EUROPEAN TELECOMMUNICATION STANDARD

ETS 300 757

April 1997

Source: ETSI TC-RES

Reference: DE/DECT-020078

ICS: 33.020

Key words: DECT, profile, data, messaging

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Low rate messaging service; (Service type E, class 2)

ETSI

European Telecommunications Standards Institute

ETSI Secretariat

Postal address: F-06921 Sophia Antipolis CEDEX - FRANCE
Office address: 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE
X.400: c=fr, a=atlas, p=etsi, s=secretariat - **Internet:** secretariat@etsi.fr

Tel.: +33 4 92 94 42 00 - Fax: +33 4 93 65 47 16

Contents

Foreword 7

1 Scope 9

2 Normative references 9

3 Definitions and abbreviations 10
3.1 Definitions 10
3.2 Abbreviations 11

4 Description of services 12
4.1 General 12
4.2 Low Rate Messaging Service Point-To-Point (LRMS PTP) 12
4.3 Low Rate Messaging Service Point-To-Multipoint (LRMS PTM) 13
4.4 Service objectives 14

5 Point-to-point service, LRMS PTP 15
5.1 Reference configuration 15
5.2 Functional description 15
5.3 Physical layer requirements 15
5.4 MAC layer requirements 15
5.5 DLC layer requirements 16
5.5.1 C-plane requirements 16
5.5.2 U-plane requirements 16
5.6 Network layer requirements 16
5.7 Management entity requirements 16
5.8 Generic interworking conventions 16
5.8.1 MMSP procedures 16
5.8.2 Multimedia Messaging Service - Service Access Point (MMS-SAP) 17
5.8.3 MMSP primitives 17
5.8.3.1 C-MMS primitives 17
5.8.3.2 M-MMS primitives 18
5.8.3.3 Parameters 18

6 Point-to-multipoint service, LRMS PTM 18
6.1 Reference configuration 18
6.2 Functional description 19
6.2.1 General 19
6.2.2 MMS relations to outside networks (horizontal model) 19
6.2.3 Architecture 19
6.2.4 MMS relations to the upper/lower layers (vertical model) 19
6.2.5 Phases of the horizontal interactions 19
6.3 Physical layer requirements 20
6.4 MAC layer requirements. 20
6.5 DLC layer requirements 20
6.5.1 C-plane requirements 20
6.5.2 U-plane requirements 20
6.6 Network layer requirements 20
6.7 Management entity requirements 21
6.8 Generic interworking conventions 21
6.8.1 MMSP procedures 21
6.8.2 MMS-SAP 21
6.8.3 MMSP primitives 21
6.8.3.1 M-MMS primitives 21
6.8.3.2 Parameters 21

Annex A (normative): Support of MMSP by the DECT lower layers 22

A.1 Profile-specific information elements 22

A.2 MMSP message implementation 22
A.2.1 General 22
A.2.2 C-MMS primitives mapping rules 22
A.2.2.1 LRMS PTP C-MMS primitives 22
A.2.2.2 LRMS PTM C-MMS primitives 22
A.2.3 M-MMS message mapping rules 22
A.2.3.1 General rules for LRMS PTP 22
A.2.3.2 General rules for LRMS PTM 22
A.2.3.3 Information element mapping rules 23

A.3 Network layer segmentation rules for LRMS PTP 23
A.3.1 Procedure at the sending side 23
A.3.2 Procedure at the receiving side 24

Annex B (informative): Interworking conventions to specific networks 25

B.1 GSM short message services, SMS Mobile Terminated (SMS-MT), SMS Mobile Originated (SMS-MO) and GSM SMS Cell Broadcast (SMS-CB) 25

Annex C (normative): Service E2: fixed termination MAC Protocol Implementation Conformance Statement (PICS) proforma 26

C.1 Standardized symbols for the status column 26

C.2 Capabilities 27
C.2.1 Services 27
C.2.2 Protocol parameters 27
C.2.3 Messages 28
C.2.4 Message parameters 30
C.2.5 Functions implemented 31
C.2.6 Timer support 32
C.2.7 Procedure support 32

Annex D (normative): Service E2: Portable termination MAC PICS proforma 34

D.1 Standardized symbols for the status column 34

D.2 Capabilities 35
D.2.1 Services 35
D.2.2 Protocol parameters 35
D.2.3 Messages 36
D.2.4 Message parameters 38
D.2.5 Functions implemented 40
D.2.6 Timer support 41
D.2.7 Procedure support 41

Annex E (normative): Service E2: Fixed termination DLC PICS proforma 43

E.1 Standardized symbols for the status column 43

E.2 Capabilities 44
E.2.1 Major capabilities 44
E.2.1.1 C-plane capabilities 44
E.2.1.1.1 C-plane services 44
E.2.1.1.2 C-plane procedures 44
E.2.1.1.2.1 Point to point acknowledged operation 44
E.2.1.1.2.2 Unacknowledged operation 46
E.2.1.1.2.3 Broadcast operation 46
E.2.1.2 Management procedures 46
E.2.2 Protocol Data Units (PDUs) 47
E.2.2.1 C-plane PDUs 47

E.2.2.1.1 C-plane frame structure 47
E.2.2.1.2 C-plane messages 48
E.2.3 Timers 58
E.2.3.1 C-plane timers 58
E.2.4 Protocol error handling 58
E.2.4.1 C-plane protocol error handling 58

Annex F (normative): Service E2: Portable termination DLC PICS proforma 59

F.1 Standardized symbols for the status column 59

F.2 Capabilities 59
F.2.1 Major capabilities 59
F.2.1.1 C-plane capabilities 59
F.2.1.1.1 C-plane services 59
F.2.1.1.2 C-plane procedures 60
F.2.1.1.2.1 Point to point acknowledged operation 60
F.2.1.1.2.2 Unacknowledged operation 61
F.2.1.1.2.3 Broadcast operation 61
F.2.1.2 Management procedures 62
F.2.2 PDUs 63
F.2.2.1 C-plane PDUs 63
F.2.2.1.1 C-plane frame structure 63
F.2.2.1.2 C-plane messages 64
F.2.3 Timers 74
F.2.3.1 C-plane timers 74
F.2.4 Protocol error handling 74
F.2.4.1 C-plane protocol error handling 74

Annex G (informative): Profile selection coding 75

G.1 <<BASIC SERVICE>> coding 75

G.2 <<IWU-ATTRIBUTES>> coding 75

G.3 <<CONNECTION ATTRIBUTES>> coding 75

Annex H (informative): Applicability of ETS 300 755 interworking annexes 76

Annex J (informative): Interworking to other message-based teleservices and application-level services 77

J.1 General 77

J.2 WWW/HTTP 77

History 78

Blank page

Foreword

This European Telecommunication Standard (ETS) has been produced by the Digital Enhanced Cordless Telecommunications (DECT) Project of the European Telecommunications Standards Institute (ETSI).

Transposition dates	
Date of adoption:	21 February 1997
Date of latest announcement of this ETS (doa):	30 June 1997
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 December 1997
Date of withdrawal of any conflicting National Standard (dow):	31 December 1997

Blank page

1 Scope

This European Telecommunication Standard (ETS) defines a profile for Digital Enhanced Cordless Telecommunications (DECT) systems conforming to ETS 300 175, parts 1 to 8 [1] - [8]. It is part of a family of profiles aimed at the general connection of terminals supporting non-voice services to a fixed infra-structure, private and public.

The Low Rate Messaging Service (LRMS), specified in this ETS, provides a means for the slow, acknowledged or unacknowledged, transfer of multimedia message objects, including alphanumeric paging messages. It provides both point-to-point and point-to-multipoint messaging and exploits the Multimedia Messaging Service (MMS) specified ETS 300 755 [13]. This service may be used for private and public roaming applications.

This ETS specifies the type E service, mobility class 2, as described in ETR 185 [11]. The service employs solely C-plane functionality and has been designed to coexist with other profiles such as the Generic Access Profile (GAP), ETS 300 444 [9] or the Global System for Mobile communication (GSM) Interworking Profile, ETS 300 370 [10]. No User plane (U-plane) functionality is required for the service.

Interworking with the GSM Short Message Service (SMS) is specifically provided for in an annex of this ETS which cross-references to GSM interworking profile standards (see ETS 300 764 [14]).

This ETS defines the requirements on the Physical (PHL), Medium Access Control (MAC), Data Link Control (DLC) and Network (NWK) layers of DECT. The standard also specifies management entity requirements and generic interworking conventions which ensure the efficient use of the DECT spectrum.

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: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".

[2] ETS 300 175-2: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer".

[3] ETS 300 175-3: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer".

[4] ETS 300 175-4: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer".

[5] ETS 300 175-5: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".

[6] ETS 300 175-6: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing".

[7] ETS 300 175-7: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features".

[8] ETS 300 175-8: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission".

[9] ETS 300 444: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Generic Access Profile (GAP)".

[10] ETS 300 370: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications / Global System for Mobile communications (DECT/GSM) inter-working profile; Access and mapping (Protocol/procedure description for 3,1 kHz speech service)".

[11] ETR 185: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Data Services Profile (DSP); Profile overview".

[12] ETS 300 651: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Generic data link service; Service type C, class 2".

[13] ETS 300 755: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Data services profile; Multimedia Messaging Service (MMS) with specific provision for facsimile services; (Service type F, class 2)".

[14] ETS 300 764: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications / Global System for Mobile communications (DECT/GSM) Interworking Profile (IWP); Implementation of short message service, point-to-point and cell broadcast".

3 Definitions and abbreviations

3.1 Definitions

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

mobility class 1: Local area applications, for which terminals are pre-registered off-air with one or more specific fixed parts, and establishment of service and user parameters is therefore implicit, according to a profile-defined list.

mobility class 2: Private and public roaming applications for which terminals may move between fixed parts within a given domain and for which association of service parameters is explicit at the time of service request.

multiframe: A repeating sequence of 16 successive Time Division Multiple Access (TDMA) frames, that allows low rate or sporadic information to be multiplexed (e.g. basic system information or paging).

service type A: Low speed frame relay, with a net sustainable throughput of up to 24 kbits/s, optimized for bursty data, low power consumption and low complexity applications such as hand-portable equipment.

service type B: High performance frame relay, with a net sustainable throughput of up to 552 kbits/s, optimized for high speed and low latency with bursty data. Equipment implementing the type B profile shall inter-operate with type A equipment.

service type C: Non-transparent connection of data streams requiring Link Access Protocol (LAP) services, optimized for high reliability and low additional complexity. This builds upon the services offered by the type A or B profiles.

service type E: A short message transfer or paging service which may be unacknowledged or acknowledged, optimized for small Service Data Units (SDUs), low Portable Part (PP) complexity and ultra-low power consumption.

service type F: An application profile specifically supporting teleservices such as fax, building upon the services offered by the type A/B and C profiles, optimized for terminal simplicity, spectrum efficiency and network flexibility.

TDMA frame: A time-division multiplex of 10 ms duration, containing 24 successive full slots. A TDMA frame starts with the first bit period of full slot 0 and ends with the last bit period of full slot 23.

3.2 Abbreviations

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

ACK	Acknowledgement
CB	Cell Broadcast
CC	Call Control
C_F	higher layer signalling Channel (Fast)
CLMS	Connectionless Message Service
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
FTAM	File Transfer Access & Management
FTP	File Transfer Protocol
GAP	Generic Access Profile
GSM	Global System for Mobile communication
HTTP	Hyper Text Transfer Protocol
I_P	higher layer Information channel (Protected)
ISDN	Integrated Services Digital Network
IWF	Interworking Functions
IWU	Interworking Unit
LAP	Link Access Procedure
LAP-B	Link Access Procedure (Balanced)
LAP-C	Link Access Procedure (Control)
LCE	Link Control Entity
LLN	Logical Link Number (DLC layer)
LRMS PTM	Low Rate Messaging Service Point-To-Multipoint
LRMS PTP	Low Rate Messaging Service Point-To-Point
LRMS	Low Rate Messaging Service
M	MAC control channel
MAC	Medium Access Control
MCE	Message Control Entity
MCI	MAC Connection Identification
MMSP	Multimedia Messaging Service Protocol
MNCC	Mobile Network Call Control
MO	Mobile Originated
MT	Mobile Terminated
NLF	New Link Flag
NWK	Network
P	Paging channel
PDU	Protocol Data Unit
PHL	Physical
PICS	Protocol Implementation Conformance Statement
PP	Portable Part
PT	Portable radio Termination
PTM	Point-To-Multipoint
Q	system information channel
RFP	Radio Fixed Part
RFPI	Radio Fixed Part Identifier
SAP	Service Access Point
SAPI	Service Access Point Identifier
SDU	Service Data Unit
SMS	Short Message Service

TDMA	Time Division Multiple Access
UI	Unnumbered Information (Frame)
U-plane	User plane
WWW	World Wide Web

4 Description of services

4.1 General

The DECT data profile defined in this ETS has been intended for message transfer or paging and is optimized for small SDUs, low PP complexity and ultra-low power consumption. Two service types are defined: Low Rate Messaging Service Point-To-Point (LRMS PTP) which may be unacknowledged or acknowledged used for point-to-point messaging and Low Rate Messaging Service Point-To-Multipoint (LRMS PTM) used for point-to-multipoint messaging. The LRMS PTM is an optional feature while LRMS PTP support is mandatory if this profile is supported.

The LRMS PTP and PTM may co-exist with other profiles and their existence should not have any effect on the functionality of the other existing profiles. That is, the LRMS functionality should have a secondary priority in respect to the profile relations.

4.2 Low Rate Messaging Service Point-To-Point (LRMS PTP)

The objectives of the data profile service type E, class 2 LRMS PTP are as follows:

The LRMS PTP is a generic set of commands, information elements and functionality for file/messaging service. In most of the cases LRMS can be regarded as a DECT internal teleservice that can be interworked to the similar services in external networks. In addition LRMS PTP provides means to convey transparently application specific upper layer protocol frames thus facilitating the usage of this profile as a bearer service. It provides a generic file handling/messaging services over the DECT air interface by utilizing the transportation mechanism of the DECT C-plane in the best way possible while offering a general set of functions to the applications using its services. The LRMS procedures can be accessed in a standardized way through a set of primitives. The LRMS point-to-point service may be acknowledge or unacknowledged.

LRMS provides a compact subset of functions to messaging servers with the advantage that a single terminal with LRMS support can use a wide variety of messaging services with minimum amount of application layer complexity. If a complete set of services is needed an escape sequence has to be used or some other means such as transparent protocol transportation mechanism should be used.

These objectives are fulfilled by Multimedia Messaging Service Protocol (MMSP).

MMSP that is used for the provision of LRMS services and functionality is a stateless protocol which defines a set of messages, framing rules and information elements each containing optional and mandatory information fields.

MMSP utilities the services of the DECT Call Control (CC)entity. It could be regarded as a supplementary service type of service that provides signalling/control and application specific information related to the teleservices provided by the DECT data profiles.

The MMSP layer functionality is provided by a set of specific DECT network layer CC information elements. Therefore the MMSP is not from DECT layer viewpoint a separate real protocol layer but a service provided to the application. However, from the application perspective the MMSP can be seen as a protocol layer. Therefore, the MMSP can be regarded as a virtual protocol layer.

The support of MMSP protocol in LRMS PTP is mandatory.

