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Part 14: Protocol Implementation Conformance Statement (PICS)
proforma specification**

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Terrestrial Trunked Radio (TETRA) Project of the European Telecommunications Standards Institute (ETSI).

This ETS is a multi-part standard and will consist of the following parts:

- Part 1: "General network design";
- Part 2: "Air Interface (AI)";
- Part 3: "Inter-working", (DE/TETRA-03001-3);
- Part 4: "Gateways", (DE/TETRA-03001-4);
- Part 5: "Peripheral equipment interface", (DE/TETRA-03001-5);
- Part 6: "Line connected stations", (DE/TETRA-03001-6);
- Part 7: "Security";
- Part 9: "General requirements for supplementary services", (DE/TETRA-03030);
- Part 10: "Supplementary services stage 1";
- Part 11: "Supplementary services stage 2";
- Part 12: "Supplementary services stage 3";
- Part 13: "SDL Model of the Air Interface";
- Part 14: "PICS Proforma".**

Transposition dates	
Date of adoption:	5 December 1997
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1 Scope

This European Telecommunication Standard (ETS) provides the Protocol Implementation Conformance Statement (PICS) proforma for the TETRA Mobile Station (MS) Air Interface (AI) defined in ETS 300 392-2 [1] in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4], ETS 300 406 [2], and in ETR 212 [5]. The details of Supplementary Services (SS) and security aspects of Voice plus Data (V+D) are outside the scope of this ETS.

2 Normative references

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

- [1] ETS 300 392-2 (1996): "Radio Equipment and Systems (RES); Trans-European Trunked Radio (TETRA); Voice plus Data (V + D); Part 2: Air Interface (AI)".
- [2] ETS 300 406 (1995): "Methods for testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardisation methodology".
- [3] ISO/IEC 9646-1 (1994): "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 1: General concepts".
- [4] ISO/IEC 9646-7 (1995): "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".
- [5] ETR 212 (1995): "Methods for Testing and Specification (MTS); Implementation Conformance Statement (ICS) proforma style guide".
- [6] ISO 8208: "X25 packet layer protocol for Data Terminal equipment".
- [7] ISO 8348: "Information processing systems - Data communications - Network service definition".

3 Definitions and abbreviations

3.1 Definitions

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

- terms defined in ETS 300 392-2 [1];
- terms defined in ISO/IEC 9646-1 [3] and in ISO/IEC 9646-7 [4].

In particular, the following terms defined in ISO/IEC 9646-1 [3] apply:

Implementation Conformance Statement (ICS): A statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented. The ICS can take several forms: protocol ICS, profile ICS, profile specific ICS, information object ICS, etc.

ICS proforma: A document, in the form of a questionnaire, which when completed for an implementation or system becomes an ICS.

Protocol ICS (PICS): An ICS for an implementation or system claimed to conform to a given protocol specification.

3.2 Abbreviations

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

BS	Base Station
CC	Call Control sub entity within CMCE
CMCE	Circuit Mode Control Entity
CONP	Connection Oriented Network Protocol
DTMF	Dual Tone Multi Frequency
ETS	European Telecommunication Standard
ICS	Implementation Conformance Statement
ITSI	Individual TETRA Subscriber Identity
IUT	Implementation Under Test
LLC	Logical Link Control
LLME	Lower Layer Management Entity
MAC	Medium Access Control
MCC	Mobile Country Code
MLE	Mobile Link Entity
MM	Mobility Management
MNC	Mobile Network Code
MS	Mobile Station
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
PTT	Push To Talk
RES	Radio Equipment and Systems
SCLNP	Specific Connectionless Network Protocol
SAP	Service Access Point
SCS	System Conformance Statement
SDS	Short Data Services sub entity within CMCE
SDU	Service Data Unit
SP	Service Primitive
SS	Supplementary Service sub entity within CMCE
SUT	System Under Test
SwMI	Switching and Management Infrastructure
V+D	Voice plus Data

4 Conformance to this PICS proforma specification

If it claims to conform to this ETS, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma given in annex A, and shall preserve the numbering/naming and ordering of the proforma items.

A PICS which conforms to this ETS shall be a conforming PICS proforma completed in accordance with the guidance for completion given in clause A.1.

Annex A (normative): Protocol ICS proforma for ETS 300 392-2

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

A.1 Guidance for completing the PICS proforma

A.1.1 Purposes and structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in ETS 300 392-2 [1] may provide information about the implementation in a standardised manner.

The PICS proforma is subdivided into subclauses for the following categories of information:

- Guidance for completing the PICS proforma;
- Identification of the implementation;
- Identification of the protocol;
- Global statement of conformance;
- Circuit Mode Control Entity (CMCE);
- Mobility Management (MM);
- Mobile Link Entity (MLE);
- Logical Link Control (LLC);
- Medium Access Control (MAC);
- Connection Oriented Network Protocol (CONP);
- Specific Connectionless Network Protocol (SCLNP).

A.1.2 Abbreviations and conventions

The PICS proforma contained in this annex is comprised of information in tabular form in accordance with the guide-lines presented in ISO/IEC 9646-7 [4].

Item column:

The item column contains a number which identifies the item in the table.

Item description column:

The item description column describes in free text each respective item (e.g. elements, timers, etc.). It implicitly means "is <item description> supported by the implementation?".

Status column:

The following notations, defined in ISO/IEC 9646-7 [4], are used for the status column:

m	mandatory - the capability is required to be supported.
o	optional - the capability may be supported or not.
n/a	not applicable - in the given context, it is impossible to use the capability.
x	prohibited (excluded) - there is a requirement not to use this capability in the given context.
o.i	qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer which identifies a unique group of related optional items and the logic of their selection which is defined immediately following the table.

ci conditional - the requirement on the capability ("m", "o", "x" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying a unique conditional status expression which is defined immediately following the table.

Reference column:

The reference column gives reference to ETS 300 392-2 [1], except where explicitly stated otherwise.

Support column:

The support column shall be filled in by the supplier of the implementation. The following common notations, defined in ISO/IEC 9646-7 [4], are used for the support column:

Y or y	supported by the implementation
N or n	not supported by the implementation
N/A, n/a or -	no answer required (allowed only if the status is n/a, directly or after evaluation of a conditional status)

It is also possible to provide a comment to an answer in the space provided at the bottom of the table.

NOTE 1: As stated in ISO/IEC 9646-7 [4], support for a received PDU requires the ability to encode/decode all mandatory elements of that PDU. Supporting a PDU while having no ability to encode/decode a mandatory element is non-conformant. Support for an element of a PDU means that the semantics of that element are supported. It does not mean that the element shall always be present in the PDU.

Values allowed column:

The values allowed column contains the type, the list, the range, or the length of values allowed. The following notations are used:

- range of values: <min value> .. <max value>
EXAMPLE: 5 .. 20
- list of values: <value1>, <value2>,, <valueN>
EXAMPLE: 2,4,6,8,9
EXAMPLE: '1101'B, '1011'B, '1111'B
EXAMPLE: '0A'H, '34'H, '2F'H
- list of named values: <name1>(<val1>), <name2>(<val2>),, <nameN>(<valN>)
EXAMPLE: reject(1), accept(2)
- length: size (<min size> .. <max size>)
EXAMPLE: size (1 .. 8)

Values supported column:

The values supported column shall be filled in by the supplier of the implementation. In this column, the values or the ranges of values supported by the implementation shall be indicated.

References to items:

For each possible item answer (answer in the support column) within the PICS proforma exists a unique reference, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table. If there is more than one support column in a table, the columns are discriminated by letters (a, b, etc.), respectively.

EXAMPLE 1: A.5/4 is the reference to the answer of item 4 in table 5 of annex A.

EXAMPLE 2: A.6/3b is the reference to the second answer (i.e. in the second support column) of item 3 in table 6 of annex A.

Prerequisite line:

A prerequisite line takes the form: Prerequisite: <predicate>.

A prerequisite line in the beginning of a clause or table indicates that the whole clause or the whole table is not required to be completed if the predicate is FALSE.

NOTE 2: In this PICS proforma, all the tables have a prerequisite independently on the status of the predicate referred to being mandatory or optional. This is done for readability reasons.

A.1.3 Instructions for completing the PICS proforma

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in each of the support or supported column boxes provided, using the notation described in subclause A.1.2.

If necessary, the supplier may provide additional comments in space at the bottom of the tables, or separately on sheets of paper.

More detailed instructions are given at the beginning of the different subclauses of the PICS proforma.

A.2 Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the PICS should be named as the contact person.

A.2.1 Date of the statement

.....

A.2.2 Implementation Under Test (IUT) identification

IUT name:

.....

.....

IUT version:

.....

A.2.3 System Under Test (SUT) identification

SUT name:

.....

.....

Hardware configuration:

.....
.....
.....

Operating system:

.....

A.2.4 Product supplier

Name:

.....

Address:

.....
.....
.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....
.....
.....

A.2.5 Client

(If different from product supplier)

Name:

.....

Address:

.....
.....
.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....
.....
.....

A.2.6 PICS contact person

(A person to contact if there are any queries concerning the content of the PICS)

Name:

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....
.....

A.3 Identification of the protocol

This PICS proforma applies to ETS 300 392-2 (1996) [1].

A.4 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No)

NOTE: Answering "No" to this question indicates non-conformance to the protocol specification. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming, on pages attached to the PICS proforma.

A.5 Major capabilities

The supplier of the implementation shall state the support of the implementation for each of the following protocol entities, in table A.1.

Table A.1: Entities supported

Item	Entity	Reference	Status	Support
1	Circuit Mode Control Entity (CMCE)	11, 12, 13, 14	o.1	
2	Mobility Management (MM)	15, 16	m	
3	Mobile Link Entity (MLE)	17, 18	m	
4	Logical Link Control (LLC)	21, 22	m	
5	Medium Access Control (MAC)	21, 23	m	
6	Connection Oriented Network Protocol (CONP)	24, 25	o.1	
7	Specific Connectionless Protocol (SCLNP)	26, 27	o.1	

o.1 It is mandatory to support at least one of these items.

A.6 Circuit Mode Control Entity (CMCE)

A.6.1 CMCE sub-entities and features

The supplier of the implementation shall state the support of the implementation for each of the CMCE sub-entities presented in table A.2 and features presented in tables A.3 and A.4.

Table A.2: CMCE services

Prerequisite: A.1/1				
Item	CMCE service	Reference	Status	Support
1	Call Control (CC)	11.2	o.2	
2	Short Data Services (SDS)	13.2	o.2	
3	Supplementary Services (SS), NOTE	12.2	o.2	

o.2 It is mandatory to support at least one of these items.

NOTE: The detailed PICS for supplementary services will be specified in a separate document. The dependency of SS to CC and addressing related to SS will also be specified in the same document.

