3 [1]: 10.7.2.3

5.2.4.3.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the bearer release procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/FT/BR/CA-data00	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.7.2.1 Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT manages rightly the release of an advanced duplex bearer with an unacknowledge release procedure when receiving a release message.
TP/FT/BR/CA-data01	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.7.2.2 Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT manages rightly the release of a double simplex bearer with an acknowledge release procedure when receiving a release message.
TP/FT/BR/CA-data02	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.4 Initial state: Active_traffic. Check that the IUT manages rightly a release of a mulitbearer connection initiated by the tester by releasing all active bearers.
TP/FT/BR/CA-data03	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.7.2.3 Initial State: Active_Traffic. Verify that the IUT is able to handle correctly a connection modification reversion the direction of an asymmetric multibearer connection

5.2.4.4 Bearer handover procedures

Test group objective:	Verify the correct implementation of bearer handover procedures.

5.2.4.4.1 MAC service and procedure concerned

M.17 Bearer handover		
	Bearer handover request	EN 300 175-3 [1]: 10.6.2, 10.5.1.1

5.2.4.4.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the bearer handover procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/FT/BH/CA-01	DPRS service M.17 Bearer handover EN 300 175-3 [1]: 10.6 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.

5.2.4.5 Connection handover procedures

Test group objective:	Verify the correct implementation of bearer release procedures

5.2.4.5.1 MAC service and procedure concerned

M.18 Connection handover		
	Advanced connection handover	EN 300 175-3 [1]: 10.2.4.3, 10.5.1.3.1

5.2.4.5.2 Test purposes

The behaviour of the connection handover procedures of the MAC layer of the IUT is tested at the NWK layer level of the test specification (Part 7 of the present document).

5.2.5 C-plane higher layer signalling

Test group objective:	Verify the correct implementation of C-plane higher layer signalling procedures.

5.2.5.1 MAC service and procedure concerned

M.9 CS higher layer signalling		
	CS channel data	EN 300 175-3 [1]: 10.8.1, 10.8.1.1
M.10 CF higher layer signalling		
	CF channel data	EN 300 175-3 [1]: 10.8.1, 10.8.1.2

5.2.5.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the C-plane higher layer signalling procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/FT/DT/CA-00	DPRS service M.9 CS higher layer signalling EN 300 175-3 [1]: 10.8.1.1 Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT re-transmits C segment until it receives an acknowledgement in the same Automatic Repeat Request (ARQ) window.
TP/FT/DT/CA-01	DPRS service M.9 CS higher layer signalling EN 300 175-3 [1]: 10.8.1.1 Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT does not transmit another C_S segment until the successful transmission of the current segment.
TP/FT/DT/CA-02	DPRS service M.9 CS higher layer signalling EN 300 175-3 [1]: 10.8.1.1 Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT manages correctly the one bit numbering of the C_S segments.
TP/FT/DT/CA-data00	DPRS service M.10 CF higher layer signalling EN 300 175-3 [1]: 10.8.1.2 Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT re-transmits a set of CFsegment until it receives an acknowledgement in the same Automatic Repeat Request (ARQ) window.
TP/FT/DT/CA-data01	DPRS service M.10 CF higher layer signalling EN 300 175-3 [1]: 10.8.1.2 Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT does not transmit another set of CF segment until the successful transmission of the current set.
TP/FT/DT/CA-data02	DPRS service M.10 CF higher layer signalling EN 300 175-3 [1]: 10.8.1.2 Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT manages correctly the one bit numbering of the set of CF segments.

5.2.6 U-plane services

Test group objective:	Verify the correct implementation of U-plane procedures.

5.2.6.1 MAC service and procedure concerned

M.6 I_P_error_detection service		
	I_P-error-detect mode	EN 301 649 [4]: 10.9.1
M.7 I_P_error_correction service		
	I_P-error-correct mode	EN 301 649 [4]: 10.9.2
	Unilateral jump	EN 301 649 [4]: D.1.4
	Bearer reset	EN 300 175-3 [1]: 10.8.2.5.3
M.8 U-plane point-to-multipoint service		
	Connectionless SIp mode	EN 301 649 [4]: D.1.1
M.16 Bearer replacement		
	Bearer replacement	EN 300 175-3 [1]: 10.8.2.5.1, EN 301 649 [4]: D.1.5

