

**V interface at the digital Local Exchange (LE);
V5.1 interface for the support of Access Network (AN);
Part 2: Protocol Implementation Conformance
Statement (PICS) proforma specification**



Reference

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Contents

Intellectual Property Rights	5
Foreword.....	5
1 Scope	6
2 References	6
3 Definitions.....	6
4 Abbreviations	7
5 Conformance	7
6 PICS proforma.....	8
6.1 Identification of the implementation.....	8
6.1.1 Implementation Under Test (IUT) identification	8
6.1.2 System Under Test (SUT) identification.....	8
6.1.3 Product supplier	8
6.1.4 Client	9
6.1.5 PICS contact person.....	9
6.2 PICS/System Conformance Statement (SCS).....	10
6.3 Identification of the protocol	10
6.4 Global statement of conformance	10
6.5 Local exchange	11
6.5.1 Main features	11
6.5.2 Protocol.....	12
6.5.2.1 Layer 1	12
6.5.2.2 Layer 2	12
6.5.2.3 Layer 3	12
6.5.2.3.1 PSTN functions	12
6.5.2.3.2 PSTN protocol.....	13
6.5.2.3.3 Control protocol	13
6.5.2.3.4 Port control protocol.....	13
6.5.2.3.5 Common control	13
6.5.3 Protocol data units	14
6.5.3.1 PSTN protocol	14
6.5.3.1.1 Messages.....	14
6.5.3.1.2 Information elements, general	15
6.5.3.1.3 Information elements, pulse type	16
6.5.3.1.4 Information elements, steady signals	17
6.5.3.1.5 Information elements, cause types	19
6.5.3.1.6 Information elements, information element fields	19
6.5.3.2 Control protocol	20
6.5.3.2.1 Messages.....	20
6.5.3.2.2 Information elements, general	20
6.5.3.2.3 Information elements, port control	20
6.5.3.2.4 Information elements, common control	21
6.6 Access network.....	21
6.6.1 Main features	21
6.6.2 Protocol.....	23
6.6.2.1 Layer 1	23
6.6.2.2 Layer 2	23
6.6.2.3 Layer 3	23
6.6.2.3.1 PSTN protocol.....	23
6.6.2.3.2 Control protocol	24
6.6.2.3.3 Port control protocol.....	24
6.6.2.3.4 Common control	24
6.6.3 Protocol data units	25

6.6.3.1	PSTN protocol	25
6.6.3.1.1	Messages.....	25
6.6.3.1.2	Information elements, general	26
6.6.3.1.3	Information elements, pulse type	27
6.6.3.1.4	Information elements, steady signals	28
6.6.3.1.5	Information elements, cause types	30
6.6.3.1.6	Information elements, information element fields	30
6.6.3.2	Control protocol	31
6.6.3.2.1	Messages.....	31
6.6.3.2.2	Information elements, general	31
6.6.3.2.3	Information elements, port control	31
6.6.3.2.4	Information elements, common control	32
Annex A (informative):	Instructions for completing the PICS proforma	33
A.1	Identification of the implementation.....	33
A.2	Global statement of conformance	33
A.3	Main features.....	33
A.4	Protocol	33
A.5	Protocol data units.....	33
History		34

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN), and is now submitted for the ETSI standards One-step Approval Procedure.

The present document is part 2 of a multi-part EN covering the V interface at the digital Local Exchange (LE); V5.1 interface for the support of Access Network (AN), as described below:

Part 1: "Part 1: V5.1 Interface Specification";

Part 2: "Protocol Implementation Conformance Statement (PICS) proforma specification";

Part 3: "Test Suite Structure and Test Purposes (TSS&TP) specification for the network layer (AN side)";

Part 4: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the network layer (AN side)";

Part 5: "Test Suite Structure and Test Purposes (TSS&TP) specification for the network layer (LE side)";

Part 6: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the network layer";

Part 7: "Test Suite Structure and Test Purposes (TSS&TP) specification for the data link layer";

Part 8: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the data link layer";

Part 9: "Test specification for the physical layer".

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a given Open Systems Interconnection (OSI) protocol. Such a statement is called a Protocol Implementation Conformance Statement (PICS).