Table A.3: CC features

Prerequisite: A.2/1				
Item	CC feature	Reference	Status	Support
1	Basic call set-up	11.2	m	
2	Call maintenance	11.2	m	
3	DTMF encoding and sending	11.2	o	
4	PTT requests/grants/information	11.2	m	
5	Call clearance	11.2	m	
6	Change of tele/bearer service within a call	11.2	o	
7	PC protocol error procedures	14.5.6.5	m	
8	PDU encoding	14.7	m	
9	PDU decoding	14.7	m	

Table A.4: SDS features

Prerequisite: A.2/2				
Item	SDS feature	Reference	Status	Support
1	Pre-defined short message	13.2	o.3	
2	User-defined short message	13.2	o.3	
3	PC protocol error procedures	14.5.6.5	m	
4	PDU encoding	14.7	m	
5	PDU decoding	14.7	m	

o.3 It is mandatory to support at least one of these items.

A.6.2 CMCE procedures

The supplier of the implementation shall state the support of the implementation for each of the CMCE procedures presented in tables A.5 to A.12.

Table A.5: CC basic call set-up procedures

Prerequisite: A.3/1				
Item	Basic call set-up procedures	Reference	Status	Support
1	Individual call set-up procedure	14.5.1	m	
2	Group call set-up procedure	14.5.2	m	
3	Call set up using on/off hook signalling	14.8.2.3	o.4	
4	Call set up using direct set up signalling	14.8.2.3	o.4	
5	Simplex call	14.8.39	m	
6	Duplex call	14.8.39	o	
7	Circuit mode speech: TCH/S	14.8.2	o.5	
8	Circuit mode unprotected: TCH/7.2	14.8.2	o.5	
9	Circuit mode low protection: TCH/4.8, N=1	14.8.2	o.5	
10	Circuit mode low protection: TCH/4.8, N=4	14.8.2	o.5	
11	Circuit mode low protection: TCH/4.8, N=8	14.8.2	o.5	
12	Circuit mode high protection: TCH/2.4, N=1	14.8.2	o.5	
13	Circuit mode high protection: TCH/2.4, N=4	14.8.2	o.5	
14	Circuit mode high protection: TCH/2.4, N=8	14.8.2	o.5	
15	Clear mode	14.8.2	o.6	
16	End to end encryption	14.8.2	o.6	
17	Communication type point to point	14.8.2	m	
18	Communication type point to multipoint	14.8.2	m	
19	Communication type point to multipoint acknowledged	14.8.2	o	
20	Communication type broadcast	14.8.2	o	
21	One slot per frame	14.8.2	m	
22	Two slots per frame	14.8.2	o	
23	Three slots per frame	14.8.2	o	
24	Four slots per frame	14.8.2	o	

- o.4 It is mandatory to support at least one of these items.
- o.5 It is mandatory to support at least one of these items.
- o.6 It is mandatory to support at least one of these items.

Table A.6: CC call maintenance procedures

Prerequisite: A.3/2				
Item	Call maintenance procedures	Reference	Status	Support
1	Individual call maintenance procedure	14.5.1.2	m	
2	Group call maintenance procedure	14.5.2.2	m	

Table A.7: CC DTMF encoding and sending procedures

Prerequisite: A.3/3				
Item	DTMF encoding and sending procedures	Reference	Status	Support
1	Individual DTMF sending procedure	14.5.1.2.5	o	
2	Individual DTMF receiving procedure	14.5.1.2.5	o	
3	Group DTMF sending procedure	14.5.2.2.5	o	
4	Group DTMF receiving procedure	14.5.2.2.5	o	

Table A.8: CC PTT requests/grants/information procedures

Prerequisite: A.3/4				
Item	PTT requests/grants/information procedures	Reference	Status	Support
1	Individual transmission control procedure	14.5.1.2.1	m	
2	Group transmission control procedure	14.5.2.2.1	m	

Table A.9: CC call clearance procedures

Prerequisite: A.3/5				
Item	Call clearance procedures	Reference	Status	Support
1	Individual call disconnection procedure	14.5.1.3	m	
2	Group call disconnection procedure	14.5.2.3	m	

Table A.10: CC change of tele/bearer service within a call procedures

Prerequisite: A.3/6				
Item	Change of tele/bearer service within a call procedures	Reference	Status	Support
1	Individual call user initiated modification procedure	14.5.1.2.3	o	
2	Individual call SwMI initiated modification procedure	14.5.1.2.3	m	
3	Group call user initiated modification procedure	14.5.2.2.3	o	
4	Group call SwMI initiated modification procedure	14.5.2.2.3	m	

Table A.11: SDS pre-defined short data message procedures

Prerequisite: A.4/1				
Item	Pre-defined short data message procedures	Reference	Status	Support
1	Incoming short data message	14.5.5.1	o.7	
2	Outgoing short data message	14.5.5.2	o.7	

o.7 It is mandatory to support at least one of these items.

Table A.12: SDS user defined short data message procedures

Prerequisite: A.4/2				
Item	User defined short data message procedures	Reference	Status	Support
1	Incoming short data message	14.5.5.1	o.8	
2	Outgoing short data message	14.5.5.2	o.8	

o.8 It is mandatory to support at least one of these items.

A.6.3 CMCE functions

The supplier of the implementation shall state the support of the implementation for each of the CMCE functions presented in tables A.13 to A.20.

Table A.13: CC individual call set-up functions

Prerequisite: A.5/1				
Item	Individual call set-up functions	Reference	Status	Support
1	Incoming call	14.5.1.1.1	m	
2	Outgoing call	14.5.1.1.2	m	
3	Colliding calls	14.5.1.1.3	m	
4	Unsuccessful call set up	14.5.1.1.4	m	
5	Call rejection	14.5.1.1.5	m	
6	U-plane switching	14.5.1.4.1	m	
7	Call status information	14.5.1.2.2	m	

Table A.14: CC group call set-up functions

Prerequisite: A.5/2				
Item	Group call set-up functions	Reference	Status	Support
1	Incoming call	14.5.2.1.1	m	
2	Outgoing call	14.5.2.1.2	m	
3	Colliding calls	14.5.2.1.3	m	
4	Unsuccessful call set up	14.5.2.1.4	m	
5	Call rejection	14.5.2.1.5	m	
6	U-plane switching	14.5.2.4.1	m	
7	Call status information	14.5.2.2.2	m	

Table A.15: CC individual call maintenance functions

Prerequisite: A.6/1				
Item	Individual call maintenance functions	Reference	Status	Support
1	Call restoration	14.5.1.2.4	m	

Table A.16: CC group call maintenance functions

Prerequisite: A.6/2				
Item	Group call maintenance functions	Reference	Status	Support
1	Call restoration	14.5.2.2.4	m	
2	Temporary address handling	14.5.2.2.6	m	
3	Acceptance of group-addressed channel allocation	14.5.2.5	m	

Table A.17: CC individual call PTT requests/grants/information functions

Prerequisite: A.8/1				
Item	Individual call PTT requests/grants/information functions	Reference	Status	Support
1	Request to transmit	14.5.1.2.1	m	
2	Transmission granted	14.5.1.2.1	m	
3	Transmission not granted	14.5.1.2.1	m	
4	Transmission request queued	14.5.1.2.1	m	
5	Permission to transmit withdrawn	14.5.1.2.1	m	
6	Permission to continue withdrawn call	14.5.1.2.1	m	
7	End of transmission	14.5.1.2.1	m	
8	Stop-transmission order	14.5.1.2.1	m	
9	U-plane switching	14.5.1.4.2	m	

Table A.18: CC group call PTT requests/grants/information functions

Prerequisite: A.8/2				
Item	Group Call PTT requests/grants/information functions	Reference	Status	Support
1	Request to transmit	14.5.2.2.1	m	
2	Transmission granted	14.5.2.2.1	m	
3	Transmission not granted	14.5.2.2.1	m	
4	Transmission request queued	14.5.2.2.1	m	
5	permission to transmit withdrawn	14.5.2.2.1	m	
6	Permission to continue withdrawn call	14.5.2.2.1	m	
7	End of transmission	14.5.2.2.1	m	
8	Stop-transmission order	14.5.2.2.1	m	
9	U-plane switching	14.5.2.4.2	m	

Table A.19: CC individual call clearance functions

Prerequisite: A.9/1				
Item	Individual call clearance functions	Reference	Status	Support
1	User initiated disconnection	14.5.1.3.1	o	
2	Reception of release request	14.5.1.3.3	m	
3	Reception of disconnection request	14.5.1.3.3	m	
4	Colliding disconnections	14.5.1.3.5	m	
5	Expiry of timers	14.5.1.3.4	m	
6	U-plane switching	14.5.1.4	m	

Table A.20: CC group call clearance functions

Prerequisite: A.9/2				
Item	Group call clearance functions	Reference	Status	Support
1	User initiated disconnection	14.5.2.3.1	o	
2	Reception of disconnection request	14.5.2.3.3	m	
3	Colliding disconnections	14.5.2.3.4	m	
4	Expiry of timers	14.5.2.3.5	m	
5	U-plane switching	14.5.2.4	m	

A.6.4 CMCE PDUs

The supplier of the implementation shall state the support of the implementation for each of the CMCE PDUs presented in tables A.21 to A.23.

Table A.21: CC PDUs

Prerequisite: A.2/1				
Item	PDU	Reference	Status	Support
1	D-ALERT	14.7.1.1	c2101	
2	D-CALL-PROCEEDING	14.7.1.2	m	
3	D-CALL-RESTORE	14.7.1.3	m	
4	D-CONNECT	14.7.1.4	m	
5	D-CONNECT ACKNOWLEDGE	14.7.1.5	m	
6	D-DISCONNECT	14.7.1.6	m	
7	D-INFO	14.7.1.8	m	
8	D-RELEASE	14.7.1.9	m	
9	D-SETUP	14.7.1.12	m	
10	D-TX-CEASED	14.7.1.13	m	
11	D-TX-CONTINUE	14.7.1.14	m	
12	D-TX-GRANTED	14.7.1.15	m	
13	D-TX-INTERRUPT	14.7.1.16	m	
14	D-TX-WAIT	14.7.1.17	m	
15	U-ALERT	14.7.2.1	c2101	
16	U-CALL-RESTORE	14.7.2.2	m	
17	U-CONNECT	14.7.2.3	m	
18	U-DISCONNECT	14.7.2.4	m	
19	U-INFO	14.7.2.6	c2102	
20	U-RELEASE	14.7.2.9	m	
21	U-SETUP	14.7.2.10	m	
22	U-TX-CEASED	14.7.2.11	m	
23	U-TX-DEMAND	14.7.2.12	m	
NOTE: The D-PDUs are received and U-PDUs are transmitted				

c2101: IF A.5/3 -- If on/off hook signalling supported then mandatory
THEN m
ELSE n/a

c2102: IF (A.5/19 OR -- If (acknowledged group call OR
A.3/6 OR -- change of tele/bearer service within a call OR
A.7/1 OR A.7/3 OR -- DTMF individual OR group sending OR
A.2/3) -- SS) supported then mandatory
THEN m
ELSE n/a

Table A.22: SDS PDUs

Prerequisite: A.2/2				
Item	PDU	Reference	Status	Support
1	D-STATUS	14.7.1.11	c2201	
2	D-SDS-DATA	14.7.1.10	c2202	
3	U-STATUS	17.7.2.7	c2203	
4	U-SDS-DATA	14.7.2.8	c2204	
NOTE: The D-PDUs are received and U-PDUs are transmitted				

- c2201: IF A.11/1 -- If incoming pre-defined short data message supported then mandatory
 THEN m
 ELSE n/a
- c2202: IF A.12/1 -- If incoming user defined short data message supported then mandatory
 THEN m
 ELSE n/a
- c2203: IF A.11/2 -- If outgoing pre-defined short data message supported then mandatory
 THEN m
 ELSE n/a
- c2204: IF A.12/2 -- If outgoing user defined short data message supported then mandatory
 THEN m
 ELSE n/a

Table A.23: SS PDUs

Prerequisite: A.2/3				
Item	PDU	Reference	Status	Support
1	D-FACILITY	14.7.1.7	m	
2	U-FACILITY	14.7.2.5	m	
NOTE: The D-PDUs are received and U-PDUs are transmitted				

NOTE: The detailed elements for supplementary service PDUs will be specified in a separate document.

