



TECHNICAL SPECIFICATION

Smart Cards;
Test specification for the Host Controller Interface (HCI);
Part 1: Terminal features
(Release 10)

STANDARD PREVIEW
(Standard not for circulation)
https://standards.iteh.ai/catalog/standards/sist/2f82ebb2-c211-4fd3-9fd2-bdf648ebb448/etsi-ts-102-695-1-v10.1.0-2015-03

Reference

RTS/SCP-00HCITva10

Keywords

smart card, terminal**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
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:
<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at
<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:
<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2015.
All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE™** are Trade Marks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.
GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	8
Foreword.....	8
Modal verbs terminology.....	8
Introduction	9
1 Scope	10
2 References	10
2.1 Normative references	10
2.2 Informative references.....	11
3 Definitions, symbols and abbreviations	11
3.1 Definitions	11
3.2 Symbols.....	11
3.3 Abbreviations	11
3.4 Void.....	12
3A Formats.....	12
3A.1 Format of the table of optional features.....	12
3A.2 Format of the applicability table.....	13
3A.3 Status and Notations.....	13
4 Test environment.....	14
4.1 Table of optional features.....	14
4.2 Applicability table	15
4.3 Information to be provided by the device supplier.....	17
4.4 Test equipment	17
4.4.1 Measurement / setting uncertainties.....	18
4.4.2 Default conditions for DUT operation.....	18
4.4.2.1 General	18
4.4.2.2 Status of UICC interfaces.....	18
4.4.3 Minimum/maximum conditions for DUT operation.....	18
4.4.4 Conventions	18
4.5 Test execution	18
4.5.1 Parameter variations	18
4.5.2 Execution requirements	18
4.6 Pass criterion	19
4.6.1 Unanticipated behaviour from the DUT	19
5 Test cases.....	19
5.1 HCI architecture	19
5.1.1 Overview	19
5.1.2 Hosts.....	19
5.1.3 Gates.....	20
5.1.3.1 Conformance requirements	20
5.1.3.2 Test case 1: existence of gates.....	20
5.1.3.2.1 Test execution.....	20
5.1.3.2.2 Initial conditions.....	20
5.1.3.2.3 Test procedure	20
5.1.3.3 Void.....	20
5.1.4 Pipes.....	21
5.1.4.1 Conformance requirements	21
5.1.4.2 Test case 1: static pipe deletion.....	21
5.1.4.2.1 Test execution.....	21
5.1.4.2.2 Initial conditions	21
5.1.4.2.3 Test procedure	21
5.1.4.3 Test case 2: initial pipe state and persistence of pipe state and registry value	22
5.1.4.3.1 Test execution.....	22
5.1.4.3.2 Initial conditions.....	22

