

**Digital Enhanced Cordless Telecommunications (DECT);
Data Services Profile (DSP);
Generic data link service (service type C, class 2)**



Reference

DEN/DECT-020125 (61000ico.PDF)

Keywords

DECT, data, layer 2, mobility, profile, radio

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Contents

Intellectual Property Rights.....	9
Foreword	9
1 Scope	10
2 References	10
3 Definitions and abbreviations	11
3.1 Definitions	11
3.2 Abbreviations.....	12
4 Description of services.....	13
4.1 Typical configuration.....	13
4.2 Service objectives	15
4.3 Service definitions	15
4.3.1 PHL service definitions	15
4.3.2 MAC service definitions	16
4.3.3 DLC service definitions.....	16
4.3.4 NWK features definitions.....	17
5 PHL requirements	18
6 MAC layer requirements.....	18
6.1 MAC services for type A	19
6.2 MAC services for type B	19
6.3 MAC services to procedure mapping.....	19
7 DLC layer requirements.....	19
7.1 C-plane requirements	19
7.2 U-plane requirements.....	20
7.3 C-plane Service Mapping	20
7.4 U-plane Service Mapping	22
8 NWK layer requirements	22
8.1 NWK layer features supported.....	23
8.2 Feature to procedures mapping.....	24
9 Management entity requirements.....	26
9.1 Link resource management	27
9.2 Link Establishment management	28
10 Generic interworking conventions and procedures.....	28
10.1 PAD functionality for character oriented user data.....	28
10.1.1 Character formatting.....	29
10.1.2 PAD operation.....	29
10.1.2.1 Transmission over DECT air interface	29
10.1.2.1.1 Data forwarding conditions.....	29
10.1.2.1.2 Transmission buffering and flow-control	30
10.1.2.2 Reception over DECT air interface	30
10.1.2.2.1 Data reception	30
10.1.2.2.2 Receive buffering and flow control.....	30
10.2 PAD functionality for bit oriented user data	30
10.2.1 The character formatting	31
10.2.2 BPAD operation.....	31
10.2.2.1 Transmission over DECT air interface	31
10.2.2.1.1 Data forwarding conditions.....	31
10.2.2.1.2 Transmission buffering and flow-control	32
10.2.2.2 Reception over DECT air interface	32
10.2.2.2.1 Data reception	32
10.2.2.2.2 Receive buffering and flow control.....	32

10.2.3	Selection of BPAD functionality	32
10.3	Control frame for V.24 interworking	32
10.4	Control frame for voice band modem interworking	33
10.5	Data-compression	34
10.6	In-call Service Change	34
10.6.1	Service Change Scope	34
10.6.2	<<CONNECTION-ATTRIBUTES>> Service Change	34
10.6.3	<<IWU-ATTRIBUTES>> Service Change	34

Annex A (normative): Implementation of the LU3 service including LAP-U36

A.1	U-plane service characteristics	36
A.1.1	General.....	36
A.1.2	LAP-U type of operation	36
A.1.3	U-plane Link Identifier (ULI)	37
A.1.4	LU3 Service Access Points (SAP).....	37
A.2	Data link service frame structure for LU3	37
A.2.1	General frame structure.....	37
A.2.2	LU2 frame delimiting and transparency.....	37
A.2.3	Transmission order	38
A.2.4	Invalid frames	38
A.3	Elements of procedures and formats of fields for U-plane peer to peer communication	38
A.3.1	General.....	38
A.3.2	Address field formats.....	39
A.3.3	Address field parameters.....	39
A.3.3.1	Reserved bit (RES).....	39
A.3.3.2	Command Response bit (C/R).....	39
A.3.3.3	SAPI field.....	39
A.3.3.4	New Link Flag bit (NLF)	39
A.3.3.5	More data bit; M	40
A.3.3.6	U-plane Link Identifier (ULI)	40
A.3.3.7	Spare bits (Spare)	40
A.3.4	Control field formats.....	40
A.3.5	Checksum field parameters	40
A.3.6	Commands and responses	41
A.3.6.1	Information (I) command	41
A.3.6.2	Receive Ready (RR) command / response	41
A.3.6.3	Receive Not Ready (RNR) command / response.....	41
A.3.6.4	REject (REJ) command / response.....	42
A.3.6.5	Set Asynchronous Balanced Mode (SABM) command	42
A.3.6.6	Unnumbered Acknowledgement (UA) response	42
A.4	Primitives for the LU3 service	43
A.5	U-plane peer to peer procedures	43
A.5.1	General.....	43
A.5.2	Point to point acknowledged operation.....	44
A.5.2.1	Procedure for the use of the P/F bit in LAP-U acknowledged information transfer.....	44
A.5.2.2	Establishing LAP-U multiple frame operation	44
A.5.2.2.1	Overview	44
A.5.2.2.2	LAP-U multiple frame establishment procedures	44
A.5.2.3	Link maintenance and information transfer in LAP-U multiple frame operation	45
A.5.2.3.1	Transmitting I-frames	46
A.5.2.3.2	Receiving I-frames.....	46
A.5.2.3.2.1	P bit set to 1	46
A.5.2.3.2.2	P bit set to 0	46
A.5.2.3.3	Sending and receiving acknowledgements	47
A.5.2.3.3.1	Sending acknowledgements	47
A.5.2.3.3.2	Receiving acknowledgements	47
A.5.2.3.4	Receiving REJ-frames	47

A.5.2.3.5	Receiving RNR-frames.....	48
A.5.2.3.6	LAP-U own receiver busy condition	49
A.5.2.3.7	Waiting acknowledgement.....	50
A.5.2.4	Release of LAP-U multiple frame operation	50
A.5.2.5	Re-establishment of LAP-U multiframe operation.....	51
A.5.2.5.1	Criteria for re-establishment	51
A.5.2.5.2	Re-establishment procedure.....	51
A.5.2.6	Exception handling.....	51
A.5.2.6.1	General	51
A.5.2.6.2	LAP-U exception condition reporting and recovery	51
A.5.2.6.2.1	N(S) sequence error	52
A.5.2.6.2.2	N(R) sequence error.....	52
A.5.2.6.2.3	Timer recovery condition.....	52
A.6	Management procedures for LAP-U.....	52
A.6.1	LAP-U establishment.....	52
A.6.2	LAP-U release.....	53
A.6.3	LAP-U resumption.....	53
A.6.4	LAP-U suspension	53
Annex B (normative):	LU3 parameters	54
B.1	LAP-U timer values	54
B.2	Constants.....	54
Annex C (normative):	Specific interworking conventions.....	55
C.1	Scope of this annex	55
C.2	Interworking specific codings.....	55
C.2.1	IWU-Attribute coding.....	55
C.2.2	IWU attributes implemented.....	59
C.3	Interworking to V.24 circuits	59
C.3.1	Reference configuration.....	59
C.3.2	Global assumptions.....	60
C.3.3	Interworking procedures and conventions	60
C.3.3.1	Procedures at the DTE-side-IWF	60
C.3.3.1.1	DTE-Initiated link establishment.....	60
C.3.3.1.2	DCE-Initiated link establishment.....	61
C.3.3.1.3	DTE-Initiated link suspension	61
C.3.3.1.4	DCE-Initiated link suspension	61
C.3.3.1.5	DTE-Initiated link resume	61
C.3.3.1.6	DCE-Initiated link resume	61
C.3.3.1.7	DTE-Initiated link release.....	61
C.3.3.1.8	DCE-Initiated link release	61
C.3.3.2	Procedures at the DCE-side-IWF	61
C.3.3.2.1	DCE-Initiated link establishment.....	61
C.3.3.2.2	DTE-Initiated link establishment.....	62
C.3.3.2.3	DCE-Initiated link suspension	62
C.3.3.2.4	DTE-Initiated link suspension	62
C.3.3.2.5	DCE-Initiated link resume	62
C.3.3.2.6	DTE-Initiated link resume	62
C.3.3.2.7	DCE-Initiated link release	62
C.3.3.2.8	DTE-Initiated link release.....	63
C.3.3.3	PAD.....	63
C.3.3.4	Timing conventions.....	63
C.3.3.5	Interworking of modem status lines, BREAK condition and PAUSE condition.....	63
C.3.3.5.1	BREAK condition.....	63
C.3.3.5.2	PAUSE condition	63
C.3.3.6	Interworking of flow control	64
C.3.3.6.1	Flow control across the DTE/DTE-side-IWF interface	64

C.3.3.6.2	Flow control across the DCE-side-IWF/DCE interface	64
C.4	Interworking to connection-oriented bearer services	64
C.4.1	Scope	64
C.4.2	Reference configuration	65
C.4.2.1	PP TAF	65
C.4.2.2	FP IWF	66
C.4.2.3	General Configuration	66
C.4.3	PP Procedures	66
C.4.3.1	C-plane procedures	66
C.4.3.1A	Suspend and resume procedures	66
C.4.4	FP procedures	67
C.4.4.1	C-plane	67
C.4.4.1A	Suspend and resume procedures	67
C.4.5	Network modem interworking service using V.24 connection	67
C.4.5.1	General	67
C.4.5.2	Reference configuration	68
C.4.5.3	TAF Interworking to V.24/V25bis	68
C.4.5.3.1	General	68
C.4.5.3.2	V.24 interchange circuit handling rules	68
C.4.5.3.3	Call establishment signalling handling	69
C.4.5.3.4	V.25bis interworking to DECT CC primitives	69
C.4.5.3.4.1	PP originated calls	70
C.4.5.3.4.1.1	Call establishment	70
C.4.5.3.4.1.2	Call release	70
C.4.5.3.4.2	PP terminated calls	70
C.4.5.3.4.2.1	Call establishment	70
C.4.5.3.4.2.2	Call release	70
C.4.5.3.5	Flow control	71
C.4.5.3.6	Break signalling procedures	71
C.4.5.3.7	PAUSE condition	71
C.4.5.3.8	Data coding selection	71
C.4.5.3.9	Data transmission	72
C.4.5.4	DECT FP Interworking procedures	72
C.4.5.4.1	General	72
C.4.5.4.2	Call establishment signalling handling	72
C.4.5.4.3	V.24 Interchange circuit handling rules	73
C.4.5.4.4	Flow control	73
C.4.5.4.5	Break signalling procedures	73
C.4.5.4.6	PAUSE condition	73
C.4.5.4.7	Modem selection	74
C.4.5.4.8	Data coding selection	74
C.4.5.4.9	Data transmission	74

Annex D (normative): Service C2: Fixed radio Termination (FT) DLC PICS proforma77

D.1	Standardized symbols for the status column	77
D.2	Capabilities	78
D.2.1	Major capabilities	78
D.2.1.1	Services	78
D.2.1.2	Procedures	79
D.2.1.2.1	Generic signalling procedures	79
D.2.1.2.2	Class A procedures	79
D.2.1.2.3	Class B procedures	79
D.2.1.2.4	Broadcast procedures	79
D.2.1.2.5	LU3 procedures	79
D.2.1.2.6	Management procedures	80
D.2.2	Protocol parameters	81
D.2.2.1	U-plane timers	81
D.2.2.2	LU3 parameters	81
D.2.3	Protocol PDU s	81

D.2.3.1	U-plane PDUs	81
D.2.3.1.1	FAU Frame structure	81
D.2.3.1.2	LU3 Messages	82
D.2.3.1.2.1	LAP-U Message support.....	82
D.2.3.1.2.2	LAP-U I-command.....	82
D.2.3.1.2.3	LAP-U RR command / response	84
D.2.3.1.2.4	LAP-U RNR command / response	85
D.2.3.1.2.5	LAP-U REJ command / response.....	86
D.2.3.1.2.6	LAP-U SABM command.....	87
D.2.3.1.2.7	LAP-U UA response	88
D.2.4	Protocol error handling	90
D.2.4.1	LAP-U error handling	90

Annex E (normative): Service M: Portable radio Termination (PT) DLC PICS proforma91

E.1	Standardized symbols for the status column.....	91
E.2	Capabilities	92
E.2.1	Major capabilities	92
E.2.1.1	Services	92
E.2.1.2	Procedures.....	93
E.2.1.2.1	Generic signalling procedures	93
E.2.1.2.2	Class A procedures	93
E.2.1.2.3	Class B procedures	93
E.2.1.2.4	Broadcast procedures.....	93
E.2.1.2.5	LU3 procedures	93
E.2.1.2.6	Management procedures.....	94
E.2.2	Protocol parameters	95
E.2.2.1	U-plane timers	95
E.2.2.2	LU3 parameters.....	95
E.2.3	Protocol PDUs	95
E.2.3.1	U-plane PDUs	95
E.2.3.1.1	FAU Frame structure	95
E.2.3.1.2	LU3 Messages	96
E.2.3.1.2.1	LAP-U Message support.....	96
E.2.3.1.2.2	LAP-U I-command.....	96
E.2.3.1.2.3	LAP-U RR command / response	98
E.2.3.1.2.4	LAP-U RNR command / response	99
E.2.3.1.2.5	LAP-U REJ command / response.....	100
E.2.3.1.2.6	LAP-U SABM command.....	101
E.2.3.1.2.7	LAP-U UA response	102
E.2.4	Protocol error handling.....	104
E.2.4.1	LAP-U error handling	104

Annex F (normative): Service C2:FT profile Requirement List (profile RL) and Protocol Implementation Conformance Statement (PICS) proforma - NWK layer105

F.1	Standardized symbols for the status column.....	105
F.2	Capabilities	105
F.2.1	Major capabilities	105
F.2.1.1	Services	105
F.2.1.2	CC features.....	106
F.2.1.3	MM features	107
F.2.1.4	SS features (services)	108
F.2.1.5	LCE features.....	109
F.2.1.6	Procedures.....	109
F.2.2	Messages.....	111
F.2.2.1	CC messages	112
F.2.2.2	Mobility management messages.....	122
F.2.2.3	Link control entity messages	129

F.2.3	Information elements	130
F.2.3.1	Fixed length information element support.....	131
F.2.3.2	Variable length information element support	132
F.2.3.3	Escape information elements support.....	148
F.2.3.4	B-Format message structure support	148
F.2.4	Protocol error handling	149
F.2.5	Protocol parameters	150
F.2.5A	Timer support.....	150
F.2.6	Negotiation capabilities	151
F.2.7	Multi-layer dependencies.....	152

Annex G (normative): Service C2: Portable radio Termination (PT) NWK PICS proforma....153

G.1	Standardized symbols for the status column.....	153
G.2	Capabilities	153
G.2.1	Major capabilities	153
G.2.1.1	Services	153
G.2.1.2	Procedures.....	154
G.2.2	Protocol parameters	156
G.2.2.1	Timer support.....	156
G.2.2.2	System wide parameters.....	157
G.2.2.3	Other parameters	157
G.2.3	Messages.....	157
G.2.3.1	CC messages	157
G.2.3.2	Mobility management messages.....	167
G.2.3.3	Link control entity messages	174
G.2.4	Information elements	175
G.2.4.1	Fixed length information element support.....	177
G.2.4.2	Variable length information element support	178
G.2.4.3	B-Format message structure support	187
G.2.5	Protocol error handling.....	188
G.2.6	Negotiation capabilities	188
G.2.7	Multi-layer dependencies.....	190

Annex H (normative): Service C2: Fixed radio Termination (FT): provisions from EN 300 175-5 specifically required by this profile191

Annex J (normative): Service C2: Portable radio Termination (PT): provisions from EN 300 175-5 (2nd edition) specifically required by this profile201

Bibliography	211
History	212

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Foreword

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

Proposed national transposition dates	
Date of latest announcement of the present document (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of the present document (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

1 Scope

The present document defines a profile for Digital Enhanced Cordless Telecommunications (DECT) systems conforming to EN 300 175, Parts 1 to 8 [1] to [8]. It is part of a family of profiles which build upon and extend each other, aimed at the general connection of terminals supporting non-voice services to a fixed infra-structure, private and public.

The present document specifies a Link Access Protocol (LAP) service suitable for non-transparent transfer of character-oriented or bit-oriented data streams and intended for use in private and public roaming applications. It builds upon the generic frame relay service offered by the Data Services Profile (DSP) base standard (Type A and Type B services) and adds full Link Access Protocol (LAP-U) functionality to the basic service. Annexes to the present document contain interworking conventions to specific character orientated services.

The present document defines the Type C Service, Mobility Class 2.

The present document defines the additional requirements on the Physical Layer (PHL), Medium Access Control (MAC) layer, DLC layer and Network (NWK) layer of DECT. The standard also specifies Management Entity (ME) requirements and generic Interworking Conventions (IC) which ensure the efficient use of the DECT spectrum.

2 References

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

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

- | | |
|-----|---|
| [1] | EN 300 175-1: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview". |
| [2] | EN 300 175-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical layer (PHL)". |
| [3] | EN 300 175-3: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer". |
| [4] | EN 300 175-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer". |
| [5] | EN 300 175-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer". |
| [6] | EN 300 175-6: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing". |
| [7] | EN 300 175-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features". |
| [8] | EN 300 175-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission". |
| [9] | ETS 300 651: "Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Generic data link service (service type C, class 2)". |

- [10] EN 300 444: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)".
- [11] EN 300 435: "Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Base standard including interworking to connectionless networks (service types A and B, class 1)".
- [12] Void.
- [13] CCITT Recommendation V.42: "Error-correcting procedures for DCEs using asynchronous-t-synchronous conversion".
- [14] CCITT Recommendation V.24 (1988): "List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE)".
- [15] CCITT Recommendation V.25bis (1988): "Automatic calling and/or answering equipment on the general switched telephone network (GSTN) using the 100-series interchange circuits".
- [16] CCITT Recommendation V.42bis (1990): "Data compression procedures for data circuit-terminating equipment (DCE) using error correcting procedures".
- [17] ETR 043: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Services and facilities requirements specification".
- [18] ETS 300 476-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 2: Data Link Control (DLC) layer - Portable radio Termination (PT)".
- [19] ETS 300 476-3: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 3: Medium Access Control (MAC) layer - Portable radio Termination (PT)".
- [20] ETS 300 476-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 4: Network (NWK) layer - Fixed radio Termination (FT)".
- [21] ETS 300 476-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 5: Data Link Control (DLC) layer - Fixed radio Termination (FT)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, 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 (FPs), 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 FPs 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 inter-operates 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.

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 the present document, the following abbreviations apply:

ACK	Acknowledgement
AMCI	Advanced MAC Connection Identifier
ARC	Access Rights Class
ARQ	Automatic Retransmission reQuest
BPAD	Bit oriented Packet Assembler / Disassembler
C	higher layer control Channel (see CS and CF)
CC	Call Control. A NWK layer functional grouping
CF	higher layer signalling Channel (Fast)CISS Call Independent Supplementary Services
CLMS	Connectionless Message Services
COMS	Connection Oriented Message Services
C-plane	Control plane
CS	higher layer signalling Channel (Slow)
DCE	Data Circuit terminating Equipment
DECT	Digital Enhanced Cordless Telecommunications
DLC	Data Link Control
DTE	Data Terminal Equipment
EIC	Equipment Installers Code
EMC	Equipment Manufacturers Code
FP	Fixed Part
FT	Fixed radio Termination
GAP	Generic Access Profile
GSM	Global System for Mobile communication
I	higher layer Information channel (see IP)
IP	higher layer Information channel (Protected)
IPIU	International Portable User Identity
ISDN	Integrated Services Digital Network
IWF	Interworking Functions
IWU	Interworking Unit
LAP-B	Link Access Procedure (Balanced)
LAP-C	Link Access Procedure (Control)
LAP-D	Link Access Procedure (ISDN D-channel)
LAP-U	Link Access Procedure (U-plane)
LCE	Link Control Entity
LLME	Lower Layer Management Entity
LLN	Logical Link Number (DLC layer)
MAC	Medium Access Control
MCI	MAC Connection Identifier
MM	Mobility Management
NLF	New Link Flag
NWK	Network
PAD	Packet Assembler-Disassembler
PARK	Portable Access Rights Key
PDU	Protocol Data Unit
PHL	Physical
PICS	Protocol Implementation Conformance Standard
PP	Portable Part
PT	Portable radio Termination
PUN	Portable User Number
PUT	Portable User Type
Q	system information channel

SAP	Service Access Point
SAPI	Service Access Point Identifier
SDU	Service Data Unit
TAF	Terminal Adaptation Function
TDMA	Time Division Multiple Access
TPUI	Temporary Portable User Identity
U-plane	User plane

4 Description of services

4.1 Typical configuration

A typical configuration for this profile shall be as shown in figure 1.

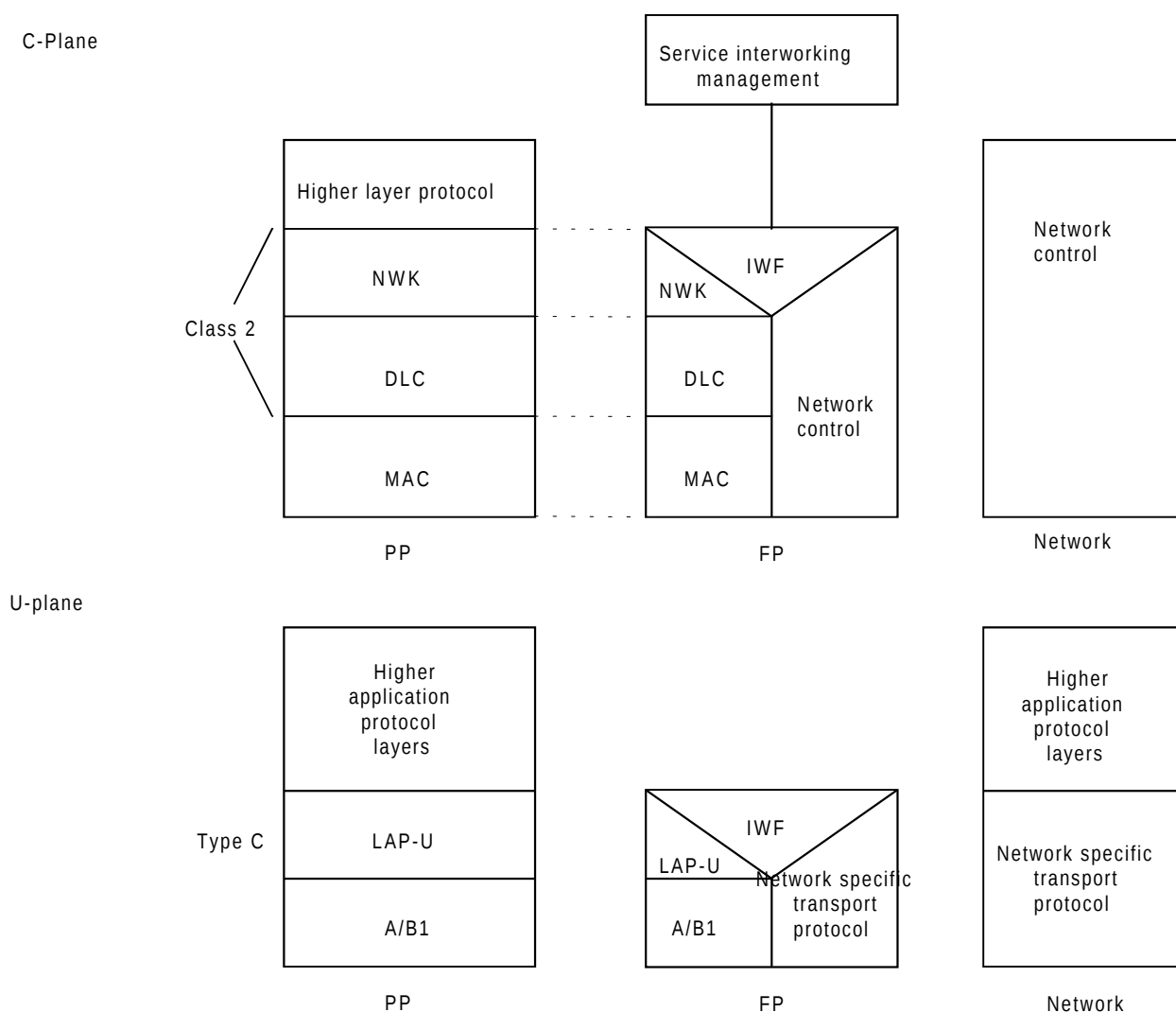
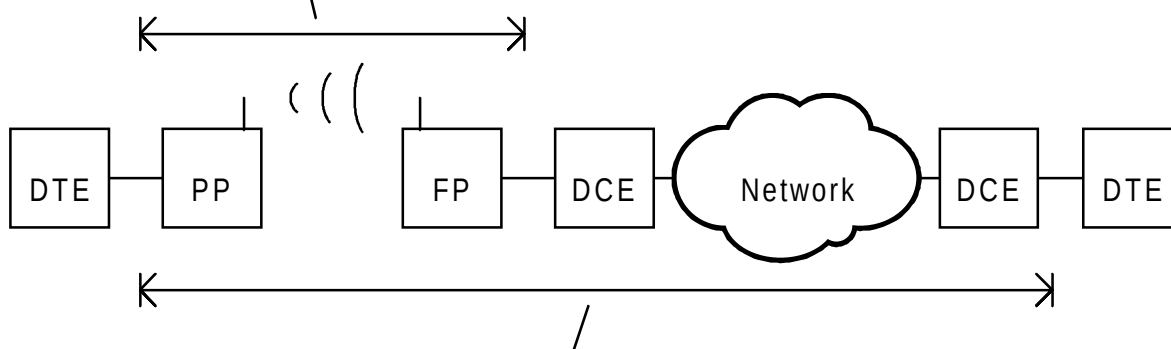


Figure 1: Typical profile configuration showing signalling interworking to connection-oriented networks via the C-plane

DECT signalling does not control external network connections



DECT signalling controls external network connections

Figure 2: Typical profile configuration (horizontal model)

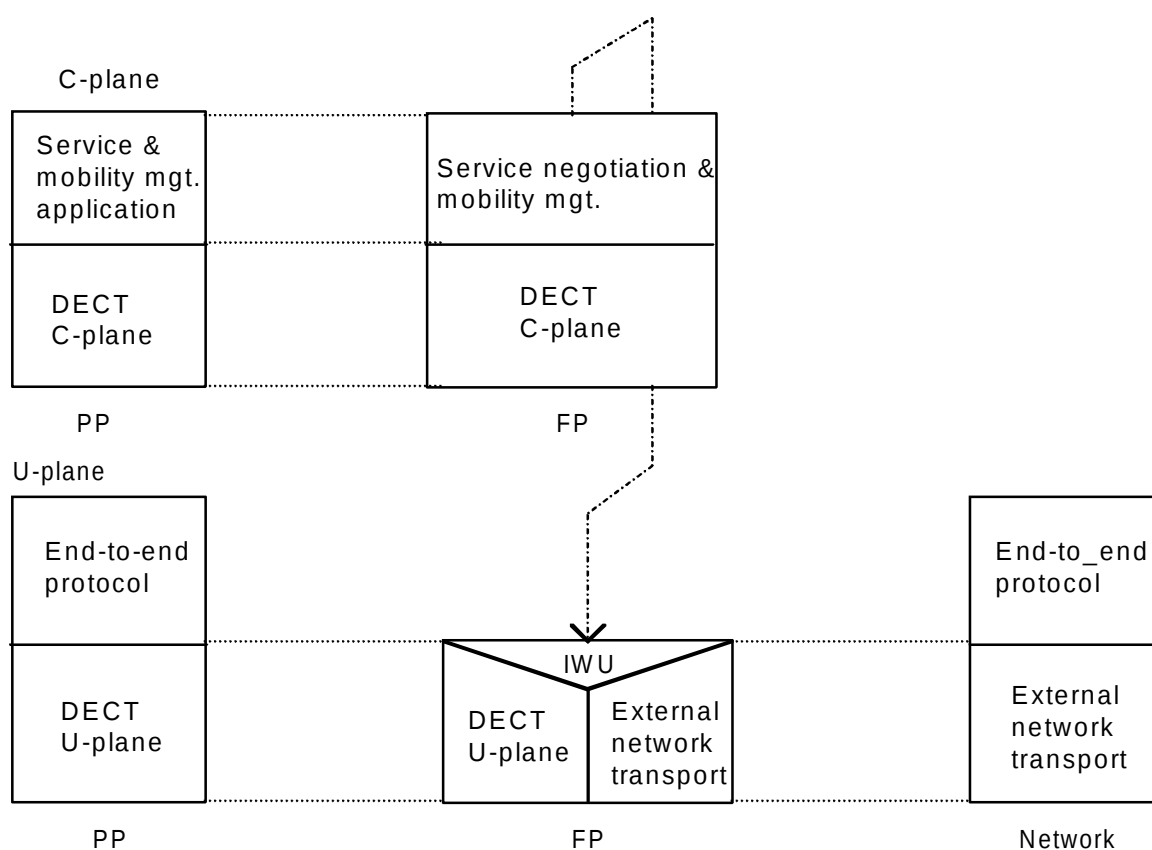


Figure 3: Typical profile configuration showing interworking to permanent virtual circuit via the U-plane

The typical profile configuration is based upon the following principles:

- applications of this profile are treated as requiring one of two kinds of service: those which require DECT signalling to control of the connections in the attached external network, and those which do not require DECT signalling to control external network connections;
- connection-oriented applications require that addresses, bearer information and other connection-associated parameters be initialized each time service is requested, because such parameters are required by the external network in order to complete the connection to the other party. Furthermore, in these cases such information is inter-worked to the DECT signalling channel, so that the FP may complete the connection using whatever network resources it has available, as transparently as possible to the PP application;

- applications which do not require DECT-signalling to control external network connections require from DECT a service which is analogous to the Integrated Services Digital Network (ISDN) permanent virtual circuit service: DECT is required to provide an appropriate bearer as far as the inter-working unit, where inter-working is performed with a network that is either connectionless or uses application-based in-band signalling for connection control. In this case, the negotiated characteristics of the DECT connections include the DECT bearer parameters, the choice of inter-working unit, together with mobility aspects such as location and operator choice;
- in both cases, interworking between the DECT U-plane and the external network does not necessarily occur at OSI layer 2. The service provided by LAP-U permits the inter-working unit to exploit DECT services such as flow-control, Packet Assembler-Disassembler (PAD) functions and synchronized transmission of out-of-band control information, but these services may be used for inter-working at any layer in the external network, including the MAC layer, transport layer or session layer.

4.2 Service objectives

The profile has the following service objectives, as outlined in ETR 043 [17]:

Point-to-point data transfer PP-FP	Yes;
Point-to-point data transfer FP-PP	Yes;
Service change and negotiation	Yes;
Data streaming	Optional;
PAD and BPAD support	Optional;
in-band user control signalling	Optional;
Encryption	Optional.

Maximum sustainable throughput	24 kbit/s per bearer;
Establishment of PT to FT link	50 ms;
Establishment of FT to PT link	50 / 160 ms;
Undetected error rate	Less than 10^{-10} per bit;
Services	point-to-point SDU transfer PP-FP; point-to-point SDU transfer FP-PP;
Maximum SDU size	$\geq 1\ 526$ octets.

4.3 Service definitions

The present document defines a profile for Digital Enhanced Cordless Telecommunications (DECT) systems conforming to EN 300 175, Parts 1 to 8 [1] to [8]. It is part of a family of profiles which build upon and extend each other, aimed at the general connection of terminals supporting non-voice services to a fixed infra-structure, private and public.

The present document specifies a Link Access Protocol (LAP) service suitable for non-transparent transfer of character-oriented or bit-oriented data streams and intended for use in private and public roaming applications. It builds upon the generic frame relay service offered by the Data Services Profile (DSP) base standard (Type A and Type B services) and adds full Link Access Protocol (LAP-U) functionality to the basic service. Annexes to the present document contain interworking conventions to specific character orientated services.

The present document defines the Type C Service, Mobility Class 2.

The present document defines the additional requirements on the Physical Layer (PHL), Medium Access Control (MAC) layer, DLC layer and Network (NWK) layer of DECT. The standard also specifies Management Entity (ME) requirements and generic Interworking Conventions (IC) which ensure the efficient use of the DECT spectrum.

4.3.1 PHL service definitions

See PHL requirements in clause 5.

MAC services provided for this profile are based as an extension of those ones defined for Type A and Type B class 1 profiles. Services defined in EN 300 435 [11] subclause 4.3.2, apply hereinafter and will be referred throughout the document with the same number they have in original document, whilst services defined in this subclause will have a number starting from M.101. Following there is a complete list of them.

Cs higher layer signalling [M.101]: A low rate connection oriented data service with ARQ using the Cs channel to transfer higher layer signalling data.

Cf higher layer signalling [M.102]: A high rate connection oriented data service with ARQ using the Cf channel to transfer higher layer signalling data.

Secondary Access Rights Identity (SARI) support [M.103]: The ability to support, in addition to the primary Access Rights Identity (ARI), secondary ARIs that the FT broadcasts less frequently than PARIs. These may be used to reflect an inter-operators agreement allowing a portable to access more than one operator or services through FT.

4.3.2 MAC service definitions

MAC services provided for this profile are based as an extension of those ones defined for Type A and Type B class 1 profiles. Services defined in EN 300 435 [11] clause 4.3.2, apply hereinafter and will be referred throughout the document with the same number they have in original document, whilst services defined in this subclause will have a number starting from M.101. Following there is a complete list of them.

Cs higher layer signalling [M.101]: A low rate connection oriented data service with ARQ using the Cs channel to transfer higher layer signalling data.

Cf higher layer signalling [M.102]: A high rate connection oriented data service with ARQ using the Cf channel to transfer higher layer signalling data.

Secondary Access Rights Identity (SARI) support [M.103]: The ability to support, in addition to the primary Access Rights Identity (ARI), secondary ARIs that the FT broadcasts less frequently than PARIs. These may be used to reflect an inter-operators agreement allowing a portable to access more than one operator or services through FT.

4.3.3 DLC service definitions

DLC services provided for this profile are based as an extension of those ones defined for Type A and Type B class 1 profiles. Services defined in ETS 300 435 [11] subclause 4.3.3, apply hereinafter and will be referred throughout the document with the same number they have in original document, whilst services defined in this subclause will have a number starting from D101. Following there is a complete list of them.

Data Link Service (LAPC+Lc) class A service [D.101]: A single frame acknowledged C-plane data link service providing a data link between one FT and one PT. The higher layer information is segmented (if necessary) and transmitted in numbered frames. The Lc service, upon which LAPC is defined, provides frame delimiting, transparency and frame synchronization.

Data Link Service (LAPC+Lc) class B service [D.102]: A multiframe acknowledged C-plane data link service providing a data link between one FT and one PT. The higher layer information is segmented (if necessary) and transmitted in numbered frames. The Lc service, upon which LAPC is defined, provides frame delimiting, transparency and frame synchronization.

Lc Service [D.103]: A service providing channel dependant fragmentation, recombination, frame synchronization and frame delimiting transparency. Fragmentation is obtained by means of dividing a LAPC data unit into more than one service data units for delivery to the MAC layer C logical channel, whilst recombination is obtained by means of joining several service units received from the MAC layer C logical channel into a LAPC data unit.

Broadcast Lb service [D.104]: A simplex point-to-multipoint transmission using simple fixed length DLC frames providing a restricted broadcast service in direction FP to PP(s).

Intra-cell voluntary connection handover [D.105]: Internal handover process provided and initiated by the DLC layer (as a result of a particular policy, implementers dependent, application on link management. E.g. continued poor quality of service from the MAC layer), whereby one set of DLC entities (C-plane and U-plane) can re-route data from one MAC connection to a second new MAC connection in the domain of the same cell, while maintaining the service provided to the NWK layer.

Intercell voluntary connection handover [D.106]: Internal handover process provided and initiated by the DLC layer (as a result of a particular policy, implementers dependent, application on link management. E.g. continued poor quality of service from the MAC layer), whereby one set of DLC entities (C-plane and U-plane) can re-route data from one MAC connection to a second new MAC connection not in the domain of the same cell, while maintaining the service provided to the NWK layer.

Encryption activation [D.107]: Transporting the NWK layer encryption request and the cipher key to the MAC layer, thereby enabling the encryption process in the MAC layer.

Encryption deactivation [D.108]: Transporting the NWK layer encryption deactivation request to the MAC layer, thereby disabling the encryption process in the MAC layer.

LU3 (LAPU) Frame SWItching service (SWI) [D.109]: A multiframe acknowledged U-plane data link service providing a data link between one FT and one PT. The higher layer information is segmented (if necessary) and transmitted in numbered frames. The LU2 service, upon which LAPU is defined, provides frame delimiting, transparency and frame synchronization.

4.3.4 NWK features definitions

outgoing call [N.1]: A call initiated at a DECT PP.

off-hook [N.2]: The ability to indicate the action of going off-hook, e.g. to start call set-up or accept a call.

on-hook (FULL Release) [N.3]: The ability to indicate the action of going on-hook (e.g. to terminate a call) and fully release the radio resource.

dialed digits (basic) [N.4]: The capability to dial digits 0-9, *, #.

register recall [N.5]: The ability of the PP to request the invocation of the supplementary service "register recall" over the DECT interface and the ability of the FP to transmit the request to the local network. Register recall means to seize a register (with dial tone) to permit input of further digits or other action.

go to DTMF signaling (defined tone length) [N.6]: Go to DTMF signaling with defined tone length.

pause (dialing pause) [N.7]: The ability to generate or indicate an dialing pause, e.g. to await further dial tone.

incoming call [N.8]: A call received at a DECT PP.

authentication of PP [N.9]: The process by which the identity of a DECT PP is checked by the FP.

authentication of user [N.10]: The process by which the identity of a user of a DECT PP is checked by the FP. The User Personal Identification (UPI), a personal identification of 0 to 8 digits, manually entered by the user, is used for user authentication.

location registration [N.11]: A facility whereby a PP can be registered with a FP or a cluster of FPs such that incoming calls, radio pages or messages may be routed to it.

on-air key allocation [N.12]: The capability to transform Authentication Code (AC) into User Authentication Key (UAK) using the key allocation procedure.

identification of PP [N.13]: The ability for the FP to request and PP to provide specific identification parameters.

service class indication / assignment [N.14]: Assignment by the FP to PP of the service class and indication to the FP by the PP of the contents of its service class.

alerting [N.15]: Activates or deactivates alerting at the PP using any appropriate indication.

ZAP [N.16]: The ability first to assign and then to re-program the account data held in the PP so that access rights may be suspended subject to the conditions set by the service provider being met, coupled with the ability to re-program the account data again to reinstate access rights once these conditions have been met. One ZAP field shall be provided per account field. The PP has the right to authenticate the FP prior to the execution of ZAP suspend.

encryption activation FT initiated [N.17]: The activation of the encryption process requested by FT.

subscription registration procedure on-air [N.18]: A standardized procedure for loading subscription registration data into a PP in real time over the air-interface.

link control [N.19]: The ability to request, accept, maintain and release a data link for the purposes of a NWK layer procedure.

terminate access rights FT initiated [N.20]: The ability of the FP to delete a subscription in the PP.

partial release [N.21]: The ability to release an established or in progress Call Control (CC) call whilst retaining the radio resource for the purpose of accessing further services.

go to DTMF (infinite tone length) [N.22]: Go to DTMF signaling, indicating infinite DTMF tone duration.

go to pulse [N.23]: Go to pulse (decadic) signaling.

signaling of display characters [N.24]: The transmission to the PP of characters to be displayed on the user's PP display (if provided).

display control characters [N.25]: Characters sent to the PP to control the user's display in the PP (if provided). Such characters include cursor control, clear screen, home, flash, inverse video etc.

authentication of FT [N.26]: The process by which the identity of a FP is checked by the PP.

encryption activation PT initiated [N.27]: The activation of the encryption process suggested by PT. The real time start of ciphering is done in the MAC layer and is always initiated by the PT.

encryption deactivation FT initiated [N.28]: The deactivation of the encryption process requested by FT. The real time stop of ciphering is done in the MAC layer and is always initiated by the PT.

encryption deactivation PT initiated [N.29]: The deactivation of the encryption process suggested by PT. The real time stop of ciphering is done in the MAC layer and is always initiated by the PT.

Calling Line Identification Presentation (CLIP) [N.30]: The ability to provide the calling party number to the called party before accepting the call.

internal call [N.31]: A call between 2 users that does not make use of the local network resources. This is typically useful in residential environments.

service call [N.32]: A call initiated by a DECT PT for entering of FT related service and adjustment procedures in a transparent way. After having sent the service call indication, the PT behaves according to the rules of a normal call.

in-call service change [N.33]: The ability to modify call parameters (e.g. bandwidth, IWU parameters etc) while the call is maintained.

service suspension and resumption [N.34]: The ability to suspend a call due to inactivity of the connection, and to resume it when new activity is detected

service negotiation [N.35]: The ability to negotiate call parameters during call set-up

cost information [N.36]: The ability to provide cost information during the call.

5 PHL requirements

The requirements of the service types A and B class 1, defined in EN 300 435 [11] shall apply.

6 MAC layer requirements

The requirements of the Service Types A or B, defined in EN 300 435 [11] shall apply including those elements described as conditional on the presence of Service Type C2. In addition, 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.

6.1 MAC services for type A

Table 1: MAC services status, service type A

Service supported				
Item no.	Name of service	Ref.	Status	
			PT	FT
M.101	Cs higher layer signalling	4.3.2	M	M
M.102	Cf higher layer signalling	4.3.2	O	O
M.103	SARI support	4.3.2	M	O

6.2 MAC services for type B

Table 2: MAC services status, service type B

Service supported				
Item no.	Name of service	Ref.	Status	
			PT	FT
M.101	Cs higher layer signalling	4.3.2	M	M
M.102	Cf higher layer signalling	4.3.2	M	M
M.103	SARI support	4.3.2	M	O

6.3 MAC services to procedure mapping

Table 3: MAC service to procedure mapping

Service / Procedure mapping				
			Status	
Service	Procedure	Ref.	PT	FT
M.101 Cs higher layer signalling		5.2		
	Cs channel data	10.8	M	M
	Q2 bit setting	10.9	M	M
M.102 Cf higher layer signalling		5.2		
	Cf channel data	10.8	M	M
M.103 SARI support		5.2		
	Downlink broadcast	10.2	M	M

7 DLC layer requirements

The DLC layer shall contain two independent planes of protocol: the C-plane and the U-plane. All internal DECT protocol control shall be handled by the C-plane. All external user data and control shall be handled by the U-plane.

7.1 C-plane requirements

Type A and Type B profile do not contain any DLC C-plane service, therefore in Type C profile, in which a C-plane is needed, it is defined a new set of requirements for the particular matter. The DLC C-plane shall provide the data link class A (FP only) and class B (PP only) service both based on LAPC+Lc, Data Link and the broadcast service (Lb), all of them are defined in EN 300 175-4 [4]. Annexes D and E of the present document specify the specific requirements for this profile.

Table 4: DLC C-plane services status

Service supported				
Item no.	Name of service	Ref.	Status	
			PT	FT
D.101	Data Link Service (LAPC+Lc) class A service	4.3.3	M	M
D.102	Data Link Service (LAPC+Lc) class B service	4.3.3	O	O
D.103	Lc Frame delimiting and sequencing service	4.3.3	M	M
D.104	Broadcast Lb service	4.3.3	M	M
D.105	Intra-cell voluntary connection handover	4.3.3	M	O
D.106	Inter-cell voluntary connection handover	4.3.3	M	O
D.107	Encryption activation	4.3.3	M	C101
D.108	Encryption deactivation	4.3.3	C100	C100

C100 if N.17 or N.27 then M else I.

C101 if N.28 or N.29 then M else I.

7.2 U-plane requirements

The DLC U-plane extends a subset of services provided by Type A and Type B profile by the mean of LU3 service, defined in annex A. This shall use the LU2 service provided by the Type A or Type B profile, as described in EN 300 435 [11] and [4].

The Slp Service is not required by this profile.

U-plane services status is defined by tables contained in subclauses 7.1 and 7.2 of EN 300 435 [11], with table 5.

Table 5: DLC U-plane services status

Service supported				
Item no.	Name of service	Ref.	Status	
			PT	FT
D.109	LU3 (LAPU) Frame SWItching service (SWI)	4.3.3	M	M

7.3 C-plane Service Mapping

NOTE: Except when stated otherwise, the reference column refers to the relevant clause in EN 300 175-4 [4].

Table 6: DLC C-plane service to procedure mapping

Service / Procedure mapping				
Service	Procedure	Ref.	PT	FT
D.101 Data Link Service (LAPC+Lc) class A service				
	Class A link establishment	9.2.3.1	M	M
	Class A acknowledged information transfer	9.2.3.2, 9.2.3.3, 9.2.3.4, 9.2.3.5, 9.2.3.6	M	M
	Class A link release	9.2.3.7, 9.2.7.1.2, 10.4.2, 10.2.2	M	M
	Class A link re-establishment	9.2.3.8	M	M
	General error handling	9.2.9.1	M	M

Service / Procedure mapping				
Service	Procedure	Ref.	PT	FT
D.102 Data Link Service (LAPC+Lc) class B service				
	Class B multiple frame establishment	9.2.4.1, 9.2.4.2, 9.2.4.3	M	M
	Class B information transfer	9.2.5.1, 9.2.5.2, 9.2.5.3, 9.2.5.4, 9.2.5.5, 9.2.5.6, 9.2.5.7	M	M
	Class B link release	9.2.6, 9.2.7.1.2	M	M
	Class B link suspension and resumption	9.2.7.1, 9.2.7.1.1, 9.2.7.2	M	M
	General error handling	9.2.9.1, 9.2.9.2.1, 9.2.9.2.2, 9.2.9.2.3, 9.2.9.2.4	M	M
D.103 Lc Frame delimiting and sequencing service				
	Segmentation of NWK information	5.1.1, 7.7	M	M
	C _s channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.2	M	M
	C _F channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.1	O	O
D.104 Broadcast Lb service				
	Normal operation	9.4.1.1	M	M
	Expedited operation	9.4.2.1	M	M
D.105 Intra-cell voluntary connection handover				
	Class B connection handover	9.2.7.3, 9.2.7.3.2, 9.2.7.3.3, 10.5	C1	C1
	Class A connection handover	9.2.1.7.2, 9.2.7.3, 9.2.7.3.1, 9.2.7.3.3, 10.5	M	M
D.106 Inter-cell voluntary connection handover				
	Class B connection handover	9.2.7.3.2, 9.2.7.3.3	C1	C1
	Class A connection handover	9.2.1.7.2, 9.2.7.3, 9.2.7.3.1, 9.2.7.3.3, 10.5	M	M
	Ciphering management	10.6.1.3	M	M

Service / Procedure mapping				
Service	Procedure	Ref.	PT	FT
D.107 Encryption activation				
	Providing a key to the MAC layer	10.6.1	M	M
	Starting the ciphering	10.6.2	M	M
	Stopping the ciphering	10.6.2	M	M
	Connection handover of ciphered connection	10.6.3	M	C1
D.108 Encryption deactivation				
	Stopping the ciphering	10.6.2	M	M

C1 if D.102 then M else I.

7.4 U-plane Service Mapping

U-plane services to procedure mapping is defined by tables contained in subclause 7.3 of EN 300 435 [11], with table 7.

Table 7: DLC U-plane service to procedure mapping

Service / Procedure mapping				
Service	Procedure	Ref.	Status	
			PT	FT
D.109 LU3 Frame SWItching service (FSWI)				
	Establishing LAP-U multiple frame operation	A.5.2.2	M	M
	Link maintenance and information transfer in LAP-U multiple frame operation	A.5.2.3	M	M
	Release of LAP-U multiple frame operation	A.5.2.4	M	M
	Re-establishment of LAP-U multiframe operation	A.5.2.5, A.5.2.5.2	M	M
	Exception handling	A.5.2.6.2.1, A.5.2.6.2.2, A.5.2.6.2.3	M	M
	Management procedures for LAP-U	A.6	M	M

8 NWK layer requirements

The NWK layer provisions shall include the following entities:

- Call Control (CC);
- Link Control Entity (LCE);
- Mobility Management (MM); and
- Call Independent Supplementary Services (CISS).

Portable Part and Fixed Part CC entities will use either packet switched mode or circuit switched mode procedures. For each interworking, the appropriate interworking annex will specify which set of procedures shall be used.

CISSs required for public operations, such as charging, shall optionally be provided.

The MM requirements shall be closely aligned to the requirements of the Generic Access Profile (GAP) EN 300 444 [10].

The provisions of EN 300 175-5 [5] shall be implemented with respect to the services, procedures, messages and information elements coding listed in annexes E and F. The provisions of EN 300 175-6 [6] shall be implemented with respect to the structure and use of identities.

The Extended Higher Layer Fixed Part Information field shall be used with bit a45 set to 1, indicating the support of the C2 profile.

In the case that the FP is capable of supporting encryption, this shall use the DECT standard algorithm and shall be signalled to the PP by the setting of the MAC Q-channel Higher Layer Information message bit a37.

In the case that the PP is capable of supporting fast paging, this shall be signalled to the FP by the appropriate coding of the "Setup Capabilities" information element, which shall be transmitted in the "Location Request" message. In this case the FP shall always use fast paging as well as normal or low-duty cycle paging to page the PP.

The significance of the <<CONNECTION-ATTRIBUTES>> element in the {CC-SETUP} message shall conventionally signify the maximum capabilities of the sender for the requested call, and hence shall be subject to negotiation. The actual values of the connection attributes are continuously negotiated at the MAC layer. For this reason octets 4a and 4c shall not be used. Octets 5, 5a, 6, 6a codings shall be used to indicate transmit and receive capabilities respectively.

The <<IWU-ATTRIBUTES>> element shall be negotiated by the prioritized list procedure and/or the exchanged attribute procedure and/or the peer-determined procedure, as defined in EN 300 175-5 [5], subclause 15.2. Support for exchanged attribute procedures shall be mandatory and, for each interworking, the appropriate interworking annex will specify which of the other two procedure(s) may be used in addition.

The <<RELEASE-REASON>> element shall always be included in the {CC-RELEASE-COM} message. Only the given codings need be interpreted.

The release of connections according to the management procedure in EN 300 435 [11], clause 9, and the subsequent re-establishment, shall be implemented by means of the Suspend / Resume procedures (EN 300 175-5 [5], subclause 9.7.4).

Should there then be an attempt to resume a cancelled transaction, through a {CC-SERVICE-CHANGE} message with the Service Change Info element coded to RESUME and an unrecognized transaction identifier, then the receiving entity shall ignore the message, as specified in EN 300 175-5 [5], subclause 17.3.2.1.