A.6.5 CMCE PDU elements

The supplier of the implementation shall state the support of the implementation for each of the CMCE PDU elements presented in tables from A.24 to A.50.

Table A.24: Elements for CC D-ALERT PDU

Prerequisite: A.21/1				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.1	m	
2	Call identifier	14.7.1.1	m	
3	Call time-out, set-up phase	14.7.1.1	m	
4	Hook method selection	14.7.1.1	m	
5	Simplex/duplex selection	14.7.1.1	m	
6	Call queued	14.7.1.1	m	
7	Basic service information	14.7.1.1	m	
8	Notification indicator	14.7.1.1	o	
9	Facility	14.7.1.1	c2401	
10	Proprietary	14.7.1.1	o	

- c2401: IF A.2/3 -- If SS supported then mandatory
 THEN m
 ELSE n/a

Table A.25: Elements for CC D-CALL-PROCEEDING PDU

Prerequisite: A.21/2				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.2	m	
2	Call identifier	14.7.1.2	m	
3	Call time-out, set-up phase	14.7.1.2	m	
4	Hook method selection	14.7.1.2	m	
5	Simplex/duplex selection	14.7.1.2	m	
6	Basic service information	14.7.1.2	m	
7	Call status	14.7.1.2	m	
8	Notification indicator	14.7.1.2	o	
9	Facility	14.7.1.2	c2501	
10	Proprietary	14.7.1.2	o	

c2501: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.26: Elements for CC D-CALL-RESTORE PDU

Prerequisite: A.21/3				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.3	m	
2	Call identifier	14.7.1.3	m	
3	Transmission grant	14.7.1.3	m	
4	Transmission request permission	14.7.1.3	m	
5	Reset call time-out timer (T310)	14.7.1.3	m	
6	New call identifier	14.7.1.3	m	
7	Call time-out	14.7.1.3	m	
8	Call status	14.7.1.3	m	
9	Modify	14.7.1.3	c2601	
10	Notification indicator	14.7.1.3	o	
11	Facility	14.7.1.3	c2602	
12	Proprietary	14.7.1.3	o	

c2601: IF (A.10/2 OR A.10/4) -- If SwMI initiated individual or group change of tele/bearer
THEN m -- services supported then mandatory
ELSE n/a

c2602: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.27: Elements for CC D-CONNECT PDU

Prerequisite: A.21/4				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.4	m	
2	Call identifier	14.7.1.4	m	
3	Call time-out	14.7.1.4	m	
4	Hook method selection	14.7.1.4	m	
5	Simplex/duplex selection	14.7.1.4	m	
6	Transmission grant	14.7.1.4	m	
7	Transmission request permission	14.7.1.4	m	
8	Call ownership	14.7.1.4	m	
9	Call priority	14.7.1.4	m	
10	Basic service information	14.7.1.4	m	
11	Temporary address	14.7.1.4	m	
12	Notification indicator	14.7.1.4	o	
13	Facility	14.7.1.4	c2701	
14	Proprietary	14.7.1.4	o	

c2701: IF A.2/3 -- If SS supported then mandatory
 THEN m
 ELSE n/a

Table A.28: Elements for CC D-CONNECT ACKNOWLEDGE PDU

Prerequisite: A.21/5				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.5	m	
2	Call identifier	14.7.1.5	m	
3	Call time-out	14.7.1.5	m	
4	Transmission grant	14.7.1.5	m	
5	Transmission request permission	14.7.1.5	m	
6	Notification indicator	14.7.1.5	o	
7	Facility	14.7.1.5	c2801	
8	Proprietary	14.7.1.5	o	

c2801: IF A.2/3 -- If SS supported then mandatory
 THEN m
 ELSE n/a

Table A.29: Elements for CC D-DISCONNECT PDU

Prerequisite: A.21/6				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.6	m	
2	Call identifier	14.7.1.6	m	
3	Disconnect cause	14.7.1.6	m	
4	Notification indicator	14.7.1.6	o	
5	Facility	14.7.1.6	c2901	
6	Proprietary	14.7.1.6	o	

c2901: IF A.2/3 -- If SS supported then mandatory
 THEN m
 ELSE n/a

Table A.30: Elements for CC D-INFO PDU

Prerequisite: A.21/7				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.8	m	
2	Call identifier	14.7.1.8	m	
3	Reset call time-out timer (T310)	14.7.1.8	m	
4	Poll request	14.7.1.8	c3001	
5	New call identifier	14.7.1.8	m	
6	Call time-out	14.7.1.8	m	
7	Call time-out set up phase	14.7.1.8	m	
8	Call ownership	14.7.1.8	o	
9	Modify	14.7.1.8	c3002	
10	Call status	14.7.1.8	o	
11	Temporary address	14.7.1.8	m	
12	Notification indicator	14.7.1.8	o	
13	Poll response percentage	14.7.1.8	c3001	
14	Poll response number	14.7.1.8	c3001	
15	DTMF	14.7.1.8	c3003	
16	Facility	14.7.1.8	c3004	
17	Poll response addresses	14.7.1.8	c3001	
18	Proprietary	14.7.1.8	o	

- c3001: IF A.5/19 -- If acknowledged group call supported then mandatory
THEN m
ELSE n/a
- c3002: IF (A.10/2 OR A.10/4) -- If SwMI initiated individual or group change of tele/bearer
THEN m -- services supported then mandatory
ELSE n/a
- c3003: IF (A.7/2 OR A.7/4) -- If individual or group DTMF reception supported
THEN m
ELSE n/a
- c3004: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.31: Elements for CC D-RELEASE PDU

Prerequisite: A.21/8				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.9	m	
2	Call identifier	14.7.1.9	m	
3	Disconnect cause	14.7.1.9	m	
4	Notification indicator	14.7.1.9	o	
5	Facility	14.7.1.9	c3101	
6	Proprietary	14.7.1.9	o	

- c3101: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.32: Elements for CC D-SETUP PDU

Prerequisite: A.21/9				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.12	m	
2	Call identifier	14.7.1.12	m	
3	Call time-out	14.7.1.12	m	
4	Hook method selection	14.7.1.12	m	
5	Simplex/duplex selection	14.7.1.12	m	
6	Basic service information	14.7.1.12	m	
7	Transmission grant	14.7.1.12	m	
8	Transmission request permission	14.7.1.12	m	
9	Call priority	14.7.1.12	m	
10	Notification indicator	14.7.1.12	o	
11	Temporary address	14.7.1.12	m	
12	Calling party type identifier	14.7.1.12	m	
13	Calling party address SSI	14.7.1.12	m	
14	Calling party extension	14.7.1.12	o	
15	External subscriber number	14.7.1.12	o	
16	Facility	14.7.1.12	c3201	
17	Proprietary	14.7.1.12	o	

c3201: IF A.2/3 -- If SS supported then mandatory
 THEN m
 ELSE n/a

Table A.33: Elements for CC D-TX-CEASED PDU

Prerequisite: A.21/10				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.13	m	
2	Call identifier	14.7.1.13	m	
3	Transmission request permission	14.7.1.13	m	
4	Notification indicator	14.7.1.13	o	
5	Facility	14.7.1.13	c3301	
6	Proprietary	14.7.1.13	m	

c3301: IF A.2/3 -- If SS supported then mandatory
 THEN m
 ELSE n/a

Table A.34: Elements for CC D-TX-CONTINUE PDU

Prerequisite: A.21/11				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.14	m	
2	Call identifier	14.7.1.14	m	
3	Continue	14.7.1.14	m	
4	Transmission request permission	14.7.1.14	m	
5	Notification indicator	14.7.1.14	o	
6	Facility	14.7.1.14	c3401	
7	Proprietary	14.7.1.14	o	

c3401: IF A.2/3 -- If SS supported then mandatory
 THEN m
 ELSE n/a

Table A.35: Elements for CC D-TX-GRANTED PDU

Prerequisite: A.21/12				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.15	m	
2	Call identifier	14.7.1.15	m	
3	Transmission grant	14.7.1.15	m	
4	Transmission request permission	14.7.1.15	m	
5	Encryption control	14.7.1.15	m	
6	Speech service	14.7.1.15	m	
7	Notification indicator	14.7.1.15	o	
8	Transmitting party type identifier	14.7.1.15	m	
9	Transmitting party address SSI	14.7.1.15	m	
10	Transmitting party extension	14.7.1.15	o	
11	Facility	14.7.1.15	c3501	
12	Proprietary	14.7.1.15	o	

c3501: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.36: Elements for CC D-TX-INTERRUPT PDU

Prerequisite: A.21/13				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.16	m	
2	Call identifier	14.7.1.16	m	
3	Transmission grant	14.7.1.16	m	
4	Transmission request permission	14.7.1.16	m	
5	Encryption control	14.7.1.16	m	
6	Speech service	14.7.1.16	m	
7	Notification indicator	14.7.1.16	o	
8	Transmitting party type identifier	14.7.1.16	m	
9	Transmitting party address SSI	14.7.1.16	m	
10	Transmitting party extension	14.7.1.16	o	
11	Facility	14.7.1.16	c3601	
12	Proprietary	14.7.1.16	o	

c3601: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.37: Elements for CC D-TX-WAIT PDU

Prerequisite: A.21/14				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.17	m	
2	Call identifier	14.7.1.17	m	
3	Transmission request permission	14.7.1.17	m	
4	Notification indicator	14.7.1.17	o	
5	Facility	14.7.1.17	c3701	
6	Proprietary	14.7.1.17	o	

c3701: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.38: Elements for CC U-ALERT PDU