5.1.4.3.3	Test procedure	22
5.1.5	Registries	23
5.1.5.1	Conformance requirements	23
5.1.5.2	Test case 1: registry deletion	23
5.1.5.2.1	Test execution.....	23
5.1.5.2.2	Initial conditions.....	23
5.1.5.2.3	Test procedure	23
5.2	HCP.....	24
5.2.1	HCP packets.....	24
5.2.1.1	Conformance requirements	24
5.2.2	HCP message structure	24
5.2.2.1	Conformance requirements	24
5.2.2.2	Test case 1: commands/events on pipe which is not open	24
5.2.2.2.1	Test execution.....	24
5.2.2.2.2	Initial conditions.....	24
5.2.2.2.3	Test procedure	25
5.2.3	Message fragmentation	25
5.2.3.1	Conformance requirements	25
5.3	Instructions	25
5.3.1	Commands	25
5.3.1.1	Overview	25
5.3.1.1.1	Conformance requirements.....	25
5.3.1.2	Generic commands.....	26
5.3.1.2.1	ANY_SET_PARAMETER	26
5.3.1.2.2	ANY_GET_PARAMETER.....	26
5.3.1.2.3	ANY_OPEN_PIPE.....	27
5.3.1.2.4	ANY_CLOSE_PIPE.....	27
5.3.1.3	Administration commands	28
5.3.1.3.1	ADM_CREATE_PIPE	28
5.3.1.3.2	ADM_NOTIFY_PIPE_CREATED.....	28
5.3.1.3.3	ADM_DELETE_PIPE	29
5.3.1.3.4	ADM_NOTIFY_PIPE_DELETED.....	29
5.3.1.3.5	ADM_CLEAR_ALL_PIPE.....	29
5.3.1.3.6	ADM_NOTIFY_ALL_PIPE_CLEARED.....	29
5.3.2	Responses	30
5.3.2.1	Conformance requirements	30
5.3.2.2	Test case 1: response to unknown command	30
5.3.2.2.1	Test execution.....	30
5.3.2.2.2	Initial conditions.....	30
5.3.2.2.3	Test procedure	30
5.3.3	Events	30
5.3.3.1	Conformance requirements	30
5.3.3.2	Test case 1: reception of unknown events	30
5.3.3.2.1	Test execution.....	30
5.3.3.2.2	Initial conditions.....	30
5.3.3.2.3	Test procedure	31
5.4	GATES and subclauses	31
5.4.1	GATES	31
5.4.1.1	Conformance requirements	31
5.4.2	Management gates	31
5.4.2.1	Administration gates	31
5.4.2.1.1	Host controller administration gate	31
5.4.2.1.2	Host administration gate.....	33
5.4.2.2	Link management gate	34
5.4.2.2.1	Host controller link management gate	34
5.4.2.2.2	Host link management gate	34
5.4.2.3	Identity management gate	34
5.4.2.3.1	Local registry.....	34
5.4.2.3.2	Remote registry	35
5.4.2.4	Loop back gate	36
5.4.2.4.1	Conformance requirements.....	36
5.4.3	Generic gates	36

5.5	HCI procedures	36
5.5.1	Pipe management	36
5.5.1.1	Pipe creation.....	36
5.5.1.1.1	Conformance requirements.....	36
5.5.1.2	Pipe deletion.....	37
5.5.1.2.1	Conformance requirements.....	37
5.5.1.2.2	Test case 1: valid pipe deletion from host to host controller	37
5.5.1.3	Clear all Pipes	37
5.5.1.3.1	Conformance requirements.....	37
5.5.1.3.2	Test case 1: identity reference data when ETSI TS 102 613 is used	38
5.5.1.3.3	Test case 2: reception of ADM_CLEAR_ALL_PIPE - static pipes, dynamic pipes to host	38
5.5.2	Registry access.....	39
5.5.3	Host and Gate discovery	39
5.5.4	Session initialization	39
5.5.4.1	Conformance requirements	39
5.5.4.2	Test case 1: inhibited state	39
5.5.4.2.1	Test execution.....	39
5.5.4.2.2	Initial conditions	39
5.5.4.2.3	Test procedure	40
5.5.4.3	Test case 2: inhibited state, followed by subsequent successful identity check	40
5.5.4.3.1	Test execution.....	40
5.5.4.3.2	Initial conditions	40
5.5.4.3.3	Test procedure	41
5.5.4.4	Test case 3: initialization using all defined gates	41
5.5.4.4.1	Test execution.....	41
5.5.4.4.2	Initial conditions	41
5.5.4.4.3	Test procedure	41
5.5.5	Loop back testing.....	44
5.5.5.1	Conformance requirements	44
5.5.5.2	Test case 1: processing of EVT_POST_DATA	44
5.5.5.2.1	Test execution.....	44
5.5.5.2.2	Initial conditions	45
5.5.5.2.3	Test procedure	45
5.6	Contactless card emulation.....	45
5.6.1	Overview	45
5.6.1.1	Conformance requirements	45
5.6.1.2	Test case 1: RF gate of type A.....	45
5.6.1.2.1	Test execution.....	45
5.6.1.2.2	Initial conditions	45
5.6.1.2.3	Test procedure	46
5.6.1.3	Test case 2: RF gate of type B.....	46
5.6.1.3.1	Test execution.....	46
5.6.1.3.2	Initial conditions	46
5.6.1.3.3	Test procedure	46
5.6.1.4	Test case 3: RF gate of type F.....	47
5.6.1.4.1	Test execution.....	47
5.6.1.4.2	Initial conditions	47
5.6.1.4.3	Test procedure	47
5.6.2	Void	47
5.6.3	Gates	47
5.6.3.1	Void.....	47
5.6.3.2	Identity management gate	48
5.6.3.2.1	Conformance requirements.....	48
5.6.3.3	Card RF gates.....	48
5.6.3.3.1	Overview	48
5.6.3.3.2	Commands.....	48
5.6.3.3.3	Events and subclauses	48
5.6.3.3.4	Registry and subclauses.....	48
5.6.3.4	Card application gates	58
5.6.3.4.1	Overview	58
5.6.3.4.2	Commands.....	58
5.6.3.4.3	Events and subclauses	58