8.1 NWK layer features supported

Table 8: NWK layer features supported

Item no.	Name of feature	Ref.	Status	
			PT	FT
N.1	Outgoing call		M	M
N.2	Off hook		M	M
N.3	On hook (full release)		M	M
N.4	Dialled digits (basic)		M	M
N.5	Register recall		M	O
N.6	Go to DTMF		M	M
N.7	Pause (dialling pause)		M	O
N.8	Incoming call		M	M
N.9	Authentication of PP		M	M
N.10	Authentication of user		M	O
N.11	Location registration		M	M
N.12	On air allocation		M	O
N.13	Identification of PP		M	O
N.14	Service class indication / assignment		M	M
N.15	Alerting		M	M
N.16	ZAP		M	O
N.17	Encryption activation FT initiated		O	O
N.18	Subscription registration procedures on-air		M	M
N.19	Link control		M	M
N.20	Terminate access rights TF initiated		M	O
N.21	Partial release		O	O
N.22	Go to DTMF (infinite tone length)		O	O
N.23	Go to Pulse		O	O
N.24	Signalling of display characters		O	O

Item no.	Name of feature	Ref.	Status	
			PT	FT
N.25	Display control characters		O	O
N.26	Authentication of FT		O	O
N.27	Encryption activation PT initiated		O	O
N.28	Encryption deactivation FT initiated		O	O
N.29	Encryption deactivation PT initiated		O	O
N.30	Calling Line Identification Presentation (CLIP)		O	O
N.31	Internal call		O	O
N.32	Service call		O	O
N.33	Service change		O	O
N.34	Service suspension and resumption		M	M
N.35	Service negotiation		M	M
N.36	Cost information		O	O

8.2 Feature to procedures mapping

Table 9: Feature to procedures mapping

Feature	Procedure	Ref.	Status	
			PT	FT
Outgoing call			M	M
	Outgoing call request		M	M
	Overlap sending		M	O
	Outgoing call proceeding		M	O
	Outgoing call confirmation		M	O
	Outgoing call connection		M	M
	Sending keypad information		M	M
Off hook			M	M
	Outgoing call request		M	M
	Incoming call request		M	M
On hook (full release)			M	M
	Normal call release		M	M
	Abnormal call release		M	M
Dialled digits (basic)			M	M
	Sending keypad information		M (note 1)	M (note 1)
(note 2)	Sending Called Party Number		M (note 3)	M (note 3)
Register recall			M	O
	Sending keypad information		M	M
Go to DTMF signalling (defined the length)			M	M
	Sending keypad information		M	M
Pause (dialling pause)			M	O
	Sending keypad information		M	M
Incoming call			M	M
	Incoming call request		M	M
	Incoming call confirmation		M	M
	PT alerting		M	M
	Incoming call connection		M	M
Authentication of the PP			M	M
	Authentication of PT		M	M
Authentication of the user			M	O
	Authentication of user		M	M
Location registration			M	M
	Location registration		M	O
	Location update		M	O
On air key allocation			M	O
	Key allocation		M	M

			Status	
Feature	Procedure	Ref.	PT	FT
Identification of PP			M	O
	Identification of PT		M	M
Service class indication / assignment			M	M
	Obtaining access rights		M	M
	Authentication of PT		M	M
Alerting			M (note 1)	M (note 1)
	PT alerting		M (note 1)	M (note 1)
ZAP			M	O
	Obtaining access rights		M	M
	Incrementing the ZAP value		M	M
	Authentication of FT		O	M
Encryption activation FT initiated			O	O
	Cipher-switching initiated by FT		M	M
	Storing the Derived Cipher Key (DCK)		M	M
Subscription registration user procedure on-air			M	M
	Obtaining access rights		M	M
Link control			M	M
	Indirect FT initiated link establishment		M	M
	Direct PT initiated link establishment		M	M
	Link release "normal"		M	M
	Link release "abnormal"		M	M
	Link release "maintain"		M	M
(note 2)	Direct FT initiated link establishment		M	M
Terminate access rights FT initiated			M	O
	FT terminating access rights		M	M
	Authentication of FT		O	M
Partial release			O	O
	Partial release		M	M
Go to DTMF (infinite tone length)			O	O
	Sending keypad information		M	M
Go to pulse			O	O
	Sending keypad information		M	M
Signalling of display characters			O	O
	Display		M	M
	Terminal capability indication		M	M
Display control characters			O	O
	Display		M	M
	Terminal capability indication		M	M
Authentication of FT			O	O
	Authentication of FT		M	M
Encryption activation PT initiated			O	O
	Cipher-switching initiated by PT		M	M
	Storing the DCK		M	M
Encryption deactivation FT initiated			O	O
	Cipher-switching initiated by FT		M	M
Encryption deactivation PT initiated			O	O
	Cipher-switching initiated by PT		M	M
Calling Line Identification Presentation (CLIP)			O	O
	Incoming call request		M	M

			Status	
Feature	Procedure	Ref.	PT	FT
Internal call			O	O
	Internal call set-up		M	M
	Internal call keypad		M	O
Service call			O	O
	Service call set-up		M	M
	Service call keypad		M	O
In-call Service change			M	M
	Bandwidth Changes (including reversals)	9.6.2	C6 (if multibearer M else I)	C6 (if multibearer M else I)
	Service re-routing	9.6.3	C7 (if asymmetric M else I)	C7 (if asymmetric M else I)
	IWU-attributes change	9.6.1	M (note 1)	M (note 1)
Service suspension and resumption			M	M
	Service suspension and resumption (circuit mode)	9.6.4	M (note 1)	M (note 1)
	Service suspension and resumption (packet mode)	9.7.4	M (note 3)	M (note 3)
Service negotiation				
	Service negotiation	15.2	M (note 1)	M (note 1)
	Prioritized list negotiation	15.2.2	O	O
	Peer attribute negotiation	15.2.5	O	O
Cost information				
	Cost information	10.6.2.4	O	O
NOTE 1: For circuit bearer interworking only.				
NOTE 2: Not a GAP procedure.				
NOTE 3: For V.24 interworking only.				

9 Management entity requirements

The management entity shall be responsible for:

- maintenance and updating of the logical associations C-plane and U-plane entities inside and among the different levels of DECT Stack: NWK, DLC, MAC and IWUs;
- managing the mobility introduced with mobility class 2.
- managing of link resources.

Management entities collect procedures defined in profiles upon which Type C profile is defined (subclause 9.2) with the addition of procedures specifically defined for the Type C profile (subclause 9.1).

Therefore, the ME shall:

- 1) contain the following procedure groups defined in EN 300 175-4 [4]:
 - MAC connection management;
 - DLC C-plane management;
 - DLC U-plane management;
- 2) contain the NWK Link Control and resources management defined in EN 300 175-5 [5] and following listed:
 - LCE, Connection Oriented link control procedures;
 - service mapping and negotiation;

- resource management;
 - management of MM procedures;
- 3) support the management procedures as defined in EN 300 444 [10]:
- management of MM procedures;
 - location registration initiation;
 - assigned individual TPUI management;
 - PMID management;
 - DCK management;
 - broadcast attributes management;
 - storage of subscription related data.

Being the Type C profile based on Type A and Type B mobility class 1 profiles, the establishment of links is based on same principles upon which this particular kind of management is based in those profiles.

Hence, the Link Establishment PP initiated has neither any constraint nor any particular requirement much more of those specified in base standard series EN 300 175-1 to 8 [1] to [8] and EN 301 444 [10].

When the Link Establishment is initiated by the FP side, following Establishment rules shall apply:

Optionally, the following procedures might be also included:

- 1) procedure defined in EN 300 175-4 [4]:
 - connection Handover management;
 - ciphering management;
- 2) procedure defined in EN 300 175-5 [5]:
 - call ciphering management.

The proper use of procedures above listed , of messages used and of values for message field are stated in PICS tables contained in annexes D, E, F and G. GAP procedures shall apply as they are; the only permitted changes are in messages used, as indicated in the PICS tables above-mentioned.

9.1 Link resource management

The necessity to manage the use of radio resources in the most efficient manner requires the participation of all the entities in the PP and FP. The higher layer entities are responsible for the presence or absence of the valid data at the MAC and LU2 service boundaries upon which such lower layer resource management is based. The management entity shall consider that there is valid user data available to the lower layers, if a call transaction identifier exists and the call is active and not suspended, or if there are any valid LAP-C frames to transmit.

In all other cases, it shall consider that there is no valid user data available.

The request to suspend the call is issued by the Interworking Functions (IWF) to the DECT network layer through service primitives, but it shall be a management entity decision as to when to suspend or to resume a call.

The ME may choose at any time to suspend the call according to implementation-specific algorithms. In any case, the ME shall suspend or release the call at least if all the following conditions are satisfied:

- the encapsulation entity in the IWF has not passed a user data packet for transmission to LAP-U for a period of 5/n seconds, where n is the number of active duplex and double simplex MAC bearers related to the LAP-U connection;
- the segmentation entity in the IWF contains no pending user data in its receiving packet assembly buffers;

- LAP-U is in an idle condition, as defined in ETS 300 651 [9] annex A, subclause A.6.2;
- there is no peer to peer signalling procedures ongoing or pending.

The ME involving the PP and the FP shall not resume the call until either one of the following conditions are met:

- There is data to be sent over the U-plane.
- There is a signalling message to be send by a C-Plane entity.

9.2 Link Establishment management

- 1) if the PP is known to support Fast Setup, the FP shall attempt to establish the connection using the Fast Setup Procedure;
- 2) if the PP is known not to support Fast Setup or if the Fast Setup fails, the FP shall try to establish the connection using the Paging rules below listed.

The paging shall be done applying following rules:

- 1) if the PP is known to support Fast Paging, the FP shall attempt to establish the connection using the Fast Paging Procedure;
- 2) if the PP is known not to support Fast Paging or if the Fast Paging fails, the FP shall try to establish the connection using the Normal Paging.

In order to permit the control of power consumption, FPs that allow the PPs to go into Low Duty Cycle Idle_Locked mode, can override above rules and use directly the Normal Paging Procedure.

NOTE: Fast Setup and Fast Paging capabilities of a PP can be known by FP during the location procedure by the means of <<SET-UP CAPABILITY>> element.

10 Generic interworking conventions and procedures

10.1 PAD functionality for character oriented user data

This subclause describes the Packet Assembly / Disassembly unit (PAD) functionality for interworking to character oriented (asynchronous) protocols. It is used to pack / unpack the characters to / from LAP-U I-frames, while other IWF functions directly use LAP-U. Figure 4 shows the relationship between the PAD, IWF and LAP-U.

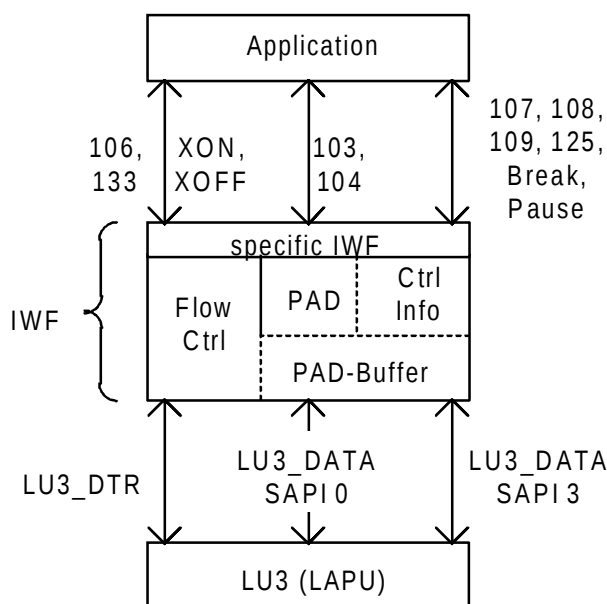


Figure 4: Relationship between PAD, IWF and LAP-U

10.1.1 Character formatting

Information is transferred between PAD entities using LAP-U I-frames. The LAP-U I-frame Service Data Unit (SDU) has variable length of n octets. The octets within the LAP-U SDU are numbered 0 to $n-1$, octet 0 is transmitted first. The bits within the octets are numbered 1 to 8, bit 1 is transmitted first. The PAD functions as follows:

Characters are coded into octets in the following way:

- the first bit of the character received / transmitted over the upper PAD interface corresponds to bit position 1 in the octet. The second bit to bit 2, and the eighth bit to bit 8;
- 8 bit characters are transmitted with no padding. Where parity is used it is generated / removed locally;
- 7 bit characters are padded with a "0" in bit position 8. Where parity is used it is inserted in bit position 8;
- 6 bit characters are padded with a "0" in bit positions 7 and 8. Where parity is used it is inserted in bit position 7 and the position 8 is padded with 0;
- 5 bit characters are padded with a "0" in bits positions 6, 7 and 8 if no parity is used. Where parity is used it is inserted in bit position 6 and the positions 7 and 8 are padded with 0s;
- all start / stop bits are generated / removed locally by the PAD;
- the character configuration (length, start, stop and parity, etc.) information is conveyed between PAD entities in the {CC-SETUP} message in the <<IWU-ATTRIBUTES>> information element during the call establishment phase;
- characters are inserted into the PAD-buffer in order of transmission in octets 0 to $n-1$.

10.1.2 PAD operation

10.1.2.1 Transmission over DECT air interface

10.1.2.1.1 Data forwarding conditions

Characters for transmission over the DECT air interface shall be assembled by the PAD for transmission as a single LAP-U SDU until one or more of the following conditions is met:

- a preset number of characters have been assembled;

- the maximum length of LAP-U SDU is reached;
- the LAP-U service is ready to accept another SDU;
- a timer value expires.

The PAD may buffer the LAP-U SDU before LAP-U transmission of that SDU begins i.e. stream mode operation of the PAD is permitted CCITT Recommendation V.42 [13].

LAP-U SDUs are forwarded to the LAP-U entity via the LAP-U primitive DLU-LU3_DATA-req for transmission in a LAP-U I-frame.

10.1.2.1.2 Transmission buffering and flow-control

Data received from an application and packetized by the PAD shall be buffered in the PAD-buffer of the IWF such that if the PT is unable to transfer the data over the DECT radio interface then data shall not be lost.

Where provided, local flow control, i.e. to the application, shall be used to prevent data loss due to PAD-buffer overflow. In addition, upon receiving a DLU-LU3_DTR.ind with the Stop / Go flag set to STOP from LU3, the IWF shall also indicate flow control to the application. However it shall accommodate latency in application recognition of the IWF not-ready indication by accepting several characters after the indication is given. These characters shall be buffered by the IWF in the PAD-buffer until LU3 indicates its ability to receive data again by issuing to the IWF a DLU-LU3_DTR.ind primitive with the Stop / Go flag set to GO. After receiving this indication, the IWF shall clear flow control to the application.

10.1.2.2 Reception over DECT air interface

10.1.2.2.1 Data reception

LAP-U SDUs received from the LAP-U entity via the LAP-U primitive DLU-LU3_DATA-ind shall be disassembled by the PAD into characters and forwarded to the application. The characters shall be disassembled using the inverse of the rules in subclause 10.1.1.

When the PAD has no further characters to communicate to the application it shall send stop bits.

10.1.2.2.2 Receive buffering and flow control

Data for transfer to the application shall be buffered in the PAD such that if the application has enabled flow control then data received from LAP-U is not lost. When an application has invoked flow control the IWF shall complete transmission of any partially-transmitted character and then cease transmitting data. Furthermore, the IWF shall stop LU3 from indicating any more data to it by issuing a DLU-LU3_DTR.req with the Stop / Go flag set to STOP.

When the application clears the not-ready condition, the IWF shall issue a DLU-LU3_DTR.req with the Stop / Go flag set to GO to LU3 and may resume the transmission of data to the application.

10.2 PAD functionality for bit oriented user data

This subclause describes the BPAD unit functionality for bit oriented protocols, such as Link Access Procedure (Balanced) (LAP-B). It is used to pack / unpack bit flow to / from LAP-U I-frames, while other IWF functions directly use LAP-U. Figure 5 shows the relationship between the BPAD, IWF and LAP-U.

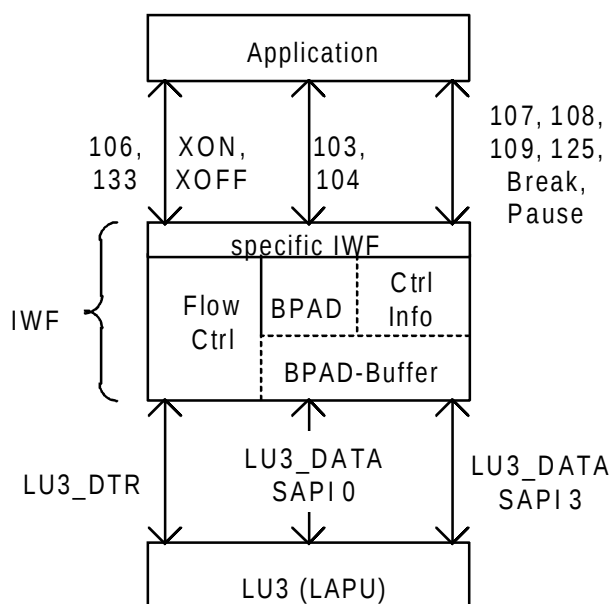


Figure 5: Relationship between BPAD, IWF and LAP-U

10.2.1 The character formatting

The user information flow is transferred between BPAD entities using LAP-U I-frames. The LAP-U I-frame Service Data Unit (SDU) has variable length of n octets. The octets within the LAP-U SDU are numbered 0 to $n-1$, octet 0 is transmitted first. The bits within the octets are numbered 1 to 8, bit 1 is transmitted first.

The user information is carried in LAP-U I-frame information octets such that the first user information bit, in any consecutive group of 8, received or transmitted corresponds to bit position 1 in the octet. The second to bit position 2, etc.

Information octets are inserted into the LAP-U I-frame in order of arrival in octets 0 to $n-1$.

10.2.2 BPAD operation

10.2.2.1 Transmission over DECT air interface

10.2.2.1.1 Data forwarding conditions

Characters for transmission over the DECT air interface shall be assembled by the BPAD for transmission as a single LAP-U SDU until one or more of the following conditions is met:

- a preset number of characters have been assembled;
- the maximum length of LAP-U SDU is reached;
- the LAP-U service is ready to accept another SDU;
- a timer value expires.

The BPAD may buffer the LAP-U SDU before LAP-U transmission of that SDU begins i.e. stream mode operation of the BPAD is permitted CCITT Recommendation V.42 [13].

LAP-U SDUs are forwarded to the LAP-U entity via the LAP-U primitive DLU-LU3_DATA-req for transmission in a LAP-U I-frame.

10.2.2.1.2 Transmission buffering and flow-control

Data received from an application and packetized by the BPAD shall be buffered in the PAD buffer of the IWF such that if the PT is unable to transfer the data over the DECT radio interface then data shall not be lost.

Where provided, local flow control, i.e. to the application, shall be used to prevent data loss due to PAD-buffer overflow. In addition, upon receiving a DLU-LU3_DTR.ind with the Stop / Go flag set to STOP from LU3, the IWF shall also indicate flow control to the application. However it shall accommodate latency in application recognition of the IWF not-ready indication by accepting some data after the indication is given. This data shall be buffered by the IWF in the PAD buffer until LU3 indicates its ability to receive data again by issuing to the IWF a DLU-LU3_DTR.ind primitive with the Stop / Go flag set to GO. After receiving this indication, the IWF shall clear flow control to the application.

10.2.2.2 Reception over DECT air interface

10.2.2.2.1 Data reception

LAP-U SDUs received from the LAP-U entity via the LAP-U primitive DLU-LU3_DATA-ind shall be disassembled by the BPAD into a bit stream and forwarded to the application. The characters shall be disassembled using the inverse of the rules in the subclause 10.2.1.

When the BPAD has no further data to communicate to the application it shall send idle.

10.2.2.2.2 Receive buffering and flow control

Data for transfer to the application shall be buffered in the BPAD such that if the application has enabled flow control then data received from LAP-U is not lost. When an application has invoked flow control the IWF shall complete transmission of any partially-transmitted data and then cease transmitting. Furthermore, the IWF shall stop LU3 from indicating any more data to it by issuing a DLU-LU3_DTR.req with the Stop / Go flag set to STOP.

When the application clears the not-ready condition, the IWF shall issue a DLU-LU3_DTR.req with the Stop / Go flag set to GO to LU3 and may resume the transmission of data to the application.

10.2.3 Selection of BPAD functionality

If no information for PAD functionality is available or BPAD function is requested as defined in the specification of the interworking unit (see annex C), the BPAD function shall be used.

10.3 Control frame for V.24 interworking

Control frames shall be sent using the SAPI indicating user control signalling data.

For the purpose of transmitting V.24 line state information the following frame format shall be used.

Bit	8	7	6	5	4	3	2	1	Octet
	frame type								1
	0	0	BREAK	PAUSE	RI	DCD	DSR	DTR	2
	BREAK / PAUSE duration								3

frame type coding (octet 1):

Bits 8 7 6 5 4 3 2 1 Meaning:
 0 0 0 0 0 0 1 V.24 status interworking;
 All other values reserved.

DTR coding (octet 2):

Bits 1 Meaning:
 0 DTR line OFF;
 1 DTR line ON.

DSR coding (octet 2):

<u>Bits</u>	2	Meaning:
	0	DSR line OFF;
	1	DSR line ON.

DCD coding (octet 2):

<u>Bits</u>	<u>3</u>	<u>Meaning:</u>
	0	DCD line OFF;
	1	DCD line ON.

RI coding (octet 2):

<u>Bits</u>	4	Meaning:
	0	RI line OFF;
	1	RI line ON.

PAUSE coding (octet 2):

<u>Bits</u>	5	<u>Meaning:</u>
	0	no PAUSE condition;
	1	PAUSE condition occurred.

NOTE 1: For a detailed description of the PAUSE condition see annex C, subclauses C.3.3.4 and C.3.3.5.

BREAK coding (octet 2):

<u>Bits</u>	6	<u>Meaning:</u>
	0	no BREAK condition;
	1	BREAK condition occurred.

NOTE 2: The BREAK and the PAUSE conditions are mutually exclusive.

BREAK / PAUSE duration (octet 3):

The time duration of a BREAK or PAUSE condition is binary coded (bit 1 being the least significant bit). It defines the time in units of 10 ms. If bits 5 and 6 of octet 2 are both set to "0" (no BREAK or PAUSE condition detected) all bits of octet 3 shall be set to "0".

10.4 Control frame for voice band modem interworking

Control frames shall be sent using the SAPI indicating user control signalling data.

For the purpose of transmitting V.24 line state information the following frame format shall be used.

Bit	8	7	6	5	4	3	2	1	Octet
frame type									1
0	0	BREAK	0	0	DCD	DSR	0		2
BREAK duration									3

frame type coding (octet 1):

Bits	8	7	6	5	4	3	2	1	Meaning:
0	0	0	0	0	0	1	0		Voice band modem status interworking;
All other values reserved.									

DSR coding (octet 2):

Bits	2	Meaning:
	0	DSR line OFF;
	1	DSR line ON.

DCD coding (octet 2):

Bits	3	Meaning:
	0	DCD line OFF;
	1	DCD line ON.

BREAK coding (octet 2):

Bits	6	Meaning:
	0	no BREAK condition;
	1	BREAK condition occurred.

NOTE: The BREAK and the PAUSE conditions are mutually exclusive.

BREAK duration (octet 3):

The time duration of a BREAK or PAUSE condition is binary coded (bit 1 being the least significant bit). It defines the time in units of 10 ms. If bits 5 and 6 of octet 2 are both set to "0" (no BREAK or PAUSE condition detected) all bits of octet 3 shall be set to "0".

10.5 Data-compression

For data-compression across the DECT air interface V.42bis over LAP-U shall be used with the following modification: Instead of using the XID-mechanism used in [16] the request for compression and the negotiation of the required parameters shall take place during call set-up via an <<IWU-Attributes>>-element utilizing the peer attribute negotiation procedure. This implies that peer-attribute-negotiation has to be implemented if data-compression is required. For interworking to V.24 circuits and voice-band modems the <<IWU-Attributes>>-element-coding defined in annex C shall be used for negotiation of the V.42bis parameters.

10.6 In-call Service Change

10.6.1 Service Change Scope

This profile has optional support to enable In-Call Service Changes. This allows the Connection Attributes and certain aspects of the Interworking Unit (IWU) attributes to be changed during the active state of a call. These service changes are affected through the MNCC-INFO (Service Change) primitives which correspond to the {CC-SERVICE-CHANGE}, {CC-SERVICE-ACCEPT} and {CC-SERVICE-REJECT}.

The In-call Service Change procedures shall be mandatory for the C.4 connection oriented bearer service to allow, in particular, the parity, start / stop bit and number of data bits to be altered (by trial and error if necessary) during a call.

10.6.2 <<CONNECTION-ATTRIBUTES>> Service Change

The Connection Attributes may be changed through the use of the MNCC-INFO(Service Change) primitives with the <<SERVICE-CHANGE-INFO>> IE parameter Change Mode = "Bandwidth Change". These primitives shall be used in accordance with the procedures set out in subclauses 9.6.1 and 9.6.2 of EN 300 175-5 [5].

10.6.3 <<IWU-ATTRIBUTES>> Service Change

The IWU Attributes may be changed through the use of the MNCC-INFO(Service Change) primitives with the <<SERVICE-CHANGE-INFO>> IE parameter Change Mode = "IWU Attribute Change". These primitives shall be used in accordance with the procedures set out in subclause 9.6.1. of EN 300 175-5 [5].

The following <<SERVICE-CHANGE-INFO>> IE parameters shall be indicated in the MNCC-INFO(Service Change).req primitive:

- Coding Standard = "DECT standard coding";
- M (Master) = "Initiating side is master";
- A attributes = "Not applicable";
- R (Reset) = "Do not reset state variables";
- B attributes = "Maintain data transfer".

The MNCC-INFO(Service Change).req primitive shall also contain the requested new <<IWU-ATTRIBUTE>> IE parameters. Of these parameters only those specified in octets 5 to 7 of the <<IWU-ATTRIBUTE>> IE shall be changed. The Profile and Profile sub-types in octets 3 and 4 shall not be changed for the purposes of this service change. However such Inter-profile and Inter-Sub-profile changes may be permitted by other Service Change procedures. The Negotiation Indicator parameter (octet 4) of <<IWU-ATTRIBUTES>> shall indicate "Negotiation not possible".

Annex A (normative): Implementation of the LU3 service including LAP-U

A.1 U-plane service characteristics

A.1.1 General

The data link service (LAP-U) shall be accessed via the LU3 SAPs. A single class of service is defined allowing single or multiple frame acknowledged operation.

Each LAP-U instance shall provide a single data link between one fixed radio termination and one portable radio termination.

LAP-U multiple frame operation shall require both sides to support three phases of procedures:

- 1) establishment of LAP-U multiframe operation;
- 2) maintenance of LAP-U multiframe operation (including acknowledged information transfer); and
- 3) release of LAP-U multiframe operation.

The complete service for one data link shall be provided by a couple of LU3 protocol entities, each one of them using the lower layer facilities provided by a single instance of the type A or B mobility class 1 profile, defined in EN 300 435 [11].

NOTE: A PT may contain multiple instances of LAP-U and instances of A or B (refer to A.1.2 of this annex). However, in many cases a PT may only require the services of one LAP-U and one A or B instance. These single instances may support more than one user plane higher layer call.

LAP-U shall provide functions for:

- the provision and control of one data link;
- segmentation of long higher layer user information fields;
- error detection (timeout or protocol);
- error recovery; and
- flow control.

LAP-U shall use the functions by LU2 in the type A or B profile for:

- the provision of one or more data link;
- frame delimiting;
- checksum generation / checking;
- segmentation of LU3 frames into Protocol Data Units (PDUs); and
- routing of frames to / from logical channels.

A.1.2 LAP-U type of operation

The defined class of operation supports the transfer of higher layer information across point-to-point links.

LAP-U acknowledged transfer: information shall be transmitted in numbered frames (I) that shall be acknowledged at the DLC layer. Error recovery based on retransmission of unacknowledged frames shall be defined. Multiple LAP-U links shall be allowed between a PT and a specific FT.

NOTE: LAP-U is based on the multiple frame operation of LAPC Class B link defined in EN 300 175-4 [4].

A.1.3 U-plane Link Identifier (ULI)

Every separate instance of a LU3 entity shall be uniquely identified within one peer entity by the U-plane Link Identifier. This identifier, which is a local matter, shall remain constant for the complete duration of the data link.

A.1.4 LU3 Service Access Points (SAP)

Each LU3 protocol entity has two SAPs:

- Connection Oriented User Data SAP (CO-SAP). This SAP is the entry point for the service of transport of user data.
- User Control Signalling Data SAP (SIG-SAP). This SAP is the entry point for the service of transport of signalling data.

The service offered by every SAP is the same, a LAP-U data link service, the only difference is the type of data transported.

A.2 Data link service frame structure for LU3

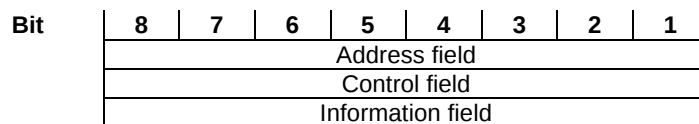


Figure A.1: Frame format type FU8

A.2.1 General frame structure

A type FU8 frame shall contain the following fields:

- an address field of 1 octet;
- a control field of 1 octet;
- a variable length information field of 0 to 236 octets (when using Type A lower layer) or 1526 octets (when using Type B lower layer).

NOTE: The length of information field is given by the context (i.e. it is an information given by the LU2 service).

A.2.2 LU2 frame delimiting and transparency

The begin and the end of every LAP-U frames (FU8) shall be aligned respectively with the begin and the end of a single LU2 SDU (LU2 SDU is the SDU defined in subclause 11.3.1 of EN 300 175-4 [4]).

Frame delimiting shall be provided by a combination of the MAC layer and the DLC layer LU2 / FU6 entity.

NOTE: The MAC layer is expected to provide a reliable connection-orientated service, with a residual PDU error rate better than 10^{-4} . The term PDU is kept from definition of LU2 service in subclause 11.3.1 of EN 300 175-4 [4].

A.2.3 Transmission order

The physical transmission order shall be controlled by the MAC layer controlled by the LU2 instance used by the LU3, as defined in EN 300 435 [11].

NOTE 1: The use of multibearer MAC connections will mean that PDUs will not necessarily be received in the order they were sent.

The logical transmission order, that is the order in which data issued by IWU are treated by the LAP-U, is defined hereinafter in this subclause.

The order of submission of data by the IWU to the SAPs, shall be maintained across the SAPs.

NOTE 2: Therefore, if SDU_a arrives to SAP before SDU_b arrives to the other SAP, than SDU_a shall be transmitted before SDU_b . At the receiving site, SDU_a shall be released to IWU before the SDU_b .

Figure A.2 represents the flow of data; the two queues are not part of the standard but are drawn in order to explicate the sequencing of data distribution in both directions.

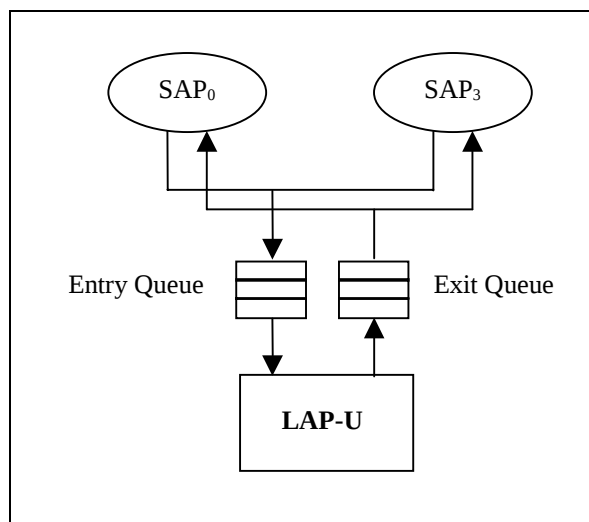


Figure A.2: SDU data flow

A.2.4 Invalid frames

An invalid data link frame shall be a frame that contains one or more of the following faults:

- contains a checksum error; or
- contains an undefined Address field (subclause A.3.6 of this annex);
- contains an undefined Control field (subclause A.3.6 of this annex).

Invalid frames shall be handled using the procedures defined in subclause A.5.2.6 of this annex.

A.3 Elements of procedures and formats of fields for U-plane peer to peer communication

A.3.1 General

The "elements of procedure" define the commands and responses that shall be used to provide a single U-plane data link. Multiple instances of U-plane data links may exist at the same time, but these instances shall operate independently.

The elements of procedure (and the related procedures described in subclause A.5 of this annex) shall only consider the operation of a single data link instance.

The "formats of fields" define the detailed coding of bits within each field of a type FU8 frame. Unless otherwise stated, all fields shall be coded according to the natural binary code. The resulting value shall be arranged with the most significant bit (msb) in the highest numbered bit position:

A.3.2 Address field formats

Bit:	8	7	6	5	4	3	2	1
	NLF	Spare		M	SAPI		C/R	RES

Figure A.3: Address field format

where:

- C/R: Command / Response bit;
- SAPI: Service Access Point Identifier;
- NLF: New Link Flag;
- M: More;
- RES: RESErved;
- Spare not used.

A.3.3 Address field parameters

A.3.3.1 Reserved bit (RES)

This bit shall be set to "1".

NOTE: This bit shall be reserved for possible use as an extended address bit. Refer to clause 7 of EN 300 175-4 [4].

A.3.3.2 Command Response bit (C/R)

The C/R bit shall identify a frame as either a command or a response. The PT side shall send commands with C/R set to "0" and responses with C/R set to "1". The FT side shall do the opposite. Refer to clause 7 of EN 300 175-4 [4].

A.3.3.3 SAPI field

The SAPI shall identify the higher layer SAP that is associated with each frame. There shall be a 1 to 1 correspondence between the SAP identities at both ends of the link for each peer-to-peer data link:

- SAPI = "0": CO-SAP connection oriented user data;
- SAPI = "3": SIG-SAP user control signalling data;
- All other values reserved.

A.3.3.4 New Link Flag bit (NLF)

In both directions, this bit shall have the same meaning:

- NLF = "1": Flag set;
- NLF = "0": Flag cleared.

A.3.3.5 More data bit; M

The more data bit, M, shall be used to indicate segmentation of higher layer user data messages into DLC frames.

M = "1" shall indicate that the information field only contains part of a higher layer user message - there is more to follow.

M = "0" shall indicate one of two things:

- that the information field contains a complete higher layer user message, provided that the M bit of the previous numbered information (I) frame was also set to "0";
- that the information field contains the last segment of a higher layer user message, provided that the M bit of the previous numbered information (I) frame was set to "1".

When the M bit is set to "1", the information field should contain the maximum number of octets.

NOTE: This rule only recommends that each frame contains the maximum amount of IWU information.

In all frames other than numbered information (I) frames the M bit shall be set to "0".

A.3.3.6 U-plane Link Identifier (ULI)

U-plane Link Identifier (ULI): the U-plane Link Identifier shall uniquely identify each LAP-U instance within the FT and within the PT. For LAP-U, the ULI shall be identical to the Advanced MAC Connection Identifier (AMCI, refer to ETS 300 175-4 [4] subclause 10.2.4). U-plane Link MAC Endpoint Identifier (ULMEI): the U-plane link MAC endpoint identifier (ULMEI) shall uniquely identify the endpoint within one of the MAC layer MC-SAPs. This shall be a local matter, and different ULMEIs may be used in the PT and the FT. The ULMEI should be formed by the combination of two components:

- $ULMEI = SAPI + ULI$;

where:

- SAPI: SAP Identifier (subclause A.3.3.3 of this annex).

Every service provided by each separate instance of LAP-U entity shall be uniquely identified by the ULEI (subclause 8.4.1 of EN 300 175-4 [4]). The ULEI, which is assigned and used by the interworking unit, should be equal to ULMEI.

A.3.3.7 Spare bits (Spare)

Left for future uses they shall be set to "00".

A.3.4 Control field formats

The control field formats and parameters shall be identical to those defined for the C-plane, therefore subclauses 7.4 and 7.5 of EN 300 175-4 [4] shall apply, with following modifications.

Table A1: Modifications to base standard requirement for Control Field

EN 300 175-4 [4]		Modifications
7.5.2.1	Modulus	The modulus of the frame sequence equals 8 and the sequence numbers shall cycle through the entire range, 0 to 7. No link classes are defined.
7.5.2.2	Send state Variable V(S)	The window size (k) is a value from 1 to 7. Refer to subclauses B.2 and A.5.2.2.1 for its set up. No link classes are defined.

A.3.5 Checksum field parameters

The checksum being a matter of the LU2 entity, no additional parameters are required.

A.3.6 Commands and responses

The following commands and responses declared here shall be supported by each user data link. For each command and response, the definition below shall apply.

Table A.2: LAP-U specific commands and responses

Format	Command	Response	8	7	6	5	4	3	2	1
I	I Numbered Information		N(R)			P	N(S)			0
S	RR Receive Ready	RR Receive Ready	N(R)			P/F	0	0	0	1
	RNR Receive Not Ready	RNR Receive Not Ready	N(R)			P/F	0	1	0	1
	REJ Reject	REJ Reject	N(R)			P/F	1	0	0	1
U	SABM Set Async Bal Mode		0	0	1	P	1	1	1	1
		UA Unnumbered ACK	0	1	1	F	0	0	1	1

Any undefined encoding of the S bits and the U bits are "invalid" and shall be handled using the procedures defined in subclause A.5.2.6 of this annex.

NOTE: S and U bit are defined in subclause 7.4 of EN 300 175-4 [4].

A.3.6.1 Information (I) command

The information (I) command shall be used to transfer sequentially numbered frames, which contain IWU information fields, across one DLC LAP-U link.

The I command shall also be used to acknowledge previously received I-frames up to and including N(R)-1, as defined in clause A.5.

A.3.6.2 Receive Ready (RR) command / response

The Receive Ready (RR) frame shall be used by a LAP-U entity to:

- 1) indicate it is ready to receive an I-frame;
- 2) acknowledge previously received I-frames up to and including N(R)-1, as defined in clause A.5;
- 3) clear a possible busy condition that was indicated by an earlier RNR frame between the same LAP-U entities.

In addition to indicating the status of a LAP-U entity, the RR command may be used by a LAP-U entity to ask for the status of its peer entity by setting the P bit to "1".

A.3.6.3 Receive Not Ready (RNR) command / response

The receive not ready frame shall be used by a LAP-U entity to:

- 1) indicate a busy condition, that is, a temporary inability to accept additional I-frames;
- 2) acknowledge previously received I-frames up to and including N(R)-1, as defined in clause A.5.

In addition to indicating the status of a LAP-U entity, the RNR command may be used by a LAP-U entity to ask for the status of its peer entity by setting the P bit to "1".

No information field shall be allowed as part of a RNR frame.

A.3.6.4 REJect (REJ) command / response

The reject (REJ) frame shall be used by a LAP-U entity to set an exception condition that requests retransmission of I-frames starting with the frame numbered N(R). The REJ frame shall acknowledge I-frames numbered up to and including N(R)-1. The retransmitted frames shall be transmitted before any new I-frames (I-frames pending initial transmission) are transmitted.

Only one REJ exception condition shall be established at a time for a given direction of information transfer. A REJ exception condition shall be cleared upon receipt of an I-frame with an N(S) equal to the N(R) of the REJ frame.

The transmission of an REJ frame shall also indicate the clearance of any busy condition in the sending LAP-U entity that was reported by the earlier transmission of an RNR frame by the same LAP-U entity.

In addition to indicating the status of a LAP-U entity, the REJ command may be used by a LAP-U entity to ask for the status of its peer entity by setting the P bit to "1".

No information field shall be permitted in a REJ frame.

A.3.6.5 Set Asynchronous Balanced Mode (SABM) command

The set asynchronous balanced mode command shall be used to re-establish LAP-U operation.

The receiving LAP-U entity shall confirm acceptance of the SABM command by transmitting a UA response at the first opportunity. Upon accepting the SABM command, the entity shall set the variables V(S), V(A), V(R) and the retransmission counter to 0.

Transmission of a SABM command shall indicate the clearance of a busy condition that was reported by the earlier transmission of an RNR frame by that same LAP-U entity.

Previously transmitted I-frames, that are unacknowledged when the SABM command is actioned, shall remain unacknowledged and shall be discarded. It is the responsibility of the higher layer (IWU) or the management entity to recover from this possible loss of I-frames.

No information field shall be allowed as part of a SABM frame.

A.3.6.6 Unnumbered Acknowledgement (UA) response

The unnumbered acknowledgement response shall be used by a DLC entity to acknowledge the receipt and acceptance of the mode setting command, SABM.

The transmission of a UA response shall also indicate the clearance of a busy condition that was reported by the earlier transmission of an RNR frame by that same LAP-U entity.

No information field shall be permitted in a UA response.

A.4 Primitives for the LU3 service

The following primitives have been declared for LU3 operation.

These primitives are defined only for the purpose of describing layer-to-layer interactions. The primitives are defined as an abstract list of parameters, and their concrete realization may vary between implementations. No formal testing of primitives is intended.

DLU-LU3_DTR{req,ind}

Parameter	REQ	CFM	IND	RES
U-plane Link Endpoint Identifier (ULEI)	A		A	
Stop / Go flag	A		A	
A: Always. O: Optional. N: Not allowed.				

Parameter values:

- ULEI = local matter, refer to A.3.3.6;
- Stop / Go flag= {GO, STOP};
- **DLU-LU3_DATA{req,ind}**.

Parameter	REQ	CFM	IND	RES
U-plane Link Endpoint Identifier (ULEI)	A		A	
Message unit	A		A	
Message unit length	A		A	
A: Always. O: Optional. N: Not allowed.				

Parameter values:

- ULEI = local matter, refer to A.3.3.6.

A.5 U-plane peer to peer procedures

A.5.1 General

The elements of procedure, which shall apply are:

- SABM command;
- UA response;
- RR command or response;
- RNR command or response;
- REJ command or response;
- I command.

LAP-U acknowledged transfer is the operating class for U-plane connection oriented links. This class shall be immediately supported whenever a connection-oriented link is instanced. LAP-U supports both single and multiple frame operation.

A.5.2 Point to point acknowledged operation

A.5.2.1 Procedure for the use of the P/F bit in LAP-U acknowledged information transfer

A LAP-U entity receiving a SABM, RR, RNR, REJ or I-frame with the P bit set to "1" shall set the F bit to "1" in the next response frame that it transmits, as defined below.

Table A.3: Immediate response operation of P/F bit

Command received with P bit = "1"	response transmitted with F bit = "1"
SABM	UA
I, RR, RNR, REJ	RR, RNR, REJ

A.5.2.2 Establishing LAP-U multiple frame operation

A.5.2.2.1 Overview

This subclause describes the LU3 establishment procedures, whereby a single point-to-point LAP-U link suitable for LAP-U multiple frame operation is established between two peer entities.

Refer to EN 300 175-4 [4] subclause 7.5.2 for definitions of multiple frame variables and sequence numbers.

The sequence numbers defined for LU3 are unrelated to those used by LU2.

During establishment of LAP-U multiple frame operation, the maximum number of outstanding I-frames (the window size) shall be set to "1" for both directions. Once in the "active" state, the maximum number of outstanding I-frames (k) shall be set either to the value negotiated by network layer CC set up procedures or to the lower of the values contained in fixed and portable part configuration tables.

All Lower Layer Management Entity (LLME) initiated establishment procedures also imply the discarding of all outstanding DLU-LU3_DATA.req primitives and all queued I-frames.

A subsequent LAP-U re-establishment procedure is allowed at any time using a SABM frame that has the NLF bit set. Successful re-establishment causes the sequence numbers to be re-initialized at both ends. This procedure is described in subclause A.5.2.5 of this annex.

Values negotiated by subsequent NWK layer CC procedures can be put into effect by either the link establishment or link re-establishment procedures.

A.5.2.2.2 LAP-U multiple frame establishment procedures

Normal establishment is initiated by a LAP-U entity, upon an LLME procedure requesting a LAP-U operation. This LLME operation shall define the ULMEI to be used.

The LAP-U entity shall respond to the initiation by setting the sequence variables V(S) V(R) and V(A) to "0" and transmitting an I-command frame, with the NLF bit set to "1".

All existing exception conditions shall be cleared, the retransmission counter shall be reset and timer <DLU.02> shall be started.

If the responding LAP-U entity is able to accept the request, it shall:

- set the sequence variables V(S) and V(A) to "0";
- set the sequence variable V(R) to "1"; and
- transmit a RR response frame with the NLF bit set to "1".

It shall clear all existing exception conditions, and the retransmission counter shall be reset. It shall then enter the "active" state.

Upon receipt of the RR response with the NLF bit set to "1", the originator of the I command shall:

- reset timer <DLU.02>;
- enter the "active" state; and
- inform the LLME of establishment success.

An RR response with the NLF bit set to "0" shall be ignored.

If timer <DLU.02> expires before a RR response with the NLF bit set to "1" is received, the LAP-U entity shall:

- 1) if the value of the retransmission counter is less than N250:
 - retransmit the I command as above;
 - add one to the retransmission counter; and
 - restart timer <DLU.02>;
- 2) if the value of the retransmission counter is equal to N250:
 - report establishment failure to the LLME;
 - discard all outstanding I-frames; and
 - remain in the "establish" state.

A.5.2.3 Link maintenance and information transfer in LAP-U multiple frame operation

When a LAP-U entity has entered the "active" state, as a result of successful LAP-U establishment, I-frames and S-frames may be transmitted according to the procedures described in this subclause.

NOTE 1: If a LAP-U link re-establishment occurs, this may cause duplication or loss of IWU messages, since the procedure ignores the possible existence of unacknowledged I-frames.

If the LAP-U has previously issued a DLU-LU3_DTR-ind primitive with the stop / go flag set to "GO" then the IWF may transfer data to the LAP-U. The LAP-U may halt this process at any time by issuing a DLU-LU3_DTR-ind primitive with the stop / go flag set to "STOP".

NOTE 2: The arrival of a DLU-LU3_DTR-ind primitive shall cause all previous DLU-LU3_DTR-ind primitives to be discarded.

Information received by the LAP-U entity from IWU by means of DLU-LU3_DATA-req primitive shall be segmented (if necessary) and the resulting segments shall be transmitted in a series of one or more I-frames. At the destination LAP-U entity, a complete message shall be reassembled from a series of received I-frames, and the complete message shall be delivered to the network layer in DLU-LU3_DATA-ind primitive, provided that the IWF has previously issued a DLU-LU3_DTR-req primitive with the stop / go flag set to "GO". The IWF may halt the transfer of data at any time by issuing DLU-LU3_DTR-req with the stop / go flag set to "STOP".

NOTE 3: The arrival of a DLU-LU3_DTR-req primitive shall cause all previous DLU-LU3_DTR-req primitives to be discarded.

The order of transmission shall be maintained as stated in subclause A.2.3 of this annex.

The procedures, which apply to the transmission and reception of each I-frame, are defined below.

NOTE 4: The term "transmission of an I-frame" refers to the delivery of a complete I-frame to the LU2 instance. The term "reception of an I-frame" refers to the receipt of an I-frame by the LAP-U from the LU2 instance.

During idle periods, the LAP-U shall not generate null frames (i.e. frames with no control purpose and with zero length information fields); transmitting of supervisory / unnumbered frames during idle periods shall be limited as much as possible.

NOTE 5: This avoids causing the MAC layer to waste connection resources.

A.5.2.3.1 Transmitting I-frames

For each I-frame, the control field parameters N(S) and N(R) shall be assigned the values of V(S) and V(R), respectively. V(S) shall be incremented by 1 at the end of the transmission of the I-frame.

If timer <DLU.03> is not running at the time of transmission of an I-frame, it shall be started. If timer <DLU.03> expires, the procedures defined in subclause A.5.2.3.7 of this annex shall be followed.

If V(S) is equal to V(A) plus k (where k is the maximum number of outstanding I-frames - see subclause A.5.2.2.1 of this annex), the LAP-U entity shall not transmit any new I-frames, but may retransmit an I-frame as a result of the error recovery procedures as described in subclauses A.5.2.3.4 and A.5.2.3.7 of this annex.

When the network side or user side is in the own receiver busy condition, it may still transmit I-frames, provided that a peer receiver busy condition does not exist.

NOTE: Any DLU-LU3_DATA-req primitives received whilst in the timer recovery condition shall be queued.

A.5.2.3.2 Receiving I-frames

Independent of a timer recovery condition, when a LAP-U entity is not in an own receiver busy condition and receives a valid I-frame whose N(S) is equal to the current V(R), the LAP-U entity shall:

- append the information field of the frame to any existing unfinished message (segment assembly);
- if the More bit value is "0" (indicating that this is the last segment of a message) it shall pass the complete message to the higher layer using the DLU-LU3_DATA-ind primitive; and
- increment by 1 its V(R) and act as indicated below.

A.5.2.3.2.1 P bit set to 1

If the P bit of the received I-frame was set to 1, the LAP-U entity shall respond to its peer in one of the following ways:

- if the LAP-U entity receiving the I-frame is still not in an own receiver busy condition, it shall send an RR response with the F bit set to 1;
- if the LAP-U entity receiving the I-frame enters the own receiver busy condition upon receipt of the I-frame, it shall send an RNR response with the F bit set to 1.

A.5.2.3.2.2 P bit set to 0

If the P bit of the received I-frame was set to 0 and:

- if the LAP-U entity is still not in an own receiver busy condition:
 - if no I-frame is available for transmission or if an I-frame is available for transmission, but a peer receiver busy condition exists, the LAP-U entity shall transmit an RR response with the F bit set to 0; or
 - if an I-frame is available for transmission and no peer receiver busy condition exists, the LAP-U entity shall transmit the I-frame with the value of N(R) set to the current value of V(R) as defined in subclause A.5.2.3.1 of this annex;
- if, on receipt of this I-frame, the LAP-U entity is now in an own receiver busy condition it shall:
 - transmit an RNR response with the F bit set to 0.

When the data link entity is in an own receiver busy condition, it shall process any received I-frame according to subclause A.5.2.3.6 of this annex.

A.5.2.3.3 Sending and receiving acknowledgements

A.5.2.3.3.1 Sending acknowledgements

Whenever a LAP-U entity transmits an I-frame or a supervisory frame, N(R) shall be set equal to V(R).

A.5.2.3.3.2 Receiving acknowledgements

On receipt of a valid I-frame or supervisory frame (RR, RNR or REJ), even if in the own receiver busy or timer recovery conditions, the LAP-U entity shall treat the N(R) contained in this frame as an acknowledgement for all the I-frames it has transmitted with an N(S) up to and including the received N(R)-1. V(A) shall be set to N(R). The LAP-U entity shall reset the timer <DLU.03> on receipt of a valid I-frame or supervisory frame with the N(R) higher than V(A) (i.e. when the N(R) actually acknowledges some I-frames), or an REJ-frame with an N(R) equal to V(A).

NOTE 1: If a supervisory frame with the P bit set to 1 has been transmitted and not acknowledged, timer <DLU.03> shall not be reset.

NOTE 2: Upon receipt of a valid I-frame, timer <DLU.03> shall not be reset if the data link entity is in the peer receiver busy condition.

If timer <DLU.03> has been reset by the receipt of an I, RR or RNR-frame, and if there are outstanding I-frames still unacknowledged, the LAP-U entity shall restart timer <DLU.03>. If timer <DLU.03> then expires, the LAP-U entity shall follow the recovery procedure as defined in subclause A.5.2.3.7 of this annex with respect to the unacknowledged I-frames.

If timer <DLU.03> has been reset by the receipt of an REJ-frame, the LAP-U entity shall follow the retransmission procedures in subclause A.5.2.3.4 of this annex.

A.5.2.3.4 Receiving REJ-frames

On receipt of a valid REJ-frame, the LAP-U entity shall act as follows:

- 1) if it is not in the timer recovery condition:
 - clear any existing peer receiver busy condition;
 - set its V(S) and its V(A) to the value of the N(R) contained in the REJ-frame control field;
 - stop timer <DLU.03>;
 - if it was an REJ-command frame with the P bit set to 1, transmit an appropriate supervisory response frame (see note 2, subclause A.5.2.3.5 of this annex) with the F bit set to 1;
 - transmit the corresponding I-frame as soon as possible, as defined in subclause A.5.2.3.1 of this annex, taking into account the items 1) to 3) below in this subclause and the paragraph following items 1) to 3); and
 - notify a protocol violation to the Lower Layer Management Entity (LLME) if it was an REJ-response frame with the F bit set to 1;
- 2) if it is in the timer recovery condition and it was an REJ-response frame with the F bit set to 1:
 - clear any existing peer receiving busy condition;
 - set its V(S) and its V(A) to the value N(R) contained in the REJ-frame control field;
 - stop timer <DLU.03>; and
 - transmit the corresponding I-frame as soon as possible, as defined in subclause A.5.2.3.1 of this annex, taking into account the items 1) to 3) below in this subclause and the paragraph following items 1) to 3);

- 3) if it is in the timer recovery condition and it was an REJ-frame other than an REJ-response frame with the F bit set to 1:
 - clear any existing peer receiver busy condition;
 - set its V(A) to the value of the N(R) contained in the REJ-frame control field; and
 - if it was an REJ-command frame with the P bit set to 1, transmit an appropriate supervisory response frame with the F bit set to 1 (see note 2 in subclause A.5.2.3.5 of this annex).

Transmission of I-frames shall take account of the following:

- 1) if the LAP-U entity is transmitting a supervisory frame when it receives the REJ-frame, it shall complete that transmission before commencing transmission of the requested I-frame;
- 2) if the LAP-U entity is transmitting a SABM command or a UA response when it receives the REJ-frame, it shall ignore the request for retransmission; and
- 3) if the LAP-U entity is not transmitting a frame when the REJ is received, it shall immediately commence (re)transmission of the requested I-frame.

All outstanding unacknowledged I-frames, commencing with the I-frame identified in the received REJ-frame, shall be retransmitted. Other I-frames not yet transmitted may be transmitted following these retransmitted I-frames.

A.5.2.3.5 Receiving RNR-frames

After receiving a valid RNR command or response, if the LAP-U entity is not engaged in a mode-setting operation, it shall set a peer receiver busy condition and indicate this to the IWF by the DLU-LU3_DTR.ind primitive with the parameter Stop / Go flag set to "STOP" and then:

- if it was an RNR command with the P bit set to 1, it shall respond with either an RR response with the F bit set to 1 (if the LAP-U entity is not in an own receiver busy condition) or shall respond with an RNR response with the F bit set to 1 (if the LAP-U entity is in an own receiver busy condition); and
- if it was an RNR response with the F bit set to 1, any existing timer recovery condition shall be cleared and the N(R) contained in this RNR response shall be used to update V(S).

The LU3 entity shall take note of the peer receiver busy condition and not transmit any I-frames to the peer which has indicated the busy condition.

NOTE 1: The N(R) in any RR- or RNR-command frame (irrespective of the setting of the P bit) will not be used to update the V(S).

The LAP-U entity shall then:

- treat the N(R) contained in the received RNR-frame as an acknowledgement for all the I-frames that have been (re)transmitted with an N(S) up to and including N(R)-1, and set its V(A) to the value of the N(R) contained in the RNR-frame; and
- restart timer <DLU.03> unless a supervisory response frame with the F bit set to 1 is still expected.

If timer <DLU.03> expires, the LAP-U entity shall:

- if it is not yet in a timer recovery condition, enter the timer recovery condition and reset the retransmission count variable; or
- if it is already in a timer recovery condition, add one to its retransmission count variable.

The LAP-U entity shall then:

- 1) if the value of the retransmission count variable is less than N250:
 - transmit an appropriate supervisory command (see note 2) with a P bit set to 1;
 - restart timer <DLU.03>;

2) if the value of the retransmission count variable is equal to N250:

- initiate a re-establishment procedure as defined in subclause A.5.2.5 of this annex, and indicate this to the Lower Layer Management Entity (LLME).

