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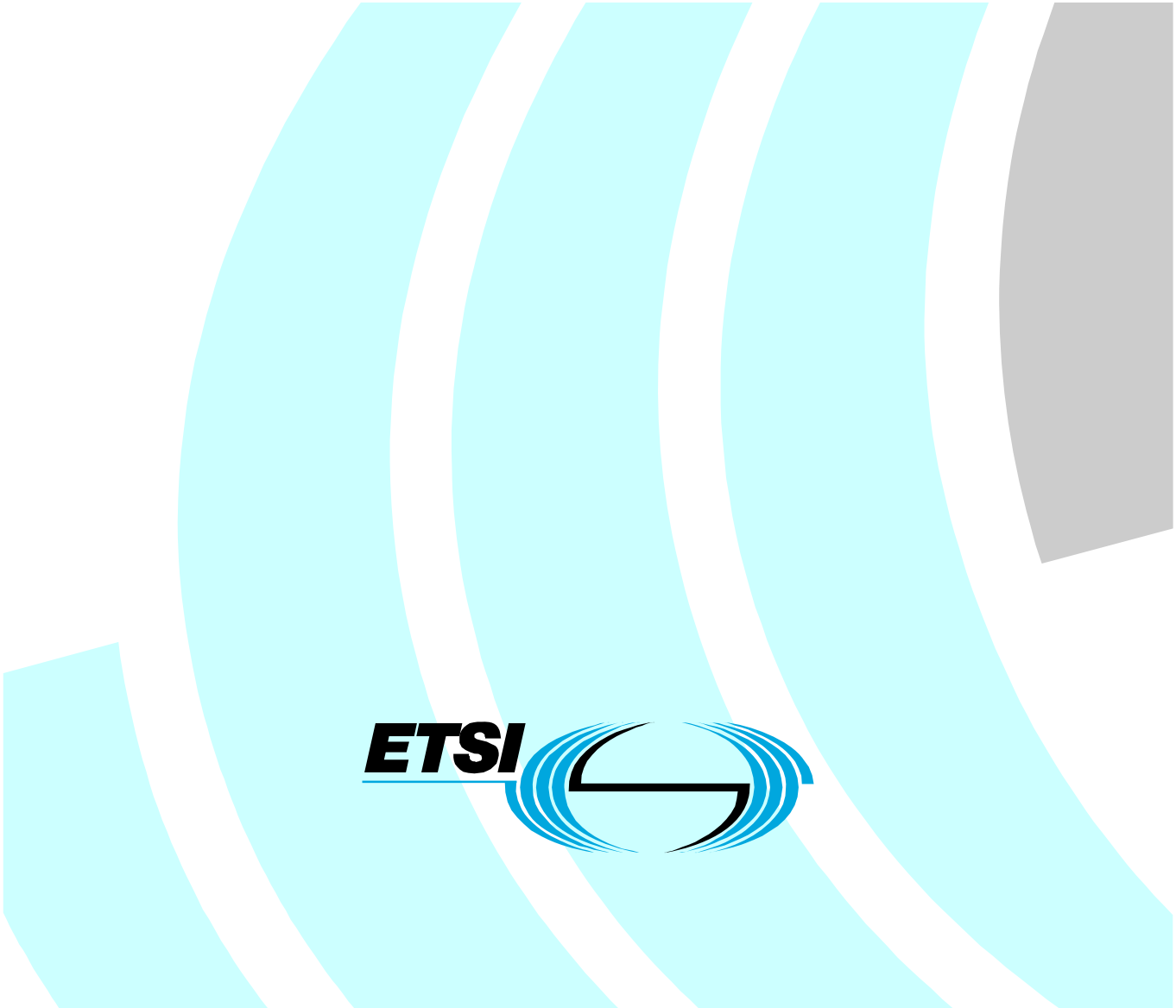
Technical Specification

Intelligent Transport Systems (ITS); Test specifications for Intelligent Transport Systems; Communications Access for Land Mobiles (CALM); Medium Service Access Points (ISO 21218); Part 1: Implementation Conformance Statement (ICS) proforma



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Contents

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Intelligent Transport System (ITS).