5.6.3.4.4	Registry	59
5.6.4	Procedures.....	60
5.6.4.1	Use of contactless card application	60
5.6.4.1.1	Conformance requirements.....	60
5.6.4.1.2	Test case 1: ISO/IEC 14443-3 Type A	60
5.6.4.1.3	Test case 2: ISO/IEC 14443-3 Type B	61
5.6.4.1.4	Test case 3: Routing EVT_FIELD_ON and EVT_FIELD_OFF to RF Gate with lowest G _{ID}	62
5.6.4.1.5	Test case 4: ISO/IEC 14443-3 Type A	63
5.6.4.1.6	Test case 5: ISO/IEC 14443-3 Type B	64
5.6.4.2	Non ISO/IEC 14443-4 type A	65
5.6.4.2.1	Conformance requirements.....	65
5.6.4.2.2	Test case 1: Non ISO/IEC 14443-4 type A.....	65
5.6.4.2.3	Test case 2: Routing EVT_FIELD_ON and EVT_FIELD_OFF to RF Gate with lowest G _{ID}	66
5.6.4.3	Type B' RF technology	67
5.6.4.3.1	Conformance requirements.....	67
5.6.4.4	Type F RF technology.....	67
5.6.4.4.1	Conformance requirements.....	67
5.6.4.4.2	Test case 1: ISO/IEC 18092 Type F.....	68
5.6.4.4.3	Test case 2: RF off during ISO/IEC 18092 Type F commands handling	69
5.6.4.4.4	Test case 3: Routing EVT_FIELD_ON and EVT_FIELD_OFF to RF Gate with lowest G _{ID}	70
5.6.4.5	Update RF technology settings	71
5.6.4.5.1	Conformance requirements.....	71
5.6.4.6	Identity check.....	72
5.6.4.6.1	Conformance requirements.....	72
5.7	Contactless reader.....	72
5.7.1	Overview	72
5.7.1.1	Conformance requirements	72
5.7.2	Reader RF gates	72
5.7.2.1	Overview	72
5.7.2.2	Command.....	72
5.7.2.2.1	WR_XCHG_DATA	72
5.7.2.3	Registries.....	73
5.7.2.3.1	Type A reader RF gate	73
5.7.2.3.2	Type B reader RF gate.....	76
5.7.2.4	Events and subclauses	78
5.7.2.4.1	Events	78
5.7.2.4.2	EVT_READER_REQUESTED	78
5.7.2.4.3	EVT_END_OPERATION.....	78
5.7.2.5	Responses.....	78
5.7.2.5.1	Conformance requirements.....	78
5.7.3	Reader application gates	79
5.7.3.1	Overview.....	79
5.7.3.2	Command.....	79
5.7.3.2.1	Conformance requirements.....	79
5.7.3.3	Registry	79
5.7.3.3.1	Conformance requirements.....	79
5.7.3.4	Events and subclauses	79
5.7.3.4.1	Events	79
5.7.3.4.2	EVT_TARGET_DISCOVERED	79
5.7.4	Procedures.....	80
5.7.4.1	Use of contactless reader application	80
5.7.4.1.1	Conformance requirements.....	80
5.8	Connectivity	80
5.8.1	Overview	80
5.8.2	Connectivity gate and subclauses	80
5.8.2.1	Connectivity gate	80
5.8.2.2	Commands	80
5.8.2.2.1	PRO_HOST_REQUEST	80
5.8.2.3	Events and subclauses	80
5.8.2.3.1	Events	80
5.8.2.3.2	EVT_CONNECTIVITY.....	81
5.8.2.3.3	Void.....	81