NOTE: It is however possible to use the present document to indicate the basic requirements for an Access Network (AN) or a Local Exchange (LE) required by a network operator. Specific requirements need to be added, e.g. the Public Switched Telephone Network (PSTN) port characteristics and conditions.

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

1 Scope

This second part of EN 300 324 defines the Protocol Implementation Conformance Statement (PICS) proforma for the implementation flexibility allowed for a V5.1 interface defined in EN 300 324-1 [1]. It allows either the Network Operator to formulate the requirements for V5.1 interface implemented in an Access Network (AN) or Local Exchange (LE), or to decide whether an implementation meets these requirements. It details in tabular form the implementation options, i.e. the optional functions additional to those which are mandatory to implement.

The present document is in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-7 [3].

2 References

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

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

- [1] EN 300 324-1 (V2.1): "V interface at the digital Local Exchange (LE); V 5.1 interface for the support of Access Network (AN); Part 1: V5.1 Interface Specification".
- [2] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".
- [3] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

3 Definitions

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

Protocol Implementation Conformance Statement (PICS): statement made by the supplier of an Open System Interconnection (OSI) implementation or system, stating which capabilities have been implemented for a given OSI protocol (see ISO/IEC 9646-1 [2]).

PICS proforma: document, in the form of a questionnaire, designed by the protocol specified or conformance test suite specified, which when completed for an OSI implementation or system becomes the PICS (see ISO/IEC 9646-1 [2]).

Static conformance review: review of the extent to which the static conformance requirements are met by the Implementation Under Test (IUT), accomplished by comparing the PICS with the static conformance requirements expressed in the relevant standard(s) (see ISO/IEC 9646-1 [2]).

4 Abbreviations

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

AN	Access Network
AND	Boolean "and"
C	Conditional requirements (to be observed if the relevant conditions apply)
DTMF	Dual Tone Multiple Frequency
ID	Identification
IUT	Implementation Under Test
LE	Local Exchange
M	Mandatory requirements (to be observed in all cases)
N/A	Not supported, not applicable or the conditions for status are not met
No	not supported
NOT	Boolean "not"
NT1	Network Termination 1
O	Option (may be selected to suit the implementation, provided that any requirements applicable to the option are observed)
O.n	Options, but support required for either at least one or only one of the options in the group labelled with the same numeral "n"
OR	Boolean "or"
OSI	Open Systems Interconnection
PICS	Protocol Implementation Conformance Statement
PSTN	Public Switched Telephone Network
SCS	System Conformance Statement
SUT	System Under Test
TS	Time Slot
Yes	Supported

5 Conformance

The supplier of a protocol implementation which is claimed to conform to EN 300 324-1 [1] is required to complete a copy of the PICS proforma provided in the present document and is required to provide the information necessary to identify both the supplier and the implementation.

6 PICS proforma

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

6.1 Identification of the implementation

6.1.1 Implementation Under Test (IUT) identification

IUT name:

.....

IUT version:

.....

6.1.2 System Under Test (SUT) identification

SUT name:

.....

Hardware configuration:

.....

Operating system:

.....

6.1.3 Product supplier

Name:

.....

Address:

.....

Telephone number:

.....

Facsimile number:

.....

Additional information:

.....

.....

.....

6.1.4 Client

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

Additional information:

.....

.....

.....

6.1.5 PICS contact person

Name:

.....

Telephone number:

.....

Facsimile number:

.....

Additional information:

.....

.....

.....

6.2 PICS/System Conformance Statement (SCS)

Provide the relationship of the PICS with the SCS for the system:

.....

.....

.....

.....

6.3 Identification of the protocol

This PICS proforma applies to the following standard:

EN 300 324-1 (V2.1): "V interface at the digital Local Exchange (LE); V 5.1 interface for the support of Access Network (AN); Part 1: V5.1 Interface Specification".

6.4 Global statement of conformance

The implementation described in this PICS meets all the mandatory requirements of the referenced standard.

☐ Yes

☐ No

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

In the tabulations which follow, all references are to EN 300 324-1 [1].

