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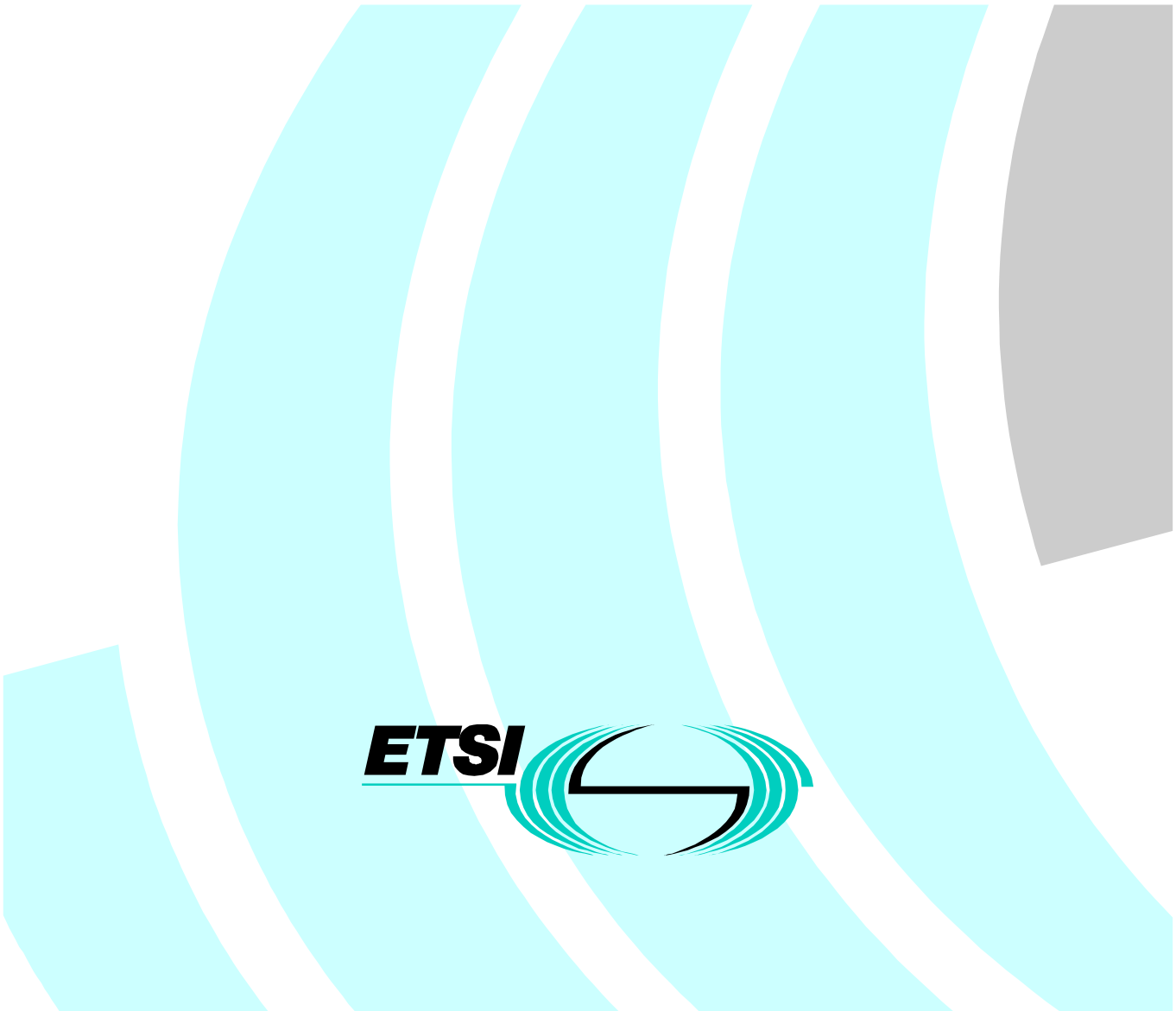
Technical Specification

Terrestrial Trunked Radio (TETRA);
Technical requirements for Direct Mode Operation (DMO);
Part 8: Protocol Implementation Conformance Statement (PICS) proforma specification;
Sub-part 4: Type 2 repeater Air Interface (AI)



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ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

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

Siret N° 348 623 562 00017 - NAF 742 C
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Contents

Intellectual Property Rights 5
Foreword 5
Introduction 5
1 Scope 6
2 References 6
3 Definitions and abbreviations 6
3.1 Definitions 6
3.2 Abbreviations 7
4 Conformance to this PICS proforma specification 7
Annex A (normative): Protocol ICS proforma (PICS) for EN 300 396-4 8
A.1 Guidance for completing the PICS proforma 8
A.1.1 Purposes and structure 8
A.1.2 Abbreviations and conventions 8
A.1.3 Instructions for completing the PICS proforma 10
A.2 Identification of the implementation 10
A.2.1 Date of the statement 10
A.2.2 Implementation Under Test (IUT) identification 10
A.2.3 System Under Test (SUT) identification 11
A.2.4 Product supplier 11
A.2.5 Client (if different from product supplier) 11
A.2.6 PICS contact person 12
A.3 Identification of the Protocol 12
A.4 Global statement of conformance 12
A.5 Roles 13
A.6 Protocols for DM-MS supporting operation with a type 2 DM-REP (MS-REP2) 13
A.6.1 MS-REP2 Direct Mode Call Control (DMCC) at Layer 3 13
A.6.1.1 DMCC major capabilities 13
A.6.1.2 Circuit mode call 14
A.6.1.3 Circuit mode call set-up 14
A.6.1.4 Circuit mode services offered 15
A.6.1.5 Short data services 15
A.6.1.6 Type of short data service 16
A.6.1.7 Data transmission 17
A.6.1.8 SDS user defined data 17
A.6.1.9 DMCC PDUs 18
A.6.1.10 DMCC constants 20
A.6.1.11 DMCC timers 21
A.6.2 MS-REP2 Data link layer (DLL) at Layer 2 22
A.6.2.1 MS-REP2 MAC features 22
A.6.2.2 MS-REP2-MAC procedures 22
A.6.2.3 MS-REP2 MAC PDUs 26
A.6.2.4 MS-REP2 MAC generated messages 27
A.6.2.5 MS-REP2 MAC constants 27
A.6.2.6 MS-REP2 MAC timers 29
A.7 DM-REP type 2 Protocol (DM-REP2) 30
A.7.1 DM-REP2 Data link layer (DLL) at Layer 2 30
A.7.1.1 Major services 30
A.7.1.2 DM-REP2 MAC features 30

A.7.1.3 DM-REP2 MAC procedures 31
A.7.1.4 DM-REP2 MAC PDUs 33
A.7.1.5 DM-REP2 MAC generated messages 33
A.7.1.6 DM-REP2 MAC constants 33
A.7.1.7 DM-REP2 MAC timers 34

A.8 PDU parameters for MS-REP2 and DM-REP2 used in DMCC at layer 3 and DLL at layer 2 35
A.8.1 MS-REP2 PDU parameters for DMCC at layer 3 35
A.8.1.1 DM-SETUP 35
A.8.1.2 DM-SETUP PRES 35
A.8.1.3 DM-CONNECT 36
A.8.1.4 DM-DISCONNECT 36
A.8.1.5 DM-CONNECT ACK 36
A.8.1.6 DM-OCCUPIED 37
A.8.1.7 DM-RELEASE 37
A.8.1.8 DM-TX CEASED 37
A.8.1.9 DM-TX REQUEST 38
A.8.1.10 DM-TX ACCEPT 38
A.8.1.11 DM-PREEMPT 38
A.8.1.12 DM-PRE ACCEPT 38
A.8.1.13 DM-REJECT 38
A.8.1.14 DM-INFO 39
A.8.1.15 DM-SDS UDATA 39
A.8.1.16 DM-SDS DATA 40
A.8.1.17 DM-SDS ACK 40
A.8.2 MS-REP2 and DM-REP2 PDU parameters for DLL at layer 2 41
A.8.2.1 DMAC-SYNC in SCH/S 41
A.8.2.2 DPRES-SYNC PDU 42
A.8.2.3 DMAC-DATA 43
A.8.2.4 DMAC-FRAG 43
A.8.2.5 DMAC-END 43
A.8.2.6 DMAC-U SIGNAL 43
A.8.3 DM-MAC generated message parameters 44
A.8.3.1 DM-RESERVED 44
A.8.3.2 DM-SDS OCCUPIED 44
A.8.3.3 DM-TIMING REQUEST 44
A.8.3.4 DM-TIMING ACK 44

History 45

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Foreword

This Technical Specification (TS) has been produced by ETSI Project Terrestrial Trunked Radio (TETRA).

The present document is part 8 of a multi-part deliverable covering the Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); as identified below:

Part 1: "General network design";

Part 2: "Radio aspects";

Part 3: "Mobile Station to Mobile Station (MS-MS) Air Interface (AI) protocol";

Part 4: "Type 1 repeater air interface";

Part 5: "Gateway air interface";

Part 6: "Security";

Part 7: "Type 2 repeater air interface";

Part 8: "Protocol Implementation Conformance Statement (PICS) proforma specification";

Part 9: "Service and Description Language (SDL) model";

Part 10: "Managed Direct Mode Operation (DMO)".

Introduction

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a telecommunication specification. Such a statement is called an Implementation Conformance Statement (ICS).

1 Scope

The present documet provides the Protocol Implementation Conformance Statement (PICS) proforma for TETRA Direct Mode Operation (DMO) Mobile Stations (MS) connected to Type 2 repeater (MS-REP2) and for TETRA Direct Mode Operation Type 2 repeater (DM-REP2), defined in EN 300 396-7 [1] in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-7 [6] and ETS 300 406 [4].

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.

[1] ETSI EN 300 396-7: "Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 7: Type 2 repeater air interface".