5.8.2.3.4	EVT_OPERATION_ENDED	81
5.8.2.3.5	EVT_TRANSACTION	81
5.8.2.4	Registry	81
5.8.2.4.1	Conformance requirements.....	81
5.8.3	Connectivity application gate and subclauses.....	82
5.8.3.1	Connectivity application gate.....	82
5.8.3.1.1	Conformance requirements.....	82
5.8.3.2	Commands	82
5.8.3.2.1	Conformance requirements.....	82
5.8.3.3	Events and subclauses	82
5.8.3.3.1	Events	82
5.8.3.3.2	EVT_STANDBY	82
5.8.3.4	Registry	82
5.8.3.4.1	Conformance requirements.....	82
5.8.4	Procedures.....	82
5.8.4.1	Use of connectivity gate.....	82
Annex A (informative):	Bibliography.....	83
Annex B (informative):	Core specification version information.....	84
Annex C (informative):	Change history	85
History		87

iTeh STANDARD PREVIEW
 (standards.iteh.ai)

Full standard:
<https://standards.iteh.ai/catalog/standards/sist/2182ebb2-c211-4fd3-9fd2-bdf648ebfafd/etsi-ts-102-695-1-v10.1.0-2015-03>

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://ipr.etsi.org>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Smart Card Platform (SCP).

The contents of the present document are subject to continuing work within TC SCP and may change following formal TC SCP approval. If TC SCP modifies the contents of the present document, it will then be republished by ETSI with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 0 early working draft;
 - 1 presented to TC SCP for information;
 - 2 presented to TC SCP for approval;
 - 3 or greater indicates TC SCP approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

The present document is part 1 of a multi-part deliverable covering the Test specification for the Host Controller Interface (HCI), as identified below:

- Part 1: "Terminal features";
 - Part 2: "UICC features";
 - Part 3: "Host Controller features".
-

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Introduction

The present document defines test cases for the terminal relating to the Host Controller Interface (HCI) as specified in ETSI TS 102 622 [1].

The aim of the present document is to ensure interoperability between the terminal and the UICC independently of the respective manufacturer, card issuer or operator.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/282ebb2-c211-4fd3-9fd2-bdf648ebfafd/etsi-ts-102-695-1-v10.1.0-2015-03>

1 Scope

The present document covers the minimum characteristics which are considered necessary for the terminal in order to provide compliance to ETSI TS 102 622 [1].

The present document specifies the test cases for:

- the HCI core as described in the first part of ETSI TS 102 622 [1];
- the contactless platform as described in the second part of ETSI TS 102 622 [1].

Test cases for the UICC relating to ETSI TS 102 622 [1] and test cases for the Single Wire Protocol (SWP) covering both terminal and UICC are out of scope of the present document.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

- In the case of a reference to a TC SCP document, a non specific reference implicitly refers to the latest version of that document in the same Release as the present document.

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.

The following referenced documents are necessary for the application of the present document.

- [1] ETSI TS 102 622: "Smart Cards; UICC - Contactless Front-end (CLF) Interface; Host Controller Interface (HCI)".
- [2] ETSI TS 102 613: "Smart Cards; UICC - Contactless Front-end (CLF) Interface; Part 1: Physical and data link layer characteristics".
- [3] ETSI TS 102 223: "Smart Cards; Card Application Toolkit (CAT)".
- [4] ISO/IEC 18092: "Information technology - Telecommunications and information exchange between systems - Near Field Communication - Interface and Protocol (NFCIP-1)".
- [5] ISO/IEC 14443-2: "Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 2: Radio frequency power and signal interface".
- [6] ISO/IEC 14443-3: "Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 3: Initialization and anticollision".
- [7] ISO/IEC 14443-4: "Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 4: Transmission Protocol".
- [8] ISO/IEC 7816-4: "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange".
- [9] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".
- [10] ETSI TS 102 695-3: "Smart Cards; Test specification for the Host Controller Interface (HCI); Part 3: Host Controller features".