The present document is part 1 of a multi-part deliverable covering the test specifications for access layer service access points and related procedures as identified below:

Part 1: "Implementation Conformance Statement (ICS) proforma";

Part 2: "Test Suite Structure and Test Purposes (TSS&TP)";

Part 3: "Abstract Test Suite (ATS) and partial PIXIT proforma".

Introduction

Communications for Intelligent Transport Systems (ITS) is standardized at ISO TC204 WG16 under the name CALM (Communications Access for Land Mobiles). The communications architecture of ITS is specified in ISO 21217 [2]. An implementation view of CALM-compliant ITS stations is the concept of a "CALM Communications Kernel" (CCK) presented in figure 1, which is based on the ITS station reference architecture specified in [2].

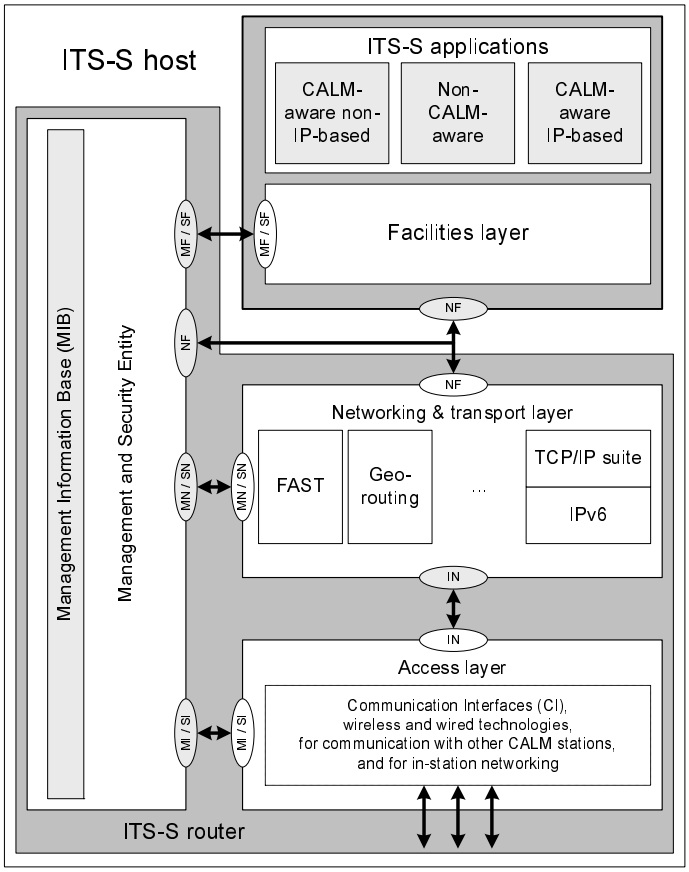

Figure 1: CCK specified in ISO 21217 [2]

The OSI protocol layers are grouped as shown in figure 1:

- The access layer contains OSI layers 1 and 2, providing the MI-interface towards the management entity, the SI-interface towards the security entity and the IN-interface towards the networking & transport layer.
- The networking & transport layer contains OSI layers 3 and 4, providing the MN-interface towards the management entity, the SN-interface towards the security entity, and the NF-interface towards the facilities layer.
- The facilities layer contains OSI layers 5, 6 and 7, providing the MF-interface towards the management entity, the SF-interface towards the security entity and the FA-interface towards the ITS-S applications.

Normally the MI-interface, the MN-interface, the MF-interface, the SI-interface, the SN-interface, the SF-interface, the IN-interface and the NF-interface are described as non-observable and non-testable service access points (SAP).

CALM is designed for a distributed implementation in a station where router boxes and host boxes are interconnected with a local area network (LAN). Each of these boxes (CCK) contains the functionality of the ITS-S router, as a minimum. Management commands are exchanged between these CCKs by means of "Inter-CCK Communications" as specified in ISO 24102 [3]. Such management commands directly may carry service primitives of SAPs to which they are addressed. By this, elements of the service primitives become observable as PDUs and thus testable. Consequently the present document provides also the foundations for testing elements of service primitives, but not the service primitives themselves.