6.5 Local exchange

6.5.1 Main features

Table 1

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
M1	ISDN ports?		O.1	6.1.2	☐ Yes ☐ No
M2	PSTN ports?		O.1	6.1.1	☐ Yes ☐ No
M3	semi-permanent leased lines?		O	6.3	☐ Yes ☐ No
M4	communication channel time slot allocation?		M	8.4	☐ Yes ☐ No
M41	communication path for control functions on TS 16?		M	8.4	☐ Yes ☐ No
M411	communication channel on TS16?		M	8.4	☐ Yes ☐ No
M412	communication channel on TS15?	MX1 NOT MX1	M N/A	8.4	☐ Yes ☐ No
M413	communication channel on TS31?	MX1 NOT MX1	M N/A	8.4	☐ Yes ☐ No
M421	communication path for P-type data on TS 16?	M1 NOT M1	M N/A	8.4	☐ Yes ☐ No
M422	communication path for P-type data on TS 15?	M1 and M412 NOT (M1 and M412)	M N/A	8.4	☐ Yes ☐ No
M423	communication path for P-type data on TS 31?	M413 NOT M413	M N/A	8.4	☐ Yes ☐ No
M431	communication path for F-type data on TS 16?	M1 NOT M1	M N/A	8.4	☐ Yes ☐ No
M432	communication path for F-type data on TS 15?	M1 and M412 NOT (M1 and M412)	M N/A	8.4	☐ Yes ☐ No
M433	communication path for F-type data on TS 31?	M413 NOT M413	M N/A	8.4	☐ Yes ☐ No
M441	communication path for D-channel signalling on TS 16?	M1 NOT M1	M N/A	8.4	☐ Yes ☐ No
M442	communication path for D-channel signalling on TS 15?	M1 and M412 NOT (M1 and M412)	M N/A	8.4	☐ Yes ☐ No
M443	communication path for D-channel signalling on TS 31?	M413 NOT M413	M N/A	8.4	☐ Yes ☐ No
M451	communication path for PSTN signalling on TS 16?	M2 NOT M2	M N/A	8.4	☐ Yes ☐ No
M452	communication path for PSTN signalling on TS 15?	M2 and M412 NOT (M2 and M412)	M N/A	8.4	☐ Yes ☐ No
M453	communication path for PSTN signalling on TS 31?	M2 and M413 NOT (M2 and M413)	M N/A	8.4	☐ Yes ☐ No
M51	allocation of bearer channels to user ports by provisioning?		M	7.2.2	☐ Yes ☐ No
M52	allocation of EFaddr to ISDN user ports by provisioning?	M1 NOT M1	M N/A	7.2.2	☐ Yes ☐ No
M53	allocation of L3addr to PSTN user ports by provisioning?	M2 NOT M2	M N/A	7.2.2	☐ Yes ☐ No
M6	envelop function?		M	9	☐ Yes ☐ No
Predicated imaginary features					
MX.1	If required by the network operator		O		
MX.2	If required by the national PSTN protocol		O		
O.1 = Support of at least one of these items is required					

6.5.2 Protocol

6.5.2.1 Layer 1

Table 2

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
P1.1	layer 1 balanced?	MX.1 NOT MX.1	M N/A	4	☐ Yes ☐ No
P1.2	layer 1 coaxial?	MX.1 NOT MX.1	M N/A	4	☐ Yes ☐ No
P1.3	interface control procedures?		M	14.3	☐ Yes ☐ No
P1.4	detection of loss of signals; 1 ms below 20 dB?		O.1	14.3.2	☐ Yes ☐ No
P1.5	detection of loss of signals; 10 consecutive ZEROS?		O.1	14.3.2	☐ Yes ☐ No
O.1 = Support of at least one of these items is required.					

6.5.2.2 Layer 2

Table 3

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
P2.11	frame structure for peer to peer communication?		M	9.1	☐ Yes ☐ No
P2.12	format of fields for data link envelope?		M	9.2	☐ Yes ☐ No
P2.13	envelop address value for control protocol?		M	10.3.2.3	☐ Yes ☐ No
P2.14	envelop address value for PSTN protocol?	M2 NOT M2	M N/A	10.3.2.3	☐ Yes ☐ No
P2.15	envelop address values for ISDN ports?	M1 NOT M1	M N/A	9.2.2.2	☐ Yes ☐ No
P2.2	data link sublayer of LAPV5 for control protocol?		M	10	☐ Yes ☐ No
P2.3	data link sublayer of LAPV5 for PSTN protocol?	M2 NOT M2	M N/A	10	☐ Yes ☐ No