The LAP-U entity receiving the supervisory frame with the P bit set to 1 shall respond, at the earliest opportunity, with a supervisory response frame (see note 2) with the F bit set to 1, to indicate whether or not its own receiver busy condition still exists.

Upon receipt of the supervisory response with the F bit set to 1, the LAP-U entity shall reset timer <DLU.03>, and:

- if the response is an RR or REJ response, the peer receiver busy condition is cleared and this shall be indicated to the IWF by the DLU-LU3_DTR.ind primitive with the parameter Stop / Go flag set to "GO" and the LAP-U entity may transmit new I-frames or retransmit I-frames as defined in subclauses A.5.2.3.1 or A.5.2.3.4 of this annex, respectively; or
- if the response is an RNR response, the LAP-U entity receiving the response shall proceed according to the first paragraph of this subclause.

If a supervisory command (RR, RNR or REJ) or a supervisory response frame (RR, RNR or REJ) with the F bit set to 0 is received during the enquiry process, the LAP-U entity shall:

- if the supervisory frame is an RR- or REJ-command frame or an RR- or REJ-response frame with the F bit set to 0, clear the peer receiver busy condition, indicate this to the IWF by the DLU-LU3_DTR.ind primitive with the parameter Stop / Go flag set to "GO" and if the supervisory frame received was a command with the P bit set to 1, transmit the appropriate supervisory response frame (see note 2) with the F bit set to 1. However, the transmission or retransmission of I-frames shall not be undertaken until the appropriate supervisory response frame with the F bit set to 1 is received or until expiry of timer <DLU.03>; or
- if the supervisory frame is an RNR command frame or an RNR-response frame with the F bit set to 0, retain the peer receiver busy condition and if the supervisory frame received was an RNR command with P bit set to 1, transmit the appropriate supervisory response frame (see note 2) with the F bit set to 1.

Upon receipt of an SABM command, the LAP-U entity shall clear the peer receiver busy condition.

NOTE 2: If the LAP-U entity is not in an own receiver busy condition and is in a Reject exception condition (that is, an N(S) sequence error has been received and an REJ-frame has been transmitted, but the requested I-frame has not been received), the appropriate supervisory frame is the RR-frame.

If the LAP-U entity is not in an own receiver busy condition but is in an N(S) sequence error exception condition (that is, an N(S) sequence error has been received but an REJ-frame has not been transmitted), the appropriate supervisory frame is the REJ-frame.

If the LAP-U entity is in its own receiver busy condition, the appropriate supervisory frame is the RNR-frame.

Otherwise, the appropriate supervisory frame is the RR-frame.

A.5.2.3.6 LAP-U own receiver busy condition

When a LAP-U entity receives a DLU-LU3_DTR.req primitive with the Stop / Go flag parameter set to "STOP" it shall enter an own receiver busy condition and it shall transmit an RNR-frame at the earliest opportunity.

NOTE: DLU-LU3_DTR.req can be sent by LLME other than by IWF, it means that it could be sent owing to internal causes of LU3 entity.

The RNR-frame may be either:

- an RNR response with the F bit set to 0; or
- if this condition is entered on receiving a command frame with the P bit set to 1, an RNR response with the F bit set to 1; or
- if this condition is entered on expiring of timer <DLU.03>, an RNR command with the P bit set to 1.

All received I-frames with the P bit set to 0 shall be discarded, after updating V(A).

All received supervisory frames with the P/F bit set to 0 shall be processed, including updating V(A).

All received I-frames with the P bit set to 1 shall be discarded, after updating V(A). However, an RNR-response frame with the F bit set to 1 shall be transmitted.

All received supervisory frames with the P bit set to 1 shall be processed including updating V(A). An RNR response with the F bit set to 1 shall be transmitted.

When a LAP-U entity receives a DLU-LU3_DTR.req primitive with the Stop / Go flag parameter set to "GO" it shall indicate to its peer LAP-U entity the clearance of the own receiver busy condition by transmitting an RR-frame or, if a previously detected N(S) sequence error has not yet been reported, an REJ-frame with the N(R) set to the current value of V(R).

The transmission of an SABM command or a UA response (in reply to an SABM command) also indicates to the peer LAP-U entity the clearance of the own receiver busy condition.

A.5.2.3.7 Waiting acknowledgement

The LAP-U entity shall maintain an internal retransmission count variable. If timer <DLU.03> expires, the LAP-U entity shall:

- if it is not yet in the timer recovery condition, enter the timer recovery condition and reset the retransmission count variable; or
- if it is already in the timer recovery condition, add one to its retransmission count variable.

The LAP-U entity shall then:

- 1) if the value of the retransmission count variable is less than N250:
 - restart timer <DLU.03>; and either
 - transmit an appropriate supervisory command (see note 2 of subclause A.5.2.3.5 of this annex) with the P bit set to 1; or
 - retransmit the last transmitted I-frame (V(S)-1) with the P bit set to 1; or
- 2) if the value of the retransmission count variable is equal to N250:
 - initiate a re-establishment procedure as defined in subclause A.5.2.5 of this annex and indicate this to the Lower Layer Management Entity (LLME).

The timer recovery condition is cleared when the LAP-U entity receives a valid supervisory frame response with the F bit set to 1. If the received supervisory frame N(R) is within the range from its current V(A) to its current V(S) inclusive, it shall set its V(S) to the value of the received N(R). Timer <DLU.03> shall be reset if the received supervisory frame response is an RR or REJ response, and then the LAP-U entity shall resume with I-frame transmission or retransmission, as appropriate. Timer <DLU.03> shall be reset and restarted if the received supervisory response is an RNR response, to proceed with the enquiry process according to subclause A.5.2.3.5 of this annex.

A.5.2.4 Release of LAP-U multiple frame operation

Release of LAP-U operation involves the release of all the LAP-U resources. LAP-U multiple frame operation is released in response to a request from the LLME (see subclause A.6.2 of this annex).

If the LLME indicates the release mode as "normal" the LAP-U entity shall first attempt to complete transmission of all outstanding I-frames and of all outstanding DLU-LU3_DATA-req primitives before releasing the link. The LAP-U shall only initiate link release if all of this outstanding data has been successfully acknowledged.

When there is no outstanding data, the LAP-U shall initiate a link release. In this event the LAP-U entity shall return confirmation to the LLME and shall then cease operation. All further frames shall be ignored.

If the LLME indicates "abnormal" release mode, the LAP-U entity shall initiate an immediate release. All outstanding DLU-LU3_DATA-req primitives and all queued I-frames shall be discarded. Confirmation shall then be sent to the LLME. This confirmation shall indicate to the LLME whether any DLU-LU3_DATA-req primitives or I-frames were discarded or were unacknowledged.

A.5.2.5 Re-establishment of LAP-U multiframe operation

A.5.2.5.1 Criteria for re-establishment

The normal criteria for re-establishing the multiple frame mode of operation are defined in this subclause by the following conditions:

- the receipt, while in the LAP-U multiple-frame mode of operation, of a SABM-frame;
- the occurrence of N250 retransmission failures while in the timer-recovery condition (see subclause A.5.2.3.7 of this annex);
- the receipt of a N(R) sequence error (see subclause A.5.2.6.2.2 of this annex).

A.5.2.5.2 Re-establishment procedure

In all re-establishment situations, the LAP-U entity shall follow the procedures defined below. All locally generated conditions for re-establishment will cause the transmission of the SABM.

The initiating LAP-U shall transmit a SABM-command frame, with the P bit set to "1". All existing exception conditions shall be cleared, the retransmission counter shall be reset and timer <DLU.02> shall be started. The NLF bit shall be set in this SABM-command frame.

The responding LAP-U entity shall respond to the receipt of the SABM-frame by informing the LLME. It shall then transmit a UA-response frame with the F bit set to the same binary value as the P bit in the SABM-frame. It shall clear all existing exception conditions, and the retransmission counter shall be reset. The NLF bit shall be set in this UA-response frame. The NLF bit shall then be cleared in all subsequent frames.

Upon receipt of the UA response with the F bit set to "1", the originator of the SABM command shall:

- reset timer <DLU.02>;
- set the sequence variables V(S) V(R) and V(A) to "0";
- (re)enter the "active" state; and
- inform the LLME.

In the case of LAP-U and peer initiated re-establishment, the initiating LU3 entity shall also:

- issue an indication to the lower layer management entity (LLME); and
- if $V(S) > V(A)$ prior to re-establishment, inform the LLME and discard all I queues.

A.5.2.6 Exception handling

A.5.2.6.1 General

All unexpected or unknown frames shall be discarded without notification to the sender, LLME can be informed of this action. The meaning of "unknown frames" is stated in A.2.4 of this annex.

A.5.2.6.2 LAP-U exception condition reporting and recovery

Exception conditions may occur as the result of MAC layer, LU2 errors or LAP-U procedural errors. The following error recovery procedures are available to effect recovery following the detection of an exception condition at LAP-U.

A.5.2.6.2.1 N(S) sequence error

An N(S) sequence error exception condition occurs in the receiver when a valid I-frame is received which contains an N(S) value not equal to the V(R) at the receiver. The information field of all I-frames whose N(S) does not equal V(R) shall be discarded.

NOTE: The receiver shall not acknowledge (nor increment its V(R)) as a result of the I-frame causing the sequence error, nor any I-frames which may follow, until an I-frame with the correct N(S) is received.

A LU3 entity which receives one or more I-frames having sequence errors, but otherwise error-free, or subsequent supervisory frames (RR, RNR and REJ), shall use the control field information contained in the N(R) field and the P or F bit to perform LAP-U control functions (for example, to receive acknowledgement of previously transmitted I-frames and to cause the LAP-U entity to respond if the P bit is set to 1). Therefore, the retransmitted I-frame may contain an N(R) field value and P bit that are updated from and therefore different from, the ones contained in the originally transmitted I-frame.

The REJ-frame is used by a receiving LAP-U entity to initiate an exception condition recovery (retransmission) following the detection of an N(S) sequence error.

Only one REJ exception condition for a given direction of information transfer shall be established at a time.

A LAP-U entity receiving an REJ-command or response shall initiate sequential transmission (retransmission) of I-frames starting with the I-frame indicated by the N(R) contained in the REJ-frame.

An REJ exception condition is cleared when the requested I-frame is received or when a SABM command is received.

A.5.2.6.2.2 N(R) sequence error

An N(R) sequence error exception condition occurs in the transmitter when a valid supervisory frame or I-frame is received which contains an invalid N(R) value. A valid N(R) is one that is in the range $V(A) \leq N(R) \leq V(S)$.

Upon detection of an N(R) sequence error, the LAP-U entity shall immediately initiate the link re-establishment procedures according to subclause A.5.2.5 of this annex.

The information field contained in an I-frame, which is correct in both sequence and format, may still be delivered to IWU by means of the DLU-LU3_DATA-ind primitive.

A.5.2.6.2.3 Timer recovery condition

If a DLC entity, due to a transmission error, does not receive a single I-frame or the last I-frame(s) in a sequence of I-frames, it will not detect an out-of-sequence exception condition and therefore will not transmit an REJ-frame.

The LU3 entity, which transmitted the unacknowledged I-frame(s), shall take appropriate recovery action as defined in subclause A.5.2.3.7 of this annex to determine at which I-frame retransmission shall begin.

A.6 Management procedures for LAP-U

The LLME shall be responsible for the establishment, initialization and release of LU3 entities in response to service demands either from the network layer LLME or from the inter-working function and MAC LLME, according to the mobility class support provided.

A.6.1 LAP-U establishment

When class 2 mobility functions are used, the LLME shall invoke an instance of LU3 in accordance with service demands from the network layer LLME.

When class 1 mobility functions are used, the LLME shall invoke an instance of LU3 in response to the arrival of data from the inter-working function or in response to a connection set up indication from the MAC.

In all cases, the LLME shall perform the association of the LU3 entity with an instance of LU2, which, in turn, shall be associated with a suitable open MAC advanced connection. Following a successful association, the relevant AMCI shall be reported to the LLME.

A.6.2 LAP-U release

When class 2 mobility functions are used, the LLME shall instruct the LU3 instance to perform a release in accordance with service demands from the network layer LLME.

When class 1 mobility functions are used, the LLME shall instruct an instance of LU3 to perform a release when the inter-working function indicates that the LAP-U is no longer required or in response to a connection release indication from the MAC.

If the LAP-U is idle, that is, it is currently not transferring data and all associated buffers are empty, then it shall release immediately. If the LAP-U is busy, that is, it is currently transferring data and/or one or more buffers contain pending data, then the LAP-U will normally attempt to complete transmission of all data prior to releasing. The LLME can force the LAP-U to release immediately, if necessary, by indicating "abnormal" release. See subclause A.5.2.4 of this annex.

In all cases, when the LLME receives confirmation of release, it shall remove all associations to LU2 links and invoke release of the lower layers.

A.6.3 LAP-U resumption

The behaviour of LLME in the resume of a LU3 instance is the same required for the establishment, therefore the subclause A.6.1 shall apply.

A.6.4 LAP-U suspension

The behaviour of LLME in the suspend of a LU3 instance is the same required for the release, therefore the subclause A.6.2 shall apply.

Annex B (normative): LU3 parameters

B.1 LAP-U timer values

<DLU.02> LAP-U establish timer:

FT value: 2 seconds;
 PT value: 2 seconds;
 Start: a request I-frame is transmitted;
 Stop: an accepting RR/RNR-frame is received.

<DLU.03> Retransmission timer:
 Type A routed frames Type B routed frames;
 FT value: 2,0 seconds; 1,0 seconds;
 PT value: 2,0 seconds; 1,0 seconds;
 Start: an I-frame is transmitted;
 Stop: an acknowledgement is received for that frame.

B.2 Constants

Among the constants defined in EN 300 175-4 [4] clause A.3, N250 (maximum number of retransmission of a frame) shall be used where appropriate (EN 300 175-4 [4] subclause A.3.1).

Following constants are subjected either to negotiation between the CC entities present in both peer (in case of mobility class 2) or to fixed set-up (in case of mobility class 1).

Constant	Meaning	Ref. in the present document	Info element(s) used for negotiation	Ref. in EN 300 175-5 [5]
k	Window size	A.3.4	<<WINDOW-SIZE>>	7.7.43

Annex C (normative): Specific interworking conventions

C.1 Scope of this annex

This annex defines Terminal Adaptation-Functions (TAF) and Interworking-Functions (IWF) for use in Portable Parts (PP) and Fixed Parts (FP) in order to enable transmission of character oriented or bit oriented data streams.

The underlying reference configuration is depicted in figure C.1:

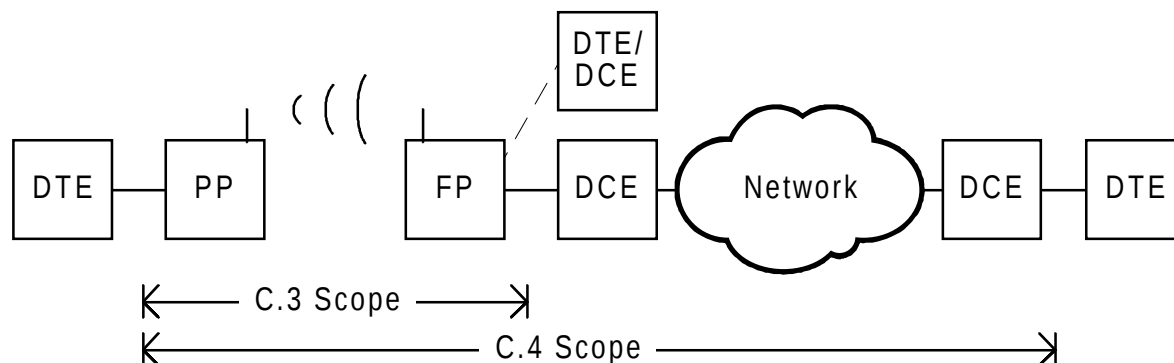


Figure C.1: Overall profile reference configuration (horizontal model) for annex C

Two different applications are described:

The first one is the interworking to the V.24 physical layer, which provides a transparent, wireless V.24 link between two pieces of DECT equipment within one DECT-system. Devices of arbitrary type (computers, modems, printers) with V.24 interface could be connected in this way.

The second one provides connections between a DECT PP and a Data Terminal Equipment (DTE) connected to a telecommunication network (e.g. a computer) by interworking to a voice band modem (see figure C.1).

Although in principle it is possible to achieve a similar configuration with the first application by inserting a modem between one end of the virtual V.24 connection and the external network, the user of this connection has to know about that Data Circuit terminating Equipment (DCE) and how to configure it. In contrast the second application makes this DCE invisible to the user by interworking some higher level commands (e.g. V.25bis, see subclause C.4.5 of this annex) to the DECT C-plane on both sides of the DECT-connection.

C.2 Interworking specific codings

C.2.1 IWU-Attribute coding

Devices implementing the Interworking Units described in this annex shall use the following IWU-Attribute coding:

Bit:	8	7	6	5	4	3	2	1	Octet:	
	0	<< IWU-ATTRIBUTES >>							1	
	Length of Contents (L)								2	
	1	CodeStd		Profile						3
		0	1	0	0	0	0	1		
	1	Negotiation indicator			Profile subtype				4	
	0/1	Stop bits		Data bits		Parity			5	
	0/1	Data Rate							5a	
	1	Dup	Modem type						5b	
	0/1	Maximum string length							6	
	0	Number of codewords (Most significant 7 bits)							6a	
	1	Number of codewords (Least significant 7 bits)							6b	
	1	EUC	EEC	FBK	RES	reserved			7 (note 1)	

NOTE 1: Octet 7 is optional and may be omitted if indicated by the L field.

Negotiation indicator (octet 4):

Bits 7 6 5 Meaning

- 0 0 0 Negotiation not possible;
- 0 1 0 Peer attribute negotiation;
- 1 0 0 Exchanged attribute negotiation;
- 1 1 0 Exchanged attribute negotiation and Peer attribute negotiation;
- All other values are reserved.

Profile subtype (octet 4):

Bits 4 3 2 1 Meaning

- 0 0 0 0 Interworking to V.24 circuits (annex C.3);
- 0 0 0 1 Interworking to voice band modem services (annex C.4);
- 0 0 1 0 Interworking to combined voice / voice band modem services;
- 0 0 1 1 Interworking to PPP;
- All other values are reserved.

Stop bits coding (octet 5):

Bits 7 6 Meaning

- 0 0 Not used;
- 0 1 1 bit;
- 1 0 1,5 bits;
- 1 1 2 bits.

Data bits coding (octet 5):

Bits 5 4 Meaning

- 0 0 6 bits;
- 0 1 5 bits;
- 1 0 7 bits;
- 1 1 8 bits.

Parity coding (octet 5):

Bits 3 2 1 Meaning

- 0 0 0 Odd;
- 0 1 0 Even;
- 0 1 1 None;
- 1 0 0 Forced to 0;
- 1 0 1 Forced to 1;
- 1 1 1 BPAD operation;
- All other values reserved.

Data Rate (octet 5a):

Bits	7 6 5 4 3 2 1	Meaning
	0 0 0 0 0 0 0	unspecified;
	0 0 0 0 1 x x	$(xx+1) * 50$ bit/s. (50 - 200 bit/s.);
	0 0 0 1 x x x	$(xxx+1) * 300$ bit/s. (300 - 2400 bit/s.);
	0 0 1 x x x x	$(xxxx+2) * 2400$ bit/s. (4,8 - 40,8 kbit/s.);
	0 1 x x x x x	$(xxxxx+1) * 8000$ bit/s. (8 - 256 kbit/s.) (note 3);
	1 0 x x x x x	$(xxxxx+6) * 9600$ bit/s. (57,6 - 355,2 kbits/s.) (note 3);
	1 1 0 x x x x	$(xxxx+11) * 24000$ bit/s. (264 - 624 kbits/s.) (note 3);
	1 1 1 0 0 0 0	75 bit/s;
	1 1 1 0 0 0 1	110 bit/s;
	1 1 1 0 0 1 0	134,5 bit/s;
	1 1 1 0 0 1 1	75/1200 bit/s (note 2);
	1 1 1 0 1 0 0	1200/75 bit/s (note 2);
	All other values reserved.	

NOTE 2: The first rate is the transmit rate in forward direction of the call. The second rate is the transmit rate in backward direction of the call.

NOTE 3: Some bitrates (24, 96, 144, 192, 240, 288, and 336 kbit/s.) are codeable in several different ways. These codings are all valid.

Examples:

Bits	7 6 5 4 3 2 1	Meaning
	0 0 0 0 1 0 0	50 bit/s (V.6 and X.1);
	0 0 0 0 1 0 1	100 bit/s (V.6 and X.1);
	0 0 0 0 1 1 0	150 bit/s (V.6 and X.1);
	0 0 0 0 1 1 1	200 bit/s (V.6 and X.1);
	0 0 0 1 0 0 0	300 bit/s (V.6 and X.1);
	0 0 0 1 0 0 1	600 bit/s (V.6 and X.1);
	0 0 0 1 0 1 1	1 200 bit/s (V.6);
	0 0 0 1 1 1 1	2 400 bit/s (V.6 and X.1);
	0 0 1 0 0 0 0	4 800 bit/s (V.6 and X.1);
	0 1 0 0 0 0 0	8 000 bit/s (I.460);
	0 0 1 0 0 1 0	9 600 bit/s (V.6, X.1, GSM HSCSD);
	0 0 1 0 0 1 1	12 000 bit/s (V.6);
	0 0 1 0 1 0 0	14 400 bit/s (V.6, GSM HSCSD);
	0 1 0 0 0 0 1	16 000 bit/s (I.460);
	0 0 1 0 1 1 0	19 200 bit/s (V.6, GSM HSCSD);
	0 0 1 1 0 0 0	24 000 bit/s (1 C2-Bearer);
	0 0 1 1 0 1 0	28 800 bit/s (V.34, GSM HSCSD);
	0 1 0 0 0 1 1	32 000 bit/s (I.460, GSM HSCSD);
	0 0 1 1 1 1 0	38 400 bit/s (GSM HSCSD);
	0 1 0 0 1 0 1	48 000 bit/s (V.6, X.1, 2 C2-Bearers, GSM HSCSD);
	0 1 0 0 1 1 0	56 000 bit/s (V.6);
	1 0 0 0 0 0 0	57 600 bit/s (GSM HSCSD);
	0 1 0 0 1 1 1	64 000 bit/s (X.1, 1 ISDN B-Channel, GSM HSCSD);
	1 0 0 0 0 0 1	67 200 bit/s (GSM HSCSD);
	1 0 0 0 0 1 0	76 800 bit/s (GSM HSCSD);
	0 1 0 1 0 0 0	72 000 bit/s (3 C2-Bearers);
	0 1 0 1 0 1 1	96 000 bit/s (4 C2-Bearers, GSM HSCSD);
	1 0 0 0 1 1 0	115 200 bit/s (RS232 Data Rate);
	0 1 0 1 1 1 0	120 000 bit/s (5 C2-Bearers);
	0 1 0 1 1 1 1	128 000 bit/s (2 ISDN B-Channels);
	1 0 0 1 0 0 1	144 000 bit/s (6 C2-Bearers);
	1 1 0 1 0 1 0	552 000 bit/s (23 C2-Bearers).

Modem Type (octet 5b):

Bits	6 5 4 3 2 1	Meaning
	0 0 0 0 0 0	autobauding modem (note 4);
	0 0 0 0 0 1	V.21;
	0 0 0 0 1 0	V.22;
	0 0 0 0 1 1	V.22 bis;
	0 0 0 1 0 0	V.23;
	0 0 0 1 0 1	V.26;
	0 0 0 1 1 0	V.26 bis;
	0 0 0 1 1 1	V.26 ter;
	0 0 1 0 0 0	V.27;
	0 0 1 0 0 1	V.27 bis;
	0 0 1 0 1 0	V.27 ter;
	0 0 1 0 1 1	V.29;
	0 0 1 1 0 0	V.32;
	0 0 1 1 0 1	V.35;
	0 0 1 1 1 0	V.32 bis;
	0 0 1 1 1 1	V.34;
	0 1 1 0 0 0	V.110;
	0 1 1 0 0 1	V.120;
	1 0 0 0 0 0 to	} Reserved for national use;
	1 1 1 1 1 1	}.

NOTE 4: In this case data rate specifies the target rate.

Duplex mode (Dup) (octet 5b):

Bits	7	Meaning
	0	Half duplex;
	1	Full duplex;

Maximum string length (octet 6):

This 7 bit word represents the natural binary coding of the maximum string length used for data compression, with the least significant bit in position 1 (see CCITT Recommendation V.42bis [16] annex A, parameter P2). It shall be coded with 0 when compression is not requested.

Number of codewords (octet 6a and octet 6b):

These two 7 bit words together represent the natural binary coding of the number of codewords used for data compression, with the least significant bit in position 1 of octet 6b (see CCITT Recommendation V.42bis [16] annex A, parameter P1).

End user compression (EUC) (octet 7):

Bits	7	Meaning
	0	Do not use data compression via external network;
	1	Use default data compression via external network (default if octet is not present).

NOTE 5: V.42bis data compression is permitted only with the use of V.42 error correction.

End user error correction (EEC) (octet 7):

Bits	6	Meaning
	0	Do not use error correction via external network;
	1	Use default error correction via external network (default if octet is not present).

Fall back (FBK) (octet 7):

Bits	5	Meaning
	0	Do not enable inband modem rate negotiation;
	1	Enable inband modem rate negotiation (default if octet is not present).

Reserved for Voice/Data switching (RES) (octet 7):

This bit is reserved for the exclusive use with profile subtype 2 and shall be ignored when used with profile subtype 0 and 1.

C.2.2 IWU attributes implemented

Table C.1

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of IWU attributes of variable length	note 1	M		18	
2	Length of Contents (L)	note 2	M		0 to 255	5 to 9
3	Coding standard	note 2	M		1	
3	Profile	note 2	M		0 to 3, to 12	1
4	Negotiation indicator	note 2	M		0, 2, 4, 5	
4	Profile subtype	note 2	M		0 to 7	0,1
5	Stop bits coding	C.2.1	I	M	0 to 3	
5	Data bits coding	C.2.1	I	M	0 to 3	
5	Parity coding	C.2.1	I	M	0, 2, 3, 4, 5, 7	
5a	Data Rate	C.2.1	I	O	4 to 116	
5b	Duplex Mode	C.2.1	I	O	0,1	
5b	Modem Type	C.2.1	I	O	0 to 15, 32 to 63	
6	Maximum string length	C.2.1	I	M	0 to 127	
6a,6b	Number of codewords	C.2.1	I	O	0 to 16 383	
7	End user compression	C.2.1	I	O	0,1	
7	End user error correction	C.2.1	I	O	0,1	
7	Fall back	C.2.1	I	O	0,1	

NOTE 1: See EN 300 175-5 [5], subclause 7.7.1.
NOTE 2: See EN 300 175-5 [5], subclause 7.7.21.

C.3 Interworking to V.24 circuits

C.3.1 Reference configuration

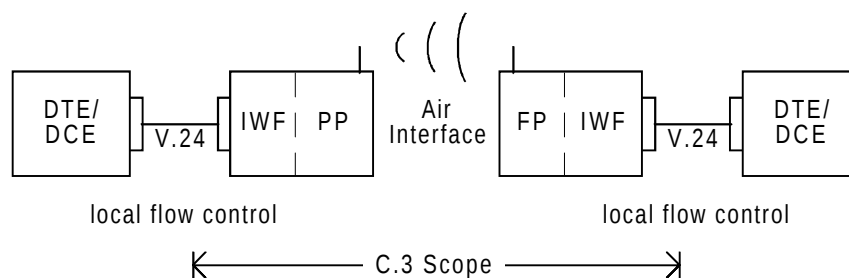


Figure C.2: Profile reference configuration showing the interworking to a V.24 DCE/DTE

The DTE-DCE connection shall support the functionality of CCITT Recommendation V.24 [14] link for the following V.24 lines:

- circuit 103 (TXD);
- circuit 104 (RXD);
- circuit 106 (CTS);
- circuit 107 (DSR);
- circuit 108 (DTR);
- circuit 109 (DCD);

- circuit 125 (RI);
- circuit 133 (RTR).

C.3.2 Global assumptions

In this application, the packet mode procedures PICS conditional C.7 (see EN 300 175-5 [5], subclause 9.7, option B) shall be applied in their entirety. No other establishment or release procedures shall be used. Access shall be provided on a demand-assigned access basis (see EN 300 175-5 [5], subclause 9.7.1, option B).

The called party number is of local significance and shall define the identity of the logical port to which the PP requests to connect.

The data stop and parity bits of the FP-side-IWF shall be set according to the information elements <<data bits coding>>, <<parity coding>> and <<stop bits coding>>, respectively, of the <<IWU-ATTRIBUTES>> element in the {CC-SETUP} message. If the FP-side-IWF cannot comply with the required coding, the connection is released with release reason 05 "Incompatible service".

The DTE/DTE-side-IWF connection and the DCE-side-IWF/DCE connection may work at different data transmission speeds.

The configuration of a PP or an FP to interwork with a DTE or a DCE shall be a local matter. All data received by the PP or the FP from LU3 shall be transferred to the RXD line when interworking with a DTE or to the TXD line when interworking to a DCE. Information regarding the status of DCD and RI lines received by a DCE-side-IWF from LU3 shall be ignored. Information regarding the status of the DSR line received by a DCE-side interworking unit from LU3 shall be interworked to the DTR line. Information regarding the status of the DTR line received by a DTE-side-IWF from LU3 shall be interworked to the DSR line.

For negotiation of the service parameters, the IWU-Attributes as defined in annex C.2 shall be used. The profile subtype in octet 3 shall indicate "Interworking to V.24 circuits". Octet 5 shall describe the desired character format at the far end IWU-interface whereby the "BPAD-operation" coding of the parity-subfield is not allowed. The data rate across the V.24-interface of the far end IWU shall be coded in octet 5a. The following octet (5b) shall not be used.

If data compression across the DECT-air-interface is to be used, the requested parameters shall be coded in octets 6 to 6b (see subclause 10.5). Otherwise the octets 6a and 6b shall be omitted and octet 6 shall be filled with a value of 0, which indicates to the receiver that no compression is requested. Octet 7 is of no use for this annex and shall therefore be omitted.

C.3.3 Interworking procedures and conventions

C.3.3.1 Procedures at the DTE-side-IWF

The interworking function shall emulate a DCE. Data is packed / unpacked for LAP-U using the PAD function described in subclause 10.2. Data received from the PAD shall be forwarded via the RXD line to the DTE and data shall be received via the TXD line from the DTE.

C.3.3.1.1 DTE-Initiated link establishment

If no V.24 link is established (the "No Link" state), then the IWF shall monitor the value of the DTR line. If this goes ON, then the IWF shall monitor the activity of the TXD line. If data is detected on the TXD line, then the IWF shall issue an MNCC_SETUP.req primitive and shall enter the "V.24 Link Requested" state. Furthermore, the state of the DTR line shall be submitted to the PAD buffer prior to submitting the received character to it.

In the "V.24 Link Requested" state, if the IWF receives a MNCC_REJECT.ind primitive or a MNCC_RELEASE.ind primitive, it shall clear the PAD buffer and shall return to the "No Link" state. Its subsequent action shall be locally determined on the basis of the release reason contained in the primitive.

In the "V.24 Link Requested" state, if the IWF receives an MNCC_CONNECT.ind primitive it shall enter a "Link Active" state. Once in this state, it shall set the values of the DSR line, RI line and DCD line to the values communicated to it by LU3.

C.3.3.1.2 DCE-Initiated link establishment

Upon the receipt of a MNCC_SETUP.ind primitive, the IWF shall determine that the service requested may be offered, and if so it will issue a MNCC_CONNECT.ind primitive and enter the "Link Active" state. Once in this state, it shall set the values of the DSR line, RI line and DCD line to the values communicated to it by LU3. If the service cannot be supported, it will issue a MNCC_REJECT.req, indicating a release reason, and will return to the "No Link" state.

C.3.3.1.3 DTE-Initiated link suspension

If the management entity requires a link suspension, the IWF shall issue a MNCC_MODIFY.req primitive specifying a suspension and shall await a MNCC_MODIFY.cfm primitive. If this primitive notifies failure, it need not take any action. If this primitive notifies success, it shall enter the "Link Suspended" state.

C.3.3.1.4 DCE-Initiated link suspension

If the IWF receives a MNCC_MODIFY.ind primitive specifying a suspension, it shall wait until it has ceased to receive data from the U-plane and shall then enter the "Link Suspended" state.

C.3.3.1.5 DTE-Initiated link resume

If the management entity requires a link resumption, the IWF shall issue an MNCC_MODIFY.req primitive, specifying link resumption, and shall await a MNCC_MODIFY.cfm primitive. If this primitive notifies failure, it shall enter the "No Link" state and turn the DSR line OFF. If the primitive notifies success, then it shall enter the "Link Active" state and transmit the buffered data according to the PAD procedures.

C.3.3.1.6 DCE-Initiated link resume

If the IWF receives a MNCC_MODIFY.ind primitive specifying link resumption, it shall enter the "Link Active" state.

C.3.3.1.7 DTE-Initiated link release

The IWF may choose at any time to release the link for implementation-specific reasons. In any case, the IWF shall release the link if:

- the DTR line goes OFF for more than five seconds; and
- the IWF has been in "Link Active" state for more than five seconds.

To release the link, the IWF shall issue a MNCC_RELEASE.req primitive, shall clear the PAD buffer and shall then enter the "No Link" state, turning the DSR line, RI line and DCD line OFF.

C.3.3.1.8 DCE-Initiated link release

If the IWF receives a MNCC_RELEASE.ind primitive, it shall enter the "No Link" state, shall clear the PAD buffer and turn the DSR line, RI line and DCD line OFF.

C.3.3.2 Procedures at the DCE-side-IWF

The interworking function shall emulate a DTE. Data is packed / unpacked for LAP-U using the PAD function described in subclause 10.2. Data received from the PAD shall be forwarded via the TXD line to the DCE and data shall be received via the RXD line from the DCE.

C.3.3.2.1 DCE-Initiated link establishment

If no V.24 link is established, then the IWF shall monitor the value of the DSR line and the RI line. If the DSR line goes ON, then the IWF shall monitor the activity of the RXD line. If data is then detected on the RXD line, or if at any time the RI line goes ON irrespective of the state of the DSR line, then the IWF shall issue an MNCC_SETUP.req primitive and shall enter the "V.24 Link Requested" state. Furthermore, the state of the DSR, DCD, and RI lines shall be submitted to the PAD buffer prior to submitting any received characters to it.

In this state, if the IWF receives a MNCC_REJECT.ind primitive or a MNCC_RELEASE.ind primitive, it shall clear the PAD buffer and shall return to the "No Link" state. Its subsequent action shall be locally determined on the basis of the release reason contained in the primitive.

In the "V.24 Link Requested" state, if the IWF receives an MNCC_CONNECT.ind primitive it shall enter a "Link Active" state. Once in this state, it shall set the value of the DTR line to the value communicated to it by LU3.

The following functions are included in the FP IWF:

C-plane:

- CC procedures including service negotiation;
- MM;

U-plane:

- flow control;
- PAD function for asynchronous operation;
- BPAD function for synchronous operation;
- control information handling.

C.3.3.2.2 DTE-Initiated link establishment

Upon the receipt of a MNCC_SETUP.ind primitive, the IWF shall determine that the service requested may be offered, and if so it will issue a MNCC_CONNECT.ind primitive and enter the "Link Active" state. Once in this state, it shall set the value of the DTR line to the value communicated to it by LU3. If the service cannot be supported, it will issue a MNCC_REJECT.req, indicating a release reason, and will return to the "No Link" state.

C.3.3.2.3 DCE-Initiated link suspension

If the management entity requires a link suspension, the IWF shall issue a MNCC_MODIFY.req primitive specifying a suspension and shall await a MNCC_MODIFY.cfm primitive. If this primitive notifies failure, it need not take any action. If this primitive notifies success, it shall enter the "Link Suspended" state.

C.3.3.2.4 DTE-Initiated link suspension

If the IWF receives a MNCC_MODIFY.ind primitive specifying a suspension, it shall wait until it has ceased to receive data from the U-plane and shall then enter the "Link Suspended" state.

C.3.3.2.5 DCE-Initiated link resume

If the management entity requires a link resumption, the IWF shall issue an MNCC_MODIFY.req primitive, specifying link resumption, and shall await a MNCC_MODIFY.cfm primitive. If this primitive notifies failure, it shall enter the "No Link" state and turn the DTR line OFF. If the primitive notifies success, then it shall enter the "Link Active" state and transmit the buffered data according to the PAD procedures.

C.3.3.2.6 DTE-Initiated link resume

If the IWF receives a MNCC_MODIFY.ind primitive specifying link resumption, it shall enter the "Link Active" state.

C.3.3.2.7 DCE-Initiated link release

The IWF may choose at any time to release the link for implementation-specific reasons. In any case, the IWF shall release the link if:

- the DSR line goes OFF for more than five seconds; and
- the IWF has been in "Link Active" state for more than five seconds.

To release the link, the IWF shall issue a MNCC_RELEASE.req primitive, shall clear the PAD buffer and shall then enter the "No Link" state, turning the DTR line OFF.

C.3.3.2.8 DTE-Initiated link release

If the IWF receives a MNCC_RELEASE.ind primitive, it shall enter the "No Link" state, shall clear the PAD buffer and turn the DTR line OFF.

C.3.3.3 PAD

The PAD-function as defined in subclause 10.1 shall be used.

C.3.3.4 Timing conventions

PAUSE conditions, that means consecutive stop bits send by the DTE for a time greater than 100 ms, shall be interworked by the DTE-side-IWF. PAUSE-conditions shall be transmitted to the DCE-side-IWF at the termination of the condition, together with information regarding the length (see subclause C.3.3.5). Upon receiving a PAUSE-condition, the DCE-side-IWF shall ensure that a PAUSE of at least the specified length is asserted on the link to the DCE between the character received immediately before reception of the PAUSE condition and the character received immediately after it.

C.3.3.5 Interworking of modem status lines, BREAK condition and PAUSE condition

On any change of one or more V.24 status lines or on the detection of the BREAK condition or PAUSE condition, the current line status values and the BREAK condition or PAUSE condition respectively shall be submitted to the PAD buffer. Such information shall be passed in sequence from the PAD buffer to the user control signalling data SAP, and transmitted in an I-frame.

If such information is passed to the signalling SAP, the current I-frame shall be closed and transmitted immediately. The next I-frame to be sent shall be an I-frame with the SAPI indicating user control signalling data and with the data field containing the actual state of all listed V.24 lines and the condition which occurred. This I-frame shall be formatted as defined in subclause 10.3 of the present document.

C.3.3.5.1 BREAK condition

The measurement of the duration of a BREAK condition shall begin immediately upon its assertion on the TXD line at the DTE-side-IWF or the RXD line at the DCE-side-IWF. Once the BREAK condition has been terminated, the total duration of assertion measured shall be coded and transmitted as specified. The duration of the BREAK condition shall be measured for a maximum duration of 2,55 seconds, after which the BREAK condition and duration shall be coded and submitted in any case. It shall not be permitted to transmit two consecutive notifications of the BREAK condition, and the persistence of the BREAK condition beyond 2,55 seconds shall not be coded or notified to the PAD.

C.3.3.5.2 PAUSE condition

The measurement of the duration of a PAUSE condition shall begin 100 ms after its assertion on the TXD line at the DTE-side-IWF or the RXD line at the DCE-side-IWF. Once the PAUSE condition has been terminated by any occurrence, the total duration of assertion, including the 100 ms detection interval, shall be coded and submitted as specified. The duration of the PAUSE condition shall be measured for a maximum duration of 2,55 seconds, after which the PAUSE condition and duration shall be coded and submitted in any case. It shall not be permitted to transmit two consecutive notifications of the PAUSE condition, and the persistence of the PAUSE condition beyond 2,55 seconds shall not be coded or notified to the PAD.

At the receiver, upon reception of the PAUSE command, the time for which the RXD line at the DTE-side-IWF or the TXD line at the DCE-side-IWF have been in the PAUSE condition shall be determined and if the time is less than the value indicated in the PAUSE command the PAUSE condition shall be prolonged until it is equal to the coded value. Once this value has been reached the contents of the subsequent I-frames shall be transferred to the V.24 lines.

C.3.3.6 Interworking of flow control

C.3.3.6.1 Flow control across the DTE/DTE-side-IWF interface

The IWF shall follow the flow control procedure which is described in subclause 10.1 of the present document.

The flow control indication should be performed using circuits 133 (RTR) and 106 (CTS), in which case:

- a DTE-side-IWF not-ready condition shall be indicated by turning circuit 106 OFF and shall be cleared by turning circuit 106 ON; and
- a DTE not-ready condition shall be recognized by an ON-to-OFF transition and cleared by an OFF-to-ON transition of circuit 133.

C.3.3.6.2 Flow control across the DCE-side-IWF/DCE interface

The IWF shall follow the flow control procedure described in subclause 10.1.

The flow control indication should be performed using circuits 133 (RTR) and 106 (CTS), in which case:

- a DCE-side-IWF not-ready condition shall be indicated by turning circuit 133 OFF and cleared by turning circuit 133 ON; and
- a DCE not-ready condition shall be recognized by an ON-to-OFF transition and cleared by an OFF-to-ON transition of circuit 106.

Flow control is handled locally between DTE/DCE and the IWF on both sides of a connection. The chained flow control mechanisms between DTE/DCE and the IWF on one side, the two IWFs, and the IWF and DCE/DTE on the other side respectively result in end-to-end flow control across the whole connection. Another possibility is to use DC1 and DC3 characters (XON and XOFF) for end to end flow-control. However, since the system may contain considerable buffer space and because the transmission speeds at both sides of the connection do not necessarily match, this method will work reliably only in conditions of a fully planned, co-ordinated and configured system. For applications of this profile, it is therefore strongly discouraged to work without hardware flow-control at the DTE and DCE.

C.4 Interworking to connection-oriented bearer services

C.4.1 Scope

The provisions of this subclause shall apply if interworking to public connection-oriented network services. It is recommended for use with connection-oriented data transmission services in general.

The physical implementation of this service and the use of the interworking functions to other networks (if present) are abstracted from the user. The PP user sees a standardized wireless service which is functionally equivalent to interfacing to an auto-calling / answering DCE accessing a connection-oriented bearer service (such as modem). In addition the service can also provide the added security (authentication and encryption), call charging, flexible throughput (up to 552 kbit/s), high reliability and error correction and other features of DECT, thus making it suitable for public wireless data services.

This subclause defines the Terminal Adaptation Functions (TAF) integral to a Portable Part (PP) and the Interworking Functions (IWF) integral to a Fixed Part (FP) which enable the attachment of asynchronous or synchronous serial data applications to a PP and attachment of connection-oriented asynchronous or synchronous serial data transmission network services to an FP. The application may be a software application or a terminal, however this annex does not mandate the implementation of a specific interface between the PP and the terminal and the FP and the service / network, but specifies the air interface requirements in order to facilitate interoperability between equipment of different origin. The functions defined in this annex are applicable to both asynchronous and synchronous processes unless stated otherwise. The last part of this annex specifies interworking conventions for DTE-to-PP interfaces based on V.24 [14] and V.25bis [15], and for corresponding conventions for FP IWUs with a nominal internal V.24 interface.

C.4.2 Reference configuration

The reference configuration for U-plane and C-plane operation is shown in figures C.3 and C.4, respectively. This specification refers to Portable Parts (PPs) and Fixed Parts (FPs) which support applications with asynchronous or synchronous serial data transmission capabilities. The TAF is functionally a part of a PP and the IWF is functionally part of FP with an integral asynchronous or synchronous data capability of the DECT C.2 profile.

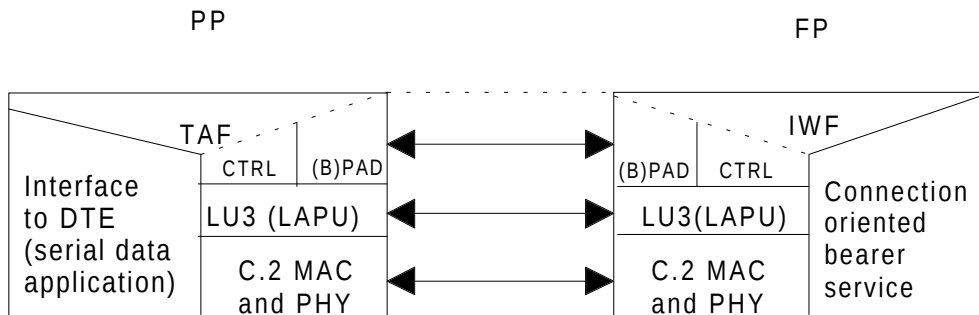


Figure C.3: Profile reference U- plane configuration showing the interworking to a connection-oriented bearer service

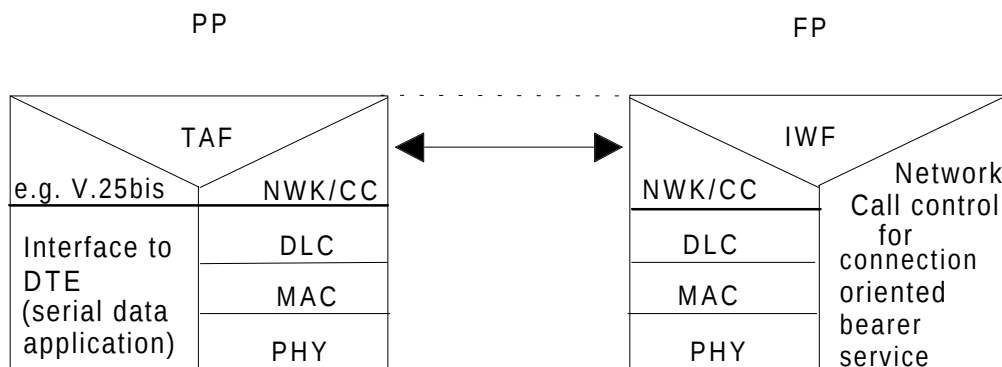


Figure C.4: Profile reference C- plane configuration showing the interworking to the connection-oriented bearer service which supports auto-calling / answering

The serial data application may implement any proprietary TAF-interface solution using the services provided by the TAF in order to facilitate application / terminal connection (such as V.24 or X.21). The serial data transmission service contains a network specific interworking unit using the IWF services to provide interconnection to outside networks such as PSTN, ISDN or Global System for Mobile communication (GSM). This subclause defines the TAF/IWF for a V.24/V.25bis modem service as an example in subclause C.4.5. This subclause also defines functions to support autocalling and autoanswering specified in accordance with CCITT Recommendation V.25bis [15] (although other autocalling / autoanswering procedures may also be used provided that mapping in a functionally equivalent way to DECT call control is also provided).

C.4.2.1 PP TAF

The following functions are included in the PP TAF:

C-plane:

- CC procedures including service negotiation;
- MM;

U-plane:

- flow control;
- PAD function for asynchronous operation;

- BPAD function for synchronous operation;
- control information handling.

C.4.2.2 FP IWF

C.4.2.3 General Configuration

For negotiation of the service parameters the IWU-Attributes as defined in annex C.2 shall be used. The profile subtype in octet 3 shall indicate "Interworking to voice band modem services". The requested character format and data rate for the modem in the IWU as well as the requested modulation scheme and duplex mode shall be coded in octets 5 to 5b. If the IWU is allowed to negotiate lower data-rates with the far end modem this shall be indicated in bit 5 of octet 7. If data compression across the DECT-air-interface is to be used, the requested parameters shall be coded in octets 6 to 6b (see subclause 10.5). Otherwise the octets 6a and 6b shall be omitted and octet 6 shall be filled with a value of 0, which indicates to the receiver that no compression is requested. Bit 7 and 6 of octet 7 shall be used to switch usage of error-correction and data compression across the external network. If these bits are set to [1] or octet 7 is left out error correction and data compression shall be used if implemented in the IWU.

C.4.3 PP Procedures

C.4.3.1 C-plane procedures

The C-plane procedures are based on those of a GAP telephone with additional mandatory Call Control elements to cover data specific aspects of the call setup. The detailed specification of these procedures is given in annex G.

The service specific configuration information is carried in the <<iwu-attributes>> information element of the {CC-SETUP} message. The values in the information elements will contain the service requirements set by the user. The called user number is conveyed in <<Multi keypad>> information element of the {CC-INFO} message.

In addition, where service parameter negotiation is provided, the TAF shall be responsible for negotiating the service parameters. Service parameter negotiation is only supported during the call establishment phase. This is implemented by reflecting a modified set of service parameters to the call initiator in the {CC-RELEASE-COM} message. The initiator of the {CC-SETUP} message may then establish a new call using the modified parameters in a new {CC-SETUP} message.

C.4.3.1A Suspend and resume procedures

The suspension and resumption of a call shall be a management entity decision according to the conditions described in subclause 9.1.

If the management entity requires a link suspension, the TAF shall issue a MNCC_MODIFY.req primitive specifying a suspension and shall await a MNCC_MODIFY.cfm primitive. If this primitive notifies failure, it need not take any action. If this primitive notifies success, it shall enter the "Link Suspended" state.

If the TAF receives a MNCC_MODIFY.ind primitive, it shall wait until it has ceased to receive data from the U-plane and shall then enter the "Link Suspended" state.

If the management entity requires a link resumption, the TAF shall issue an MNCC_MODIFY.req primitive, specifying link resumption, and shall await a MNCC_MODIFY.cfm primitive. If this primitive notifies failure, it shall enter the "No Link" state and turn the DSR line OFF. If the primitive notifies success, then it shall enter the "Link Active" state and transmit the buffered data according to the PAD procedures.

If the TAF receives a MNCC_MODIFY.ind primitive, it shall enter the "Link Active" state.

C.4.4 FP procedures

C.4.4.1 C-plane

The C-plane procedures are based on those of a GAP telephone with additional mandatory elements to cover data specific aspects of the call setup. The detailed specification of these procedures is given in annex G.

The service specific configuration information is carried in the <<iwu-attributes>> information element of the {CC-SETUP} message. The values in the information elements will contain the service requirements set by the user. The called user number is conveyed in <<Multi-keypad>> information element of {CC-INFO} message.

Specific functionality is required of the IWF depending on the service which is being requested to be supported. The selection of the appropriate Interworking Unit (IWU) will be determined by the FP/IWF on the basis of information contained in the <<iwu-attributes>> information element signalled in the {CC-SETUP} request message.

In addition where service parameter negotiation is provided, the IWU shall be responsible for interworking the negotiation between the PP and the FP and between the FP and the attached network. Service parameter negotiation is only supported during the call establishment phase. This is implemented by reflecting a modified set of service parameters to the call initiator in the {CC-RELEASE-COM} message. The initiator of the {CC-SETUP} message may then establish a new call using the modified parameters in a new {CC-SETUP} message. In the case of an outgoing call the FP shall also release the associated call into the network if this is already established. In the case of incoming call the IWF shall upon receipt of an {RELEASE-COM} message either:

- attempt another {CC-SETUP} for the same incoming call provided the RELEASE-COM message contained an acceptable set of modified service parameters; or
- notify the network of the {CC-SETUP} failure giving the release reason specified in the {RELEASE-COM} message.

C.4.4.1A Suspend and resume procedures

The suspension and resumption of a call shall be a management entity decision according to the conditions described in subclause 9.1.

If the management entity requires a link suspension, the IWF shall issue a MNCC_MODIFY.req primitive specifying a suspension and shall await a MNCC_MODIFY.cfm primitive. If this primitive notifies failure, it need not take any action. If this primitive notifies success, it shall enter the "Link Suspended" state.

If the IWF receives a MNCC_MODIFY.ind primitive, it shall wait until it has ceased to receive data from the U-plane and shall then enter the "Link Suspended" state.

If the management entity requires a link resumption, the IWF shall issue an MNCC_MODIFY.req primitive, specifying link resumption, and shall await a MNCC_MODIFY.cfm primitive. If this primitive notifies failure, it shall enter the "No Link" state and turn the DTR line OFF. If the primitive notifies success, then it shall enter the "Link Active" state and transmit the buffered data according to the PAD procedures.

If the IWF receives a MNCC_MODIFY.ind primitive, it shall enter the "Link Active" state.

C.4.5 Network modem interworking service using V.24 connection

C.4.5.1 General

This subclause specifies the interworking of the DECT C.2 services with DTE connected by V.24 to the PP. It also specifies the functionality of the corresponding IWU in the FP by means of a nominal, reference V.24 interface to CCITT-specified DCE. This subclause will describe how CCITT Recommendation V.24 [14] signalling should take place in the TAF and IWU. The V.24 modem service TAF or IWU may be used independently of each other i.e. the TAF may be used in conjunction with other IWU descriptions and the IWU with other TAF descriptions, respectively.

C.4.5.2 Reference configuration

The reference configuration is illustrated in figure C.5.