Prerequisite: A.21/15				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.1	m	
2	Call identifier	14.7.2.1	m	
3	Hook method selection	14.7.2.1	m	
4	Simplex/duplex selection	14.7.2.1	m	
5	Basic service information	14.7.2.1	m	
6	Facility	14.7.2.1	c3801	
7	Proprietary	14.7.2.1	o	

c3801: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.39: Elements for CC U-CALL-RESTORE PDU

Prerequisite: A.21/16				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.2	m	
2	Call identifier	14.7.2.2	m	
3	Request to transmit/send data	14.7.2.2	m	
4	Called party type identifier	14.7.2.2	m	
5	Called party short number address	14.7.2.2	o	
6	Called party SSI	14.7.2.2	m	
7	Called party extension	14.7.2.2	o	
8	Basic service information	14.7.2.2	m	
9	Facility	14.7.2.2	c3901	
10	Proprietary	14.7.2.2	o	

c3901: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.40: Elements for CC U-CONNECT PDU

Prerequisite: A.21/17				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.3	m	
2	Call identifier	14.7.2.3	m	
3	Hook method selection	14.7.2.3	m	
4	Simplex/duplex selection	14.7.2.3	m	
5	Basic service information	14.7.2.3	m	
6	Facility	14.7.2.3	c4001	
7	Proprietary	14.7.2.3	o	

c4001: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.41: Elements for CC U-DISCONNECT PDU

Prerequisite: A.21/18				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.4	m	
2	Call identifier	14.7.2.4	m	
3	Disconnect cause	14.7.2.4	m	
4	Facility	14.7.2.4	c4101	
5	Proprietary	14.7.2.4	o	

c4101: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.42: Elements for CC U-INFO PDU

Prerequisite: A.21/19				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.6	m	
2	Call identifier	14.7.2.6	m	
3	Poll response	14.7.2.6	c4201	
4	Modify	14.7.2.6	c4202	
5	DTMF	14.7.2.6	c4203	
6	Facility	14.7.2.6	c4204	
7	Proprietary	14.7.2.6	o	

c4201: IF A.5/19 -- If acknowledged group call supported
THEN m
ELSE n/a

c4202: IF (A.10/1 OR A.10/3) -- If user initiated individual or group change of tele/bearer
THEN m -- service supported then mandatory
ELSE n/a

c4203: IF (A.7/1 OR A.7/3) -- If DTMF individual or group sending procedure supported
THEN m
ELSE n/a

c4204: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.43: Elements for CC U-RELEASE PDU

Prerequisite: A.21/20				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.9	m	
2	Call identifier	14.7.2.9	m	
3	Disconnect cause	14.7.2.9	m	
4	Facility	14.7.2.9	c4301	
5	Proprietary	14.7.2.9	o	

c4301: IF A.2/3 -- If SS supported then mandatory
 THEN m
 ELSE n/a

Table A.44: Elements for CC U-SETUP PDU

Prerequisite: A.21/21				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.10	m	
2	Area selection	14.7.2.10	m	
3	Hook method selection	14.7.2.10	m	
4	Simplex/duplex selection	14.7.2.10	m	
5	Basic service information	14.7.2.10	m	
6	Request to transmit/send data	14.7.2.10	m	
7	Call priority	14.7.2.10	m	
8	Reserved	14.7.2.10	m	
9	Called party type identifier	14.7.2.10	m	
10	Called party short number address	14.7.2.10	o	
11	Called party SSI	14.7.2.10	m	
12	Called party extension	14.7.2.10	o	
13	External subscriber number	14.7.2.10	o	
14	Facility	14.7.2.10	c4401	
15	Proprietary	14.7.2.10	o	

c4401: IF A.2/3 -- If SS supported then mandatory
 THEN m
 ELSE n/a

Table A.45: Elements for CC U-TX-CEASED PDU

Prerequisite: A.21/22				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.11	m	
2	Call identifier	14.7.2.11	m	
3	Facility	14.7.2.11	c4501	
4	Proprietary	14.7.2.11	o	

c4501: IF A.2/3 -- If SS supported then mandatory
 THEN m
 ELSE n/a

Table A.46: Elements for CC U-TX-DEMAND PDU

Prerequisite: A.21/23				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.12	m	
2	Call identifier	14.7.2.12	m	
3	TX demand priority	14.7.2.12	m	
4	Encryption control	14.7.2.12	m	
5	Speech service	14.7.2.12	m	
6	Facility	14.7.2.12	c4601	
7	Proprietary	14.7.2.12	o	

c4601: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.47: Elements for SDS D-STATUS PDU

Prerequisite: A.22/1				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.11	m	
2	Calling party type identifier	14.7.1.11	m	
3	Calling party address SSI	14.7.1.11	m	
4	Calling party extension	14.7.1.11	o	
5	Pre-coded status	14.7.1.11	m	
6	Facility	14.7.1.11	c4701	

c4701: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.48: Elements for SDS D-SDS-DATA PDU

Prerequisite: A.22/2				
Item	Element	Reference	Status	Support
1	PDU type	14.7.1.10	m	
2	Calling party type identifier	14.7.1.10	m	
3	Calling party address SSI	14.7.1.10	m	
4	Calling party extension	14.7.1.10	o	
5	Short data type identifier	14.7.1.10	m	
6	User defined data-1	14.7.1.10	o.9	
7	User defined data-2	14.7.1.10	o.9	
8	User defined data-3	14.7.1.10	o.9	
9	Length indicator	14.7.1.10	c4801	
10	User defined data-4	14.7.1.10	o.9	
11	Facility	14.7.1.10	c4802	

c4801: IF A.48/10 -- If user defined data-4 supported then mandatory
THEN m
ELSE n/a

c4802: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

o.9 It is mandatory to support at least one of these items.

Table A.49: Elements for SDS U-STATUS PDU

Prerequisite: A.22/3				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.7	m	
2	Area selection	14.7.2.7	m	
3	Called party type identifier	14.7.2.7	m	
4	Called party short number address	14.7.2.7	o	
5	Called party SSI	14.7.2.7	m	
6	Called party extension	14.7.2.7	o	
7	Pre-coded status	14.7.2.7	m	
8	External subscriber number	14.7.2.7	o	
9	Facility	14.7.2.7	c4901	

c4901: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

Table A.50: Elements for SDS U-SDS-DATA PDU

Prerequisite: A.22/4				
Item	Element	Reference	Status	Support
1	PDU type	14.7.2.8	m	
2	Area selection	14.7.2.8	m	
3	Called party type identifier	14.7.2.8	m	
4	Called party short number address	14.7.2.8	o	
5	Called party SSI	14.7.2.8	m	
6	Called party extension	14.7.2.8	o	
7	Short data type identifier	14.7.2.8	m	
8	User defined data-1	14.7.2.8	o.10	
9	User defined data-2	14.7.2.8	o.10	
10	User defined data-3	14.7.2.8	o.10	
11	Length indicator	14.7.2.8	c5001	
12	User defined data-4	14.7.2.8	o.10	
13	External subscriber number	14.7.2.8	o	
14	Facility	14.7.2.8	c5002	

c5001: IF A.50/12 -- If user defined data-4 supported then mandatory
THEN m
ELSE n/a

c5002: IF A.2/3 -- If SS supported then mandatory
THEN m
ELSE n/a

o.10 It is mandatory to support at least one of these items.

A.6.6 CMCE constants

The supplier of the implementation shall state the support of the implementation for each of the CMCE constants presented in table A.51.

Table A.51: CMCE constants

Prerequisite: A.2/1						
Item	Constants	Reference	Status	Support	Values	
					Allowed	Supported
1	Max number of instances of call control	11.2,14.2.4.1	m		>= 1	
2	Max number of active concurrent calls	14.2.4.1	m		1..4	

A.6.7 CMCE timers

The supplier of the implementation shall state the support of the implementation for each of the CMCE timers presented in table A.52.

Table A.52: CMCE timers

Prerequisite: A.2/1						
Item	Timer	Reference	Status	Support	Allowed range	Supported values
1	T301	14.6	m		0..30 --Sec	
2	T302	14.6	m		0..60 --Sec	
3	T303	14.6	m		0..60 --Sec	
4	T306	14.6	m		4..6 --Sec	
5	T307	14.6	m		6..8 --Sec	
6	T308	14.6	m		0..10 --Sec	
7	T310	14.6	m		≥ 5 --Sec	
8	T311	14.6	m		0..300 --Sec	

A.6.8 Negotiation capabilities

The supplier of the implementation shall state the support of the implementation for each of the CMCE negotiation capabilities presented in tables A.53 to A.55.

Table A.53: Basic service information

Prerequisite: A 3/1						
Item	Element	Reference	Status	Support	Values	
					Allowed	Supported
1	Circuit mode type	14.8.2	m		0..7	
2	Encryption flag	14.8.2	m		0..1	
3	Communication type	14.8.2	m		0..3	
4	Slots per frame	14.8.2	m		0..3	

Table A.54: Hook method selection

Prerequisite: A 3/1						
Item	Element	Reference	Status	Support	Values	
					Allowed	Supported
1	Hook method selection element	14.8.23	m		0,1	

Table A.55: Simplex/duplex selection

Prerequisite: A 3/1						
Item	Element	Reference	Status	Support	Values	
					Allowed	Supported
1	Simplex/duplex selection element	14.8.39	m		0,1	

A.7 Mobility Management (MM)

A.7.1 MM features

The supplier of the implementation shall state the support of the implementation for each of the MM features presented in table A.56.

Table A.56: MM features

Prerequisite: A.1/2				
Item	MM feature	Reference	Status	Support
1	Registration procedures	16.4.1.1	m	
2	Deregistration procedure	15.2,16.6	o	
3	Change of energy economy mode procedures	15.2	c5601	
4	Attachment/detachment of group identities procedures	15.2	o	
5	Enable/disable procedures	16.5	m	
6	PDU encoding	16.9.1	m	
7	PDU decoding	16.9.1	m	

c5601: IF A.142/7 -- If energy economy mode supported then mandatory
THEN m
ELSE n/a

A.7.2 MM procedures

The supplier of the implementation shall state the support of the implementation for each of the MM procedures presented in tables A.57 to A.61.