6.5.2.3 Layer 3

6.5.2.3.1 PSTN functions

Table 4

Index	Protocol capability Does the implementation support ...	Predicate	Status	Reference	Support
P3.11	DTMF senders/receivers?	M2 NOT M2	M N/A	13.1.2	☐ Yes ☐ No
P3.12	tone generators?	M2 NOT M2	M N/A	13.1.2	☐ Yes ☐ No
P3.13	announcement?	M2 NOT M2	M N/A	13.1.2	☐ Yes ☐ No

6.5.2.3.2 PSTN protocol

Table 5

Index	Protocol capability Does the implementation support ...	Predicate	Status	Reference	Support
P3.2	PSTN protocol entity?	M2 NOT M2	M N/A	13.2	[] Yes [] No
P3.3	PSTN call control entity?	M2 NOT M2	M N/A	13.5 - 13.7	[] Yes [] No

6.5.2.3.3 Control protocol

Table 6

Index	Protocol capability Does the implementation support ...	Predicate	Status	Reference	Support
P4.0	Control protocol entity?		M	14.4.4	[] Yes [] No

6.5.2.3.4 Port control protocol

Table 7

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
P4.11	ISDN user port status indication and control?	M1 NOT M1	M N/A	14.1	[] Yes [] No
P4.12	performance monitoring?	M1 AND MX.1 NOT (M1 AND MX.1)	M N/A	14.1.4	[] Yes [] No
P4.2	PSTN user port status indication and control?	M2 NOT M2	M N/A	14.2	[] Yes [] No

6.5.2.3.5 Common control

Table 8

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
P5.1	variant and interface ID control?		M	14.5	[] Yes [] No
P5.2	verify re-provisioning?	MX.1 NOT MX.1	M N/A	14.5	[] Yes [] No
P5.3	re-provisioning synchronization?	MX.1 NOT MX.1	M N/A	14.5	[] Yes [] No

6.5.3 Protocol data units

6.5.3.1 PSTN protocol

6.5.3.1.1 Messages

Table 9

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.1	ESTABLISH?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.2	ESTABLISH ACK?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.3	SIGNAL?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.4	SIGNAL ACK?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.5	STATUS?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.6	STATUS ENQUIRY?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.7	DISCONNECT?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.8	DISCONNECT COMPLETE?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.9	PROTOCOL PARAMETER?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.3	[] Yes [] No

6.5.3.1.2 Information elements, general

Table 10

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.10	protocol discriminator?	M2 NOT M2	M N/A	13.4.2	☐ Yes ☐ No
U1.11	layer 3 address?	M2 NOT M2	M N/A	13.4.3	☐ Yes ☐ No
U1.12	pulse notification?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.6.1	☐ Yes ☐ No
U1.13	line information?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.6.2	☐ Yes ☐ No
U1.14	state?	M2 NOT M2	M N/A	13.4.6.3	☐ Yes ☐ No
U1.15	autonomous signalling sequence?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.6.4	☐ Yes ☐ No
U1.16	sequence response?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.6.5	☐ Yes ☐ No
U1.17	sequence-number?	M2 NOT M2	M N/A	13.4.7.1	☐ Yes ☐ No
U1.18	cadenced-ringing?	M2 NOT M2	M N/A	13.4.7.2	☐ Yes ☐ No
U1.19	pulsed-signal?	M2 NOT M2	M N/A	13.4.7.3	☐ Yes ☐ No
U1.20	steady-signal?	M2 NOT M2	M N/A	13.4.7.4	☐ Yes ☐ No
U1.21	digit-signal?	M2 NOT M2	M N/A	13.4.7.5	☐ Yes ☐ No
U1.22	recognition-time?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.6	☐ Yes ☐ No
U1.23	enable-autonomous-acknowledge?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.7	☐ Yes ☐ No
U1.24	disable-autonomous-acknowledge?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.8	☐ Yes ☐ No
U1.25	cause?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.26	resource-unavailable?	M2 NOT M2	M N/A	13.4.7.10	☐ Yes ☐ No
U1.27	enable-metering?	M2 and MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.11	☐ Yes ☐ No
U1.28	metering-report?	M2 and MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.12	☐ Yes ☐ No
U1.29	Attenuation?	M2 and MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.13	☐ Yes ☐ No