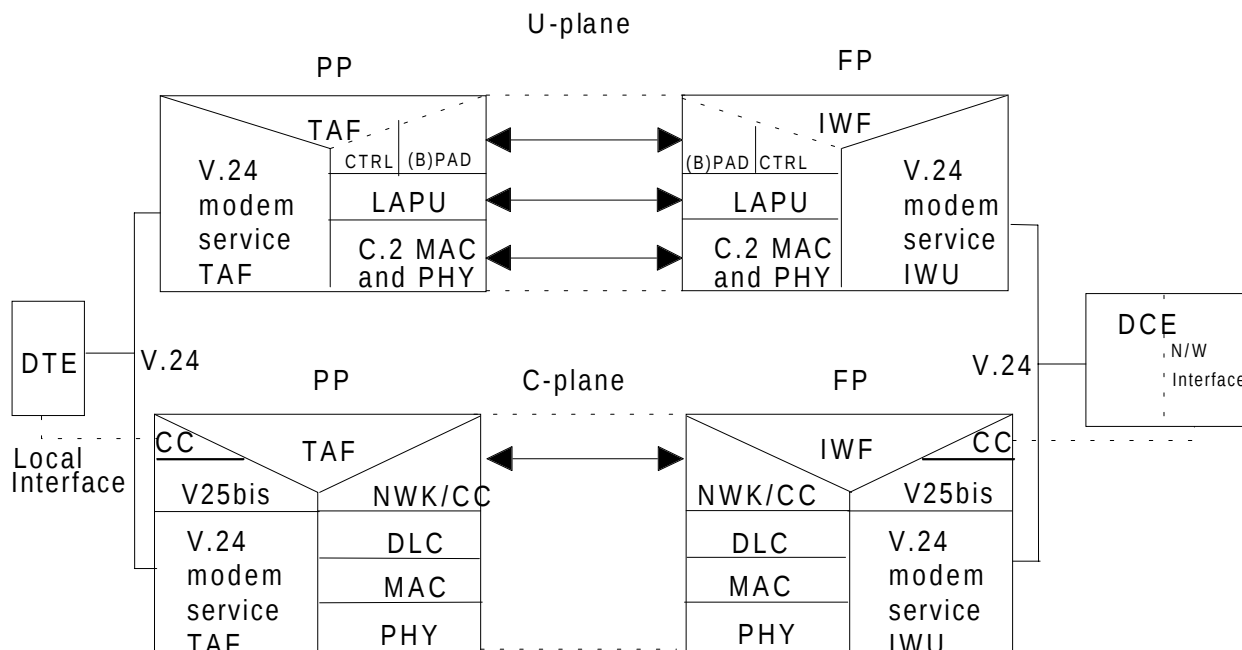


Figure C.5: The reference configuration

C.4.5.3 TAF Interworking to V.24/V25bis

C.4.5.3.1 General

The V.24 TAF emulates DCE towards the DTE while interworking the V.24 and V.25bis status to the CC and DLU primitives. The implementation of the V.24 interface is not mandatory in the context of this interworking annex, but if the V.24 interface is implemented physically or logically in the TAF then the provisions of this subclause are mandatory. The rules are applicable for both manual and automatic calling. The autocall / autoanswer functionality of CCITT Recommendation V.25bis [15] is described in subclause C.4.5.5.

C.4.5.3.2 V.24 interchange circuit handling rules

The circuit 108/2 (DTR) is required to be in the on state before the PT/TAF may initiate call establishment (manual or automatic). The circuit 108/2 (DTR) may be used to indicate with on state to the PT/TAF that the DTE is ready to accept an incoming call.

In the active state, the 108/2 (DTR) transition from on to off state shall cause the TAF to release the connection, after an implementation-specific timeout by issuing an MNCC-RELEASE-req primitive with Release Reason "User Detached".

If 108/2(DTR) is off, the TAF shall respond to an incoming call with a MNCC-ALERT-req primitive and shall turn on circuit 125 (RI). If circuit 108/2(DTR) goes on in this condition, the TAF shall issue an MNCC-CONNECT-req primitive. It shall be an implementation-specific feature for the TAF to time-out if circuit 108/2 (DTR) does not go on in this condition, in which case it shall issue an MNCC-RELEASE-req primitive. The TAF may also issue an MNCC-RELEASE-req. primitive independently of the state of circuit 108/2 (DTR), for implementation-specific reasons.

The status change of circuit 107 (DSR) from off to on by PT/TAF shall indicate to the DTE that network call establishment has been successful, that a far-end modem has been detected and that negotiation to establish a carrier has begun.

The status change of 107 (DSR) from on to off by PT/TAF shall indicate to the DTE that the call has been released. Circuit 107 (DSR) shall be turned off when the PT/TAF receives MNCC-REJECT-ind primitive.

Circuit 109 (DCD) may be turned on by the PT/TAF only when the LAP-U link is established. Circuit 109 (DCD) turning on during the call establishment shall indicate to the DTE the successful establishment of a data carrier to the far-end modem, and the availability of service for end-to-end data transfer. PT/TAF shall turn off circuit 109 (DCD) if the value of this circuit as transferred by the LAP-U control frame is set to off, or if the call is released. PT/TAF shall be responsible for turning circuit 109 (DCD) off before circuit 107 (DSR) is turned off if it is not already off. The status of circuits 105 (RTS) and 106 (CTS) shall not be conveyed across the radio interface. The TAF shall respond to the on condition of the circuit 105 (RTS) with on condition of 106 (CTS) if no flow control is activated and the LAP-U U plane connection is present.

C.4.5.3.3 Call establishment signalling handling

The TAF shall control call establishment by means of the relevant MNCC primitives, in accordance with the procedures of the GAP. Functions to support autocalling and autoanswering are specified in accordance with CCITT Recommendation V.25bis [15] (although the use of other autocalling / autoanswering procedures are not prohibited provided that mapping in a functionally equivalent way to DECT call control is also provided). The procedures are defined in the subclause C.4.7.5. Information about the state of call establishment which is additional to that conveyed by V.25bis or similar protocols may be transferred by the TAF to the DTE using locally defined means. Such information is expected to include notification of the MNCC-CALL_PROC.ind, MNCC-ALERT.ind and MNCC-CONNECT.ind primitives. In particular, the TAF shall include means to provide notification to the DTE or the user of the MNCC-CONNECT.ind primitive.

C.4.5.3.4 V.25bis interworking to DECT CC primitives

This subclause shall apply when V.25bis is implemented on the DTE-TAF interface. The use of V.25bis is not mandatory and there is no restriction on the use of alternative call-control protocols on this interface (e.g. AT command set), for which interworking shall be carried out in an analogous manner.

The following general rules shall apply:

a) Auto Calling:

- this procedure is provided according to CCITT Recommendation V.25bis [15];
- a subset of CCITT Recommendation V.25bis is shown in table C.2. This subset gives minimum level of control and indication;
- during the call establishment phase, i.e. after signalling, call tone according to CCITT Recommendation V.25bis shall be generated in the TAF.

b) Auto Answer:

- this procedure is provided according to CCITT Recommendation V.25bis [15].

CCITT Recommendation V.25bis [15] indications generated by the TAF shall be even parity, even if the parity condition for the user's application is different.

Table C.2: Minimum set of call set-up commands and indications

	Description	IA5 Characters
Commands from Application	Call Request with Number provided 0,1..9,*,#,A,B,C,D	CRN
	Connect Incoming Call	CIC
	Disregard Incoming Call	DIC
Indications to Application	Call Failure Indication XX = CB,AB,NT,FC (see note)	CFI XX
	INcoming Call	INC
	VALid	VAL
	INValid	INV
NOTE: CB = Local MT busy; AB = Abort call; NT = No answer; FC = Forbidden call. Forbidden call indication results from contravention of rules for repeat call attempts as defined by the appropriate national approvals administration. It is recommended that this is the responsibility of the PP, not the DTE.		

Only those elements and messages that are of particular relevance are considered. The signalling charts have been illustrated in figures C.7 and C.8. It should be noted that not all possible signalling has been illustrated i.e. other C-plane signalling related to the CC machine requirements may take place between PP and FP during different phases of the call.

C.4.5.3.4.1 PP originated calls

C.4.5.3.4.1.1 Call establishment

Upon receipt of V25bis {CRN}, {CRI} or {CRS} commands from the DTE the PP/TAF shall issue MNCC-SETUP-req primitive to the DECT NWK C-plane. The called party number (as derived from the {CRN}, {CRI} or {CRS} command) shall be conveyed in a single <<Multi-keypad>> information element parameter of the MNCC-INFO.ind primitive, in conformance with the GAP procedures. If the V.25bis command is invalid the TAF shall respond with {INV} and shall not proceed with call establishment. The acceptance of the command is acknowledged with {VAL}.

C.4.5.3.4.1.2 Call release

If the call was not accepted or in the case of establishment failure to the fixed network, the fixed network connection equipment may issue a Error Code. These error codes may be mapped to a CC-RELEASE-COM message reason code. Upon receipt of MNCC-REJECT-ind, the PP TAF may issue to the DTE the V.25bis {CFI} message with the error code information mapped from the MNCC-REJECT.ind primitive <<reason code>> information element before turning off 106 (CTS) and 107 (DSR).

C.4.5.3.4.2 PP terminated calls

C.4.5.3.4.2.1 Call establishment

Upon receipt of MNCC-SETUP-ind primitive V.25bis {INC} indication shall be sent and circuit 125 (RI) shall be turned on by the PP TAF towards the DTE.

The DTE may answer either with {DIC} (Disregard Incoming Call) or {CIC} (Connect Incoming Call) to the call indication. With the {DIC} command the call is rejected and MNCC-REJECT-req shall be issued with hex 15 "User rejection" <<Release reason>> code as a response to the MNCC-SETUP-ind primitive. With the {CIC} answer the TAF shall clear circuits 106 and 125 (RI) and issue MNCC-CONNECT-req.

C.4.5.3.4.2.2 Call release

If the call is to be disconnected by the network side the PP CC machine issues an MNCC-RELEASE.ind primitive, optionally carrying the release reason code. Upon the receipt of the MNCC-RELEASE.ind primitive the PP TAF sends the {CIF} V.25bis message. The error code of the V.25bis message may optionally contain a mapping of the <<release reason>> parameter.

C.4.5.3.5 Flow control

Flow control shall be performed as described in subclause 10. If the 133(105)/106 flow control is supported then the status of the 133 (105)/106 shall be interworked with the PAD/BPAD flow control, described in subclauses 10.1 and 10.2.

The flow control indication should be performed using circuits 133 (RTR) and 106 (CTS), in which case:

- a TAF not-ready condition shall be indicated by turning circuit 106 OFF and shall be cleared by turning circuit 106 ON; and
- a DTE not-ready condition shall be recognized by an ON-to-OFF transition and cleared by an OFF-to-ON transition of circuit 133.

C.4.5.3.6 Break signalling procedures

The "BREAK" condition from the DTE shall be recognized by the TAF function and interworked to the DECT link according to the procedures in subclause 10.4.

The measurement of the duration of a BREAK condition shall begin immediately upon its assertion on circuit 103 (TXD) at the PT/TAF. Once the BREAK condition has been terminated, the total duration of assertion measured shall be coded and transmitted as specified. The duration of the BREAK condition shall be measured for a maximum duration of 2,55 seconds, after which the BREAK condition and duration shall be coded and submitted in any case. It shall not be permitted to transmit two consecutive notifications of the BREAK condition, and the persistence of the BREAK condition beyond 2,55 seconds shall not be coded or notified to the PAD.

The TAF shall generate a "BREAK" condition towards the DTE on receipt of a BREAK condition indication from the LAP-U SAPI 3 as indicated by the coding of subclause 10.4.

C.4.5.3.7 PAUSE condition

The "PAUSE" condition from the DTE shall be recognized by the TAF function and interworked to the DECT link according to the procedures in subclause 10.4.

The measurement of the duration of a PAUSE condition shall begin 100 ms after its assertion on circuit 103 (TXD) of a DTE connected to the TAF or on circuit 104 (RXD) of a DCE connected to the TAF. Once the PAUSE condition has been terminated by any occurrence, the total duration of assertion, including the 100 ms detection interval, shall be coded and submitted as specified. The duration of the PAUSE condition shall be measured for a maximum duration of 2,55 seconds, after which the PAUSE condition and duration shall be coded and submitted in any case. It shall not be permitted to transmit two consecutive notifications of the PAUSE condition, and the persistence of the PAUSE condition beyond 2,55 seconds shall not be coded or notified to the PAD.

Upon reception of a PAUSE command, the time for which circuit 104 (RXD) of a DTE connected to the TAF or circuit 103 (TXD) of a DCE connected to the TAF have been in the PAUSE condition shall be determined and if the time is less than the value indicated in the PAUSE command the PAUSE condition shall be prolonged until it is equal to the coded value. Once this value has been reached the contents of the subsequent I-frames shall be transferred to the V.24 lines.

C.4.5.3.8 Data coding selection

The means of configuring in the TAF the use of an asynchronous or synchronous interface, and hence the use of the PAD or BPAD respectively, and where appropriate of the values of the data, stop and parity bits, shall be a local matter. These values shall be coded into the "BPAD / Parity coding", "data bits coding", "Stop bits coding" and "BPAD / Parity coding" fields respectively in the <<IWU-ATTRIBUTES>> parameter of the MNCC-SETUP, MNCC-SETUP-ACK, MNCC-CALL-PROC, MNCC-ALERT, MNCC-CONNECT or MNCC-INFO-(service change) primitives. For a PP-initiated call, these values shall be transferred from the TAF in a .req primitive, and for a PP-terminated call they shall be transferred to the TAF in a .ind primitive. These parameters shall be subject to exchanged attribute negotiation, and optionally to prioritized list negotiation and peer attribute negotiation, as specified in subclause 10.

C.4.5.3.9 Data transmission

The data is interworked for LAP-U in the PP as described in subclause 10.1 using the PAD or BPAD functions. The connection over the LAP-U link is always a duplex service.

C.4.5.4 DECT FP Interworking procedures

C.4.5.4.1 General

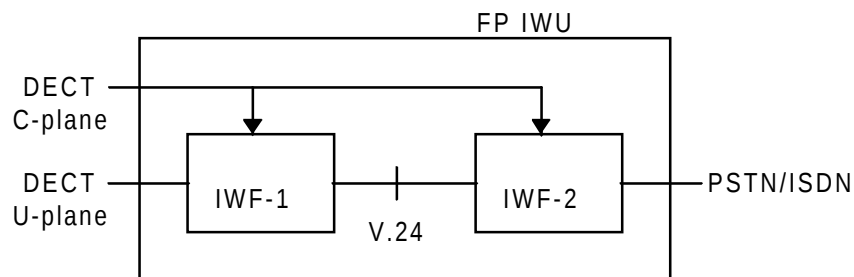


Figure C.6: FP IWU reference configuration

This subclause specifies the interworking procedures for the IWU of the PSTN / ISDN modem service. This IWU is split into 2 sub-functions called IWF-1 and IWF-2 as shown in figure C.6. IWF-2 is the only function which is attached to the local fixed network. From the perspective of this network this shall function exactly like an ITU V.series voice-band modem or an ITU V.110/120 ISDN termination.

Establishment and release of the PSTN / ISDN calls by IWF-2 shall be controlled on the DECT side by the GAP procedures. The call control primitive parameters have been extended to support the non-voice services standardized herein.

The FP IWU reference configuration defines a logical V.24 reference point between IWF-1 and IWF-2. This is used to simplify the specification of the interworking of the U-plane data to the modem data since the ITU V.series modems (incl. V.110/120) are specified with respect to the V.24 interface. This shall not in any way restrict the implementation of the FP IWU.

C.4.5.4.2 Call establishment signalling handling

The modem call establishment is directly signalled to IWF-2 via the DECT network layer primitives and procedures standardized herein using the GAP interworking procedures.

If the selected modem service is an ITU V.series voice-band modem the signalling to the local fixed network shall be identical to a standard 3,1 kHz audio call establishment up to the point where the FP CC enters the active state. At this point the behaviour of IWF-2 towards the network shall be in accordance with the ITU V.series modem selected by the <Modem-Type>, <Data-Rate> and octet 7 parameters in the <<IWU-ATTRIBUTES>> IE.

If the selected modem service is an ITU Recommendation V.110/120 ISDN modem the signalling to the local fixed network shall follow the standard ISDN call setup procedures for the V.110 or V.120 service. The V.110/120 call setup parameters for the ISDN call shall use the appropriate parameters from octets 5, 5a and 5b of the <<IWU-ATTRIBUTES>> IE, and shall allocate the remaining V.110/120 parameters according to the capabilities of IWF-2.

The "Answer" indication from the local fixed network shall be understood when one or more of the following has been detected:

- 1) off-hook for the called party has been detected;
- 2) charging for this call has started;
- 3) a CONNECT message has been received (e.g. from an ISDN network);
- 4) the 2 100 Hz modem tone has been detected.

Depending on the attached local fixed network and the called party it may not be possible to detect any of the above. Under such circumstances the FP IWU is permitted to issue a MNCC-RELEASE-req primitive following a timeout period indicating release reason "timer expired".

C.4.5.4.3 V.24 Interchange circuit handling rules

Circuit 107 (DSR) is required to be in the on state before the IWF-1 may transmit data on circuit 103 (TXD).

The state of circuit 125 (RI) shall be ignored by IWF-1, since the presence of an incoming call shall be interworked to the DECT network by the IWF-2. The IWF-1 shall transfer the value of circuit 109 (DCD) and circuit 107 (DSR) in DLU-LU3_DATA.ind primitives using the codings defined in subclause 10.4.

Data received via DLU-LU3_DATA.ind primitives shall be interworked to circuit 103 (TXD) using the PAD or BPAD functions specified in subclause 10. Data received on circuit 104 (RXD) shall be interworked to DLU-LU3_DATA.req primitives using the same PAD or BPAD functions. The selection of which PAD function and, if appropriate, the asynchronous PAD parameters - data length, stop bits and parity - shall be negotiated by the IWF-1 using the respective coding values in the <<IWU-ATTRIBUTES>> parameter of the MNCC-SETUP, MNCC-SETUP-ACK, MNCC-CALL-PROC, MNCC-ALERT, MNCC-CONNECT or MNCC-INFO-(service change) primitives during call setup.

The status of circuits 105 (RTS) and 106 (CTS) shall not be conveyed across the radio interface. The IWF-1 shall respond to the on condition of the circuit 106 (CTS) with on condition of 105 (RTS) if no flow control is activated and if the LAP-U U plane connection is present.

C.4.5.4.4 Flow control

If the 133(105)/106 flow control is used the status of the 106 (CTS) is interworked into the PAD/BPAD flow control, described in subclauses 10.1 and 10.2.

The flow-control indication should be performed using circuits 133 (RTR) and 106 (CTS), in which case:

- a IWF-1 side not-ready condition shall be indicated by turning circuit 133 OFF and cleared by turning circuit 133 ON; and
- a IWF-2 not ready condition shall be recognized by an ON-to-OFF transition and cleared by an OFF-to-ON transition of circuit 106.

C.4.5.4.5 Break signalling procedures

The "BREAK" condition from IWF-2 shall be recognized by the IWF-1 and passed to the LAP-U using procedures described in subclause 10.3. The IWF-1 will generate a "BREAK" condition towards the IWF-2 on receipt of a BREAK condition indication from the LAP-U.

C.4.5.4.6 PAUSE condition

The measurement of the duration of a PAUSE condition shall begin 100 ms after its assertion on the circuit 104 (RXD) by IWF-2. Once the PAUSE condition has been terminated by any occurrence, the total duration of assertion, including the 100 ms detection interval, shall be coded and submitted as specified. The duration of the PAUSE condition shall be measured for a maximum duration of 2,55 seconds, after which the PAUSE condition and duration shall be coded and submitted in any case. It shall not be permitted to transmit two consecutive notifications of the PAUSE condition, and the persistence of the PAUSE condition beyond 2,55 seconds shall not be coded or notified to the PAD.

Upon reception of a PAUSE command, the time for which the TXD of IWF-1 has been in the PAUSE condition shall be determined and if the time is less than the value indicated in the PAUSE command the PAUSE condition shall be prolonged until it is equal to the coded value. Once this value has been reached the contents of the subsequent I-frames shall be transferred to the V.24 lines.

C.4.5.4.7 Modem selection

For an outgoing call, the modem type in IWF-2 is selected according to the "modem type" coding of the <<IWU-ATTRIBUTES>> parameter in the MNCC-SETUP.ind primitive. If this value is not supported by IWF-2, the supported service negotiation procedures shall be invoked by the IWU. If no acceptable modem can be negotiated, the call is rejected with an MNCC-RELEASE-COM.req primitive with release reason (hex) 05 "Incompatible service".

For an incoming call, a locally determined value of the modem type shall be used by the IWU in the MNCC-SETUP.req primitive. A PP-initiated peer attribute negotiation may be used to modify this value, otherwise the IWF-2 may locally determine a new value after it has received the MNCC-CONNECT.ind primitive and has consequently responded to the incoming call and has agreed the modem type to be used. It shall then communicate this in an MNCC-CONNECT_ACK.req primitive.

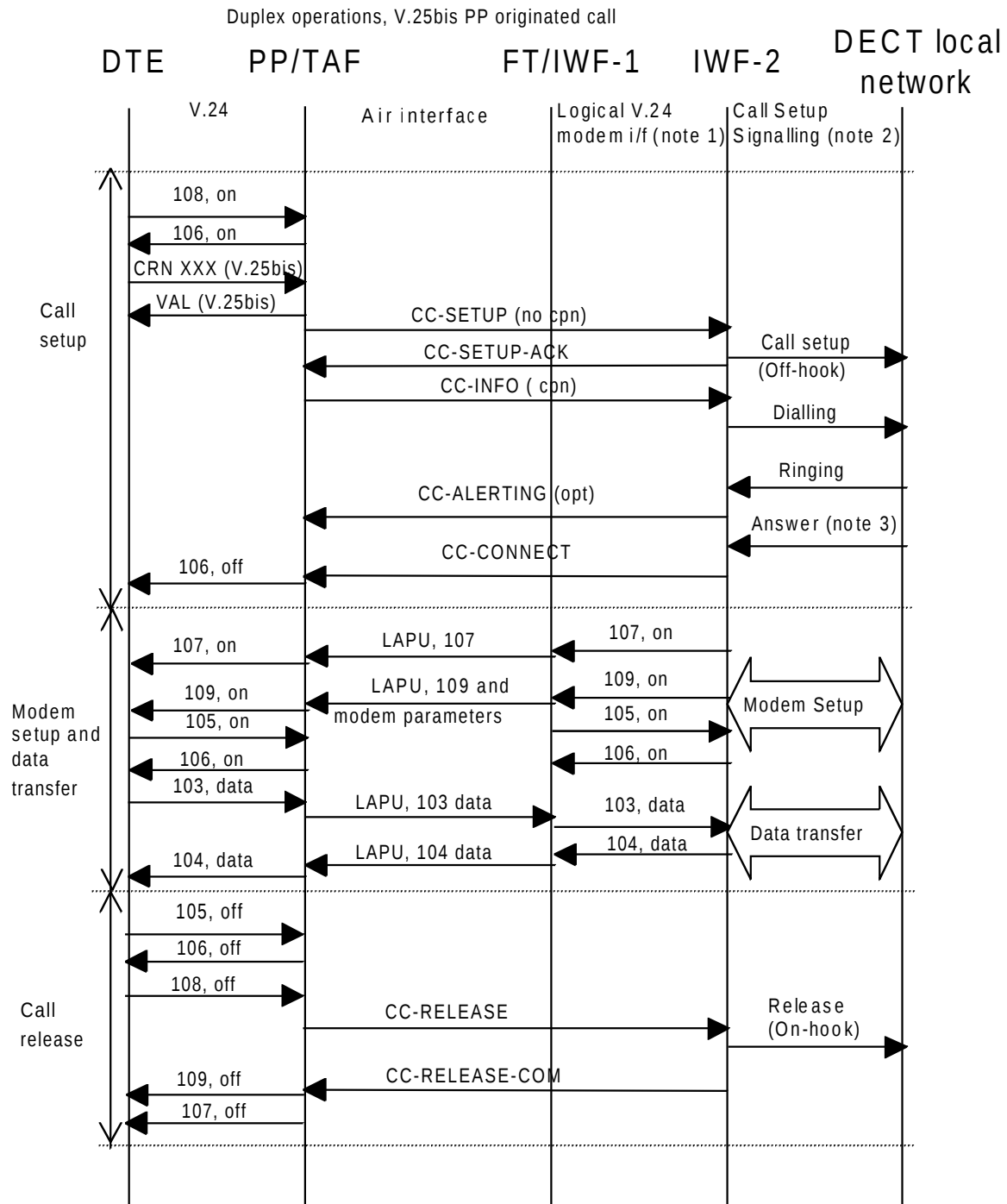
C.4.5.4.8 Data coding selection

For an outgoing (PP-initiated) call, the use of an asynchronous or synchronous interface, and hence the use of the PAD or BPAD respectively, and where appropriate of the values of the data, stop and parity bits, shall be selected according to the values coded in the "BPAD / Parity coding", "data bits coding", "Stop bits coding" and "BPAD / Parity coding" fields respectively in the <<IWU-ATTRIBUTES>> parameter of the MNCC-SETUP.ind primitive. If this set of values is not supported by the IWU, the supported service negotiation procedures shall be invoked by the IWU. If no acceptable service parameter set can be negotiated, the call shall be rejected with an MNCC-RELEASE-COM.req primitive with release reason (hex) 05 " incompatible service".

For an incoming call, a locally determined value for these parameters shall be used by the IWU in the MNCC-SETUP.req primitive. If this set of values is not acceptable to the PP, the supported service negotiation procedures shall be invoked by the PP. If no acceptable parameter set can be negotiated, the call shall be rejected with an MCC-RELEASE-COM.req primitive with release reason (hex) 05 "incompatible service".

C.4.5.4.9 Data transmission

The data is formed for the LAP-U by the IWF as described in the subclause 10.1, using the PAD or B-PAD functions. The connection over the LAP-U link is always duplex service.

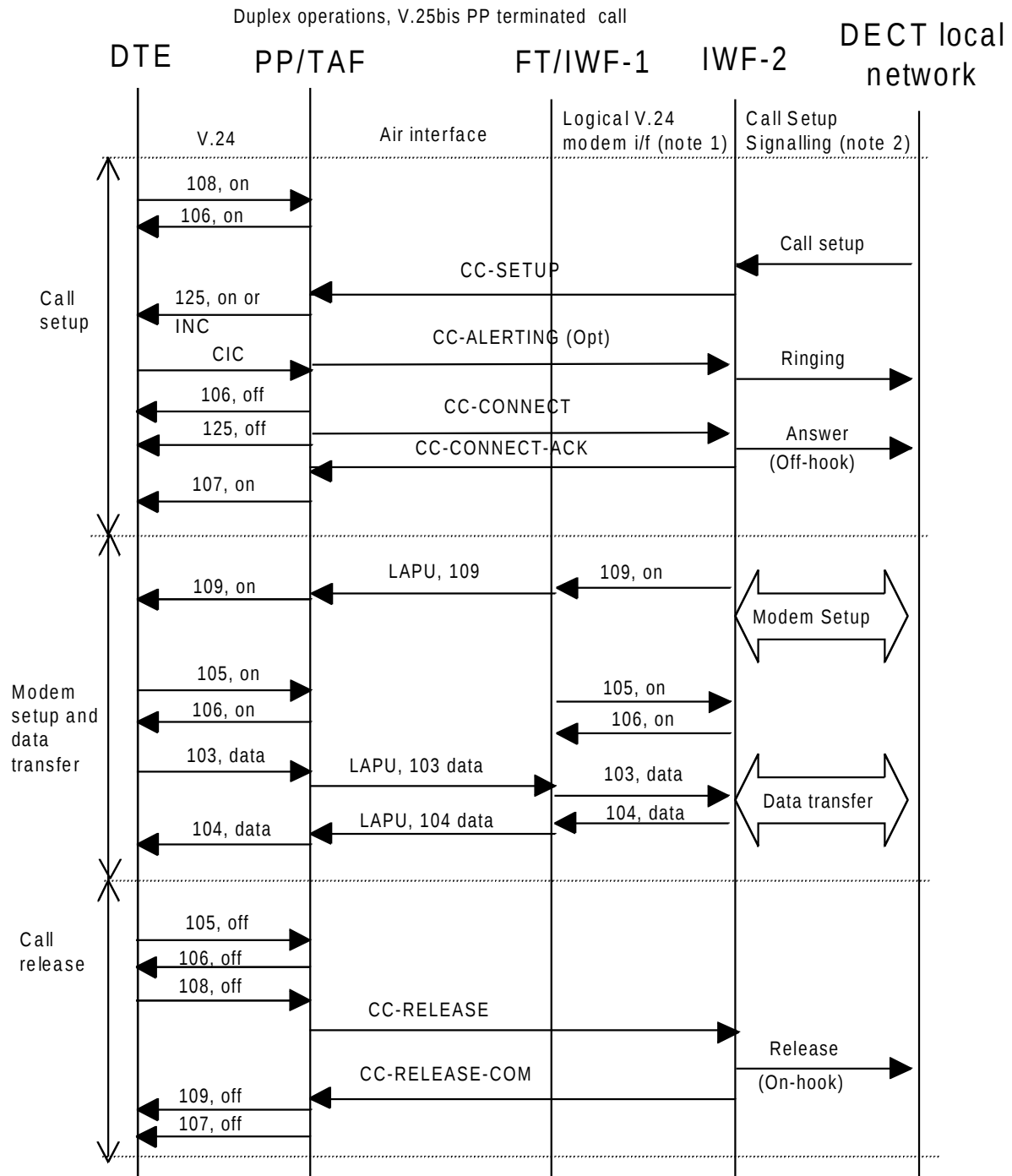


NOTE 1: The logical V.24 interface corresponds to the R reference point in the Reference Configuration shown in figure C.6. This shall result in transmission and reception of the appropriate voice-band modems tones in accordance with the relevant ITU V.series modem recommendation as selected and instantiated during the DECT call setup procedures.

NOTE 2: The call setup sequence shown here is for illustrative purposes only. The actual signalling towards the network will depend on the DECT network and its interaction with the DECT signalling shall be in accordance with subclause C.4.5.4.2.

NOTE 3: The "Answer" indication is specified in subclause C.4.5.4.2.

Figure C.7: Duplex operations V.25bis PP originated call



NOTE 1: The logical V.24 interface corresponds to the R reference point in the Reference Configuration shown in figure C.6. This shall result in transmission and reception of the appropriate voice-band modems tones in accordance with the relevant ITU V.series modem recommendation as selected and instantiated during the DECT call setup procedures.

NOTE 2: The call setup sequence shown here is for illustrative purposes only. The actual signalling towards the network will depend on the DECT network and its interaction with the DECT signalling shall be in accordance with subclause C.4.5.4.2.

Figure C.8: Duplex operations V.25bis PP originated call

Annex D (normative): Service C2: Fixed radio Termination (FT) DLC PICS proforma

Notwithstanding the provisions of the copyright clause related to the text of the present EN (see front page), ETSI grants users of the present document to freely reproduce the PICS proforma in this annex so that it can be used for its intended purposes and may further publish the completed PICS.

The references given in the tables of this annex refer to clauses and subclauses of EN 300 175-4 [4], where not differently specified.

The tables hereinafter contained extend the set of PICS tables, regarded to the DLC, that is specified in EN 300 435 [11]. The extension is done both by the overriding of pre-existing tables and by adding of new tables not present in EN 300 435 [11] at the date of publishing of the present document.

Throughout the annex tables overridden maintain their original name (that is the one they have in ETS 300 476-5 , whilst new tables have a caption valid only in the present document. Q.xx is the number format for those new tables.

D.1 Standardized symbols for the status column

The standardized symbols for the status column are as follows:

- m or M for mandatory (the capability is required to be implemented);
- o or O for optional (Boolean) (the capability may be implemented);
- x or X for prohibited or excluded use (the capability may not be used in a given context);
- N/A, N/A or - (dash) for not applicable (the capability is not allowed because the underlying DECT layers (service provider) cannot handle it or the requirement belongs to an application i.e. does not belong to the data link control layer);
- c or C for conditional (the capability depends on the selection of other optional and/or conditional items);
- i or I for out of scope (the capability is allowed to be implemented but is not called upon by the profile functionality).

If appropriate, a "C" followed by an integer is placed in the status column, providing a reference to a conditional status expression defined elsewhere in the PICS proforma. The following conditions are applicable throughout the entire annex:

Condition identifier	Condition definition
C1	IF D.102 THEN M ELSE I
C2	IF D.107 THEN M ELSE I
C3	IF D.108 THEN M ELSE I
C4	IF C _p provided THEN M else I
C5	IF D.106 THEN M else I
C6	IF D.102 and D.106 THEN M else I
C7	IF D.102 and D.105 THEN M else I

D.2 Capabilities

D.2.1 Major capabilities

D.2.1.1 Services

Table A.9: Data link services

Item	Data link services	Ref.	Status	Support
1	C-plane services	5	M	
2	U-plane services	11	M	

Table A.10: C-plane services

Prerequisite: A.9/1				
Item	C-plane services	Ref.	Status	Support
1	Class U service	5.1	I	
2	Class A service	5.1	M	
3	Class B service	5.1	C1	
4	Broadcast service	5.2, 9.4	M	

Table A.11: U-plane services

Prerequisite: A.9/2				
Item	U-plane services	Ref.	Status	Support
1	LU1 - Transparent Unprotected service (TRUP)	11.2	I	
2	LU2 - Frame Relay service (FREL)	11.3	M	
3	LU3 - Frame Switching service (FSWI)	11.4	M	
4	LU4 - Forward error correction service (FEC)	11.5	I	
5	LU5 - Basic Rate Adaptation (BRAT) protected service	11.6	I	
6	LU5 - Basic Rate Adaptation (BRAT) unprotected service	11.6	I	
7	LU6 - Secondary Rate Adaptation service (SRAT)	11.7	I	
8	LU7 - 64kbit/s data bearer service	11.9	I	
9	LU16 - Escape for non-standard family (ESC)	11.8	I	

Table A.12 Management services

Item	Management services	Ref.	Status	Support
1	MAC connection management	10.2	M	
2	DLC C-plane management	10.3	M	
3	DLC U-plane management	10.4	M	
4	Connection handover management	10.5	C5	
5	Connection ciphering management	10.6	C2	

D.2.1.2 Procedures

D.2.1.2.1 Generic signalling procedures

Table A.13: Generic signalling procedures

Prerequisite: A.10/2 OR A.10/3				
Item	Generic signalling procedures	Ref.	Status	Supp.
1	Segmentation of NWK information	5.1.1, 7.7	M	
2	C _S channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.2	M	
3	C _F channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.1	C4	

D.2.1.2.2 Class A procedures

Table A.15: Class A procedures

Prerequisite: A.10/2				
Item	Class A procedures	Ref.	Status	Support
1	Class A link establishment	9.2.3.1	M	
2	Class A acknowledged information transfer	9.2.3.2, 9.2.3.3, 9.2.3.4, 9.2.3.5, 9.2.3.6	M	
3	Class A link release	9.2.3.7	M	
4	Class A link re-establishment	9.2.3.8	M	
5	Class A connection handover	9.2.7.3, 9.2.7.3.1	C5	

D.2.1.2.3 Class B procedures

Table A.16: Class B procedures

Prerequisite: A.10/3				
Item	Class B procedures	Ref.	Status	Support
1	Class B multiple frame establishment	9.2.4	C1	
2	Class B information transfer	9.2.5	C1	
3	Class B link release	9.2.6	C1	
4	Class B link suspension and resumption	9.2.7	C1	
5	Class B connection handover	9.2.7.3, 9.2.7.3.2	C6	

D.2.1.2.4 Broadcast procedures

Table A.17: Broadcast procedures

Prerequisite: A.10/4				
Item	Broadcast procedures	Ref.	Status	Support
1	Normal operation	9.4.1.1	M	
2	Expedited operation	9.4.2.1	M	

D.2.1.2.5 LU3 procedures

In this subclause, references are within the present document.

Table Q.1: LU3 procedures

Prerequisite: A.11/3				
Item	LU3 procedures	Ref.	Status	Support
1	Establishing LAP-U multiple frame operation	A.5.2.1	M	
2	Link maintenance and information transfer in LAP-U multiple frame operations	A.5.2.3	M	
3	Release of LAP-U multiple frame operation	A.5.2.4	M	
4	Re-establishment of LAP-U multiple frame operation	A.5.2.5	M	

D.2.1.2.6 Management procedures

Table A.31: MAC connection management procedures

Prerequisite: A.30/1				
Item	MAC connection management procedures	Ref.	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	M	
4	MAC connection identification	10.2.4	M	
5	Selection of logical channels (C_S or C_F)	10.2.5	C6	

Table A.32: DLC C-plane management procedures

Prerequisite: A.30/2				
Item	DLC C-plane management procedures	Ref.	Status	Support
1	Provision of link signature	10.3.1	M	
2	Routing of connection oriented links	10.3.2	C6	
3	Routing of connectionless links	10.3.3	I	

Table A.33: DLC U-plane management procedures

Prerequisite: A.30/3				
Item	DLC U-plane management procedures	Ref.	Status	Support
1	U-plane establishment	10.4.1	M	
2	U-plane release	10.4.2	M	
3	U-plane suspend and resume	10.4.3	M	

Table A.34: Connection ciphering management procedures

Prerequisite: A.30/5				
Item	Connection ciphering management procedures	Ref.	Status	Support
1	Providing a key to the MAC layer	10.6.1	M	
2	Starting the ciphering	10.6.2	M	
3	Stopping the ciphering	10.6.2	C3	
4	Connection handover	10.6.3	C3401	

C3401: IF A.30/4 THEN M ELSE N/A.

Table Q.2: LAP-U management procedures

Prerequisite: A.11/3				
Item	LAP-U management procedures	Ref.	Status	Support
1	General issues	A.6 (note)	M	
2	LU3 establishment	A.6.1 (note)	M	
3	LU3 release	A.6.2 (note)	M	

NOTE: The reference is within the present document.

D.2.2 Protocol parameters

D.2.2.1 U-plane timers

Table A.36: U-plane timers

Prerequisite: A.9/2						
Item	U-plane timers	Ref.	Status	Supp.	Value Allowed	Value Supported
1	DLU.01	A.1	C3601		2 s	
2	DLU.02	B (note)	M		2 s	
3	DLU.03	B (note)	M		2 s	

NOTE: The reference is within the present document.

C3601: IF A.43/4 OR A.43/5 OR A.43/6 THEN M ELSE N/A.

D.2.2.2 LU3 parameters

In this subclause, references are within the present document.

Table Q.3: LAP-U Frame type

Prerequisite: A.11/3				
Item	LAP-U Frame type	Ref.	Status	Support
1	FAU	A.2	M	

D.2.3 Protocol PDU s

D.2.3.1 U-plane PDUs

D.2.3.1.1 FAU Frame structure

In this subclause, references are within the present document.

Table Q.4: Frame structures (Receipt P to F)

Prerequisite: Q.3/1				
Item	Frame Structures	Ref.	Status	Support
1	Frame structure of format type FA.	A.2, A.2.1	M	

Table Q.5: Frame structures (Sending F to P)

Prerequisite: Q.3/1				
Item	Frame Structures	Ref.	Status	Support
1	Frame structure of format type FA.	A.2, A.2.1	M	

Table Q.6: Frame format type FAU (Receipt P to F)

Prerequisite: Q.4/1				
Item	Frame elements	Ref.	Status	Support
1	Address field	A.2, A.2.1	M	
2	Control field	A.2, A.2.1	M	
4	Information field	A.2, A.2.1	CQ601	
6	Checksum field	A.2, A.2.1	M	

CQ601: IF Q.7/1 THEN M ELSE x.

Table Q.7: Frame format type FAU (Sending F to P)

Prerequisite: Q.5/1				
Item	Frame elements	Ref.	Status	Support
1	Address field	A.2, A.2.1	M	
2	Control field	A.2, A.2.1	M	
4	Information field	A.2, A.2.1	CQ701	
6	Checksum field	A.2, A.2.1	M	

CQ701: IF Q.7/1 THEN M ELSE x.

D.2.3.1.2 LU3 Messages

In this and all subsequent subclause, references are within the present document.

D.2.3.1.2.1 LAP-U Message support

Table Q.8: LAP-U messages support (Receipt P to F)

Prerequisite: A.11/3				
Item	LAP-U messages	Ref.	Status	Support
1	I-command	A.3.6, A.3.6.1	M	
2	RR-command / response	A.3.6, A.3.6.2	M	
3	RNR-command / response	A.3.6, A.3.6.3	M	
4	REJ-command / response	A.3.6, A.3.6.4	M	
5	SABM-command	A.3.6, A.3.6.5	M	
6	UA-response	A.3.6, A.3.6.6	M	

Table Q.9: LAP-U messages support (Sending F to P)

Prerequisite: A.11/3				
Item	LAP-U messages	Ref.	Status	Support
1	I-command	A.3.6, A.3.6.1	M	
2	RR-command / response	A.3.6, A.3.6.2	M	
3	RNR-command / response	A.3.6, A.3.6.3	M	
4	REJ-command / response	A.3.6, A.3.6.4	M	
5	SABM-command	A.3.6, A.3.6.5	M	
6	UA-response	A.3.6, A.3.6.6	M	

D.2.3.1.2.2 LAP-U I-command

Table Q.10: LAP-U I-command (Numbered Information) (Receipt P to F)

Prerequisite: Q.8/1				
Item	LAP-U I-command - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Information field	A.2.1, A.2.2	M	
4	Checksum field	A.3.5	M	

Table Q.11: LAP-U I-command (Numbered Information) (Sending F to P)

Prerequisite: Q.9/1				
Item	LAP-U I-command - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Information field	A.2.1, A.2.2	M	
4	Checksum field	A.3.5	M	

Table Q.12: LAP-U I-command Control field (Receipt P to F)

Prerequisite: Q.10/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'0'B	
2	N(S)	7.4, 7.5.2.4	M		'000'B .. '111'B	
3	P	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.12 are with EN 300 175-4 [4].

Table Q.13: LAP-U I-command Control field (Sending F to P)

Prerequisite: Q.11/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'0'B	
2	N(S)	7.4, 7.5.2.4	M		'000'B .. '111'B	
3	P	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.13 are with EN 300 175-4 [4].

Table Q.14: LAP-U I-command Address field (Receipt P to F)

Prerequisite: Q.10/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B, '11'B	
4	M	A.3.2, A.3.3.5	M		'0'B, '1'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.15: LAP-U I-command Address field (Sending F to P)

Prerequisite: Q.11/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B, '11'B	
4	M	A.3.2, A.3.3.5	M		'0'B, '1'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

D.2.3.1.2.3 LAP-U RR command / response

Table Q.16: LAP-U RR-command / response (Receive ready) (Receipt P to F)

Prerequisite: Q.8/2				
Item	RR-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.17: LAP-U RR-command / response (Receive ready) (Sending F to P)

Prerequisite: Q.9/2				
Item	RR-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.18: LAP-U RR Control field (Receipt P to F)

Prerequisite: Q.16/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'00'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.18 are with EN 300 175-4 [4].

Table Q.19: LAP-U RR Control field (Sending F to P)

Prerequisite: Q.17/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'00'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.19 are with EN 300 175-4 [4].

Table Q.20: LAP-U Class B RR Address field (Receipt P to F)

Prerequisite: Q.16/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.21: LAP-U RR Address field (Sending F to P)

Prerequisite: Q.17/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

D.2.3.1.2.4 LAP-U RNR command / response

Table Q.22: LAP-U RNR command / response (Receive Not Ready) (Receipt P to F)

Prerequisite: Q.8/3				
Item	RR-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.23: LAP-U RNR command / response (Receive Not Ready) (Sending F to P)

Prerequisite: Q.9/3				
Item	RR-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.24: LAP-U RNR Control field (Receipt P to F)

Prerequisite: Q.22/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'01'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.24 are with EN 300 175-4 [4].

Table Q.25: LAP-U RNR Control field (Sending F to P)

Prerequisite: Q.23/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'01'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.25 are with EN 300 175-4 [4].

Table Q.26: LAP-U RNR Address field (Receipt P to F)

Prerequisite: Q.22/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.27: LAP-U RNR Address field (Sending F to P)

Prerequisite: Q.23/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

D.2.3.1.2.5 LAP-U REJ command / response

Table Q.28: LAP-U REJ command / response (Reject) (Receipt P to F)

Prerequisite: Q.8/4				
Item	REJ-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.29: LAP-U REJ command / response (Reject) (Sending F to P)

Prerequisite: Q.9/4				
Item	REJ-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.30: LAP-U REJ Control field (Receipt P to F)

Prerequisite: Q.28/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'10'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.30 are with EN 300 175-4 [4].

Table Q.31: LAP-U REJ Control field (Sending F to P)

Prerequisite: Q.29/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'10'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.31 are with EN 300 175-4 [4].

Table Q.32: LAP-U REJ Address field (Receipt P to F)

Prerequisite: Q.28/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.33: LAP-U REJ Address field (Sending F to P)

Prerequisite: Q.29/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

D.2.3.1.2.6 LAP-U SABM command

Table Q.34: LAP-U SABM command (Set Asynchronous Balanced Mode) (Receipt P to F)

Prerequisite: Q.8/5				
Item	SABM-command - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.35: LAP-U SABM command (Set Asynchronous Balanced Mode) (Sending F to P)

Prerequisite: Q.9/5				
Item	SABM-command - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.36: LAP-U SABM Control field (Receipt P to F)

Prerequisite: Q.34/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'11'B	
2	U bits part 1	7.4, 7.11	M		'11'B	
3	P	7.4, 7.5.1, 9.2.1.2	M		'1'B	
4	U bits part 2	7.4, 7.11	M		'001'B	

References in table Q.36 are with EN 300 175-4 [4].

Table Q.37: LAP-U SABM Control field (Sending F to P)

Prerequisite: Q.35/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'11'B	
2	U bits part 1	7.4, 7.11	M		'11'B	
3	P	7.4, 7.5.1, 9.2.1.2	M		'1'B	
4	U bits part 2	7.4, 7.11	M		'001'B	

References in table Q.37 are with EN 300 175-4 [4].

Table Q.38: LAP-U SABM Address field (Receipt P to F)

Prerequisite: Q.34/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.39: LAP-U SABM Address field (Sending F to P)

Prerequisite: Q.35/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

D.2.3.1.2.7 LAP-U UA response

Table Q.40: LAP-U UA-response (Unnumbered ACK) (Receipt P to F)

Prerequisite: Q.8/6				
Item	UA-response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.41: LAP-U UA-response (Unnumbered ACK) (Sending F to P)

Prerequisite: Q.9/6				
Item	UA-response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.42: LAP-U UA Control field (Receipt P to F)

Prerequisite: Q.40/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'11'B	
2	U bits part 1	7.4, 7.11	M		'00'B	
3	F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	U bits part 2	7.4, 7.11	M		'011'B	

References in table Q.40 are with EN 300 175-4 [4].

Table Q.43: LAP-U UA Control field (Sending F to P)

Prerequisite: Q.41/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'11'B	
2	U bits part 1	7.4, 7.11	M		'00'B	
3	F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	U bits part 2	7.4, 7.11	M		'011'B	

References in table Q.41 are with EN 300 175-4 [4].

Table Q.44: LAP-U UA Address field (Receipt P to F)

Prerequisite: Q.40/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.45: LAP-U UA Address field (Sending F to P)

Prerequisite: Q.41/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

D.2.4 Protocol error handling

D.2.4.1 LAP-U error handling

Table Q.46: LAP-U error handling

Prerequisite: A.11/3				
Item	LAP-U error handling	Ref.	Status	Support
1	N(S) sequence error	A.5.2.6.2.1 (note)	M	
2	N(R) sequence error	A.5.2.6.2.2 (note)	M	
3	Timer recovery condition	A.5.2.6.2.3 (note)	M	
NOTE: The reference is within the present document.				

Annex E (normative): Service M: Portable radio Termination (PT) DLC PICS proforma

Notwithstanding the provisions of the copyright clause related to the text of the present EN (see front page), ETSI grants users of the present document to freely reproduce the PICS proforma in this annex so that it can be used for its intended purposes and may further publish the completed PICS.

The references given in the tables of this annex refer to clauses and subclauses of EN 300 175-4 [4], where not differently specified.

The tables hereinafter contained extend the set of PICS tables, regarded to the DLC, that is specified in EN 300 435 [11]. The extension is done both by the overriding of pre-existing tables and by adding of new tables not present in EN 300 435 [11] at the date of publishing of the present document.

Throughout the annex tables overridden maintain their original name (that is the one they have in ETS 300 476-2, whilst new tables have a caption valid only in the present document. Q.xx is the number format for those new tables.

E.1 Standardized symbols for the status column

The standardized symbols for the status column are as follows:

- M or m for mandatory (the capability is required to be implemented);
- o or O for optional (Boolean) (the capability may be implemented);
- x or X for prohibited or excluded use (the capability may not be used in a given context);
- N/A, N/A or - (dash) for not applicable (the capability is not allowed because the underlying DECT layers (service provider) cannot handle it or the requirement belongs to an application i.e. does not belong to the data link control layer);
- c or C for conditional (the capability depends on the selection of other optional and/or conditional items);
- i or I for out of scope (the capability is allowed to be implemented but is not called upon by the profile functionality).

If appropriate, a "C" followed by an integer is placed in the status column, providing a reference to a conditional status expression defined elsewhere in the PICS proforma. The following conditions are applicable throughout the entire document.

Condition identifier	Condition definition
C1	IF D.102 THEN M ELSE I
C2	IF D.107 THEN M ELSE I
C3	IF D.108 THEN M ELSE I
C4	IF C _F provided THEN M else I

E.2 Capabilities

E.2.1 Major capabilities

E.2.1.1 Services

Table A.9: Data link services

Item	Data link services	Ref.	Status	Support
1	C-plane services	5	M	
2	U-plane services	11	M	

Table A.10: C-plane services

Prerequisite: A.9/1				
Item	C-plane services	Ref.	Status	Support
1	Class U service	5.1	I	
2	Class A service	5.1	M	
3	Class B service	5.1	C1	
4	Broadcast service	5.2, 9.4	M	

Table A.11: U-plane services

Prerequisite: A.9/2				
Item	U-plane services	Ref.	Status	Support
1	LU1 - Transparent Unprotected service (TRUP)	11.2	I	
2	LU2 - Frame Relay service (FREL)	11.3	M	
3	LU3 - Frame Switching service (FSWI)	11.4	M	
4	LU4 - Forward error correction service (FEC)	11.5	I	
5	LU5 - Basic Rate Adaptation (BRAT) protected service	11.6	I	
6	LU5 - Basic Rate Adaptation (BRAT) unprotected service	11.6	I	
7	LU6 - Secondary Rate Adaptation service (SRAT)	11.7	I	
8	LU7 - 64kbit/s data bearer service	11.9	I	
9	LU16 - Escape for non-standard family (ESC)	11.8	I	

Table A.12: Management services

Item	Management services	Ref.	Status	Support
1	MAC connection management	10.2	M	
2	DLC C-plane management	10.3	M	
3	DLC U-plane management	10.4	M	
4	Connection handover management	10.5	M	
5	Connection ciphering management	10.6	M	

E.2.1.2 Procedures

E.2.1.2.1 Generic signalling procedures

Table A.13: Generic signalling procedures

Prerequisite: A.10/2 OR A.10/3				
Item	Generic signalling procedures	Ref.	Status	Supp.
1	Segmentation of NWK information	5.1.1, 7.7	M	
2	C _S channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.2	M	
3	C _F channel fragmentation and recombination	6.1.2, 6.1.3, 6.1.4, 6.1.4.1	C3	

E.2.1.2.2 Class A procedures

Table A.15: Class A procedures

Prerequisite: A.10/2				
Item	Class A procedures	Ref.	Status	Support
1	Class A link establishment	9.2.3.1	M	
2	Class A acknowledged information transfer	9.2.3.2, 9.2.3.3, 9.2.3.4, 9.2.3.5, 9.2.3.6	M	
3	Class A link release	9.2.3.7	M	
4	Class A link re-establishment	9.2.3.8	M	
5	Class A connection handover	9.2.7.3, 9.2.7.3.1	M	

E.2.1.2.3 Class B procedures

Table A.16: Class B procedures

Prerequisite: A.10/3				
Item	Class B procedures	Ref.	Status	Support
1	Class B multiple frame establishment	9.2.4	C1	
2	Class B information transfer	9.2.5	C1	
3	Class B link release	9.2.6	C1	
4	Class B link suspension and resumption	9.2.7	C1	
5	Class B connection handover	9.2.7.3, 9.2.7.3.2	C1	

E.2.1.2.4 Broadcast procedures

Table A.17: Broadcast procedures

Prerequisite: A.10/4				
Item	Broadcast procedures	Ref.	Status	Support
1	Normal operation	9.4.1.1	M	
2	Expedited operation	9.4.2.1	M	

E.2.1.2.5 LU3 procedures

In this subclause, references are within the present document.