5.2.6.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the U-plane procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/FT/UP/CA-data00	DPRS service M.6 I_P_error_detection EN 301 649 [4]: 10.9.1 Initial state: Active_traffic or Active_traffic_and_idle. Verify that the IUT is able to receive I_P-error-detect data for a symmetric connection.
TP/FT/UP/CA-data01	DPRS service M.6 I_P_error_detection EN 301 649 [4]: 10.9.1 Initial state: Active_traffic or Active_traffic_and_idle. Verify that the IUT is able to receive I_P-error-detect data for an asymmetric connection.
TP/FT/UP/CA-data02	DPRS service M.7 I_P_error_correction EN 301 649 [4]: 10.9.1 Initial state: Active_traffic or Active_traffic_and_idle. Verify that the IUT is able to receive I_P-error-correct data for a symmetric connection and react with the correct settings of BCK and Q2 bits.
TP/FT/UP/CA-data03	DPRS service M.7 I_P_error_correction EN 301 649 [4]: 10.9.1 Initial state: Active_traffic or Active_traffic_and_idle. Verify that the IUT is able to receive I_P-error-correct data for an asymmetric connection and react with the correct MAC-mod2-ACK message.
TP/FT/UP/CA-data04	DPRS service M.7 I_P_error_correction EN 300 175-3 [1]: 10.8.5.3 Initial state: Active_Traffic or Active_Traffic_and_Idle. Check that the IUT manages rightly the MAC IP bearer reset procedure.
TP/FT/UP/CA-data05	DPRS service M.16 Bearer replacement EN 300 175-3 [1]: 10.8.2.5.1; EN 301 649 [4]: D.1.5 Initial state: Active_Traffic or Active_Traffic_and_Idle. Check that the IUT manages rightly the bearer replacement procedure.
TP/FT/UP/CA-data06	DPRS service M.8 U-plane point-to-multipoint EN 301 649 [4]: 10.9.3 Initial state: Active_idle. Check that the IUT, is able to transmit SI_P data on connectionless downlink bearers.

5.2.6.3 BI test purposes

Subgroup objective:	To check the behaviour of the of the IUT in response to invalid messages.

Test purposes:	
TP/FT/UP/BI-data00	DPRS service M.7 I_P_error_correction EN 300 175-3 [1]: 10.8.2.4.1 Initial state: Active_Traffic or Active_Traffic_and_Idle. Check that the IUT, when receiving I_P_error_correction data on a duplex bearer, is capable of detecting A-field R-CRC error and to respond with the correct Q2 bit setting (Q2 = 0).
TP/FT/UP/BI-data01	DPRS service M.7 I_P_error_correction EN 300 175-3 [1]: 10.8.2.4.1 Initial state: Active_Traffic or Active_Traffic_and_Idle. Check that the IUT, when receiving I_P_error_correction data on an asymmetric double simplex bearer, is capable of detecting A-field R-CRC error and to respond with the correct ACK bit setting indicating the packet number of the last correctly received I_P packet.

5.2.7 Encryption

Test group objective:	Verify the correct implementation of encryption procedures.

5.2.7.1 MAC service and procedure concerned

M.11 Encryption activation		
	Encryption process - initialization and synchronization	EN 300 175-7 [3]: 6.4.4, 6.4.5
	Encryption mode control	EN 300 175-7 [3]: 6.4.6
	PT Encryption activation	EN 300 175-7 [3]: 6.4.6.3
	Encryption handover control	EN 300 175-7 [3]: 6.4.7
M.12 Encryption deactivation		
	PT Encryption deactivation	EN 300 175-7 [3]: 6.4.6.4

5.2.7.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the encryption procedures are in accordance with the static conformance requirements

Test purposes:	
TP/FT/EN/CA-data00	DPRS service M.11 Encryption activation EN 300 175-7 [3]: 6.4 Only for IUT supporting encryption. Initial state: Active_Traffic or Active_Traffic_and_Idle. Check that the IUT manages correctly the procedure to switch an advanced connection from clear mode to encrypt mode.
TP/FT/EN/CA-data01	DPRS service M.12 Encryption deactivation EN 300 175-7 [3]: 6.4 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 an advanced connection from encrypt mode to clear mode.