[2] ETSI ETS 300 396-3: "Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 3: Mobile Station to Mobile Station (MS-MS) Air Interface (AI) protocol".

[3] ETSI EN 300 396-8-2: "Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 8: Protocol Implementation Conformance Statement (PICS) proforma specification; Sub-part 2: Type 1 repeater Air Interface (AI)".

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

[5] ISO/IEC 9646-1 (1994): "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 1: General concepts".

[6] ISO/IEC 9646-7 (1995): "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

[7] ETSI EN 300 396-4: "Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 4: Type 1 repeater air interface".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in EN 300 396-4 [7], ISO/IEC 9646-1 [5], ISO/IEC 9646-7 [6] and the following apply.

Implementation Conformance Statement (ICS): 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: document, in the form of a questionnaire, which when completed for an implementation or system becomes an ICS

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

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ICS	Implementation Conformance Statement
IUT	Implementation Under Test
PICS	Protocol Implementation Conformance Statement
SCS	System Conformance Statement
SUT	System Under Test

4 Conformance to this PICS proforma specification

If it claims to conform to the present document, 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 the present document 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 (PICS) for EN 300 396-4

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.

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 EN 300 396-7 [1] may provide information about the implementation in a standardized manner.

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

- guidance for completing the PICS proforma;
- identification of the implementation;
- identification of the Protocol;
- global statement of conformance;
- identification of the roles, MS-REP2 or DM-REP2;
- MS-REP2 layer 3 protocol part;
- MS-REP2 protocol layer 2 part;
- DM-REP2 part.

A.1.2 Abbreviations and conventions

The PICS proforma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [6].

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. parameters, timers, etc.). It implicitly means "is <item description> supported by the implementation?".

Status column

The following notations, defined in ISO/IEC 9646-7 [6], 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 makes reference to EN 300 396-7 [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 [6], 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).

If this PICS proforma is completed in order to describe a multiple-profile support in a system, it is necessary to be able to answer that a capability is supported for one profile and not supported for another. In that case, the supplier shall enter the unique reference to a conditional expression, preceded by "?" (e.g. ?3). This expression shall be given in the space for comments provided at the bottom of the table. It uses predicates defined in the SCS, each of which refers to a single profile and which takes the value TRUE if and only if that profile is to be used.

EXAMPLE: ?3: IF prof1 THEN Y ELSE N

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

NOTE: As stated in ISO/IEC 9646-7 [6], support for a received PDU requires the ability to parse all valid parameters of that PDU. Supporting a PDU while having no ability to parse a valid parameter is non-conformant. Support for a parameter on a PDU means that the semantics of that parameter are supported.

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 a unique reference exists, 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 after a clause or table title indicates that the whole clause or the whole table is not required to be completed if the predicate is FALSE.

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 clause 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 clauses 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 the following standard:

EN 300 396-7 [1**]:** "Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 7: Type 2 repeater air interface".

This proforma covers two layers of the protocol stack, Direct Mode Call Control (DMCC) at layer 3 and Data Link Layer (DLL) at layer 2 for the DM-MS operating with a type 2 repeater (MS-REP2), and one layer only (layer 2) of the type 2 DM-REP protocol (DM-REP2).

Each of these parts is addressed in a different section of the present PICS.

When submitting an implementation for test, the implementer is required to answer the questions of the section(s) of the proforma pertaining to the part(s) of the protocol submitted to the test, i.e. the MS-REP2 section and/or the DM-REP2 section.

A.4 Global statement of conformance

Are all mandatory capabilities of the DM-MS for operation with a type 2 DM-REP implemented? (Yes/No/(n/a))

Are all mandatory capabilities of the type 2 Repeater Layer 2 Protocol implemented? (Yes/No/(n/a))

NOTE: Answering "No" to any of these questions 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. Answering "n/a" to any of these questions indicates that the questions related to that part does not apply.

A.5 Roles

The supplier of the implementation shall state the role of the implementation, in table A.1.

Table A.1: Roles

Item	Role	Reference	Status	Support
1	DM-MS supporting operation with a type 2 DM-REP (MS-REP2)	4.1	o.1	
2	Type 2 Repeater (Layer 2 protocol of a DM-REP2)	4.1	o.1	

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

A.6 Protocols for DM-MS supporting operation with a type 2 DM-REP (MS-REP2)

A.6.1 MS-REP2 Direct Mode Call Control (DMCC) at Layer 3

This clause is derived from clause A.6 of EN 300 396-8-2 [3] which contains the PICS for a DM-MS supporting operation with a type 1 repeater (MS-REP1). On many occasions, references are taken from this document, to be more precise in the description of the conformance requirements.

A.6.1.1 DMCC major capabilities

The supplier of the MS-REP2 implementation shall state the support of the implementation for each of the following protocol services, in table A.2.

Table A.2: DMCC services

Prerequisite: A.1/1 -- MS-REP2				
Item	**Service**	**Reference from [3]**	**Status**	**Support**
1	Circuit mode call	6.2	o.2	
2	Short Data Service (SDS)	6.3	o.2	

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

A.6.1.2 Circuit mode call

The supplier of the implementation shall state the support of the implementation for each of the following circuit mode call protocol features, in table A.3.

Table A.3: Circuit mode protocol features

Prerequisite: A.2/1 -- circuit mode call				
Item	**Protocol features**	**Reference from [3]**	**Status**	**Support**
1	Group address call capability	5.2	o.3	
2	Individual address call capability	5.2	o.3	
3	Initiate call set-up without presence check	6.2.1.1	o	
4	Initiate call set-up with presence check	6.2.2.1	o	
5	Accept call set-up without presence check	6.2.1.2	m	
6	Accept call set-up with presence check	6.2.2.2	o	
7	Master end of call transmission	6.2.4.1	c301	
8	Receive end of call transmission	6.2.4.2	m	
9	Master call termination	6.2.4.1, 6.2.5.1	c301	
10	Receive call termination	6.2.4.2, 6.2.5.2	m	
11	Accept call pre-emption	6.2.4.1, 6.2.5.1	c301	
12	Initiate pre-emption in ongoing call	6.2.4.2	o	
13	Initiate a new call by pre-emption	6.2.6	o	
14	Initiate call change-over	6.2.5.2	o	
15	Accept call change-over	6.2.5.1	c301	
16	Late entry by called party	6.2.3.2	o	
17	Receive TPNI in call set-up	6.2.4.3	m	
18	Suppress TPNI in call set-up	6.2.4.3	o	
19	Receive inter-MNI call	6.2.4.3	m	
20	Initiate inter-MNI call	6.2.4.3	o	

o.3: It is mandatory to support at least one of these items.
c301: IF A.3/3 OR A.3/4 -- If initiation of call set-up with or without presence check supported
THEN m -- then mandatory
ELSE n/a

A.6.1.3 Circuit mode call set-up

The supplier of the implementation shall state the support of the implementation for each of the following circuit mode call set-up procedures, in tables A.4 to A.5.

Table A.4: Circuit mode call set-up procedures - Group call

Prerequisite: A.3/1 AND A.3/3 -- Initiate group call set-up				
Item	**Set-up procedure**	**Reference from [3]**	**Status**	**Support**
1	Group call address	6.2.1.1	m	
2	Call on temporary group address	6.2.1.3	o	

Table A.5: Circuit mode call set-up procedures - Individual call

Prerequisite: A.3/2 -- Individual address call capability				
Item	**set-up procedure**	**Reference from [3]**	**Status**	**Support**
1	Individual call without presence check	6.2.1.1	c501	
2	Individual call with presence check	6.2.2.1	c502	

c501: IF A.3/3 THEN o ELSE n/a -- If initiate call set-up without presence check then optional
c502: IF A.3/4 THEN m ELSE n/a -- If initiate call set-up with presence check then mandatory

A.6.1.4 Circuit mode services offered

The supplier of the implementation shall state the support of the implementation for each of the following circuit mode services, in table A.6

Table A.6: Circuit mode services offered

Prerequisite: A.2/1 -- circuit mode call				
Item	**Circuit mode service**	**Reference from [3]**	**Status**	**Support**
1	Circuit mode speech:	5.4	o.4	
2	Circuit mode data unprotected: 7.2	5.4	o.4	
3	Circuit mode data low protection: 4.8, N=1	5.4	o.4	
4	Circuit mode data low protection: 4.8, N=4	5.4	o.4	
5	Circuit mode data low protection: 4.8, N=8	5.4	o.4	
6	Circuit mode data high protection: 2.4, N=1	5.4	o.4	
7	Circuit mode data high protection: 2.4, N=4	5.4	o.4	
8	Circuit mode data high protection: 2.4, N=8	5.4	o.4	
9	Clear mode transmission	5.2	o.5	
10	End to end encrypted transmission	5.2	o.5	
11	Normal priority call	5.4	m	
12	High priority call	5.4	o	
13	Pre-emptive priority call	5.4	o	
14	Emergency pre-emptive priority call	5.4	o	
15	Recent user priority service	5.4	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.

A.6.1.5 Short data services

The supplier of the implementation shall state the support of the implementation for each of the following short data services, in table A.7.

Table A.7: Short Data Services

Prerequisite: A.2/2 -- Short Data Services				
Item	**Short data service**	**Reference from [3]**	**Status**	**Support**
1	Send data (note 1)	6.3.1	o.6	
2	Receive data (note 2)	6.3.2	o.6	
3	Extended error protection (FCS)	6.3.4	m	
NOTE 1: Capability to originate short data transaction as master NOTE 2: Capability to receive short data transaction as slave				

o.6: It is mandatory to support at least one of these items.

A.6.1.6 Type of short data service

The supplier of the implementation shall state the support of the implementation for each of the following types of SDSs, in tables A.8 to A.12.