Table Q.1: LU3 procedures

Prerequisite: A.11/3				
Item	LU3 procedures	Ref.	Status	Support
1	Establishing LAP-U multiple frame operation	A.5.2.1	M	
2	Link maintenance and information transfer in LAP-U multiple frame operations	A.5.2.3	M	
3	Release of LAP-U multiple frame operation	A.5.2.4	M	
4	Re-establishment of LAP-U multiple frame operation	A.5.2.5	M	

E.2.1.2.6 Management procedures

Table A.31: MAC connection management procedures

Prerequisite: A.30/1				
Item	MAC connection management procedures	Ref.	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	M	
4	MAC connection identification	10.2.4	M	
5	Selection of logical channels (C_S or C_F)	10.2.5	C1	

Table A.32: DLC C-plane management procedures

Prerequisite: A.30/2				
Item	DLC C-plane management procedures	Ref.	Status	Support
1	Provision of link signature	10.3.1	M	
2	Routing of connection oriented links	10.3.2	C1	
3	Routing of connectionless links	10.3.3	I	

Table A.33: DLC U-plane management procedures

Prerequisite: A.30/3				
Item	DLC U-plane management procedures	Ref.	Status	Support
1	U-plane establishment	10.4.1	M	
2	U-plane release	10.4.2	M	
3	U-plane suspend and resume	10.4.3	M	

Table A.34: Connection ciphering management procedures

Prerequisite: A.30/5				
Item	Connection ciphering management procedures	Ref.	Status	Support
1	Providing a key to the MAC layer	10.6.1	M	
2	Starting the ciphering	10.6.2	M	
3	Stopping the ciphering	10.6.2	C2	
4	Connection handover	10.6.3	C2401	

C2401: IF A.30/4 THEN M ELSE N/A.

Table Q.2: LAP-U management procedures

Prerequisite: A.11/3				
Item	LAP-U management procedures	Ref.	Status	Support
1	General issues	A.6 (1)	M	
2	LU3 establishment	A.6.1 (1)	M	
3	LU3 release	A.6.2 (1)	M	

NOTE: The reference is within the present document.

E.2.2 Protocol parameters

E.2.2.1 U-plane timers

Table A.36: U-plane timers

Prerequisite: A.9/2						
Item	U-plane timers	Ref.	Status	Supp.	Value Allowed	Value Supported
1	DLU.01	A.1	C2601		2 s	
2	DLU.02	B (1)	M		2 s	
3	DLU.03	B (1)	M		2 s	

C2601: IF A.43/4 OR A.43/5 OR A.43/6 THEN M ELSE N/A.

NOTE: The reference is within the present document.

E.2.2.2 LU3 parameters

In this subclause, references are within the present document.

Table Q.3: LAP-U Frame type

Prerequisite: A.11/3				
Item	LAP-U Frame type	Ref.	Status	Support
1	FAU	A.2	M	

E.2.3 Protocol PDUs

E.2.3.1 U-plane PDUs

E.2.3.1.1 FAU Frame structure

In this subclause, references are within the present document.

Table Q.4: Frame structures (Sending P to F)

Prerequisite: Q.3/1				
Item	Frame Structures	Ref.	Status	Support
1	Frame structure of format type FA.	A.2, A.2.1	M	

Table Q.5: Frame structures (Receipt F to P)

Prerequisite: Q.3/1				
Item	Frame Structures	Ref.	Status	Support
1	Frame structure of format type FA.	A.2, A.2.1	M	

Table Q.6: Frame format type FAU (Sending P to F)

Prerequisite: Q.4/1				
Item	Frame elements	Ref.	Status	Support
1	Address field	A.2, A.2.1	M	
2	Control field	A.2, A.2.1	M	
4	Information field	A.2, A.2.1	CQ601	
6	Checksum field	A.2, A.2.1	M	

CQ601: IF Q.7/1 THEN M ELSE x.

Table Q.7: Frame format type FAU (Receipt F to P)

Prerequisite: Q.5/1				
Item	Frame elements	Ref.	Status	Support
1	Address field	A.2, A.2.1	M	
2	Control field	A.2, A.2.1	M	
4	Information field	A.2, A.2.1	CQ701	
6	Checksum field	A.2, A.2.1	M	

CQ701: IF Q.7/1 THEN M ELSE x.

E.2.3.1.2 LU3 Messages

In this and all subsequent subclause, references are within the present document.

E.2.3.1.2.1 LAP-U Message support

Table Q.8: LAP-U messages support (Sending P to F)

Prerequisite: A.11/3				
Item	LAP-U messages	Ref.	Status	Support
1	I-command	A.3.6, A.3.6.1	M	
2	RR-command / response	A.3.6, A.3.6.2	M	
3	RNR-command / response	A.3.6, A.3.6.3	M	
4	REJ-command / response	A.3.6, A.3.6.4	M	
5	SABM-command	A.3.6, A.3.6.5	M	
6	UA-response	A.3.6, A.3.6.6	M	

Table Q.9: LAP-U messages support (Receipt F to P)

Prerequisite: A.11/3				
Item	LAP-U messages	Ref.	Status	Support
1	I-command	A.3.6, A.3.6.1	M	
2	RR-command / response	A.3.6, A.3.6.2	M	
3	RNR-command / response	A.3.6, A.3.6.3	M	
4	REJ-command / response	A.3.6, A.3.6.4	M	
5	SABM-command	A.3.6, A.3.6.5	M	
6	UA-response	A.3.6, A.3.6.6	M	

E.2.3.1.2.2 LAP-U I-command

Table Q.10: LAP-U I-command (Numbered Information) (Sending P to F)

Prerequisite: Q.8/1				
Item	LAP-U I-command - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Information field	A.2.1, A.2.2	M	
4	Checksum field	A.3.5	M	

Table Q.11: LAP-U I-command (Numbered Information) (Receipt F to P)

Prerequisite: Q.9/1				
Item	LAP-U I-command - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Information field	A.2.1, A.2.2	M	
4	Checksum field	A.3.5	M	

Table Q.12: LAP-U I-command Control field (Sending P to F)

Prerequisite: Q.10/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'0'B	
2	N(S)	7.4, 7.5.2.4	M		'000'B .. '111'B	
3	P	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.12 are with EN 300 175-4 [4].

Table Q.13: LAP-U I-command Control field (Receipt F to P)

Prerequisite: Q.11/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'0'B	
2	N(S)	7.4, 7.5.2.4	M		'000'B .. '111'B	
3	P	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.13 are with EN 300 175-4 [4].

Table Q.14: LAP-U I-command Address field (Sending P to F)

Prerequisite: Q.10/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B, '11'B	
4	M	A.3.2, A.3.3.5	M		'0'B, '1'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.15: LAP-U I-command Address field (Receipt F to P)

Prerequisite: Q.11/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B, '11'B	
4	M	A.3.2, A.3.3.5	M		'0'B, '1'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

E.2.3.1.2.3 LAP-U RR command / response

Table Q.16: LAP-U RR-command / response (Receive ready) (Sending P to F)

Prerequisite: Q.8/2				
Item	RR-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.17: LAP-U RR-command / response (Receive ready) (Receipt F to P)

Prerequisite: Q.9/2				
Item	RR-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.18: LAP-U RR Control field (Sending P to F)

Prerequisite: Q.16/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'00'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.18 are with EN 300 175-4 [4].

Table Q.19: LAP-U RR Control field (Receipt F to P)

Prerequisite: Q.17/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'00'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.19 are with EN 300 175-4 [4].

Table Q.20: LAP-U Class B RR Address field (Sending P to F)

Prerequisite: Q.16/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.21: LAP-U RR Address field (Receipt F to P)

Prerequisite: Q.17/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

E.2.3.1.2.4 LAP-U RNR command / response

Table Q.22: LAP-U RNR command / response (Receive Not Ready) (Sending P to F)

Prerequisite: Q.8/3				
Item	RR-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.23: LAP-U RNR command / response (Receive Not Ready) (Receipt F to P)

Prerequisite: Q.9/3				
Item	RR-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.24: LAP-U RNR Control field (Sending P to F)

Prerequisite: Q.22/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'01'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.24 are with EN 300 175-4 [4].

Table Q.25: LAP-U RNR Control field (Receipt F to P)

Prerequisite: Q.23/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	m		'01'B	
2	S bits	7.4, 7.11	m		'01'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	m		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	m		'000'B .. '111'B	

References in table Q.25 are with EN 300 175-4 [4].

Table Q.26: LAP-U RNR Address field (Sending P to F)

Prerequisite: Q.22/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.27: LAP-U RNR Address field (Receipt F to P)

Prerequisite: Q.23/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

E.2.3.1.2.5 LAP-U REJ command / response

Table Q.28: LAP-U REJ command / response (Reject) (Sending P to F)

Prerequisite: Q.8/4				
Item	REJ-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.29: LAP-U REJ command / response (Reject) (Receipt F to P)

Prerequisite: Q.9/4				
Item	REJ-command / response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.30: LAP-U REJ Control field (Sending P to F)

Prerequisite: Q.28/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'10'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.30 are with EN 300 175-4 [4].

Table Q.31: LAP-U REJ Control field (Receipt F to P)

Prerequisite: Q.29/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'01'B	
2	S bits	7.4, 7.11	M		'10'B	
3	P/F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	N(R)	7.4, 7.5.2.6	M		'000'B .. '111'B	

References in table Q.31 are with EN 300 175-4 [4].

Table Q.32: LAP-U REJ Address field (Sending P to F)

Prerequisite: Q.28/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.33: LAP-U REJ Address field (Receipt F to P)

Prerequisite: Q.29/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B, '1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

E.2.3.1.2.6 LAP-U SABM command

Table Q.34: LAP-U SABM command (Set Asynchronous Balanced Mode) (Sending P to F)

Prerequisite: Q.8/5				
Item	SABM-command - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.35: LAP-U SABM command (Set Asynchronous Balanced Mode) (Receipt F to P)

Prerequisite: Q.9/5				
Item	SABM-command - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.36: LAP-U SABM Control field (Sending P to F)

Prerequisite: Q.34/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'11'B	
2	U bits part 1	7.4, 7.11	M		'11'B	
3	P	7.4, 7.5.1, 9.2.1.2	M		'1'B	
4	U bits part 2	7.4, 7.11	M		'001'B	

References in table Q.36 are with EN 300 175-4 [4].

Table Q.37: LAP-U SABM Control field (Receipt F to P)

Prerequisite: Q.35/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'11'B	
2	U bits part 1	7.4, 7.11	M		'11'B	
3	P	7.4, 7.5.1, 9.2.1.2	M		'1'B	
4	U bits part 2	7.4, 7.11	M		'001'B	

References in table Q.37 are with EN 300 175-4 [4].

Table Q.38: LAP-U SABM Address field (Sending P to F)

Prerequisite: Q.34/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.39: LAP-U SABM Address field (Receipt F to P)

Prerequisite: Q.35/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

E.2.3.1.2.7 LAP-U UA response

Table Q.40: LAP-U UA-response (Unnumbered ACK) (Sending P to F)

Prerequisite: Q.8/6				
Item	UA-response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.41: LAP-U UA-response (Unnumbered ACK) (Receipt F to P)

Prerequisite: Q.9/6				
Item	UA-response - Name of field	Ref.	Status	Supp.
1	Address field	A.3.2, A.3.3	M	
2	Control field	A.3.4	M	
3	Checksum field	A.3.5	M	

Table Q.42: LAP-U UA Control field (Sending P to F)

Prerequisite: Q.40/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'11'B	
2	U bits part 1	7.4, 7.11	M		'00'B	
3	F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	U bits part 2	7.4, 7.11	M		'011'B	

References in table Q.40 are with EN 300 175-4 [4].

Table Q.43: LAP-U UA Control field (Receipt F to P)

Prerequisite: Q.41/2						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	Spare field	7.4	M		'11'B	
2	U bits part 1	7.4, 7.11	M		'00'B	
3	F	7.4, 7.5.1, 9.2.1.2	M		'0'B, '1'B	
4	U bits part 2	7.4, 7.11	M		'011'B	

References in table Q.41 are with EN 300 175-4 [4].

Table Q.44: LAP-U UA Address field (Sending P to F)

Prerequisite: Q.40/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'1'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

Table Q.45: LAP-U UA Address field (Receipt F to P)

Prerequisite: Q.41/1						
Item	Name of sub-field	Ref.	Status	Supp.	Value Allowed	Value Supported
1	RES	A.3.2, A.3.3.1	M		'1'B	
2	C/R	A.3.2, A.3.3.2	M		'0'B	
3	SAPI	A.3.2, A.3.3.3	M		'00'B	
4	M	A.3.2, A.3.3.5	M		'0'B	
4	Spare	A.3.2, A.3.3.7	M		'00'B	
5	NLF	A.3.2, A.3.3.4	M		'0'B, '1'B	

E.2.4 Protocol error handling

E.2.4.1 LAP-U error handling

Table Q.46: LAP-U error handling

Prerequisite: A.11/3				
Item	LAP-U error handling	Ref.	Status	Support
1	N(S) sequence error	A.5.2.6.2.1 (1)	M	
2	N(R) sequence error	A.5.2.6.2.2 (1)	M	
3	Timer recovery condition	A.5.2.6.2.3 (1)	M	

NOTE: The reference is within the present document.

Annex F (normative): Service C2:FT profile Requirement List (profile RL) and Protocol Implementation Conformance Statement (PICS) proforma - NWK layer

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

The references given in the tables of this annex refer to clauses and subclauses of EN 300 175-5 [5].

F.1 Standardized symbols for the status column

The standardized symbols for the status column are as follows:

- m or M for mandatory (the capability is required to be implemented);
- o or O for optional (Boolean) (the capability may be implemented);
- x or X for prohibited or excluded use (the capability may not be used in a given context);
- n/a, N/A or - (dash) for not applicable (the capability is not allowed because the underlying DECT layers (service provider) cannot handle it or the requirement belongs to an application i.e. does not belong to the network layer);
- c or C for conditional (the capability depends on the selection of other optional and/or conditional items);
- i or I for out of scope (the capability is allowed to be implemented but is not called upon by the profile functionality).

If appropriate, a "C" followed by an integer is placed in the status column, providing a reference to a conditional status expression defined elsewhere in the PICS proforma. The following conditions are applicable throughout the entire document:

C2: IF "Support for asymmetric connections" then M ELSE I;
 C3: IF "Support for fast setup" then M ELSE I;
 C4: IF "Ciphering PT initiated is supported" then M ELSE O;
 C6: IF "multibearer supported" then M ELSE I;
 C7: IF N.35 then M ELSE I;
 C8: IF "Cost information exchanged supported" then M ELSE I;
 C9: IF "Ciphering FT initiated is supported" then M ELSE O;
 C11m: IF "In call parameter change" then M else I;
 C11o: IF "In call parameter change" then O else I;
 C12: IF "Service suspension and resumption" then M else I;
 C13: IF "Partial Release supported" then M else O.

Ed note: need to refer a MAC service?

F.2 Capabilities

F.2.1 Major capabilities

F.2.1.1 Services

The supplier of the implementation shall state the support of the implementation for each of the following entities, in the table below.

Table F.1: ETS 300 476-4 table A.12: Services supported

Item no.	Name of service	Reference	Protocol Status	Profile Support
1	Call control (CC)	5.2	O	M
2	Call Independent Supplementary Services (CISS)	5.3	O	I
3	Connection Oriented Message Services (COMS)	5.4	O	I
4	Connectionless Message Services (CLMS)	5.5	O	I
5	Mobility management (MM)	5.6	O	M
6	Link control entity (LCE)	5.7	O	M
7	Management (LLME)	15	O	M

F.2.1.2 CC features

Table F.2: ETS 300 476-4 table A.13 CC features supported

Item no.	Call Control features	Reference	Protocol status	Profile support
1	Bell off (alerting)	7.6.8, 9.3.2	o	m
2	Bell on (alerting)	7.6.8, 9.3.2	o	m
3	Control of supervisory tones	7.6.8, 9.3.2	o	i
4	Dial tone detection indication	7.6.8, 9.3.2	o	i
5	Dialled digits (basic)	7.6.6, 7.7.27, 9.3	o	m
6	Dialled digits additional	7.6.6, 7.7.27, 9.3	o	i
7	Dialling delimiter	7.6.2, 9.3.1.5	o	i
8	Dialling delimiter request	7.6.2, 9.3.1.5	o	i
9	Display control characters	7.6.5, 7.7.26, 9.3	o	o
10	Emergency service access request	9.3.1.1	o	i
11	External Handover (inter-cell)	9.3.1.1	o	i
12	Fixed part / portable part capability exchange	9.3.1.1	o	o
13	Go to DTMF (infinite tone length)	7.6.6, 7.7.27, 9.3, D.2.2	o	o
14	Go to DTMF signalling (defined tone length)	7.6.6, 7.7.27, 9.3, D.2.2	o	m
15	Go to Pulse	7.6.6, 7.7.27, 9.3, D.2.2	o	o
16	Group address	6.3.3 [6 - identities]	o	i
17	Incoming call	9.3.2	o	m
18	Internal call	9.3.1, 4.1[13 - GAP]	o	o
19	Off hook	9.3.1.1, 9.3.2.8	o	m
20	On hook (full release)	9.5	o	m
21	Outgoing call	9.3.1	o	m
22	Packet mode	9.7	o	C7
23	Partial release	9.5.1	o	o
24	Pause (dialling pause)	7.6.6, 7.7.27, 9.3, D.2.2	o	o
25	Register recall	7.6.6, 7.7.27, 9.3, D.2.2	o	o
26	Signalling of display characters	7.6.5, 7.7.26, 9.3	o	o
27	Selection of bearer service	9.3.1.1, 9.3.2.1	o	M
28	Service call	9.3.1.1, 4.1[1 - GAP]	o	o
29	Service change	9.6	o	M

F.2.1.3 MM features

Table F.3: ETS 300 476-4 table A.14 MM features supported

Item no.	Mobility Management features	Reference	Protocol status	Profile support
1	Authentication of FT	13.3.3	o	o
2	Authentication of PT	13.3.1	o	m
3	Authentication of user	13.3.2	o	o
4	Encryption activation FT initiated	13.8	o	m
5	Encryption activation PT initiated	13.8	o	o
6	Encryption deactivation FT initiated	13.8	o	o
7	Encryption deactivation PT initiated	13.8	o	o
8	Identification of PP	13.2.1	o	o
9	Inter-operator roaming registration	8.2 [6], 6.5.2 [7 - security], 6.5.4 [7], 7.2 [7]	o	i
10	Location de-registration	13.4.2	o	i
11	Location registration	13.4.1	o	m
12	Multiple subscription registration	4 [6], 6.5.5 [7]	o	n/a
13	On air key allocation	13.6	o	o
14	Service class indication / assignment	13.3.1, 13.3.5	o	m
15	Silent polling	13.2.1, 4.1.23 [9]	o	i
16	Subscription registration procedure on-air	13.5.1	o	m
17	Subscription registration user procedure with DECT authentication module	7.2.3 [7]	o	i
18	Subscription registration user procedures keypad (digit entry only)	7.2.3 [7]	o	i
19	Terminate access rights FT initiated	13.5.2	o	o
20	Terminate access rights PT initiated	13.5.2	o	i
21	ZAP	13.3.1, 13.3.5	o	o
22	MM Partial release	14.2.7	o	m
23	Temporary identity assign	13.2.2	o	i

F.2.1.4 SS features (services)

Table F.4: ETS 300 476-4 table A.15 SS features supported

Item no.	Call Related and Call Independent Supplementary Service features	Reference	Protocol status	Profile support
1	Advice of charge (AOC)	10.6.1	o	i
2	Advice of tariff request	10.6.1	o	i
3	Call Deflection (CD)	10.6.1	o	i
4	Call Forwarding Busy (CFB)	10.6.1	o	i
5	Call Forwarding No Reply (CFNR)	10.6.1	o	i
6	Call Forwarding Unconditional (CFU)	10.6.1	o	i
7	Call Waiting (CW)	10.6.1	o	i
8	Calling Line Identification Presentation (CLIP)	10.6.1	o	i
9	Calling Line Identification Restriction (CLIR)	10.6.1	o	i
10	Closed User Group (CUG)	10.6.1	o	i
11	Completion of Calls to Busy Subscriber (CCBS)	10.6.1	o	i
12	Call Hold (CH)	10.6.1	o	i
13	CONFerence call add-on (CONF)	10.6.1	o	i
14	COConnected Line identification Presentation (COLP)	10.6.1	o	i
15	COConnected Line identification Restriction (COLR)	10.6.1	o	i
16	Control of echo control functions	10.6.2.3	o	i
17	Cost information	10.6.2.4	o	o
18	Credit agency public access service	10.6.1	o	i
19	Credit public access service	10.6.1	o	i
20	Debit public access service	10.6.1	o	i
21	Direct Dialing In (DDI)	10.6.1	o	i
22	Explicit Call Transfer (ECT)	10.6.1	o	i
23	Forced re-connection of held call	10.6.1	o	i
24	FreePHone (FPH)	10.6.1	o	i
25	Hold call (FT to PT)	10.4.1.1	o	i
26	Hold call (PT to FT)	10.4.1.1	o	i
27	Indication of teleservice available request	10.6.1	o	i
28	Indication of teleservices available	10.6.1	o	i
29	Malicious Call Identification (MCID)	10.6.1	o	i
30	Multiple Subscriber Number (MSN)	10.6.1	o	i
31	On-demand (hot bill) public access service- CRSS	10.6.1	o	i
32	Queue management	10.6.2.1	o	i
33	Re-connection of held call (FT to PT)	10.4.1.2	o	i
34	Re-connection of held call (PT to FT)	10.4.1.2	o	i
35	Request for indication of temporary subscriber number- CRSS	10.6.1	o	i
36	Selection of required teleservice	10.6.1	o	i
37	Single step Call Transfer (SCT)	10.6.1	o	i
38	Specific trunk carrier selection	10.3	o	i
39	SUBaddressing (SUB)	10.6.1	o	i
40	Terminal Portability (TP)	10.6.1	o	i
41	Tree ParTY (3TPY)	10.6.1	o	i
42	User to User Signaling UUS	10.6.1	o	i
43	CISS Partial release	14.2.7	o	i
44	Feature key	10.3	o	i
45	Indication of subscriber number	10.3	o	i
46	Register recall	10.3	o	i
47	Specific line selection	10.3	o	i
48	External handover switch	10.3	o	i

F.2.1.5 LCE features

Table F.5: ETS 300 476-4 table A.16 LCE features supported

Item no.	LCE features	Reference	Protocol status	Profile support
1	Connection oriented Link control	14.2	o	m
2	Connectionless oriented Link control	14.3	o	i

F.2.1.6 Procedures

The supplier of the implementation shall state the support of the implementation for each of the following procedures, in the tables below.

Table F.6: ETS 300 476-4 table A.18 CC procedures supported

Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	cc_outgoing_normal_call_request	9.3.1.1	O	M
2	cc_outgoing_emergency_call_request	9.3.1.1	O	I
3	cc_outgoing_external_handover_request	9.3.1.1	O	I
4	cc_outgoing_selection_of_lower_layer_resources	9.3.1.3	O	M
5	cc_outgoing_connection_of_U_plane	9.3.1.4	O	M
6	cc_outgoing_overlap_sending	9.3.1.5	O	M
7	cc_outgoing_call_proceeding	9.3.1.6	O	M
8	cc_outgoing_call_confirmation	9.3.1.7	O	M
9	cc_outgoing_call_connection	9.3.1.8	O	M
10	cc_incoming_call_request	9.3.2.1	O	M
11	cc_incoming_selection_of_lower_layer_resources	9.3.2.3	O	M
12	cc_incoming_connection_of_U_plane	9.3.2.4	O	M
13	cc_incoming_overlap_receiving	9.3.2.5	O	I
14	cc_incoming_call_proceeding	9.3.2.6	O	O
15	cc_incoming_call_confirmation	9.3.2.7	O	M
	cc_incoming_call_connection	9.3.2.8	O	M
16	cc_sending_terminal_capability	9.3.1.1, 9.3.2.9	O	o
17	cc_sending_keypad_info	9.3, 9.4, 9.5	O	O
18	cc_call_information	9.4	O	i
19	cc_normal_call_release	9.5.1	O	M
20	cc_partial_release	9.5.1	O	I
21	cc_abnormal_call_release	9.5.2	O	M
22	cc_release_collisions	9.5.3	O	M
23	cc_bandwidth_changes	9.6.2	O	C6
24	cc_service_re-routing	9.6.3	O	C2
25	cc_service_suspension & resumption	9.6.4	O	C7 OR C12
26	cc_packet_mode_pt_init_access	9.7.2	O	C7
27	cc_packet_mode_ft_init_access	9.7.3	O	C7
28	cc_packet_mode_c_plane_suspend & resume	9.7.4.2	O	C7 OR C12
29	cc_packet_mode_c_plane_suspend & resume	9.7.4.3	O	C7 OR C12
30	cc_timer_f_cc_02_mgt	9.5.1, A.1	O	M
31	cc_timer_f_cc_03_mgt	9.3.1.1, A.1	O	M
32	cc_timer_f_cc_04_mgt	9.3.1.9, 9.3.2.10, A.1	O	I
33	cc_timer_f_cc_01_mgt	9.3.1.5, A.1	O	M
34	cc_internal_call_setup	9.3.1.1	O	o
35	cc_service_call_setup	9.3.1.1	O	o
36	cc_connection_reversal	9.6.2	O	C2
37	cc_service_call_keypad	9.3.1.1	O	o
38	cc_internal_call_keypad	9.3.1.1	O	o
39	pt_alerting	9.3.2.7	O	M
40	display	10.2, 9.3.2.9	O	o

Table F.7: ETS 300 476-4 table A.19 MM procedures supported

Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	mm_identification_of_pt	13.2.1	O	O
2	mm_temporary_identity_assignment	13.2.2	i	i
3	mm_authentication_of_pt	13.3.1	O	M
4	mm_authentication_of_user	13.3.2	O	O
5	mm_authentication_of_ft	13.3.3	O	O
6	mm_location_registration	13.4.1	O	M
7	mm_detach	13.4.2	O	o
8	mm_location_update	13.4.3	O	O
9	mm_obtain_access_rights	13.5.1	O	M
10	mm_pt_init_terminate_access_rights	13.5.2	O	I
11	mm_ft_init_terminate_access_rights	13.5.2	O	O
12	mm_key_allocation	13.6	O	O
13	mm_pt_init_parameter_retrieval	13.7	O	I
14	mm_ft_init_parameter_retrieval	13.7	O	M
15	mm_pt_init_cipher_switching	13.8	O	C4
16	mm_ft_init_cipher_switching	13.8	O	C9
17	mm_zap_increment	13.3.1	o	o
18	mm_dck_storing	13.3.1	o	o
19	mm_dck_sending	13.3.1	o	i
20	mm_service_class_mgt	13.3.1, 13.5.1	o	m
21	mm_partial_release	14.2.7	o	m
22	mm_timer_f_mm_ident1_mgt	13.2.2, 13.4.1, A.5	o	m
23	mm_timer_f_mm_access_2_mgt	13.5.2, A.5	o	o
24	mm_timer_f_mm_auth_1_mgt	13.3.1, 13.6, A.5	o	o
25	mm_timer_f_mm_cipher_1_mgt	13.8, A.5	o	o
26	mm_timer_f_mm_key_1_mgt	13.6, A.5	o	o
27	mm_timer_f_mm_ident.2_mgt	13.2.1, A.5	o	m
28	mm_timer_f_mm_auth_2_mgt	13.2.2, A.5	o	o

Table F.8: ETS 300 476-4 table A.20 SS protocols supported

Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	crss_keypad_protocol	10.2	O	I
2	crss_feature_key_mgt_protocol	10.3	O	C8
3	crss_functional_protocol_smc	10.4.1	O	i
4	ciss_keypad_protocol	10.2	O	I
5	ciss_feature_key_mgt_protocol	10.3	O	I
6	ciss_partial_release	14.2.7	O	I
7	crss_functional_protocol_ciec	10.4.2	O	I
8	ciss_functional_protocol_ciec	10.4.2	O	I

Table F.9: ETS 300 476-4 table A.23 LCE procedures supported

Procedures supported				
Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	Ice_direct_pt_init_link_establishment	14.2.2	O	M
2	Ice_indirect_ft_init_link_establishment	14.2.3	O	M
3	Ice_direct_ft_init_link_establishment	14.2.4	O	C3
4	Ice_link_maintenance	14.2.5	O	M
5	Ice_link_suspend	14.2.6.1	O	I
6	Ice_link_resume	14.2.6.2	O	I
7	Ice_link_release	14.2.7	O	M
8	Ice_link_partial_release	14.2.7	O	M
9	Ice_cl_message_routing	14.3.1	O	I
10	Ice_cl_broadcast_announce	14.3.2	O	I
11	Ice_timer_Ice_01_mgt	14.2.7, A.6	o	m
12	Ice_timer_Ice_02_mgt	14.2.7, A.6	o	m
13	Ice_timer_Ice_03_mgt	14.2.3, A.6	o	m
14	Ice_timer_Ice_04_mgt	14.2.6, A.6	o	i

Table F.10: ETS 300 476-4 table A.24 LLME procedures supported

Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	mgt_prioritized_list_negotiation	15.2.2	O	O
2	mgt_exchanged_attribute_negotiation	15.2.3	O	M
3	mgt_operating_parameter_negotiation	15.2.4	O	M
4	mgt_peer_attribute_negotiation	15.2.5	O	O
5	mgt_service_modification	15.3	O	C2 OR C6 OR C7 OR C12
6	mgt_mm_procedures_priority_mgt	15.5	O	M
7	mgt_mm_cc_coexistence	15.5	O	M
8	mgt_mm_coms_coexistence	15.5	O	I
9	mgt_call_ciphering_mgt	15.6	o	C4 OR C9
10	mgt_external_handover	15.7	O	I
11	mgt_test_call_back	15.8.1	O	I
12	mgt_test_hook_control	15.8.2	O	I
13	mgt_upper_tester	15.8.3	O	I

F.2.2 Messages

The supplier of the implementation shall state whether or not the messages specified by ETS 300 175-5 [5] are supported, in the tables below. The supplier shall indicate the status of support for sending and receiving each message.

F.2.2.1 CC messages

Table F.11: ETS 300 476-4 table A.25 CC receiving (P to F) messages supported

Item	CC receiving (P to F) Message name	Reference	Status	Support
1	CC-SETUP	6.3.2.1	O	M
2	CC-INFormation	6.3.2.2	O	M
3	CC-SETUP-ACKnowledge	6.3.2.3	Ccc17	I
4	CC-CALL-PROCeeding	6.3.2.4	Ccc18	I
5	CC-ALERTING	6.3.2.5	O	M
6	CC-CONNECT	6.3.2.6	O	M
7	CC-CONNECT-ACKnowledge	6.3.2.7	X	
8	CC-RELEASE	6.3.2.8	O	M
9	CC-RELEASE-COMplete	6.3.2.9	O	M
10	CC-SERVICE-CHANGE	6.3.2.10	o	M
11	CC-SERVICE-ACCEPT	6.3.2.11	o	M
12	CC-SERVICE-REJECT	6.3.2.12	o	M
13	CC-NOTIFY	6.3.2.13	X	
14	IWU-INFormation	6.3.2.14	O	I

Table F.12: ETS 300 476-4 table A.25 CC sending (F to P) messages supported

Item	CC sending (F to P) Message name	Reference	Status	Support
1	CC-SETUP	6.3.2.1	O	M
2	CC-INFormation	6.3.2.2	O	C8
3	CC-SETUP-ACKnowledge	6.3.2.3	O	O
4	CC-CALL-PROCeeding	6.3.2.4	O	O
5	CC-ALERTING	6.3.2.5	O	O
6	CC-CONNECT	6.3.2.6	O	M
7	CC-CONNECT-ACKnowledge	6.3.2.7	O	M
8	CC-RELEASE	6.3.2.8	O	M
9	CC-RELEASE-COMplete	6.3.2.9	O	M
10	CC-SERVICE-CHANGE	6.3.2.10	o	M
11	CC-SERVICE-ACCEPT	6.3.2.11	o	M
12	CC-SERVICE-REJECT	6.3.2.12	o	M
13	CC-NOTIFY	6.3.2.13	O	M
14	IWU-INFormation	6.3.2.14	O	I

Table F.13: ETS 300 476-4 table A.26 CC-SETUP receiving (P to F) supported

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, ext	
3	Message Type (MI)	7.4.1	M		5	
4	Portable identity	7.7.30	M			
5	Fixed identity	7.7.18	M			
6	Basic service	7.6.4	M			
6a	Repeat indicator "prioritized list"	7.6.3	O	O		
7	IWU attributes	7.7.21	O	M		
8	Repeat indicator "prioritized list"	7.6.3	O	O		
9	Call attributes	7.7.5	O	O		
10	Repeat indicator "prioritized list"	7.6.3	O	O		
11	Connection attributes	7.7.11	O	M		
12	Cipher info	7.7.10	O	I		
13	Connection identity	7.7.12	O	I		
14	Facility	7.7.15	O	I		
15	Progress Indicator	7.7.31	X			
16	Display	7.5.5	X			
17	Keypad	7.5.5	O	I		
18	Signal	7.6.8	X			
19	Feature Activate	7.7.16	O	C8		
20	Feature Indicate	7.7.17	X			
21	Network parameter	7.7.29	O	I		
22	Terminal capability	7.7.41	O	o		
23	End-to-end compatibility	7.7.14	O	I		
24	Rate parameters	7.7.33	O	I		
25	Transit delay	7.7.42	O	I		
26	Window size	7.7.43	O	M		
27	Calling party number	7.7.9	O	I		
28	Called party number	7.7.7	O	O		
29	Called party subaddress	7.7.8	O	I		
30	Sending complete	7.6.2	O	I		
31	IWU-to-IWU	7.7.23	O	I		
32	IWU-PACKET	7.7.22	O	I		

Table F.14: ETS 300 476-4 table A.28 CC-SETUP sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, ext	
3	Message Type (MI)	7.4.1	M		5	
4	Portable identity	7.7.30	M			
5	Fixed identity	7.7.18	M			
6	Basic service	7.6.4	M			
6a	Repeat indicator	7.6.3	O	O		
7	IWU attributes	7.7.21	O	M		
8	Repeat indicator	7.6.3	O	O		
9	Call attributes	7.7.5	O	O		
10	Repeat indicator	7.6.3	O	I		
11	Connection attributes	7.7.11	O	M		
12	Cipher info	7.7.10	O	I		
13	Connection identity	7.7.12	O	I		
14	Facility	7.7.15	O	I		
15	Progress Indicator	7.7.31	O	I		
16	Display	7.5.5	O	I		
17	Keypad	7.5.5	X			
18	Signal	7.6.8	O			
19	Feature Activate	7.7.16	X			
20	Feature Indicate	7.7.17	O	C8		
21	Network parameter	7.7.29	X			
22	Terminal capability	7.7.41	X			
23	End-to-end compatibility	7.7.14	O	I		
24	Rate parameters	7.7.33	O	I		
25	Transit delay	7.7.42	O	I		
26	Window size	7.7.43	O	M		
27	Calling party number	7.7.9	O	I		
28	Called party number	7.7.7	O	I		
29	Called party subaddress	7.7.8	O	I		
30	Sending complete	7.6.2	O	I		
31	IWU-to-IWU	7.7.23	O	I		
32	IWU-PACKET	7.7.22	O	I		

Table F.15: ETS 300 476-4 table A.29 CC-INFO receiving (P to F) supported

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		123	
4	Location area	7.7.25	O	I		
5	NWK assigned identity	7.7.28	O	I		
6	Facility	7.7.15	O	I		
7	Progress Indicator	7.7.31	X			
8	Display	7.5.5	X			
9	Keypad	7.5.5	O	M		
10	Signal	7.6.8	X			
11	Feature activate	7.7.16	O	C8		
12	Feature indicate	7.7.17	X			
13	Network parameter	7.7.29	O	I		
14	Called party number	7.7.7	O	I		
15	Called party subaddress	7.7.8	O	I		
16	Sending complete	7.6.2	O	I		
17	Test hook control	7.6.10	X			
18	IWU-to-IWU	7.7.23	O	I		
19	IWU-packet	7.7.22	O	I		

Table F.16: ETS 300 476-4 table A.30 CC-INFO sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		123	
4	Location area	7.7.25	X			
5	NWK assigned identity	7.7.28	X			
6	Facility	7.7.15	O	I		
7	Progress Indicator	7.7.31	O	I		
8	Display	7.5.5	O	O		
9	Keypad	7.5.5	X			
10	Signal	7.6.8	O	O		
11	Feature activate	7.7.16	X			
12	Feature indicate	7.7.17	O	C8		
13	Network parameter	7.7.29	X			
14	Called party number	7.7.7	O	I		
15	Called party subaddress	7.7.8	O	I		
16	Sending complete	7.6.2	O	I		
17	Test hook control	7.6.10	O	I		
18	IWU-to-IWU	7.7.23	O	I		
19	IWU-packet	7.7.22	O	I		

Table F.17: ETS 300 476-4 table A.31: CC-SETUP-ACK sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		13	
4	Info type	7.7.20	O	I		
5	Portable identity	7.7.30	O	I		
6	Fixed identity	7.7.18	O	I		
7	Location area	7.7.25	O	I		
7a	IWU attributes	7.7.21	O	O		
8	Call attributes	7.7.5	O	I		
9	Connection attributes	7.7.11	O	O		
10	Connection identity	7.7.12	O	I		
11	Facility	7.7.15	O	I		
12	Progress indicator	7.7.31	O	O		
13	Display	7.5.5	O	I		
14	Signal	7.6.8	O	I		
15	Feature indicate	7.7.17	O	C8		
16	Transit delay	7.7.42	O	I		
17	Window size	7.7.43	O	M		
18	Delimiter request	7.6.2	O	I		
19	IWU-to-IWU	7.7.23	O	I		
20	IWU-packet	7.7.22	O	I		

Table F.18: ETS 300 476-4 table A.32 CC-CALL-PROC sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		2	
3a	IWU attributes	7.7.21	O	O		
4	Call attributes	7.7.5	O	O		
5	Connection attributes	7.7.11	O	O		
6	Connection identity	7.7.12	O	I		
7	Facility	7.7.15	O	I		
8	Progress indicator	7.7.31	O	O		
9	Display	7.5.5	O	I		
10	Signal	7.6.8	O	I		
11	Feature indicate	7.7.17	O	C8		
12	Transit delay	7.7.42	O	I		
13	Window size	7.7.43	O	I		
14	IWU-to-IWU	7.7.23	O	I		
15	IWU-PACKET	7.7.22	O	I		

Table F.19: ETS 300 476-4 table A.33 CC-ALERTING supported

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		1	
3a	IWU attributes	7.7.21	O	O		
4	Call attributes	7.7.5	O	X		
5	Connection attributes	7.7.11	O	O		
6	Connection identity	7.7.12	O	I		
7	Facility	7.7.15	X			
8	Progress Indicator	7.7.31	X			
9	Display	7.5.5	X			
10	Signal	7.6.8	X			
11	Feature indicate	7.7.17	X			
12	Terminal capability	7.7.41	O	I		
13	Transit delay	7.7.42	O	I		
14	Window size	7.7.43	O	I -> O		
15	IWU-to-IWU	7.7.23	O	I		
16	IWU-PACKET	7.7.22	O	I		

Table F.20: ETS 300 476-4 table A.34 CC-ALERTING sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		1	
3a	IWU attributes	7.7.21	O	O		
4	Call attributes	7.7.5	O	I		
5	Connection attributes	7.7.11	O	O		
6	Connection identity	7.7.12	O	I		
7	Facility	7.7.15	O	I		
8	Progress Indicator	7.7.31	O	O		
9	Display	7.5.5	O	I		
10	Signal	7.6.8	O	I		
11	Feature indicate	7.7.17	O	C8		
12	Terminal capability	7.7.41	X			
13	Transit delay	7.7.42	O	I		
14	Window size	7.7.43	O	I->O		
15	IWU-to-IWU	7.7.23	O	I		
16	IWU-PACKET	7.7.22	O	I		

Table F.21: ETS 300 476-4 table A.35 CC-CONNECT receiving (P to F) supported

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		7	
3a	IWU attributes	7.7.21	O	O		
4	Call attributes	7.7.5	O	I		
5	Connection attributes	7.7.11	O	O		
6	Connection identity	7.7.12	O	I		
7	Facility	7.7.15	O	I		
8	Progress indicator	7.7.31	X			
9	Display	7.5.5	X			
10	Signal	7.6.8	X			
11	Feature indicate	7.7.17	X			
12	Terminal capability	7.7.41	O	I		
13	Transit delay	7.7.42	O	I		
14	Window size	7.7.43	O	M		
15	IWU-to-IWU	7.7.23	O	I		
16	IWU-PACKET	7.7.22	O	I		

Table F.22: ETS 300 476-4 table A.36 CC-CONNECT sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		7	
3a	IWU attributes	7.7.21	O	O		
4	Call attributes	7.7.5	O	I		
5	Connection attributes	7.7.11	O	O		
6	Connection identity	7.7.12	O	I		
7	Facility	7.7.15	O	I		
8	Progress indicator	7.7.31	O	O		
9	Display	7.5.5	O	I		
10	Signal	7.6.8	O	I		
11	Feature indicate	7.7.17	O	C8		
12	Terminal capability	7.7.41	X			
13	Transit delay	7.7.42	O	I		
14	Window size	7.7.43	O	M		
15	IWU-to-IWU	7.7.23	O	I		
16	IWU-PACKET	7.7.22	O	I		

Table F.23: ETS 300 476-4 table A.37 CC-CONNECT-ACK sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, ext	
3	Message Type (MI)	7.4.1	M		15	
4	Display	7.5.5	O	I		
5	Feature indicate	7.7.17	O	C8		
6	IWU-to-IWU	7.7.23	O	I		
7	IWU-PACKET	7.7.22	O	I		

Table F.24: ETS 300 476-4 table A.38 CC-RELEASE receiving (P to F) supported

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		77	
4	Release reason	7.6.7	O	C13		
5	Facility	7.7.15	X			
6	Display	7.5.5	X			
7	Feature indicate	7.7.17	X			
8	IWU-to-IWU	7.7.23	O	I		
9	IWU-PACKET	7.7.22	O	I		

Table F.25: ETS 300 476-4 table A.39 CC-RELEASE sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		77	
4	Release reason	7.6.7	O	C13		
5	Facility	7.7.15	O	I		
6	Display	7.5.5	O	I		
7	Feature indicate	7.7.17	O	C8		
8	IWU-to-IWU	7.7.23	O	I		
9	IWU-PACKET	7.7.22	O	I		

Table F.26: ETS 300 476-4 table A.40 CC-RELEASE-COM receiving (P to F) supported

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		90	
4	Release reason	7.6.7	O	C13		
5	Identity type	7.7.19	X			
6	Location area	7.7.25	X			
7	IWU attributes	7.7.21	O	C110		
8	Facility	7.7.15	X			
9	Display	7.5.5	X			
10	Feature indicate	7.7.17	X			
11	Network parameter	7.7.29	X			
12	IWU-to-IWU	7.7.23	O	I		
13	IWU-PACKET	7.7.22	O	I		

Table F.27: ETS 300 476-4 table A.41 CC-RELEASE-COM sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		90	
4	Release reason	7.6.7	O	C13		
5	Identity type	7.7.19	O	I		
6	Location area	7.7.25	O	I		
7	IWU attributes	7.7.21	O	C11o		
8	Facility	7.7.15	O	I		
9	Display	7.5.5	O	I		
10	Feature indicate	7.7.17	O	C8		
11	Network parameter	7.7.29	O	I		
12	IWU-to-IWU	7.7.23	O	I		
13	IWU-PACKET	7.7.22	O	I		

Table F.28: ETS 300 476-4 table A.42 CC-SERVICE-CHANGE receiving (P to F) supported

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		32	
3a	IWU attributes	7.7.21	O	C11m		
4	Portable identity	7.7.30	M			
5	Service change Info	7.7.38	M			
6	Repeat indicator	7.6.3	O	I		
7	Connection attributes	7.7.11	O	O		
8	Connection identity	7.7.12	O	I		

Table F.29: ETS 300 476-4 table A.43 CC-SERVICE-CHANGE sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		32	
3a	IWU attributes	7.7.21	O	C11o		
4	Portable identity	7.7.30	M			
5	Service change Info	7.7.38	M			
6	Repeat indicator	7.6.3	O	I		
7	Connection attributes	7.7.11	O	O		
8	Connection identity	7.7.12	O	I		

Table F.30: ETS 300 476-4 table A.44 CC-SERVICE-ACCEPT receiving (P to F) supported

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		33	
3a	IWU attributes	7.7.21	O	C11m		
4	Connection identity	7.7.12	O	I		

Table F.31: ETS 300 476-4 table A.45 CC-SERVICE-ACCEPT sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		33	
3a	IWU attributes	7.7.21	O	C11o		
4	Connection identity	7.7.12	O	I		

Table F.32: ETS 300 476-4 table A.46 CC-SERVICE-REJECT receiving (P to F) supported

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		35	
4	Release reason	7.6.7	M			
4a	IWU attributes	7.7.21	O	C11m		
5	Connection attributes	7.7.11	O			

Table F.33: ETS 300 476-4 table A.47 CC-SERVICE-REJECT sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		35	
4	Release reason	7.6.7	O			
4a	IWU attributes	7.7.21	O	C11o		
5	Connection attributes	7.7.11	O			

Table F.34: ETS 300 476-4 table A.48 CC-NOTIFY sending (F to P) supported

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		110	
4	Timer restart	7.6.9	O	M		

F.2.2.2 Mobility management messages

Table F.35: ETS 300 476-4 table A.51 MM message receiving (P to F) supported

Supported Messages				
Item	MM message receiving (P to F) Information element name	Reference	Status	Support
1	ACCESS-RIGHTS-ACCEPT	6.3.6.1	x	
2	ACCESS-RIGHTS-REJECT	6.3.6.2	x	
3	ACCESS-RIGHTS-REQUEST	6.3.6.3	o	m
4	ACCESS-RIGHTS-TERMINATE-ACCEPT	6.3.6.4	o	o
5	ACCESS-RIGHTS-TERMINATE-REJECT	6.3.6.5	o	o
6	ACCESS-RIGHTS-TERMINATE-REQUEST	6.3.6.6	x	
7	AUTHENTICATION-REJECT	6.3.6.7	m	
8	AUTHENTICATION-REPLY	6.3.6.8	m	
9	AUTHENTICATION-REQUEST	6.3.6.9	o	o
10	CIPHER-REJECT	6.3.6.10	o	c9
11	CIPHER-REQUEST	6.3.6.11	x	
12	CIPHER-SUGGEST	6.3.6.12	o	c4
13	DETACH	6.3.6.13	o	o
14	IDENTITY-REPLY	6.3.6.14	o	
15	IDENTITY-REQUEST	6.3.6.15	x	
16	KEY-ALLOCATE	6.3.6.16	x	
17	LOCATE-ACCEPT	6.3.6.17	x	
18	LOCATE-REJECT	6.3.6.18	x	
19	LOCATE-REQUEST	6.3.6.19	o	m
20	MM-INFO-ACCEPT	6.3.6.20	x	
21	MM-INFO-REJECT	6.3.6.21	x	
22	MM-INFO-REQUEST	6.3.6.22	o	i
23	MM-INFO-SUGGEST	6.3.6.23	x	
24	TEMPORARY-IDENTITY-ASSIGN	6.3.6.24	x	
25	TEMPORARY-IDENTITY-ASSIGN-ACKnowledge	6.3.6.25	o	m
26	TEMPORARY-IDENTITY-ASSIGN-REJECT	6.3.6.26	o	m

Table F.36: ETS 300 476-4 table A.52 MM message sending (F to P) supported

Supported messages				
Item	MM message sending (F to P) Information element name	Reference	Status	Support
1	ACCESS-RIGHTS-ACCEPT	6.3.6.1	o	m
2	ACCESS-RIGHTS-REJECT	6.3.6.2	o	m
3	ACCESS-RIGHTS-REQUEST	6.3.6.3	x	
4	ACCESS-RIGHTS-TERMINATE-ACCEPT	6.3.6.4	x	
5	ACCESS-RIGHTS-TERMINATE-REJECT	6.3.6.5	x	
6	ACCESS-RIGHTS-TERMINATE-REQUEST	6.3.6.6	o	o
7	AUTHENTICATE-REJECT	6.3.6.7	o	o
8	AUTHENTICATE-REPLY	6.3.6.8	o	o
9	AUTHENTICATE-REQUEST	6.3.6.9	m	
10	CIPHER-REJECT	6.3.6.10	o	c4
11	CIPHER-REQUEST	6.3.6.11	o	c9
12	CIPHER-SUGGEST	6.3.6.12	x	
13	DETACH	6.3.6.13	x	
14	IDENTITY-REPLY	6.3.6.14	x	
15	IDENTITY-REQUEST	6.3.6.15	o	o
16	KEY-ALLOCATE	6.3.6.16	o	o
17	LOCATE-ACCEPT	6.3.6.17	o	m
18	LOCATE-REJECT	6.3.6.18	o	m
19	LOCATE-REQUEST	6.3.6.19	x	
20	MM-INFO-ACCEPT	6.3.6.20	o	i
21	MM-INFO-REJECT	6.3.6.21	o	i
22	MM-INFO-REQUEST	6.3.6.22	x	
23	MM-INFO-SUGGEST	6.3.6.23	o	o
24	TEMPORARY-IDENTITY-ASSIGN	6.3.6.24	o	m
25	TEMPORARY-IDENTITY-ASSIGN-ACKnowledge	6.3.6.25	x	
26	TEMPORARY-IDENTITY-ASSIGN-REJECT	6.3.6.26	x	

Table F.37: ETS 300 476-4 table ACCESS-RIGHTS-ACCEPT sending (F to P) supported

Item	ACCESS-RIGHTS-ACCEPT sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	m
2	Portable identity	7.7.30	m	m
3	Repeat indicator "non-prioritized"	7.6.3	o	i
4	Fixed identity (PARK) 1	7.7.18	m	m
9	Location area	7.7.25	o	i
10	Auth-type	7.7.4	o	i
11	Cipher-info	7.7.10	o	i
12	ZAP field	7.7.44	o	o
13	Service class	7.7.39	o	M
14	IWU-to-IWU	7.7.23	o	i

Table F.38: ETS 300 476-4 table A.54 ACCESS-RIGHTS-REJECT sending (F to P) supported

	ACCESS-RIGHTS-REJECT sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	m
2	Reject reason	7.7.34	o	i
3	Duration	7.7.13	o	i

Table F.39: ETS 300 476-4 table A.55 ACCESS-RIGHTS-REQUEST receiving (P to F) supported

Item	ACCESS-RIGHTS-REQUEST receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	m
2	Portable identity	7.7.30	m	m
3	Auth-type	7.7.4	m	m
4	Cipher-info	7.7.10	o	i
5	Terminal Capability	7.7.41	o	m
6	IWU-to-IWU	7.7.23	o	i

Table F.40: ETS 300 476-4 table A.56 ACCESS-RIGHTS-TERMINATE-ACCEPT receiving (P to F) supported

Item	ACCESS-RIGHTS-TERMINATE-ACCEPT receiving (P to F) - Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	

Table F.41: ETS 300 476-4 table A.57 ACCESS-RIGHTS-TERMINATE-ACCEPT sending (F to P) supported

Item	ACCESS-RIGHTS-TERMINATE-ACCEPT sending (F to P) - Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	

Table F.42: ETS 300 476-4 table A.58 ACCESS-RIGHTS-TERMINATE-REJECT receiving (P to F) supported

Item	ACCESS-RIGHTS-TERMINATE-REJECT receiving (P to F) - Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Reject reason	7.7.34	o	
3	Duration	7.7.13	n/a	

Table F.43: ETS 300 476-4 table A.59 ACCESS-RIGHTS-TERMINATE-REJECT sending (F to P) supported

Item	ACCESS-RIGHTS-TERMINATE-REJECT sending (F to P) - Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Reject reason	7.7.34	o	
3	Duration	7.7.13	o	

Table F.44: ETS 300 476-4 table A.61 ACCESS-RIGHTS-TERMINATE-REQUEST sending (F to P) supported

Item	ACCESS-RIGHTS-TERMINATE-REQUEST sending (F to P) - Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	m
2	Portable identity	7.7.30	m	m
3	Repeat indicator "non-prioritized"	7.6.3	o	i
4	Fixed identity (PARK) 1	7.7.18	o	m
5	Fixed identity (PARK) 2	7.7.18	o	i
6	Fixed identity (PARK) 3	7.7.18	o	i
7	IWU-to-IWU	7.7.23	o	ii

Table F.45: ETS 300 476-4 table A.62 AUTHENTICATE-REJECT receiving (P to F) supported

Item	AUTHENTICATE-REJECT receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	m
2	Repeat indicator "prioritized"	7.6.3	o	i
3	Auth-type 1	7.7.4	o	i
4	Auth-type 2	7.7.4	o	i
5	Auth-type 3	7.7.4	o	i
6	Reject reason	7.7.34	o	i

Table F.46: ETS 300 476-4 table A.63 AUTHENTICATE-REJECT sending (F to P) supported

Item	AUTHENTICATE-REJECT sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	m
2	Repeat indicator "prioritized"	7.6.3	o	x
3	Auth-type 1	7.7.4	o	i
4	Auth-type 2	7.7.4	o	i
5	Auth-type 3	7.7.4	o	i
6	Reject reason	7.7.34	o	i

Table F.47: ETS 300 476-4 table A.64: AUTHENTICATE-REPLY receiving (P to F) supported

Item	AUTHENTICATE-REPLY receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	RES	7.7.35	m	
3	RS	7.7.36	n/a	
4	ZAP field	7.7.44	o	(feature N.16)
5	Service class	7.7.39	o	(feature N.14)
6	Key	7.7.24	o	i
7	IWU-to-IWU	7.7.23	o	i

Table F.48: ETS 300 476-4 table A.65 AUTHENTICATE-REPLY sending (F to P) supported

Item	AUTHENTICATE-REPLY sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	RES	7.7.35	m	
3	RS	7.7.36	o	m
4	ZAP field	7.7.44	x	
5	Service class	7.7.39	x	
6	Key	7.7.24	x	
7	IWU-to-IWU	7.7.23	o	i

Table F.49: ETS 300 476-4 table A.66 AUTHENTICATE-REQUEST receiving (P to F) supported

Item	AUTHENTICATE-REQUEST receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Auth-type	7.7.4	m	
3	RAND	7.7.32	m	
4	RES	7.7.35	o	i
5	RS	7.7.36	n/a	
6	Cipher info	7.7.10	o	i
7	IWU-to-IWU	7.7.23	o	i

Table F.50: ETS 300 476-4 table A.67 AUTHENTICATE-REQUEST sending (F to P) supported

Item	AUTHENTICATE-REQUEST sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Auth-type	7.7.4	m	
3	RAND	7.7.32	m	
4	RES	7.7.35	x	
5	RS	7.7.36	o	m
6	Cipher info	7.7.10	o	i
7	IWU-to-IWU	7.7.23	o	i

Table F.51: ETS 300 476-4 table A.68 CIPHER-REJECT receiving (P to F) supported

Item	CIPHER-REJECT receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Repeat indicator "prioritized"	7.6.3	o	i
3	Cipher info 1	7.7.10	o	i
4	Cipher info 2	7.7.10	o	i
5	Cipher info 3	7.7.10	o	i
6	Reject reason	7.7.34	o	i

Table F.52: ETS 300 476-4 table A.69 CIPHER-REJECT sending (F to P) supported

Item	CIPHER-REJECT sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Repeat indicator "prioritized"	7.6.3	o	i
3	Cipher info 1	7.7.10	o	i
4	Cipher info 2	7.7.10	o	i
5	Cipher info 3	7.7.10	o	i
6	Reject reason	7.7.34	o	i

Table F.53: ETS 300 476-4 table A.70 CIPHER-REQUEST sending (F to P) supported

Item	CIPHER-REQUEST sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Cipher info	7.7.10	m	
3	Call identity	7.7.6	o	l
4	Connection identity	7.7.12	o	l
5	IWU-to-IWU	7.7.23	o	l

Table F.54: ETS 300 476-4 table A.71 CIPHER-SUGGEST receiving (P to F) supported

Item	CIPHER-SUGGEST receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Cipher info	7.7.10	m	
3	Call identity	7.7.6	o	i
4	Connection identity	7.7.12	o	i
5	IWU-to-IWU	7.7.23	o	i

Table F.55: ETS 300 476-4 table A.72 DETACH receiving (P to F) supported

Item	DETACH receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Portable identity	7.7.30	m	
3	NWK assigned identity	7.7.28	o	i
4	IWU-to-IWU	7.7.23	o	i

Table F.56: ETS 300 476-4 table A.73 IDENTITY-REPLY receiving (P to F) supported

Item	IDENTITY-REPLY receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Repeat Indicator "non-prioritized"	7.6.3	o	i
3	Portable identity 1	7.7.30	o	m
4	Portable identity 2	7.7.30	o	i
5	Portable identity 3	7.7.30	o	i
6	Repeat Indicator "non-prioritized"	7.6.3	o	i
7	Fixed identity 1	7.7.18	o	m
8	Fixed identity 2	7.7.18	o	l
9	Fixed identity 3	7.7.18	o	l
10	Repeat Indicator "non-prioritized"	7.6.3	o	l
11	NWK assigned identity 1	7.7.28	o	l
12	NWK assigned identity 2	7.7.28	o	l
13	NWK assigned identity 3	7.7.28	o	l
14	IWU-to-IWU	7.7.23	o	l

Table F.57: ETS 300 476-4 table A.74 IDENTITY-REQUEST sending (F to P) supported

Item	IDENTITY-REQUEST sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Repeat indicator	7.6.3	o	i
3	Identity type 1	7.7.19	m	
4	Identity type 2	7.7.19	o	i
5	Identity type 3	7.7.19	o	i
6	IWU-to-IWU	7.7.23	o	i

Table F.58: ETS 300 476-4 table A.75 KEY-ALLOCATE sending (F to P) supported

Item	KEY-ALLOCATE sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Allocation type	7.7.2	m	
3	RAND	7.7.32	m	
4	RS	7.7.36	m	

Table F.59: ETS 300 476-4 table A.76 LOCATE-ACCEPT sending (F to P) supported

Item	LOCATE-ACCEPT sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Portable identity	7.7.30	m	
3	Location area	7.7.25	m	
4	NWK assigned identity	7.7.28	o	i
5	Duration	7.7.13	o	i
6	IWU-to-IWU	7.7.23	o	i

Table F.60: ETS 300 476-4 table A.77 LOCATE-REJECT sending (F to P) supported

Item	LOCATE-REJECT sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Reject reason	7.7.34	o	l
3	Duration	7.7.13	o	l

Table F.61: ETS 300 476-4 table A.78 LOCATE-REQUEST receiving (P to F) supported

Item	LOCATE-REQUEST receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Portable identity	7.7.30	m	
3	Fixed identity	7.7.18	m	
4	Location area	7.7.25	m	
5	NWK assigned identity	7.7.28	o	i
6	Cipher info	7.7.10	o	i
7	Setup capability	7.7.40	o	i
8	Terminal capability	7.7.41	o	M
9	IWU-to-IWU	7.7.23	o	i

Table F.62: ETS 300 476-4 table A.82 MM-INFO-SUGGEST sending (F to P) supported

Item	MM-INFO-SUGGEST sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Info type	7.7.20	m	
3	Fixed identity	7.7.18	o	i
4	Location area	7.7.25	o	i
5	NWK assigned identity	7.7.28	o	i
6	Network parameter	7.7.29	o	i
7	IWU-to-IWU	7.7.23	o	i

Table F.63: ETS 300 476-4 table A.83 TEMPORARY-IDENTITY-ASSIGN sending (F to P) supported

Item	TEMPORARY-IDENTITY-ASSIGN sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Portable identity	7.7.30	o	?
3	NWK assigned identity	7.7.28	o	?
4	Duration	7.7.13	o	?
5	IWU-to-IWU	7.7.23	o	?