Further on the functionality of "Inter-CCK Communications" is used to enable access of the Tester to the "hidden" SAPs in the SUT as specified in [4].

NOTE: At time of writing the present document, ISO TC204 WG16 was in the process to harmonize terminology in the set of CALM standards. The following list shows the mapping of some new terms to previously used terms:

New term	Previous term
IM-SAP	M-SAP
IN-SAP	C-SAP
NF-SAP	T-SAP
FM-SAP	A-SAP
Facilities layer	service layer
networking & transport layer	CALM Network layer
management entity	IME

This note will be removed in a next version of the present document after ISO revised ISO 21218.

1 Scope

The present document specifies "Implementation Conformance Statement" (ICS) proformas for the access layer service access points MI-SAP and IN-SAP and related procedures as defined in ISO 21218 [1] in accordance with the relevant guidance given in ISO/IEC 9646-1 [5], ISO/IEC 9646-7 [6] and ETS 300 406 [7].

This proforma is intended for use by suppliers of equipment which is claimed to conform to the access layer service access points and procedures as specified in ISO 21218 [1] in combination with a defined CALM-compliant CI. Without a specific CALM-compliant CI, ISO 21218 cannot be tested.

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a specific CALM-compliant CI. Such a statement is called an Implementation Conformance Statement (ICS). The present document provides proforma ICS templates, to be filled in by equipment suppliers.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
  - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
  - for informative references.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

[1] ISO 21218-2008: "Intelligent Transport Systems - Communications access for land mobiles (CALM) - Medium Service Access Points".

[2] ISO/DIS 21217-2009: "Intelligent Transport Systems - Communications access for land mobiles (CALM) - Architecture".

[3] ISO/DIS 24102-2009: "Intelligent Transport Systems - Communications access for land mobiles (CALM) - CALM management".

[4] ETSI TS 102 760-2: "Intelligent Transport Systems (ITS); Test specifications for Intelligent Transport Systems; Communications Access for Land Mobiles (CALM);. Medium Service Access Points (ISO 21218); Part 2: Test Suite Structure and Test Purposes (TSS&TP)".

[5] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concept".

[6] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

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

2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Not applicable.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ISO 21218 [1], ISO 21217 [2], ISO 24102 [3], ISO/IEC 9646-1 [5] and ISO/IEC 9646-7 [6] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ISO 21218 [1], ISO 21217 [2], ISO 24102 [3], ISO/IEC 9646-1 [5] and ISO/IEC 9646-7 [6] apply.

4 Conformance requirement concerning ICS

The actual ICS proforma to be filled in by a supplier shall be technically equivalent to the text of the ICS proforma given in the normative annexes of the present document, and shall preserve the numbering/naming and ordering of the proforma items.

An ICS which conforms to the present document shall be a conforming ICS proforma completed in accordance with the instructions for completion given in annex A.

Annex A (normative): Guidance for completing the ICS proforma

A.1 Purposes and structure

The purpose of this ICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in ISO 21218 [1] may provide information about the implementation in a standardized manner.

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

- guidance for completing the ICS proforma;
- identification of the implementation;
- identification of the protocol;
- global statement of conformance;
- ICS proforma tables.

A.2 Abbreviations and conventions

A.2.1 General

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

A.2.2 Item column

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

A.2.3 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?".

A.2.4 Status column

The following notations, defined in ISO/IEC 9646-7 [6] and extended here, 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.
r	as specified in the related referenced standard of the CI.

A.2.5 Reference column

The reference column makes reference to ISO 21218 [1], except where explicitly stated otherwise.

A.2.6 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).

A.2.7 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)

A.2.8 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.

A.2.9 References to items

For each possible item answer (answer in the support column) within the ICS 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.