Table A.57: MM registration procedures

Prerequisite: A.56/1				
Item	Registration procedures	Reference	Status	Support
1	MLE initiated registration	16.4.1	m	
2	User application initiated registration	16.4.2	m	
3	User application initiated registration procedure at powerup	16.4.2	m	
4	Infrastructure initiated registration	16.4.3	m	
5	Colliding registrations	16.4.4	o	
6	Expiry of timer T351	16.4.5	m	

Table A.58: MLE initiated registration procedures

Prerequisite: A.57/1				
Item	MLE initiated registration procedure	Reference	Status	Support
1	Normal roaming registration	16.4.1.1	m	
2	Normal migration registration	16.4.1.1	o	
3	Forward roaming registration	16.4.1.2	c5801	
4	Forward migration registration	16.4.1.2	c5802	

c5801: IF A.81/5 -- If announced type 1 cell reselection supported then mandatory
THEN m
ELSE n/a

c5802: IF A.81/5 -- If announced type 1 cell reselection supported then optional
THEN o
ELSE n/a

Table A.59: User application initiated registration procedures

Prerequisite: A.57/2				
Item	User application initiated registration procedure	Reference	Status	Support
1	No new ITSI registration	16.4.2	o	
2	New ITSI registration	16.4.2	m	
3	New unexchanged ITSI registration	16.4.2	c5901	

c5901: IF (A.58/2 OR A.58/4) -- If normal or forward migration registration supported then mandatory
THEN m
ELSE n/a

Table A.60: MM attachment/detachment of group identities procedures

Prerequisite: A.56/4				
Item	Attachment/detachment of group identities procedures	Reference	Status	Support
1	Infrastructure initiated attachment/detachment of group identities procedure	16.8.1	o	
2	Infrastructure initiated group identity report request	16.8.1	c6001	
3	MS initiated attachment/detachment of group identities procedure	16.8.2	o	
4	MS initiated group identity report request	16.8.2	c6002	

c6001: IF A.60/1 -- If infrastructure initiated attachment/detachment supported then mandatory
THEN m
ELSE n/a

c6002: IF A.60/3 -- If MS initiated attachment/detachment supported then optional, else n/a
THEN o
ELSE n/a

Table A.61: MM enable/disable procedures

Prerequisite: A.56/5				
Item	Enable/disable procedure	Reference	Status	Support
1	Temporary disable of MS	16.5	m	
2	Permanent disable of MS	16.5	o	
3	Enable of MS	16.5	m	

A.7.4 MM PDU elements

The supplier of the implementation shall state the support of the implementation for each of the MM PDU elements presented in tables A.63 to A.77.

Table A.63: Elements for MM D-ATTACH/DETACH GROUP IDENTITY PDU

Prerequisite: A.62/1				
Item	Element	Reference	Status	Support
1	PDU type	16.9.2.1	m	
2	Group identity report	16.9.2.1	m	
3	Group identity acknowledgement request	16.9.2.1	m	
4	Group identity attach/detach mode	16.9.2.1	m	
5	Proprietary	16.9.2.1	o	
6	Group identity downlink	16.9.2.1	m	

Table A.64: Elements for MM D-ATTACH/DETACH GROUP IDENTITY ACKNOWLEDGEMENT PDU

Prerequisite: A.62/2				
Item	Element	Reference	Status	Support
1	PDU type	16.9.2.2	m	
2	Group identity accept/reject	16.9.2.2	m	
3	Group identity attach/detach mode	16.9.2.2	m	
4	Proprietary	16.9.2.2	o	
5	Group identity downlink	16.9.2.2	m	

Table A.65: Elements for MM D-DISABLE PDU

Prerequisite: A.62/3				
Item	Element	Reference	Status	Support
1	PDU type	16.9.2.3	m	
2	Disabling type	16.9.2.3	m	
3	TETRA equipment identity	16.9.2.3	m	
4	Address extension	16.9.2.3	m	
5	Proprietary	16.9.2.3	o	

Table A.66: Elements for MM D-ENABLE PDU

Prerequisite: A.62/4				
Item	Element	Reference	Status	Support
1	PDU type	16.9.2.4	m	
2	TETRA equipment identity	16.9.2.4	m	
3	Address extension	16.9.2.4	m	
4	Proprietary	16.9.2.4	o	

Table A.67: Elements for MM D-ENERGY SAVING PDU

Prerequisite: A.62/5				
Item	Element	Reference	Status	Support
1	PDU type	16.9.2.5	m	
2	Status	16.9.2.5	m	
3	Energy saving information	16.9.2.5	m	
4	Proprietary	16.9.2.5	o	

Table A.68: Elements for MM D-STATUS PDU

Prerequisite: A.62/6				
Item	Element	Reference	Status	Support
1	PDU type	16.9.2.6	m	
2	Status	16.9.2.6	m	
3	Proprietary	16.9.2.6	o	

Table A.69: Elements for MM D-LOCATION UPDATE ACCEPT PDU

Prerequisite: A.62/7				
Item	Element	Reference	Status	Support
1	PDU type	16.9.2.7	m	
2	Location update type	16.9.2.7	m	
3	SSI	16.9.2.7	m	
4	Address extension	16.9.2.7	m	
5	Subscriber class	16.9.2.7	m	
6	Energy saving information	16.9.2.7	m	
7	SCCH information and distribution on 18th frame	16.9.2.7	m	
8	New registered area	16.9.2.7	m	
9	Proprietary	16.9.2.7	o	
10	Group identity location accept	16.9.2.7	m	

Table A.70: Elements for MM D-LOCATION UPDATE COMMAND PDU

Prerequisite: A.62/8				
Item	Element	Reference	Status	Support
1	PDU type	16.9.2.8	m	
2	Group identity report	16.9.2.8	m	
3	Cipher control	16.9.2.8	m	
4	Ciphering parameters	16.9.2.8	c7001	
5	Address extension	16.9.2.8	m	
6	Proprietary	16.9.2.8	o	

c7001: IF A.137/8 -- If air interface encryption supported then mandatory
THEN m
ELSE n/a

Table A.71: Elements for MM D-LOCATION UPDATE REJECT PDU

Prerequisite: A.62/9				
Item	Element	Reference	Status	Support
1	PDU type	16.9.2.9	m	
2	Location update type	16.9.2.9	m	
3	Reject cause	16.9.2.9	m	
4	Cipher control	16.9.2.9	m	
5	Ciphering parameters	16.9.2.9	c7101	
6	Address extension	16.9.2.9	m	
7	Proprietary	16.9.2.9	o	

c7101: IF A.137/8 -- If air interface encryption supported then mandatory
THEN m
ELSE n/a

Table A.72: Elements for MM D-LOCATION UPDATE PROCEEDING PDU

Prerequisite: A.62/10				
Item	Element	Reference	Status	Support
1	PDU type	16.9.2.10	m	
2	SSI	16.9.2.10	m	
3	Address extension	16.9.2.10	m	
4	Proprietary	16.9.2.10	o	

Table A.73: Elements for MM U-ATTACH/DETACH GROUP IDENTITY PDU

Prerequisite: A.62/11				
Item	Element	Reference	Status	Support
1	PDU type	16.9.3.1	m	
2	Group identity report	16.9.3.1	m	
3	Group identity attach/detach mode	16.9.3.1	m	
4	Proprietary	16.9.3.1	o	
5	Group identity uplink	16.9.3.1	m	

Table A.74: Elements for MM U-ATTACH/DETACH GROUP IDENTITY ACKNOWLEDGEMENT PDU

Prerequisite: A.62/12				
Item	Element	Reference	Status	Support
1	PDU type	16.9.3.2	m	
2	Group identity acknowledgement type	16.9.3.2	m	
3	Proprietary	16.9.3.2	o	
4	Group identity uplink	16.9.3.2	m	

Table A.75: Elements for MM U-ITSI DETACH PDU

Prerequisite: A.62/13				
Item	Element	Reference	Status	Support
1	PDU type	16.9.3.3	m	
2	Address extension	16.9.3.3	m	
3	Proprietary	16.9.3.3	o	

Table A.76: Elements for MM U-LOCATION UPDATE DEMAND PDU

Prerequisite: A.62/14				
Item	Element	Reference	Status	Support
1	PDU type	16.9.3.4	m	
2	Location update type	16.9.3.4	m	
3	Request to append location area	16.9.3.4	m	
4	Cipher control	16.9.3.4	m	
5	Ciphering parameters	16.9.3.4	c7601	
6	Class of MS	16.9.3.4	m	
7	Energy saving mode	16.4.2	c7602	
8	Location area information	16.9.3.4	m	
9	SSI	16.9.3.4	m	
10	Address extension	16.9.3.4	m	
11	Group identity location demand ack	16.9.3.4	m	
12	Group identity location demand	16.4.2	o	
13	Proprietary	16.9.3.4	o	
NOTE: The information contents of the "Class of MS" field is subject to dynamic protocol conformity and therefore no detailed information of that is required in this ETS.				

c7601: IF A.137/8 -- If air interface encryption supported then mandatory
 THEN m
 ELSE n/a

c7602: IF A.142/7 -- If energy economy mode supported then mandatory
 THEN m
 ELSE n/a

Table A.77: Elements for MM U-STATUS PDU

Prerequisite: A.62/15				
Item	Element	Reference	Status	Support
1	PDU type	16.9.3.5	m	
2	Status	16.9.3.5	m	
3	Energy saving mode	16.9.3.5	m	
4	Proprietary	16.9.3.5	o	

A.7.5 MM timers

The supplier of the implementation shall state the support of the implementation for the MM timer presented in table A.78.

Table A.78: MM timers

Prerequisite: A.1/2						
Item	Timer	Reference	Status	Support	Values	
					Allowed	Supported
1	T351	16.11.1.1	m		30 --Sec	

A.8 Mobile Link Entity (MLE)

A.8.1 MLE features

The supplier of the implementation shall state the support of the implementation for each of the MLE features, presented in table A.79.

Table A.79: MLE features

Item	MLE Feature	Reference	Status	Support
1	Cell monitoring	18.3.4.2	m	
2	Cell reselection	18.3.4.7	m	
3	Cell scanning	18.3.4.1	m	
4	Cell surveillance	18.3.4.3	m	
5	Call restoration	18.3.4.7.3	c7901	
6	Data transfer MM	18.3.5.3.1	m	
7	Data transfer CMCE	18.3.5.3.1	c7901	
8	Data transfer CONP	18.3.5.3.1	c7902	
9	Data transfer SCLNP	18.3.5.3.1	c7903	
10	Immediate system information reception	18.3.6.2	m	
11	Initial cell selection	18.3.4.6	m	
12	Network broadcast information reception	18.3.6.2	m	
13	Neighbour cell enquiry	18.3.6.5	o	

c7901: IF A.2/1 -- If CC supported then mandatory
THEN m
ELSE n/a

c7902: IF A.1/6 -- If CONP supported then mandatory
THEN m
ELSE n/a

c7903: IF A.1/7 -- If SCLNP supported then mandatory
THEN m
ELSE n/a

A.8.2 MLE procedures

The supplier of the implementation shall state the support of the implementation for each of the following MLE procedures, presented in tables A.80 to A.92.