Table A.8: Type of short data service

Prerequisite: A.2/2 -- Short Data Services				
Item	**Type of short data service**	**Reference from [3]**	**Status**	**Support**
1	Group address SDS capability	6.3	o.7	
2	Individual address SDS capability	6.3	o.7	
3	Pre-defined short data messages	6.3	o.8	
4	User-defined short data messages	6.3	o.8	
5	OTAR (note)	6.3	o.8	
6	Enable/disable (note)	6.3	o.8	
7	Additional addressing (receive)	6.3.3	c801	
8	Additional addressing (send)	6.3.3	c802	
NOTE: The detailed PICS proforma for DMO security is defined in a separate PICS proforma covering security aspects.				

o.7: It is mandatory to support at least one of these items.
o.8: It is mandatory to support at least one of these items.
c801: IF A.7/2 THEN m ELSE n/a -- If receive SDS supported then mandatory
c802: IF A.7/1 THEN o ELSE n/a -- If send SDS supported then optional

Table A.9: Send short data service on group address

Prerequisite: A.7/1 AND A.8/1 -- Group address SDS capability				
Item	**SDS on group address**	**Reference from [3]**	**Status**	**Support**
1	Unacknowledged data service	6.3	m	

Table A.10: Send short data service on individual address

Prerequisite: A.7/1 AND A.8/2 -- Individual address SDS capability				
Item	**SDS on individual address**	**Reference from [3]**	**Status**	**Support**
1	Unacknowledged data service	6.3	o.9	
2	Acknowledged data service	6.3	o.9	
3	Extraction of data if included in ACK	6.3	c1001	

o.9: It is mandatory to support at least one of these items.
c1001: IF A.10/2 -- If the sending of acknowledged short data service supported
THEN m -- then mandatory
ELSE n/a

Table A.11: Receive short data service on group address

Prerequisite: A.7/2 AND A.8/1 -- Group address SDS capability				
Item	**SDS on group address**	**Reference from [3]**	**Status**	**Support**
1	Unacknowledged data service	6.3	m	

Table A.12: Receive short data service on individual address

Prerequisite: A.7/2 AND A.8/2 -- Individual address SDS capability				
Item	**SDS on individual address**	**Reference from [3]**	**Status**	**Support**
1	Unacknowledged data service	6.3	o.10	
2	Acknowledged data service	6.3	o.10	
3	Including data in ACK	6.3	o	

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

A.6.1.7 Data transmission

The supplier of the implementation shall state the support of the implementation for each of the following services for sending data, in table A.13.

Table A.13: Sending data services

Prerequisite: A.7/1 -- Send data using SDS				
Item	**Send data**	**Reference from [3]**	**Status**	**Support**
1	Send short data on a free channel	6.3.1.1	m	
2	Send short data after pre-emption of a circuit mode call (new call)	6.3.1.2	o	
3	Send short data stealing from circuit mode transmission	6.3.1.3	c1301	
4	Send short data after pre-emption of a circuit mode call (ongoing call)	6.3.1.4.1	c1302	
5	Send short data after changeover of a circuit mode call	6.3.1.4.2	c1302	
6	Send short data as master of a circuit mode call	6.3.1.4.3	c1302	

c1301: IF A.3/3 OR A.3/4 -- If initiate CM call set-up supported
THEN o -- then optional
ELSE n/a
c1302: IF A.2/1 -- If CM call supported then optional
THEN o
ELSE n/a

A.6.1.8 SDS user defined data

The supplier of the implementation shall state the support of the implementation for each of the following types of SDSs, in table A.14.

Table A.14: SDS user defined data

Prerequisite: A.8/4 -- User defined short data				
Item	**Circuit mode service**	**Reference from [3]**	**Status**	**Support**
1	User defined data 1 (16 bits)	5.4	o.11	
2	User defined data 2 (32 bits)	5.4	o.11	
3	User defined data 3 (64 bits)	5.4	o.11	
4	User defined data 4 (up to 2047 bits)	5.4	o.11	

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

A.6.1.9 DMCC PDUs

The supplier of the implementation shall state the support of the implementation for each of the following circuit mode and SDS PDUs, in tables A.15 to A.16.

Table A.15: Circuit Mode call and pre-emption PDUs

Item	PDU	Reference	Sending		Receiving	
		from ETS 300 396-3 [2]	Status	Support	Status	Support
1	DM-SETUP	9.5.1	c1501		c1502	
2	DM-SETUP PRES	9.5.2	c1503		c1504	
3	DM-CONNECT	9.5.3	c1504		c1503	
4	DM-DISCONNECT	9.5.4	c1504		c1503	
5	DM-CONNECT ACK	9.5.5	c1503		c1504	
6	DM-OCCUPIED	9.5.6	c1505		c1502	
7	DM-RELEASE	9.5.7	c1505		c1502	
8	DM-TX CEASED	9.5.8	c1505		c1502	
9	DM-TX REQUEST	9.5.9	c1506		c1505	
10	DM-TX ACCEPT	9.5.10	c1505		c1512	
11	DM-PREEMPT	9.5.11	c1507		c1511	
12	DM-PRE ACCEPT	9.5.12	c1511		c1513	
13	DM-REJECT	9.5.13	c1509		c1510	
14	DM-INFO	9.5.14	c1508		c1502	

c1501: IF A.3/1 OR A.5/1 -- If group call or individual call set-up without presence check
THEN m -- supported then mandatory
ELSE n/a

c1502: IF A.2/1 -- If circuit mode call supported
THEN m -- then mandatory
ELSE n/a

c1503: IF A.5/2 -- If individual call set-up with presence check supported
THEN m -- then mandatory
ELSE n/a

c1504: IF A.3/6 -- If accept of call set-up with presence check supported
THEN m -- then mandatory
ELSE n/a

c1505: IF A.3/3 OR A.3/4 -- If initiate call set-up with or without presence check supported
THEN m -- then mandatory
ELSE n/a

c1506: IF A.3/14 OR A.13/5 -- If CM or SDS call changeover supported
THEN m -- then mandatory
ELSE n/a

c1507: IF A.3/10 OR A.3/13 -- If initiation of CM or SDS pre-emption is supported
OR A.13/2 OR A.13/4
THEN m -- then mandatory
ELSE n/a

c1508: IF A.3/18 -- If sending of TPNI can be suppressed then
THEN m -- mandatory else
ELSE o -- optional

c1509: IF A.3/3 OR A.3/4 -- If initiate CM call supported
THEN m -- then mandatory
ELSE IF A.12/2 OR A.12/3 -- If receive acknowledged SDS supported
THEN o -- then optional
ELSE n/a

c1510: IF A.2/1 OR -- If circuit mode call or send acknowledged short data
A.10/2 OR A.10/3 -- supported
THEN m -- then mandatory
ELSE n/a

c1511: IF A.3/3 OR -- If initiation of CM or SDS call
A.3/4 OR A.7/1 -- supported
THEN m -- then mandatory
ELSE n/a
c1512: IF A.2/1 OR A.13/5 -- If circuit mode call or send SDS after changeover supported
THEN m -- then mandatory
ELSE n/a
c1513: IF A.2/1 OR A.13/2 -- If circuit mode call or send SDS after pre-emption supported
OR A.13/4
THEN m -- then mandatory
ELSE n/a

Table A.16: Specific SDS PDUs

Prerequisite: A.2/2 -- Short Data Services						
Item	**PDU**	**Reference from document [2]**	**Sending**		**Receiving**	
			Status	**Support**	**Status**	**Support**
1	DM-SDS UDATA	9.5.15	c1601		c1603	
2	DM-SDS DATA	9.5.16	c1602		c1604	
3	DM-SDS ACK	9.5.17	c1604		c1602	

c1601: IF A.9/1 OR A.10/1 -- If sending of unacknowledged SDS with group or individual address
THEN m -- supported then mandatory
ELSE n/a
c1602: IF A.10/2 OR A.10/3 -- If sending of acknowledged data service with or without data in
THEN m -- ACK supported then mandatory
ELSE n/a
c1603: IF A.11/1 OR A.12/1 -- If receiving of unacknowledged supported
THEN m -- then mandatory
ELSE n/a
c1604: IF A.12/2 OR A.12/3 -- If receiving of acknowledged data service supported
THEN m -- then mandatory
ELSE n/a

A.6.1.10 DMCC constants

The supplier of the implementation shall state the support of the implementation for each of the following DMCC constants, in table A.17.

Table A.17: DMCC constants

Item	Constants	Reference from [3]	Status	Support	Value ranges	
					Allowed	Supported
1	DN303 -- DM-SETUP PRES -- retries	A.2	c1701		1..3	
2	DN314 -- DM-SDS UDATA -- retries	A.2	c1702		1..6	
3	DN315 -- DM-SDS DATA -- retries on -- negative response	A.2	c1703		2..6	
4	DN316 -- DM-SDS DATA -- retries on no -- response	A.2	c1703		1..4	
5	DN304 -- DM-SETUP or DM- -- SETUP PRES -- retries on DM- -- REP2link failure	A.2	c1704		1..3	
6	DN317 -- DM-SDS DATA or -- DM-SDS UDATA -- retries on DM- -- REP2 link failure	A.2	c1705		1..3	

c1701: IF A.5/2 THEN m ELSE n/a -- If call set-up with presence check supported then
-- mandatory
c1702: IF A.9/1 OR A.10/1 -- If unacknowledged SDS supported for
THEN m ELSE n/a -- group or individual address then mandatory
c1703: IF A.10/2 OR A.10/3 -- If acknowledged SDS supported with or without
THEN m ELSE n/a -- data in ACK then mandatory
c1704: IF A.2/3 OR A.2/4 -- If initiate call set-up without presence OR with presence check
THEN m ELSE n/a -- then mandatory
c1705: IF A.6/1 THEN m -- If Send Data then mandatory
ELSE n/a

A.6.1.11 DMCC timers

The supplier of the implementation shall state the support of the implementation for each of the following DMCC timers, in table A.18.