The LRMS PTP is closely aligned with the ETS 300 755 [13] Multimedia Messaging Service (MMS) in the following way:

- the MMSP protocol used by LRMS PTP is the MMSP protocol used by MMS;

- LRMS PTP utilized only the C-plane services; no U-plane is required;

- the LRMS PTP and MMS may co-exist in a same terminal. It is the matter of the implementation if the services of LRMS and MMS are joined or separated i.e. if the messaging is done through the same link or a separate link is instantiated;

- a specific procedure can be used to change the type E profile (this ETS) connection into type F profile (ETS 300 755 [13]) connection. However, this requires the support of the both profiles as well as additional DECT network layer functionality.

In general the LRMS PTP may receive or send messages during a on-going other profile based call but this requires a separate CC instance.

4.3 Low Rate Messaging Service Point-To-Multipoint (LRMS PTM)

The objectives of data profile service type E, class 2 LRMS PTM are as follows:

The purpose of this service is to provide a point-to-multipoint broadcast service of alphanumeric messages from Fixed Part (FP) to PPs. The messages are not acknowledged. With the addressing provided a subset of the receiving PP can be preselected or the messages can be aimed at all PPs in the range of a specific Radio Fixed Part (RFP). Thus the receiving terminals and area can be selected by the DECT FP service provider.

NOTE: For the addressing of the PPs the connectionless TPUI is used.

The LRMS PTM service provides means for sending a subset of MMSP messages over a point-to-multipoint link. This facilitates the usage of standard format messages in both point-to-point and point-to-multipoint cases. With this functionality a network server can control a subgroup of MMSP terminals with single multicast messages without a need of full bi-directional link instantiation. In this way the LRMS PTM facilitates a simple and cost effective means of messaging and remote group control of terminal equipment saving at the same time the air interface resources.

The LRMS PTM may co-exist with other profiles in the PPs and FPs. The co-existence of the LRMS PTM should not have any affect on the functionality of the co-existing profiles.

The support of LRMS PTM is optional and if supported the MMSP support is mandatory.

In general the LRMS PTM may function during a on-going other profile based call.

4.4 Service objectives

The profile has the service objectives given in table 1 and table 2:

Table 1

Offered services	LRMS PTP	LRMS PTM
point-to-point SDU transfer PP-FP point-to-point SDU transfer FP-PP	Yes	Not supported
point-to-multipoint SDU transfer FP-PP	Not Supported	Yes
Encryption	Optional	Not supported
MMSP support	Mandatory	Mandatory
Profile up/downgrading	Optional	Not Supported
Support in this ETS	Mandatory	Optional

Table 2

Performance	LRMS PTP	LRMS PTM
Maximum throughput for unsegmented messages with minimum header (note 1)	1,38 kbit/s C_S channel 17,6 kbit/s C_f channel, full slot	1,23 kbit/s CL_S channel 15,6 kbit/s CL_F channel full slot
Error rate	$< 10^{-9}$ per bit	$< 10^{-9}$ per bit
Minimum SDU size (note 2)	48 octets	43 octets
SDU size if segmentation used (note 3)	$\leq$ 5 632 octets	$\leq$ 4 992 octets

NOTE 1: The throughput depends strongly on the used control channel and on the other services that are in use simultaneously and these figures are the maximum reachable rates for the user data if no other profiles are in use.

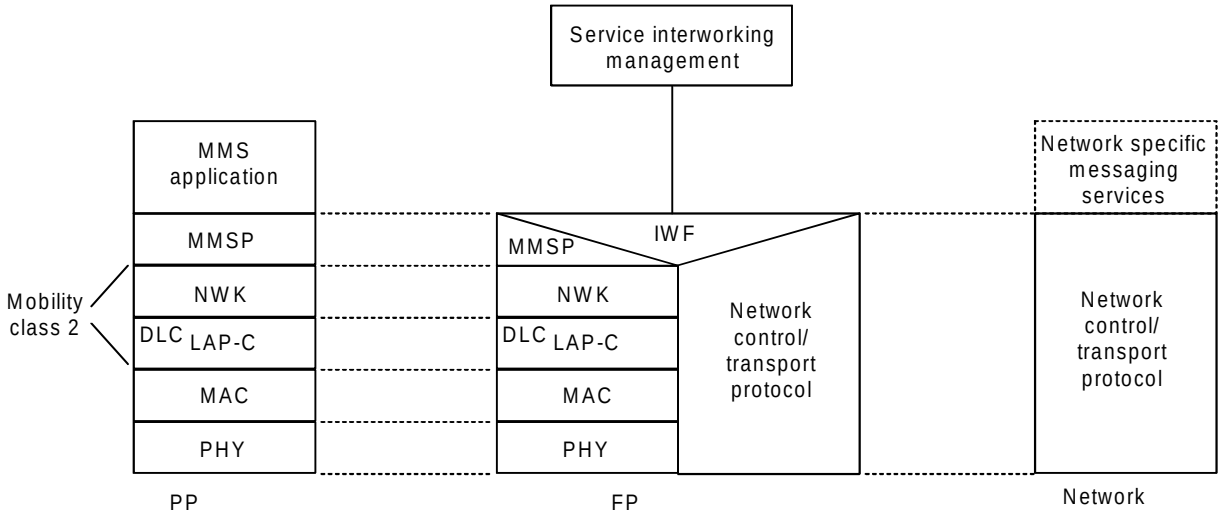
NOTE 2: This length is the maximum length of the application layer SDU (user information) if only mandatory elements are used at their minimum length and no network layer segmentation is used.

NOTE 3: The maximum supported size is defined in the interworking annexes on a per service basis.

5 Point-to-point service, LRMS PTP

5.1 Reference configuration

The reference configuration for this profile shall be as shown in figure 1.



IWF: Interworking Functions.

Figure 1: Profile reference configuration of LRMS PTP showing signalling and message interworking to connectionless networks via the C-plane

5.2 Functional description

The functional description as outlined in clause 5 of ETS 300 755 [13] shall apply.

5.3 Physical layer requirements

The physical layer requirements of ETS 300 444 [9] shall apply.

5.4 MAC layer requirements

The minimum instance shall only require the capability to establish and maintain single-bearer connections. The provisions of ETS 300 175-3 [3] shall be implemented with respect to the services, procedures, messages and information elements coding listed in annexes C to D with the condition of LRMS PTP. The provisions of ETS 300 175-6 [6] shall be implemented with respect to the structure and use of identities.

The C_F may be used if the co-existing profile provides the channel and the LRMS PTP usage does not noticeably disturb the main profile transmissions. If no other profiles exist then the C_S channel shall be used.

The MAC extended fixed part information message shall be used and, therefore, bit a12 of the fixed part information field shall be set to 1. In addition, the extended higher layer capabilities bit a43 for the support of the type E profile shall be set to 1.

5.5 DLC layer requirements

5.5.1 C-plane requirements

All internal DECT protocol control, all external user data and control shall be handled by the C-plane. The provisions of ETS 300 175-4 [4] shall be implemented with respect to the services, procedures, messages and information elements coding listed in annexes E and F. The minimum supported DLC layer frame length shall be 63 octets.

NOTE: The requirement of the DLC layer C plane is as far as possible compatible with GAP (ETS 300 444 [9]).

5.5.2 U-plane requirements

The U-plane shall not be used by this ETS. However the presence of LRMS PTP service should not noticeably limit the functionality of the possible other coexisting profiles using the U-plane.

5.6 Network layer requirements

The provision of ETS 300 175-5 [5] shall be implemented with respect to the services, procedures, messages and information elements listed in annexes F to G of ETS 300 755 [13], with the condition of LRMS PTP.

NOTE: These network layer requirements are closely related with ETS 300 755 [13] network layer requirements.

The CC entity in FP and PP shall support either packet mode procedures as specified in subclause 9.7 of ETS 300 175-5 [5] and indicated by condition C7 in annexes F and G of ETS 300 651 [12] or circuit mode procedures as specified in ETS 300 444 [9] and indicated by condition C1 in annexes F and G of ETS 300 651 [12]. The used CC procedure is dependent of the interworking profile and therefore defined in appropriate interworking annexes.

The <<IWU-TO-IWU>> information element in the {IWU-INFO} message shall be used to carry the application information in the active state of CC. The messages shall be segmented by using the <<SEGMENTED-INFO>> element in the {IWU-INFO} message if the original {IWU-INFO} message length exceeds 58 octets. The rules for segmentation are specified in clause A.3.

If LRMS PTP is used during ongoing call a separate CC instance shall be required for LRMS.

Type E/F profile upgrading procedure may optionally be supported. In this case the procedures for the up and downgrading as specified in clause 9 of ETS 300 755 [13] shall apply.

5.7 Management entity requirements

The management entity requirements of ETS 300 444 [9] shall apply.

5.8 Generic interworking conventions

5.8.1 MMSP procedures

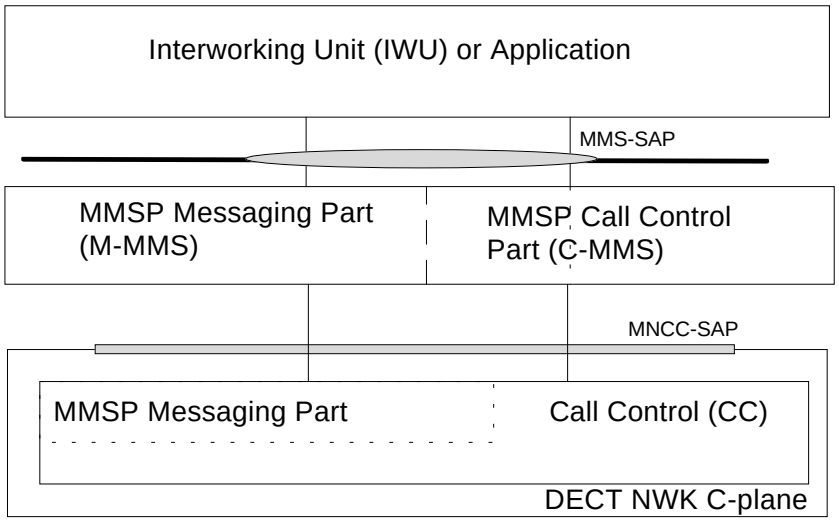
The MMSP elements of procedures and message definitions are defined in clause A.1 of ETS 300 755 [13].

The MMSP information elements are defined in clause A.2 of ETS 300 755 [13].

The MMSP implementation on lower layers has been defined in annex A of this ETS.

5.8.2 Multimedia Messaging Service - Service Access Point (MMS-SAP)

The MMS-SAP is the service access point on the top of MMSP that shall be accessed by the interworking unit (IWU) or the application. The M-MMS-SAP primitives are used for LRMS CC and for requesting LRMS message transportation or reception directly by the upper layer application. The main CC functionality for different services is done as defined in an appropriate service interworking definition. The MMS-SAP primitives have been defined in subclause 5.8.3 of this ETS.



IWU: Interworking Unit.

Figure 2: The LRMS PTP protocol model

5.8.3 MMSP primitives

5.8.3.1 C-MMS primitives

The following primitives are provided by MMS-SAP for the control of C-MMS part of the MMSP.

Table 3

Primitive	Req	Cfm	Ind	Res
C-MMS-SETUP-	x		x	
C-MMS-CONNECT-	x	x	x	
C-MMS-RELEASE-	x	x	x	x
C-MMS-MODIFY-	x	x	x	

NOTE: C-MMS-MODIFY- primitive is used for type F and E profile changes. It can be used only if the functionality is supported.

5.8.3.2 M-MMS primitives

The following primitives are provided by MMS-SAP for the control of M-MMS part of the MMSP.

Table 4

Primitive	Req	Cfm	Ind	Res
M-MMS-SEND-	x		x	
M-MMS-SEND-REQ	x		x	
M-MMS-SEND-RPY	x		x	
M-MMS-RETRIEVE-	x		x	
M-MMS-RETRIEVE-HDR	x		x	
M-MMS-RETRIEVE-RPY	x		x	
M-MMS-STATUS-	x		x	
M-MMS-STATUS-RPY	x		x	
M-MMS-EXT-CMD-	x		x	
M-MMS-EXT-CMD-RPY	x		x	
M-MMS-ESC-CMD-	x		x	
M-MMS-ESC-CMD-RPY	x		x	

5.8.3.3 Parameters

The parameters for each primitive are described in clause A.3 of the of ETS 300 755 [13].

6 Point-to-multipoint service, LRMS PTM

6.1 Reference configuration

The reference configuration for this profile shall be as shown in figure 3.

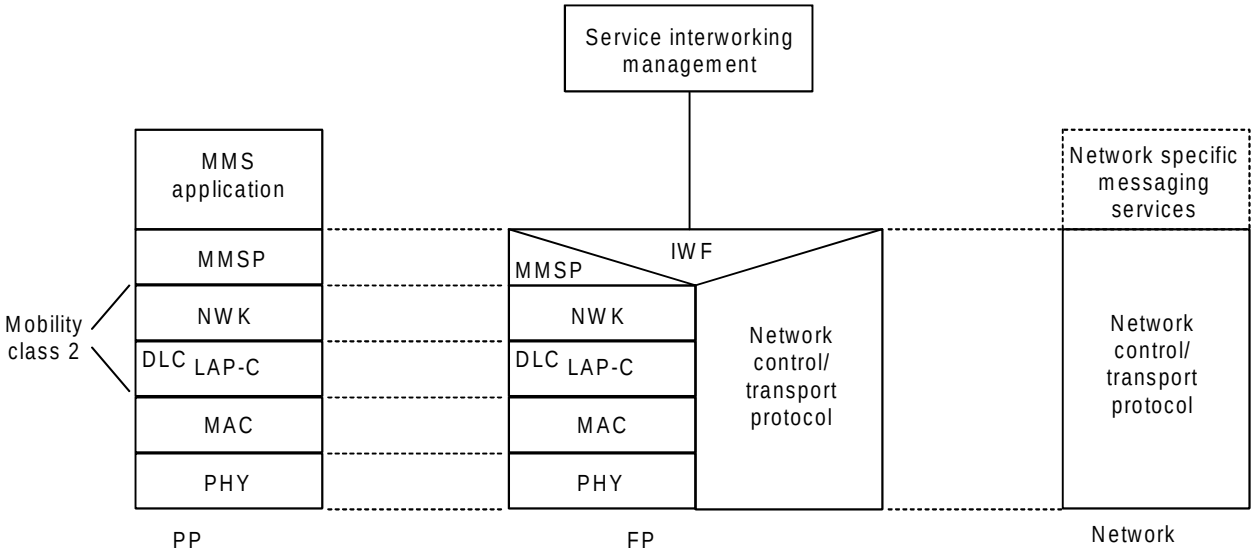


Figure 3: Profile reference configuration of LRMS PTM showing signalling and message interworking to connectionless networks via the C-plane

6.2 Functional description

6.2.1 General

The functional description as outlined in clause 5 of ETS 300 755 [13] shall apply with the exceptions outlined in this subclause.

6.2.2 MMS relations to outside networks (horizontal model)

The model defined in the subclause 5.2 of ETS 300 755 [13] shall apply with the following rules:

- the messaging direction is always from MCE to portable MMS entity. Due to this no IWU conversion can be requested in FP IWU or MCE IWU with MMSP messages;
- the MCE as well as the fixed MMS entity may do implicit IWU conversions but this conversion cannot be controlled with MMSP;
- only such MMS procedures are available that are allowed in the direction of fixed MMS entity to portable MMS entity. The portable MMS entity cannot control the MCE messaging;
- the end entity may send message only to the MMS entities;
- the addressing of a group of portable entities shall be done in the fixed entity by mapping the incoming address to the Point-To-Multipoint (PTM) as specified in each interworking descriptions.