5.2.8 MAC layer management

Test group objective:	Verify the correct implementation of the LLME MAC layer management procedures.

5.2.8.1 MAC service and procedure concerned

M.2 Non continuous broadcast		
	Extended system information	EN 300 175-3 [1]: 11.2
M.13 Quality control		
	RFPI handshake	EN 300 175-3 [1]: 11.5.1
	PT frequency correction procedure	EN 300 175-3 [1]: 11.5.2.2
M.14 Physical channel selection		
	Physical channel selection	EN 300 175-3 [1]: 11.4, 10.5.2

5.2.8.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the LLME MAC layer management procedures are in accordance with the static conformance requirements

Test purposes:	
TP/FT/LM/CA-data00	DPRS service M.2 Non continuous broadcast EN 300 175-3 [1]: 11.2 Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT responds correctly within T206 frames to a Tester (acting as a PT part) request for Extended system information..
TP/FT/LM/CA-data01	DPRS service M.13 Quality control. EN 300 175-3 [1]: 10.5.1.1 - 11.5.1 Initial state: Active_traffic or Active_traffic_and_idle. Check that the IUT releases a bearer if it has not received the correct RFPI on that bearer in the last T201 seconds during the time an advanced connection exists.

5.3 Test purposes for PT part

5.3.1 TP presentation

Test purposes are presented by a logical grouping related to MAC services. The naming is in line with the test suite structure. Existing test purposes in the CI test case library are highlighted by a greyed name column.

5.3.2 General services

5.3.2.1 MAC service and procedure concerned

M.1 General		
	General	EN 300 175-3 [1]: 4.2, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 7.1.2, 7.1.4, 11.3.3, 11.7, 11.8, 11.9

5.3.2.2 Test purposes

No specific test purposes are defined for the M.1 General service. Format, Coding, Multiplex, Scrambling, etc.. are implicitly tested in other tests defined in the present document.

5.3.3 Broadcast services

5.3.3.1 Downlink broadcast

Test group objective:	Verify the correct implementation of the Downlink broadcast services.

5.3.3.1.1 MAC service and procedure concerned

M.3 Continuous broadcast		
	Downlink broadcast	EN 300 175-3 [1]: 7.2.2, 7.2.3.2, 7.2.3.3, 7.2.3.4, 7.2.3.5
M.11 Encryption activation		
	Encryption process - initialization and synchronization	EN 300 175-7 [3]: 6.4.4, 6.4.5
M.15 SARI support		
	Downlink broadcast	EN 300 175-3 [1]: 7.2.3.6

5.3.3.1.2 CA test purposes

No TPs are defined for downlink broadcast services CA tests in the present document.

5.3.3.1.3 BV test purposes

Subgroup objective:	To test the behaviour of the IUT concerning the Downlink broadcast services in relation to syntactically and contextual correct behaviour of the test system.

Test purposes:	
TP/PT/DB/BV-01	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 7.2.3.3 Initial state: Idle_locked. Check that the IUT is able to establish a bearer after reception of the extended RF carrier information Q_T message.
TP/PT/DB/BV-02	DPRS service M.15 SARI support EN 300 175-3 [1]: 11.3.2 EN 300 175-6 [2]: 5.6 Initial state: Active_unlocked. Check that the IUT enters the idle locked state after receiving the Q_T SARI list contents message containing ARI matching the IUT PARK (the LT PARI does not match the IUT PARK).
TP/PT/DB/BV-51	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 7.2.4.3.9 Initial state: Active_idle. Check that the IUT does not attempt to send an access request to an RFP which is broadcasting "RFP busy" in the RFP status message after reception of this status message at the IUT.
TP/PT/DB/BV-52	DPRS service M.3 Continuous broadcast EN 300 175-3 [1]: 7.2.4.3.9 Initial state: Active_idle. Check that the IUT does not attempt to send an access request to an FP which is broadcasting "system busy" in the RFP status message after reception of this status message at the IUT.

5.3.3.2 Non continuous broadcast

Test group objective:	Verify the correct implementation of the Non continuous broadcast services.

5.3.3.2.1 MAC service and procedure concerned

M.2 Non continuous broadcast		
	Request for specific Q-channel information	EN 300 175-3 [1]: 9.3.1.2
	Request for a new dummy	EN 300 175-3 [1]: 9.3.2.