Table A.18: DMCC timers

Item	Timer	Reference from [3]	Status	Support	Values	
					Default	Supported
1	DT303 -- Wait DM- -- SETUP -- PRES -- response	A.1	c1801		250 -- mSec	
2	DT307 -- Wait DM- -- CONNECT -- ACK	A.1	c1802		350 -- mSec	
3	DT311 -- Call -- transaction -- time	A.1	c1803		300 -- Sec	
4	DT314 -- SDS failure -- timer	A.1	c1804		500 -- mSec	
5	DT316 -- Wait DM- -- SDS DATA -- response	A.1	c1805		400 -- mSec	

c1801: IF A.3/4 -- If initiation of call set-up with presence check supported
THEN m -- then mandatory
ELSE n/a

c1802: IF A.3/6 -- If accept call set-up with presence check supported
THEN m -- then mandatory
ELSE n/a

c1803: IF A.3/3 OR A.3/4 -- If initiate CM call set-up supported
THEN m -- then mandatory
ELSE n/a

c1804: IF A.7/1 -- If SDS send data supported
THEN m -- then mandatory
ELSE n/a

c1805: IF A.10/2 OR A.10/3 -- If acknowledged SDS supported with or without
THEN m -- data in ACK. then mandatory
ELSE n/a

A.6.2 MS-REP2 Data link layer (DLL) at Layer 2

A.6.2.1 MS-REP2 MAC features

The supplier of the implementation shall state the support of the implementation for each of the following MS-REP2 MAC features, in table A.19.

Table A.19: MS-REP2 MAC features

Prerequisite: A.1/1 – MS-REP2				
Item	**Feature**	**Reference from [3]**	**Status**	**Support**
1	Scrambling mechanism	8.2.4	m	
2	PDU error detection	8.2.5	m	
3	Stealing mechanism	8.2.6.2.2	c1901	
4	MS-REP2 channel usage procedures	8.4	m	
5	Signalling messages procedures	8.5	m	
6	Traffic mode procedures	8.6	c1902	

c1901: IF A.3/3 OR A.3/4 -- If initiation of call set-up with or without presence check
THEN m -- supported then mandatory
ELSE o -- else optional
c1902: IF A.2/1 -- If circuit mode call supported
THEN m -- then mandatory
ELSE n/a

A.6.2.2 MS-REP2-MAC procedures

The supplier of the implementation shall state the support of the implementation for each of the following MAC procedures, in tables A.20 to A.26.

Table A.20: MS-REP2 channel usage procedures

Item	**MS-REP2 channel procedure**	**Reference**	**Status**	**Support**
1	MS-REP2 channel arrangement	8.4.1.1	m	
2	MS-REP2 channel A operation	8.4.1.2	m	
3	MS-REP2 channel B operation	8.4.1.3	m	
4	Determination of MS-REP2 channel state	8.4.2	m	
5	Slave MS-REP2 channel surveillance procedure during a call	8.4.2.4	m	
6	Master MS-REP2 channel surveillance during a call	8.4.2.3	c2001	
7	MS-REP2 channel monitoring procedures	8.4.4	m	
8	Transmission of layer 3 messages procedures	8.4.5	c2003	
9	Transmission of layer 2 messages procedures	8.4.6	c2003	
10	MS-REP2 dual watch	8.4.7.10, 8.3.1	o	
11	Air interface encryption	8.4.7.11	o	
12	MS-REP2 channel A and channel B operation	8.4.7.12	m	
13	Short data within circuit mode	8.4.7.13	c2007	
14	SDS time remaining	8.4.7.14	c2004	
15	Timing change procedure	8.4.7.15	x	
16	Timing change at changeover or pre-emption for requesting MS-REP2	8.4.7.16	x	

c2001: IF A.3/3 OR A.3/4 OR A.7/1 -- If CM call initiate or SDS send supported
THEN m -- then mandatory
ELSE n/a

c2003: IF (A.3/3 OR A.3/4 OR A.3/6) -- If CM call initiate or accept call with presence check
OR A.7/1 OR A.12/2 -- or SDS send or receive acknowledged short data
OR A.12/3 -- supported
THEN m -- then mandatory
ELSE n/a
c2004: IF A.7/1 -- If send SDS supported
THEN m -- then mandatory
ELSE n/a
c2007: IF A.7/1 -- If send SDS supported
THEN o -- then optional
ELSE n/a

Table A.21: MS-REP2 channel monitoring procedures

Item	MS-REP2 monitoring procedures	Reference	Status	Support
1	MS-REP2 channel monitoring during call set-up	8.4.4.1	c2103	
2	MS-REP2 channel monitoring during new call transaction	8.4.4.1	c2103	
3	MS-REP2 channel monitoring during call set-up with presence check	8.4.4.2	c2101	
4	MS-REP2 channel monitoring in occupation during circuit mode call as slave	8.4.4.3	c2104	
5	MS-REP2 channel monitoring in occupation during circuit mode call as master	8.4.4.3	c2103	
6	MS-REP2 channel monitoring in reservation during circuit mode call as slave	8.4.4.4	c2104	
7	MS-REP2 channel monitoring in reservation during circuit mode call as master	8.4.4.4	c2103	
8	MS-REP2 channel monitoring in occupation during SDS call	8.4.4.5	c2105	
9	MS-REP2 channel usage monitoring during pre-emption signalling	8.4.4.6	c2106	
10	Monitoring MS-REP2 channel usage during timing change request signalling	8.4.4.7	x	

c2101: IF A.5/2 -- If call set-up with presence check supported then
THEN m -- mandatory
ELSE n/a
c2102: IF A.3/6 -- If accept call set-up with presence check supported
THEN m -- then mandatory
ELSE n/a
c2103: IF A.3/3 OR A.3/4 -- If initiate circuit mode call set-up supported
THEN m -- then mandatory
ELSE n/a
c2104: IF A.2/1 -- if CM call supported
THEN m -- then mandatory
ELSE n/a
c2105: IF A.7/1 -- If send data using SDS supported
THEN m -- then mandatory
ELSE n/a
c2106: IF A.3/10 OR A.3/13 -- If Initiate pre-emption in ongoing call or new call
THEN m -- supported then mandatory
ELSE n/a

Table A.22: MS-REP2 MAC signalling messages

Item	Signalling messages procedure	Reference	Status	Support
1	Addressing in synchronization burst	8.5.2.1.1	c2201	
2	Addressing in normal burst	8.5.2.1.2	c2201	
3	Air Interface encryption	8.5.3	c2202	
4	Reception of message	8.5.2.2	m	
5	Fragmentation started by DMAC-SYNC PDU	8.5.4.1	c2203	
6	Reconstruction started by DMAC-SYNC PDU	8.5.4.2	c2204	
7	Fill bit addition	8.5.5.1	c2201	
8	Fill bit deletion	8.5.5.2	m	
9	Null PDU flag use	8.5.5.3	o	
10	Null PDU flag recognition	8.5.5.3	m	
11	Transmission of message by layer 2 unacknowledged service	8.5.6.1	c2201	

c2201: IF A.3/3 OR A.3/4 OR A.3/6 -- If CM call initiate or accept call with presence check
OR A.7/1 OR A.12/2 -- or SDS send or receive acknowledged short data
OR A.12/3 -- supported
THEN m -- then mandatory
ELSE n/a
c2202: IF A.8/5 THEN m ELSE n/a -- If OTAR supported then mandatory
c2203: IF A.7/1 OR A.12/3 -- If sending short data service or including short data in ACK
THEN o -- supported then optional
ELSE n/a
c2204: IF A.7/2 OR A.10/3 -- If receiving short data or extraction of data in ACK
THEN m -- supported then mandatory
ELSE n/a

Table A.23: MS-REP2 MAC reception of messages by layer 2 unacknowledged service

Item	Use of frame countdown element in received message	Reference	Status	Support
1	Suppression of duplicate messages	8.5.6.2	m	
2	Delaying switch into traffic mode	8.5.6.2	c2301	
3	Timing of set-up signalling for pre-emption or changeover	8.5.6.2	c2302	
4	Timing of immediate SDS retransmission	8.5.6.2	c2303	
5	Timing of response to message from master	8.5.6.2	c2304	
6	Timing of response to fragmented message from master	8.5.6.2	c2305	
7	Timing of DM-CONNECT ACK	8.5.6.2	c2306	

c2301: IF A.2/1 THEN m ELSE n/a -- If circuit mode call supported then mandatory
c2302: IF A.3/10 OR A.3/11 OR A.3/13 OR -- If CM or SDS pre-emption in ongoing or new
A.13/2 OR A.13/4 OR A.13/5 -- call or changeover supported
THEN m -- then mandatory
ELSE n/a
c2303: IF A.10/2 OR A.10/3 -- If sending acknowledged SDS data service with or
THEN m -- without data in ACK supported then mandatory
ELSE n/a
c2304: IF A.3/6 OR A.12/2 OR A.12/3 -- If accept call set-up with presence check and
THEN m -- receive acknowledge SDS then mandatory
ELSE n/a
c2305: IF A.22/5 AND (A.12/2 OR A.12/3) -- If reconstruction and SDS acknowledged
THEN m -- data service with or without data in ACK
ELSE n/a -- supported then mandatory

c2306: IF A.5/2 THEN m ELSE n/a -- If call set-up with presence check supported
-- then mandatory

Table A.24: MS-REP2 MAC random access master MS procedures

Item	Procedure	Reference	Status	Support
1	Indication of frames available for request	8.5.7.2.1	c2401	
2	Monitoring frames available for requests	8.5.7.2.2	c2402	
3	Response to pre-emption or changeover request	8.5.7.2.3	c2402	
4	Response to timing change request	8.5.7.2.4	x	

c2401: IF A.3/3 OR A.3/4 -- If CM initiate call set-up supported
THEN m -- then mandatory
ELSE n/a
c2402: IF (A.3/3 OR A.3/4) OR A.7/1 -- If CM initiate call set-up or SDS data send supported
THEN m -- then mandatory
ELSE n/a