A.2.10 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.3 Instructions for completing the ICS proforma

The supplier of the implementation shall complete the ICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in each of the "Support" 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.

Annex B (normative): Identification of the implementation

B.1 General

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.

NOTE: The essential part of the IUT is the functionality specified in ISO 21218 [1]. The SUT, as a minimum, is a CALM-compliant communication interface (CI). In what follows, the IUT thus referrers to the functionality specified in ISO 21218 [1] applied in the context of a specific CI.

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 ICS should be named as the contact person.

B.2 Date of the statement

.....

B.3 Implementation Under Test (IUT) identification

IUT name:

.....

.....

IUT version:

.....

B.4 System Under Test (SUT) identification

SUT name:

.....

.....

Hardware configuration:

.....

.....

.....

Operating system:

.....

B.5 Product supplier

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

B.6 Client (if different from product supplier)

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

B.7 ICS contact person

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

Name:

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

B.8 Identification of protocol

This ICS proforma applies to the following standards:

- ISO 21218 [1]:
- CALM CI standard reference:

  .....

  .....
- CALM CI standard PICS reference:

  .....

  .....

B.9 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 ICS, with an explanation of why the implementation is non-conforming, on pages attached to the ICS proforma.

B.10 Detailed conformance declarations proforma

Detailed conformance declarations proforma are presented in annex C.

Annex C (normative): ICS proforma for ISO 21218 CALM CI service access points

C.1 Service Access Points

Table C.1: SAPs

Item	SAP functionality implemented	Reference	Status	Support
1	IN-SAP	5.1, 5.4	m	
2	MI-SAP	5.1, 5.5	m	

C.2 CI classes

Table C.2: CI classes

Item	CI class implemented	Reference	Status	Support
1	CIC-wl1 - Multiple simultaneous peer stations transceiver	5.2.1	o.1	
2	CIC-wl2 - Single peer station transceiver	5.2.1	o.1	
3	CIC-wl3 - MAC groupcast transmitter only	5.2.1	o.1	
4	CIC-wl4 - MAC broadcast receiver only	5.2.1	o.1	
5	CIC-wl5 - ISO 15628 legacy CI	5.2.1	o.1	
6	CIC-wr1 - Non-deterministic LAN	5.2.1	o	
7	CIC-wr2 - Deterministic LAN	5.2.1	o	

o.1: It is mandatory for wireless CIs to support exactly one of these options

C.3 CI access classes

Table C.3: CI access classes

Item	CI access class implemented	Reference	Status	Support
1	CIAC-1	5.2.2	o.2	
2	CIAC-2	5.2.2	o.2	
3	CIAC-3	5.2.2	o.2	

o.2: It is mandatory to support exactly one of these options

C.4 Network protocol exclusion

Table C.4: Network protocol exclusion

Item	Network protocol exclusion given	Reference	Status	Support
1	CALM FAST excluded	A.2.25	o.3	
2	IPv6 excluded	A.2.25	o.3	
3	Geo-routing (Geo-Networking) excluded	A.2.25	o.3	
4	IEEE WAVE excluded	A.2.25	o.3	
5	Local port protocol excluded	A.2.25	o.3	
NOTE 1: The local port protocol no more is supported in CALM. It will be removed from ISO 21218 [1] at the next revision. NOTE 2: The geo-routing protocol now is being developed under the name of Geo-Networking. The name will be changed in ISO 21218 [1] at the next revision.				

o.3: It is mandatory not to exclude all of these options

C.5 CI identifier

Table C.5: CI identifier

Item	CI-ID format implemented	Reference	Status	Support
1	CI-ID	5.2.3	m	

C.6 Virtual communication interface

Table C.6: VCI type

Item	VCI types implemented	Reference	Status	Support
1	BC-VCI transmitter	5.3	c.1	
2	MC-VCI transmitter	5.3	c.2	
3	UC-VCI (includes RX and TX capability)	5.3	c.3	
4	RX-VCI groupcast	5.3	c.4	

c.1: IF (Table C.2/1 OR Table C.2/3) THEN m ELSE n/a.

c.2: IF (Table C.2/1 OR Table C.2/3) THEN o ELSE n/a.

c.3: IF (Table C.2/1 OR Table C.2/2) THEN m ELSE n/a.

c.4: IF Table C.2/4 THEN m ELSE n/a.