5.3.3.2.2 Test purposes

No TPs are defined for non continuous broadcast services for PT Part in the present document.

5.3.3.3 Paging services

Test group objective:	Verify the correct implementation of the paging services.

5.3.3.3.1 MAC service and procedure concerned

M.4 Paging broadcast		
	Normal paging	EN 300 175-3 [1]: 9.1.3, 11.3.3.1
	High duty cycle paging	EN 300 175-3 [1]: 9.1.3, 11.3.3.1
	Low duty cycle paging	EN 300 175-3 [1]: 9.1.3, 11.3.3.1

5.3.3.3.2 CA test purposes

Test purposes:	
TP/PT/PG/CA-00	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 9.1.3 Initial state: Idle_locked. Check that the IUT can receive a short page message.
TP/PT/PG/CA-01	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 9.1.3 Initial state: Idle_locked. Check that the IUT can receive a correct zero length page message.
TP/PT/PG/CA-data00	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 9.1.3 Initial state: Idle_locked. Check that the IUT can receive a full page message.
TP/PT/PG/CA-data01	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 9.1.3 Initial state: Idle_locked. Check that the IUT can receive a long page (36 bits) message.

5.3.3.3.3 BV test purposes

Subgroup objective:	To test the behaviour of the IUT in relation to syntactically and contextual correct behaviour of the test system.

Test purposes:	
TP/PT/PG/BV-02	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 7.2.4.3 Initial state: Idle_locked. Check that the PT does not setup a bearer on a slot announced to be blind, after reception of a PT blind full slot information message.
TP/PT/PG/BV-03	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 7.2.4.3 Initial state: Idle_locked. Check that the PT stays locked to an FT, based on reception of other bearer and dummy or CL-bearer position zero length PT messages.
TP/PT/PG/BV-data00	DPRS service M.4 Paging broadcast EN 300 175-3 [1]: 9.1.3 Initial state: Idle_locked. Check that the IUT accepts to be paged in frame number 2, 4, 6, 10, 12 of a multiframe when fast paging is required and accepted.

5.3.4 Advanced connection

5.3.4.1 Bearer setup procedures

Test group objective:	Verify the correct implementation of Bearer setup procedures

5.3.4.1.1 MAC service and procedure concerned

M.5 Advanced connection		
	PT initiated pilot bearer setup	EN 300 175-3 [1]: 10.5.1.3.1
	FT initiated pilot bearer setup (Fast setup)	EN 300 175-3 [1]: 10.5.1.3.2
	Additional bearer setup (duplex)	EN 300 175-3 [1]: 10.2.4.3, 10.5.1.3
	Additional bearer setup (double simplex)	EN 300 175-3 [1]: 10.2.4.3, 10.5.1.4

5.3.4.1.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the advanced connection procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/PT/BS/CA-data00	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.5.1.3.1 Initial state: Idle_locked. Check that the IUT manages rightly the PT initiated B-field single bearer setup procedure.
TP/PT/BS/CA-data01	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.5.1.3.2 Initial state: Idle_locked. Check that the IUT manages rightly the FT initiated B-field single bearer fast setup procedure.
TP/PT/BS/CA-data02	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.5.1.3 Initial state: Idle_locked. Check that the IUT manages rightly a B-field duplex bearer setup procedure for additional bearers of a symmetric multibearer connection.
TP/PT/BS/CA-data03	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.5.1.4 Initial state: Idle_locked. Check that the IUT is able to handle double simplex bearer setup procedure, initiated by the tester for additional bearers of an asymmetric multibearer connection.

5.3.4.2 Connection modification procedures

Test group objective:	Verify the correct implementation of connection modification procedures

5.3.4.2.1 MAC service and procedure concerned

M.5 Advanced connection		
	Connection modification	EN 300 175-7 [3]: 10.3

5.3.4.2.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the connection modification procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/PT/CM/CA-data00	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.3 Initial state: Active_locked. Verify that the IUT is able to handle correctly a connection modification changing the number of bearers used in a symmetric multibearer connection
TP/PT/CM/CA-data01	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.3 Initial state: Active_locked. Verify that the IUT is able to handle correctly a connection modification changing the number of bearers used in an asymmetric multibearer connection