Table A.25: MS-REP2 MAC random access requesting MS procedures

Item	Procedure	Reference	Status	Support
1	Preparation for random access	8.5.7.3.1	c2501	
2	First transmission of request	8.5.7.3.2	c2501	
3	Valid access slots	8.5.7.3.3	c2501	
4	Wait for response	8.5.7.3.4	c2501	
5	Subsequent transmission of request	8.5.7.3.5	c2501	
6	Abandon random access attempt	8.5.7.3.6	c2501	

c2501: IF A.3/3 OR A.3/4 OR A.13/2 OR A.13/4 OR A.13/5 -- If CM initiate call set-up or SDS pre-emption or SDS changeover -- supported
THEN m -- then mandatory
ELSE n/a

Table A.26: MS-REP2 MAC traffic mode procedures

Prerequisite: A.1/1 -- Circuit mode call				
Item	**Feature**	**Reference**	**Status**	**Support**
1	Enter U-plane mode for call set-up without presence check - outgoing call	8.6.3.1.1	c2601	
2	Enter U-plane mode for call set-up without presence check - incoming call	8.6.3.1.2	c2602	
3	Enter U-plane mode for call set-up with presence check - outgoing call	8.6.3.2.1	c2603	
4	Enter U-plane mode for call set-up with presence check - incoming call	8.6.3.2.2	c2604	
5	Leaving U-plane mode - Master MS	8.6.3.4.1	c2605	
6	Leaving U-plane mode - Slave MS	8.6.3.4.2	c2607	
7	Stealing from circuit mode capacity - transmission on STCH	8.6.5.1	c2605	
8	Stealing from circuit mode capacity - reception on STCH	8.6.5.3	c2607	
9	Fragmentation on STCH	8.5.4.1	c2606	
10	Reconstruction on STCH	8.5.4.2	c2607	

c2601: IF A.3/3 -- If call set-up without presence check supported
THEN m -- then mandatory
ELSE n/a
c2602: IF A.3/5 -- If accept call set-up without presence check supported
THEN m -- then mandatory
ELSE n/a
c2603: IF A.5/2 -- If initiate call set-up with presence check supported
THEN m -- then mandatory
ELSE n/a
c2604: IF A.3/6 a -- If accept call set-up with presence check supported
THEN m -- then mandatory
ELSE n/
c2605: IF A.3/3 OR A.3/4 -- If initiate CM call set-up supported
THEN m -- then mandatory
ELSE n/a
c2606: IF A.3/3 OR A.3/4 -- If initiate CM call set-up supported
THEN o -- then optional
ELSE n/a
c2607: IF A.3/5 OR A.3/6 -- If accept call set-up with or without presence check supported
THEN m -- then mandatory
ELSE n/a

A.6.2.3 MS-REP2 MAC PDUs

The supplier of the implementation shall state the support of the implementation for each of the following MAC PDUs, in table A.27.

Table A.27: MS-REP2 MAC PDUs

Item	PDU	Reference	Sending		Receiving	
			Status	Support	Status	Support
1	DMAC-SYNC	10	c2701		m	
2	DPRES-SYNC	10	n/a		o	
3	DMAC-DATA	10	c2701		m	
4	DMAC-FRAG	10	c2702		c2703	
5	DMAC-END	10	c2702		c2703	
6	DMAC-U SIGNAL	10	c2704		c2705	
7	DMAC-TRAFFIC	10	c2704		c2705	

c2701: IF A.3/3 OR A.3/4 OR A.3/6 -- If CM call initiate or accept call with presence check
OR A.7/1 OR A.12/2 -- or SDS send or receive acknowledged short data
OR A.12/3 -- supported
THEN m -- then mandatory
ELSE n/a
c2702: IF A.22/5 OR A.26/9 -- If fragmentation supported
THEN m -- then mandatory
ELSE n/a
c2703: IF A.22/6 OR A.26/10 -- If reconstruction supported
THEN m -- then mandatory
ELSE n/a
c2704: IF A.3/3 OR A.3/4 -- If initiate CM call set-up supported
THEN m -- then mandatory
ELSE n/a
c2705: IF A.2/1 THEN m ELSE n/a -- If circuit mode call supported then mandatory

A.6.2.4 MS-REP2 MAC generated messages

The supplier of the implementation shall state the support of the implementation for each of the following MS-REP2-MAC generated messages, in table A.28.

Table A.28: MS-REP2 MAC generated messages

Item	MAC generated message	Reference	Sending		Receiving	
			Status	Support	Status	Support
1	DM-RESERVED	10	c2801		m	
2	DM-SDS OCCUPIED	10	c2803		m	
3	DM-TIMING REQUEST	10	x		x	
4	DM-TIMING ACK	10	x		x	

c2801: IF A.3/3 OR A.3/4 -- If initiate CM call set-up supported
THEN m -- then mandatory
ELSE n/a
c2803: IF A.7/1 -- If send short data service supported
THEN m -- then mandatory
ELSE n/a

A.6.2.5 MS-REP2 MAC constants

The supplier of the implementation shall state the support of the implementation for each of the following MS-REP2-MAC constants, in tables A.29 and A.30.

Table A.29: MS-REP2 MAC constants

Item	Constant	Reference from [3]	Status	Support	Values	
					Default /Range	Supported
1	DN204 (min)	A.4	c2901		1	
2	DN205 (max)	A.4	c2901		8	
3	DN206 (min)	A.4	c2902		8	
4	DN207 (max)	A.4	c2902		12	
5	DN208	A.4	c2903		2 .. 8	
6	DN209	A.4	c2904		2 .. 8	
7	DN210	A.4	c2905		3	
8	DN212	A.4	c2906		2	
9	DN213	A.4	c2907		8	
10	DN232	A.4	c2903		2/2 .. 4	
11	DN233	A.4	c2906		2/2 .. 4	

c2901: IF A.3/3 OR A.3/4 OR A.7/1 -- If initiate CM call set-up or SDS send data supported
THEN m -- then mandatory
ELSE n/a
c2902: IF A.3/4 OR A.10/2 OR A.10/3 -- If initiate CM call set-up with presence check or send SDS
THEN m -- acknowledged data with or without data in ACK then
ELSE n/a -- mandatory
c2903: IF A.3/3 OR A.3/4 -- If initiate CM call set-up with or without presence check
THEN m -- supported then mandatory
ELSE n/a
c2904: IF A.2/1 OR A.7/2 -- If CM call supported or SDS receive data supported
THEN m -- then mandatory
ELSE n/a
c2905: IF A.3/6 OR A.12/2 OR A.12/3 -- If CM call receive with presence check supported or
THEN m -- receive acknowledged SDS with or without data
ELSE n/a -- in ACK supported then mandatory

c2906: IF A.10/2 OR A.10/3 -- If send SDS data with or without data in ACK supported
THEN m -- then mandatory
ELSE n/a
c2907: IF A.25/6 -- If MAC abandon random access procedure supported
THEN m -- then mandatory
ELSE n/a

Table A.30: MS-REP2 MAC number of frame transmissions

Item	Message type	Reference from [3]	Status	Support	Values	
					Allowed	Supported
1	DM-SETUP (new call set-up)	A.5	c3001		2 .. 4	
2	DM-SETUP (continuation of ongoing call)	A.5	c3001		1 .. 4	
3	DM-SETUP PRES (new call set-up)	A.5	c3002		2 .. 4	
4	DM-SETUP PRES (continuation of ongoing call)	A.5	c3002		1 .. 4	
5	DM-CONNECT	A.5	c3003		1 .. DN210	
6	DM-DISCONNECT	A.5	c3003		1 .. DN210	
7	DM-CONNECT ACK	A.5	c3002		1 .. 4	
8	DM-TX CEASED	A.5	c3004		2 .. 4	
9	DM-RELEASE	A.5	c3004		2 .. 4	
10	DM-TX ACCEPT	A.5	c3004		2 .. 4	
11	DM-PRE ACCEPT	A.5	c3005		2 .. 4	
12	DM-REJECT	A.5	c3006		1 .. 4	
13	DM-TIMING ACK (during occupation)	A.5	c3007		1 .. 4	
14	DM-TIMING ACK (during reservation for rejection)	A.5	c3007		1 .. 4	
15	DM-TIMING ACK (during reservation for acceptance)	A.5	c3007		2 .. 4	
16	DM-SDS DATA (DSB) (new call set-up)	A.5	c3008		2 .. 4	
17	DM-SDS DATA (DSB) (continuation of ongoing call)	A.5	c3008		1 .. 4	
18	DM-SDS UDATA (DSB) (new call set-up)	A.5	c3009		2 .. 4	
19	DM-SDS UDATA (DSB) (continuation of ongoing call)	A.5	c3009		1 .. 4	
20	DM-SDS ACK (fragmentation)	A.5	c3010		1 .. DN210	

c4301: IF A.3/3 -- If initiate CM call without presence check supported
THEN m -- then mandatory
ELSE n/a
c4302: IF A.3/4 -- If initiate CM call with presence check supported
THEN m -- then mandatory
ELSE n/a
c4303: IF A.3/6 -- If accept call set-up with presence check supported
THEN m -- then mandatory
ELSE n/a
c4304: IF A.3/3 OR A.3/4 -- If initiate CM call with or without presence check supported
THEN m -- then mandatory
ELSE n/a
c4305: IF A.3/3 OR A.3/4 OR A.7/1 -- If initiate CM call or send SDS data supported
THEN m -- then mandatory
ELSE n/a
c4306: IF A.3/3 OR A.3/4 -- If initiate CM call supported
THEN m -- then mandatory
ELSE IF A.12/2 OR A.12/3 -- If receive acknowledged SDS supported
THEN o -- then optional
ELSE n/a
c4307: IF A.20/9 -- If timing change procedure supported
THEN m -- then mandatory
ELSE n/a

c4308: IF A.10/2 OR A.10/3 -- If acknowledged data service with or without data in ACK
THEN m -- supported then mandatory
ELSE n/a
c4309: IF A.9/1 OR A.10/1 -- If unacknowledged SDS with group or individual
THEN m -- address supported then mandatory
ELSE n/a
c4310: IF A.12/2 OR A.12/3 -- If receive acknowledged SDS supported
THEN m -- then mandatory
ELSE n/a

A.6.2.6 MS-REP2 MAC timers

The supplier of the implementation shall state the support of the implementation for each of the following MS-REP2-MAC timers, in table A.31.