The PTM MMS messaging horizontal functional model has been illustrated in figure 4.

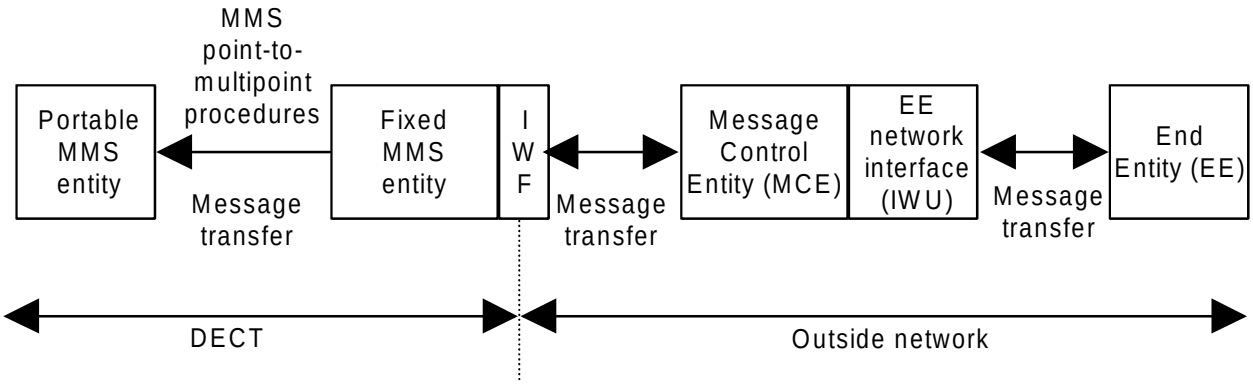


Figure 4: The MMS horizontal functional model for point-to-multipoint service

6.2.3 Architecture

The internal architecture of the MMSP layer as defined in ETS 300 755 [13], subclause 5.3 shall apply with the exception that the C-MMS part is not required in the LRMS PTM service. That is, the M-MMS part interacts directly with the DECT upper layer as illustrated in figure 5. No connection establishment phase is required on MMSP layer.

6.2.4 MMS relations to the upper/lower layers (vertical model)

The model defined in the subclause 5.4 of ETS 300 755 [13] shall apply.

6.2.5 Phases of the horizontal interactions

Only the phase 3 b) of the horizontal interaction of PP terminated incoming MMS call as defined in subclause 5.5.2.3 of ETS 300 755 [13] shall apply.

6.3 Physical layer requirements

The physical layer requirements of the Generic Access Profile (GAP), ETS 300 444 [9] shall apply.

6.4 MAC layer requirements.

The minimum instance shall only require the capability to establish and maintain single-bearer connections. The provisions of ETS 300 175-3 [3] shall be implemented with respect to the services, procedures, messages and information elements coding listed in Annexes C to D of this ETS with reference to LRMS PTM. The provisions of ETS 300 175-6 [6] shall be implemented with respect to the structure and use of identities. The Fixed radio Termination (FT) and Portable radio Termination (PT) shall support the downlink connectionless procedure as defined in ETS 300 175-3 [3].

FT and PT shall support either the CL_S or CL_F channel. The CL_F may be used if the co-existing profile provides the channel and the LRMS PTM usage does not noticeably disturb the main profile transmissions. If no other profiles exist then the CL_S channel shall be used.

The broadcast attributes coding for CLMS, bit a42 shall be set to 1.

6.5 DLC layer requirements

6.5.1 C-plane requirements

All internal DECT protocol control shall be handled by the C-plane. All external user data and control shall be handled by the C-plane. The provisions of ETS 300 175-4 [4] shall be implemented with respect to the services, procedures, messages and information elements coding listed in Annexes E to F of this ETS with the condition of LRMS PTM. The DLC layer Link Access Procedure (Control) (LAP-C) class U operation shall be supported. The Unnumbered Information (UI) frames shall be fragmented to use either the CL_S or CL_F channel. The minimum supported DLC layer frame length shall be 63 octets.

6.5.2 U-plane requirements

The U-plane shall not be used by this ETS. However the presence of LRMS PTM service should not noticeably limit the functionality of the possible other coexisting profiles using the U-plane.

6.6 Network layer requirements

The provisions of ETS 300 175-5 [5] shall be implemented with respect to the services, procedures, messages and information elements coding listed in annexes F and G of ETS 300 755 [13], with the condition of LRMS PTM.

The Network layer provisions shall include the Connectionless Message Service (CLMS) entity. For the service the rules of the clause 12 of ETS 300 175-5 [5] variable length service shall apply.

The <<PORTABLE IDENTITY>> element of the {CLMS-VARIABLE} message shall be used for the addressing. For the addressing of the PPs the connectionless TPUI shall be used as specified ETS 300 175-5 [5], subclause 14.3 (see particularly subclause 14.3.2 paragraph 4). The interworking annexes to specific services shall define the type of addressing used as well as the way external addresses are mapped into the DECT addresses.

The inclusion of the <<IWU-TO-IWU>>, <<MMS-GENERIC-HDR>> and <<MMS-OBJECT-HDR>> shall be required in the {CLMS-VARIABLE} message.

The messages shall be segmented by using the <<SEGMENTED-INFO>> element in the {CLMS-VARIABLE} message if the {CLMS-VARIABLE} message length exceeds 58 octets. The segmentation rules as specified in ETS 300 175-5 [5] in subclauses 12.3.2.1 and 12.3.2.2 shall apply. For the segmentation procedure the elements defined mandatory in {CLMS-VARIABLE} in ETS 300 175-5 [5] shall be present in all messages. The segmentation shall apply to the << IWU-TO-IWU>> element only.

NOTE: This implies that other elements, such as the <<MMS-GENERIC-HDR>> and <<MMS-OBJECT-HDR>>, are not duplicated for subsequent {CLMS-VARIABLE} messages when segmentation is used.

6.7 Management entity requirements

The connectionless link procedures shall be provided.

6.8 Generic interworking conventions

6.8.1 MMSP procedures

The MMSP elements of procedures and message definitions are defined in clause A.1 of ETS 300 755 [13]. Only {MMS-SEND}, {MMS-STATUS}, {MMS-EXT-CMD} and {MMS-ESC-CMD} message shall be supported.

The MMSP information elements are defined in clause A.2 of ETS 300 755 [13].

The MMSP implementation on lower layers has been defined in annex A of this ETS.

6.8.2 MMS-SAP

The MMS-SAP is the service access point on the top of MMSP that shall be accessed by the interworking unit (IWU) or the application. The M-MMS-SAP primitives are used for LRMS message control and for requesting LRMS message transportation or reception directly by the upper layer application. The main message control functionality for different services is done as defined in an appropriate service interworking definition. The MMS-SAP primitives for LRMS PTM have been defined in subclause 6.8.3 of this ETS.

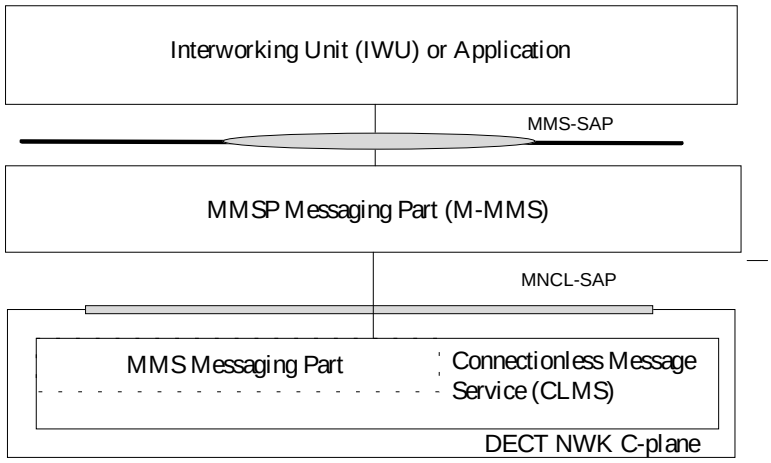


Figure 5: The LRMS PTM protocol model

6.8.3 MMSP primitives

6.8.3.1 M-MMS primitives

The following primitives are provided by MMS-SAP for the control of M-MMS part of the MMSP.

Table 5

Primitive	Req	Cfm	Ind	Res
PTM-MMS-SEND-	x		x	
PTM-MMS-STATUS-	x		x	
PTM-MMS-EXT-CMD-	x		x	
PTM-MMS-ESC-CMD-	x		x	

6.8.3.2 Parameters

The parameters for each primitive are described in clause A.2 of ETS 300 755 [13].

Annex A (normative): Support of MMSP by the DECT lower layers

A.1 Profile-specific information elements

The information elements specified in clause B.1 of annex B in data service type F profile, class 2 (ETS 300 755 [13]) shall apply for both services LRMS PTP and PTM.

A.2 MMSP message implementation

A.2.1 General

This annex describes the implementation of the MMSP point-to-point and point-to-multipoint service in DECT. The implementation is illustrated in the form of mappings between the MMSP and DECT NWK layer elements.

The M-MMS messages specified in ETS 300 755 [13], annex A shall apply.

A.2.2 C-MMS primitives mapping rules

A.2.2.1 LRMS PTP C-MMS primitives

There is no concept of "C-MMS messages". Therefore C-MMS primitives are directly mapped to Mobile Network Call Control (MNCC) primitives.

The mapping shall be as follows as follows:

Table A.1: Primitive mapping between C-MMS and CC

MMS primitive	MNCC primitive
C-MMS-SETUP-{req, ind}	MNCC-SETUP-{req, ind}
C-MMS-CONNECT-{req, cfm, ind}	MNCC-CONNECT-{req, cfm, ind}
C-MMS-RELEASE- {req, cfm, ind, res}	MNCC-RELEASE- {req, cfm, ind, res}
C-MMS-MODIFY- {req, cfm, ind}	MNCC-MODIFY- {req, cfm, ind}

The parameters of corresponding primitives are identical.

A.2.2.2 LRMS PTM C-MMS primitives

No C-MMS part is present in the LRMS PTM thus no C-MMS primitives are defined nor mapped.

A.2.3 M-MMS message mapping rules

A.2.3.1 General rules for LRMS PTP

The primary part of an M-MMS message shall be placed into an {IWU-INFO} message.

The User data field of the secondary part shall be carried in the {IWU-INFO} message. Other fields of the secondary part shall not be conveyed.

A.2.3.2 General rules for LRMS PTM

These rules shall apply if MMSP messages are conveyed over the connectionless PTM link.

The primary part of an M-MMS message shall be placed into an {CLMS-VARIABLE} message.

The User data field of the secondary part shall be carried in the {CLMS-VARIABLE} message. Other fields of the secondary part shall not be conveyed.

A.2.3.3 Information element mapping rules

The following M-MMS information elements shall be mapped one to one on to elements with the same name in the network layer.

Table A.2: M-MMS information elements mapping

M-MMS information element	Reference
MMS-Generic-Header	ETS 300 755 [13], B.1.1
Called-Party-Number	ETS 300 175-5 [5], 7.7.7.
Called party Subaddress	ETS 300 175-5 [5], 7.7.8.
Calling Party Number	ETS 300 175-5 [5], 7.7.9.
Time-Date	ETS 300 175-5 [5], 7.7.50
MMS-Obj-Header	ETS 300 755 [13], B.1.2.,
MMS-Ext-Header	ETS 300 755 [13], B.1.3
Segmented Info	ETS 300 175-5 [5], 7.7.37.
Repeat Indicator	ETS 300 175-5 [5], 7.6.3

The user data M-MMS information element shall be mapped as follows:

Table A.3: M-MMS user data element mapping

M-MMS information element	NWK information element	Reference
User data	IWU-TO-IWU with <protocol discriminator> "M-MMS user data" user data is mapped into the IWU-TO-IWU-INFORMATION field	ETS 300 175-5 [5], 7.7.23

A.3 Network layer segmentation rules for LRMS PTP

A.3.1 Procedure at the sending side

Upon receipt of a MNCC-IWU-INFO-req primitive the CC shall map the parameters into {IWU-INFO} message elements. The original message shall be segmented into two or more {IWU-INFO} messages by using the <<SEGMENTED-INFO>> element in the {IWU-INFO} message if the original message length exceeds 58 octets. For the segmentation procedure the elements defined mandatory in {IWU-INFO} message in ETS 300 175-5 5 shall be present in all messages and shall have the same value. The segmentation shall apply to the <<IWU-TO-IWU>> element only. Each message should contain the maximum amount of user data.

NOTE: This implies that other elements, such as the <<MMS-GENERIC-HDR>> and <<MMS-OBJECT-HDR>>, are not duplicated for subsequent {IWU-INFO} messages when segmentation is used.

The CC shall deliver the resulting {IWU-INFO} message (or series of messages) in sequence to the Link Control Entity (LCE) for immediate delivery via the connection oriented S-SAP (Service Access Point Identifier (SAPI) = "0"). The messages shall be delivered using DL-DATA-req primitives, indicating the use of a class A link.

A.3.2 Procedure at the receiving side

Upon receipt of a {IWU-INFO} message, the CC shall act as follows:

a) if the message does not contain the <<SEGMENTED-INFO>> information element it shall map the elements into the parameters of a MNCC-IWU-INFO-ind primitive. It shall immediately issue the resulting primitive via the MNCC-SAP;

b) if the message does contain the <<SEGMENTED-INFO>> element the CC shall store (buffer) the this message. Whenever a new segmented message is received, the CC shall attempt to construct a original message using all stored segmented messages. Any duplicate segmented messages should be discarded.

The reconstructed original message shall be identified by the receipt of all of the segments as indicated in the <<SEGMENTED-INFO>> elements. Upon detection of a complete series of segments, the CC shall map the elements into the parameters of a MNCC-IWU-INFO-ind primitive. Duplicate mandatory elements and all <<SEGMENTED-INFO>> elements shall be discarded, and the individual <<IWU-TO-IWU>> elements shall be concatenated into a single message unit parameter. The CC shall immediately issue the resulting primitive via the MNCC-SAP.

Annex B (informative): Interworking conventions to specific networks

B.1 GSM short message services, SMS Mobile Terminated (SMS-MT), SMS Mobile Originated (SMS-MO) and GSM SMS Cell Broadcast (SMS-CB)

The interworking description of the LRMS (this profile) to the GSM short message service, point-to-point mobile originated and mobile terminated and GSM short message service cell broadcast is defined in ETS 300 764 [14].

Annex C (normative): Service E2: fixed termination MAC Protocol Implementation Conformance Statement (PICS) proforma

C.1 Standardized symbols for the status column

The symbols for the status column are as follows:

M	Mandatory;
O	Optional (Boolean);
x or N/A	prohibited use;
n/a, N/A or - (dash)	Not Applicable;
Cn	Conditional, the condition n appears at the bottom of the table;
i or I	out of scope (the capability is allowed to be implemented but is not called upon by the profile functionality).

Where reception of a message is marked as "O", this shall be understood to mean that correct understanding and processing of that message is optional.

Except when stated otherwise, the reference column refers to the relevant subclause in ETS 300 175-3 [3].