5.3.4.3 Bearer release procedures

Test group objective:	Verify the correct implementation of bearer release procedures

5.3.4.3.1 MAC service and procedure concerned

M.5 Advanced connection		
	Unacknowledged bearer release	EN 300 175-3 [1]: 10.7.2.1
	Acknowledged bearer release	EN 300 175-3 [1]: 10.7.2.2
	Bandwidth reversal fast release	EN 300 175-3 [1]: 10.7.2.3

5.3.4.3.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the bearer release procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/PT/BR/CA-data00	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.7.2.1 Initial state: Active_locked. Check that the IUT manages rightly the release of an advanced duplex bearer with an unackowledge release procedure when receiving a release message.
TP/PT/BR/CA-data01	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.7.2.2 Initial state: Active_locked. Check that the IUT manages rightly the release of a double simplex bearer with an acknowledge release procedure when receiving a release message.
TP/PT/BR/CA-data02	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.4 Initial state: Active_locked. Check that the IUT manages rightly a release of a mulitbearer connection initiated by the tester by releasing all active bearers.
TP/PT/BR/CA-data03	DPRS service M.5 Advanced connection EN 300 175-3 [1]: 10.7.2.3 Initial state: Active_locked. Verify that the IUT is able to handle correctly a connection modification reversion the direction of an asymmetric multibearer connection

5.3.4.4 Bearer handover procedures

Test group objective:	Verify the correct implementation of bearer handover procedures.

5.3.4.4.1 MAC service and procedure concerned

M.17 Bearer handover		
	Bearer handover request	EN 300 175-3 [1]: 10.6.2, 10.5.1.1

5.3.4.4.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the bearer handover procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/PT/BH/CA-01	DPRS service M.17 Bearer handover EN 300 175-3 [1]: 10.6 Initial state: Active_locked. Check that the IUT, for a duplex bearer, correctly initiates and completes an intercell bearer handover procedure using basic set-up.

5.3.4.5 Connection handover procedures

Test group objective:	Verify the correct implementation of bearer release procedures

5.3.4.5.1 MAC service and procedure concerned

M.18 Connection handover		
	Advanced connection handover	EN 300 175-3 [1]: 10.2.4.3, 10.5.1.3.1

5.3.4.5.2 Test purposes

The behaviour of the connection handover procedures of the MAC layer of the IUT is tested at the NWK layer level of the test specification (Part 7 of the present document).

5.3.5 C-plane higher layer signalling

Test group objective:	Verify the correct implementation of C-plane higher layer signalling procedures.

5.3.5.1 MAC service and procedure concerned

M.9 CS higher layer signalling		
	CS channel data	EN 300 175-3 [1]: 10.8.1, 10.8.1.1
M.10 CF higher layer signalling		
	CF channel data	EN 300 175-3 [1]: 10.8.1, 10.8.1.2

5.3.5.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the C-plane higher layer signalling procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/PT/DT/CA-00	DPRS service M.9 CS higher layer signalling EN 300 175-3 [1]: 10.8.1.1 Initial state: Active_locked. Check that the IUT re-transmits C_s segment until it receives an acknowledgement in the same Automatic Repeat Request (ARQ) window.
TP/PT/DT/CA-01	DPRS service M.9 CS higher layer signalling EN 300 175-3 [1]: 10.8.1.1 Initial state: Active_locked. Check that the IUT does not transmit another C_S segment until the successful transmission of the current segment.
TP/PT/DT/CA-02	DPRS service M.9 CS higher layer signalling EN 300 175-3 [1]: 10.8.1.1 Initial state: Active_locked. Check that the IUT manages correctly the one bit numbering of the C_S segments.
TP/PT/DT/CA-data00	DPRS service M.10 CF higher layer signalling EN 300 175-3 [1]: 10.8.1.2 Initial state: Active_locked. Check that the IUT re-transmits a set of C_F segment until it receives an acknowledgement in the same Automatic Repeat Request (ARQ) window.
TP/PT/DT/CA-data01	DPRS service M.10 CF higher layer signalling EN 300 175-3 [1]: 10.8.1.2 Initial state: Active_locked. Check that the IUT does not transmit another set of C_F segment until the successful transmission of the current set.
TP/PT/DT/CA-data02	DPRS service M.10 CF higher layer signalling EN 300 175-3 [1]: 10.8.1.2 Initial state: Active_locked. Check that the IUT manages correctly the one bit numbering of the set of C_F segments.