Table A.31: MS-REP2 MAC timers

Item	Timer	Reference from [3]	Status	Support	Values	
					Default	Supported
1	DT205	A.3	c3101		18 -- frames	
2	DT207	A.3	m		90 -- frames	
3	DT210	A.3	c3102		4 -- frames	
4	DT211	A.3	c3103		3 -- frames	
5	DT212	A.3	o		7 -- frames	
6	DT213	A.3	c3104		5 .. 60 -- multiframes	
7	DT214	A.3	c3105		36 -- frames	
8	DT221	A.3	c3106		90 --frames	
9	DT225	A.3	c3106		90 --frames	

c3101: IF A.3/3 OR A.3/4 OR A.7/1 -- If initiate CM call set-up or SDS send data supported
THEN m -- then mandatory
ELSE n/a
c3102: IF A.10/2 OR A.10/3 -- If acknowledged SDS with or without data in ACK
THEN m -- supported then mandatory
ELSE n/a
c3103: IF A.25/4 -- If random access wait for response supported
THEN m -- then mandatory
ELSE n/a
c3104: IF A.25/6 -- If abandon random access attempt supported
THEN m -- then mandatory
ELSE n/a
c3105: IF A.25/3 -- If valid access slot supported
THEN m -- then mandatory
ELSE n/a
c3106: IF A.112/1 -- If circuit mode call supported
THEN m -- then mandatory
ELSE n/a

A.7 DM-REP type 2 Protocol (DM-REP2)

A.7.1 DM-REP2 Data link layer (DLL) at Layer 2

A.7.1.1 Major services

The supplier of the DM-REP2 implementation shall state the support of the implementation for each of the following protocol services, in table A.32.

Table A.32: Type 1 DM-REP2 services

Prerequisite: A.1/2 – Type1 DM-REP2				
Item	**Service**	**Reference**	**Status**	**Support**
1	Circuit mode call		o.12	
2	Short Data Service (SDS)		o.12	

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

NOTE: A DM-REP2 has no layer 3 protocol, where these options are defined. The consequence is that there is no explicit reference in the specification for the table above.

When one of these options is declared supported, the whole functionality is supposed to be supported. For instance, there are no further options for the support of features inside, like presence check, or acknowledged data, or data fragmentation.

A.7.1.2 DM-REP2 MAC features

The supplier of the implementation shall state the support of the implementation for each of the following **DM-REP2** MAC features, in table A.33

Table A.33: DM-REP2 MAC features

Item	Feature	Reference from [3]	Status	Support
1	Scrambling mechanism	9.2	m	
2	PDU error detection via CRC	9.2	m	
3	Reception/regeneration/retransmission of messages	9.1	m	
4	Reception/retransmission of traffic	9.1	m	
5	Stealing mechanism	9.2	m	
6	DM channel usage procedures	9.4	m	
7	Procedures for retransmission of signalling messages	9.5	m	
8	Traffic mode procedures	9.6	c3301	
9	DM-REP2 full duplex operation (at physical layer)	9.3	m	

c3301: IF A.32 /1 -- If circuit mode call supported
THEN m -- then mandatory
ELSE n/a

A.7.1.3 DM-REP2 MAC procedures

The supplier of the implementation shall state the support of each of the following MAC procedures, in tables A.34 to A.39.

Table A.34: DM-REP2 channel usage procedures

Item	DM-REP2 channel procedure	Reference	Status	Support
1	DM-REP2 channel A+B structure	9.4.1.1	m	
2	DM-REP2 channel synchronization	9.4.1.2	m	
3	Determination of DM-REP2 channel state	9.4.2	m	
4	DM-REP2 channel surveillance procedure when idle on a free channel	9.4.2.2.1	m	
5	DM-REP2 channel surveillance procedure when idle on a busy channel	9.4.2.2.2	m	
6	DM-REP2 channel surveillance procedure when idle at MS call set-up	9.4.2.2.3	m	
7	DM-REP2 channel surveillance procedure when active with one free channel	9.4.2.2.4	m	
8	Criteria for changing DM-REP2 channel state	9.4.3	m	
9	DM-REP2 channel monitoring procedures	9.4.4	m	
10	DM-REP2 presence signal on free carrier	9.4.5.1.1	m	
11	DM-REP2 presence signal when one channel is free	9.4.5.1.2	m	
12	DM-REP2 presence signal on channel in occupation	9.4.5.2	m	
13	DM-REP2 presence signal on channel in reservation	9.4.5.3	m	
14	DM-REP2 linearization	9.4.6	m	

Table A.35: DM-REP2 channel monitoring procedures

Item	MS-REP2 monitoring procedures	Reference	Status	Support
1	DM channel monitoring during call set-up with presence check	9.4.4.1	c3501	
2	DM channel in occupation during circuit mode call	9.4.4.2	c3501	
3	DM channel in reservation during circuit mode call	9.4.4.3	c3501	
4	DM channel in occupation during SDS call	9.4.4.4	c3502	
5	DM channel following pre-emption or changeover acceptance	9.4.4.5	c3501	
6	DM channel following timing change announcement	9.4.4.6	x	

c3501: IF A.32 /1 -- If circuit mode call supported
THEN m -- then mandatory
ELSE n/a

c3502: IF A.32 /2 -- If SDS supported
THEN m -- then mandatory
ELSE n/a

Table A.36: DM-REP2 procedures for retransmission of signalling messages from master MS

Item	Retransmission procedure	Reference	Status	Support
1	Signalling messages received from the master MS-REP2 in a DSB	9.5.1.1	m	
2	Signalling messages received from the master MS-REP2 in a DNB	9.5.1.2	m	
3	Regeneration of additional repetitions on slave link	9.5.1.3	o	

Table A.37: DM-REP2 procedures for retransmission of signalling messages from slave MS

Item	Retransmission procedure	Reference	Status	Support
1	Re-transmission of DMAC-SYNC	9.5.2.1	m	
2	Re-transmission of response msg	9.5.2.2	m	
3	Re-transmission of random access request	9.5.2.3	m	

Table A.38: DM-REP2 signalling mechanisms

Item	Signalling mechanisms	Reference from [3]	Status	Support
1	Frame countdown procedure	9.5.3.1	m	
2	Fill bit addition	9.5.3.2	m	
3	Fill bit deletion	9.5.3.2	m	
4	Null PDU flag use	9.5.3.3	o	
5	Null PDU flag recognition	9.5.3.3	m	
6	Air Interface encryption	9.5.3.4	c3801	
7	Timing change procedure	9.5.3.5	x	
8	Random access procedure	9.5.3.6	m	

c3801: IF security THEN m ELSE n/a -- If security (OTAR) supported then mandatory

Table A.39: DM-REP2 traffic mode procedures

Item	Feature	Reference from [3]	Status	Support
1	Change of U-plane mode for call set-up without presence check	9.6.2.1	c3901	
2	Change of U-plane mode for call set-up with presence check	9.6.2.2	c3901	
3	Change of U-plane mode - end of traffic transmission	9.6.2.3	c3901	
4	Traffic mode: Reception of TCH and STCH on the master link	9.6.3.1	m	
5	Traffic mode: Re-transmission of TCH and STCH on the slave link	9.6.3.2	m	

c3901: IF A.32 /1 -- If circuit mode call supported
THEN m -- then mandatory
ELSE n/a

A.7.1.4 DM-REP2 MAC PDUs

The supplier of the implementation shall state the support of the implementation for each of the following MAC PDUs, in table A.40.

Table A.40: DM-REP2 MAC PDUs

Item	PDU	Reference	Sending		Receiving	
		from [3]	Status	Support	Status	Support
1	DMAC-SYNC	10.1.1	m		m	
2	DPRES-SYNC	10.1.2	o		n/a	
3	DMAC-DATA	10.2	m		m	
4	DMAC-FRAG	10.2	m		m	
5	DMAC-END	10.2	m		m	
6	DMAC-U SIGNAL	10.2	m		m	
7	DMAC-TRAFFIC	10.2	m		m	

A.7.1.5 DM-REP2 MAC generated messages

The supplier of the implementation shall state the support of the implementation for each of the following **DM-REP2** MAC generated messages, in table A.41.

Table A.41: DM-REP2 MAC generated messages

Item	MAC generated message	Reference	Sending		Receiving	
		from [3]	Status	Support	Status	Support
1	DM-RESERVED	10.4	c4101		m	
2	DM-SDS OCCUPIED	10.4	c4102		m	
3	DM-TIMING REQUEST	10.4	x		x	
4	DM-TIMING ACK	10.4	x		x	

c4101: IF A.32 /1 -- If circuit mode call supported
THEN m -- then mandatory
ELSE n/a
c4102: IF A.32 /2 -- If short data service supported
THEN m -- then mandatory
ELSE n/a

A.7.1.6 DM-REP2 MAC constants

The supplier of the implementation shall state the support of the implementation for each of the following **DM-REP2** MAC constants, in tables A.42 and A.43.