Table F.64: ETS 300 476-4 table A.84 TEMPORARY-IDENTITY-ASSIGN-ACK receiving (P to F) supported

Item	TEMPORARY-IDENTITY-ASSIGN-ACK receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	

Table F.65: ETS 300 476-4 table A.85 TEMPORARY-IDENTITY-ASSIGN-REJECT receiving (P to F) supported

Item	TEMPORARY-IDENTITY-ASSIGN-REJECT receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Reject reason	7.7.34	o	i

F.2.2.3 Link control entity messages

Table F.66: ETS 300 476-4 table A.126 LCE message receiving (P to F) supported

Item	LCE message receiving (P to F) Information element name	Reference	Status	Support
1	LCE-PAGE-RESPONSE	6.3.7.1	o	m
2	LCE-PAGE-REJECT	6.3.7.2	n/a	
3	LCE-REQUEST-PAGE short	6.4.2	n/a	
4	LCE-REQUEST-PAGE long	6.4.2	n/a	

Table F.67: ETS 300 476-4 table A.127 LCE message sending (F to P) supported

Item	LCE message sending (F to P) Information element name	Reference	Status	Support
1	LCE-PAGE-RESPONSE	6.3.7.1	x	
2	LCE-PAGE-REJECT	6.3.7.2	o	m
3	LCE-REQUEST-PAGE short	6.4.2	o	Cx
4	LCE-REQUEST-PAGE long	6.4.2	o	Cx

Cx: support of one format is M.

Table F.68: ETS 300 476-4 table A.128 LCE-PAGE-RESPONSE receiving (P to F) supported

Item	LCE-PAGE-RESPONSE receiving (P to F) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
2	Portable identity	7.7.30	m	
3	Fixed identity	7.7.18	o	m
4	NWK assigned identity	7.7.28	o	l
5	Cipher info	7.7.10	o	l

Table F.69: ETS 300 476-4 table A.130 LCE-PAGE-REJECT sending (F to P) supported

Item	LCE-PAGE-REJECT sending (F to P) Information element name	Reference	Status	Support
1	Message header	7.2, 7.3, 7.4.1	m	
3	Portable identity	7.7.30	m	
4	Fixed identity	7.7.18	o	i
5	Reject reason	7.7.34	o	i

Table F.70: ETS 300 476-4 table A.130 LCE-REQUEST-PAGE short sending (F to P) supported

Item	LCE-REQUEST-PAGE short sending (F to P) Information element name	Reference	Status	Support
1	LCE header	8.2.1	m	
2	Short format message	8.2	m	

Table F.71: ETS 300 476-4 table A.131 LCE-REQUEST-PAGE long sending (F to P) supported

Item	LCE-REQUEST-PAGE long sending (F to P) Information element name	Reference	Status	Support
1	LCE header	8.2.1	m	
2	Long format message	8.2	m	

F.2.3 Information elements

The supplier of the implementation shall state whether or not each information element for each message specified by EN 300 175-5 [5] are supported. The supplier shall indicate the type, value(s) and range(s), of each information element. The supplier shall indicate the status of support for sending and receiving each information element in each message.

Table F.72: Information element support

Supported information elements						
Item no.	Name	Reference	Sending (F to P)		Receipt (P to F)	
			Status	Support	Status	Support
0	Codeset shift	7.5.3 to 4	O	I	O	I
1	Sending complete	7.6.2	O	I	O	I
2	Delimiter request	7.6.2	O	?	X	
3	Repeat indicator (non prioritized)	7.6.3	O	?	O	?
4	Repeat indicator (prioritized)	7.6.3	O	O	O	O
5	Basic service	7.6.4	O	M	O	M
6	Single-display	7.6.5	O	I	X	
7	Single-keypad	7.6.6	X		O	?
8	Release-reason	7.6.7	O	M	O	M
9	Signal	7.6.8	O	M	X	
10	Timer restart	7.6.9	M		X	
11	Test Hook Control	7.6.10	O	I	X	
12	Allocation type	7.7.2	M		X	
13	Alphanumeric	7.7.3	O	I	O	I
14	Auth-type	7.7.4	M		M	
15	Call attributes	7.7.5	O	?	O	?
16	Call identity	7.7.6	O	I	O	I
17	Called party number	7.7.7	O	I	O	C7o
18	Called party subaddress	7.7.8	O	I	O	I
19	Calling party number	7.7.9	O	I	O	I
20	Cipher info	7.7.10	O	C4 OR C9	O	C4 OR C9
21	Connection attributes	7.7.11	O	M	O	M
22	Connection identity	7.7.12	O	M	O	M
23	Duration	7.7.13	O	I	X	
24	End-to-end compatibility	7.7.14	O	I	O	I
25	Facility	7.7.15	O	I	O	I
26	Feature activate	7.7.16	X		O	C8
27	Feature indicate	7.7.17	O	C8	X	
28	Fixed identity	7.7.18	M		M	
29	Identity type	7.7.19	M		X	
30	Info type	7.7.20	O	O	O	O
31	IWU attributes	7.7.21	O	M	O	M
32	IWU PACKET	7.7.22	O	I	O	I
33	IWU to IWU	7.7.23	O	I	O	I
34	Key	7.7.24	X		O	C4
35	Location area	7.7.25	O	M	O	I
36	Multi-display	7.7.26	O	I	X	
37	Multi-keypad	7.7.27	X		O	M
38	Network assigned identity	7.7.28	O	I	O	I

Supported information elements						
Item no.	Name	Reference	Sending (F to P)		Receipt (P to F)	
			Status	Support	Status	Support
39	Network parameter	7.7.29	O	I	O	I
40	Portable identity	7.7.30	M		M	
41	Progress indicator	7.7.31	O	I	X	
42	Rand	7.7.32	M		M	
43	Rate Parameters	7.7.33	O	I	O	I
44	Reject reason	7.7.34	O	I	O	I
45	RES	7.7.35	M		M	
46	RS	7.7.36	M		X	
47	Segmented info	7.7.37	O	I	O	I
48	Service change info	7.7.38	O	M	O	M
49	Service class	7.7.39	O	I	O	I
50	Setup capability	7.7.40	X		O	I
51	Terminal capability	7.7.41	X		O	M
52	Transit delay	7.7.42	O	I	O	I
53	Window size	7.7.43	O	M	O	M
54	ZAP field	7.7.44	O	M	O	M

F.2.3.1 Fixed length information element support

Table F.73: ETS 300 476-4 table A.134 Repeat indicator (non prioritized list) supported

It.	Repeat indicator (non prioritized) Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Repeat indicator "non-prioritized"	7.6.3	m		'11010001'B	

Table F.74: ETS 300 476-4 table A.135 Repeat indicator (prioritized list) supported

It.	Repeat indicator (prioritized) Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Repeat indicator "prioritized"	7.6.3	m		'11010010'B	

Table F.75: ETS 300 476-4 table A.1 Type of service class in basic service supported

Item	Type of service class in basic service supported	Reference	Status	Support
1	Basic service "Normal call set-up"	7.6.4	m	
2	Basic service "Internal call set-up"	7.6.4	i	
3	Basic service "Emergency call set-up"	7.6.4	i	
4	Basic service "Service call set-up"	7.6.4	i	
5	Basic service "External handover call set-up"	7.6.4	i	

Table F.76: ETS 300 476-4 table A.2: Basic service - Normal call set-up supported

It.	Basic service - Normal call set-up Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of basic service	7.6.1	m		'11100000'B	
2	Call class	7.6.4	m		'1000'B	
3	Basic service	7.6.4	m		'0000'B, '1111'B	

Table F.77: ETS 300 476-4 table A.144 Release-reason supported

It.	Release-reason Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID for release-reason	7.6.1	m		'11100010'B	
2	Release reason code	7.6.7	m		00 to 09, 0D to 0F, 10 to 15, 21 to 23, 31 to 34 (Hex)	0x-3x

Table F.78: ETS 300 476-4 table A. Signal supported

It.	Signal Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID for signal	7.6.1	m		'11100100'B	
2	Signal value	7.6.8	m		'01000000'B, '01000111'B, '01001000'B, '01001111'B	

Table F.79: ETS 300 476-4 table A.: Timer restart supported

It.	Timer restart Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID for timer restart	7.6.1	m		'11100101'B	
2	Restart value	7.6.9	m		'00000000'B	

F.2.3.2 Variable length information element support

Table F.80: ETS 300 476-4 table A.206: Allocation type supported

It.	Allocation type Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of allocation type	7.7.1	m		'00001011'B	
2	Length of Contents (L)	7.7.2	m		2	
3	Authentication algorithm identifier	7.7.2	m		'00000001'B	
4	User Authentication Key (UAK) number	7.7.2	m		'0000'B .. '1111'B	
5	Authentication Code (AC) number	7.7.2	m		'0000'B .. '1111'B	

Table F.81: ETS 300 476-4 table A.208: Auth-type supported

It.	Auth-type Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of Auth-type	7.7.1	m		'00001010'B	
2	Length of Contents (L)	7.7.4	m		3-4	
3	Authentication algorithm identifier	7.7.4	m		'00000001'B, '01000000'B, '01111111'B	
4	Proprietary algorithm identifier	7.7.4	i			
5	Authentication key type	7.7.4	m		'0001'B, '0011'B, '0100'B	
6	Authentication key number	7.7.4	m		'0000'B .. '1111'B	
7	INCRement bit	7.7.4	m		0,1	
8	Oct5_spare	7.7.4	m		0	
9	TXC bit	7.7.4	m		0,1	
10	UPC bit	7.7.4	m		0,1	
11	Cipher key number	7.7.4	m		'0000'B .. '1111'B	

Table F.82: ETS 300 476-4 table A.209 Call attributes supported

Field no.	Name of fields	Reference	Protocol status	Profile status	Values	
					Protocol allowed	Profile allowed
1	ID of call attributes	7.7.1	m		'00010011'B	
2	Length of Contents (L)	7.7.5	m		0,4,6	
3	Oct3_ext_bit	7.7.5	m		'1'B	
4	Coding standard	7.7.5	m		'00'B	
5	Network layer attributes	7.7.5	m		'00000'B,'00001'B	
6	Oct4_ext_bit	7.7.5	m		'1'B	
7	C-plane class	7.7.5	m		'000'B, '010'B,'100'B, '101'B	
8	C-plane routing	7.7.5	m		'0000'B, '0001'B,'0010'B,'0 100'B,'1100'B	
9	Oct5_ext_bit	7.7.5	m		0,1	
10	U-plane symmetry	7.7.5	m		'00'B, '10'B	
11	LU identification (P => F direction)	7.7.5	m		'00001'B ..'00111'B,'10000' B	
12	Oct5a_ext_bit	7.7.5	c20902		'1'B	
13	Oct5a_spare	7.7.5	c20902		'00'B	
14	LU identification (F => P direction)	7.7.5	c20902		'00001'B ..'00111'B,'10000' B	
15	Oct6_ext_bit	7.7.5	m		0,1	
16	U-plane class (P => F direction)	7.7.5	m		'000'B .. '010'B, '100'B .. '111'B	
17	U-plane frame type (P => F direction)	7.7.5	m		'0001'B .. '0110'B	
18	Oct6a_ext_bit	7.7.5	c20902		'1'B	
19	U-plane class (F => P direction)	7.7.5	c20902		'000'B .. '010'B, '100'B .. '111'B	
20	U-plane frame type (F => P direction)	7.7.5	c20902		'0001'B..'0110'B	

Table F.83: ETS 300 476-4 table A. 211 Called party number supported

It.	Called party number Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of called party number	7.7.1	m		'01110000'B	
2	Length of Contents (L)	7.7.7	m		2 to 255	
3	Oct3_ext_bit	7.7.7	m		1	
4	Number type	7.7.7	m		to 4, 6	
5	Numbering plan identification	7.7.7	m		0, 1, 3, 8, 9	
6	Called party address (group of octets)	7.7.7, annex D	m		00, 02, 03, 05 to 0F, 11 to 14, 16, 19 to 1B, 20 to 7F (HEX)	

Table F.84: ETS 300 476-4 table A.214 Cipher info supported

It.	Cipher info Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of cipher info	7.7.1	m		'000011001'B	
2	Length of Contents (L)	7.7.10	m		2 to 3	
3	Y/N	7.7.10	m		0 to 1	
4	Cipher algorithm identifier	7.7.10	m		'0000001'B	
5	Proprietary algorithm identifier	7.7.10	o	i	'00000000'B .. '11111111'B	
6	Cipher key type	7.7.10	m		'1001'B, '1010'B	
7	Cipher key number	7.7.10	m		'0000'B .. '1111'B	

Table F.85: ETS 300 476-4 table A.215 Type connection attributes supported

Item	Type of connection attributes supported	Reference	Status	Support
1	Connection attributes (symmetric)		m	
2	Connection attributes (asymmetric)		C2	

Table F.86: ETS 300 476-4 table A.216 Connection attributes (symmetric) supported

It.	Connection attributes (symmetric) Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of connection attributes	7.7.1	m		'00010111'B	
2	Length of Contents (L)	7.7.11	m		4 to 9	
3	Oct3_ext_bit	7.7.11	m		'1B	
4	Symmetry	7.7.11	m		'001'B	
5	Connection identity	7.7.11	m		'0000'B, '1000'B .. '1111'B	
6	Oct4_ext_bit	7.7.11	m		'0'B, '1'B	
7	Oct4_bearer_def_coding	7.7.11	m		'00'B	
8	Target bearers (P => F direction)	7.7.11	m		'00000'B, '00001'B .. '11111'B	
9	Oct4a_ext_bit	7.7.11	o		'1'B	
10	Oct4a_bearer_def_coding	7.7.11	o		'01'B	
11	Minimum bearers (both directions)	7.7.11	o		'00000'B, '00001'B .. '11111'B	
12	Oct5_ext_bit	7.7.11	m		'1'B	
13	MAC slot size	7.7.11	m		"100'B	
14	MAC service (both directions)	7.7.11	m		"0011'B	
15	Oct6_ext_bit	7.7.11	m		'1'B	
16	CF channel attributes (both directions)	7.7.11	m		'010'B	
17	MAC packet life time (both directions)	7.7.11	m		"1000'B .. '1111'B	

Table F.87: ETS 300 476-4 table A.217 Connection attributes (asymmetric) supported

It.	Connection attributes (asymmetric) Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of connection attributes	7.7.1	m		'00010111'B	
2	Length of Contents (L)	7.7.11	m		4 to 9	
3	Oct3_ext_bit	7.7.11	m		'1B	
4	Symmetry	7.7.11	m		'100'B .. '111'B	
5	Connection identity	7.7.11	m		'0000'B, '1000'B .. '1111'B	
6	Oct4_ext_bit	7.7.11	m		'0'	
7	Oct4_bearer_def_coding	7.7.11	m		'00'B	
8	Target bearers (P => F direction)	7.7.11	m		'00000'B, '00001'B .. '11111'B	
9	Oct4a_ext_bit	7.7.11	o		'0'B	
10	Oct4a_bearer_def_coding	7.7.11	o		'01'B	
11	Minimum bearers (P => F direction)	7.7.11	o		'00000'B, '00001'B .. '11111'B	
12	Oct4b_ext_bit	7.7.11	m		'0'B, '1'B	
13	Oct4b_bearer_def_coding	7.7.11	m		'10'B	
14	Target bearers (F => P direction)	7.7.11	m		'00000'B, '00001'B .. '11111'B	
15	Oct4c_ext_bit	7.7.11	o		'1'B	
16	Oct4c_bearer_def_coding	7.7.11	o		'01'B	
17	Minimum bearers (F => P direction)	7.7.11	o		'00000'B, '00001'B .. '11111'B	
18	Oct5_ext_bit	7.7.11	m		'0'B	
19	MAC slot size	7.7.11	m		'100'B	
20	MAC service (P => F direction)	7.7.11	m		'0011'B	
21	Oct5a_ext_bit	7.7.11	m		'1'B	
22	Oct5a_spare	7.7.11	m		'000'B	
23	MAC service (F => P direction)	7.7.11	m		'0011'B	
24	Oct6_ext_bit	7.7.11	m		'0'B	
25	CF channel attributes (P => F direction)	7.7.11	m		'010'B	
26	MAC packet life time (P =>F direction)	7.7.11	m		'1000'B .. '1111'B	
27	Oct6a_ext_bit	7.7.11	m		'1'B	
28	CF channel attributes (F => P direction)	7.7.11	m		'010'B	
29	MAC packet life time (F =>P direction)	7.7.11	m		'1000'B .. '1111'B	

Table F.88: ETS 300 476-4 table A.222 Type of feature activate / indicate supported

Item	Type of feature activate / indicate supported	Reference	Status	Support
1	Register recall	7.7.16, 7.7.17	i	
2	External handover switch	7.7.16, 7.7.17	i	
3	Queue entry request	7.7.16, 7.7.17	i	
4	Indication of subscriber number	7.7.16, 7.7.17	i	
5	Feature key	7.7.16, 7.7.17	C8	
6	Specific line selection	7.7.16, 7.7.17	i	
7	Specific trunk carrier selection	7.7.16, 7.7.17	i	
8	Control of echo control functions	7.7.16, 7.7.17	i	
9	Cost information	7.7.16, 7.7.17	i	

Table F.89: ETS 300 476-4 table A.227 Feature activate "feature key" supported

It.	Feature activate "feature key" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of feature activate	7.7.1	m		'00111000'B	
2	Length of Contents (L)	7.7.16	m		2	
3	Oct3_ext_bit	7.7.16	m		'0'B	
4	Feature	7.7.16	m		'1000010'B	
5	Oct4_ext_bit	7.7.16	m		'1'B	
6	Parameter	7.7.16	m		01H .. 7FH	

Table F.90: ETS 300 476-4 table A. Feature activate "cost information" supported

It.	Feature activate "cost information" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of feature activate	7.7.1	m		'00111000'B	
2	Length of Contents (L)	7.7.16	m		2	
	Oct3_ext_bit	7.7.16	m		'0'B	
3	Feature	7.7.16	m		'1100000'B,	
	Oct4_ext_bit	7.7.16	m		'1'B	
4	Parameter_bit765	7.7.16	m		'001'B, '011'B	
4	Parameter_bit4321	7.7.16	m		'0000'B, '0001'B, '0010'B	

Table F.91: ETS 300 476-4 table A.240 Feature indicate "cost information" supported

It.	Feature indicate "cost information" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of feature indicate	7.7.1	m		'00111001'B	
2	Length of Contents (L)	7.7.17	m		4 to 255	
3	Oct3_ext_bit	7.7.17	m		'0'B	
4	Feature	7.7.17	m		'1100000'B,	
5	Oct4_ext_bit	7.7.17	m		'1'B	
6	Parameter_bit765	7.7.17	m		'001'B, '011'B	
7	Parameter_bit4321	7.7.17	m		'0000'B, '0001'B, '0010'B	
8	Status indicator	7.7.17	m		'10000000'B, '10000001'B, '10000011'B, '10000100'B, '10000110'B	
9	Charging component	7.7.17	m		'00001'B .. '00111'B, '01010'B .. '01110'B, '10000'B .. '10111'B	
10	Length	7.7.17	m		'001'B .. '111'B	
11	Value (group of octets)	7.7.17	m		'00000000'B .. '11111111'B	
12	More components (Charging component + Length + Value (group of octets))	7.7.17	o			

Table F.92: ETS 300 476-4 table A.241 Class Fixed identity supported

Item	Class Fixed identity	Reference	Status	Support
1	Fixed identity class A	5.1 [6]	Ox	
2	Fixed identity class B	5.2 [6]	Ox	
3	Fixed identity class C	5.3 [6]	Ox	
4	Fixed identity class D	5.4 [6]	Ox	

Ox: it is mandatory to support at least one of these options.

Table F.93: ETS 300 476-4 table A.242 Fixed identity "ARI Class A" and "PARK Class A" supported

It.	Fixed identity "ARI Class A" and "PARK Class A" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of fixed identity	7.7.1	m		'00000110'B	
2	Length of contents (L)	7.7.18	m		0, 7	
3	Oct3_ext_bit	7.7.18	m		'1'B	
4	Type	7.7.18	m		'0000000'B, '0100000'B	
5	Oct4_ext_bit	7.7.18	m		'1'B	
6	Length of identity value	7.7.18	m		37	
7	Oct5_ext_bit	7.7.18	m		'0'B	
8	ARC	7.2 [6]	m		'000'B	
9	ARD_EMC	5.1 [6]	m		len_b: 16 val: 1 .. 65 535	
10	ARD_FPN	5.1 [6]	m		len_b: 17 val: 1 .. 131071	

Table F.94: ETS 300 476-4 table A.243 Fixed identity "ARI Class B" or "PARK Class B" supported

It.	Fixed identity "ARI Class B" and "PARK Class B" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of fixed identity	7.7.1	m		'00000110'B	
2	Length of contents (L)	7.7.18	m		0, 6	
3	Oct3_ext_bit	7.7.18	m		'1'B	
4	Type	7.7.18	m		'0000000'B, '0100000'B	
5	Oct4_ext_bit	7.7.18	m		'1'B	
6	Length of identity value	7.7.18	m		32	
7	Oct5_ext_bit	7.7.18	m		'0'B	
8	ARC	7.2 [6]	m		'001'B	
9	ARD-EIC	5.2 [6]	m		len_b: 16 val: 1 - 65 535	
10	ARD-FPN	5.2 [6]	m		len_b: 0 .. 12 val: 1 - 255	
11	ARD-FPS	5.2 [6]	m		len_b: 0..12 val: 1 - 15	

Table F.95: ETS 300 476-4 table A.244 Fixed identity "ARI Class C" or "PARK Class C" supported

It.	Fixed identity "ARI Class C" and "PARK Class C" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of fixed identity	7.7.1	m		'00000110'B	
2	Length of contents (L)	7.7.18	m		0, 6	
3	Oct3_ext_bit	7.7.18	m		'1'B	
4	Type	7.7.18	m		'0000000'B, '0100000'B	
5	Oct4_ext_bit	7.7.18	m		'1'B	
6	Length of identity value	7.7.18	m		32	
7	Oct5_ext_bit	7.7.18	m		'0'B	
8	ARC	7.2 [6]	m		'010'B	
9	ARD-POC	5.3 [6]	m		len_b: 16 val: 1 - 65 535	
10	ARD-FPN	5.3 [6]	m		len_b: 0 .. 12 val: 1 - 255	
11	ARD-FPS	5.3 [6]	m		len_b: 0..12 val: 1 - 15	

Table F.96: table A.245 Fixed identity "ARI Class D" or "PARK Class D" supported

It.	Fixed identity "ARI Class D" and "PARK Class D" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of fixed identity	7.7.1	m		'00000110'B	
2	Length of contents (L)	7.7.18	m		0, 6	
3	Oct3_ext_bit	7.7.18	m		'1'B	
4	Type	7.7.18	m		'0000000'B, '0100000'B	
5	Oct4_ext_bit	7.7.18	m		'1'B	
6	Length of identity value	7.7.18	m		32	
7	Oct5_ext_bit	7.7.18	m		'0'B	
8	ARC	7.2 [6]	m		'011'B	
9	ARD-GOP	5.4 [6]	m		len_b: 20 val: GSM specific	
10	ARD-FPN	5.4 [6]	m		len_b: 8 val: 1 - 255	

Table F.97: ETS 300 476-4 table A.246 Fixed identity ARI+RPN Class A supported

It.	Fixed identity "ARI+RPN Class A" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of fixed identity	7.7.1	m		'00000110'B	
2	Length of contents (L)	7.7.18	m		0, 8	
3	Oct3_ext_bit	7.7.18	m		'1'B	
4	Type	7.7.18	m		'0000001'B	
5	Oct4_ext_bit	7.7.18	m		'1'B	
6	Length of identity value	7.7.18	m		40	
7	Oct5_ext_bit	7.7.18	m		'0'B	
8	ARC	7.2 [6]	m		'000'B	
9	ARD_EMCC	5.1 [6]	m		len_b: 16 val: 1 .. 65 535	
10	ARD_FPN	5.1 [6]	m		len_b: 17 val: 1 .. 131071	
11	RPN	5.1 [6]	m		len_b: 3 val: 0 .. 7	

Table F.98: ETS 300 476-4 table A.247 Fixed identity ARI+RPN Class B supported

It.	Fixed identity "ARI+RPN Class B" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of fixed identity	7.7.1	m		'00000110'B	
2	Length of contents (L)	7.7.18	m		0, 8	
3	Oct3_ext_bit	7.7.18	m		'1'B	
4	Type	7.7.18	m		'0000001'B	
5	Oct4_ext_bit	7.7.18	m		'1'B	
6	Length of identity value	7.7.18	m		40	
7	Oct5_ext_bit	7.7.18	m		'0'B	
8	ARC	7.2 [6]	m		'001'B	
9	ARD-EIC	5.2 [6]	m		len_b: 16 val: 1 - 65 535	
10	ARD-FPN	5.2 [6]	m		len_b: 0 .. 12 val: 1 - 255	
11	ARD-FPS	5.2 [6]	m		len_b: 0..12 val: 1 - 15	
12	RPN	5.2 [6]	m		len_b: 8 val: 0 .. 255	

Table F.99: ETS 300 476-4 table A.248 Fixed identity "ARI+RPN Class C" supported

It.	Fixed identity "ARI+RPN Class C" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of fixed identity	7.7.1	m		'00000110'B	
2	Length of contents (L)	7.7.18	m		0, 8	
3	Oct3_ext_bit	7.7.18	m		'1'B	
4	Type	7.7.18	m		'0000001'B	
5	Oct4_ext_bit	7.7.18	m		'1'B	
6	Length of identity value	7.7.18	m		40	
7	Oct5_ext_bit	7.7.18	m		'0'B	
8	ARC	7.2 [6]	m		'010'B	
9	ARD-POC	5.3 [6]	m		len_b: 16 val: 1 - 65 535	
10	ARD-FPN	5.3 [6]	m		len_b: 0 .. 12 val: 1 - 255	
11	ARD-FPS	5.3 [6]	m		len_b: 0..12 val: 1 - 15	
12	RPN	5.3 [6]	m		len_b: 8 val: 0 .. 255	

Table F.100: ETS 300 476-4 table A.249 Fixed identity "ARI+RPN Class D" supported

It.	Fixed identity "ARI+RPN Class D" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of fixed identity	7.7.1	m		'00000110'B	
2	Length of contents (L)	7.7.18	m		0, 8	
3	Oct3_ext_bit	7.7.18	m		'1'B	
4	Type	7.7.18	m		'0000001'B	
5	Oct4_ext_bit	7.7.18	m		'1'B	
6	Length of identity value	7.7.18	m		40	
7	Oct5_ext_bit	7.7.18	m		'0'B	
8	ARC	7.2 [6]	m		'011'B	
9	ARD-GOP	5.4 [6]	m		len_b: 20 val: GSM specific	
10	ARD-FPN	5.4 [6]	m		len_b: 8 val: 1 - 255	
11	RPN	5.4 [6]	m		len_b: 8 val: 0 .. 255	

Table F.101: ETS 300 476-4 table A.250 Identity type supported

Item	Identity type	Reference	Status	Support
1	Identity type "Portable identity"	7.7.19	Ox	
2	Identity type "NWK assigned identity"	7.7.19	Ox	
3	Identity type "Fixed identity"	7.7.19	Ox	
4	Identity type "Proprietary"	7.7.19	i	

Table F.102: ETS 300 476-4 table A.251 Identity type 'Portable identity' supported

It.	Identity type 'Portable identity' Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of identity type	7.7.1	m		'00000010'B	
2	Length of Contents (L)	7.7.19	m		2	
3	Oct3_ext_bit	7.7.19	m		'1'B	
4	Oct3_subfield	7.7.19	m		'000'B	
5	Identity group	7.7.19	m		'0000'B	
6	Oct4_ext_bit	7.7.19	m		'1'B	
7	Type	7.7.19	m		'0000000'B, '0010000'B, '0100000'B	

Table F.103: ETS 300 476-4 table A.253 Identity type "Fixed identity" supported

It.	Identity type "Fixed identity" Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of identity type	7.7.1	m		'00000010'B	
2	Length of Contents (L)	7.7.19	m		2	
3	Oct3_ext_bit	7.7.19	m		'1'B	
4	Oct3_subfield	7.7.19	m		'000'B	
5	Identity group	7.7.19	m		'0100'B	
6	Oct4_ext_bit	7.7.19	m		'1'B	
7	Type	7.7.19	m		'0000000'B, '0000001'B, '0100000'B	

Table F.104: ETS 300 476-4 table A.252 Identity type 'NWK assigned identity' supported

It.	Identity type 'NWK assigned identity' Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of identity type	7.7.1	m		'00000010'B	
2	Length of Contents (L)	7.7.19	m		2	
3	Oct3_ext_bit	7.7.19	m		'1'B	
4	Oct3_subfield	7.7.19	m		'000'B	
5	Identity group	7.7.19	m		'0001'B	
6	Oct4_ext_bit	7.7.19	m		'1'B	
7	Type	7.7.19	m		'1110100'B, '1111111'B	

Table F.105: ETS 300 476-4 table A.254 Identity type "Proprietary" supported

It.	Identity type "Proprietary" Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of identity type	7.7.1	m		'00000010'B	
2	Length of Contents (L)	7.7.19	m		2	
3	Oct3_ext_bit	7.7.19	m		'1'B	
4	Oct3_subfield	7.7.19	m		'000'B	
5	Identity group	7.7.19	m		'1111'B	
6	Oct4_ext_bit	7.7.19	m		'1'B	
7	Type	7.7.19	m		'0000000'B .. '1111111'B	

Table F.106: ETS 300 476-4 table A.255 Info type supported

It.	Info type Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of info type	7.7.1	m		'00000001'B	
2	Length of Contents (L)	7.7.20	m		1	
3	Oct3_ext_bit	7.7.20	m		'0'B, '1'B	
4	Parameter coding	7.7.20	m		'0000000'B,	
5	Ext_bit and Parameter coding (group of octets)	7.7.20	i			

Table F.107: ETS 300 476-4 table A.256 IWU attributes supported

Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of IWU attributes of variable length	7.7.1	M		18	
2	Length of Contents (L)	7.7.21	M		4-	
3	Coding standard	7.7.21	M		0,1	
4	Profile	7.7.21	M		0, 1, 2, 3, 4, 8, 9, 10, 11, 12	1
5	Negotiation indicator	7.7.21	M		0, 2, 4, 6	
6	Profile subtype	7.7.21	M		note	
7	IWU attributes information	7.7.21	O		note	

NOTE: The codings of the interworking service dependent fields shall be given in the interworking annexes.

Table F.108: ETS 300 476-4 table A.260 Location area info types supported

Item	Location area info types supported	Reference	Status	Support
1	Location area "No ELI"	7.7.25	m	
2	Location area "With ELI no GSM info indicated"	7.7.25	i	i
3	Location area "No ELI GSM info indicated"	7.7.25	i	

Table F.109: ETS 300 476-4 table A.261 Location area "No ELI" supported

It.	Location area "No ELI" Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of location area	7.7.1	m		'00000111'B	
2	Length of Contents (L)	7.7.25	m		0, 1	
3	Location Information (LI) type	7.7.25	m		'01'B	
4	Location area level	7.7.25	m		'000000'B .. '100111'B	

Table F.110: ETS 300 476-4 table A.10: Type of portable identity supported

Item	Type of portable identity Identity name	Reference	Status	Support
1	IPEI	10 [6]	Ox	
2	IPUI-N	6.2.1 [6]	Ox	
3	IPUI-S	6.2.2 [6]	Ox	
4	IPUI-O	6.2.3 [6]	Ox	
5	IPUI-T	6.2.4 [6]	Ox	
6	IPUI-P	6.2.5 [6]	Ox	
7	IPUI-Q	6.2.6 [6]	Ox	
8	IPUI-U	6.2.7 [6]	Ox	
9	IPUI-R	6.2.8 [6]	Ox	
10	TPUI-default	6.3.2 [6]	o	
11	TPUI-assigned individual	6.3.2 [6]	o	
12	TPUI-assigned call group	6.3.3 [6]	i	
13	TPUI-assigned connectionless group	6.3.3 [6]	i	

Ox: M at least one of the list.

Table F.111: ETS 300 476-4 table A.273 Portable identity "IPUI-N or IPEI" supported

It.	Portable identity "IPUI-N or IPEI" Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of portable identity	7.7.1	m		'00000101'B	
2	Length of contents (L)	7.7.30	m		0, 7	
3	Oct3_ext_bit	7.7.30	m		'1'B	
4	Type	7.7.30	m		'0000000'B, '0010000'B	
5	Oct4_ext_bit	7.7.30	m		'1'B	
6	Length of identity value	7.7.30	m		40	
7	Portable User Type (PUT)	6.2.1 [6]	m		'0000'B	
8	PUN- EMC	10 [6]	m		len_b: 16 val: 1 .. 65 535	
9	PUN-PSN	10 [6]	m		len_b: 20 val: 0 .. 1048575	

Table F.112: ETS 300 476-4 table A.274 Portable identity - type of IPUI-o supported

It.	Portable identity - type of IPUI-o Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of portable identity	7.7.1	m		'00000101'B	
2	Length of contents (L)	7.7.30	m		0, 10	
3	Oct3_ext_bit	7.7.30	m		'1'B	
4	Type	7.7.30	m		'0000000'B	
5	Oct4_ext_bit	7.7.30	m		'1'B	
6	Length of identity value	7.7.30	m		64	
7	Portable User Type (PUT)	6.2.1 [6]	m		'0001'B	
8	Portable User Number (PUN)	6.2.3 [6]	m		len_b: 60 val: 0 .. ((2**60)-1)	

Table F.113: ETS 300 476-4 table A.275 Portable identity - type of IPUI-P supported

It.	Portable identity - type of IPUI-P Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of portable identity	7.7.1	m		'00000101'B	
2	Length of contents (L)	7.7.30	m		0, 15	
3	Oct3_ext_bit	7.7.30	m		'1'B	
4	Type	7.7.30	m		'0000000'B	
5	Oct4_ext_bit	7.7.30	m		'1'B	
6	Length of identity value	7.7.30	m		100	
7	Portable User Type (PUT)	6.2.1 [6]	m		'0010'B	
8	PUN-Public Operator Code	6.2.5 [6]	m		len_b: 16 val: 1 .. 65 535	
9	PUN-ACCount number	6.2.5 [6]	m		len_b: 80 val: 0 .. ((2**80)-1)	

Table F.114: ETS 300 476-4 table A.276 Portable identity - type IPUI-Q supported

It.	Portable identity - type IPUI-Q Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of portable identity	7.7.1	m		'00000101'B	
2	Length of contents (L)	7.7.30	m		0, 13	
3	Oct3_ext_bit	7.7.30	m		'1'B	
4	Type	7.7.30	m		'0000000'B, '0010000'B	
5	Oct4_ext_bit	7.7.30	m		'1'B	
6	Length of identity value	7.7.30	m		84	
7	Portable User Type (PUT)	6.2.1 [6]	m		'0011'B	
6	PUN-BACN	6.2.6 [6]	m		len_b: 80 val: 0 .. ((2**80)-1)	

Table F.115: ETS 300 476-4 table A.277 Portable identity - type of IPUI-R supported

It.	Portable identity - type of IPUI-R Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of portable identity	7.7.1	m		'00000101'B	
2	Length of contents (L)	7.7.30	m		0, 10	
3	Oct3_ext_bit	7.7.30	m		'1'B	
4	Type	7.7.30	m		'0000000'B	
5	Oct4_ext_bit	7.7.30	m		'1'B	
6	Length of identity value	7.7.30	m		64	
7	Portable User Type (PUT)	6.2.1 [6]	m		'0100'B	
8	PUN-IMSI	6.2.7 [6]	m		len_b: 60 val: 0 .. ((2**60)-1)	

Table F.116: ETS 300 476-4 table A.278 Portable identity - type IPUI-S supported

It.	Portable identity - type IPUI-S Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of portable identity	7.7.1	m		'00000101'B	
2	Length of contents (L)	7.7.30	m		0, 10	
3	Oct3_ext_bit	7.7.30	m		'1'B	
4	Type	7.7.30	m		'0000000'B	
5	Oct4_ext_bit	7.7.30	m		'1'B	
6	Length of identity value	7.7.30	m		64	
7	Portable User Type (PUT)	6.2.1 [6]	m		'0101'B	
8	PUN-ISDN / PSTN number	6.2.2 [6]	m		len_b: 60 val: 0 .. ((2**60)-1)	

Table F.117: ETS 300 476-4 table A.273 Portable identity - type of IPUI-T supported

It.	Portable identity - type of IPUI-T Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of portable identity	7.7.1	m		'00000101'B	
2	Length of contents (L)	7.7.30	m		0, 10	
3	Oct3_ext_bit	7.7.30	m		'1'B	
4	Type	7.7.30	m		'00000000'B	
5	Oct4_ext_bit	7.7.30	m		'1'B	
6	Length of identity value	7.7.30	m		64	
7	Portable User Type (PUT)	6.2.1 [6]	m		'0110'B	
8	PUN-EIC	6.2.4 [6]	m		len_b: 16 val: 1 .. ((2**16)-1)	
9	PUN-Number	6.2.4 [6]	m		len_b: 44 val: 0 .. ((2**44)-1)	

Table F.118: ETS 300 476-4 table A.280 Portable identity - type IPUI-U supported

It.	Portable identity - type IPUI-U Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of portable identity	7.7.1	m		'00000101'B	
2	Length of contents (L)	7.7.30	m		0, 13	
3	Oct3_ext_bit	7.7.30	m		'1'B	
4	Type	7.7.30	m		'00000000'B, '00100000'B	
5	Oct4_ext_bit	7.7.30	m		'1'B	
6	Length of identity value	7.7.30	m		84	
7	Portable User Type (PUT)	6.2.1 [6]	m		'0111'B	
8	PUN-CACN	6.2.7 [6]	m		len_b: 80 val: 0 .. ((2**80)-1)	

Table F.119: ETS 300 476-4 table A.281 Portable identity - type default individual TPUI supported

It.	Portable identity - type default individual TPUI Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of portable identity	7.7.1	m		'00000101'B	
2	Length of contents (L)	7.7.30	m		0, 5	
3	Oct3_ext_bit	7.7.30	m		'1'B	
4	Type	7.7.30	m		'01000000'B	
5	Oct4_ext_bit	7.7.30	m		'1'B	
6	Length of identity value	7.7.30	m		20	
7	Oct5_bit8765	7.7.30	m		'0000'B	
8	TPUI type 1st digit	6.3 [6]	m		EH	
9	Last 16 bits of the least significant portion of IPUI	6.3 [6]	m		len_b: 16 val: 0-65535 or 4 BCD digits	

Table F.120: ETS 300 476-4 table A.282 Portable identity - type assigned individual TPUI supported

It.	Portable identity - type assigned individual TPUI Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of portable identity	7.7.1	m		'00000101'B	
2	Length of contents (L)	7.7.30	m		0, 5	
3	Oct3_ext_bit	7.7.30	m		'1'B	
4	Type	7.7.30	m		'0100000'B	
5	Oct4_ext_bit	7.7.30	m		'1'B	
6	Length of identity value	7.7.30	m		20	
7	Oct5_bit8765	7.7.30	m		'0000'B	
8	TPUI type 1st digit	6.3 [6]	m		0H .. BH	
9	TPUI type 2nd digit	6.3 [6]	m		0H .. BH	
10	Last 12 bits	6.3 [6]	m		len_b: 12 val: 0 .. ((2**12) - 1)	

Table F.121: ETS 300 476-4 table A.286 RAND supported

It.	RAND Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of RAND	7.7.1	m		'00001100'B	
2	Length of contents (L)	7.7.32	m		0, 8	
3	RAND field (group of octets)	7.7.32	m		len_o: 8 val: 0 .. ((2** 64))-1)	

Table F.122: ETS 300 476-4 table A.287 Type rate parameters supported

Item	Type of rate parameters supported	Reference	Status	Support
1	Rate parameters "symmetric"	7.7.33	o	
2	Rate parameters "asymmetric"	7.7.33	C2	

Table F.123: ETS 300 476-4 table A.289 Rate parameters "symmetric" supported

It.	Rate parameters "symmetric" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of rate parameters	7.7.1	m		'0100101'B	
2	Length of contents (L)	7.7.33	m		0,2,3,4	
3	Oct3_ext_bit	7.7.33	m		'1'B	
4	Symmetry	7.7.33	m		'00'B	
5	Interleaving	7.7.33	m		'0'B, '1'B	
6	Class of service	7.7.33	m		'0000'B, '0010'B, '0100'B .. '0111'B	
7	Oct4_ext_bit	7.7.33	m		'1'B	
8	Channel_1 rate	7.7.33	m		'000'B .. '100'B	
9	Channel_1 arrangement	7.7.33	m		'0000'B, '0001'B, '0010'B, '1000'B	
10	Oct5_ext_bit	7.7.33	o		'1'B	
11	Channel_2 rate	7.7.33	o		'000'B .. '100'B	
12	Channel_2 arrangement	7.7.33	o		'0000'B, '0001'B, '0010'B, '1000'B	
13	Oct6_ext_bit	7.7.33	o		'1'B	
14	Channel_3 rate	7.7.33	o		'000'B .. '100'B	
15	Channel_3 arrangement	7.7.33	o		'0000'B, '0001'B, '0010'B, '1000'B	

Table F.124: ETS 300 476-4 table A.289 Rate parameters "asymmetric" supported

It.	Rate parameters "asymmetric" Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of rate parameters	7.7.1	m		'0100101'B	
2	Length of contents (L)	7.7.33	m		0,2,3,4	
3	Oct3_ext_bit	7.7.33	m		'1'B	
4	Symmetry	7.7.33	m		'10'B	
5	Interleaving	7.7.33	m		'0'B, '1'B	
6	Class of service	7.7.33	m		'0000'B, '0010'B, '0100'B .. '0111'B	
7	Oct4_ext_bit	7.7.33	m		'0'B	
8	Channel_1 rate (P => F)	7.7.33	m		'000'B .. '100'B	
9	Channel_1 arrangement (P => F)	7.7.33	m		'0000'B, '0001'B, '0010'B, '1000'B	
10	Oct4a_ext_bit	7.7.33	m		'1'B	
11	Channel_1 rate (F => P)	7.7.33	m		'000'B .. '100'B	
12	Channel_1 arrangement (F => P)	7.7.33	o		'0000'B, '0001'B, '0010'B, '1000'B	
13	Oct5_ext_bit	7.7.33	o		'0'B	
14	Channel_2 rate (P => F)	7.7.33	o		'000'B .. '100'B	
15	Channel_2 arrangement (P => F)	7.7.33	o		'0000'B, '0001'B, '0010'B, '1000'B	
16	Oct5a_ext_bit	7.7.33	o		'1'B	
17	Channel_2 rate (F => P)	7.7.33	o		'000'B .. '100'B	
18	Channel_2 arrangement (F => P)	7.7.33	o		'0000'B, '0001'B, '0010'B, '1000'B	
19	Oct6_ext_bit	7.7.33	o		'0'B	
20	Channel_3 rate (P => F)	7.7.33	o		'000'B .. '100'B	
21	Channel_3 arrangement (P => F)	7.7.33	o		'0000'B, '0001'B, '0010'B, '1000'B	
22	Oct6a_ext_bit	7.7.33	o		'1'B	
23	Channel_3 rate (F => P)	7.7.33	o		'000'B .. '100'B	
24	Channel_3 arrangement (F => P)	7.7.33	o		'0000'B, '0001'B, '0010'B, '1000'B	

Table F.125: ETS 300 476-4 table A.291 RES supported

It.	RES Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of RES	7.7.1	m		'00001101'B	
2	Length of contents (L)	7.7.35	m		0, 4	
3	RES value (group of octets)	7.7.35	m		len_o: 4 val:0 .. ((2**32)-1)	

Table F.126: ETS 300 476-4 table A.292 RS supported

It.	RS Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of RS	7.7.1	m		'00001110'B	
2	Length of contents (L)	7.7.36	m		0, 8	
3	RS value (group of octets)	7.7.36	m		len_o: 8 val: 0 .. ((2**64)-1)	

Table F.127: ETS 300 476-4 table A.294 Service change info supported

It.	Service change info Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of service change info	7.7.1	m		'00010110'B	
2	Length of contents (L)	7.7.38	m		2 to 3	
	Oct3_ext_bit	7.7.38	m		0, 1	
3	Coding standard	7.7.38	m		'00'B	
4	Master (m)	7.7.38	m		'0'B, '1'B	
5	Change mode	7.7.38	m		'0000'B, '0001'B, '0010'B, '0100'B, '0110'B, '1000'B, '1001'B, '1100'B	
	Oct3a_ext_bit	7.7.38	m		'0'B, '1'B	
6	Extended change mode	7.7.38	i		'0000000'B .. '1111111'B	
	Oct4_ext_bit	7.7.38	m		'1'B	
7	A attributes	7.7.38			'000'B, '010'B, '011'B	
8	Reset (R)	7.7.38	C12601		'0'B, '1'B	
9	B attributes	7.7.38	C12601		'000'B, '010'B, '011'B	

C12601: IF F.126/5 = ('suspend' or 'resume') then M else I.

Table F.128: ETS 300 476-4 table A.296 Setup capability supported

It.	Setup capability Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ID of setup capability	7.7.1	m		'01100010'B	
2	Length of contents (L)	7.7.40	m		0, 1, 2	
3	Oct3_ext_bit	7.7.40	m		'0'B, '1'B	
4	Oct3_subfield	7.7.40	m		'000'B	
5	Setup capability	7.7.40	m		'01'B, '10'B	
6	Paging capability	7.7.40	m		'01'B, '10'B	
7	Oct4_extbit	7.7.40	c12701		'1'B	
8	Spare	7.7.40	c12701		'0000000'B	

c12701: IF F.127 /3 = '1'B THEN x ELSE m.

Table F.129: Window size supported

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of window size	7.7.1	m		'01100111'B	
2	Length of contents (L)	7.7.43	m		0 to 255	2
3	Oct3_ext_bit	7.7.43	m		0 to 1	1
4	Forward value	7.7.43	m		0, 1 to 7	1 to 7
5	Oct4_ext_bit	7.7.43	o.29901		0 to 1	1
6	Backward value	7.7.43	o.29901		0, 1 to 7	1 to 7

o.29901: It is mandatory to support either all of these options or none.