C.7 Type of medium

Table C.7: Medium type

Item	Medium type values implemented	Reference	Status	Support
1	0: Unknown	A.2.24	m	
2	1: Indicating any type of medium in a command	A.2.24	m	
3	2: "2G cellular" compliant with ISO 21212	A.2.24	o.4	
4	3: "3G cellular" compliant with ISO 21213	5.2.4.2, 5.2.4.11.2, A.2.24	o.4	
5	4: "IR" compliant with ISO 21214	5.2.4.2, 5.2.4.11.2, A.2.24	o.4	
6	5: "M5" compliant with ISO 21215	5.2.4.2, 5.2.4.11.2, A.2.24	o.4	
7	6: "MM" compliant with ISO 21216	5.2.4.2, 5.2.4.11.2, A.2.24	o.4	
8	7: "802.16e" compliant with ISO 25112	5.2.4.2, 5.2.4.11.2, A.2.24	o.4	
9	8: "HC-SDMA" compliant with ISO 25113	5.2.4.2, 5.2.4.11.2, A.2.24	o.4	
10	9: "802.20" compliant with ISO 29283	5.2.4.2, 5.2.4.11.2, A.2.24	o.4	
11	10: "Satellites" compliant with ISO 29282	5.2.4.2, 5.2.4.11.2	o.4	
12	11: "Public broadcast reception" compliant with ISO 18183	5.2.4.2, 5.2.4.11.2	o.4	
13	128: "ISO 15628" compliant with ISO 15628	5.2.4.2, 5.2.4.11.2, A.2.24	o.4	
14	254: "LAN non-IP"	5.2.4.2, 5.2.4.11.2, A.2.24	o.5	
15	255: "LAN IP"	5.2.4.2, 5.2.4.11.2, A.2.24	o.5	

o.4: It is mandatory for wireless CIs to support exactly one of these options

o.5: It is mandatory for wired CIs to support exactly one of these options

C.8 Procedures

Table C.8: Procedures

Item	Procedures implemented	Reference	Status	Support
1	Registration procedure	5.2.4.2, 5.2.4.10	m	
2	Deregistration	5.2.4.3, 5.2.4.10	m	
3	Inactivation	5.2.4.4, 5.2.4.10	m	
4	Activation	5.2.4.5, 5.2.4.10	m	
5	Suspension	5.2.4.6, 5.2.4.10	m	
6	Reactivation	5.2.4.7, 5.2.4.10	m	
7	Connection	5.2.4.8, 5.2.4.10	m	
8	Disconnection	5.2.4.9, 5.2.4.10	m	
9	Prioritization procedure	5.3.1, 5.4, 5.5.5.3.8	m	
10	Cross-CI prioritization - victim procedure	5.2.4.11	o	
11	Cross-CI prioritization - interferer procedure	5.2.4.11	m	
12	Protection of a CI	5.2.4.12	o	
13	Regulatory Information Management	5.2.4.13	r	
14	Creation of a BC-VCI	5.3.3.1	c.5	
15	Creation of a MC-VCI	5.3.3.1	c.6	
16	Creation of a UC-VCI	5.3.3.1	c.7	
17	Creation of a RX-VCI	5.3.3.1	c.8	
18	Reset of a VCI	5.3.3.2	m	
19	Deletion of a VCI	5.3.3.3	m	
20	Association of peer identify with CI-ID of VCI	5.3.3.4, 5.4.2.2	c.7	
21	Rejection of DL-UNITDATA.reqeusts with user priority smaller than given in parameter"MinimumUserPriority"	5.4.4, A.2.13	m	
22	Management of priority queue level based on parameters "QueueAlarmThreshold" and "QueueLowThreshold"	5.4.4, A.2.34, A.2.49	m	

c.5: IF Table C.6/1 THEN m ELSE n/a.

c.6: IF Table C.6/2 THEN m ELSE n/a.

c.7: IF Table C.6/3 THEN m ELSE n/a.

c.8: IF Table C.6/4 THEN m ELSE n/a.