Table A.42: DM-REP2 MAC constants

Item	Constant	Reference from [3]	Status	Support	Values	
					Default /Range	Supported
1	DN232	A.7	c4201		2/2-4	
2	DN233	A.7	c4202		2/2-4	
3	DN253	A.7	m		2	
4	DN259	A.7	m		any	

Supported values for DN232 and DN233 must be equal to the ones chosen in the DM MS-REP2. See table A.29 for their definition.

c4201: IF A.32 /1 -- If circuit mode call supported
THEN m -- then mandatory
ELSE n/a

c4202: IF A.32 /2 -- If short data service supported
THEN m -- then mandatory
ELSE n/a

Table A.43: DM-REP2 MAC number of frame transmissions

Item	Message type	Reference from [3]	Status	Support	Values	
					Allowed	Supported
1	DM-SETUP (new call set-up)	A.5	c4301		2 .. 4	
2	DM-SETUP (continuation of ongoing call)	A.5	c4301		1 .. 4	
3	DM-SETUP PRES (new call set-up)	A.5	c4301		2 .. 4	
4	DM-SETUP PRES (continuation of ongoing call)	A.5	c4301		1 .. 4	
5	DM-CONNECT	A.5	c4301		1 .. DN210	
6	DM-DISCONNECT	A.5	c4301		1 .. DN210	
7	DM-CONNECT ACK	A.5	c4301		1 .. 4	
8	DM-TX CEASED	A.5	c4301		2 .. 4	
9	DM-RELEASE	A.5	c4301		2 .. 4	
10	DM-TX ACCEPT	A.5	c4301		2 .. 4	
11	DM-PRE ACCEPT	A.5	c4301		2 .. 4	
12	DM-REJECT	A.5	c4301		1 .. 4	
13	DM-TIMING ACK (during occupation)	A.5	x		1 .. 4	
14	DM-TIMING ACK (during reservation for rejection)	A.5	x		1 .. 4	
15	DM-TIMING ACK (during reservation for acceptance)	A.5	x		2 .. 4	
16	DM-SDS DATA (DSB) (new call set-up)	A.5	c4302		2 .. 4	
17	DM-SDS DATA (DSB) (continuation of ongoing call)	A.5	c4302		1 .. 4	
18	DM-SDS UDATA (DSB) (new call set-up)	A.5	c4302		2 .. 4	
19	DM-SDS UDATA (DSB) (continuation of ongoing call)	A.5	c4302		1 .. 4	
20	DM-SDS ACK (fragmentation)	A.5	c4302		1 .. DN210	

c4301: IF A.32 /1 -- If circuit mode call supported
THEN m -- then mandatory
ELSE n/a
c4302: IF A.32 /2 -- If short data service supported
THEN m -- then mandatory
ELSE n/a

A.7.1.7 DM-REP2 MAC timers

The supplier of the implementation shall state the support of the implementation for each of the following **DM-REP2** MAC timers, in table A.44.

Table A.44: DM-REP2 MAC timers

Item	Timer	Reference from [3]	Status	Support	Values	
					Default	Supported
1	DT250	A.6	c4401		xx -- frames	
2	DT251	A.6	c4402		4 -- frames	
3	DT252	A.6	c4401		9 -- frames	
4	DT253	A.6	m		xx -- frames	
5	DT254	A.6	m		xx -- frames	
6	DT256	A.6	c4401		180 -- frames	
7	DT257	A.6	c4401		xx -- frames	
8	DT258	A.6	c4401		180 --frames	

c4401: IF A.32 /1 -- If circuit mode call supported
THEN m -- then mandatory
ELSE n/a
c4402: IF A.32 /2 -- If short data service supported
THEN m -- then mandatory
ELSE n/a

A.8 PDU parameters for MS-REP2 and DM-REP2 used in DMCC at layer 3 and DLL at layer 2

A.8.1 MS-REP2 PDU parameters for DMCC at layer 3

The supplier of the implementation shall state the support of the implementation for each of the following DMCC PDU elements, in tables A.45 to A.61.

A.8.1.1 DM-SETUP

Table A.45: DM-SETUP PDU contents

Prerequisite: A.2/1 -- Circuit mode call				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	Timing flag	10.6	m	
2	LCH in frame 3 flag	10.6	m	
3	Pre-emption flag	10.6	m	
4	Power class	10.6	m	
5	Power control flag	10.6	m	
6	Reserved	10.5	m	
7	Circuit mode type	10.6	m	
8	Reserved	10.5	m	
9	Priority level	10.6	m	
DM-SDU elements				
10	End-to-end encryption flag	10.7	m	
11	Call type flag	10.7	m	
12	External source flag	10.7	m	
13	Reserved	10.5	m	

A.8.1.2 DM-SETUP PRES

Table A.46: DM-SETUP PRES PDU contents

Prerequisite: A.15/2a OR A.15/2b -- DM-SETUP PRES PDU				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	Reserved	10.5	m	
2	Power class	10.6	m	
3	Power control flag	10.6	m	
4	Reserved	10.5	m	
5	Circuit mode type	10.6	m	
6	Reserved	10.5	m	
7	Priority level	10.6	m	
DM-SDU elements				
8	End-to-end encryption flag	10.7	m	
9	Call type flag	10.7	m	
10	External source flag	10.7	m	
11	Reserved	10.5	m	

A.8.1.3 DM-CONNECT

Table A.47: DM-CONNECT PDU contents

Prerequisite: A.15/3a OR A.15/3b -- DM-CONNECT PDU				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	Circuit mode type	10.6	m	
2	Reserved	10.5	m	
DM-SDU elements				
3	Reserved	10.5	m	

A.8.1.4 DM-DISCONNECT

Table A.48: DM-DISCONNECT PDU contents

Prerequisite: A.15/4a OR A.15/4b -- DM-DISCONNECT PDU				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
DM-SDU elements				
1	Disconnect cause	10.7	m	

A.8.1.5 DM-CONNECT ACK

Table A.49: DM-CONNECT ACK PDU contents

Prerequisite: A.15/5a OR A.15/5b -- DM-CONNECT ACK PDU				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	Timing flag	10.6	m	
2	LCH in frame 3 flag	10.6	m	
3	Pre-emption flag	10.6	m	
4	Power class	10.6	m	
5	Power control flag	10.6	m	
6	Reserved	10.5	m	
7	Circuit mode type	10.6	m	
8	Reserved	10.5	m	
9	Priority level	10.6	m	
DM-SDU elements				
10	End-to-end encryption flag	10.7	m	
11	Call type flag	10.7	m	
12	External source flag	10.7	m	
13	Reserved	10.5	m	

A.8.1.6 DM-OCCUPIED

Table A.50: DM-OCCUPIED PDU contents

Prerequisite: A.2/1 -- Circuit mode call				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	Timing flag	10.6	m	
2	LCH in frame 3 flag	10.6	m	
3	Pre-emption flag	10.6	m	
4	Power class	10.6	m	
5	Power control flag	9.6.9	m	
6	Reserved	10.5	m	
7	Circuit mode type	10.6	m	
8	Reserved	10.5	m	
9	Priority level	10.6	m	
DM-SDU elements				
10	End-to-end encryption flag	10.7	m	
11	Call type flag	10.7	m	
12	External source flag	10.7	m	
13	Reserved	10.5	m	

A.8.1.7 DM-RELEASE

Table A.51: DM-RELEASE PDU contents

Prerequisite: A.2/1 -- Circuit mode call				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
DM-SDU elements				
1	Release cause	10.7	m	

A.8.1.8 DM-TX CEASED

Table A.52: DM-TX CEASED contents

Prerequisite: A.2/1 -- Circuit mode call				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	Reservation time remaining	10.6	m	
2	Timing flag	10.6	m	
3	Requests flag	10.6	m	
4	Changeover requests flag	10.6	m	
5	Requests bitmap	10.6	m	
6	Recent user priority flag	10.6	m	
7	Timing change announced	10.6	m	
8	Timing adjustment	10.6	m	
9	Priority level	10.6	m	
DM-SDU elements				
10	Cease cause	10.7	m	

A.8.1.9 DM-TX REQUEST

Table A.53: DM-TX REQUEST PDU contents

Prerequisite: A.15/9a OR A.15/9b -- DM-TX REQUEST PDU				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	Timing change required	10.6	m	
2	Timing adjustment	10.6	m	
3	Priority level	10.6	m	

A.8.1.10 DM-TX ACCEPT

Table A.54: DM-TX ACCEPT PDU contents

Prerequisite: A.2/1 -- Circuit mode call				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	Timing change announced	10.6	m	
2	Timing adjustment	10.6	m	

A.8.1.11 DM-PREEMPT

Table A.55: DM-PREEMPT PDU contents

Prerequisite: A.15/11a OR A.15/11b -- DM-PREEMPT PDU				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	Perceived channel state	10.6	m	
2	Timing change required	10.6	m	
3	Timing adjustment	10.6	m	
4	New call pre-emption	10.6	m	
5	Type of pre-emption	10.6	m	
6	Priority level	10.6	m	

A.8.1.12 DM-PRE ACCEPT

Table A.56: DM-PRE ACCEPT PDU contents

Prerequisite: A.2/1 -- Circuit mode call				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	Timing change announced	10.6	m	
2	Timing adjustment	10.6	m	
3	New call pre-emption	10.6	m	
4	Type of pre-emption	10.6	m	

A.8.1.13 DM-REJECT

Table A.57: DM-REJECT PDU contents

Prerequisite: A.15/13a OR A.15/13b -- DM-REJECT PDU				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
DM-SDU elements				
1	Reject cause	10.7	m	

A.8.1.14 DM-INFO

Table A.58: DM-INFO PDU contents

Prerequisite: A.2/1 -- Circuit mode call				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
DM-SDU elements				
1	Information type	10.7	m	
2	Calling party TSI	10.7	m	

A.8.1.15 DM-SDS UDATA

Table A.59: DM-SDS UDATA PDU contents

Prerequisite: A.16/1a OR A.16/1b -- DM-SDS UDATA PDU				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	SDS time remaining	10.6	m	
2	SDS transaction type	10.6	m	
3	Priority level	10.6	m	
4	FCS flag	10.6	m	
DM-SDU elements				
5	Additional addressing flag	10.7	m	
6	Additional address type(s)	10.7	o	
7	Calling party TSI	10.7	o	
8	Short Data Type Identifier	10.7	m	
9	User defined data 1	10.7	o	
10	User defined data 2	10.7	o	
11	User defined data 3	10.7	o	
12	Length indicator	10.7	o	
13	User defined data 4	10.7	o	
14	Precoded status	10.7	o	
15	OTAR information	10.5	o	
16	Enable/disable information	10.5	o	
17	FCS	10.7	m	

NOTE: Options depend upon Data Security or Short Data Type Identifier, imposed by MS-REP2. See the definitions of these options for MS_REP in tables A.14 and A.8.