6.5.3.1.3 Information elements, pulse type

Table 11

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.30	pulse type: Pulsed normal polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.31	pulse type: Pulsed reversed polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.32	pulse type: Pulsed battery on c-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.33	pulse type: Pulsed on hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.34	pulse type: Pulsed reduced battery ?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.35	pulse type: Pulsed no battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.36	pulse type: Initial ring?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.37	pulse type: Meter pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.38	pulse type: 50 Hz pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.39	pulse type: Register recall?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.40	pulse type: Pulsed off hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.41	pulse type: Pulsed b-wire connected to earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.42	pulse type: Earth loop pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.43	pulse type: Pulsed b-wire connected to battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.44	pulse type: Pulsed a-wire connected to earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.45	pulse type: Pulsed a-wire connected to battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.46	pulse type: Pulsed c-wire connected to earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.47	pulse type: Pulsed c-wire disconnected?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.48	pulse type: Pulsed normal battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	[] Yes [] No
U1.49	pulse type: Pulsed a-wire disconnected?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	[] Yes [] No
U1.50	pulse type: Pulsed b-wire disconnected?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	[] Yes [] No

6.5.3.1.4 Information elements, steady signals

Table 12

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.51	steady signal: Normal polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.52	steady signal: Reversed polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.53	steady signal: Battery on c-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.54	steady signal: No battery on c-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.55	steady signal: Off hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.56	steady signal: On hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.57	steady signal: Battery on a-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.58	steady signal: A-wire on earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.59	steady signal: No battery on a-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.60	steady signal: No battery on b-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.61	steady signal: Reduced battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.62	steady signal: No battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.63	steady signal: Alternate reduced power/no power?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.64	steady signal: Normal battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.65	steady signal: Stop ringing?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.66	steady signal: Start pilot frequency?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.67	steady signal: Stop pilot frequency?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.68	steady signal: Low impedance on b-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.69	steady signal: B-wire connected to earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.70	steady signal: B-wire disconnected from earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.71	steady signal: Normal battery on b-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.72	steady signal: Low loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.73	steady signal: High loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.74	steady signal: Anomalous loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.75	steady signal: A-wire disconnected from earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.76	steady signal: C-wire on earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.77	steady signal: C-wire disconnected from earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.96	steady signal: Signal: Ramp to Reversed Polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.97	steady signal: Signal: Ramp to Normal Polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No

6.5.3.1.5 Information elements, cause types

Table 13

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.78	cause type: Response to status enquiry?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.79	cause type: Protocol discriminator error?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.80	cause type: L3 address error?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.81	cause type: Message type unrecognized?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.82	cause type: Out of sequence information element?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.83	cause type: Repeated optional information element?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.84	cause type: Mandatory information element missing?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.85	cause type: Unrecognized information element?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.86	cause type: Mandatory information element content error?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.87	cause type: Optional information element content error?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.88	cause type: Message not compatible with state?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.89	cause type: Repeated mandatory information element?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No
U1.90	cause type: Too many information elements?	M2 NOT M2	M N/A	13.4.7.9	[] Yes [] No

6.5.3.1.6 Information elements, information element fields

Table 14

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.91	suppression indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	[] Yes [] No
U1.92	acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	[] Yes [] No
U1.93	suppression indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.7	[] Yes [] No
U1.94	acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.7	[] Yes [] No
U1.95	digit acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.5	[] Yes [] No

6.5.3.2 Control protocol

6.5.3.2.1 Messages

Table 15

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U2.1	common control and port control messages?		M	14.4.1	☐ Yes ☐ No

6.5.3.2.2 Information elements, general

Table 16

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U2.5	protocol discriminator?		M	14.4.2.2	☐ Yes ☐ No
U2.6	layer 3 addresses?		M	14.4.2.3	☐ Yes ☐ No