C.2 Capabilities

C.2.1 Services

Table C.1: Q.9 Service support

Service supported				
Item No.	**Name of service**	**Reference**	**Status**	**Support**
1	Type 1f IN_minimum delay	5.6.2.1	I	
2	Type 2f IN_normal delay	5.6.2.1	I	
3	Type 3f IP_error_detection	5.6.2.1	I	
4	Type 4f IP_error_correction	5.6.2.1	I	
5	Type 5 IN_normal delay	5.6.2.2	I	
6	Type 6 IP_error_detection	5.6.2.2	I	
7	Type 7f IP_error_correction	5.6.2.2	I	
8	Type 1h IN_minimum delay	5.6.2.1	I	
9	Type 2h IN_normal delay	5.6.2.1	I	
10	Type 3h IP_error_detection	5.6.2.1	I	
11	Type 4h IP_error_correction	5.6.2.1	I	
12	CS duplex	5.3.1.1	C101	
13	CF duplex	5.3.1.1	C102	
14	Downlink CL_S only	5.7.2.1	C103	
15	Downlink CL_F + CL_S	5.7.2.1	C104	
16	Downlink CL_S + SIN	5.7.2.1	I	
17	Uplink CL_F only	5.7.2.2	I	
18	Uplink CL_S only	5.7.2.2	I	
19	Uplink without SDU	5.7.2.2	I	
20	GF simplex	5.3.1.3	I	
21	Fast paging	11.3.3.1	O	
22	Normal paging	11.3.3.1	M	
23	Low duty cycle paging	11.3.3.1	O	
24	System identities	11.3.2	M	
25	System information	11.3.2	M	
26	Encryption	6.2.3	C105	
27	Fast setup	11.3.3.2	I	
IP: higher layer Information channel (Protected).				

C101: IF LRMS PTP (point to point) service supported THEN M ELSE I
C102: IF protected B-field available THEN M ELSE I
C103: IF LRMS PTM (point-to-multipoint) service supported THEN M ELSE I
C104: IF LRMS PTM (point-to-multipoint) service supported AND protected B-field available THEN M ELSE I
C105: IF encryption supported THEN M

C.2.2 Protocol parameters

Table C.2: Q.11 Protocol parameters

Protocol parameters supported						
Item No.	**Name**	**Reference**	**Status**	**Support**	**Value**	
					Allowed	**Supported**
1	N200	10.2	C201		10	
2	N201	10.6	I			
3	N202	11.4	M		10	
4	N203	9.2	I			

C201: IF LRMS PTP (point to point) service supported THEN M ELSE I

C.2.3 Messages

Table C.3: Q.12 Messages in A_tail

Supported messages						
Item No.	**Name**	**Reference**	**Sending**		**Receipt**	
			Status	**Support**	**Status**	**Support**
1	TA code: CT data packet number 0	7.1.2	M		M	
2	TA code: CT data packet number 1	7.1.2	M		M	
3	TA code: identities information on connectionless bearer	7.1.2	M		N/A	
4	TA code: identities information	7.1.2	M		M	
5	TA code: multiframe sync. and system information	7.1.2	M		N/A	
6	TA code: main escape	7.1.2	X		X	
7	TA code: MAC layer control	7.1.2	M		M	
8	TA code: paging/first PT transmission	7.1.2	M		M	
9	BA code: U-type, IN, SIN or IP packet number 0	7.1.4	I		I	
10	BA code: U-type, IP error detect or IP packet number 1	7.1.4	I		I	
11	BA code: E-type, all CF or CL_F, packet number 0	7.1.4	C301		C301	
12	BA code: E-type, all CF, packet number 1	7.1.4	C301		C301	
13	BA code: E-type, not all CF or CL_F; CF packet number 0	7.1.4	C301		C301	
14	BA code: E-type, not all CF; CF packet number 1	7.1.4	C301		C301	
15	BA code: E-type, all MAC control	7.1.4	I		I	
16	BA code: no B_field	7.1.4	O		N/A	
17	NT information	7.2.2	M		M	
18	Static system information	7.2.3.2	M		N/A	
19	Extended RF carrier information	7.2.3.3	I		N/A	
20	Fixed part capabilities	7.2.3.4	M		N/A	
21	Extended fixed part capabilities	7.2.3.5	I		N/A	
22	SARI message	7.2.3.6	O		N/A	
23	Multi-frame number	7.2.3.7	C302		N/A	
24	Q-channel escape	7.2.3.8	I		N/A	
25	Zero length page indication	7.2.4.2.3	M		N/A	
26	Short page indication	7.2.4.2.3	M		N/A	
27	Full page indication	7.2.4.2.3	I		N/A	
28	Not the last 36 bits of a long page indication	7.2.4.2.3	I		N/A	
29	The first 36 bits of a long page indication	7.2.4.2.3	I		N/A	
30	The last 36 bits of a long page indication	7.2.4.2.3	I		N/A	
31	All of a long page indication	7.2.4.2.3	I		N/A	
32	PT header extend flag	7.2.4.2.2	M		N/A	
33	PT MAC information: fill	7.2.4.3.2	O		N/A	
34	PT MAC information: blind full slot	7.2.4.3.3	M		N/A	
35	PT MAC information: other bearer	7.2.4.3.4	O		N/A	
36	PT MAC information: recommended other bearer	7.2.4.3.4	O		N/A	
37	PT MAC information: good RFP bearer	7.2.4.3.4	O		N/A	
38	PT MAC information: dummy or C/L bearer position	7.2.4.3.4	M		N/A	
39	PT MAC information: RFP identity	7.2.4.3.5	I		N/A	
40	PT MAC information: dummy or C/L bearer marker	7.2.4.3.7	M		N/A	
41	PT MAC information: escape	7.2.4.3.6	I		N/A	
42	PT MAC information: bearer handover type 0000	7.2.4.3.8	I		N/A	
43	PT MAC information: bearer handover type 0001	7.2.4.3.8	I		N/A	
44	PT MAC information: bearer handover type 0010	7.2.4.3.8	I		N/A	
45	PT MAC information: bearer handover type 0011	7.2.4.3.8	I		N/A	
46	Basic access request	7.2.5.2	N/A		C303	
47	Basic bearer handover request	7.2.5.2	N/A		I	

(continued)

Table C.3 (concluded): Q.12 Messages in A_tail

Supported messages						
Item No.	**Name**	**Reference**	**Sending**		**Receipt**	
			Status	**Support**	**Status**	**Support**
48	Basic connection handover request	7.2.5.2	N/A		I	
49	Basic unconfirmed access request	7.2.5.2	N/A		I	
50	Basic bearer confirm	7.2.5.2	C303		N/A	
51	Basic wait	7.2.5.2.3	C303		I˘	
52	Basic bearer release	7.2.5.2	C303		I	
53	Advanced access request	7.2.5.3.2	I		I	
54	Advanced bearer handover request	7.2.5.3.3	I		I	
55	Advanced connection handover request	7.2.5.3.4	I		I	
56	Advanced bearer confirm	7.2.5.3.6	I		I	
57	Advanced unconfirmed access request	7.2.5.3.5	I		I	
58	Advanced wait	7.2.5.3.7	I		I	
59	Advanced attributes-T request	7.2.5.3.8	I		I	
60	Advanced attributes-T confirm	7.2.5.3.8	I		I	
61	Advanced bandwidth-T request	7.2.5.3.9	I		I	
62	Advanced bandwidth-T confirm	7.2.5.3.9	I		I	
63	Advanced channel list	7.2.5.3.10	I		I	
64	Advanced unconfirmed dummy	7.2.5.3.11	I		I	
65	Advanced unconfirmed handover	7.2.5.3.12	I		I	
66	Advanced bearer release	7.2.5.3.13	I		I	
67	Transmit on the specified slot/frequency test message	7.2.5.4.2	N/A		I	
68	Loopback B_field test message	7.2.5.4.3	N/A		I	
69	Defeat antenna diversity test message	7.2.5.4.4	N/A		I	
70	Force bearer handover test message	7.2.5.4.5	N/A		I	
71	Clear test mode test message	7.2.5.4.6	N/A		I	
72	Single bearer antenna switch QC message	7.2.5.5	O		O	
73	All bearer antenna switch QC message	7.2.5.5	O		O	
74	Bearer handover QC message	7.2.5.5	I		I	
75	Connection handover QC message	7.2.5.5	I		I	
76	Single bearer frequency control QC message	7.2.5.5	O		O	
77	All bearer frequency control QC message	7.2.5.5	O		O	
78	C/L single transmission with 1 CL_F segment	7.2.5.6	C304		C304	
79	C/L single transmission with 2 CL_F segments	7.2.5.6	C304		C304	
80	C/L single transmission with 3 CL_F segments	7.2.5.6	C304		C304	
81	C/L single transmission with 4 CL_F segments	7.2.5.6	C304		C304	
82	1st C/L half slot transmission with 1 CL_F segment	7.2.5.6	I		I	
83	1st C/L full slot transmission with 4 CL_F segment	7.2.5.6	C304		C304	
84	2nd C/L transmission with 1 CL_F segment	7.2.5.6	C304		C304	
85	2nd C/L transmission with 2 CL_F segment	7.2.5.6	C304		C304	
86	2nd C/L transmission with 3 CL_F segment	7.2.5.6	C304		C304	
87	2nd C/L transmission with 4 CL_F segment	7.2.5.6	C304		C304	
88	C/L single transmission without CL_F segment	7.2.5.6	C301		C301	
89	1st C/L transmission without CL_F segment (CL_S service)	7.2.5.6	C301		C301	
90	Change dummy position	7.2.5.6	N/A		O	
91	Extended system information	7.2.5.6	N/A		O	
92	Start encryption: request	7.2.5.7	N/A		C302	
93	Start encryption: confirm	7.2.5.7	C302		N/A	
94	Start encryption: grant	7.2.5.7	N/A		C302	
95	Stop encryption: request	7.2.5.7	N/A		C302	
96	Stop encryption: confirm	7.2.5.7	C302		N/A	
97	Stop encryption: grant	7.2.5.7	N/A		C302	
98	First transmission for B_field setup	7.2.5.8	I		I	
99	M-channel escape	7.2.5.9	I		I	

C301: IF protected B-field available THEN M ELSE I
C302: IF encryption supported THEN M
C303: IF LRMS PTP (point to point) service supported THEN M ELSE I
C304: IF LRMS PTM (point-to-multipoint) service supported AND protected B-field available THEN M ELSE I

C.2.4 Message parameters

Table C.4: Q.14 Parameters of static system information message

Supported parameters						
Item No.	**Parameter**	**Reference**	**Status**	**Support**	**Values**	
					Allowed	**Supported**
1	Normal-reverse	7.2.3.2.2	M		0	
2	Slot number	7.2.3.2.3	M		0 - 11	
3	Start position	7.2.3.2.4	M		0	
4	Escape	7.2.3.2.5	M		0 - 1	
5	Number of transceivers	7.2.3.2.6	M		0 - 3	
6	Extended RF carrier flag	7.2.3.2.7	M		0	
7	RF carriers available	7.2.3.2.8	M		1 - 1 023	
8	Spare	7.2.3.2.11	M		0	
9	Carrier number	7.2.3.2.10	M		0 - 9	
10	Spare	7.2.3.2.11	M		0	
11	Primary receiver scan number	7.2.3.2.12	M		0 - 9	

Table C.5: Q.15 Parameters of fixed part capabilities message

Fixed part capabilities						
Item No.	**Parameter**	**Reference**	**Status**	**Support**	**Values**	
					Allowed	**Supported**
1	Extended FP information	7.2.3.4.2	M		0, 1	
2	Full slot	7.2.3.4.2	M		0, 1	
3	Frequency control	7.2.3.4.2	M		0, 1	
4	Page repetition	7.2.3.4.2	M		0, 1	
5	C/O setup on dummy allowed	7.2.3.4.2	M		C501	
6	C/L uplink	7.2.3.4.2	M		0, 1	
7	C/L downlink	7.2.3.4.2	M		C502	
8	Basic A_field setup	7.2.3.4.2	M		C503	
9	Advanced A_field setup	7.2.3.4.2	M		0, 1	
10	B_field setup	7.2.3.4.2	M		0, 1	
11	CF messages	7.2.3.4.2	M		C504	
12	IN_minimum_delay	7.2.3.4.2	M		0, 1	
13	IN_normal_delay	7.2.3.4.2	M		0, 1	
14	IP_error_detection	7.2.3.4.2	M		0, 1	
15	IP_error_correction	7.2.3.4.2	M		0, 1	
16	Multibearer connection	7.2.3.4.2	M		0, 1	

C501: IF LRMS PTM (point-to-multipoint) service supported THEN 0 ELSE 0, 1
C502: IF LRMS PTM (point-to-multipoint) service supported THEN 1 ELSE 0, 1
C503: IF LRMS PTP (point to point) service supported THEN 1 ELSE 0,1
C504: IF protected B-field available THEN 1 else 0,1

C.2.5 Functions implemented

Table C.6: Q.34 Function implemented

Supported functions				
Item No.	**Function name**	**Reference**	**Status**	**Support**
1	B_field data scrambling	6.2.4	C601	
2	B_field data unscrambling	6.2.4	C601	
3	R-CRC generation	6.2.5.2	M	
4	R-CRC checking	6.2.5.2	M	
5	X-CRC generation	6.2.5.4	C601	
6	X-CRC checking	6.2.5.4	C602	
7	Z-CRC generation	ETS 300 175-2 [2] 4.8	I	
8	Z-CRC checking	ETS 300 175-2 [2] 4.8	I	
9	D-MAP D80 field mapping	6.2.1.1	I	
10	D-MAP D32 field mapping	6.2.1.1	C601	
11	D-MAP D08 field mapping	6.2.1.1	I	
12	D-MAP D00 field mapping	6.2.1.1	M	
13	A-MAP A_field mapping	6.2.1.2	M	
14	E/U-MUX E80 type multiplex	6.2.2.2	I	
15	E/U-MUX E32 type multiplex	6.2.2.2	C601	
16	E/U-MUX E08 type multiplex	6.2.2.2	I	
17	E/U-MUX U80a type multiplex	6.2.2.2	I	
18	E/U-MUX U80b type multiplex	6.2.2.2	I	
19	E/U-MUX U32a type multiplex	6.2.2.2	C603	
20	E/U-MUX U32b type multiplex	6.2.2.2	C602	
21	E/U-MUX U08a type multiplex	6.2.2.2	I	
22	E/U-MUX U08b type multiplex	6.2.2.2	I	
23	C-MUX B_field full slot mode 0 multiplex	6.2.2.3.1	C601	
24	C-MUX B_field full slot mode 1 multiplex	6.2.2.3.1	C601	
25	C-MUX B_field full slot mode 2 multiplex	6.2.2.3.1	C601	
26	C-MUX B_field full slot mode 3 multiplex	6.2.2.3.1	C601	
27	C-MUX B_field full slot mode 4 multiplex	6.2.2.3.1	C601	
28	C-MUX B_field half slot mode 0 multiplex	6.2.2.3.2	I	
29	C-MUX B_field half slot mode 1 multiplex	6.2.2.3.2	I	
30	T-MUX Tail multiplex	6.2.2.1.2	M	
31	Frequency correction function	11.5.2.2	O	

C601: IF protected B-field available THEN M ELSE I
C602: IF protected B-field available THEN O ELSE I
C603: IF LRMS PTP (point to point) service supported THEN M ELSE I