Table F.130: ETS 300 476-4 table A.300 ZAP supported

It.	ZAP Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	ID of ZAP field	7.7.1	m		'01010010'B	
2	Length of contents (L)	7.7.44	m		0, 1	
3	Oct3_subfield	7.7.44	m		'0000'B	
4	Contents field (ZAP value)	7.7.44	m		'0000'B .. '1111'B	

F.2.3.3 Escape information elements support

Table F.131: ETS 300 476-4 table A.301 Escape information elements receiving (P to F) supported

It.	Escape I.E. receiving (P to F) Information element name	Ref.	Status	Sp.
1	Escape (fixed length)	7.6.1	o	i
2	Escape to proprietary (variable length)	7.7.1	o	i
3	Escape for extension (variable length)	7.7.1	o	i
4	Codeset shift	7.5.3 to 7.5.4	o	i

Table F.132: ETS 300 476-4 table A.302 Escape information elements sending (F to P) supported

It.	Escape I.E. sending (F to P) Information element name	Ref.	Status	Sp.
1	Escape (fixed length)	7.6.1	o	i
2	Escape to proprietary (variable length)	7.7.1	o	i
3	Escape for extension (variable length)	7.7.1	o	i
4	Codeset shift	7.5.3 to 7.5.4	o	i

F.2.3.4 B-Format message structure support

Table F.133: ETS 300 476-4 table A.307 Short TPUI address of LCE-request paging message supported

It.	Short TPUI address of LCE- request paging message Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	Oct1_bits8765	8.2.1	m		don't care	
2	W-bit	8.2.1	m		'0'B, '1'B	
3	LCE header	8.2.1	m		'000'B, '011'B .. '111'B	
4	TPUI address (lowest 16 bits)	6.3.1 [6]	m		0-65 535	

Table F.134: ETS 300 476-4 table A.308 Long TPUI address of LCE-request paging message supported

It.	Long TPUI address of LCE- request paging message Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	Oct1_bits8765	8.2.1	m		don't care	
2	W-bit	8.2.1	m		'1'B	
3	LCE header	8.2.1	m		'000'B, '011'B .. '111'B	
4	Attributes	8.2.2	m		'0000'B, '0100'B, 0101'B, '1001'B, '1100'B .. '1111'B	
5	TPUI address (complete 20 bits)	6.3.1 [6]	m		0 .. ((2**20)-1)	
6	Target bearers	8.2.2	m		'0000'B, '0001'B .. '1111'B	
7	MAC packet life	8.2.2	m		'0000'B, '1000'B .. '1111'B	

Table F.135: ETS 300 476-4 table A.309 Long IPUI address of LCE-request paging message supported

It.	Long IPUI address of LCE-request paging message Name of field	Ref.	Stat.	Sp.	Value allowed	Value sp.
1	Oct1_bits8765	8.2.1	m		don't care	
2	W-bit	8.2.1	m		'0'B	
3	LCE header	8.2.1	m		'000'B, '011'B .. '111'B	
4	IPUI class (PUT)	6.2.1 [6]	m		'0000'B .. '0111'B	
5	IPUI address (PUN lowest 28 bits)	8.2.1	m		len_b: 28 val: 0 .. ((2*28)-1)	

F.2.4 Protocol error handling

The supplier of the implementation shall state the support of the implementation for each of the following protocol error and exception handling procedures, in the table below.

Table F.136: ETS 300 476-4 table A.313 Error and exception handling procedures supported

Item	Error and exception handling procedures Procedure name	Ref.	Status	Support
1	eeh_protocol_discriminator_error	17.1	m	
2	eeh_message_too_short	17.2	m	
3	eeh_unsupported_transaction_identity_error	17.3.1	m	
4	eeh_unknown_active_cc_call	17.3.2.1	m	
5	eeh_unknown_active_ciss_call	17.3.2.2	i	
6	eeh_unknown_active_coms_call	17.3.2.3	i	
7	eeh_unknown_active_clms_call	17.3.2.4	i	
8	eeh_unknown_active_mm_transaction	17.3.2.5	m	
9	eeh_cc_message_error	17.4.1	m	
10	eeh_ciss_message_error	17.4.2	m	
11	eeh_coms_message_error	17.4.3	i	
12	eeh_clms_message_error	17.4.3	i	
13	eeh_mm_message_error	17.4.4	m	
14	eeh_info_element_out_of_sequence	17.5.1	m	
15	eeh_duplicated_info_elements	17.5.2	m	
16	eeh_mandatory_info_element_missing_in_cc_message	17.6.1	m	
17	eeh_mandatory_info_element_content_error_in_cc_message	17.6.2	m	
18	eeh_mandatory_info_element_missing_in_coms_message	17.6.3	i	
19	eeh_mandatory_info_element_missing_in_clms_message	17.6.3	i	
20	eeh_mandatory_info_element_error_in_mm_message	17.6.4	m	
21	eeh_unrecognized_info_element	17.7.1	m	
22	eeh_non-mandatory_info_element_content_error	17.7.2	m	
23	eeh_data_link_reset	17.8	m	
24	eeh_data_link_failure	17.9	m	

F.2.5 Protocol parameters

F.2.5A Timer support

The supplier of the implementation shall provide information about the timers specified in the EN 300 175-5 [5].

Table F.137: ETS 300 476-4 table A.315 Timer and constants supported

Timer supported						
Item no.	Name	Reference	Protocol Status	Profile Support	Values	
					Allowed	Supported
1	CC.01	A.1	O	M	20 seconds	
2	CC.02	A.1	O	M	30 seconds	
3	CC.03	A.1	O	M	20 seconds	
4	CC.04	A.1	O	I	100 seconds	
5	CC.05	A.1	X		-	
6	COMS.00	A.3	Ccoms	I	5 seconds	
7	COMS.01	A.3	Ccoms	I	2 seconds	
8	COMS.02	A.3	Ccoms	I	10 seconds	
9	COMS.03	A.3	Ccoms	I	10 seconds	
10	CLMS.00	A.4	Cclms	I	5 seconds	
11	MM_access.1	A.5	X		60 seconds	
12	MM_access.2	A.5	O	M	20 seconds	
13	MM_auth.1	A.5	O	M	10 seconds	
14	MM_auth.2	A.5	O	M	100 seconds	
15	MM_cipher.1	A.5	O	C9		
16	MM_cipher.2	A.5	X		10 seconds	
17	MM_ident.1	A.5	X			
18	MM_ident.2	A.5	O	O		
19	MM_key.1	A.5	O	O		
20	MM_locate.1	A.5	X		20 seconds	
21	MM_wait	A.5	X	I	5 minutes	
22	LCE.01	A.6	O	M	5 seconds	
23	LCE.02	A.6	Clce8	M	10 seconds	
24	LCE.03	A.6	O	M	3 seconds	
25	LCE.04	A.6	Clce5 OR lce6	I	5 seconds	
26	N300	A.7	M	M	3	
26	T601	ETS 300 175 [6] part 6: B	O	O	5 minutes	
27	T602	ETS 300 175 [6] part 6: B	X		5 minutes	

F.2.6 Negotiation capabilities

The supplier of the implementation shall provide information to describe the negotiation options available in the protocol, and indicate which have been implemented, in the tables below.

Table Q.81: Negotiation capabilities

Item no.	Negotiation capabilities	Involved messages	Negotiation Info Element	Sending (P to F)	
				Protocol Status	Profile Support
1	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SETUP	Call attributes, Connection attributes, IWU attributes	O O O	O O O
2	Prioritized list negotiation, max. 3 values for the repeated info element	MM-AUTH-REJECT	Auth-type	O	O
3	Prioritized list negotiation, max. 3 values for the repeated info element	MM-CIPHER-REJECT	Cipher info	O	O
4	Exchanged attribute negotiation	CC-RELEASE-COM	IWU attributes	O	M
5	Operating parameter negotiation	CC-SETUP-ACK CC-ALERTING CC-CALL-PROC CC-CONNECT	Window size, Transit delay	O O	M I
6	Peer attribute parameter negotiation	CC-SETUP CC-SETUP-ACK CC-ALERTING CC-CALL-PROC CC-CONNECT	IWU attributes	O	O
7	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SERVICE-CHANGE CC-SERVICE-ACCEPT CC-SERVICE-REJECT	IWU attributes, Call attributes, Connection attributes	O	O

Item no.	Negotiation capabilities	Involved messages	Negotiation Info Element	Receipt (F to P)	
				Protocol Status	Profile Support
1	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SETUP	Call attributes, Connection attributes, IWU attributes	O O O	O O O
2	Prioritized list negotiation, max. 3 values for the repeated info element	MM-AUTH-REJECT	Auth-type	O	O
3	Prioritized list negotiation, max. 3 values for the repeated info element	MM-CIPHER-REJECT	Cipher info	X	
4	Exchanged attribute negotiation	CC-RELEASE-COM	IWU attributes	O	M
5	Operating parameter negotiation	CC-SETUP-ACK CC-ALERTING CC-CALL-PROC CC-CONNECT	Window size, Transit delay	O O	M I
6	Peer attribute parameter negotiation	CC-SETUP CC-SETUP-ACK CC-ALERTING CC-CALL-PROC CC-CONNECT	IWU attributes	O	O
7	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SERVICE-CHANGE CC-SERVICE-ACCEPT CC-SERVICE-REJECT	IWU attributes, Call attributes, Connection attributes	O O O	O O O

F.2.7 Multi-layer dependencies

The supplier of the implementation shall provide information to identify the implementation support for specific requirements on the underlying layers, not made mandatory by the underlying layer protocol specifications, in the table below. Where appropriate, the supplier shall provide an external reference to the completed PICS for the layer standard.

Table Q.82: Multi-layer dependencies

Profile Support for specific requirements on underlying layers			
Item no.	Layer	Protocol version support	PICS Reference
1	DLC	ETS 300 175-4 [4]	ETS 300 476-2 [18]
2	MAC	ETS 300 175-3 [3]	ETS 300 476-3 [19]
3	PHL	ETS 300 175-2 [2]	ETS 300 476-4 [20]

Annex G (normative):

Service C2: Portable radio Termination (PT) NWK PICS proforma

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

The references given in the tables of this annex refer to clauses and subclauses of EN 300 175-5 [5].

G.1 Standardized symbols for the status column

The standardized symbols for the status column are as follows:

- m or M for mandatory (the capability is required to be implemented);
- o or O for optional (Boolean) (the capability may be implemented);
- x or X for prohibited or excluded use (the capability may not be used in a given context);
- n/a, N/A or - (dash) for not applicable (the capability is not allowed because the underlying DECT layers (service provider) cannot handle it or the requirement belongs to an application i.e. does not belong to the network layer);
- c or C for conditional (the capability depends on the selection of other optional and/or conditional items);
- i or I for out of scope (the capability is allowed to be implemented but is not called upon by the profile functionality).

If appropriate, a "C" followed by an integer is placed in the status column, providing a reference to a conditional status expression defined elsewhere in the PICS proforma. The following conditions are applicable throughout this annex:

C2: IF "Support for asymmetric bearers" then M ELSE I;
 C3: IF "Support for fast setup" then M ELSE I;
 C4: IF "Ciphering PT initiated is supported" then M ELSE O;
 C6: IF "Multibearers supported" then M ELSE I;
 C7: IF "Packet mode CC procedures supported" then M ELSE I;
 C8: IF "Cost information exchange supported" then M ELSE I;
 C9: IF "Ciphering FT initiated is supported" then M ELSE O;
 C11m: IF " In call parameter change" then M else I;
 C11o: IF " In call parameter change" then O else I;
 C12: IF "Service suspension and resumption" then M else I;
 C13: IF "Partial Release supported" then M else O.

G.2 Capabilities

G.2.1 Major capabilities

G.2.1.1 Services

The supplier of the implementation shall state the support of the implementation for each of the following services, in the table below.

Table Q.9.1: Services supported

Services supported				
Item no.	Name of service	Reference	Protocol Status	Profile Support
1	Call control (CC)	5.2	O	M
2	Call independent supplementary services (CISS)	5.3	O	I
3	Connection oriented message services (COMS)	5.4	O	I
4	Connectionless message services (CLMS)	5.5	O	I
5	Mobility management (MM)	5.6	O	M
6	Link control entity (LCE)	5.7	O	M
7	Management	15	O	M
8	Error handling	17	O	M

G.2.1.2 Procedures

The supplier of the implementation shall state the support of the implementation for each of the following procedures, in the tables below.

Table Q.9.2: CC procedure support

Procedures supported				
Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	cc_outgoing_normal_call_request	9.3.1.1	O	M
2	cc_outgoing_emergency_call_request	9.3.1.1	O	I
3	cc_outgoing_external_handover_request	9.3.1.1	O	I
4	cc_outgoing_selection_of_lower_layer_resources	9.3.1.3	O	M
5	cc_outgoing_connection_of_U_plane	9.3.1.4	O	M
6	cc_outgoing_overlap_sending	9.3.1.5	O	M
7	cc_outgoing_call_proceeding	9.3.1.6	O	M
8	cc_outgoing_call_confirmation	9.3.1.7	O	M
9	cc_outgoing_call_connection	9.3.1.8	O	M
10	cc_expiry_of_timer_P<cc.03>	9.3.1.2	O	M
11	cc_expiry_of_timer_P<cc.04>	9.3.1.9	O	I
12	cc_incoming_call_request	9.3.2.1	O	M
13	cc_incoming_call_accept	9.3.2.2	O	M
14	cc_incoming_call_reject	9.3.2.2	O	M
15	cc_incoming_selection_of_lower_layer_resources	9.3.2.3	O	M
16	cc_incoming_connection_of_U_plane	9.3.2.4	O	M
17	cc_incoming_overlap_receiving	9.3.2.5	O	I
18	cc_incoming_call_proceeding	9.3.2.6	O	O
19	cc_incoming_call_confirmation	9.3.2.7	O	M
20	cc_incoming_call_connection	9.3.2.8	O	M
21	cc_incoming_pt_sending_terminal_capability	9.3.2.9	O	O
22	cc_outgoing_pt_sending_terminal_capability	9.3.1.1	O	O
23	cc_call_information	9.4	O	M
24	cc_starting_side_normal_call_release	9.5.1	O	M
25	cc_accepting_side_normal_call_release	9.5.1	O	M
26	cc_abnormal_call_release	9.5.2	O	M
27	cc_release_collisions	9.5.3	O	M
28	cc_bandwidth_changes	9.6.2	O	C6
29	cc_service_re-routing	9.6.3	O	C2
30	cc_service_suspension & resumption	9.6.4	O	C7 OR C12
31	cc_packet_mode_pt_init_access	9.7.2	O	C7
32	cc_packet_mode_ft_init_access	9.7.3	O	C7
33	cc_packet_mode_c_plane_suspend & resume	9.7.4.2	O	C7 OR C12
34	cc_packet_mode_u_plane_suspend & resume	9.7.4.3	O	C7 OR C12

Table Q.9.3: SS (CRSS and CISS) procedure support

Procedures supported				
Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	crss_keypad_protocol	10.2	O	I
2	crss_feature_key_mgt	10.3	O	I
3	crss_hold	10.4.1	O	I
4	crss_retrieve	10.4.1	O	I
5	crss_facility	10.4.2	O	I
6	ciss_keypad_protocol	10.2	O	I
7	ciss_feature_key_mgt	10.3	O	I
8	ciss_facility	10.4.2	O	I
9	crss_queue_mgt	10.6.2.1	O	I
10	crss_indication_of_subscriber_number	10.6.2.2	O	I
11	ciss_indication_of_subscriber_number	10.6.2.2	O	I
12	crss_control_of_echo_control_functions	10.6.2.3	O	I
13	crss_cost_information	10.6.2.4	O	C8
14	ciss_cost_information	10.6.2.4	O	I

Table Q.9.6: MM procedure support

Procedures supported				
Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	mm_identification_of_pt	13.2.1	O	M
3	mm_authentication_of_pt	13.3.1	O	M
4	mm_authentication_of_user	13.3.2	O	M
5	mm_authentication_of_ft	13.3.3	O	O
6	mm_location_registration	13.4.1	O	M
7	mm_detach	13.4.2	O	I
8	mm_location_update	13.4.3	O	M
9	mm_obtain_access_rights	13.5.1	O	M
10	mm_pt_init_terminate_access_rights	13.5.2	O	I
11	mm_ft_init_terminate_access_rights	13.5.2	O	M
12	mm_key_allocation	13.6	O	M
13	mm_pt_init_parameter_retrieval	13.7	O	I
14	mm_ft_init_parameter_retrieval	13.7	O	I
15	mm_pt_init_cipher_switching	13.8	O	C4
16	mm_ft_init_cipher_switching	13.8	O	C9

Table Q.9.7: LCE procedure support

Procedures supported				
Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	lce_direct_pt_init_link_establishment	14.2.2	O	M
2	lce_indirect_ft_init_link_establishment	14.2.3	O	M
3	lce_direct_ft_init_link_establishment	14.2.4	O	C3
4	lce_link_maintenance	14.2.5	O	M
5	lce_link_suspend	14.2.6.1	O	I
6	lce_link_resume	14.2.6.2	O	I
7	lce_link_release	14.2.7	O	M
8	lce_link_partial_release	14.2.7	O	M
9	lce_cl_message_routing	14.3.1	O	I
10	lce_cl_broadcast_announce	14.3.2	O	I

Table Q.9.8: Management procedure support

Procedures supported				
Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	mgt_prioritized_list_negotiation	15.2.2	O	O
2	mgt_exchanged_attribute_negotiation	15.2.3	O	M
3	mgt_operating_parameter_negotiation	15.2.4	O	M
4	mgt_peer_attribute_negotiation	15.2.5	O	O
5	mgt_service_modification	15.3	O	M
6	mgt_mm_procedures_mgt	15.5	O	M
7	mgt_call_ciphering_mgt	15.6	Cmm15 OR mm16	C4
8	mgt_external_handover	15.7	O	I
9	mgt_test_call_back	15.8.1	O	I
10	mgt_test_hook_control	15.8.2	O	I
11	mgt_upper_tester	15.8.3	O	I

G.2.2 Protocol parameters

G.2.2.1 Timer support

The supplier of the implementation shall provide information about the timers specified in ETS 300 175-5 [5].

Table Q.10.1: Timer support

Timer supported						
Item no.	Name	Reference	Protocol Status	Profile Support	Values	
					Allowed	Supported
1	CC.01	A.1	O	M	20 seconds	
2	CC.02	A.1	O	M	30 seconds	
3	CC.03	A.1	O	M	20 seconds	
4	CC.04	A.1	O	I	100 second	
5	CC.05	A.1	X			
6	COMS.00	A.3	O	I	5 seconds	
7	COMS.01	A.3	O	I	2 seconds	
8	COMS.02	A.3	O	I	10 seconds	
9	COMS.03	A.3	O	I	10 seconds	
10	CLMS.00	A.4	O	I	5 seconds	
11	MM_access.1	A.5	O	M	60 seconds	
12	MM_access.2	A.5	O	X	20 seconds	
13	MM_auth.1	A.5	O	X	10 seconds	
14	MM_auth.2	A.5	O	X	100 seconds	
15	MM_cipher.1	A.5	X			
16	MM_cipher.2	A.5	O	C4	10 seconds	
17	MM_ident.1	A.5	X			
18	MM_ident.2	A.5	X			
19	MM_key.1	A.5	X			
20	MM_locate.1	A.5	O	M	20 seconds	
21	MM_wait	A.5	O	I	5 minutes	
22	LCE.01	A.6	O	M	5 seconds	
23	LCE.02	A.6	O	M	10 seconds	
24	LCE.03	A.6	O	M	3 seconds	
25	LCE.04	A.6	O	I	5 seconds	
26	T601	ETS 300 175 [6] part 6: B	X		5 minutes	
27	T602	ETS 300 175 [6] part 6: B	O	O	5 minutes	

G.2.2.2 System wide parameters

System wide parameters have a single specification applicable for all network messages in which they occur and the corresponding tables in which they occur contain reference to the following declarations.

The supplier of the implementation shall state whether or not the following parameters specified by ETS 300 175-5 [5] are supported and their type, value(s) and range(s), in the table below. The supplier shall indicate the status of support for sending and receiving each parameter.

Table Q.10.2: Protocol parameters

Protocol parameters supported						
Item no.	Name	Reference	Protocol Status	Profile Support	Values	
					Allowed	Supported
1	N300	A.7	X			

G.2.2.3 Other parameters

Some parameters only occur in a limited number of network messages. Declaration of the support these parameters shall be specified in the tables in which they occur.

G.2.3 Messages

The supplier of the implementation shall state whether or not the messages specified by ETS 300 175-5 [5] are supported, in the tables below. The supplier shall indicate the status of support for sending and receiving each message.

G.2.3.1 CC messages

Table Q.11: CC Message support

Supported messages						
Item no.	Name	Reference	Sending (P to F)		Receipt (F to P)	
			Protocol Status	Profile Support	Protocol Status	Profile Support
1	CC-SETUP	6.3.2.1	O	M	O	M
2	CC-INFOmation	6.3.2.2	O	M	O	C8
3	CC-SETUP-ACKnowledge	6.3.2.3	Ccc17	I	O	M
4	CC-CALL-PROCeeding	6.3.2.4	Ccc18	I	O	M
5	CC-ALERTING	6.3.2.5	O	M	O	M
6	CC-CONNECT	6.3.2.6	O	M	O	M
7	CC-CONNECT-ACKnowledge	6.3.2.7	X		O	M
8	CC-RELEASE	6.3.2.8	O	M	O	M
9	CC-RELEASE-COMplete	6.3.2.9	O	M	O	M
10	CC-SERVICE-CHANGE	6.3.2.10	Ccc28 OR cc29 OR cc30		Ccc28 OR cc29 OR cc30	
11	CC-SERVICE-ACCEPT	6.3.2.11	Ccc28 OR cc29 OR cc30		Ccc28 OR cc29 OR cc30	
12	CC-SERVICE-REJECT	6.3.2.12	Ccc28 OR cc29 OR cc30		Ccc28 OR cc29 OR cc30	
13	CC-NOTIFY	6.3.2.13	X		O	M
14	IWU-INFOrmation	6.3.2.14	O	I	O	I

Table Q.11.1: CC-SETUP

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, ext	
3	Message Type (MI)	7.4.1	M		5	
4	Portable identity	7.7.30	M			
5	Fixed identity	7.7.18	M			
6	Basic service	7.6.4	M			
6a	Repeat indicator "prioritized list"	7.6.3	O	O		
7	IWU attributes	7.7.21	O	M		
8	Repeat indicator "prioritized list"	7.6.3	O	O		
9	Call attributes	7.7.5	O	O		
10	Repeat indicator "prioritized list"	7.6.3	O	O		
11	Connection attributes	7.7.11	O	M		
12	Cipher info	7.7.10	O	I		
13	Connection identity	7.7.12	O	I		
14	Facility	7.7.15	O	I		
15	Progress Indicator	7.7.31	X			
16	Display	7.5.5	X			
17	Keypad	7.5.5	O	I		
18	Signal	7.6.8	X			
19	Feature Activate	7.7.16	O	C8		
20	Feature Indicate	7.7.17	X			
21	Network parameter	7.7.29	O	I		
22	Terminal capability	7.7.41	O	O		
23	End-to-end compatibility	7.7.14	O	I		
24	Rate parameters	7.7.33	O	I		
25	Transit delay	7.7.42	O	I		
26	Window size	7.7.43	O	M		
27	Calling party number	7.7.9	O	I		
28	Called party number	7.7.7	O	O		
29	Called party subaddress	7.7.8	O	I		
30	Sending complete	7.6.2	O	I		
31	IWU-to-IWU	7.7.23	O	I		
32	IWU-PACKET	7.7.22	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, ext	
3	Message Type (MI)	7.4.1	M		5	
4	Portable identity	7.7.30	M			
5	Fixed identity	7.7.18	M			
6	Basic service	7.6.4	M			
6a	Repeat indicator	7.6.3	O	O		
7	IWU attributes	7.7.21	O	M		
8	Repeat indicator	7.6.3	O	O		
9	Call attributes	7.7.5	O	O		
10	Repeat indicator	7.6.3	O	I		
11	Connection attributes	7.7.11	O	M		
12	Cipher info	7.7.10	O	I		
13	Connection identity	7.7.12	O	I		
14	Facility	7.7.15	O	I		
15	Progress Indicator	7.7.31	O	I		
16	Display	7.5.5	O	I		
17	Keypad	7.5.5	X			
18	Signal	7.6.8	O			
19	Feature Activate	7.7.16	X			
20	Feature Indicate	7.7.17	O	C8		
21	Network parameter	7.7.29	X			
22	Terminal capability	7.7.41	X			
23	End-to-end compatibility	7.7.14	O	I		
24	Rate parameters	7.7.33	O	I		
25	Transit delay	7.7.42	O	I		
26	Window size	7.7.43	O	M		
27	Calling party number	7.7.9	O	I		
28	Called party number	7.7.7	O	I		
29	Called party subaddress	7.7.8	O	I		
30	Sending complete	7.6.2	O	I		
31	IWU-to-IWU	7.7.23	O	I		
32	IWU-PACKET	7.7.22	O	I		

Table Q.11.2: CC-INFO

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		123	
4	Location area	7.7.25	O	I		
5	NWK assigned identity	7.7.28	O	I		
6	Facility	7.7.15	O	I		
6a	Progress Indicator	7.7.31	X			
7	Display	7.5.5	X			
8	Keypad	7.5.5	O	M		
9	Signal	7.6.8	X			
10	Feature activate	7.7.16	O	C8		
11	Feature indicate	7.7.17	X			
12	Network parameter	7.7.29	O	I		
13	Called party number	7.7.7	O	I		
14	Called party subaddress	7.7.8	O	O		
15	Sending complete	7.6.2	O	I		
16	Test hook control	7.6.10	X			
17	IWU-to-IWU	7.7.23	O	I		
18	IWU-packet	7.7.22	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		123	
4	Location area	X				
5	NWK assigned identity	X				
6	Facility	O	I			
6a	Progress Indicator	O	I			
7	Display	O	I			
8	Keypad	X				
9	Signal	O	M			
10	Feature activate	X				
11	Feature indicate	O	C8			
12	Network parameter	X				
13	Called party number	O	I			
14	Called party subaddress	O	I			
15	Sending complete	O	I			
16	Test hook control	O	I			
17	IWU-to-IWU	O	I			
18	IWU-packet	O	I			

Table Q.11.3: CC-SETUP-ACKnowledge

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		13	
4	Info type	7.7.20	O	I		
5	Portable identity	7.7.30	O	I		
6	Fixed identity	7.7.18	O	I		
7	Location area	7.7.25	O	I		
8	IWU attributes	7.7.21	O	O		
9	Call attributes	7.7.5	O	I		
10	Connection attributes	7.7.11	O	O		
11	Connection identity	7.7.12	O	I		
12	Facility	7.7.15	O	I		
13	Progress indicator	7.7.31	O	M		
14	Display	7.5.5	O	I		
15	Signal	7.6.8	O	I		
16	Feature indicate	7.7.17	O	C8		
17	Transit delay	7.7.42	O	I		
18	Window size	7.7.43	O	M		
19	Delimiter request	7.6.2	O			
20	IWU-to-IWU	7.7.23	O	I		
21	IWU-packet	7.7.22	O	I		

Table Q.11.4: CC-CALL-PROCeeding

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		2	
4	IWU attributes	7.7.21	O	O		
5	Call attributes	7.7.5	O			
6	Connection attributes	7.7.11	O	O		
7	Connection identity	7.7.12	O	I		
8	Facility	7.7.15	O	I		
9	Progress indicator	7.7.31	O	M		
10	Display	7.5.5	O	I		
11	Signal	7.6.8	O	I		
12	Feature indicate	7.7.17	O	C8		
13	Transit delay	7.7.42	O	I		
14	Window size	7.7.43	O	I		
15	IWU-to-IWU	7.7.23	O	I		
16	IWU-PACKET	7.7.22	O	I		

Table Q.11.5: CC-ALERTING

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		1	
4	IWU attributes	7.7.21	O	O		
5	Call attributes	7.7.5	O			
6	Connection attributes	7.7.11	O	O		
7	Connection identity	7.7.12	O	I		
8	Facility	7.7.15	X			
9	Progress Indicator	7.7.31	X			
10	Display	7.5.5	X			
11	Signal	7.6.8	X			
12	Feature indicate	7.7.17	X			
13	Terminal capability	7.7.41	O	I		
14	Transit delay	7.7.42	O	I		
15	Window size	7.7.43	O	I		
16	IWU-to-IWU	7.7.23	O	I		
17	IWU-PACKET	7.7.22	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		1	
4	IWU attributes	7.7.21	O	O		
5	Call attributes	7.7.5	O	I		
6	Connection attributes	7.7.11	O	O		
7	Connection identity	7.7.12	O	I		
8	Facility	7.7.15	O	I		
9	Progress Indicator	7.7.31	O	M		
10	Display	7.5.5	O	I		
11	Signal	7.6.8	O	I		
12	Feature indicate	7.7.17	O	C8		
13	Terminal capability	7.7.41	X			
14	Transit delay	7.7.42	O	I		
15	Window size	7.7.43	O	I		
16	IWU-to-IWU	7.7.23	O	I		
17	IWU-PACKET	7.7.22	O	I		

Table Q.11.6: CC-CONNECT

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		7	
3a	IWU attributes	7.7.21	O	O		
4	Call attributes	7.7.5	O	I		
5	Connection attributes	7.7.11	O	O		
6	Connection identity	7.7.12	O	I		
7	Facility	7.7.15	O	I		
8	Progress indicator	7.7.31	X			
9	Display	7.5.5	X			
10	Signal	7.6.8	X			
11	Feature indicate	7.7.17	X			
12	Terminal capability	7.7.41	O	I		
13	Transit delay	7.7.42	O	I		
14	Window size	7.7.43	O	M		
15	IWU-to-IWU	7.7.23	O	I		
16	IWU-PACKET	7.7.22	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		7	
3a	IWU attributes	7.7.21	O	O		
4	Call attributes	7.7.5	O	I		
5	Connection attributes	7.7.11	O	O		
6	Connection identity	7.7.12	O	I		
7	Facility	7.7.15	O	I		
8	Progress indicator	7.7.31	O			
9	Display	7.5.5	O	I		
10	Signal	7.6.8	O	I		
11	Feature indicate	7.7.17	O	C8		
12	Terminal capability	7.7.41	X			
13	Transit delay	7.7.42	O	I		
14	Window size	7.7.43	O	M		
15	IWU-to-IWU	7.7.23	O	I		
16	IWU-PACKET	7.7.22	O	I		

Table Q.11.7: CC-CONNECT-ACKnowledge

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		15	
4	Display	7.5.5	O	I		
5	Feature indicate	7.7.17	O	C8		
6	IWU-to-IWU	7.7.23	O	I		
7	IWU-PACKET	7.7.22	O	I		

Table Q.11.8: CC-RELEASE

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		77	
4	Release reason	7.6.7	O	C13		
5	Facility	7.7.15	X			
6	Display	7.5.5	X			
7	Feature indicate	7.7.17	X			
8	IWU-to-IWU	7.7.23	O	I		
9	IWU-PACKET	7.7.22	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		77	
4	Release reason	7.6.7	O	C13		
5	Facility	7.7.15	O	I		
6	Display	7.5.5	O	I		
7	Feature indicate	7.7.17	O	C8		
8	IWU-to-IWU	7.7.23	O	I		
9	IWU-PACKET	7.7.22	O	I		

Table Q.11.9: CC-RELEASE-COMplete

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		90	
4	Release reason	7.6.7	OM	C13		
5	Identity type	7.7.19	X			
6	Location area	7.7.25	X			
7	IWU attributes	7.7.21	O	C11o		
8	Facility	7.7.15	X			
9	Display	7.5.5	X			
10	Feature indicate	7.7.17	X			
11	Network parameter	7.7.29	X			
12	IWU-to-IWU	7.7.23	O	I		
13	IWU-PACKET	7.7.22	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		90	
4	Release reason	7.6.7	O	C13		
5	Identity type	7.7.19	O	I		
6	Location area	7.7.25	O	I		
7	IWU attributes	7.7.21	O	C11o		
8	Facility	7.7.15	O	I		
9	Display	7.5.5	O	I		
10	Feature indicate	7.7.17	O	C8		
11	Network parameter	7.7.29	O	I		
12	IWU-to-IWU	7.7.23	O	I		
13	IWU-PACKET	7.7.22	O	I		

Table Q.11.10: CC-SERVICE-CHANGE

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		32	
3a	IWU attributes	7.7.21	O	C11o		
4	Portable identity	7.7.30	M			
5	Service change Info	7.7.38	M			
6	Repeat indicator	7.6.3	O	I		
7	Connection attributes	7.7.11	O	O		
8	Connection identity	7.7.12	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		32	
3a	IWU attributes	7.7.21	O	C11m		
4	Portable identity	7.7.30	M			
5	Service change Info	7.7.38	M			
6	Repeat indicator	7.6.3	O	I		
7	Connection attributes	7.7.11	O	O		
8	Connection identity	7.7.12	O	I		

Table Q.11.11: CC-SERVICE-ACCEPT

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		33	
3a	IWU attributes	7.7.21	O	C11o		
4	Connection identity	7.7.12	O			

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		33	
3a	IWU attributes	7.7.21	O	C11m		
4	Connection identity	7.7.12	O			

Table Q.11.12: CC-SERVICE-REJECT

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0-6,8-14,ext	
3	Message Type (MI)	7.4.1	M		35	
4	Release reason	7.6.7	O			
5	IWU attributes	7.7.21	O	C11o		
6	Connection attributes	7.7.11	O			

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		35	
4	Release reason	7.6.7	M			
5	IWU attributes	7.7.21	O	C11m		
6	Connection attributes	7.7.11	O			

Table Q.11.13: CC-NOTIFY

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		110	
4	Timer restart	7.6.9	O	M		

G.2.3.2 Mobility management messages

Table Q.15: MM message support

Supported messages						
Item no.	Name	Reference	Sending (P to F)		Receipt (F to P)	
			Protocol Status	Profile Status	Protocol Status	Profile Status
1	ACCESS-RIGHTS-ACCEPT	6.3.6.1	X		O	M
2	ACCESS-RIGHTS-REJECT	6.3.6.2	X		O	M
3	ACCESS-RIGHTS-REQUEST	6.3.6.3	O	M	X	
4	ACCESS-RIGHTS-TERMINATE-ACCEPT	6.3.6.4	O	M	X	
5	ACCESS-RIGHTS-TERMINATE-REJECT	6.3.6.5	O	M	X	
6	ACCESS-RIGHTS-TERMINATE-REQUEST	6.3.6.6	X		O	M
7	AUTHentication-REJECT	6.3.6.7	M		O	O
8	AUTHentication-REPLY	6.3.6.8	M		O	O
9	AUTHentication-REQUEST	6.3.6.9	O	O	M	
10	CIPHER-REJECT	6.3.6.10	O	C9	O	C4
11	CIPHER-REQUEST	6.3.6.11	X		O	C9
12	CIPHER-SUGGEST	6.3.6.12	O	C4	X	
13	DETACH	6.3.6.13	O	I	X	
14	IDENTITY-REPLY	6.3.6.14	O	M	X	
15	IDENTITY-REQUEST	6.3.6.15	X		O	M
16	KEY-ALLOCATE	6.3.6.16	X		O	M
17	LOCATE-ACCEPT	6.3.6.17	X		O	M
18	LOCATE-REJECT	6.3.6.18	X		O	M
19	LOCATE-REQUEST	6.3.6.19	O	M	X	
20	MM-INFO-ACCEPT	6.3.6.20	X		O	I
21	MM-INFO-REJECT	6.3.6.21	X		O	I
22	MM-INFO-REQUEST	6.3.6.22	O	I	X	
23	MM-INFO-SUGGEST	6.3.6.23	X		O	M
24	TEMPORARY-IDENTITY-ASSIGN	6.3.6.24	X		O	M
25	TEMPORARY-IDENTITY-ASSIGN-ACKnowledge	6.3.6.25	O	M	X	
26	TEMPORARY-IDENTITY-ASSIGN-REject	6.3.6.26	O	M	X	

Table Q.15.1: ACCESS-RIGHTS-ACCEPT

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		69	
4	Portable identity	7.7.30	M			
5	Repeat indicator	7.6.3	O	I		
6	Fixed identity (PARK)	7.7.18	M			
7	Location area	7.7.25	O	I		
8	Auth-type	7.7.4	O	I		
9	Cipher-info	7.7.10	O	I		
10	ZAP field	7.7.44	O	M		
11	Service class	7.7.39	O	M		
12	IWU-to-IWU	7.7.23	O	I		

Table Q.15.2: ACCESS-RIGHTS-REJECT

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		71	
4	Reject reason	7.7.34	O	I		
5	Duration	7.7.13	O	I		

Table Q.15.3: ACCESS-RIGHTS-REQUEST

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		68	
4	Portable identity	7.7.30	M			
5	Auth-type	7.7.4	M			
6	Cipher-info	7.7.10	O	I		
7	Terminal Capability	7.7.41	O	M		
8	IWU-to-IWU	7.7.23	O	I		

Table Q.15.4: ACCESS-RIGHTS-TERMINATE-ACCEPT

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		73	

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M	I	5	
2	Transaction Identifier (TI)	7.3	M	I	8	
3	Message Type (MI)	7.4.1	M	I	73	

Table Q.15.5: ACCESS-RIGHTS-TERMINATE-REJECT

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		75	
4	Reject reason	7.7.34	O	I		
5	Duration	7.7.13	X			

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		75	
4	Reject reason	7.7.34	O	I		
5	Duration	7.7.13	O	I		

Table Q.15.6: ACCESS-RIGHTS-TERMINATE-REQUEST

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		72	
4	Portable identity	7.7.30	M	I		
5	Repeat indicator	7.6.3	O	I		
6	Fixed identity (PARKs)	7.7.18	O	I		
7	IWU-to-IWU	7.7.23	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		72	
4	Portable identity	7.7.30	M			
5	Repeat indicator	7.6.3	O	I		
6	Fixed identity (PARKs)	7.7.18	O	M		
7	IWU-to-IWU	7.7.23	O	I		

Table Q.15.7: AUTHentication-REJECT

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		67	
4	Repeat indicator	7.6.3	O	I		
5	Auth-type	7.7.4	O	I		
6	Reject reason	7.7.34	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		67	
4	Repeat indicator	7.6.3	O	I		
5	Auth-type	7.7.4	O	I		
6	Reject reason	7.7.34	O	I		

Table Q.15.8: AUTHentication-REPLY

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		65	
4	RES	7.7.35	M			
5	RS	7.7.36	X			
6	ZAP field	7.7.44	O	M		
7	Service class	7.7.39	O	M		
8	Key	7.7.24	O	I		
9	IWU-to-IWU	7.7.23	O	I		

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		65	
4	RES	7.7.35	M			
5	RS	7.7.36	O	M		
6	ZAP field	7.7.44	X			
7	Service class	7.7.39	X			
8	Key	7.7.24	X			
9	IWU-to-IWU	7.7.23	O	I		

Table Q.15.9: AUTHentication-REQUEST

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		64	
4	Auth-type	7.7.4	M			
5	RAND	7.7.32	M			
6	RES	7.7.35	O	I		
7	RS	7.7.36	X			
8	Cipher info	7.7.10	O	I		
9	IWU-to-IWU	7.7.23	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		64	
4	Auth-type	7.7.4	M			
5	RAND	7.7.32	M			
6	RES	7.7.35	X			
7	RS	7.7.36	O	M		
8	Cipher info	7.7.10	O	I		
9	IWU-to-IWU	7.7.23	O	I		

Table Q.15.10: CIPHER-REJECT

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		79	
4	Repeat indicator	7.6.3	O	I		
5	Cipher info	7.7.10	O	I		
6	Reject reason	7.7.34	O	I		

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		79	
4	Repeat indicator	7.6.3	O	I		
5	Cipher info	7.7.10	O	I		
6	Reject reason	7.7.34	O	I		

Table Q.15.11: CIPHER-REQUEST

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		76	
4	Cipher info	7.7.10	M			
5	Call identity	7.7.6	O	I		
6	Connection identity	7.7.12	O	I		
7	IWU-to-IWU	7.7.23	O	I		

Table Q.15.12: CIPHER-SUGGEST

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		78	
4	Cipher info	7.7.10	M			
5	Call identity	7.7.6	O	I		
6	Connection identity	7.7.12	O	I		
7	IWU-to-IWU	7.7.23	O	I		

Table Q.15.14: IDENTITY-REPLY

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		89	
4	Repeat Indicator	7.6.3	O	O		
5	Portable identity	7.7.30	O	M		
6	Repeat Indicator	7.6.3	O	I		
7	Fixed identity	7.7.18	O	M		
8	Repeat Indicator	7.6.3	O	I		
9	NWK assigned identity	7.7.28	O	I		
10	IWU-to-IWU	7.7.23	O	I		

Table Q.15.15: IDENTITY-REQUEST

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		88	
4	Repeat indicator	7.6.3	O	I		
5	Identity type	7.7.19	M			
6	IWU-to-IWU	7.7.23	O	I		

Table Q.15.16: KEY-ALLOCATE

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		66	
4	Allocation type	7.7.2	M			
5	Rand	7.7.32	M			
6	RS	7.7.36	M			

Table .15.17: LOCATE-ACCEPT

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		85	
4	Portable identity	7.7.30	M			
5	Location area	7.7.25	M			
6	NWK assigned identity	7.7.28	O	I		
7	Duration	7.7.13	O	I		
8	IWU-to-IWU	7.7.23	O	I		

Table Q.15.18: LOCATE-REJECT

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		87	
4	Reject reason	7.7.34	O	I		
5	Duration	7.7.13	O	I		

Table Q.15.19: LOCATE-REQUEST

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		84	
4	Portable identity	7.7.30	M			
5	Fixed identity	7.7.18	O	M		
6	Location area	7.7.25	O	M		
7	NWK assigned identity	7.7.28	O	I		
8	Cipher info	7.7.10	O	I		
9	Setup capability	7.7.40	O	I		
10	Terminal capability	7.7.41	O	M		
11	IWU-to-IWU	7.7.23	O	I		

Table Q.15.23: MM-INFO-SUGGEST

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		82	
4	Info type	7.7.20	M			
5	Fixed identity	7.7.18	O	I		
6	Location area	7.7.25	O	I		
7	NWK assigned identity	7.7.28	O	I		
8	Network parameter	7.7.29	O	I		
9	IWU-to-IWU	7.7.23	O	I		

Table Q.15.25: TEMPORARY-IDENTITY-ASSIGN-ACKnowledge

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		5	
2	Transaction Identifier (TI)	7.3	M		0,8	
3	Message Type (MI)	7.4.1	M		93	

G.2.3.3 Link control entity messages

Table Q.16: LCE message support

Supported messages						
Item no.	Name	Reference	Sending (P to F)		Receipt (F to P)	
			Protocol Status	Profile Support	Protocol Status	Profile Support
1	LCE-PAGE-RESPONSE	6.3.7.1	M		X	
2	LCE-PAGE-REJECT	6.3.7.2	X		M	
3	LCE-REQUEST-PAGE-B-format	6.4.2	X		M	

Table Q.16.1: LCE-PAGE-RESPONSE

Item no.	Name of information element	Reference	Sending (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		0	
2	Transaction Identifier (TI)	7.3	M		0	
3	Message Type (MI)	7.4.1	M		113	
4	Portable identity	7.7.30	M			
5	Fixed identity	7.7.18	O	M		
6	NWK assigned identity	7.7.28	O	I		
7	Cipher info	7.7.10	O	I		

Table Q.16.2: LCE-PAGE-REJECT

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		0	
2	Transaction Identifier (TI)	7.3	M		8	
3	Message Type (MI)	7.4.1	M		114	
4	Portable identity	7.7.30	M			
6	Fixed identity	7.7.18	O	I		
7	Reject reason	7.7.34	O	I		

Table Q.16.3: LCE-REQUEST-PAGE-B-format

Item no.	Name of information element	Reference	Receipt (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	LCE header	8.2.1	M		0,3-7	
2	Long address	8.2	M			
3	Short address	8.2	M			

G.2.4 Information elements

The supplier of the implementation shall state whether or not each information element for each message specified by EN 300 175-5 [5] are supported. The supplier shall indicate the type, value(s) and range(s), of each information element. The supplier shall indicate the status of support for sending and receiving each information element in each message.

Table Q.17: Information element support

Supported information elements						
Item no.	Name	Reference	Sending (P to F)		Receipt (F to P)	
			Protocol Status	Profile Support	Protocol Status	Profile Support
0	Codeset shift	7.5.3 to 7.5.4	O	I	O	I
1	Sending complete	7.6.2	O	I	O	I
2	Delimiter request	7.6.2	X		O	
3	Repeat indicator (non prioritized)	7.6.3	O	O	O	O
4	Repeat indicator (prioritized)	7.6.3	O	O	O	O
5	Basic service	7.6.4	O	M	O	M
6	Single-display	7.6.5	X		O	I
7	Single-keypad	7.6.6	O	M	X	
8	Release-reason	7.6.7	O	M	O	M
9	Signal	7.6.8	X		O	M
10	Timer restart	7.6.9	X		M	
11	Test Hook Control	7.6.10	X		O	I
12	Allocation type	7.7.2	X		M	
13	Alphanumeric	7.7.3	O	I	O	I
14	Auth-type	7.7.4	M		M	
15	Call attributes	7.7.5	O	M	O	M
16	Call identity	7.7.6	O	I	O	I
17	Called party number	7.7.7	O	C7o	O	I
18	Called party subaddress	7.7.8	O	I	O	I
19	Calling party number	7.7.9	O	I	O	I
20	Cipher info	7.7.10	O	C4 OR C9	O	C4 OR C9
21	Connection attributes	7.7.11	O	I	O	I
22	Connection identity	7.7.12	O	M	O	M
23	Duration	7.7.13	X		O	I
24	End-to-end compatibility	7.7.14	O	I	O	I

Supported information elements						
Item no.	Name	Reference	Sending (P to F)		Receipt (F to P)	
			Protocol Status	Profile Support	Protocol Status	Profile Support
25	Facility	7.7.15	O	I	O	I
26	Feature activate	7.7.16	O	C8	X	
27	Feature indicate	7.7.17	X		O	C8
28	Fixed identity	7.7.18	M		M	
29	Identity type	7.7.19	X		M	
30	Info type	7.7.20	O	I	O	I
31	IWU attributes	7.7.21	O	M	O	M
32	IWU PACKET	7.7.22	O	I	O	I
33	IWU to IWU	7.7.23	O	I	O	I
34	Key	7.7.24	O	C4	X	
35	Location area	7.7.25	O	I	O	M
36	Multi-display	7.7.26	X		O	I
37	Multi-keypad	7.7.27	O	M	X	
38	Network assigned identity	7.7.28	O	I	O	I
39	Network parameter	7.7.29	O	I	O	I
40	Portable identity	7.7.30	M		M	
41	Progress indicator	7.7.31	X		O	I
42	Rand	7.7.32	M		M	
43	Rate Parameters	7.7.33	O	I	O	I
44	Reject reason	7.7.34	O	I	O	I
45	RES	7.7.35	M		M	
46	RS	7.7.36	X		M	
47	Segmented info	7.7.37	O	I	O	I
48	Service change info	7.7.38	O	M	O	M
49	Service class	7.7.39	O	I	O	I
50	Setup capability	7.7.40	O	I	X	
51	Terminal capability	7.7.41	O	M	X	
52	Transit delay	7.7.42	O	I	O	I
53	Window size	7.7.43	O	M	O	M
54	ZAP field	7.7.44	O	M	O	M

Table Q.18: Escape support

Supported escape elements						
Item no.	Name	Reference	Sending (P to F)		Receipt (F to P)	
			Protocol Status	Profile Support	Protocol Status	Profile Support
1	Escape for non-standard codeset	7.5.2 to 7.5.3	O	I	O	I
2	Escape (fixed length)	7.6.1	-	I	-	I
3	Escape to proprietary (variable length)	7.7.1	O	I	O	I
4	Escape for extension (variable length)	7.7.1	O	I	O	I

G.2.4.1 Fixed length information element support

Table Q.21.1: Repeat indicator (non prioritized list) implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	Identifier of repeat indicator	7.6.1	M		5	
2	Repeat indicator	7.6.3	M		1	

Table Q.21.2: Repeat indicator (prioritized list) implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	Identifier of repeat indicator	7.6.1	M		5	
2	Repeat indicator	7.6.3	M		2	

Table Q.22: Basic service implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	Identifier for double octet	7.6.1	M		6	
2	2nd-ID of basic service of fixed length	7.6.1	M		0	
3	Call class	7.6.4	M		0, 2, 4	0
4	Basic service	7.6.4	M		0, 15	15

Table Q.25: Release-reason implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	Identifier for double octet	7.6.1	M		6	
2	2nd-ID of release reason	7.6.1	M		2	
3	Release reason code	7.6.7	M		00 to 09, 0D to 0F, 10 to 15, 21 to 23, 31 to 34 (Hex)	0X-3X

Table Q.27: Timer restart implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	Identifier for double octet	7.6.1	M		6	
2	2nd-ID of timer restart of fixed length	7.6.1	M		5	
3	Restart value	7.6.9	M		0	

G.2.4.2 Variable length information element support

Table Q.30: Allocation type implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of allocation type	7.7.1	M		11	
2	Length of Contents (L)	7.7.2	M		2	
3	Authentication algorithm identifier	7.7.2	M		1	
4	User Authentication Key (UAK) number	7.7.2	M		0 to 15	
5	Authentication Code (AC) number	7.7.2	M		0 to 15	

Table Q.32: General Auth-type implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol status	Profile status	Values	
					Protocol allowed	Profile allowed
1	ID of Auth-type	7.7.1	M		10	
2	Length of Contents (L)	7.7.4	M		3 to 4	
3	Authentication algorithm identifier	7.7.4	M		1, 64, 172	1
4	Proprietary algorithm identifier	7.7.4	O	I	0 to 255	
5	Authentication key type	7.7.4	M		1, 3, 4	
6	Authentication key number	7.7.4	M		0 to 15	8
7	INCRement bit	7.7.4	M		0, 1	
8	TXC bit	7.7.4	M		0, 1	0
9	UPC bit	7.7.4	M		0, 1	
10	Cipher key number	7.7.4	O		0 to 15	0, 8

Table Q.35: Called party number implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of called party number	7.7.1	M		112	
2	Length of Contents (L)	7.7.7	M		2 to 255	
3	Number type	7.7.7	M		0 to 4, 6	
4	Numbering plan identification	7.7.7	M		0, 1, 3, 8, 9	
5	Called party address(the first DECT character)	7.7.7	M		00, 02, 03, 05 to 0F, 11 to 14, 16, 19 to 1B, 20 to 7F (HEX)	
6	Called party address(list of the rest DECT character)	7.7.7	M		00, 02, 03, 05 to 0F, 11 to 14, 16, 19 to 1B, 20 to 7F (HEX)	

Table Q.38: Cipher info implemented

Supported parameters						
Field no.	Name of fields	Reference	Status	Supp	Values	
					Allowed	Supported
1	ID of cipher info of variable length	7.7.1	M		25	
2	Length of Contents (L)	7.7.10	M		2 to 3	
3	Enable ciphering	7.7.10	M		0, 1	
4	Cipher algorithm identifier	7.7.10	M		1, 127	1
5	Proprietary algorithm identifier	7.7.10	O	I	0 to 255	
6	Cipher key type	7.7.10	M		9, 10	9
7	Cipher key number	7.7.10	M		0 to 15	8

Table Q.39: Connection attributes implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of connection attributes	7.7.1	M		23	
2	Length of Contents (L)	7.7.11	M		4 to 9	
3	Symmetry	7.7.11	M		1, 4 to 7	
4	Connection identity	7.7.11	M		0, 8 to 15	8 to 15
5	Target bearers (P => F direction)	7.7.11	M		0, 1 to 31	1 to 23
6	Minimum bearers (P => F direction)	7.7.11	O	O	0, 1 to 31	1 to 23
7	Target bearers (F => P direction)	7.7.11	O	C2	0, 1 to 31	1 to 23
8	Minimum bearers (F => P direction)	7.7.11	O	C2	0, 1 to 31	1 to 23
9	MAC slot size	7.7.11	M		0, 4, 5	4
10	MAC service (P => F direction)	7.7.11	M		0 to 3	3
11	MAC service (F => P direction)	7.7.11	O	C2	0 to 3	3
12	CF channel attributes (P => F direction)	7.7.11	M		0, 2 to 5	2
13	MAC packet life time (P =>F direction)	7.7.11	M		0, 8 to 15	8 to 15
14	CF channel attributes (F => P direction)	7.7.11	O	C2	0, 2 to 5	2
15	MAC packet life time (F =>P direction)	7.7.11	O	C2	0, 8 to 15	8 to 15

Table Q.45: Feature indicate implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of feature indicate	7.7.1	M		57	
2	Length of Contents (L)	7.7.17	M		2 to 255	
3	Feature	7.7.17	M		1, 15, 32, 48, 66, 68, 71, 72, 96	60
4	Parameter	7.7.17	O	M	0 to 127	
5	Protocol Status indicator	7.7.17	M		128, 129, 131, 132, 134	
6	Component	7.7.17	O		0 to 255	
7	Component	7.7.17	O		0 to 255	

Table Q.45.3: Feature - cost information indicate implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of feature indicate of variable length	7.7.1	M		57	
2	Length of Contents (L)	7.7.17	M		4 to 255	
3	Feature	7.7.17	M		96	
4	Parameter_1 for cost information	7.7.17	M		1, 3	
5	Parameter_2 for cost information	7.7.17	M		0 to 2	
6	Protocol Status indicator	7.7.17	M		128, 129, 131, 132, 134	
7	Charging component	7.7.17	M		1 to 14, 16 to 23	
8	Length	7.7.17	M		1 to 7	
9	Value	7.7.17	M		0 to 127	
10	Charging component	7.7.17	O	O	1 to 14, 16 to 23	
11	Length	7.7.17	O	O	1 to 7	
12	Value	7.7.17	O	O	0 to 127	

Table Q.47: Identity type implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of identity type	7.7.1	M		2	
2	Length of Contents (L)	7.7.19	M		2	
3	Identity group	7.7.19	M		0, 1, 4, 15	
4	Type	7.7.19	M		0, 1, 16, 32, 116, 127	

Table Q.47.1: Identity type (portable identity) implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of identity type	7.7.1	M		2	
2	Length of Contents (L)	7.7.19	M		2	
3	Identity group	7.7.19	M		0	
4	Type	7.7.19	M		0, 16, 32	

Table Q.47.2: Identity type (fixed identity and PARK) implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of identity type	7.7.1	M		2	
2	Length of Contents (L)	7.7.19	M		2	
3	Identity group	7.7.19	M		4	
4	Type	7.7.19	M		0, 1, 32	

Table Q.47.3: Identity type (network assigned identity) implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of identity type	7.7.1	M		2	
2	Length of Contents (L)	7.7.19	M		2	
3	Identity group	7.7.19	M		1	
4	Type	7.7.19	M		116, 127	

Table Q.49: IWU attributes implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of IWU attributes of variable length	7.7.1	M		18	
2	Length of Contents (L)	7.7.21	M		4-	
3	Coding standard	7.7.21	M		0, 1	
4	Profile	7.7.21	M		0, 1, 2, 3, 4, 8, 9, 10, 11, 12	1
5	Negotiation indicator	7.7.21	M		0, 2, 4, 6	
6	Profile subtype	7.7.21	M		note	
7	IWU attributes information	7.7.21	O		note	

NOTE: The codings of the interworking service dependent fields shall be given in the interworking annexes.