6.5.3.2.3 Information elements, port control

Table 17

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U3.1	FE101 activate access?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U3.2	FE102 activation initiated by user?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U3.3	FE103 DS activated?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U3.4	FE104 access activated?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U3.5	FE105 deactivate access?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U3.6	FE106 access deactivated?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U4.1	FE201/202 unblock?		M	14.4.2.5.4	☐ Yes ☐ No
U4.2	FE203/204 block?		M	14.4.2.5.4	☐ Yes ☐ No
U4.3	FE205 block request?		M	14.4.2.5.4	☐ Yes ☐ No
U5.1	FE206 performance grading?	M1 AND MX.1 NOT (M1 AND MX.1)	M N/A	14.4.2.5.4	☐ Yes ☐ No
U5.2	FE207 D-channel block?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U5.3	FE208 D-channel unblock?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No

6.5.3.2.4 Information elements, common control

Table 18

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U6.1	verify re-provisioning?	P5.2 NOT P5.2	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.2	ready for re-provisioning?	P5.2 OR P5.3 NOT (P5.2 OR P5.3)	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.3	not ready for re-provisioning?	P5.2 OR P5.3 NOT (P5.2 OR P5.3)	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.4	switch-over to new variant?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.5	re-provisioning started?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.6	cannot re-provision?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.7	request variant and interface ID?		M	14.4.2.5.5	☐ Yes ☐ No
U6.8	variant and interface ID?		M	14.4.2.5.5	☐ Yes ☐ No
U6.9	blocking started?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.10	restart?		M	14.4.2.5.5	☐ Yes ☐ No
U6.11	restart acknowledge?		M	14.4.2.5.5	☐ Yes ☐ No

6.6 Access network

6.6.1 Main features

Table 19

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
M1	ISDN ports?		O.1	6.1.2	☐ Yes ☐ No
M2	PSTN ports?		O.1	6.1.1	☐ Yes ☐ No
M3	semi-permanent leased lines?		O	6.3	☐ Yes ☐ No
M4	communication channel time slot allocation?		M	8.4	☐ Yes ☐ No
M41	communication path for control functions on TS 16?		M	8.4	☐ Yes ☐ No
M411	communication channel on TS16?		M	8.4	☐ Yes ☐ No
M412	communication channel on TS15?	MX1 NOT MX1	M N/A	8.4	☐ Yes ☐ No
M413	communication channel on TS31?	MX1 NOT MX1	M N/A	8.4	☐ Yes ☐ No
M421	communication path for P-type data on TS 16?	M1 NOT M1	M N/A	8.4	☐ Yes ☐ No
M422	communication path for P-type data on TS 15?	M1 and M412 NOT (M1 and M412)	M N/A	8.4	☐ Yes ☐ No
M423	communication path for P-type data on TS 31?	M413 NOT M413	M N/A	8.4	☐ Yes ☐ No
M431	communication path for F-type data on TS 16?	M1 NOT M1	M N/A	8.4	☐ Yes ☐ No
M432	communication path for F-type data on TS 15?	M1 and M412 NOT (M1 and M412)	M N/A	8.4	☐ Yes ☐ No
M433	communication path for F-type data on TS 31?	M413 NOT M413	M N/A	8.4	☐ Yes ☐ No
M441	communication path for D-channel signalling on TS 16?	M1 NOT M1	M N/A	8.4	☐ Yes ☐ No