C.2.6 Timer support

Table C.7: Q.35 Timer support

Timer supported						
Item No.	**Name**	**Reference**	**Status**	**Support**	**Values**	
					Allowed	**Supported**
1	T200	10.2	C701		3 seconds	
2	T201	11.5	C701		5 seconds	
3	T202	10.6	I		3 seconds	
4	T203	10.6	I		16 frames	
5	T204	9.1	M		6 multiframes	
6	T205	9.1	M		10 seconds	
7	T206	11.2	I		10 frames	
8	T207	11.3	N/A		5 seconds	
9	T208	11.3	N/A		20 seconds	
10	T209	11.4	M		30 seconds	
11	T210	11.4	M		2 seconds	
12	T211	10.3	I		3 seconds	
13	T212	10.5	I		20 frames	
14	T213	10.7	I		20 frames	
15	T214	9.2	I		20 frames	
16	T215	9.2	I		6 multiframes	

C701: IF LRMS PTP (point to point) service supported THEN M ELSE I

C.2.7 Procedure support

Table C.8: Q.36 Procedure support

Procedures supported				
Item No.	**Name of procedure**	**Reference**	**Status**	**Support**
1	Downlink connectionless procedure	9.1.2	C801	
2	Downlink broadcast procedure	9.1.1	M	
3	Uplink connectionless procedure	9.2.3	I	
4	Request for specific Q information procedure	9.3.1	O	
5	Request for a new dummy procedure	9.3.2	O	
6	Basic setup procedure for single bearer basic connection of known service	10.2.4.2	C802	
7	Normal setup procedure for single bearer advanced connection of known service	10.2.4.2	I	
8	Fast setup procedure for single bearer advanced connection of known service	10.2.4.2	I	
9	Normal setup procedure multi-bearer symmetric connection	10.2.4.3.1	I	
10	Fast setup procedure for multi-bearer symmetric connection	10.2.4.3.1	I	
11	Normal setup procedure for full asymmetric downlink connection	10.2.4.3.3	I	
12	Fast setup procedure for full asymmetric downlink connection	10.2.4.3.3	I	
13	Normal setup procedure for full asymmetric uplink connection	10.2.4.3.2	I	
14	Fast setup procedure for full asymmetric uplink connection	10.2.4.3.2	I	
15	Setup procedure for connection with unknown service	10.2.4.3	I	
16	Connection modification procedure	10.3	I	
17	Connection release procedure	10.4	I	
18	Basic single bearer setup procedure	10.5.1.1	C802	
19	A_field advanced single bearer setup procedure	10.5.1.2	I	

(continued)

Table C.8 (concluded): Q.36 Procedure support

Procedures supported				
Item No.	**Name of procedure**	**Reference**	**Status**	**Support**
20	B_field single bearer normal setup procedure	10.5.1.3.1	C803	
21	B_field single bearer fast setup procedure	10.5.1.3.2	I	
22	Double simplex bearer indirect setup procedure	10.5.1.4	I	
23	Double simplex bearer direct setup procedure	10.5.1.4	I	
24	Duplex bearer handover procedure	10.6.2	I	
25	Double simplex bearer handover procedure	10.6.3	I	
26	Unacknowledged bearer release procedure	10.7.2.1	c802	
27	Acknowledged bearer release procedure	10.7.2.2	I	
28	Fast bearer release procedure	10.7.2.3	I	
29	Q1 and Q2 bits setting procedure for C-channel data	10.8.1	C804	
30	Q1 and Q2 bits setting procedure for IN and IP_error_detection data	10.8.1.3	I	
31	BCK and Q2 bits setting for IP_error_correction data in symmetric connection	10.8.2.4.1	I	
32	BCK and Acknowledgement (ACK) bit setting for IP_error_correction data in asymmetric connection	10.8.2.4.1	I	
33	Bearer replacement procedure	10.8.2.5.1	I	
34	Mac message jump procedure	10.8.2.5.2	I	
35	Unilateral jump procedure	10.8.2.5.3	I	
36	Idle_locked state entering procedure	11.3.2	N/A	
37	Idle_locked state maintaining procedure	11.3.3	N/A	
38	Duplex bearer channel selection procedure	11.4.1	I	
39	Double simplex bearer channel selection procedure	11.4.1	I	
40	Simplex bearer channel selection procedure	11.4.1	I	
41	Uplink connectionless channel selection	9.2.2	I	
42	Radio Fixed Part Identifier (RFPI) handshaking procedure	11.5.1	M	
43	PT frequency correction procedure	11.5.2.2	O	
44	MAC layer test message procedure	12.2	M	
45	Receiver scanning procedure	11.9	M	
46	PP paging procedure	9.1.3.2	M	
47	Channel list procedure	10.5.2	I	

C801: IF LRMS PTM (point-to-multipoint) service supported THEN M ELSE I
C802: IF LRMS PTP (point to point) service supported THEN M ELSE I
C803: IF LRMS PTP (point to point) service supported THEN O ELSE I
C804: IF protected B-field available THEN M ELSE I

Table C.9: Q.37 Parameters of channel selection procedure (duplex/double/simplex bearer)

Supported parameters						
Item No.	**Parameter**	**Reference**	**Status**	**Support**	**Values**	
					Allowed	**Supported**
1	Lowest boundary of channel list	11.4.1	M		< = - 93 dBm	
2	Band resolution	11.4.1	M		6 dB	
3	RSSI variation between checking	11.4.1	M		< = 12 dB	

Annex D (normative): Service E2: Portable termination MAC PICS proforma

D.1 Standardized symbols for the status column

The standardized symbols for the status column are as follows:

The symbols for the status column are as follows:

M	Mandatory;
O	Optional (Boolean);
x or N/A	prohibited use;
n/a, N/A or - (dash)	Not Applicable;
Cn	Conditional, the condition n appears at the bottom of the table;
i or I	out of scope (the capability is allowed to be implemented but is not called upon by the profile functionality).

Where reception of a message is marked as "O", this shall be understood to mean that correct understanding and processing of that message is optional.

Except when stated otherwise, the reference column refers to the relevant subclause in ETS 300 175-3 [3].

D.2 Capabilities

D.2.1 Services

Table D.1: Q.9 Service support

Service supported				
Item No.	**Name of service**	**Reference**	**Status**	**Support**
1	Type 1f IN_minimum delay	5.6.2.1	I	
2	Type 2f IN_normal delay	5.6.2.1	I	
3	Type 3f IP_error_detection	5.6.2.1	I	
4	Type 4f IP_error_correction	5.6.2.1	I	
5	Type 5 IN_normal delay	5.6.2.2	I	
6	Type 6 IP_error_detection	5.6.2.2	I	
7	Type 7f IP_error_correction	5.6.2.2	I	
8	Type 1h IN_minimum delay	5.6.2.1	I	
9	Type 2h IN_normal delay	5.6.2.1	I	
10	Type 3h IP_error_detection	5.6.2.1	I	
11	Type 4h IP_error_correction	5.6.2.1	I	
12	CS duplex	5.3.1.1	C101	
13	CF duplex	5.3.1.1	C102	
14	Downlink CL_S only	5.7.2.1	C103	
15	Downlink CL_F + CL_S	5.7.2.1	C104	
16	Downlink CL_S + SIN	5.7.2.1	I	
17	Uplink CL_F only	5.7.2.2	I	
18	Uplink CL_S only	5.7.2.2	I	
19	Uplink without SDU	5.7.2.2	I	
20	GF simplex	5.3.1.3	I	
21	Fast paging	11.3.3.1	O	
22	Normal paging	11.3.3.1	M	
23	Low duty cycle paging	11.3.3.1	O	
24	System identities	11.3.2	M	
25	System information	11.3.2	M	
26	Encryption	6.2.3	C105	
27	Fast setup	11.3.3.2	I	

C101: IF LRMS PTP (point to point) service supported THEN M ELSE I
C102: IF protected B-field available THEN M ELSE I
C103: IF LRMS PTM (point-to-multipoint) service supported THEN M ELSE I
C104: IF LRMS PTM (point-to-multipoint) service supported AND protected B-field available THEN M ELSE I
C105: IF encryption supported THEN M

D.2.2 Protocol parameters

Table D.2: Q.11 Protocol parameters

Protocol parameters supported						
Item No.	**Name**	**Reference**	**Status**	**Support**	**Value**	
					Allowed	**Supported**
1	N200	10.2	C201		10	
2	N201	10.6	I			
3	N202	11.4	M		10	
4	N203	9.2	I			

C201: IF LRMS PTP (point to point) service supported THEN M ELSE I

D.2.3 Messages

Table D.3: Q.12 Messages in A_tail

Supported messages						
Item No.	**Name**	**Reference**	**Sending**		**Receipt**	
			Status	**Support**	**Status**	**Support**
1	TA code: CT data packet number 0	7.1.2	C301		C301	
2	TA code: CT data packet number 1	7.1.2	C301		C301	
3	TA code: identities information on connectionless bearer	7.1.2	N/A		C305	
4	TA code: identities information	7.1.2	M		M	
5	TA code: multiframe sync. and system information	7.1.2	N/A		M	
6	TA code: main escape	7.1.2	X		X	
7	TA code: MAC layer control	7.1.2	M		M	
8	TA code: paging/first PT transmission	7.1.2	M		M	
9	BA code: U-type, IN, SIN or IP packet number 0	7.1.4	M		M	
10	BA code: U-type, IP error detect or IP packet number 1	7.1.4	I		I	
11	BA code: E-type, all CF or CL_F, packet number 0	7.1.4	C301		C301	
12	BA code: E-type, all CF, packet number 1	7.1.4	C301		C301	
13	BA code: E-type, not all CF or CL_F; CF packet number 0	7.1.4	C301		C301	
14	BA code: E-type, not all CF; CF packet number 1	7.1.4	C301		C301	
15	BA code: E-type, all MAC control	7.1.4	I		I	
16	BA code: no B_field	7.1.4	N/A		O	
17	NT information	7.2.2	M		M	
18	Static system information	7.2.3.2	N/A		M	
19	Extended RF carrier information	7.2.3.3	N/A		I	
20	Fixed part capabilities	7.2.3.4	N/A		M	
21	Extended fixed part capabilities	7.2.3.5	N/A		I	
22	SARI message	7.2.3.6	N/A		O	
23	Multi-frame number	7.2.3.7	N/A		C303	
24	Q-channel escape	7.2.3.8	N/A		I	
25	Zero length page indication	7.2.4.2.3	N/A		M	
26	Short page indication	7.2.4.2.3	N/A		M	
27	Full page indication	7.2.4.2.3	N/A		O	
28	Not the last 36 bits of a long page indication	7.2.4.2.3	N/A		I	
29	The first 36 bits of a long page indication	7.2.4.2.3	N/A		I	
30	The last 36 bits of a long page indication	7.2.4.2.3	N/A		I	
31	All of a long page indication	7.2.4.2.3	N/A		I	
32	PT header extend flag	7.2.4.2.2	N/A		M	
33	PT MAC information: fill	7.2.4.3.2	N/A		M	
34	PT MAC information: blind full slot	7.2.4.3.3	N/A		M	
35	PT MAC information: other bearer	7.2.4.3.4	N/A		O	
36	PT MAC information: recommended other bearer	7.2.4.3.4	N/A		O	
37	PT MAC information: good RFP bearer	7.2.4.3.4	N/A		O	
38	PT MAC information: dummy or C/L bearer position	7.2.4.3.4	N/A		M	
39	PT MAC information: RFP identity	7.2.4.3.5	N/A		I	

(continued)

Table D.3 (continued): Q.12 Messages in A_tail

Supported messages						
Item No.	**Name**	**Reference**	**Sending**		**Receipt**	
			Status	**Support**	**Status**	**Support**
40	PT MAC information: dummy or C/L bearer marker	7.2.4.3.7	N/A		M	
41	PT MAC information: escape	7.2.4.3.6	N/A		I	
42	PT MAC information: bearer handover type 0000	7.2.4.3.8	N/A		I	
43	PT MAC information: bearer handover type 0001	7.2.4.3.8	N/A		I	
44	PT MAC information: bearer handover type 0010	7.2.4.3.8	N/A		I	
45	PT MAC information: bearer handover type 0011	7.2.4.3.8	N/A		I	
46	Basic access request	7.2.5.2	C302		N/A	
47	Basic bearer handover request	7.2.5.2	I		N/A	
48	Basic connection handover request	7.2.5.2	I		N/A	
49	Basic unconfirmed access request	7.2.5.2	I		N/A	
50	Basic bearer confirm	7.2.5.2	N/A		C302	
51	Basic wait	7.2.5.2.3	C302		C302	
52	Basic bearer release	7.2.5.2	C302		C302	
53	Advanced access request	7.2.5.3.2	I		I	
54	Advanced bearer handover request	7.2.5.3.3	I		I	
55	Advanced connection handover request	7.2.5.3.4	I		I	
56	Advanced bearer confirm	7.2.5.3.6	I		I	
57	Advanced unconfirmed access request	7.2.5.3.5	I		I	
58	Advanced wait	7.2.5.3.7	I		I	
59	Advanced attributes-T request	7.2.5.3.8	I		I	
60	Advanced attributes-T confirm	7.2.5.3.8	I		I	
61	Advanced bandwidth-T request	7.2.5.3.9	I		I	
62	Advanced bandwidth-T confirm	7.2.5.3.9	I		I	
63	Advanced channel list	7.2.5.3.10	I		I	
64	Advanced unconfirmed dummy	7.2.5.3.11	I		I	
65	Advanced unconfirmed handover	7.2.5.3.12	I		I	
66	Advanced bearer release	7.2.5.3.13	I		I	
67	Transmit on the specified slot/frequency test message	7.2.5.4.2	N/A		I	
68	Loopback B_field test message	7.2.5.4.3	N/A		I	
69	Defeat antenna diversity test message	7.2.5.4.4	N/A		I	
70	Force bearer handover test message	7.2.5.4.5	N/A		I	
71	Clear test mode test message	7.2.5.4.6	N/A		I	
72	Single bearer antenna switch QC message	7.2.5.5	O		O	
73	All bearer antenna switch QC message	7.2.5.5	O		O	
74	Bearer handover QC message	7.2.5.5	I		I	
75	Connection handover QC message	7.2.5.5	I		I	
76	Single bearer frequency control QC message	7.2.5.5	O		O	
77	All bearer frequency control QC message	7.2.5.5	O		O	
78	C/L single transmission with 1 CL_F segment	7.2.5.6	C304		C304	
79	C/L single transmission with 2 CL_F segments	7.2.5.6	C304		C304	
80	C/L single transmission with 3 CL_F segments	7.2.5.6	C304		C304	
81	C/L single transmission with 4 CL_F segments	7.2.5.6	C304		C304	
82	1st C/L half slot transmission with 1 CL_F segment	7.2.5.6	I		I	
83	1st C/L full slot transmission with 4 CL_F segment	7.2.5.6	C304		C304	
84	2nd C/L transmission with 1 CL_F segment	7.2.5.6	C304		C304	
85	2nd C/L transmission with 2 CL_F segment	7.2.5.6	C304		C304	
86	2nd C/L transmission with 3 CL_F segment	7.2.5.6	C304		C304	
87	2nd C/L transmission with 4 CL_F segment	7.2.5.6	C304		C304	
88	C/L single transmission without CL_F segment	7.2.5.6	C301		C301	
89	1st C/L transmission without CL_F segment (CL_S service)	7.2.5.6	C301		C301	

(continued)