Table A.80: MLE cell monitoring procedures

Prerequisite: A.79/1				
Item	MLE procedure	Reference	Status	Support
1	Start monitoring procedure	18.3.4.2	m	
2	Monitoring indication reception	18.3.4.2	m	
3	Stop monitoring procedure	18.3.4.2	m	

Table A.81: MLE cell reselection procedures

Prerequisite: A.79/2				
Item	MLE procedure	Reference	Status	Support
1	Undeclared cell reselection	18.3.4.7.2	m	
2	Unannounced cell reselection	18.3.4.7.3	m	
3	Announced type 3 cell reselection	18.3.4.7.4	m	
4	Announced type 2 cell reselection	18.3.4.7.5	o	
5	Announced type 1 cell reselection	18.3.4.7.6	o	

Table A.82: MLE cell scanning procedures

Prerequisite: A.79/3				
Item	MLE procedure	Reference	Status	Support
1	Start scanning procedure	18.3.4.5.2	m	
2	Foreground scanning	18.3.4.1	m	
3	Interrupting scanning	18.3.4.1	o	
4	Background scanning	18.3.4.1	c8201	
5	Cell scan result reception	18.3.4.2	m	

c8201: IF (A.81/4 OR A.81/5) -- If announced type 1 or type 2 cell reselection supported then
THEN m -- mandatory
ELSE o

Table A.83: MLE surveillance procedures

Prerequisite: A.79/4				
Item	MLE procedure	Reference	Status	Support
1	Cell surveillance indication reception	18.3.4.3	m	
2	Cell surveillance MAC channel change	18.3.4.3	m	

Table A.84: MLE call restoration procedure

Prerequisite: A.79/5				
Item	MLE procedure	Reference	Status	Support
1	CMCE call restoration request	18.3.4.7.3	m	

Table A.85: MM-MLE data transfer procedures

Prerequisite: A.79/6				
Item	MLE procedure	Reference	Status	Support
1	Acknowledged MM data transmission	18.3.5.3.1	m	
2	Acknowledged response MM data transmission	18.3.5.3.1	m	

Table A.86: CMCE-MLE data transfer procedures

Prerequisite: A.79/7				
Item	MLE procedure	Reference	Status	Support
1	Acknowledged CMCE data transmission	18.3.5.3.1	m	
2	Acknowledged response CMCE data transmission	18.3.5.3.1	m	

Table A.87: CONP-MLE data transfer procedures

Prerequisite: A.79/8				
Item	MLE procedure	Reference	Status	Support
1	Unacknowledged CONP data transmission	18.3.5.3.1	o.11	
2	Acknowledged CONP data transmission	18.3.5.3.1	o.11	

o.11 It is mandatory to support at least one of these items.

Table A.88: SCLNP-MLE data transfer procedures

Prerequisite: A.79/9				
Item	MLE procedure	Reference	Status	Support
1	Unacknowledged SCLNP data transmission	18.3.5.3.1	o.12	
2	Acknowledged SCLNP data transmission	18.3.5.3.1	o.12	

o.12 It is mandatory to support at least one of these items.

Table A.89: MLE immediate system information procedures

Prerequisite: A.79/10				
Item	MLE procedure	Reference	Status	Support
1	Synchronisation system information reception	18.3.6.4	m	
2	System information indication reception	18.3.6.4	m	

Table A.90: MLE initial cell selection

Prerequisite: A.79/11				
Item	MLE procedure	Reference	Status	Support
1	Initial cell selection	18.3.4.6	m	

Table A.91: MLE network broadcast information reception

Prerequisite: A.79/12				
Item	MLE procedure	Reference	Status	Support
1	Network broadcast reception	18.3.6.2	m	

Table A.92: MLE neighbour cell enquiry

Prerequisite: A.79/13				
Item	MLE procedure	Reference	Status	Support
1	Neighbour cell enquiry procedure	18.3.6.5	o	

A.8.3 MLE PDUs

Table A.93: MLE PDUs

Item	PDU	Reference	Status	Support
1	MLE service user PDU	18.4.1.3	m	
2	D-NWRK-BROADCAST	18.4.1.4.1	m	
3	D-NEW-CELL	18.4.1.4.2	m	
4	D-PREPARE-FAIL	18.4.1.4.3	c9301	
5	D-RESTORE-ACK	18.4.1.4.4	m	
6	D-RESTORE-FAIL	18.4.1.4.5	m	
7	U-PREPARE	18.4.1.4.6	m	
8	U-RESTORE	18.4.1.4.7	m	
9	D-MLE-SYNC	18.4.2.1	m	
10	D-MLE-SYSINFO	18.4.2.2	m	

c9301: IF (A.81/4 OR
A.81/5 OR
A.79/13)
THEN m
ELSE o

-- If annouced type 1 or type 2 cell reselection or
-- neighbour cell enquiry procedure supported
-- then mandatory

A.8.4 MLE timers

The supplier of the implementation shall state the support of the implementation for the MLE timer presented in table A.94.

Table A.94: MLE timers

Item	Timer	Reference	Status	Support	Values	
					Allowed	Supported
1	T.370	18.6.1	m		5 -- Sec	

A.8.5 MLE PDU elements

The supplier of the implementation shall state the support of the implementation for each of the MLE PDU elements presented in tables from A.95 to A.104.

Table A.95: Elements for MLE service user PDU

Prerequisite: A.93 /1				
Item	Element	Reference	Status	Support
1	All elements	18.4.1.3	m	

Table A.96: Elements for MLE network broadcast PDU

Prerequisite: A.93/2				
Item	Element	Reference	Status	Support
1	All elements	18.4.1.4.1	m	

Table A.97: Elements for MLE D-NEW-CELL PDU

Prerequisite: A.93/3				
Item	Element	Reference	Status	Support
1	All elements	18.4.1.4.2	m	

Table A.98: Elements for MLE D-PREPARE-FAIL PDU

Prerequisite: A.93/4				
Item	Element	Reference	Status	Support
1	All elements	18.4.1.4.3	m	

Table A.99: Elements for MLE D-RESTORE-ACK PDU

Prerequisite: A.93/5				
Item	Element	Reference	Status	Support
1	All elements	18.4.1.4.4	m	

Table A.100: Elements for MLE D-RESTORE-FAIL PDU

Prerequisite: A.93/6				
Item	Element	Reference	Status	Support
1	All elements	18.4.1.4.5	m	

Table A.101: Elements for MLE U-PREPARE PDU

Prerequisite: A.93/7				
Item	Element	Reference	Status	Support
1	PDU type	18.4.1.4.6	m	
2	Cell identifier	18.4.1.4.6	m	
3	SDU	18.4.1.4.6	c10101	

c10101:IF A.81/5 -- If announced type 1 cell reselection supported then mandatory
THEN m
ELSE n/a

Table A.102: Elements for MLE U-RESTORE PDU

Prerequisite: A.93/8				
Item	Element	Reference	Status	Support
1	All elements	18.4.1.4.7	m	

Table A.103: Elements for D-MLE-SYNC PDU

Prerequisite: A.93/9				
Item	Element	Reference	Status	Support
1	All elements	18.4.2.1	m	

Table A.104: Elements for D-MLE-SYSINFO PDU

Prerequisite: A.93/10				
Item	Element	Reference	Status	Support
1	All elements	18.4.2.2	m	

A.9 Logical Link Control (LLC)

A.9.1 LLC features

The supplier of the implementation shall state the support of the implementation for each of the LLC features presented in table A.105.

Table A.105: LLC features

Item	LLC feature	Reference	Status	Support
1	Basic link (BL) acknowledged service	22.2.1, 22.3.2	m	
2	Basic link unacknowledged service	22.2.1, 22.3.2	m	
3	Advanced link (AL) acknowledged service	22.2.2, 22.3.3	o	
4	Advanced link unacknowledged service	22.2.2, 22.3.4	o	

A.9.2 LLC procedures

The supplier of the implementation shall state the support of the implementation for each of the LLC procedures presented in tables A.106, A.107, A.108 and A.109.

Table A.106: LLC basic link procedures for acknowledged service

Prerequisite: A.105/1				
Item	Procedure	Reference	Status	Support
1	Data reception	22.2.1.1	m	
2	Data transmission	22.2.1.1	m	
3	FCS checking in reception	22.3.1.5	o	
4	FCS calculation in transmission	22.3.1.5	o	

Table A.107: LLC basic link procedures for unacknowledged service

Prerequisite: A.105/2				
Item	Procedure	Reference	Status	Support
1	Data reception	22.2.1.2	m	
2	Data transmission	22.2.1.2	o	
3	FCS checking in reception	22.3.1.5	o	
4	FCS calculation in transmission	22.3.1.5	o	

Table A.108: LLC acknowledged advanced link procedures

Prerequisite: A.105/3				
Item	Procedure	Reference	Status	Support
1	Connection establishment	22.2.2.1	c10801	
2	QoS negotiation	22.2.2.1	c10801	
3	Data reception	22.2.2.3	c10801	
4	Data transmission	22.2.2.3	c10801	
5	Segmentation	22.3.3.2.1	c10801	
6	Reassembly	22.3.3.2.2	c10801	
7	Window mechanism	22.2.2.5	c10802	
8	Flow control	22.2.2.7	c10801	
9	Connection reset	22.2.2.8	c10801	
10	FCS checking in reception	22.3.1.5	c10801	
11	FCS calculation in transmission	22.3.1.5	c10801	
12	Disconnection	22.2.2.9	c10801	

c10801:IF A.105/3
THEN m
ELSE n/a -- If acknowledged AL supported then mandatory

c10802:IF (A.105/3 AND
(A.134/6 > 1))
THEN m
ELSE n/a -- If maximum window size for AL acknowledged service,
-- N.272, is greater than 1 then mandatory

Table A.109: LLC unacknowledged advanced link procedures

Prerequisite: A.105/4 -- AL unacknowledged service				
Item	Procedure	Reference	Status	Support
1	Connection establishment	22.3.4.1	o	
2	QoS checking	22.3.4.1	c10901	
3	Data reception	22.2.2.4	m	
4	Reassembly	22.3.3.2.2	m	
5	Window mechanism	22.3.4.3	c10902	
6	Received duplicates suppressed	22.3.4.2	o	
7	Data delivered in order	22.3.4.2	o	
8	FCS checking in reception	22.3.1.5	m	
9	Disconnection	22.3.4.4	o	

c10901:IF A.109/1
THEN m
ELSE n/a -- If connection establishment then mandatory

c10902:IF (A.134/9 > 1)
THEN m
ELSE n/a -- If maximum window size for AL unacknowledged
-- service, N.281, is greater than 1 then mandatory

A.9.3 LLC PDUs

The supplier of the implementation shall state the support of the implementation for each of the LLC PDUs presented in tables A.110, A.111, A.112, A.113 and A.114.

Table A.110: LLC basic link PDUs for acknowledged service

Item	PDU	Reception			Transmission		
		Reference	Status	Support	Reference	Status	Support
1	BL-ACK without FCS	21.2.2.1	m		21.2.2.1	m	
2	BL-ADATA without FCS	21.2.2.2	m		21.2.2.2	m	
3	BL-DATA without FCS	21.2.2.3	m		21.2.2.3	m	
4	BL-ACK with FCS	21.2.2.1	m (NOTE)		21.2.2.1	c11001	
5	BL-ADATA with FCS	21.2.2.2	m (NOTE)		21.2.2.2	c11001	
6	BL-DATA with FCS	21.2.2.3	m (NOTE)		21.2.2.3	c11001	

c11001:IF A.106/4 -- If FCS calculation supported in BL acknowledged service then mandatory
THEN m
ELSE n/a

NOTE: It is not mandatory for an implementation to check the FCS of a received PDU, but it shall be capable of receiving and decoding PDUs containing an FCS field.