C.9 NF-SAP services

Table C.9: NF-SAP services

Item	Functionality of M-SAP services implemented	Reference	Status	Support
1	DL-UNITDATA (Type I. operation)	5.4.1, 5.4.3	m	

C.10 MI-SAP services

Table C.10: MI-SAP services

Item	Functionality of M-SAP services implemented	Reference	Status	Support
1	CIMAE-SETPARAM	5.5.1, 5.5.2	m	
2	CIMAE-GETPARAM	5.5.1, 5.5.3	m	
3	CIMAE-COMMAND	5.5.1, 5.5.4	m	
4	CIMAE-REQUEST	5.5.1, 5.5.5	m	
5	CIMAE-NOTIFY	5.5.1, 5.5.6	m	

C.11 COMMANDs

Table C.11: COMMANDs

Item	COMMANDs implemented	Reference	Status	Support
1	0: RegCmd	Annex B	m	
2	1: CIstateChng	Annex B	m	
3	2: WakeUp	Annex B	r	
4	3: RTScmd	Annex B	m	
5	4: RTSackCmd	Annex B	c.9	
6	5: *reserved*	Annex B	n.a.	
7	6: *reserved*	Annex B	n.a.	
8	7: RIcmd	Annex B	c.10	
9	8: ManuCmd	Annex B	o	
10	9: VCIcmd	Annex B	m	
11	10: Monitor	Annex B	m	
12	255: UnitDataCmd	Annex B	r	

c.9: IF Table C.8/10 THEN m ELSE n/a.

c.10: IF Table C.8/13 THEN m ELSE n/a.

C.12 REQUESTs

Table C.12: REQUESTs

Item	REQUESTs implemented	Reference	Status	Support
1	0: RegReq	Annex C	m	
2	1: PrioReg	Annex C	c.9	
3	2: RTSreq	Annex C	c.9	
4	3: RTSackReq	Annex C	m	
5	7: RIreq	Annex C	c.10	
6	8: ManuReq	Annex C	o	
7	9: Events	Annex C	m	
8	10: PosUpdateReq	Annex C	o	
9	255: UnitDataReq	Annex C	r	

C.13 Events

Table C.13: Events

Item	Events implemented	Reference	Status	Support
1	0: Invalid user priority	5.4.4 5.5.5.3.8	m	
2	1: Transmission queue above upper threshold	5.4.4 5.5.5.3.8 Annex A	m	
3	2: Transmission queue is full	5.4.4 5.5.5.3.8	m	
4	3: VCI created	5.5.5.3.8	m	
5	4: VCI deleted	5.5.5.3.8	m	
6	5: Automatic notification of change of parameter value	5.5.5.3.8	m	
7	6: Transmit queue below lower threshold	5.4.4 5.5.5.3.8 Annex A	m	
8	7: VCI reset	5.5.5.3.8	m	

C.14 Error/return codes

Table C.14: Error/return codes

Item	Error/return codes implemented	Reference	Status	Support
1	0: SUCCESS 1: UNSPECIFIED FAILURE 2: INVALID PARAMETER NUMBER 3: INVALID PARAMETER VALUE 5: INVALID COMMAND/REQUEST NUMBER 6: INVALID COMMAND/REQUEST VALUE 7: ACCESS VIOLATION	Annex D	m	
2	4: RI VIOLATION	Annex D	c.10	