Table D.3 (concluded): Q.12 Messages in A_tail

Supported messages						
Item No.	**Name**	**Reference**	**Sending**		**Receipt**	
			Status	**Support**	**Status**	**Support**
90	Change dummy position	7.2.5.6	O		N/A	
91	Extended system information	7.2.5.6	O		N/A	
92	Start encryption: request	7.2.5.7	C303		N/A	
93	Start encryption: confirm	7.2.5.7	N/A		C303	
94	Start encryption: grant	7.2.5.7	C303		N/A	
95	Stop encryption: request	7.2.5.7	C303		N/A	
96	Stop encryption: confirm	7.2.5.7	N/A		C303	
97	Stop encryption: grant	7.2.5.7	C303		N/A	
98	First transmission for B_field setup	7.2.5.8	I		I	
99	M-channel escape	7.2.5.9	I		I	

C301: IF protected B-field available THEN M ELSE I
C302: IF LRMS PTP (point to point) service supported THEN M ELSE I
C303: IF encryption supported THEN M
C304: IF LRMS PTM (point-to-multipoint) service supported AND protected B-field available THEN M ELSE I
C305: IF LRMS PTM (point-to-multipoint) service supported THEN O ELSE I

D.2.4 Message parameters

Table D.4: Q.14 Parameters of static system information message

Supported parameters						
Item No.	**Parameter**	**Reference**	**Status**	**Support**	**Values**	
					Allowed	**Supported**
1	Normal-reverse	7.2.3.2.2	M		0 - 1	
2	Slot number	7.2.3.2.3	M		0 - 11	
3	Start position	7.2.3.2.4	M		0	
4	Escape	7.2.3.2.5	M		0 - 1	
5	Number of transceivers	7.2.3.2.6	M		0 - 3	
6	Extended RF carrier flag	7.2.3.2.7	M		0	
7	RF carriers available	7.2.3.2.8	M		1 - 1 023	
8	Spare	7.2.3.2.11	M		0	
9	Carrier number	7.2.3.2.10	M		0 - 9	
10	Spare	7.2.3.2.11	M		0	
11	Primary receiver scan number	7.2.3.2.12	M		0 - 9	

Table D.5: Q.15 Parameters of FP capabilities message

Fixed Part Capabilities						
Item No.	**Parameter**	**Reference**	**Status**	**Support**	**Values**	
					Allowed	**Supported**
1	Extended FP information	7.2.3.4.2	M		0, 1	
2	Full slot	7.2.3.4.2	M		1	
3	Frequency control	7.2.3.4.2	M		0, 1	
4	Page repetition	7.2.3.4.2	M		0, 1	
5	C/O setup on dummy allowed	7.2.3.4.2	M		0,1	
6	C/L uplink	7.2.3.4.2	M		0, 1	
7	C/L downlink	7.2.3.4.2	M		C501	
8	Basic A_field setup	7.2.3.4.2	M		C502	
9	Advanced A_field setup	7.2.3.4.2	M		0, 1	
10	B_field setup	7.2.3.4.2	M		0, 1	
11	CF messages	7.2.3.4.2	C503		C504	
12	IN_minimum_delay	7.2.3.4.2	M		0, 1	
13	IN_normal_delay	7.2.3.4.2	M		0, 1	
14	IP_error_detection	7.2.3.4.2	M		0, 1	
15	IP_error_correction	7.2.3.4.2	M		0, 1	
16	Multibearer connection	7.2.3.4.2	M		0, 1	

C501: IF LRMS PTM (point-to-multipoint) service supported THEN 1 ELSE 0,1
C502: IF LRMS PTP (point to point) service supported THEN M ELSE I
C503: IF protected B-field available THEN 1 ELSE 0,1
C504: IF protected B-field available THEN 1 else 0,1

D.2.5 Functions implemented

Table D.6: Q.34 Function implemented

Supported functions				
Item No.	**Function name**	**Reference**	**Status**	**Support**
1	B_field data scrambling	6.2.4	C601	
2	B_field data unscrambling	6.2.4	C601	
3	R-CRC generation	6.2.5.2	M	
4	R-CRC checking	6.2.5.2	M	
5	X-CRC generation	6.2.5.4	C601	
6	X-CRC checking	6.2.5.4	C602	
7	Z-CRC generation	ETS 300 175-2 [2] 4.8	I	
8	Z-CRC checking	ETS 300 175-2 [2] 4.8	I	
9	D-MAP D80 field mapping	6.2.1.1	I	
10	D-MAP D32 field mapping	6.2.1.1	M	
11	D-MAP D08 field mapping	6.2.1.1	I	
12	D-MAP D00 field mapping	6.2.1.1	O	
13	A-MAP A_field mapping	6.2.1.2	M	
14	E/U-MUX E80 type multiplex	6.2.2.2	I	
15	E/U-MUX E32 type multiplex	6.2.2.2	C601	
16	E/U-MUX E08 type multiplex	6.2.2.2	I	
17	E/U-MUX U80a type multiplex	6.2.2.2	I	
18	E/U-MUX U80b type multiplex	6.2.2.2	I	
19	E/U-MUX U32a type multiplex	6.2.2.2	C603	
20	E/U-MUX U32b type multiplex	6.2.2.2	C602	
21	E/U-MUX U08a type multiplex	6.2.2.2	I	
22	E/U-MUX U08b type multiplex	6.2.2.2	I	
23	C-MUX B_field full slot mode 0 multiplex	6.2.2.3.1	C601	
24	C-MUX B_field full slot mode 1 multiplex	6.2.2.3.1	C601	
25	C-MUX B_field full slot mode 2 multiplex	6.2.2.3.1	C601	
26	C-MUX B_field full slot mode 3 multiplex	6.2.2.3.1	C601	
27	C-MUX B_field full slot mode 4 multiplex	6.2.2.3.1	C601	
28	C-MUX B_field half slot mode 0 multiplex	6.2.2.3.2	I	
29	C-MUX B_field half slot mode 1 multiplex	6.2.2.3.2	I	
30	T-MUX Tail multiplex	6.2.2.1.2	M	
31	Frequency correction function	11.5.2.2	O	

C601: IF protected B-field available THEN M ELSE I
C602: IF protected B-field available THEN O ELSE I
C603: IF LRMS PTP (point to point) service supported THEN M ELSE I

D.2.6 Timer support

Table D.7: Q.35 Timer support

Timer supported						
Item No.	**Name**	**Reference**	**Status**	**Support**	**Values**	
					Allowed	**Supported**
1	T200	10.2	C701		3 seconds	
2	T201	11.5	C701		5 seconds	
3	T202	10.6	I		3 seconds	
4	T203	10.6	N/A		16 frames	
5	T204	9.1	I		6 multiframes	
6	T205	9.1	M		10 seconds	
7	T206	11.2	I		10 frames	
8	T207	11.3	M		5 seconds	
9	T208	11.3	M		20 seconds	
10	T209	11.4	M		30 seconds	
11	T210	11.4	C701		2 seconds	
12	T211	11.3	I		3 seconds	
13	T212	10.5	I		20 frames	
14	T213	10.7	I		20 frames	
15	T214	9.2	I		20 frames	
16	T215	9.2	I		6 multiframes	

C701: IF LRMS PTP (point to point) service supported THEN M ELSE I

D.2.7 Procedure support

Table D.8: Q.36 Procedure support

Procedures supported				
Item No.	**Name of procedure**	**Reference**	**Status**	**Support**
1	Downlink connectionless procedure	9.1.2	C801	
2	Downlink broadcast procedure	9.1.1	M	
3	Uplink connectionless procedure	9.2.3	I	
4	Request for specific Q information procedure	9.3.1	O	
5	Request for a new dummy procedure	9.3.2	O	
6	Basic setup procedure for single bearer basic connection of known service	10.2.4.2	C802	
7	Normal setup procedure for single bearer advanced connection of known service	10.2.4.2	I	
8	Fast setup procedure for single bearer advanced connection of known service	10.2.4.2	I	
9	Normal setup procedure for multi-bearer symmetric connection	10.2.4.3.1	I	
10	Fast setup procedure for multi-bearer symmetric connection	10.2.4.3.1	I	
11	Normal setup procedure for full asymmetric downlink connection	10.2.4.3.3	I	
12	Fast setup procedure for full asymmetric downlink connection	10.2.4.3.3	I	
13	Normal setup procedure for full asymmetric uplink connection	10.2.4.3.2	I	
14	Fast setup procedure for full asymmetric uplink connection	10.2.4.3.2	I	
15	Setup procedure for connection with unknown service	10.2.4.3	I	
16	Connection modification procedure	10.3	I	
17	Connection release procedure	10.4	I	
18	Basic single bearer setup procedure	10.5.1.1	C802	
19	A_field advanced single bearer setup procedure	10.5.1.2	I	

(continued)

Table D.8 (concluded): Q.36 Procedure support

Item No.	Name of procedure	Reference	Status	Support
20	B_field single bearer normal setup procedure	10.5.1.3.1	C803	
21	B_field single bearer fast setup procedure	10.5.1.3.2	I	
22	Double simplex bearer indirect setup procedure	10.5.1.4	I	
23	Double simplex bearer direct setup procedure	10.5.1.4	I	
24	Duplex bearer handover procedure	10.6.2	I	
25	Double simplex bearer handover procedure	10.6.3	I	
26	Unacknowledged bearer release procedure	10.7.2.1	C802	
27	Acknowledged bearer release procedure	10.7.2.2	I	
28	Fast bearer release procedure	10.7.2.3	I	
29	Q1 and Q2 bits setting procedure for C-channel data	10.8.1	C804	
30	Q1 and Q2 bits setting procedure for IN and IP_error_detection data	10.8.1.3	I	
31	BCK and Q2 bits setting for IP_error_correction data in symmetric connection	10.8.2.4.1	I	
32	BCK and ACK bit setting for IP_error_correction data in asymmetric connection	10.8.2.4.1	I	
33	Bearer replacement procedure	10.8.2.5.1	I	
34	Mac message jump procedure	10.8.2.5.2	I	
35	Unilateral jump procedure	10.8.2.5.3	I	
36	Idle_locked state entering procedure	11.3.2	N/A	
37	Idle_locked state maintaining procedure	11.3.3	N/A	
38	Duplex bearer channel selection procedure	11.4.1	I	
39	Double simplex bearer channel selection procedure	11.4.1	I	
40	Simplex bearer channel selection procedure	11.4.1	I	
41	Uplink connectionless channel selection	9.2.2	I	
42	RFPI handshaking procedure	11.5.1	M	
43	PT frequency correction procedure	11.5.2.2	O	
44	MAC layer test message procedure	12.2	I	
45	Receiver scanning procedure	11.9	M	
46	PP paging procedure	9.1.3.2	M	
47	Channel list procedure	10.5.2	I	

C801: IF LRMS PTM (point-to-multipoint) service supported THEN M ELSE I
C802: IF LRMS PTP (point to point) service supported THEN M ELSE I
C803: IF LRMS PTP (point to point) service supported THEN O ELSE I
C804: IF protected B-field available THEN M ELSE I

Table D.9: Q.37 Parameters of channel selection procedure (duplex/double/simplex bearer)

Supported parameters						
Item No.	**Parameter**	**Reference**	**Status**	**Support**	**Values**	
					Allowed	**Supported**
1	Lowest boundary of channel list	11.4.1	M		< = - 93 dBm	
2	Band resolution	11.4.1	M		6 dB	
3	RSSI variation between checking	11.4.1	M		< = 12 dB	

Annex E (normative): Service E2: Fixed termination DLC PICS proforma

E.1 Standardized symbols for the status column

The symbols for the status column are as follows:

M	Mandatory;
O	Optional (Boolean);
x or N/A	prohibited use;
n/a, N/A or - (dash)	Not Applicable;
Cn	Conditional, the condition n appears at the bottom of the table;
i or I	out of scope (the capability is allowed to be implemented but is not called upon by the profile functionality).

E.2 Capabilities

E.2.1 Major capabilities

E.2.1.1 C-plane capabilities

E.2.1.1.1 C-plane services

Table E.1: Q.9 C-plane data link services

Supported services				
Item No	**C-plane services**	**Reference**	**Status**	**Support**
1	Class U service	5.1	C11	
2	Class A service	5.1	C10m	
3	Class B service	5.1	C10o	

C10m IF LRMS_PTP (point to point) service supported THEN M ELSE I
C10o IF LRMS_PTP (point to point) service supported THEN O ELSE I
C11 IF LRMS_PTM (point-to-multipoint) service supported THEN M ELSE I

Table E.2: Q.10 C-plane broadcast service

Supported services				
Item No	**C-plane services**	**Reference**	**Status**	**Support**
1	Broadcast service	5.2, 9.4	M	

E.2.1.1.2 C-plane procedures

E.2.1.1.2.1 Point to point acknowledged operation

Table E.3: Q.11 Class A procedures

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	Class A link establishment	9.2.3.1	C301	
2	Class A acknowledged information transfer	9.2.3.2	C301	
3	Class A link release	9.2.3.7	C301	
4	Class A link re-establishment	9.2.3.8	C301	
5	Class A connection handover	9.2.7.3.1	C302	

C301 IF Q.9/2 THEN M ELSE IX
C302 IF Q.9/2 THEN O ELSE IX

Table E.4: Q.12 Class A features

Supported features				
Item No	**Operation - General feature**	**Reference**	**Status**	**Support**
1	Segmentation of NWK information	5.1.1, 7.7	C401	
2	CS channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.2	C401	
3	CF channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.1	C402	

C401 IF Q.9/2 THEN M ELSE IX
C402 IF Q.9/2 THEN O ELSE IX

Table E.5: Q.13 Class A parameter values

Supported parameter values				
Item No	**Parameter**	**Reference**	**Status**	**Support**
1	Fixed window size of 1 ?	9.2.3.2, 7.5.2.2	C501	
2	Modulo 2 ?	9.2.3.2, 7.5.2.1	C501	

C501 IF Q.9/2 THEN M ELSE IX

Table E.6: Q.14 Class B procedures

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	Class B multiple frame establishment	9.2.4	C601	
2	Class B information transfer	9.2.5	C601	
3	Class B link release	9.2.6	C601	
4	Class B link suspension and resumption	9.2.7	C601	
5	Class B connection handover	9.2.7.3.2	C602	

C601 IF Q.9/3 THEN M ELSE I
C602 IF Q.9/3 THEN O ELSE I

Table E.7: Q.15 Class B features

Supported features				
Item No	**Operation - General feature**	**Reference**	**Status**	**Support**
1	Segmentation of NWK information	5.1.1, 7.7	C701	
2	CS channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.2	C701	
3	CF channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.1	C702	

C701 IF Q.9/3 THEN M ELSE I
C702 IF Q.9/3 THEN O ELSE I

Table E.8: Q.16 Class B parameter values

Supported parameter values				
Item No	**Parameter**	**Reference**	**Status**	**Support**
1	Fixed window size of 3 ?	9.2.4.2, 7.5.2.2	C801	
2	Modulo 1 in ULI state ?	9.2.4.2	C801	
3	Modulo 8 in ASM state ?	9.2.4.2, 7.5.2.1	C801	

C801 IF Q.9/3 THEN M ELSE I

E.2.1.1.2.2 Unacknowledged operation

Table E.9: Q.17 Class U procedures

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	Class U link establishment	9.3.2	C901	
2	Class U information transfer	9.3.3	C901	
3	Class U link release	9.3.4	C901	

C901 IF Q.9/1 THEN M ELSE I

E.2.1.1.2.3 Broadcast operation

Table E.10: Q.17.1 Broadcast procedures

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	Normal operation	9.4.1	M	
2	Expedited operation	9.4.2	O	