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
M442	communication path for D-channel signalling on TS 15?	M1 and M412 NOT (M1 and M412)	M N/A	8.4	[] Yes [] No
M443	communication path for D-channel signalling on TS 31?	M413 NOT M413	M N/A	8.4	[] Yes [] No
M451	communication path for PSTN signalling on TS 16?	M2 NOT M2	M N/A	8.4	[] Yes [] No
M452	communication path for PSTN signalling on TS 15?	M2 and M412 NOT (M2 and M412)	M N/A	8.4	[] Yes [] No
M453	communication path for PSTN signalling on TS 31?	M2 and M413 NOT (M2 and M413)	M N/A	8.4	[] Yes [] No
M421	communication path for P-type data on TS 16?	M1 NOT M1	M N/A	8.4	[] Yes [] No
M422	communication path for P-type data on TS 15?	M1 NOT M1	M N/A	8.4	[] Yes [] No
M423	communication path for P-type data on TS 31?	M1 NOT M1	M N/A	8.4	[] Yes [] No
M431	communication path for F-type data on TS 16?	M1 NOT M1	M N/A	8.4	[] Yes [] No
M432	communication path for F-type data on TS 15?	M1 NOT M1	M N/A	8.4	[] Yes [] No
M433	communication path for F-type data on TS 31?	M1 NOT M1	M N/A	8.4	[] Yes [] No
M441	communication path for D-channel signalling on TS 16?	M1 NOT M1	M N/A	8.4	[] Yes [] No
M442	communication path for D-channel signalling on TS 15?	M1 NOT M1	M N/A	8.4	[] Yes [] No
M443	communication path for D-channel signalling on TS 31?	M1 NOT M1	M N/A	8.4	[] Yes [] No
M451	communication path for PSTN signalling on TS 16?	M2 NOT M2	M N/A	8.4	[] Yes [] No
M452	communication path for PSTN signalling on TS 15?	M2 NOT M2	M N/A	8.4	[] Yes [] No
M453	communication path for PSTN signalling on TS 31?	M1 AND M2 NOT (M1 AND M2)	M N/A	8.4	[] Yes [] No
M51	allocation of bearer channels to user ports by provisioning?	MX.4 NOT MX.4	M O	7.2.2	[] Yes [] No [] Yes [] No
M52	allocation of EFaddr to ISDN user ports by provisioning?	M1 AND MX.4 M1 AND NOT MX.4 NOT M1	M O N/A	7.2.2	[] Yes [] No [] Yes [] No
M53	allocation of L3addr to PSTN user ports by provisioning?	M2 AND MX.4 M2 AND NOT MX.4 NOT M2	M O N/A	7.2.2	[] Yes [] No [] Yes [] No
M6	envelop function?		M	9	[] Yes [] No
M7	permanent line capability?		O	6.2, 14.1	[] Yes [] No
Predicated imaginary features to main features					
MX.1	If required by the network operator		O		
MX.2	If required by the national PSTN protocol		O		
MX.3	If required by the network operator for AN with separate NT1		O		
MX.4	If not equipment for which exception has been accepted, see EN 300 324-1 [1], subclause 7.2.2, item 1)		O		
O.1 = Support of at least one of these items is required					

6.6.2 Protocol

6.6.2.1 Layer 1

Table 20

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
P1.1	layer 1 balanced?	MX.1 NOT MX.1	M N/A	4	☐ Yes ☐ No
P1.2	layer 1 coaxial?	MX.1 NOT MX.1	M N/A	4	☐ Yes ☐ No
P1.3	interface control procedures?		M	14.3	☐ Yes ☐ No
P1.4	detection of loss of signals; 1 ms below 20 dB?		O.1	14.3.2	☐ Yes ☐ No
P1.5	detection of loss of signals; 10 consecutive ZEROS?		O.1	14.3.2	☐ Yes ☐ No

O.1 = Support of at least one of these items is required.

6.6.2.2 Layer 2

Table 21

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
P2.11	frame structure for peer to peer communication?		M	9.1	☐ Yes ☐ No
P2.12	format of fields for data link envelope?		M	9.2	☐ Yes ☐ No
P2.13	envelop address value for control protocol?		M	10.3.2.3	☐ Yes ☐ No
P2.14	envelop address value for PSTN protocol?	M2 NOT M2	M N/A	10.3.2.3	☐ Yes ☐ No
P2.15	envelop address values for ISDN ports?	M1 NOT M1	M N/A	9.2.2.2	☐ Yes ☐ No
P2.2	data link sublayer of LAPV5 for control protocol?		M	10	☐ Yes ☐ No
P2.3	data link sublayer of LAPV5 for PSTN protocol?	M2 NOT M2	M N/A	10	☐ Yes ☐ No
P2.4	frame relay function in the AN	M1 NOT M1	M N/A	11	☐ Yes ☐ No

6.6.2.3 Layer 3

6.6.2.3.1 PSTN protocol

Table 22

Index	Protocol capability Does the implementation support ...	Predicate	Status	Reference	Support
P3.17	Control of time critical sequences by AN?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.1.2	☐ Yes ☐ No
P3.2	PSTN protocol entity?	M2 NOT M2	M N/A	13.2	☐ Yes ☐ No
P3.3	PSTN call control entity?	M2 NOT M2	M N/A	13.5 - 13.7	☐ Yes ☐ No
P3.4	meter pulse scheduling in the AN?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.11, 13.4.7.12	☐ Yes ☐ No