A.8.1.16 DM-SDS DATA

Table A.60: DM-SDS DATA PDU contents

Prerequisite: A.16/2a OR A.16/2b -- DM-SDS DATA PDU				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	SDS time remaining	10.6	m	
2	SDS transaction type	10.6	m	
3	Priority level	10.6	m	
4	FCS flag	10.6	m	
DM-SDU elements				
5	Additional addressing flag	10.7	m	
6	Additional address type(s)	10.7	o	
7	Calling party TSI	10.7	o	
8	Short Data Type Identifier	10.7	m	
9	User defined data 1	10.7	o	
10	User defined data 2	10.7	o	
11	User defined data 3	10.7	o	
12	Length indicator	10.7	o	
13	User defined data 4	10.7	o	
14	Precoded status	10.7	o	
15	OTAR information	10.5	o	
16	Enable/disable information	10.5	o	
17	FCS	10.7	m	

NOTE: Options depend upon Data Security or Short Data Type Identifier, imposed by MS-REP2. See the definitions of these options for MS_REP in tables A.14 and A.8.

A.8.1.17 DM-SDS ACK

Table A.61: DM-SDS ACK PDU contents

Prerequisite: A.16/3a OR A. 16/3b -- DM-SDS ACK PDU				
Item	**Elements**	**Reference from [3]**	**Status**	**Support**
Message dependent elements				
1	FCS flag	10.6	m	
DM-SDU elements				
2	Acknowledgement type	10.7	m	
3	Short Data Type Identifier	10.7	m	
4	User defined data 1	10.7	o	
5	User defined data 2	10.7	o	
6	User defined data 3	10.7	o	
7	Length indicator	10.7	o	
8	User defined data 4	10.7	o	
9	Precoded status	10.7	o	
10	OTAR information	10.5	o	
11	Enable/disable information	10.5	o	
12	FCS	10.7	m	

NOTE: Options depend upon Data Security or Short Data Type Identifier, imposed by MS-REP2. See the definitions of these options for MS_REP in tables A.14 and A.8.

A.8.2 MS-REP2 and DM-REP2 PDU parameters for DLL at layer 2

The supplier of the implementation shall state the support of the implementation for each of the following MAC PDU parameters, in tables A.62 to A.69.

A.8.2.1 DMAC-SYNC in SCH/S

Table A.62: Information elements for DMAC-SYNC PDU in SCH/S

Item	Information element	Reference from [3]	Status	Support
1	System code	10.3	m	
2	SYNC PDU type = 00	10.3	m	
3	Communication type = 01	10.3	m	
4	Master/slave link flag	10.3	m	
5	Reserved	10.1.1	m	
6	Gateway master flag	10.3	n/a	
7	Reserved	10.1.1	m	
8	A/B channel usage = 01 or 10	10.3	m	
9	Slot number	10.3	m	
10	Frame number	10.3	m	
11	AI encryption state	10.3	m	
12	Time Variant Parameter	10.3	o	
13	Timestamp flag	10.3	o	
14	KSG number	10.3	o	
15	Encryption key number	10.3	o	
16	Reserved	10.1.1	m	
NOTE 1: The n/a status is used for elements which do not apply to DMO REP applications. NOTE 2: Options depend upon Encryption, imposed by DM-MS.				

Table A.63: Information elements for DMAC-SYNC PDU in SCH/H

Item	Information element	Reference from [3]	Status	Support
1	Repeater address	10.3	m	
2	Gateway address	10.3	n/a	
3	Reserved	10.1.1	m	
4	Fill bit indication	10.3	m	
5	Fragmentation flag	10.3	m	
6	Number of SCH/F slots	10.3	m	
7	Frame countdown	10.3	m	
8	Destination address type	10.3	m	
9	Destination address	10.3	m	
10	Source address type	10.3	m	
11	Source address	10.3	m	
12	Mobile Network Identity	10.3	m	
13	Message type	10.3	m	
14	Message dependent elements	10.3	m	
15	DM SDU	10.3	m	
NOTE 1: Items 1 and 2 are present only for communication with a repeater or gateway. NOTE 2: The n/a status is used for elements which do not apply to repeater applications.				

A.8.2.2 DPRES-SYNC PDU

Table A.64: Information elements for DPRES-SYNC PDU in SCH/S

Item	Information element	Reference from [3]	Status	Support
1	System code	10.1.2	m	
2	SYNC PDU type = 01	10.1.2	m	
3	Communication type = 01	10.1.2	m	
4	Reserved	10.1.2	m	
5	Two-frequency repeater flag = 1	10.1.2, 10.3.10	m	
6	Repeater operating modes = 01 or10	10.1.2, 10.3.8	m	
7	Spacing of uplink	10.1.2, 10.3.9	m	
8	Reserved	10.1.2	m	
9	Master/slave link flag	10.1.2	m	
10	Channel usage = 00, 01, 10	10.1.2, 10.3.7	m	
11	Slot number	10.1.2	m	
12	Frame number	10.1.2	m	
13	Repeater address	10.1.2	m	
14	Power class	10.1.2	m	
15	Power control flag	10.1.2	m	
16	Channel state	10.1.2, 10.3.6	m	
17	Frame countdown	10.1.2	m	
18	Reserved	10.1.2	m	
19	Priority level	10.1.2	m	
20	Reserved	10.1.2	m	
21	Values of DN232 and DN233	10.1.2, 10.3.14	m	
22	Value of DT254	10.1.2, 10.3.13	m	
23	Reserved	10.1.2	m	

Table A.65: Information elements for DPRES-SYNC PDU in SCH/H

Item	Information element	Reference from [3]	Status	Support
1	Mobile Netw Id (MNI) of DM-REP2	10.1.2, 10.3.11	m	
2	Usage Restriction Type	10.1.2, 10.3.12	m	
3	Addressing for URT = 0010	10.1.2, 10.3.1	m	
4	Addressing for URT = 0011	10.1.2, 10.3.2	m	
5	Addressing for URT = 0100	10.1.2, 10.3.3	m	
6	Addressing for URT = 0101 or 0110 or 0111	10.1.2, 10.3.4	m	
7	Addressing for URT = 1000	10.1.2, 10.3.5	m	
8	Proprietary	10.1.2	m	
9	Reserved	10.1.2	m	
10	Reserved	10.1.2	m	
11	Reserved	10.1.2	m	

A.8.2.3 DMAC-DATA

Table A.66: Information elements for DMAC-DATA PDU

Item	Information element	Reference from [3]	Sending		Receiving	
			Status	Support	Status	Support
1	MAC PDU type	10.3	m		m	
2	Fill bit indication	10.3	m		m	
3	Second half slot stolen flag	10.3	m		m	
4	Fragmentation flag	10.3	m		m	
5	Null PDU flag	10.3	m		m	
6	Frame countdown	10.3	m		m	
7	AI encryption state	10.3	m		m	
8	Destination address type	10.3	m		m	
9	Destination address	10.3	m		m	
10	Source address type	10.3	m		m	
11	Source address	10.3	o		m	
12	Mobile Network Identity	10.3	m		m	
13	Message type	10.3	m		m	
14	Message dependent elements	10.3	m		m	
15	DM-SDU	10.3	m		m	

A.8.2.4 DMAC-FRAG

Table A.67: Information elements for DMAC-FRAG PDU

Item	Information element	Reference from [3]	Status	Support
1	MAC PDU type	10.3	m	
2	MAC PDU subtype	10.3	m	
3	Fill bit indication	10.3	m	
4	DM-SDU	10.3	m	

A.8.2.5 DMAC-END

Table A.68: Information elements for DMAC-END PDU

Item	Information element	Reference from [3]	Status	Support
1	MAC PDU type	10.3	m	
2	MAC PDU subtype	10.3	m	
3	Fill bit indication	10.3	m	
4	DM-SDU	10.3	m	

A.8.2.6 DMAC-U SIGNAL

Table A.69: Information elements for DMAC-U SIGNAL PDU

Item	Information element	Reference from [3]	Status	Support
1	MAC PDU type	10.3	m	
2	Second half slot stolen flag	10.3	m	
3	U-plane DM-SDU	10.3	m	

A.8.3 DM-MAC generated message parameters

The supplier of the implementation shall state the support of the implementation for each of the following DM-MAC generated message parameters, in tables A.70 and A.71.

A.8.3.1 DM-RESERVED

Table A.70: Information elements for DM-RESERVED

Item	Information element	Reference from [3]	Status	Support
1	All elements	10.4	m	

A.8.3.2 DM-SDS OCCUPIED

Table A.71: Information elements for DM-SDS OCCUPIED

Item	Information element	Reference from [3]	Status	Support
1	All elements	10.4	m	

A.8.3.3 DM-TIMING REQUEST

Void

A.8.3.4 DM-TIMING ACK

Void

History

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