Table A.111: LLC basic link PDUs for unacknowledged service

Item	PDU	Reception			Transmission		
		Reference	Status	Support	Reference	Status	Support
1	BL-UDATA without FCS	21.2.2.4	m		21.2.2.4	m	
2	BL-UDATA with FCS	21.2.2.4	m (NOTE)		21.2.2.4	c11101	

c11101:IF A.107/4 -- If FCS calculation supported in BL unacknowledged service then mandatory
THEN m
ELSE n/a

NOTE: It is not mandatory for an implementation to check the FCS of a received PDU, but it shall be capable of receiving and decoding PDUs containing an FCS field.

Table A.112: LLC advanced link connection handling PDUs

Item	PDU	Reception			Transmission		
		Reference	Status	Support	Reference	Status	Support
1	AL-SETUP	21.2.3.5	c11201		21.2.3.5	c11202	
2	AL-DISC	21.2.3.4	c11203		21.2.3.4	c11204	

c11201:IF (A.108/1 OR A.109/1) -- If acknowledged AL with connection setup or
THEN m -- unacknowledged AL with connection setup required
ELSE n/a -- then mandatory

c11202:IF A.108/1 -- If acknowledged AL with
THEN m -- connection setup then mandatory
ELSE n/a

c11203:IF (A.108/12 OR A.109/9) -- If acknowledged AL or unacknowledged AL
 THEN m -- with disconnection required then mandatory
 ELSE n/a

c11204:IF A.108/12 -- If acknowledged AL with disconnection
 THEN m -- then mandatory
 ELSE n/a

Table A.113: LLC acknowledged advanced link PDUs

Prerequisite: A.105/3 -- AL acknowledged service							
Item	PDU	Reception			Transmission		
		Reference	Status	Support	Reference	Status	Support
1	AL-DATA	21.2.3.3	m		21.2.3.3	m	
2	AL-DATA-AR	21.2.3.3	m		21.2.3.3	m	
3	AL-FINAL	21.2.3.2	m		21.2.3.2	m	
4	AL-FINAL-AR	21.2.3.2	m		21.2.3.2	m	
5	AL-ACK	21.2.3.1	m		21.2.3.1	m	
6	AL-RNR	21.2.3.1	m		21.2.3.1	m	

Table A.114: LLC unacknowledged advanced link PDUs

Prerequisite: 105/4 -- AL unacknowledged service							
Item	PDU	Reception			Transmission		
		Reference	Status	Support	Reference	Status	Support
1	AL-UDATA	21.2.3.6	m			n/a	
2	AL-UFINAL	21.2.3.7	m			n/a	

A.9.4 LLC PDU elements

The supplier of the implementation shall state the support of the implementation for each of the LLC PDU elements presented in tables from A.115 to A.132.

Table A.115: Elements for BL-ACK without FCS

Prerequisite: A.110/1				
Item	Element	Reference	Status	Support
1	All elements	21.2.2.1	m	

Table A.116: Elements for BL-ADATA without FCS

Prerequisite: A.110/2				
Item	Element	Reference	Status	Support
1	All elements	21.2.2.2	m	

Table A.117: Elements for BL-DATA without FCS

Prerequisite: A.110/3				
Item	Element	Reference	Status	Support
1	All elements	21.2.2.3	m	

Table A.118: Elements for BL-ACK with FCS

Prerequisite: A.110/4				
Item	Element	Reference	Status	Support
1	All elements	21.2.2.1	m	

Table A.119: Elements for BL-ADATA with FCS

Prerequisite: A.110/5				
Item	Element	Reference	Status	Support
1	All elements	21.2.2.2	m	

Table A.120: Elements for BL-DATA with FCS

Prerequisite: A.110/6				
Item	Element	Reference	Status	Support
1	All elements	21.2.2.3	m	

Table A.121: Elements for BL-UDATA without FCS

Prerequisite: A.111/1				
Item	Element	Reference	Status	Support
1	All elements	21.2.2.4	m	

Table A.122: Elements for BL-UDATA with FCS

Prerequisite: A.111/2				
Item	Element	Reference	Status	Support
1	All elements	21.2.2.4	m	

Table A.123: AL-SETUP elements

Prerequisite: A.112/1				
Item	Element	Reference	Status	Support
1	All elements	21.2.3.5	m	

Table A.124: AL-DISC elements

Prerequisite: A.112/2				
Item	Element	Reference	Status	Support
1	All elements	21.2.3.4	m	

Table A.125: AL-DATA elements

Prerequisite: A.113/1				
Item	Element	Reference	Status	Support
1	All elements	21.2.3.3	m	

Table A.126: AL-DATA-AR elements

Prerequisite: A.113/2				
Item	Element	Reference	Status	Support
1	All elements	21.2.3.3	m	

Table A.127: AL-FINAL elements

Prerequisite: A.113/3				
Item	Element	Reference	Status	Support
1	All elements	21.2.3.2	m	

Table A.128: AL-FINAL-AR elements

Prerequisite: A.113/4				
Item	Element	Reference	Status	Support
1	All elements	21.2.3.2	m	

Table A.129: AL-ACK elements

Prerequisite: A.113/5				
Item	Element	Reference	Status	Support
1	LLC PDU type	21.2.3.1	m	
2	Flow control	21.2.3.1	m	
3	First acknowledgement block	21.2.3.1	m	
4	Other acknowledgement blocks	21.2.3.1	c12901	

c12901:IF (A.134/6 > 1) -- If maximum window size for AL acknowledged
THEN m -- service, N.272, is greater than 1 then mandatory
ELSE n/a

Table A.130: AL-RNR elements

Prerequisite: A.113/6				
Item	Element	Reference	Status	Support
1	LLC PDU type	21.2.3.1	m	
2	Flow control	21.2.3.1	m	
3	First acknowledgement block	21.2.3.1	m	
4	Other acknowledgement blocks	21.2.3.1	c13001	

c13001:IF (A.134/6 > 1) -- If maximum window size for AL acknowledged
THEN m -- service, N.272, is greater than 1 then mandatory
ELSE n/a

Table A.131: AL-UDATA elements

Prerequisite: A.114/1				
Item	Element	Reference	Status	Support
1	All elements	21.2.3.6	m	

Table A.132: AL-UFINAL elements

Prerequisite: A.114/2				
Item	Element	Reference	Status	Support
1	All elements	21.2.3.7	m	

A.9.5 LLC constants

The supplier of the implementation shall state the support of the implementation for each of the LLC constants presented in tables A.133 and A.134.

Table A.133: LLC constants for basic link

Item	Constant	Reference	Status	Support	Values	
					Allowed	Supported
1	N.251	A.2	m		1 .. 2595 bits (NOTE 1)	
2	N.252	A.2	m		1 .. 5, 3 .. 5 (NOTE 2)	
3	N.253	A.2	c13301		1 .. 5	

c13301: IF A.107/2
THEN m
ELSE n/a -- If unacknowledged BL data transmission then mandatory

NOTE 1: This is the value including the optional FCS. If FCS is not used, value may be larger by 32 bits.

NOTE 2: The first range applies, when stealing repeats are used for the PDU being transmitted. The second range applies when not.

Table A.134: LLC constants for advanced link

Item	Constant	Reference	Status	Support	Values	
					Allowed	Supported
1	N.261	A.2	c13401		1 .. 4	
2	N.262	A.2	c13402		1 .. 5	
3	N.263	A.2	c13403		3 .. 5	
4	N.264	A.2	c13401		1 .. 4	
5	N.271	A.2	c13401		32, 64, 128, 256, 512, 1024, 2048, 4096 -- octets	
6	N.272	A.2	c13404		1 .. 3	
7	N.273	A.2	c13401		0 .. 7	
8	N.274	A.2	c13401		0 .. 15	
9	N.281	A.2	c13405		1 .. 3	
10	N.282	A.2	c13405		0 .. 7	

c13401: IF (A.105/3 OR A.105/4)
THEN m
ELSE n/a -- If acknowledged or unacknowledged AL
-- then mandatory

c13402: IF A.108/1
THEN m
ELSE n/a -- If acknowledged AL with connection setup
-- then mandatory

A.10 Medium Access Control (MAC)

A.10.1 MAC features

The supplier of the implementation shall state the support of the implementation for each of the MAC features presented in table A.137.

Table A.137: MAC features

Item	MAC feature	Reference	Status	Support
1	Control channel usage procedures	23.3	m	
2	General MAC procedures	23.4	m	
3	PDU transfer for signalling messages procedures	23.5	m	
4	PDU transfer for broadcast messages procedures	23.6	m	
5	Layer management communication procedures	23.7	m	
6	PDU transfer for traffic procedures	23.8	m	
7	Minimum mode procedures	23.3.3	o	
8	Air Interface encryption	19.4.7	o	
9	Concurrent services	23.1.2.5	o	

A.10.2 MAC procedures

The supplier of the implementation shall state the support of the implementation for each of the MAC procedures presented in tables A.138 to A.143.

Table A.138: MAC control channel usage procedures

Prerequisite: A.137/1				
Item	Control channel usage procedures	Reference	Status	Support
1	Receive and decode messages on the downlink MCCH	23.3.1.1	m	
2	Common secondary control channel	23.3.1.2.1	o	
3	Assigned secondary control channel	23.3.1.2.2	o	
4	Associated control channel	23.3.1.3	m	
5	Discontinuous transmission procedure	23.3.2	o	
6	Recognition of the beginning of minimum mode	23.3.3.1	m	
7	Recognition of the end of minimum mode	23.3.3.5	m	

Table A.139: General MAC procedures

Prerequisite: A.137/2				
Item	General MAC procedures	Reference	Status	Support
1	Decode address in downlink message procedure	23.4.1.2.1	m	
2	Encode address in uplink message procedure	23.4.1.2.2	m	
3	Handle event label reception procedure	23.4.1.2.3	m	
4	Handle event label transmission procedure	23.4.1.2.3	o	
5	Usage of SMI procedure	23.4.1.2.4	o	
6	Usage of USSI procedure	23.4.1.2.5	c13901	
7	Fragmentation procedure	23.4.2.1.2	m	
8	Fill bit addition procedure	23.4.2.2	m	
9	PDU association procedure	23.4.2.3	o	
10	Reconstruction of downlink TM-SDU procedure	23.4.3.1.1	m	
11	Fill bit deletion procedure	23.4.3.2	m	
12	PDU dissociation procedure	23.4.3.3	m	
13	PDU error detection procedure	23.4.3.4	m	
14	MS open power control procedure	23.4.4.2	m	
15	MS closed power control procedure	23.4.4.3	o	
16	MS linearisation procedure using CLCH sub-slot	23.4.5	o	
17	Handling of monitoring pattern	9.6	m	

c13901:IF (A.58/2 OR A.58/4) -- If MLE initiated migration registration supported then mandatory
THEN m
ELSE n/a