5.3.6 U-plane services

Test group objective:	Verify the correct implementation of U-plane procedures.

5.3.6.1 MAC service and procedure concerned

M.6 I_P_error_detection service		
	I_P-error-detect mode	EN 301 649 [4]: 10.9.1
M.7 I_P_error_correction service		
	I_P-error-correct mode	EN 301 649 [4]: 10.9.2
	Unilateral jump	EN 301 649 [4]: D.1.4
	Bearer reset	EN 300 175-3 [1]: 10.8.2.5.3
M.8 U-plane point-to-multipoint service		
	Connectionless SI_P mode	EN 301 649 [4]: D.1.1
M.16 Bearer replacement		
	Bearer replacement	EN 300 175-3 [1]: 10.8.2.5.1, EN 301 649 [4]: D.1.5

5.3.6.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the U-plane procedures are in accordance with the static conformance requirements.

Test purposes:	
TP/PT/UP/CA-data00	DPRS service M.6 I_P_error_detection EN 301 649 [4]: 10.9.1 Initial state: Active_locked. Verify that the IUT is able to receive I_P-error-detect data for a symmetric connection.
TP/PT/UP/CA-data01	DPRS service M.6 I_P_error_detection EN 301 649 [4]: 10.9.1 Initial state: Active_locked. Verify that the IUT is able to receive I_P-error-detect data for an asymmetric connection.
TP/PT/UP/CA-data02	DPRS service M.7 I_P_error_correction EN 301 649 [4]: 10.9.1 Initial state: Active_locked. Verify that the IUT is able to receive I_P-error-correct data for a symmetric connection and react with the correct settings of BCK and Q2 bits.
TP/PT/UP/CA-data03	DPRS service M.7 I_P_error_correction EN 301 649 [4]: 10.9.1 Initial state: Active_locked. Verify that the IUT is able to receive I_P-error-correct data for an asymmetric connection and react with the correct MAC-mod2-ACK message.
TP/PT/UP/CA-data04	DPRS service M.7 I_P_error_correction EN 300 175-3 [1]: 10.8.5.3 Initial state: Active_locked. Check that the IUT manages rightly the MAC I_P bearer reset procedure.
TP/PT/UP/CA-data05	DPRS service M.16 Bearer replacement EN 300 175-3 [1]: 10.8.2.5.1; EN 301 649 [4]: D.1.5 Initial state: Active_locked. Check that the IUT manages rightly the bearer replacement procedure.

5.3.6.3 BI test purposes

Subgroup objective:	To check the behaviour of the of the IUT in response to invalid messages.

Test purposes:	
TP/PT/UP/BI-data00	DPRS service M.7 I_P_error_correction EN 300 175-3 [1]: 10.8.2.4.1 Initial state: Active_locked. Check that the IUT, when receiving I_P_error_correction data on a duplex bearer, is capable of detecting A-field R-CRC error and to respond with the correct Q2 bit setting (Q2 = 0).
TP/PT/UP/BI-data01	DPRS service M.7 I_P_error_correction EN 300 175-3 [1]: 10.8.2.4.1 Initial state: Active_locked. Check that the IUT, when receiving I_P_error_correction data on an asymmetric double simplex bearer, is capable of detecting A-field R-CRC error and to respond with the correct ACK bit setting indicating the packet number of the last correctly received I_P packet.

5.3.7 Encryption

Test group objective:	Verify the correct implementation of encryption procedures.

5.3.7.1 MAC service and procedure concerned

M.11 Encryption activation		
	Encryption process - initialization and synchronization	EN 300 175-7 [3]: 6.4.4, 6.4.5
	Encryption mode control	EN 300 175-7 [3]: 6.4.6
	PT Encryption activation	EN 300 175-7 [3]: 6.4.6.3
	Encryption handover control	EN 300 175-7 [3]: 6.4.7
M.12 Encryption deactivation		
	PT Encryption deactivation	EN 300 175-7 [3]: 6.4.6.4

5.3.7.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the encryption procedures are in accordance with the static conformance requirements

Test purposes:	
TP/PT/EN/CA-data00	DPRS service M.11 Encryption activation EN 300 175-7 [3]: 6.4 Only for IUT supporting encryption. Initial state: Active_locked. Check that the IUT manages correctly the procedure to switch an advanced connection from clear mode to encrypt mode.
TP/PT/EN/CA-data01	DPRS service M.12 Encryption deactivation EN 300 175-7 [3]: 6.4 Only for IUT supporting encryption deactivation. Initial state: Active_locked. Check that the IUT manages correctly the procedure to switch an advanced connection from encrypt mode to clear mode.