E.2.1.2 Management procedures

Table E.11: Q.32 Management procedures

Supported procedures				
Item No	**General procedures**	**Reference**	**Status**	**Support**
1	MAC connection management	10.2	M	
2	DLC C-plane management	10.3	M	
3	DLC U-plane management	10.4	I	
4	Connection handover management	10.5	C1101	
5	Connection ciphering management	10.6	C1102	

C1102 IF Q.32/5 THEN M ELSE I
C1101 IF LRMS_PTP (point to point) service supported THEN O ELSE I

Table E.12: Q.33 MAC connection management procedures

Supported procedures				
Item No	**Procedures**	**Reference**	**Status**	**Support**
1	MAC connection set-up	10.2.1	M	
2	MAC connection release	10.2.2	M	
3	MAC connection modification	10.2.3	I	
4	MAC connection identification	10.2.4	M	
5	Selection of logical channels (CS or CF)	10.2.5	M	

Table E.13: Q.34 DLC C-plane management procedures

Supported procedures				
Item No	**Procedures**	**Reference**	**Status**	**Support**
1	Provision of link signature	10.3.1	M	
2	Routeing of connection oriented links	10.3.2	C1301	
3	Routeing of connectionless links	10.3.3	C1302	

C1301 IF LRMS_PTP (point to point) service supported THEN M ELSE I
C1302 IF LRMS_PTM (point-to-multipoint) service supported THEN M ELSE I

Table E.14: Q.36 Connection ciphering management procedures

Supported procedures				
Item No	**Procedures**	**Reference**	**Status**	**Support**
1	Providing a key to the MAC layer	10.6.1	C1401	
2	Starting and stopping the ciphering	10.6.2	C1401	
3	Connection handover	10.6.3	C1401	

C1401 IF Q.32/5 THEN M ELSE I

E.2.2 Protocol Data Units (PDUs)

E.2.2.1 C-plane PDUs

E.2.2.1.1 C-plane frame structure

Table E.15: Q.37 Frame structures

Supported frames structures								
Item No	**Frame Structures**	**Reference**	**Sending**			**Receiving**		
			Status	**Support**		**Status**	**Support**	
				Yes	**No**		**Yes**	**No**
1	Frame structure of format type FA.	6.1	M			M		
2	Broadcast service frame structure	6.2	M			N/A		

Table E.16: Q.38 Frame format type FA

Item No	Frame elements	Reference	Sending			Receiving		
			Status	**Support**		**Status**	**Support**	
				Yes	**No**		**Yes**	**No**
1	Address field	6.1	M			M		
2	Control field	6.1	M			M		
3	Length indicator field	6.1	C1601			C1601		
4	Information field	6.1	C1601			C1601		
5	Fill field	6.1	C1601			C1601		
6	Checksum field	6.1	M			M		

C1601 IF Q.40 THEN M ELSE I

Table E.17: Q.38.1 Broadcast service frame structure

Supported frames structures								
Item No	**Frame elements**	**Reference**	**Sending**			**Receiving**		
			Status	**Support**		**Status**	**Support**	
				Yes	**No**		**Yes**	**No**
1	Short frame format (3 octets)	6.2.1	M			N/A		
2	Long frame format (5 octets)	6.2.1	M			N/A		

E.2.2.1.2 C-plane messages

Table E.18: Q.39 Message support

Supported messages								
Item No	**Message elements**	**Reference**	**Sending (P to F)**			**Receiving (F to P)**		
			Status	**Support**		**Status**	**Support**	
				Yes	**No**		**Yes**	**No**
1	I-command	7.11	M			M		
2	RR-command/response	7.11	M			M		
3	RNR-command/response	7.11	C1801			C1801		
4	REJ-command/response	7.11	C1801			C1801		
5	SABM-command	7.11	C1801			C1801		
6	DM-response	7.11	C1801			C1801		
7	UI-command	7.11	M			M		
8	DISC-command	7.11	C1801			C1801		
9	UA-response	7.11	C1801			C1801		

C1801 IF Q.9/3 THEN M ELSE I

Table E.19: Q.40 I-command (numbered Information)

Item No.	Name of information element and field element	Reference	Sending				Receipt			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		1		M		0	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	Logical Link Number (LLN)	7.3.5	M		1 C1901 2-6 C1902		M		1 C1901 2-6 C1902	
1.5	New Link Flag (NLF)	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	N(S)	7.5.2.4	M		0-1 C1901 0-7 C1902		M		0-1 C1901 0-7 C1902	
2.2	P	7.5.1 9.2.1	M		0 C1901 0-1 C1902		M		0 C1901 0-1 C1902	
2.3	N(R)	7.5.2.6	M		0-1 C1901 0-7 C1902		M		0-1 C1901 0-7 C1902	
3	Length indicator field	7.6	M				M			
4	Information field	7.8	M				M			
5	Checksum field	7.10	M				M			

C1901 IF Q.9/2 THEN M ELSE I
C1902 IF Q.9/3 THEN M ELSE I

Table E.20: Q.41 RR-command/response (Receive Ready)

Item No.	Name of information element and field element	Reference	Sending				Receipt			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		0-1		M		0-1	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2001 2-7 C2002		M		1 C2001 2-7 C2002	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	S (Supervisory function bits)	7.5.2.4	M		0		M		0	
2.2	P/F	7.5.1, 9.2.1	M		0 C2001 0-1 C2002		M		0 C2001 0-1 C2002	
2.3	N(R)	7.5.2.6	M		0-1 C2001 0-7 C2002		M		0-1 C2001 0-7 C2002	
3	Checksum field	7.10	M				M			

C2001 IF Q.9/2 THEN M ELSE I
C2002 IF Q.9/3 THEN M ELSE I

Table E.21: Q.42 RNR-command/response (Receive Not Ready)

Item No.	Name of information element and field element	Reference	Sending				Receipt			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		0-1		M		0-1	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		2-6		M		2-6	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	S (Supervisory function bits)	7.5.2.4	M		1		M		1	
2.2	P/F	7.5.1, 9.2.1	M		0-1		M		0-1	
2.3	N(R)	7.5.2.6	M		0-7		M		0-7	
3	Checksum field	7.10	M				M			

Table E.22: Q.43 REJ-command/response (Reject)

Item No.	Name of information element and field element	Reference	Sending (P to F)				Receipt (F to P)			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		0-1		M		0-1	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2201 2-7 C2202		M		1 C2201 2-7 C2202	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	S (Supervisory function bits)	7.5.2.4	M		2		M		2	
2.2	P/F	7.5.1, 9.2.1	M		0 C2201 0-1 C2202		M		0 C2201 0-1 C2202	
2.3	N(R)	7.5.2.6	M		0-1 C2201 0-7 C2202		M		0-1 C2201 0-7 C2202	
3	Checksum field	7.10	M				M			

C2201 IF Q.9/2 THEN M ELSE I
C2202 IF Q.9/3 THEN M ELSE I

Table E.23: Q.44 SABM-command (Set Asynchronous Balanced Mode)

Item No.	Name of information element and field element	Reference	Sending (P to F)				Receipt (F to P)			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		1		M		0	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2301 2-7 C2302		M		1 C2301 2-7 C2302	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	U (Unnumbered function bits) length: 5 BIT (2+3)	7.5.2.4	M		7		M		7	
2.2	P	7.5.1, 9.2.1	M		0 C2301 1 C2302		M		0 C2301 1 C2302	
3	Checksum field	7.10	M				M			

C2301 IF Q.9/2 THEN M ELSE I
C2302 IF Q.9/3 THEN M ELSE I

Table E.24: Q.45 DM-response (Disconnect Mode)

Item No.	Name of information element and field element	Reference	Sending (P to F)				Receipt (F to P)			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		0		M		1	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2401 2-7 C2402		M		1 C2401 2-7 C2402	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	U (Unnumbered function bits) length: 5 BIT (2+3)	7.5.2.4	M		3		M		3	
2.2	F	7.5.1, 9.2.1	M		0 C2401 0-1 C2402		M		0 C2401 0-1 C2402	
3	Checksum field	7.10	M				M			

C2401 IF Q.9/2 THEN M ELSE I
C2402 IF Q.9/3 THEN M ELSE I

Table E.25: Q.46 UI-command (Unnumbered Information)

Item No.	Name of information element and field element	Reference	Sending				Receipt			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		1		M		0	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2501 2-7 C2502		M		1 C2501 2-7 C2502	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	U (Unnumbered function bits) length: 5 BIT (2+3)	7.5.2.4	M		0		M		0	
2.2	P	7.5.1, 9.2.1	M		0 C2501 0-1 C2502		M		0 C2501 0-1 C2502	
3	Checksum field	7.10	M				M			

C2501 IF Q.9/2 THEN M ELSE I
C2502 IF Q.9/3 THEN M ELSE I

Table E.26: Q.47 DISC-command (Disconnect)

Item No.	Name of information element and field element	Reference	Sending (P to F)				Receipt (F to P)			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		1		M		0	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2601 2-7 C2602		M		1 C2601 2-7 C2602	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	U (Unnumbered function bits) length: 5 BIT (2+3)	7.5.2.4	M		8		M		8	
2.2	P	7.5.1, 9.2.1	M		0 C2601 0-1 C2602		M		0 C2601 0-1 C2602	
3	Checksum field	7.10	M				M			

C2601 IF Q.9/2 THEN M ELSE I
C2602 IF Q.9/3 THEN M ELSE I

Table E.27: Q.48 UA response (Unnumbered ACK)

Item No.	Name of information element and field element	Reference	Sending (P to F)				Receipt (F to P)			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		0		M		1	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2701 2-7 C2702		M		1 C2701 2-7 C2702	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	U (Unnumbered function bits) length: 5 BIT (2+3)	7.5.2.4	M		12		M		12	
2.2	F	7.5.1, 9.2.1	M		0 C2701 0-1C2702		M		0 C2701 0-1C2702	
3	Checksum field	7.10	M				M			

C2701 IF Q.9/2 THEN M ELSE I
C2702 IF Q.9/3 THEN M ELSE I

E.2.3 Timers

E.2.3.1 C-plane timers

Table E.28: Q.61 C-plane timers

Supported timers						
Item No.	**Timer**	**Reference**	**Status**	**Support**	**Value**	
					Allowed	**Supported**
1	DL.00	A.1	M		2 s	
2	DL.01	A.1	M		2 s	
3	DL.02	A.1	M		2 s	
4	DL.03	A.1	M		2 s	
5	DL.04 (CF routed frames)	A.1	M		1 s	
6	DL.04 (CS routed frames)	A.1	M		2 s	
7	DL.05	A.1	M		10 s	
8	DL.06	A.1	M		4 s	
7	DL.07	A.1	M		2 s	

E.2.4 Protocol error handling

E.2.4.1 C-plane protocol error handling

Table E.29: Q.63 General error handling

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	Invalid frames are discarded	9.2.9.1	M	

Table E.30: Q.64 Class A error recovery

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	Waiting for acknowledgement, timer DL.04 expiry	9.2.3.6	C3001	

C3001 IF Q.9/2 THEN M ELSE IX

Table E.31: Q.65 Class B error handling and recovery

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	N(S) sequence error	9.2.9.2.1	C3101	
2	N(R) sequence error	9.2.9.2.2	C3101	
3	Timer recovery condition	9.2.9.2.3	C3101	

C3101 IF Q.9/3 THEN M ELSE I

Table E.32: Q.66 Unknown or invalid frames (which provoke error handling as requested in Q.63)

Supported frames				
Item No	**Frame types**	**Reference**	**Status**	**Support**
1	Unknown frames	9.2.9.1, 7.11	M	
2	Invalid frames	6.1.5	M	

Annex F (normative): Service E2: Portable termination DLC PICS proforma

F.1 Standardized symbols for the status column

The symbols for the status column are as follows:

M	Mandatory;
O	Optional (Boolean);
x or N/A	prohibited use;
n/a, N/A or - (dash)	Not Applicable;
Cn	Conditional, the condition n appears at the bottom of the table;
i or I	out of scope (the capability is allowed to be implemented but is not called upon by the profile functionality).

F.2 Capabilities

F.2.1 Major capabilities

F.2.1.1 C-plane capabilities

F.2.1.1.1 C-plane services

Table F.1: Q.9 C-plane data link services

Supported services				
Item No	**C-plane services**	**Reference**	**Status**	**Support**
1	Class U service	5.1	C11	
2	Class A service	5.1	C10m	
3	Class B service	5.1	C10o	

C10m IF LRMS_PTP (point to point) service supported THEN M ELSE I
C10o IF LRMS_PTP (point to point) service supported THEN O ELSE I
C11 IF LRMS_PTM (point-to-multipoint) service supported THEN M ELSE I

Table F.2: Q.10 C-plane broadcast service

Supported services				
Item No	**C-plane services**	**Reference**	**Status**	**Support**
1	Broadcast service	5.2, 9.4	M	

F.2.1.1.2 C-plane procedures

F.2.1.1.2.1 Point to point acknowledged operation

Table F.3: Q.11 Class A procedures

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	Class A link establishment	9.2.3.1	C301	
2	Class A acknowledged information transfer	9.2.3.2	C301	
3	Class A link release	9.2.3.7	C301	
4	Class A link re-establishment	9.2.3.8	C301	
5	Class A connection handover	9.2.7.3.1	C302	

C301 IF Q.9/2 THEN M ELSE IX
C302 IF Q.9/2 THEN O ELSE IX

Table F.4: Q.12 Class A features

Supported features				
Item No	**Operation - General feature**	**Reference**	**Status**	**Support**
1	Segmentation of NWK information	5.1.1, 7.7	C401	
2	CS channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.2	C401	
3	CF channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.1	C402	

C401 IF Q.9/2 THEN M ELSE IX
C402 IF Q.9/2 THEN O ELSE IX

Table F.5: Q.13 Class A parameter values

Supported parameter values				
Item No	**Parameter**	**Reference**	**Status**	**Support**
1	Fixed window size of 1 ?	9.2.3.2, 7.5.2.2	C501	
2	Modulo 2 ?	9.2.3.2, 7.5.2.1	C501	

C501 IF Q.9/2 THEN M ELSE IX

Table F.6: Q.14 Class B procedures

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	Class B multiple frame establishment	9.2.4	C601	
2	Class B information transfer	9.2.5	C601	
3	Class B link release	9.2.6	C601	
4	Class B link suspension and resumption	9.2.7	C601	
5	Class B connection handover	9.2.7.3.2	C602	

C601 IF Q.9/3 THEN M ELSE I
C602 IF Q.9/3 THEN O ELSE I

Table F.7: Q.15 Class B features

Supported features				
Item No	**Operation - General feature**	**Reference**	**Status**	**Support**
1	Segmentation of NWK information	5.1.1, 7.7	C701	
2	CS channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.2	C701	
3	CF channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.1	C702	

C701 IF Q.9/3 THEN M ELSE I
C702 IF Q.9/3 THEN O ELSE I

Table F.8: Q.16 Class B parameter values

Supported parameter values				
Item No	**Parameter**	**Reference**	**Status**	**Support**
1	Fixed window size of 3 ?	9.2.4.2, 7.5.2.2	C801	
2	Modulo 1 in ULI state ?	9.2.4.2	C801	
3	Modulo 8 in ASM state ?	9.2.4.2, 7.5.2.1	C801	