Table A.140: MAC PDU transfer for signalling messages procedures

Prerequisite: A.137/3				
Item	PDU transfer for signalling messages procedures	Reference	Status	Support
1	Access code A	23.5.1.2	m	
2	Access code B	23.5.1.2	o	
3	Access code C	23.5.1.2	o	
4	Access code D	23.5.1.2	o	
5	Initiating random access procedure	23.5.1.4.3	m	
6	Checking for appropriate access code procedure	23.5.1.4.4	m	
7	First try procedure	23.5.1.4.5	m	
8	Retry procedure	23.5.1.4.8	m	
9	Reservation requirement procedure	23.5.2.1	m	
10	Slot granting procedure	23.5.2.2	m	
11	Cancel request procedure	23.5.3	m	
12	Replace current channel with specified channel	23.5.4.2	m	
13	Additional channel allocation procedure	23.5.4.2	c14001	
14	Quit current channel and go to specified channel	23.5.4.2	m	
15	Replace current channel with specified channel, plus MCCH/SCCH or CSS	23.5.4.2	m	
16	Usage marker assignment procedure	23.5.5	m	
17	Maintenance of assigned channel procedure	23.5.6	m	

c14001:IF A.137/9 -- If concurrent services supported then mandatory
THEN m
ELSE n/a

Table A.141: MAC PDU transfer for broadcast messages procedures

Prerequisite: A.137/4				
Item	PDU transfer for broadcast messages procedures	Reference	Status	Support
1	Broadcast channels procedure	23.6.1	m	
2	Acquiring cell synchronisation procedure	23.6.2	m	
3	Acquiring network information procedure	23.6.3	m	

Table A.142: MAC layer management communication procedures

Prerequisite: A.137/5				
Item	Layer management communication procedures	Reference	Status	Support
1	Path loss calculation parameter C1 procedure	23.7.1.1	m	
2	Path loss calculation parameter C2 procedure	23.7.1.2	m	
3	Serving cell downlink measurement procedure	23.7.3.1	m	
4	Serving cell uplink measurement procedure	23.7.3.2	m	
5	Monitoring procedure	23.7.4	m	
6	Scanning procedure	23.7.5	m	
7	Selection of energy economy mode procedure	23.7.6	o	

Table A.143: MAC PDU transfer for traffic procedures

Prerequisite: A.137/6				
Item	PDU transfer for traffic procedures	Reference	Status	Support
1	Criteria for transmission and reception of traffic procedure	23.8.2	m	
2	Exchange of information at the TMD-SAP procedure	23.8.3	o	
3	Stealing from circuit mode capacity procedure	23.8.4	m	

Table A.144: MAC minimum mode procedures

Prerequisite: A.137/7				
Item	Minimum mode procedures	Reference	Status	Support
1	Decoding during minimum mode	23.3.3.2	m	
2	Decoding during minimum mode in frame 18	23.3.3.3	m	
3	Reconstruction in minimum mode	23.4.3.1.3	m	

A.10.3 MAC PDUs

The supplier of the implementation shall state the support of the implementation for each of the MAC PDUs presented in table A.145.

Table A.145: MAC PDUs

Item	PDU	Reference	Status	Support
1	MAC-ACCESS	21.4.2.1	m	
2	MAC-END-HU	21.4.2.2	m	
3	MAC-DATA	21.4.2.3	m	
4	MAC-FRAG (uplink)	21.4.2.4	m	
5	MAC-END (uplink)	21.4.2.5	m	
6	MAC-RESOURCE	21.4.3.1	m	
7	MAC-FRAG (downlink)	21.4.3.2	m	
8	MAC-END (downlink)	21.4.3.3	m	
9	Broadcast SYSINFO	21.4.4.1	m	
10	Broadcast SYNC	21.4.4.2	m	
11	Broadcast ACCESS-DEFINE	21.4.4.3	m	
12	MAC-U-SIGNAL	21.4.5	m	
13	MAC-TRAFFIC	21.4.6	m	
14	ACCESS-ASSIGN	21.4.7	m	

A.10.4 MAC PDU elements

The supplier of the implementation shall state the support of the implementation for each of the MAC PDU elements presented in tables from A.146 to A.159.

Table A.146: Elements for MAC MAC-ACCESS

Prerequisite: A.145/1				
Item	Element	Reference	Status	Support
1	All elements	21.4.2.1	m	

Table A.147: Elements for MAC MAC-END-HU

Prerequisite: A.145/2				
Item	Element	Reference	Status	Support
1	All elements	21.4.2.2	m	

Table A.148: Elements for MAC MAC-DATA

Prerequisite: A.145/3				
Item	Element	Reference	Status	Support
1	All elements	21.4.2.3	m	

Table A.149: Elements for MAC MAC-FRAG (uplink)

Prerequisite: A.145/4				
Item	Element	Reference	Status	Support
1	All elements	21.4.2.4	m	

Table A.150: Elements for MAC MAC-END (uplink)

Prerequisite: A.145/5				
Item	Element	Reference	Status	Support
1	All elements	21.4.2.5	m	

Table A.151: Elements for MAC MAC-RESOURCE

Prerequisite: A.145/6				
Item	Element	Reference	Status	Support
1	All elements	21.4.3.1	m	

Table A.152: Elements for MAC MAC-FRAG (downlink)

Prerequisite: A.145/7				
Item	Element	Reference	Status	Support
1	All elements	21.4.3.2	m	

Table A.153: Elements for MAC MAC-END (downlink)

Prerequisite: A.145/8				
Item	Element	Reference	Status	Support
1	All elements	21.4.3.3	m	

Table A.154: Elements for MAC SYSINFO

Prerequisite: A.145/9				
Item	Element	Reference	Status	Support
1	All elements	21.4.4.1	m	

Table A.155: Elements for MAC SYNC

Prerequisite: A.145/10				
Item	Element	Reference	Status	Support
1	All elements	21.4.4.2	m	

Table A.156: Elements for MAC ACCESS-DEFINE

Prerequisite: A.145/11				
Item	Element	Reference	Status	Support
1	All elements	21.4.4.3	m	

Table A.157: Elements for MAC MAC-U-SIGNAL

Prerequisite: A.145/12				
Item	Element	Reference	Status	Support
1	All elements	21.4.5	m	

Table A.158: Elements for MAC MAC-TRAFFIC

Prerequisite: A.145/13				
Item	Element	Reference	Status	Support
1	All elements	21.4.6	m	

Table A.159: Elements for MAC ACCESS-ASSIGN

Prerequisite: A.145/14				
Item	Element	Reference	Status	Support
1	All elements	21.4.7	m	

A.10.5 MAC constants

The supplier of the implementation shall state the support of the implementation for each of the MAC constants presented in table A.160.

Table A.160: MAC constants

Item	Constant	Reference	Status	Support	Values	
					Default	Supported
1	N.202	B.2	m		<= 329 -- octets	
2	N.208	B.2	m		3	
3	N.210	B.2	m		4	
4	N.211	B.2	m		3	
5	N.212	B.2	m		3	
6	N.213	B.2	c16001		3	
7	N.214	B.2	m		4	
NOTE: New values can be received when subscribing to a network for all the constants except N.202.						

c16001:IF A.5/6 -- If CMCE duplex call supported then mandatory
THEN m
ELSE n/a

A.10.6 MAC timers

The supplier of the implementation shall state the support of the implementation for each of the MAC timers presented in table A.161.

Table A.161: MAC timers

Item	Timer	Reference	Status	Support	Values	
					Default	Supported
1	T.201, multiframes	B.1	m		30	
2	T.202, downlink signalling frames	B.1	m		9	
3	T.205, multiframes	B.1	m		5..60	
4	T.206, downlink signalling frames	B.1	m		18	
5	T.208, multiframes	B.1	c16101		30	
6	T.209, multiframes	B.1	m		18	
7	T.210, TDMA frames	B.1	c16102		18	
8	T.211 TDMA frames	B.1	m		36	
9	T.212 TDMA frames	B.1	m		18	
10	T.213 TDMA frames	B.1	c16103		18	
11	T.214, opportunities	B.1	o		6	

NOTE: New values can be received when subscribing to a network for all the timers except T.205.

c16101:IF A.138/3 -- If assigned SCCH supported then mandatory
THEN m
ELSE n/a

c16102:IF A.142/7 -- If energy economy mode supported then mandatory
THEN m
ELSE n/a

c16103:IF A.138/5 -- If discontinuous transmission supported then mandatory
THEN m
ELSE n/a

A.11 Connection Oriented Network Protocol (CONP)

The PICS for CONP is defined in ISO 8208 [6] and ISO 8348 [7]. It shall apply if item 6 is supported in table A.1.

A.12 Specific Connectionless Network Protocol (SCLNP)

A.12.1 SCLNP procedures

The supplier of the implementation shall state the support of the implementation for each of the SCLNP procedures presented in table A.162.

Table A.162: Protocol procedures

Prerequisite: A.1/7							
Item	Procedure	Sender			Receiver		
		Reference	Status	Support	Reference	Status	Support
1	DT PDU composition	27.7.1	m			n/a	
2	DT PDU decomposition		n/a		27.7.3	m	
3	DEL PDU decomposition	27.7.4	m			n/a	
4	Forward PDU	27.7.6	m			n/a	
5	Discard PDU		n/a		27.7.7	m	
6	Subaddressing	27.7.9.1	m		27.7.9.1	m	
7	Priority	27.7.9.2	m		27.7.9.2	m	

A.12.2 SCLNP PDUs

The supplier of the implementation shall state the support of the implementation for each of the SCLNP PDUs presented in table A.163.

Table A.163: SCLNP PDUs

Prerequisite: A.1/7							
Item	PDU	Sender			Receiver		
		Reference	Status	Support	Reference	Status	Support
1	S1-DT	27.4.2, 27.4.3	m		-	n/a	n/a
2	S2-DT	-	n/a	n/a	27.4.2, 27.4.3	m	
3	S2-DEL	-	n/a	n/a	27.4.5, 27.4.6	m	

A.12.3 SCLNP PDU elements

The supplier of the implementation shall state the support of the implementation for each of the SCLNP PDU elements presented in tables from A.164 to A.166.

Table A.164: S1-DT elements

Prerequisite: A.1/7				
Item	Element	Reference	Status	Support
1	All elements	27.7.1,27.7.1.4	m	

Table A.165: S2-DT elements

Prerequisite: A.1/7				
Item	Element	Reference	Status	Support
1	All elements	27.4.2, 27.4.3, 27.9	m	

Table A.166: S2-DEL elements

Prerequisite: A.1/7				
Item	Element	Reference	Status	Support
1	All elements	27.4.5, 27.4.6, 27.9	m	

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