Table Q.52: Key implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of Key	7.7.1	M		86	
2	Length of Contents (L)	7.7.24	M		2 to 255	
3	Key type	7.7.24	M		144	
4	Key data	7.7.24	M		$0 - (2^{**}((254*8) - 1))$	

Table Q.53: Location area implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol status	Profile status	Values	
					Protocol allowed	Profile allowed
1	ID of location area of variable length	7.7.1	M		7	
2	Length of Contents (L)	7.7.25	M		1, 2, 8	
3	Location Information (LI) type	7.7.25	M		1 to 3	1
4	Location area level	7.7.25	M		1 to 39	0 to 39
5	Extended Location Information (ELI)	7.7.25	O		7, 15	
6	GSM MCC	7.7.25	O		3 BCD digits	
7	GSM MNC	7.7.25	O		1 to 2 BCD digits	
8	GSM Location Area Code (LAC)	7.7.25	O		0 to 65 535	
9	GSM Cell Identity (CI)	7.7.25	O		0 to 65 535	

Table Q.58: Portable identity implemented

Identity types supported				
Item no.	Type of portable identity	Reference	Protocol Status	Profile Support
1	International Portable User Identity (IPUI) type N	part 6: 6.2.1	M	
2	International Portable User Identity (IPUI) type M	part 6: 6.2.3	M	
3	International Portable User Identity (IPUI) type P	part 6: 6.2.5	M	
4	International Portable User Identity (IPUI) type Q	part 6: 6.2.6	M	
5	International Portable User Identity (IPUI) type R	part 6: 6.2.8	M	
6	International Portable User Identity (IPUI) type S	part 6: 6.2.2	M	
7	International Portable User Identity (IPUI) type T	part 6: 6.2.4	M	
8	International Portable User Identity (IPUI) type U	part 6: 6.2.7	M	
9	International Portable Part Equipment Identity (IPEI)	part 6: 10	M	
10	Default individual Temporary Portable part User Identity (TPUI)	part 6: 6.3	M	
11	Assigned individual TPUI	part 6: 6.3	M	
12	Connectionless group TPUI	part 6: 6.3	M	
13	Call group TPUI	part 6: 6.3	M	

Table Q.58.1: Portable identity - types of IPUI-N and IPEI

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		7	
3	Type	7.7.30	M		0, 16	
4	Length of identity value	7.7.30	M		40	
5	Portable User Type (PUT)	part 6: 6.2.1	M		0	
6	PUN- EMC	part 6: 10	M		1 to 65 535	
7	PUN-PSN	part 6: 10	M		0 to 1 048 575	

Table Q.58.2: Portable identity - type of IPUI-M

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		3 to 10	
3	Type	7.7.30	M		0	
4	Length of identity value	7.7.30	M		8 to 64, (mod 4)	
5	Portable User Type (PUT)	part 6: 7.3	M		1	
6	Portable User Number (PUN)	part 6: 6.2.3	M		0 - ((2**60) - 1)	

Table Q.58.3: Portable identity - type of IPUI-P

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		5 to 15	
3	Type	7.7.30	M		0	
4	Length of identity value	7.7.30	M		24 to 100	
5	Portable User Type (PUT)	part 6: 7.3	M		2	
6	PUN-Public Operator Code	part 6: 6.2.5	M		1 - 65 535	
7	PUN-ACCcount number	part 6: 6.2.5	M		0 - ((2**80) - 1)	

Table Q.58.4: Portable identity - type IPUI-Q

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		3 to 13	
3	Type	7.7.30	M		0	
4	Length of identity value	7.7.30	M		8 to 84	
5	Portable User Type (PUT)	part 6: 7.3	M		3	
6	PUN-BACN	part 6: 6.2.6	M		0 to 20 BCD digits	

Table Q.58.5: Portable identity - type of IPUI-R

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		3 to 10	
3	Type	7.7.30	M		0	
4	Length of identity value	7.7.30	M		8 to 64, (mod 4)	
5	Portable User Type (PUT)	part 6: 7.3	M		4	
7	PUN-IMSI	part 6: 6.2.7	M		0 to 15 BCD digits	

Table Q.58.6: Portable identity - type IPUI-S

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		3 to 10	
3	Type	7.7.30	M		0	
4	Length of identity value	7.7.30	M		8 to 64, (mod 4)	
5	Portable User Type (PUT)	part 6: 7.3	M		5	
6	PUN-ISDN / PSTN number	part 6: 6.2.2	M		0 to 15 BCD digits	

Table Q.58.7: Portable identity - type of IPUI-T

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		5 to 10	
3	Type	7.7.30	M		0	
4	Length of identity value	7.7.30	M		24 to 64, (mod 4)	
5	PUT	part 6: 7.3	M		6	
6	PUN-EIC	part 6: 6.2.4	M		1 to 65 535	
7	PUN	part 6: 6.2.4	M		0 to 11 BCD digits	

Table Q.58.8: Portable identity - type IPUI-U

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		3 to 13	
3	Type	7.7.30	M		0	
4	Length of identity value	7.7.30	M		84	
5	Portable User Type (PUT)	part 6: 7.3	M		7	
6	PUN-CACN	part 6: 6.2.7	M		0 to 20 BCD digits	

Table Q.58.9: Portable identity - type default individual TPUI

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		5	
3	Type	7.7.30	M		32	
4	Length of identity value	7.7.30	M		20	
5	First 4 bit	part 6: 6.3	M		E (Hex)	
6	Last 16 bits of the least significant portion of IPUI	part 6: 6.3	M		0 to 65 535 or 4 BCD digits	

Table Q.58.10: Portable identity - type assigned individual TPUI

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		5	
3	Type	7.7.30	M		32	
4	Length of identity value	7.7.30	M		20	
5	First 4 bit	part 6: 6.3	M		0 to B (Hex)	
6	Second 4 bit	part 6: 6.3	M		0 to B (Hex)	
7	Last 12 bit	part 6: 6.3	M		0 to 4095	

Table Q.58.11: Portable identity - type connectionless group TPUI

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		5	
3	Type	7.7.30	M		32	
4	Length of identity value	7.7.30	M		20	
5	First 4 bit	part 6: 6.3	M		C (Hex)	
6	Second 4 bit	part 6: 6.3	M		C (Hex)	
7	Last 12 bit	part 6: 6.3	M		0 to 4095	

Table Q.58.12: Portable identity - type call group TPUI

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of portable identity of variable length	7.7.1	M		5	
2	Length of contents (L)	7.5.1	M		5	
3	Type	7.7.30	M		32	
4	Length of identity value	7.7.30	M		20	
5	First 4 bit	part 6: 6.3	M		D (Hex)	
6	Second 4 bit	part 6: 6.3	M		D (Hex)	
7	Last 12 bit	part 6: 6.3	M		0 to 4 095	

Table Q.60: Rand implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of Rand	7.7.1	M		12	
2	Length of contents (L)	7.7.32	M		8 to 255	
3	Rand value	7.7.32	M		$0 - ((2^{**} 64)) - 1$	
4	Rand value	7.7.32	O		$0 - ((2^{**} 64)) - 1$	

Table Q.61: Rate parameters implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of rate parameters	7.7.1	M		101	
2	Length of contents (L)	7.7.33	M		2 to 7	
3	Symmetry	7.7.33	M		0, 2	
4	Interleaving	7.7.33	M		0, 1	
5	Class of service	7.7.33	M		0, 2, 4 to 7	
6	Channel 1 rate (P => F)	7.7.33	M		0 to 4	
7	Channel 1 arrangement (P => F)	7.7.33	M		0 to 2, 8	
8	Channel 1 rate (F => P)	7.7.33	M		0 to 4	
9	Channel 1 arrangement (F => P)	7.7.33	M		0 to 2, 8	
10	Channel 2 rate (P => F)	7.7.33	M		0 to 4	
11	Channel 2 arrangement (P => F)	7.7.33	M		0 to 4	
12	Channel 2 rate (F => P)	7.7.33	M		0 to 2, 8	
13	Channel 2 arrangement (F => P)	7.7.33	M		0 to 4	
14	Channel 3 rate (P => F)	7.7.33	M		0 to 2, 8	
15	Channel 3 arrangement (P => F)	7.7.33	M		0 to 4	
16	Channel 3 rate (F => P)	7.7.33	M		0 to 4	
17	Channel 3 arrangement (F => P)	7.7.33	M		0 to 2, 8	

Table Q.63: RES implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of RES	7.7.1	M		13	
2	Length of contents (L)	7.7.35	M		1 to 255	
3	RES value	7.7.35	M		$0 - ((2^{**}32) - 1)$	
4	RES value	7.7.35	O		$0 - ((2^{**}32) - 1)$	

Table Q.64: RS implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of RS	7.7.1	M		14	
2	Length of contents (L)	7.7.36	M		1 to 255	
3	RS value	7.7.36	M		$0 - ((2^{**}64) - 1)$	
4	RS value	7.7.36	O		$0 - ((2^{**}64) - 1)$	

Table Q.66: Service change info implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of service change info	7.7.1	M		22	
2	Length of contents (L)	7.7.38	M		2 to 3	
3	Coding standard	7.7.38	M		0	
4	Master (M)	7.7.38	M		0, 1	
5	Change mode	7.7.38	M		0, 1, 2, 4, 6, 8, 9, 10, 11, 12, 13, 15	0, 1, 2, 4, 5, 8, 9, 12
6	Extended change mode	7.7.38	O	X		
7	A attributes	7.7.38	M		0, 2, 3	
8	Reset (R)	7.7.38	M		0, 1	
9	B attributes	7.7.38	M		0, 2, 3	?

Table Q.72: ZAP field implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of ZAP field	7.7.1	M		82	
2	Length of contents (L)	7.7.44	M		1	
3	ZAP value	7.7.44	M		0 to 15	

G.2.4.3 B-Format message structure support

Table Q.75: Short TPUI address of LCE-request paging message implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	W-bit	8.2.1	M		0, 1	
2	LCE header	8.2.1	M		0, 3 to 7	
3	TPUI address (lowest 16 bits)	part 6: 6.3.1	M		0 to 65 535	

Table Q.76: Long TPUI address of LCE-request paging message implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	W-bit	8.2.1	M		1	
2	LCE header	8.2.1	M		0, 3 to 7	
3	Attributes	8.2.2	M		0, 4, 5, 9, 1 to 15	
4	TPUI address (complete 20 bits)	part 6: 6.3.1	M		$(0 - (2^{*20}) - 1)$	
5	Target bearers	8.2.2	M		0, 1 to 15	
6	MAC packet life	8.2.2	M		0, 8 to 15	

Table Q.77: Long IPUI address of LCE-request paging message implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	W-bit	8.2.1	M		0	
2	LCE header	8.2.1	M		0, 3 to 7	
3	IPUI class (PUT)	part 6: 6.2.1	M		0 to 7	
4	IPUI address (PUN lowest 28 bits)	8.2.1	M		7 BCD dig. or (0 - (2**28) - 1)	

G.2.5 Protocol error handling

The supplier of the implementation shall state the support of the implementation for each of the following protocol error and exception handling procedures, in the table below.

Table Q.80: Error and exception handling procedure support

Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	eeh_protocol_discriminator_error	17.1	M	
2	eeh_message_too_short	17.2	M	
3	eeh_unsupported_transaction_identity_error	17.3.1	M	
4	eeh_unknown_active_cc_call	17.3.2.1	M	
5	eeh_unknown_active_ciss_call	17.3.2.2	Cciss	I
6	eeh_unknown_active_coms_call	17.3.2.3	Ccoms	I
7	eeh_unknown_active_clms_call	17.3.2.4	Cclms	I
8	eeh_unknown_active_mm_transaction	17.3.2.5	M	
9	eeh_cc_message_error	17.4.1	M	
10	eeh_ciss_message_error	17.4.2	Cciss	I
11	eeh_coms_&_clms_message_error	17.4.3	Ccoms OR clms	I
12	eeh_mm_message_error	17.4.4	M	
13	eeh_info_element_out_of_sequence	17.5.1	M	
14	eeh_duplicated_info_elements	17.5.2	M	
15	eeh_mandatory_info_element_missing_in_cc_message	17.6.1	M	
16	eeh_mandatory_info_element_content_error_in_cc_message	17.6.2	M	
17	eeh_mandatory_info_element_missing_in_coms_&_clms_message	17.6.3	Ccoms OR clms	I
18	eeh_mandatory_info_element_missing_in_mm_message	17.6.4	M	
19	eeh_unrecognized_info_element	17.7.1	M	
20	eeh_non-mandatory_info_element_content_error	17.7.2	M	
21	eeh_data_link_reset	17.8	M	
22	eeh_data_link_failure	17.9	M	

G.2.6 Negotiation capabilities

The supplier of the implementation shall provide information to describe the negotiation options available in the protocol, and indicate which have been implemented, in the table below.

Table Q.81: Negotiation capabilities

Item no.	Negotiation capabilities	Involved messages	Negotiation Info Element	Sending (P to F)	
				Protocol Status	Profile Support
1	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SETUP	Call attributes, Connection attributes, IWU attributes	O O O	O O O
2	Prioritized list negotiation, max. 3 values for the repeated info element	MM-AUTH-REJECT	Auth-type	O	O
3	Prioritized list negotiation, max. 3 values for the repeated info element	MM-CIPHER-REJECT	Cipher info	O	O
4	Exchanged attribute negotiation	CC-RELEASE-COM	IWU attributes	O	M
5	Operating parameter negotiation	CC-SETUP-ACK CC-ALERTING CC-CALL-PROC CC-CONNECT	Window size, Transit delay	O O	M I
6	Peer attribute parameter negotiation	CC-SETUP CC-SETUP-ACK CC-ALERTING CC-CALL-PROC CC-CONNECT	IWU attributes	O	O
7	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SERVICE-CHANGE CC-SERVICE-ACCEPT CC-SERVICE-REJECT	IWU attributes, Call attributes, Connection attributes	O	O

Item no.	Negotiation capabilities	Involved messages	Negotiation Info Element	Receipt (F to P)	
				Protocol Status	Profile Support
1	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SETUP	Call attributes, Connection attributes, IWU attributes	O O O	O O O
2	Prioritized list negotiation, max. 3 values for the repeated info element	MM-AUTH-REJECT	Auth-type	O	O
3	Prioritized list negotiation, max. 3 values for the repeated info element	MM-CIPHER-REJECT	Cipher info	X	
4	Exchanged attribute negotiation	CC-RELEASE-COM	IWU attributes	O	M
5	Operating parameter negotiation	CC-SETUP-ACK CC-ALERTING CC-CALL-PROC CC-CONNECT	Window size, Transit delay	O O	M I
6	Peer attribute parameter negotiation	CC-SETUP CC-SETUP-ACK CC-ALERTING CC-CALL-PROC CC-CONNECT	IWU attributes	O	O
7	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SERVICE-CHANGE CC-SERVICE-ACCEPT CC-SERVICE-REJECT	IWU attributes, Call attributes, Connection attributes	O O O	O O O

G.2.7 Multi-layer dependencies

The supplier of the implementation shall provide information to identify the implementation support for specific requirements on the underlying layers, not made mandatory by the underlying layer protocol specifications, in the table below. Where appropriate, the supplier shall provide an external reference to the completed PICS for the layer standard.

Table Q.82: Multi-layer dependencies

Profile Support for specific requirements on underlying layers			
Item no.	Layer	Protocol version support	PICS Reference
1	DLC	ETS 300 175-4 [4]	ETS 300 476-2 [18]
2	MAC	ETS 300 175-3 [3]	ETS 300 476-3 [19]
3	PHL	ETS 300 175-2 [2]	ETS 300 476-4 [20]

Annex H (normative):

Service C2: Fixed radio Termination (FT):

provisions from EN 300 175-5 specifically required by this profile

Any provisions of EN 300 175-5 [5] not specifically listed in this annex shall not be used.

Table Q.9.8: Management procedure support

Procedures supported				
Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	mgt_prioritized_list_negotiation	15.2.2	O	C5m
2	mgt_exchanged_attribute_negotiation	15.2.3	O	M
3	mgt_operating_parameter_negotiation	15.2.4	O	M
4	mgt_peer_attribute_negotiation	15.2.5	O	C10m
5	mgt_service_modification	15.3	O	C2 OR C6 OR C7 OR C12
6	mgt_mm_procedures_mgt	15.5	O	M
7	mgt_call_ciphering_mgt	15.6	Cmm15ORm m16	C4 OR C9
8	mgt_external_handover	15.7	O	I
9	mgt_test_call_back	15.8.1	O	I
10	mgt_test_hook_control	15.8.2	O	I
11	mgt_upper_tester	15.8.3	O	I

Table Q.11.1: CC-SETUP

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, ext	
3	Message Type (MI)	7.4.1	M		5	
4	Portable identity	7.7.30	M		<Q.58>	
5	Fixed identity	7.7.18	M		<Q.46>	
6	Basic service	7.6.4	M		<Q.22>	
6a	Repeat indicator	7.6.3	O	C5o	<Q.21.2>	
7	IWU attributes	7.7.21	O	M	<Q.49>	
8	Repeat indicator	7.6.3	O	C5o	<Q.21.2>	
9	Call attributes	7.7.5	O		<Q.33>	
10	Repeat indicator	7.6.3	O	I	<Q.21.1>	
11	Connection attributes	7.7.11	O	M	<Q.39>	
12	Cipher info	7.7.10	O	I	<Q.38>	
13	Connection identity	7.7.12	O	I	<Q.40>	
14	Facility	7.7.15	O	I	<Q.43>	
15	Progress Indicator	7.7.31	O		<Q.59>	
16	Display	7.5.5	O	I	<Q.23 or <Q.54>	
17	Keypad	7.5.5	X			
18	Signal	7.6.8	O		<Q.26>	
19	Feature Activate	7.7.16	X		<Q.44>	
20	Feature Indicate	7.7.17	O	C8	<Q.45>	
21	Network parameter	7.7.29	X			
22	Terminal capability	7.7.41	X			
23	End-to-end compatibility	7.7.14	O	I	<Q.42>	
24	Rate parameters	7.7.33	O	I	<Q.61>	
25	Transit delay	7.7.42	O	I	<Q.70>	
26	Window size	7.7.43	O	M	<Q.71>	
27	Calling party number	7.7.9	O	I	<Q.37>	
28	Called party number	7.7.7	O	I	<Q.35>	
29	Called party subaddress	7.7.8	O	I	<Q.36>	
30	Sending complete	7.6.2	O	I	<Q.20.1>	
31	IWU-to-IWU	7.7.23	O	I	<Q.51>	
32	IWU-PACKET	7.7.22	O	I	<Q.50>	

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, ext	
3	Message Type (MI)	7.4.1	M		5	
4	Portable identity	7.7.30	M		<Q.58>	
5	Fixed identity	7.7.18	M		<Q.46>	
6	Basic service	7.6.4	M		<Q.22>	
6a	Repeat indicator	7.6.3	O	C5o	<Q.21.2>	
7	IWU attributes	7.7.21	O	M	<Q.49>	
8	Repeat indicator	7.6.3	O	C5o	<Q.21.2>	
9	Call attributes	7.7.5	O		<Q.33>	
10	Repeat indicator	7.6.3	O	I	<Q.21.1>	
11	Connection attributes	7.7.11	O	M	<Q.39>	
12	Cipher info	7.7.10	O	I	<Q.38>	
13	Connection identity	7.7.12	O	I	<Q.40>	
14	Facility	7.7.15	O	I	<Q.43>	
15	Progress Indicator	7.7.31	X			
16	Display	7.5.5	X			
17	Keypad	7.5.5	O		<Q.24> or <Q.55>	
18	Signal	7.6.8	X			
19	Feature Activate	7.7.16	O	C8	<Q.44>	
20	Feature Indicate	7.7.17	X			
21	Network parameter	7.7.29	O		<Q.57>	
22	Terminal capability	7.7.41	O	I	<Q.69>	
23	End-to-end compatibility	7.7.14	O	I	<Q.42>	
24	Rate parameters	7.7.33	O	I	<Q.61>	
25	Transit delay	7.7.42	O	I	<Q.70>	
26	Window size	7.7.43	O	M	<Q.71>	
27	Calling party number	7.7.9	O	I	<Q.37>	
28	Called party number	7.7.7	O	O	<Q.35>	
29	Called party subaddress	7.7.8	O	I	<Q.36>	
30	Sending complete	7.6.2	O	I	<Q.20.1>	
31	IWU-to-IWU	7.7.23	O	I	<Q.51>	
32	IWU-PACKET	7.7.22	O	I	<Q.50>	

Table Q.11.3: CC-SETUP-ACKnowledge

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		13	
4	Info type	7.7.20	O	I	<Q.48>	
5	Portable identity	7.7.30	O	I	<Q.58>	
6	Fixed identity	7.7.18	O	I	<Q.46>	
7	Location area	7.7.25	O	I	<Q.53>	
7a	IWU attributes	7.7.21	O	O	<Q.49>	
8	Call attributes	7.7.5	O	I	<Q.33>	
9	Connection attributes	7.7.11	O	O	<Q.39>	
10	Connection identity	7.7.12	O	I	<Q.40>	
11	Facility	7.7.15	O	I	<Q.43>	
12	Progress indicator	7.7.31	O	C10	<Q.59>	
13	Display	7.5.5	O	I	<Q.23> or <Q.54>	
14	Signal	7.6.8	O	I	<Q.26>	
15	Feature indicate	7.7.17	O	C8	<Q.45>	
16	Transit delay	7.7.42	O	I	<Q.70>	
17	Window size	7.7.43	O	M	<Q.71>	
18	Delimiter request	7.6.2	O	I	<Q.20.2>	
19	IWU-to-IWU	7.7.23	O	I	<Q.51>	
20	IWU-packet	7.7.22	O	I	<Q.50>	

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	X			
2	Transaction Identifier (TI)	7.3	X			
3	Message Type (MI)	7.4.1	X			
4	Info type	7.7.20	X			
5	Portable identity	7.7.30	X			
6	Fixed identity	7.7.18	X			
7	Location area	7.7.25	X			
7a	IWU attributes	7.7.21	X			
8	Call attributes	7.7.5	X			
9	Connection attributes	7.7.11	X			
10	Connection identity	7.7.12	X			
11	Facility	7.7.15	X			
12	Progress indicator	7.7.31	X			
13	Display	7.5.5	X			
14	Signal	7.6.8	X			
15	Feature indicate	7.7.17	X			
16	Transit delay	7.7.42	X			
17	Window size	7.7.43	X			
18	Delimiter request	7.6.2	X			
19	IWU-to-IWU	7.7.23	X			
20	IWU-packet	7.7.22	X			

Table Q.11.4: CC-CALL-PROCeeding

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		2	
3a	IWU attributes	7.7.21	O	O	<Q.49>	
4	Call attributes	7.7.5	O		<Q.33>	
5	Connection attributes	7.7.11	O	O	<Q.39>	
6	Connection identity	7.7.12	O	I	<Q.40>	
7	Facility	7.7.15	O	I	<Q.43>	
8	Progress indicator	7.7.31	O	C10	<Q.59>	
9	Display	7.5.5	O	I	<Q.23> or <Q.54>	
10	Signal	7.6.8	O	I	<Q.26>	
11	Feature indicate	7.7.17	O	C8	<Q.45>	
12	Transit delay	7.7.42	O	I	<Q.70>	
13	Window size	7.7.43	O	I	<Q.71>	
14	IWU-to-IWU	7.7.23	O	I	<Q.51>	
15	IWU-PACKET	7.7.22	O	I	<Q.50>	

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	X			
2	Transaction Identifier (TI)	7.3	X			
3	Message Type (MI)	7.4.1	X			
3a	IWU attributes	7.7.21	X			
4	Call attributes	7.7.5	X			
5	Connection attributes	7.7.11	X			
6	Connection identity	7.7.12	X			
7	Facility	7.7.15	X			
8	Progress indicator	7.7.31	X			
9	Display	7.5.5	X			
10	Signal	7.6.8	X			
11	Feature indicate	7.7.17	X			
12	Transit delay	7.7.42	X			
13	Window size	7.7.43	X			
14	IWU-to-IWU	7.7.23	X			
15	IWU-PACKET	7.7.22	X			

Table Q.11.5: CC-ALERTING

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		1	
3a	IWU attributes	7.7.21	O	O	<Q.49>	
4	Call attributes	7.7.5	O	I	<Q.33>	
5	Connection attributes	7.7.11	O	O	<Q.39>	
6	Connection identity	7.7.12	O	I	<Q.40>	
7	Facility	7.7.15	O	I	<Q.43>	
8	Progress Indicator	7.7.31	O	C10	<Q.59>	
9	Display	7.5.5	O	I	<Q.23> or <Q.54>	
10	Signal	7.6.8	O	I	<Q.26>	
11	Feature indicate	7.7.17	O	C8	<Q.45>	
12	Terminal capability	7.7.41	X			
13	Transit delay	7.7.42	O	I	<Q.70>	
14	Window size	7.7.43	O	I	<Q.71>	
15	IWU-to-IWU	7.7.23	O	I	<Q.51>	
16	IWU-PACKET	7.7.22	O	I	<Q.50>	

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		1	
3a	IWU attributes	7.7.21	O	O	<Q.49>	
4	Call attributes	7.7.5	O	X	<Q.33>	
5	Connection attributes	7.7.11	O	O	<Q.39>	
6	Connection identity	7.7.12	O	I	<Q.40>	
7	Facility	7.7.15	X			
8	Progress Indicator	7.7.31	X			
9	Display	7.5.5	X			
10	Signal	7.6.8	X			
11	Feature indicate	7.7.17	X			
12	Terminal capability	7.7.41	O	I	<Q.69>	
13	Transit delay	7.7.42	O	I	<Q.70>	
14	Window size	7.7.43	O	I	<Q.71>	
15	IWU-to-IWU	7.7.23	O	I	<Q.51>	
16	IWU-PACKET	7.7.22	O	I	<Q.50>	

Table Q.11.6: CC-CONNECT

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		7	
3a	IWU attributes	7.7.21	O	O	<Q.49>	
4	Call attributes	7.7.5	O	I	<Q.33>	
5	Connection attributes	7.7.11	O	O	<Q.39>	
6	Connection identity	7.7.12	O	I	<Q.40>	
7	Facility	7.7.15	O	I	<Q.43>	
8	Progress indicator	7.7.31	O		<Q.59>	
9	Display	7.5.5	O	I	<Q.23> or <Q.54>	
10	Signal	7.6.8	O	I	<Q.26>	
11	Feature indicate	7.7.17	O	C8	<Q.45>	
12	Terminal capability	7.7.41	X			
13	Transit delay	7.7.42	O	I	<Q.70>	
14	Window size	7.7.43	O	M	<Q.71>	
15	IWU-to-IWU	7.7.23	O	I	<Q.51>	
16	IWU-PACKET	7.7.22	O	I	<Q.50>	

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		7	
3a	IWU attributes	7.7.21	O	O	<Q.49>	
4	Call attributes	7.7.5	O	I	<Q.33>	
5	Connection attributes	7.7.11	O	O	<Q.39>	
6	Connection identity	7.7.12	O	I	<Q.40>	
7	Facility	7.7.15	O	I	<Q.43>	
8	Progress indicator	7.7.31	X			
9	Display	7.5.5	X			
10	Signal	7.6.8	X			
11	Feature indicate	7.7.17	X			
12	Terminal capability	7.7.41	O	I	<Q.69>	
13	Transit delay	7.7.42	O	I	<Q.70>	
14	Window size	7.7.43	O	M	<Q.71>	
15	IWU-to-IWU	7.7.23	O	I	<Q.51>	
16	IWU-PACKET	7.7.22	O	I	<Q.50>	

Table Q.11.10: CC-SERVICE-CHANGE

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		32	
3a	IWU attributes	7.7.21	O	C11o	<Q.49>	
4	Portable identity	7.7.30	M		<Q.58>	
5	Service change Info	7.7.38	M		<Q.66>	
6	Repeat indicator	7.6.3	O	I	<Q.21.1>	
7	Connection attributes	7.7.11	O	O	<Q.39>	
8	Connection identity	7.7.12	O	I	<Q.40>	

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		32	
3a	IWU attributes	7.7.21	O	C11m	<Q.49>	
4	Portable identity	7.7.30	M		<Q.58>	
5	Service change Info	7.7.38	M		<Q.66>	
6	Repeat indicator	7.6.3	O	I	<Q.21.1>	
7	Connection attributes	7.7.11	O	O	<Q.39>	
8	Connection identity	7.7.12	O	I	<Q.40>	

Table Q.11.11: CC-SERVICE-ACCEPT

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		33	
3a	IWU attributes	7.7.21	O	C11o	<Q.49>	
4	Connection identity	7.7.12	O	I	<Q.40>	

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		33	
3a	IWU attributes	7.7.21	O	C11m	<Q.49>	
4	Connection identity	7.7.12	O	I	<Q.40>	

Table Q.11.12: CC-SERVICE-REJECT

Item no.	Name of information element	Reference	Sending (F to P)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		35	
4	Release reason	7.6.7	O		<Q.25>	
4a	IWU attributes	7.7.21	O	C11o	<Q.49>	
5	Connection attributes	7.7.11	O		<Q.39>	

Item no.	Name of information element	Reference	Receipt (P to F)			
			Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		35	
4	Release reason	7.6.7	M		<Q.25>	
4a	IWU attributes	7.7.21	O	C11m	<Q.49>	
5	Connection attributes	7.7.11	O		<Q.39>	

Table Q.49: IWU attributes implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of IWU attributes of variable length	7.7.1	M		18	
2	Length of Contents (L)	7.7.21	M		4-	
3	Coding standard	7.7.21	M		0, 1	
4	Profile	7.7.21	M		0, 1, 2, 3, 4, 8, 9, 10, 11, 12	1
5	Negotiation indicator	7.7.21	M		0, 2, 4, 6	
6	Profile subtype	7.7.21	M		note	
7	IWU attributes information	7.7.21	O		note	

NOTE: The codings of the interworking service dependent fields shall be given in the interworking annexes.

Table Q.66: Service change info implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of service change info	7.7.1	M		22	
2	Length of contents (L)	7.7.38	M		2 to 3	
3	Coding standard	7.7.38	M		0	
4	Master (M)	7.7.38	M		0, 1	
5	Change mode	7.7.38	M		0, 12, 4, 6, 8, 9, 10, 11, 12, 13, 15	0, 1, 2, 4, 5, 8, 9, 12
6	Extended change mode	7.7.38	O	I		
7	A attributes	7.7.38	M		0, 2, 3	
8	Reset (R)	7.7.38	M		0, 1	
9	B attributes	7.7.38	M		0, 2, 3	

Table Q.81: Negotiation capabilities

Item no.	Negotiation capabilities	Involved messages	Negotiation Info Element	Sending (P to F)	
				Protocol Status	Profile Support
1	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SETUP	Call attributes, Connection attributes, IWU attributes	O O O	C5o C5o C5o
2	Prioritized list negotiation, max. 3 values for the repeated info element	MM-AUTH-REJECT	Auth-type	O	C5o
3	Prioritized list negotiation, max. 3 values for the repeated info element	MM-CIPHER-REJECT	Cipher info	O	C5o
4	Exchanged attribute negotiation	CC-RELEASE-COM	IWU attributes	O	M
5	Operating parameter negotiation	CC-SETUP-ACK, CC-ALERTING, CC-CALL-PROC, CC-CONNECT	Window size, Transit delay	O O	M I
6	Peer attribute parameter negotiation	CC-SETUP, CC-SETUP-ACK, CC-ALERTING, CC-CALL-PROC, CC-CONNECT	IWU attributes	O	C10o

Item no.	Negotiation capabilities	Involved messages	Negotiation Info Element	Receipt (F to P)	
				Protocol Status	Profile Support
1	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SETUP	Call attributes, Connection attributes, IWU attributes	O O O	C5m C5m C5m
2	Prioritized list negotiation, max. 3 values for the repeated info element	MM-AUTH-REJECT	Auth-type	O	C5m
3	Prioritized list negotiation, max. 3 values for the repeated info element	MM-CIPHER-REJECT	Cipher info	X	
4	Exchanged attribute negotiation	CC-RELEASE-COM	IWU attributes	O	M
5	Operating parameter negotiation	CC-SETUP-ACK, CC-ALERTING, CC-CALL-PROC, CC-CONNECT	Window size, Transit delay	O O	M I
6	Peer attribute parameter negotiation	CC-SETUP, CC-SETUP-ACK, CC-ALERTING, CC-CALL-PROC, CC-CONNECT	IWU attributes	O	C10m

Annex J (normative): Service C2: Portable radio Termination (PT): provisions from EN 300 175-5 (2nd edition) specifically required by this profile

Any provisions of EN 300 175-5 [5] not specifically listed in this annex shall not be used.

Table Q.9.8: Management procedure support

Procedures supported				
Item no.	Name of procedure	Reference	Protocol Status	Profile Support
1	mgt_prioritized_list_negotiation	15.2.2	O	C5m
2	mgt_exchanged_attribute_negotiation	15.2.3	O	M
3	mgt_operating_parameter_negotiation	15.2.4	O	M
4	mgt_peer_attribute_negotiation	15.2.5	O	C10m
5	mgt_service_modification	15.3	O	M
6	mgt_mm_procedures_mgt	15.5	O	M
7	mgt_call_ciphering_mgt	15.6	Cmm15ORmm 16	C4
8	mgt_external_handover	15.7	O	I
9	mgt_test_call_back	15.8.1	O	I
10	mgt_test_hook_control	15.8.2	O	I
11	mgt_upper_tester	15.8.3	O	I

Table Q.11.1: CC-SETUP

Item no.	Name of information element	Reference	Sending (P to F)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, ext	
3	Message Type (MI)	7.4.1	M		5	
4	Portable identity	7.7.30	M		<Q.58>	
5	Fixed identity	7.7.18	M		<Q.46>	
6	Basic service	7.6.4	M		<Q.22>	
6a	Repeat indicator	7.6.3	O	C5o	<Q.21.2>	
7	IWU attributes	7.7.21	O	M	<Q.49>	
8	Repeat indicator	7.6.3	O	C5o	<Q.21.2>	
9	Call attributes	7.7.5	O		<Q.33>	
10	Repeat indicator	7.6.3	O	I	<Q.21.1>	
11	Connection attributes	7.7.11	O	M	<Q.39>	
12	Cipher info	7.7.10	O	I	<Q.38>	
13	Connection identity	7.7.12	O	I	<Q.40>	
14	Facility	7.7.15	O	I	<Q.43>	
15	Progress Indicator	7.7.31	X			
16	Display	7.5.5	X			
17	Keypad	7.5.5	O		<Q.24> or <Q.55>	
18	Signal	7.6.8	X			
19	Feature Activate	7.7.16	O	C8	<Q.44>	
20	Feature Indicate	7.7.17	X			
21	Network parameter	7.7.29	O		<Q.57>	
22	Terminal capability	7.7.41	O	I	<Q.69>	
23	End-to-end compatibility	7.7.14	O	I	<Q.42>	
24	Rate parameters	7.7.33	O	I	<Q.61>	
25	Transit delay	7.7.42	O	I	<Q.70>	
26	Window size	7.7.43	O	M	<Q.71>	
27	Calling party number	7.7.9	O	I	<Q.37>	
28	Called party number	7.7.7	O	O	<Q.35>	
29	Called party subaddress	7.7.8	O	I	<Q.36>	
30	Sending complete	7.6.2	O	I	<Q.20.1>	
31	IWU-to-IWU	7.7.23	O	I	<Q.51>	
32	IWU-PACKET	7.7.22	O	I	<Q.50>	

Item no.	Name of information element	Reference	Receipt (F to P)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, ext	
3	Message Type (MI)	7.4.1	M		5	
4	Portable identity	7.7.30	M		<Q.58>	
5	Fixed identity	7.7.18	M		<Q.46>	
6	Basic service	7.6.4	M		<Q.22>	
6a	Repeat indicator	7.6.3	O	C5o	<Q.21.2>	
7	IWU attributes	7.7.21	O	M	<Q.49>	
8	Repeat indicator	7.6.3	O	C5o	<Q.21.2>	
9	Call attributes	7.7.5	O		<Q.33>	
10	Repeat indicator	7.6.3	O	I	<Q.21.1>	
11	Connection attributes	7.7.11	O	M	<Q.39>	
12	Cipher info	7.7.10	O	I	<Q.38>	
13	Connection identity	7.7.12	O	I	<Q.40>	
14	Facility	7.7.15	O	I	<Q.43>	
15	Progress Indicator	7.7.31	O		<Q.59>	
16	Display	7.5.5	O	I	<Q.23 or <Q.54>	
17	Keypad	7.5.5	X			
18	Signal	7.6.8	O	C1m	<Q.26>	
19	Feature Activate	7.7.16	X		<Q.44>	
20	Feature Indicate	7.7.17	O	C8	<Q.45>	
21	Network parameter	7.7.29	X			
22	Terminal capability	7.7.41	X			
23	End-to-end compatibility	7.7.14	O	I	<Q.42>	
24	Rate parameters	7.7.33	O	I	<Q.61>	
25	Transit delay	7.7.42	O	I	<Q.70>	
26	Window size	7.7.43	O	M	<Q.71>	
27	Calling party number	7.7.9	O	I	<Q.37>	
28	Called party number	7.7.7	O	I	<Q.35>	
29	Called party subaddress	7.7.8	O	I	<Q.36>	
30	Sending complete	7.6.2	O	I	<Q.20.1>	
31	IWU-to-IWU	7.7.23	O	I	<Q.51>	
32	IWU-PACKET	7.7.22	O	I	<Q.50>	

Table Q.11.3: CC-SETUP-ACKnowledge

Item no.	Name of information element	Reference	Sending (P to F)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	X			
2	Transaction Identifier (TI)	7.3	X			
3	Message Type (MI)	7.4.1	X			
4	Info type	7.7.20	X			
5	Portable identity	7.7.30	X			
6	Fixed identity	7.7.18	X			
7	Location area	7.7.25	X			
8	IWU attributes	7.7.21	X			
9	Call attributes	7.7.5	X			
10	Connection attributes	7.7.11	X			
11	Connection identity	7.7.12	X			
12	Facility	7.7.15	X			
13	Progress indicator	7.7.31	X			
14	Display	7.5.5	X			
15	Signal	7.6.8	X			
16	Feature indicate	7.7.17	X			
17	Transit delay	7.7.42	X			
18	Window size	7.7.43	X			
19	Delimiter request	7.6.2	X			
20	IWU-to-IWU	7.7.23	X			
21	IWU-packet	7.7.22	X			

Item no.	Name of information element	Reference	Receipt (F to P)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		13	
4	Info type	7.7.20	O	I	<Q.48>	
5	Portable identity	7.7.30	O	I	<Q.58>	
6	Fixed identity	7.7.18	O	I	<Q.46>	
7	Location area	7.7.25	O	I	<Q.53>	
8	IWU attributes	7.7.21	O	O	<Q.49>	
9	Call attributes	7.7.5	O	I	<Q.33>	
10	Connection attributes	7.7.11	O	O	<Q.39>	
11	Connection identity	7.7.12	O	I	<Q.40>	
12	Facility	7.7.15	O	I	<Q.43>	
13	Progress indicator	7.7.31	O	C1m	<Q.59>	
14	Display	7.5.5	O	I	<Q.23> or <Q.54>	
15	Signal	7.6.8	O	I	<Q.26>	
16	Feature indicate	7.7.17	O	C8	<Q.45>	
17	Transit delay	7.7.42	O	I	<Q.70>	
18	Window size	7.7.43	O	M	<Q.71>	
19	Delimiter request	7.6.2	O		<Q.20.2>	
20	IWU-to-IWU	7.7.23	O	I	<Q.51>	
21	IWU-packet	7.7.22	O	I	<Q.50>	

Table Q.11.4: CC-CALL-PROceeding

Item no.	Name of information element	Reference	Sending (P to F)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	X			
2	Transaction Identifier (TI)	7.3	X			
3	Message Type (MI)	7.4.1	X			
4	IWU attributes	7.7.21	X			
5	Call attributes	7.7.5	X			
6	Connection attributes	7.7.11	X			
7	Connection identity	7.7.12	X			
8	Facility	7.7.15	X			
9	Progress indicator	7.7.31	X			
10	Display	7.5.5	X			
11	Signal	7.6.8	X			
12	Feature indicate	7.7.17	X			
13	Transit delay	7.7.42	X			
14	Window size	7.7.43	X			
15	IWU-to-IWU	7.7.23	X			
16	IWU-PACKET	7.7.22	X			

Item no.	Name of information element	Reference	Receipt (F to P)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		2	
4	IWU attributes	7.7.21	O	O	<Q.49>	
5	Call attributes	7.7.5	O		<Q.33>	
6	Connection attributes	7.7.11	O	O	<Q.39>	
7	Connection identity	7.7.12	O	I	<Q.40>	
8	Facility	7.7.15	O	I	<Q.43>	
9	Progress indicator	7.7.31	O	C1m	<Q.59>	
10	Display	7.5.5	O	I	<Q.23> or <Q.54>	
11	Signal	7.6.8	O	I	<Q.26>	
12	Feature indicate	7.7.17	O	C8	<Q.45>	
13	Transit delay	7.7.42	O	I	<Q.70>	
14	Window size	7.7.43	O	I	<Q.71>	
15	IWU-to-IWU	7.7.23	O	I	<Q.51>	
16	IWU-PACKET	7.7.22	O	I	<Q.50>	

Table Q.11.5: CC-ALERTING

Item no.	Name of information element	Reference	Sending (P to F)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		1	
7	IWU attributes	7.7.21	O	O	<Q.49>	
4	Call attributes	7.7.5	O		<Q.33>	
5	Connection attributes	7.7.11	O	O	<Q.39>	
6	Connection identity	7.7.12	O	I	<Q.40>	
7	Facility	7.7.15	X			
8	Progress Indicator	7.7.31	X			
9	Display	7.5.5	X			
10	Signal	7.6.8	X			
11	Feature indicate	7.7.17	X			
12	Terminal capability	7.7.41	O	I	<Q.69>	
13	Transit delay	7.7.42	O	I	<Q.70>	
14	Window size	7.7.43	O	I	<Q.71>	
15	IWU-to-IWU	7.7.23	O	I	<Q.51>	
16	IWU-PACKET	7.7.22	O	I	<Q.50>	

Item no.	Name of information element	Reference	Receipt (F to P)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		1	
7	IWU attributes	7.7.21	O	O	<Q.49>	
4	Call attributes	7.7.5	O	I	<Q.33>	
5	Connection attributes	7.7.11	O	O	<Q.39>	
6	Connection identity	7.7.12	O	I	<Q.40>	
7	Facility	7.7.15	O	I	<Q.43>	
8	Progress Indicator	7.7.31	O	C1m	<Q.59>	
9	Display	7.5.5	O	I	<Q.23> or <Q.54>	
10	Signal	7.6.8	O	I	<Q.26>	
11	Feature indicate	7.7.17	O	C8	<Q.45>	
12	Terminal capability	7.7.41	X			
13	Transit delay	7.7.42	O	I	<Q.70>	
14	Window size	7.7.43	O	I	<Q.71>	
15	IWU-to-IWU	7.7.23	O	I	<Q.51>	
16	IWU-PACKET	7.7.22	O	I	<Q.50>	

Table Q.11.6: CC-CONNECT

Item no.	Name of information element	Reference	Sending (P to F)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		7	
3a	IWU attributes	7.7.21	O	O	<Q.49>	
4	Call attributes	7.7.5	O	I	<Q.33>	
5	Connection attributes	7.7.11	O	O	<Q.39>	
6	Connection identity	7.7.12	O	I	<Q.40>	
7	Facility	7.7.15	O	I	<Q.43>	
8	Progress indicator	7.7.31	X			
9	Display	7.5.5	X			
10	Signal	7.6.8	X			
11	Feature indicate	7.7.17	X			
12	Terminal capability	7.7.41	O	I	<Q.69>	
13	Transit delay	7.7.42	O	I	<Q.70>	
14	Window size	7.7.43	O	M	<Q.71>	
15	IWU-to-IWU	7.7.23	O	I	<Q.51>	
16	IWU-PACKET	7.7.22	O	I	<Q.50>	

Item no.	Name of information element	Reference	Receipt (F to P)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		8 to 14, ext	
3	Message Type (MI)	7.4.1	M		7	
3a	IWU attributes	7.7.21	O	O	<Q.49>	
4	Call attributes	7.7.5	O	I	<Q.33>	
5	Connection attributes	7.7.11	O	O	<Q.39>	
6	Connection identity	7.7.12	O	I	<Q.40>	
7	Facility	7.7.15	O	I	<Q.43>	
8	Progress indicator	7.7.31	O		<Q.59>	
9	Display	7.5.5	O	I	<Q.23> or <Q.54>	
10	Signal	7.6.8	O	I	<Q.26>	
11	Feature indicate	7.7.17	O	C8	<Q.45>	
12	Terminal capability	7.7.41	X			
13	Transit delay	7.7.42	O	I	<Q.70>	
14	Window size	7.7.43	O	M	<Q.71>	
15	IWU-to-IWU	7.7.23	O	I	<Q.51>	
16	IWU-PACKET	7.7.22	O	I	<Q.50>	

Table Q.11.10: CC-SERVICE-CHANGE

Item no.	Name of information element	Reference	Sending (P to F)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		32	
3a	IWU attributes	7.7.21	O	C11o	<Q.49>	
4	Portable identity	7.7.30	M		<Q.58>	
5	Service change Info	7.7.38	M		<Q.66>	
6	Repeat indicator	7.6.3	O	I	<Q.21.1>	
7	Connection attributes	7.7.11	O	O	<Q.39>	
8	Connection identity	7.7.12	O	I	<Q.40>	

Item no.	Name of information element	Reference	Receipt (F to P)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		32	
3a	IWU attributes	7.7.21	O	C11m	<Q.49>	
4	Portable identity	7.7.30	M		<Q.58>	
5	Service change Info	7.7.38	M		<Q.66>	
6	Repeat indicator	7.6.3	O	I	<Q.21.1>	
7	Connection attributes	7.7.11	O	O	<Q.39>	
8	Connection identity	7.7.12	O	I	<Q.40>	

Table Q.11.11: CC-SERVICE-ACCEPT

Item no.	Name of information element	Reference	Sending (P to F)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		33	
3a	IWU attributes	7.7.21	O	C11o	<Q.49>	
4	Connection identity	7.7.12	O		<Q.40>	

Item no.	Name of information element	Reference	Receipt (F to P)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		33	
3a	IWU attributes	7.7.21	O	C11m	<Q.49>	
4	Connection identity	7.7.12	O		<Q.40>	

Table Q.11.12: CC-SERVICE-REJECT

Item no.	Name of information element	Reference	Sending (P to F)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		35	
4	Release reason	7.6.7	O		<Q.25>	
5	IWU attributes	7.7.21	O	C11o	<Q.49>	
6	Connection attributes	7.7.11	O		<Q.39>	

Item no.	Name of information element	Reference	Receipt (F to P)			
			Protocol Status	Support	Value	
					Allowed	Supported
1	Protocol Discriminator (PD)	7.2	M		3	
2	Transaction Identifier (TI)	7.3	M		0 to 6, 8 to 14, ext	
3	Message Type (MI)	7.4.1	M		35	
4	Release reason	7.6.7	M		<Q.25>	
5	IWU attributes	7.7.21	O	C11m	<Q.49>	
6	Connection attributes	7.7.11	O		<Q.39>	

Table Q.49: IWU attributes implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of IWU attributes of variable length	7.7.1	M		18	
2	Length of Contents (L)	7.7.21	M		4-	
3	Coding standard	7.7.21	M		0, 1	
4	Profile	7.7.21	M		0, 1, 2, 3, 4, 8, 9, 10, 11, 12	1
5	Negotiation indicator	7.7.21	M		0, 2, 4, 6	
6	Profile subtype	7.7.21	M		note	
7	IWU attributes information	7.7.21	O		note	
NOTE: The codings of the interworking service dependent fields shall be given in the interworking annexes.						

Table Q.66: Service change info implemented

Supported parameters						
Field no.	Name of fields	Reference	Protocol Status	Supp	Values	
					Allowed	Supported
1	ID of service change info	7.7.1	M		22	
2	Length of contents (L)	7.7.38	M		2 to 3	
3	Coding standard	7.7.38	M		0	
4	Master (M)	7.7.38	M		0, 1	
5	Change mode	7.7.38	M		0, 1, 2, 4, 6, 8, 9, 10, 11, 12, 13, 15	0, 1, 2, 4, 5, 8, 9, 12
6	Extended change mode	7.7.38	O	X		
7	A attributes	7.7.38	M		0, 2, 3	
8	Reset (R)	7.7.38	M		0, 1	
9	B attributes	7.7.38	M		0, 2, 3	?

Table Q.81: Negotiation capabilities

Item no.	Negotiation capabilities	Involved messages	Negotiation Info Element	Sending (P to F)	
				Protocol Status	Profile Support
1	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SETUP	Call attributes, Connection attributes, IWU attributes	O O O	O
2	Prioritized list negotiation, max. 3 values for the repeated info element	MM-AUTH-REJECT	Auth-type	O	O
3	Prioritized list negotiation, max. 3 values for the repeated info element	MM-CIPHER-REJECT	Cipher info	O	O
4	Exchanged attribute negotiation	CC-RELEASE-COM	IWU attributes	O	M
5	Operating parameter negotiation	CC-SETUP-ACK, CC-ALERTING, CC-CALL-PROC, CC-CONNECT	Window size, Transit delay	O O	M I
6	Peer attribute negotiation	CC-SETUP, CC-SETUP-ACK, CC-ALERTING, CC CALL-PROC, CC-CONNECT	IWU attributes	O	O

Item no.	Negotiation capabilities	Involved messages	Negotiation Info Element	Receipt (F to P)	
				Protocol Status	Profile Support
1	Prioritized list negotiation, max. 3 values for the repeated info element	CC-SETUP	Call attributes, Connection attributes, IWU attributes	O O O	M
2	Prioritized list negotiation, max. 3 values for the repeated info element	MM-AUTH-REJECT	Auth-type	O	M
3	Prioritized list negotiation, max. 3 values for the repeated info element	MM-CIPHER-REJECT	Cipher info	X	
4	Exchanged attribute negotiation	CC-RELEASE-COM	IWU attributes	O	M
5	Operating parameter negotiation	CC-SETUP-ACK, CC-ALERTING, CC-CALL-PROC, CC-CONNECT	Window size, Transit delay	O O	M I
6	Peer attribute negotiation	CC-SETUP, CC-SETUP-ACK, CC-ALERTING, CC-CALL-PROC, CC-CONNECT	IWU attributes	O	O

Bibliography

CCITT Recommendation Q.921 (1988): "Digital subscriber signalling system no. 1 data link layer".

History

Document history		
V1.1.1	August 1998	Public Enquiry PE 9851: 1998-08-21 to 1998-12-18