C.15 Read/write VCI MIB parameters

Table C.15: Read/write VCI MIB parameters

Item	MIB parameter readable and writeable	Reference	Status	Support
1	0: AuxiliaryChannel	Annex A	m	
2	1: ControlChannel	Annex A	m	
3	2: ServiceChannel	Annex A	m	
4	3: RXsensitivity	Annex A	r	
5	4: TXpower	Annex A	r	
6	5: DataRate	Annex A	m	
7	9: Directivity	Annex A	r	
8	10: BlockLength	Annex A	m	
9	11: MinimumUserPriority	5.4.4, Annex A	m	
10	13: InactivityTimeLimit	5.3.3.3, Annex A	m	
11	26: FreeAirTime	Annex A	r	
12	35: MACaddrTemp	5.2.4.2, Annex A	r	
13	39: FrameLengthMax	Annex A	r	
14	46: PeerMAC	5.3.3.4, Annex A	r	

C.16 Read/write CI MIB parameters

Table C.16: Read/write CI MIB parameters

Item	MIB parameter readable and writeable	Reference	Status	Support
1	8: DataRateNWreq	Annex A	m	
2	13: InactivityTimeLimit	5.3.3.3, Annex A	m	
3	19: Properties	Annex A	m	
4	21: MinimumSuspendPriority	5.4.4, Annex A	r	
5	25: Regulatory Information	5.2.4.13 Annex A	c.10	
6	30: MedUseObservationTime	Annex A	r	
7	32: QueueAlarmTheshold	5.4.4, 5.5.3.8, Annex A	r	
8	36: TimeOutRegister	5.2.4.2, Annex A	m	
9	37: MedID	5.2.3, 5.2.4.2, 5.2.4.3, 5.2.4.11.5, 5.3.2, 5.4.2.2, Annex A	m	
10	44: MinPrioCrossCI	5.2.4.11.3 Annex A	c.9	
11	45: CckId	Annex A	m	
12	47: QueueLowThreshold	5.4.4, 5.5.5.3.8, Annex A	r	

C.17 Read-only VCI MIB parameters

Table C.17: Read-only VCI MIB parameters

Item	MIB parameter readable and writeable	Reference	Status	Support
1	6: DataRateNW	Annex A	r	
2	7: DataRatesNW	Annex A	r	
3	9: Directivity	Annex A	r	
4	12: TimeOfLastReception	5.3.3.4, Annex A	m	
5	14: DistancePeer	Annex A	r	
6	16: CommRangeRef	Annex A	r	
7	17: Cost	Annex A	r	
8	18: Reliability	Annex A	r	
9	20: CommProfile	5.3.3.3, 5.3.3.4, Annex A	m	
10	43: Notify	5.5.6.2, Annex A	m	
11	48: PeerRXpower	Annex A	r	
12	49: TXpowMax	Annex A	r	

C.18 Read-only CI MIB parameters

Table C.18: Read-only CI MIB parameters

Item	MIB parameter readable and writeable	Reference	Status	Support
1	15: CIclass	5.2.1, 5.2.4.2, 5.3.3.1 Annex A	m	
2	22: MedType	5.2.4.2, 5.2.4.11, Annex A	m	
3	23: NWsupport	Annex A	m	
4	24: CIaccessClass	5.2.2, 5.2.4.8, 5.2.4.9, 5.3.3.1, Annex A	m	
5	29: MediumUsage	Annex A	r	
6	31: SuspendSupportFlag	Annex A	r	
7	32: QueueLevel	Annex A	r	
8	34: MACaddress	5.2.3, 5.2.4.2, 5.3.1, 5.3.2, 5.3.3, 5.4.2.2, Annex A	m	
9	41: KinematicVectorOut	Annex A	r	
10	42: CIstatus	5.2.4, 5.3.3.1, Annex A	m	
11	43: Notify	5.5.6.2, Annex A	m	
12	50: ManufacturerDeviceID	Annex A	r	
13	51: Connect	5.3.3.1, Annex A	r	

C.19 Write-only CI MIB parameters

Table C.19: Write-only CI MIB parameters

Item	MIB parameter readable and writeable	Reference	Status	Support
1	27: SIMpin	5.2.2, Annex A	r	
2	28: ProviderInfo	5.2.2, Annex A	r	
3	40: KinematicVectorIn	5.2.4.13, 5.5.5.3.9, Annex A	r	

History

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