5.3.8 MAC layer management

Test group objective:	Verify the correct implementation of the LLME MAC layer management procedures.

5.3.8.1 MAC service and procedure concerned

M.2 Non continuous broadcast		
	Extended system information	EN 300 175-3 [1]: 11.2
M.13 Quality control		
	RFPI handshake	EN 300 175-3 [1]: 11.5.1
	PT frequency correction procedure	EN 300 175-3 [1]: 11.5.2.2
M.14 Physical channel selection		
	Physical channel selection	EN 300 175-3 [1]: 11.4, 10.5.2

5.3.8.2 CA test purposes

Subgroup objective:	Limited testing that the observable capabilities of the IUT concerning the LLME MAC layer management procedures are in accordance with the static conformance requirements

Test purposes:	
TP/PT/LM/CA-data00	DPRS service M.13 Quality control. EN 300 175-3 [1]: 10.5.1.1 - 11.5.1 Initial state: Active_locked. Check that the IUT releases a bearer if it has not received the correct RFPI on that bearer in the last T201 seconds during the time an advanced connection exists.
TP/PT/LM/CA-data01	DPRS service M.13 Quality control. EN 301 649 [4]: 9.4.2.4 Initial state: Active_locked. Check that the IUT releases a suspended connection after T910, if there has not been any successful handshake.
TP/PT/LM/CA-data02	DPRS service M.13 Quality control. EN 301 649 [4]: 9.3.1.2.2 Initial state: Active_locked. Check that the IUT requests a suspension of a connection if no U-plane PDU or C-plane message has been transmitted or received during a consecutive period of T903.
TP/PT/LM/CA-data03	DPRS service M.13 Quality control. EN 301 649 [4]: 9.3.1.2.3 Initial state: Active_locked. Check that the IUT requests a suspension of a connection if the situation of violation of the “minimum number of bearers“ of the connection, exists for more time than T906.
TP/PT/LM/CA-data04	DPRS service M.13 Quality control. EN 301 649 [4]: 9.3.1.2.4 Initial state: Active_locked. Check that the IUT requests a suspension of a connection if all received bearers of the connection are lost, and this situation exists for more time than T908.
TP/PT/LM/CA-data05	DPRS service M.13 Quality control. EN 301 649 [4]: A.1.3.2 Initial state: Active_locked. Check that the IUT accepts a fast setup for a suspended connection at (T909 minus 10%) after the suspend procedure.
TP/PT/LM/CA-data06	DPRS service M.13 Quality control. EN 301 649 [4]: A.1.3.1 Initial state: Active_locked. Check that the IUT initiates a new attempt of the connection setup procedure between at minimum T904 and at maximum (T904 + T905) after the FP refuse for the first time a PT initiated connection setup.

Bibliography

The following material, though not specifically referenced in the body of the present document (or not publicly available), gives supporting information.

EN 300 175-1: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".

EN 300 175-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)".

EN 300 175-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) Layer".

EN 300 175-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) Layer".

EN 300 175-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech Coding and Transmission".

EN 300 435: "Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Base standard including interworking to connectionless networks (service types A and B, class 1)".

EN 300 651: "Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Generic data link service (service type C, class 2)".

ETS 300 699: "Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Generic data link service for closed user groups (service type C, class 1)".

EN 300 701: "Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Generic frame relay service with mobility (service types A and B, class 2)".

ETS 300 755: "Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Multimedia Messaging Service (MMS) with specific provision for facsimile services (service type F, class 2)".

ETS 300 757: "Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Low rate messaging service (service type E, class 2)".

EN 301 240: "Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Point-to-Point Protocol (PPP) interworking for internet access and general multi-protocol datagram transport".

History

Document history			
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