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

- In the case of a reference to a TC SCP document, a non specific reference implicitly refers to the latest version of that document in the same Release as the present document.

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

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

Not applicable.

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ETSI TS 102 622 [1] and the following apply:

allowed error response code: response code which is not ANY_OK and which is allowed for the referenced command as specified in ETSI TS 102 622 [1]

non-occurrence RQ: RQ which has been extracted from ETSI TS 102 622 [1], but which indicates a situation which should never occur

NOTE: The consequence is that such RQs cannot be explicitly tested.

user: describes any logical or physical entity which controls the test equipment in a way that it is able to trigger activities of the DUT

3.2 Symbols

For the purposes of the present document, the symbols given in ETSI TS 102 622 [1] and the following apply:

PIPE0	the static pipe connected to the link management gate of the device under test.
PIPE1	the static pipe connected to the administration gate of the device under test.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in ETSI TS 102 622 [1] and the following apply:

(U)SIM	(Universal) Subscriber Identity Module
AC	AntiCollision
AFI	Application Family Identifier
AID	Application IDentifier
ATQA	Answer To reQuest of type A
ATQB	Answer To reQuest of type B
ATS	Answer To Select
CLF	ContactLess Front-end
CLT	ContactLess Tunnelling
CRC	Cyclic Redundancy Code
DUT	Device under test
FFS	For further study
HCI	Host Controller Interface
HCUT	Host controller under test
HS	Host simulator

ICRx Initial condition requirement (where x is a number)

NOTE: As used in the applicability table; see clauses 4.2 and 4.5.2.

LEN LENgth
 NAA Network Access Application
 PCD Proximity Coupling Device
 PICC Proximity Integrated Circuit Card
 PPS Protocol and Parameter Selection
 RATS Request for Answer To Select
 REQA REQuest command, type A
 RF Radio Frequency
 RO Read-Only
 RQ Conformance requirement
 RW Read-Write
 SAK Select AcKnowledge
 SDL Specification and Description Language
 SRx Static requirement (where x is a number)

NOTE: As used in the applicability table; see clauses 4.2 and 4.5.2.

TC Test Case
 TRx Trigger requirement (where x is a number)
 UID Unique IDentification
 WO Write Only
 WUPB Wake-Up command for PICC type B

NOTE: As used in the applicability table; see clauses 4.2 and 4.5.2.

3.4 Void

Content of this clause has been moved to clause 3A.

3A Formats

3A.1 Format of the table of optional features

The columns in table 4.1 have the following meaning.

Column	Meaning
Option	The optional feature supported or not by the DUT.
Status	See clause 3.4.3.
Support	The support columns shall be filled in by the supplier of the implementation. The following common notations, defined in ISO/IEC 9646-7 [9], are used for the support column in table 4.1. 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).
Mnemonic	The mnemonic column contains mnemonic identifiers for each item.

3A.2 Format of the applicability table

The applicability of every test in table 4.2 is formally expressed by the use of Boolean expression defined in the following clause.

The columns in table 4.2 have the following meaning.

Column	Meaning
Clause	The "Clause" column identifies the clause containing the test case referenced in the "Test case number and description" column.
Test case number and description	The "Test case number and description" column gives a reference to the test case number (along with the corresponding description) detailed in the present document and required to validate the DUT.
Release	The "Release" column gives the Release applicable and onwards, for the corresponding test case.
Execution requirements	The usage of the "Execution requirements" column is described in clause 4.5.2.
Rel-x Terminal	For a given Release, the corresponding "Rel-x" column lists the tests required for a DUT to be declared compliant to this Release.
Support	The "Support" column is blank in the proforma, and shall be completed by the manufacturer in respect of each particular requirement to indicate the choices, which have been made in the implementation.

3A.3 Status and Notations

The "Rel-x" columns show the status of the entries as follows:

The following notations, defined in ISO/IEC 9646-7 [9], 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. For nested conditional expressions, the syntax "IF ... THEN (IF ... THEN ... ELSE...) ELSE ..." shall be used to avoid ambiguities.

References to items

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

EXAMPLE: 4.1/4 is the reference to the answer of item 4 in table 4.1.