C801 IF Q.9/3 THEN M ELSE I

F.2.1.1.2.2 Unacknowledged operation

Table F.9: Q.17 Class U procedures

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	Class U link establishment	9.3.2	C901	
2	Class U information transfer	9.3.3	C901	
3	Class U link release	9.3.4	C901	

C901 IF Q.9/1 THEN M ELSE I

F.2.1.1.2.3 Broadcast operation

Table F.10: Q.17.1 Broadcast procedures

Supported procedures				
Item No	**Operation - General procedures**	**Reference**	**Status**	**Support**
1	Normal operation	9.4.1	M	
2	Expedited operation	9.4.2	O	

F.2.1.2 Management procedures

Table F.11: Q.32 Management procedures

Supported procedures				
Item No	**General procedures**	**Reference**	**Status**	**Support**
1	MAC connection management	10.2	M	
2	DLC C-plane management	10.3	M	
3	DLC U-plane management	10.4	I	
4	Connection handover management	10.5	C1101	
5	Connection ciphering management	10.6	C1102	

C1101 IF LRMS_PTP (point to point) service supported THEN O ELSE I
C1102 IF Q.32/5 THEN M ELSE I

Table F.12: Q.33 MAC connection management procedures

Supported procedures				
Item No	**Procedures**	**Reference**	**Status**	**Support**
1	MAC connection set-up	10.2.1	M	
2	MAC connection release	10.2.2	M	
3	MAC connection modification	10.2.3	I	
4	MAC connection identification	10.2.4	M	
5	Selection of logical channels (CS or CF)	10.2.5	M	

Table F.13: Q.34 DLC C-plane management procedures

Supported procedures				
Item No	**Procedures**	**Reference**	**Status**	**Support**
1	Provision of link signature	10.3.1	M	
2	Routeing of connection oriented links	10.3.2	C1301	
3	Routeing of connectionless links	10.3.3	C1302	

C1301 IF LRMS_PTP (point to point) service supported THEN M ELSE I
C1302 IF LRMS_PTM (point-to-multipoint) service supported THEN M ELSE I

Table F.14: Q.36 Connection ciphering management procedures

Supported procedures				
Item No	**Procedures**	**Reference**	**Status**	**Support**
1	Providing a key to the MAC layer	10.6.1	C1401	
2	Starting and stopping the ciphering	10.6.2	C1401	
3	Connection handover	10.6.3	C1401	

C1401 IF Q.32/5 THEN M ELSE I

F.2.2 PDUs

F.2.2.1 C-plane PDUs

F.2.2.1.1 C-plane frame structure

Table F.15: Q.37 Frame structures

Supported messages								
Item No	**Frame Structures**	**Reference**	**Sending**			**Receiving**		
			Status	**Support**		**Status**	**Support**	
				Yes	**No**		**Yes**	**No**
1	Frame structure of format type FA.	6.1	M			M		
2	Broadcast service frame structure	6.2	N/A			M		

Table F.16: Q.38 Frame format type FA

Item No	**Frame elements**	**Reference**	**Sending**			**Receiving**		
			Status	**Support**		**Status**	**Support**	
				Yes	**No**		**Yes**	**No**
1	Address field	6.1	M			M		
2	Control field	6.1	M			M		
3	Length indicator field	6.1	C1601			C1601		
4	Information field	6.1	C1601			C1601		
5	Fill field	6.1	C1601			C1601		
6	Checksum field	6.1	M			M		

C1601 IF Q.40 THEN M ELSE I

Table F.17: Q.38.1 Broadcast service frame structure

Supported frame structures								
Item No	**Frame elements**	**Reference**	**Sending**			**Receiving**		
			Status	**Support**		**Status**	**Support**	
				Yes	**No**		**Yes**	**No**
1	Short frame format (3 octets)	6.2.1	N/A			M		
2	Long frame format (5 octets)	6.2.1	N/A			O		

F.2.2.1.2 C-plane messages

Table F.18: Q.39 Message support

Supported messages								
Item No	**Message elements**	**Reference**	**Sending**			**Receiving**		
			Status	**Support**		**Status**	**Support**	
				Yes	**No**		**Yes**	**No**
1	I-command	7.11	M			M		
2	RR-command/response	7.11	M			M		
3	RNR-command/response	7.11	C1801			C1801		
4	REJ-command/response	7.11	C1801			C1801		
5	SABM-command	7.11	C1801			C1801		
6	DM-response	7.11	C1801			C1801		
7	UI-command	7.11	M			M		
8	DISC-command	7.11	C1801			C1801		
9	UA-response	7.11	C1801			C1801		

C1801 IF Q.9/3 THEN M ELSE I

Table F.19: Q.40 I-command (numbered Information)

Item No.	Name of information element and field element	Reference	Sending				Receipt			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		1		M		0	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C1901 2-6 C1902		M		1 C1901 2-6 C1902	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	N(S)	7.5.2.4	M		0-1 C1901 0-7 C1902		M		0-1 C1901 0-7 C1902	
2.2	P	7.5.1 9.2.1	M		0 C1901 0-1 C1902		M		0 C1901 0-1 C1902	
2.3	N(R)	7.5.2.6	M		0-1 C1901 0-7 C1902		M		0-1 C1901 0-7 C1902	
3	Length indicator field	7.6	M				M			
4	Information field	7.8	M				M			
5	Checksum field	7.10	M				M			

C1901 IF Q.9/2 THEN M ELSE I
C1902 IF Q.9/3 THEN M ELSE I

Table F.20: Q.41 RR-command/response (Receive Ready)

Item No.	Name of information element and field element	Reference	Sending				Receipt			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		0-1		M		0-1	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2001 2-7 C2002		M		1 C2001 2-7 C2002	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	S (Supervisory function bits)	7.5.2.4	M		0		M		0	
2.2	P/F	7.5.1, 9.2.1	M		0 C2001 0-1 C2002		M		0 C2001 0-1 C2002	
2.3	N(R)	7.5.2.6	M		0-1 C2001 0-7 C2002		M		0-1 C2001 0-7 C2002	
3	Checksum field	7.10	M				M			

C2001 IF Q.9/2 THEN M ELSE I
C2002 IF Q.9/3 THEN M ELSE I

Table F.21: Q.42 RNR-command/response (Receive Not Ready)

Item No.	Name of information element and field element	Reference	Sending				Receipt			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		0-1		M		0-1	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		2-6		M		2-6	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	S (Supervisory function bits)	7.5.2.4	M		1		M		1	
2.2	P/F	7.5.1, 9.2.1	M		0-1		M		0-1	
2.3	N(R)	7.5.2.6	M		0-7		M		0-7	
3	Checksum field	7.10	M				M			

Table F.22: Q.43 REJ-command/response (Reject)

Item No.	Name of information element and field element	Reference	Sending (P to F)				Receipt (F to P)			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		0-1		M		0-1	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2201 2-7 C2202		M		1 C2201 2-7 C2202	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	S (Supervisory function bits)	7.5.2.4	M		2		M		2	
2.2	P/F	7.5.1, 9.2.1	M		0 C2201 0-1 C2202		M		0 C2201 0-1 C2202	
2.3	N(R)	7.5.2.6	M		0-1 C2201 0-7 C2202		M		0-1 C2201 0-7 C2202	
3	Checksum field	7.10	M				M			

C2201 IF Q.9/2 THEN M ELSE I
C2202 IF Q.9/3 THEN M ELSE I

Table F.23: Q.44 SABM-command (Set Asynchronous Balanced Mode)

Item No.	Name of information element and field element	Reference	Sending (P to F)				Receipt (F to P)			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		1		M		0	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2301 2-7 C2302		M		1 C2301 2-7 C2302	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	U (Unnumbered function bits) length: 5 BIT (2+3)	7.5.2.4	M		7		M		7	
2.2	P	7.5.1, 9.2.1	M		0 C2301 1 C2302		M		0 C2301 1 C2302	
3	Checksum field	7.10	M				M			

C2301 IF Q.9/2 THEN M ELSE I
C2302 IF Q.9/3 THEN M ELSE I

Table F.24: Q.45 DM-response (Disconnect Mode)

Item No.	Name of information element and field element	Reference	Sending (P to F)				Receipt (F to P)			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		0		M		1	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2401 2-7 C2402		M		1 C2401 2-7 C2402	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	U (Unnumbered function bits) length: 5 BIT (2+3)	7.5.2.4	M		3		M		3	
2.2	F	7.5.1, 9.2.1	M		0 C2401 0-1 C2402		M		0 C2401 0-1 C2402	
3	Checksum field	7.10	M				M			

C2401 IF Q.9/2 THEN M ELSE I
C2402 IF Q.9/3 THEN M ELSE I

Table F.25: Q.46 UI-command (Unnumbered Information)

Item No.	Name of information element and field element	Reference	Sending				Receipt			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		1		M		0	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2501 2-7 C2502		M		1 C2501 2-7 C2502	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	U (Unnumbered function bits) length: 5 BIT (2+3)	7.5.2.4	M		0		M		0	
2.2	P	7.5.1, 9.2.1	M		0 C2501 0-1 C2502		M		0 C2501 0-1 C2502	
3	Checksum field	7.10	M				M			

C2501 IF Q.9/2 THEN M ELSE I
C2502 IF Q.9/3 THEN M ELSE I

Table F.26: Q.47 DISC-command (Disconnect)

Item No.	Name of information element and field element	Reference	Sending (P to F)				Receipt (F to P)			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		1		M		0	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2601 2-7 C2602		M		1 C2601 2-7 C2602	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	U (Unnumbered function bits) length: 5 BIT (2+3)	7.5.2.4	M		8		M		8	
2.2	P	7.5.1, 9.2.1	M		0 C2601 0-1 C2602		M		0 C2601 0-1 C2602	
3	Checksum field	7.10	M				M			

C2601 IF Q.9/2 THEN M ELSE I
C2602 IF Q.9/3 THEN M ELSE I

Table F.27: Q.48 UA response (Unnumbered ACK)

Item No.	Name of information element and field element	Reference	Sending (P to F)				Receipt (F to P)			
			Status	Support	Value		Status	Support	Value	
					Allowed	Supported			Allowed	Supported
1	Address field	7.2	M				M			
1.1	RES	7.3.1	M		1		M		1	
1.2	C/R	7.3.2	M		0		M		1	
1,3	SAPI	7.3.3	M		0		M		0	
1.4	LLN	7.3.5	M		1 C2701 2-7 C2702		M		1 C2701 2-7 C2702	
1.5	NLF	7.3.4, 9.2.2.1	M		0-1		M		0-1	
2	Control field	7.4	M				M			
2.1	U (Unnumbered function bits) length: 5 BIT (2+3)	7.5.2.4	M		12		M		12	
2.2	F	7.5.1, 9.2.1	M		0 C2701 0-1C2702		M		0 C2701 0-1C2702	
3	Checksum field	7.10	M				M			

C2701 IF Q.9/2 THEN M ELSE I
C2702 IF Q.9/3 THEN M ELSE I

F.2.3 Timers

F.2.3.1 C-plane timers

Table F.28: Q.61 C-plane timers

Supported timers						
Item No.	Timer	Reference	Status	Support	Value	
					Allowed	Supported
1	DL.00	A.1	M		2 s	
2	DL.01	A.1	M		2 s	
3	DL.02	A.1	M		2 s	
4	DL.03	A.1	M		2 s	
5	DL.04 (CF routed frames)	A.1	M		1 s	
6	DL.04 (CS routed frames)	A.1	M		2 s	
7	DL.05	A.1	M		10 s	
8	DL.06	A.1	M		4 s	
7	DL.07	A.1	M		2 s	

F.2.4 Protocol error handling

F.2.4.1 C-plane protocol error handling

Table F.29: Q.63 General error handling

Supported procedures				
Item No	Operation - General procedures	Reference	Status	Support
1	Invalid frames are discarded	9.2.9.1	M	

Table F.30: Q.64 Class A error recovery

Supported procedures				
Item No	Operation - General procedures	Reference	Status	Support
1	Waiting for acknowledgement, timer DL.04 expiry	9.2.3.6	C3001	

C3001 IF Q.9/2 THEN M ELSE IX

Table F.31: Q.65 Class B error handling and recovery

Supported procedures				
Item No	Operation - General procedures	Reference	Status	Support
1	N(S) sequence error	9.2.9.2.1	C3101	
2	N(R) sequence error	9.2.9.2.2	C3101	
3	Timer recovery condition	9.2.9.2.3	C3101	

C3101 IF Q.9/3 THEN M ELSE I

Table F.32: Q.66 Unknown or invalid frames (which provoke error handling as requested in Q.63)

Supported frames				
Item No	Frame types	Reference	Status	Support
1	Unknown frames	9.2.9.1, 7.11	M	
2	Invalid frames	6.1.5	M	

Annex G (informative): Profile selection coding

This annex contains the basic coding used for selection of the type E data profile, mobility class 2, point-to-point (LRMS PTP) service.

G.1 <<BASIC SERVICE>> coding

Table G.1: <<Basic service>> default coding

Octet	Information element field	Field value
2	<Call Class> <Basic Service>	"Messaging Call Setup" " LRMS (E-profile) service " (note)
NOTE: A different basic service is used for GSM SMS interworking.		

G.2 <<IWU-ATTRIBUTES>> coding

Table G.2: <<iwu attributes>> default coding

Octet	Information element field	Field value
3	<Coding standard> <Profile>	"Profile defined coding" "E data profile"
4	<Negotiation indicator>	Value depends on the implementation

Rest of the codings are used for interworking service selection as defined in interworking annexes.

G.3 <<CONNECTION ATTRIBUTES>> coding

Table G.3: <<Connection attributes>> default coding

Octet	Information element field	Field value
3	<Symmetry> <Connection identity coding>	"Symmetric connection" "Unknown"
4	<Target number of bearers; P => F direction>	"No U-plane"
4b	<Target number of bearers; F => P direction>	"No U-plane"

Annex H (informative): Applicability of ETS 300 755 interworking annexes

The interworking annexes in ETS 300 755 [13] specifying the F.2 profile messaging service are also applicable to this ETS and vice verse. Although consideration has to be taken to the lower data throughput in the E.2 profile, i.e. it is for example not suitable to run a facsimile application on the E.2 profile, but short messages can without problems be send on the F.2 profile.

Annex J (informative): Interworking to other message-based teleservices and application-level services

J.1 General

The messaging service specified in this ETS also allows efficient interworking to other message-based teleservices and application-level services such as:

- World Wide Web / Hyper Text Transfer Protocol (WWW/HTTP);
- E-mail;
- File transfer (File Transfer Protocol (FTP), File Transfer Access & Management (FTAM) and Integrated Services Digital Network (ISDN) file transfer);
- Message waiting.

There may be subsequent amendments to this ETS or separate ETSs to fully specify the interworking for the above services.

J.2 WWW/HTTP

Using the messaging service for interworking to WWW/HTTP gives the advantage that the PP does not need to have a TCP/IP stack, which would require significant memory and complexity in the PP. This is especially useful to enhance a GAP handset with possibilities to not only receive (short) messages but also to be able to request WWW pages.

Another application might be a PDA with limited memory or a PP designated only for WWW/HTTP applications.

History

Document history			
May 1996	Public Enquiry	PE 106:	1996-05-20 to 1996-09-13
December 1996	Vote	V 117:	1996-12-23 to 1997-02-14
April 1997	First Edition		

ISBN 2-7437-1289-9
Dépôt légal : Avril 1997