6.6.2.3.2 Control protocol

Table 23

Index	Protocol capability Does the implementation support ...	Predicate	Status	Reference	Support
P4.0	Control protocol entity?		M	14.4.4	☐ Yes ☐ No

6.6.2.3.3 Port control protocol

Table 24

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
	ISDN user port status indication and control?	M1 NOT M1	M N/A	14.1	☐ Yes ☐ No
P4.12	performance monitoring?	M1 AND MX.3 NOT (M1 AND MX.3)	M N/A	14.1.4	☐ Yes ☐ No
P4.2	PSTN user port status indication and control?	M2 NOT M2	M N/A	14.2	☐ Yes ☐ No

6.6.2.3.4 Common control

Table 25

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
P5.1	variant and interface ID control?		M	14.5	☐ Yes ☐ No
P5.2	verify re-provisioning?	MX.1 NOT MX.1	M N/A	14.5	☐ Yes ☐ No
P5.3	re-provisioning synchronization?	MX.1 NOT MX.1	M N/A	14.5	☐ Yes ☐ No

6.6.3 Protocol data units

6.6.3.1 PSTN protocol

6.6.3.1.1 Messages

Table 26

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.1	ESTABLISH?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.2	ESTABLISH ACK?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.3	SIGNAL?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.4	SIGNAL ACK?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.5	STATUS?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.6	STATUS ENQUIRY?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.7	DISCONNECT?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.8	DISCONNECT COMPLETE?	M2 NOT M2	M N/A	13.3	[] Yes [] No
U1.9	PROTOCOL PARAMETER?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.3	[] Yes [] No

6.6.3.1.2 Information elements, general

Table 27

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.10	protocol discriminator?	M2 NOT M2	M N/A	13.4.2	☐ Yes ☐ No
U1.11	layer 3 address?	M2 NOT M2	M N/A	13.4.3	☐ Yes ☐ No
U1.12	pulse notification?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.6.1	☐ Yes ☐ No
U1.13	line information?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.6.2	☐ Yes ☐ No
U1.14	state?	M2 NOT M2	M N/A	13.4.6.3	☐ Yes ☐ No
U1.15	autonomous signalling sequence?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.6.4	☐ Yes ☐ No
U1.16	sequence response?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.6.5	☐ Yes ☐ No
U1.17	sequence-number?	M2 NOT M2	M N/A	13.4.7.1	☐ Yes ☐ No
U1.18	cadenced-ringing?	M2 NOT M2	M N/A	13.4.7.2	☐ Yes ☐ No
U1.19	pulsed-signal?	M2 NOT M2	M N/A	13.4.7.3	☐ Yes ☐ No
U1.20	steady-signal?	M2 NOT M2	M N/A	13.4.7.4	☐ Yes ☐ No
U1.21	digit-signal	M2 NOT M2	M N/A	13.4.7.5	☐ Yes ☐ No
U1.22	recognition-time	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.6	☐ Yes ☐ No
U1.23	enable-autonomous-acknowledge	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.7	☐ Yes ☐ No
U1.24	disable-autonomous-acknowledge	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.8	☐ Yes ☐ No
U1.25	cause	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.26	resource-unavailable	M2 NOT M2	M N/A	13.4.7.10	☐ Yes ☐ No
U1.27	enable-metering	M2 and MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.11	☐ Yes ☐ No
U1.28	metering-report?	M2 and MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.12	☐ Yes ☐ No
U1.29	Attenuation	M2 and MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.13	☐ Yes ☐ No

6.6.3.1.3 Information elements, pulse type

Table 28

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.30	pulse type: Pulsed normal polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.31	pulse type: Pulsed reversed polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.32	pulse type: Pulsed battery on c-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.33	pulse type: Pulsed on hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.34	pulse type: Pulsed reduced battery ?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.35	pulse type: Pulsed no battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.36	pulse type: Initial ring?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.37	pulse type: Meter pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.38	pulse type: 50 Hz pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.39	pulse type: Register recall?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.40	pulse type: Pulsed off hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.41	pulse type: Pulsed b-wire connected to earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.42	pulse type: Earth loop pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.43	pulse type: Pulsed b-wire connected to battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.44	pulse type: Pulsed a-wire connected to earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.45	pulse type: Pulsed a-wire connected to battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.46	pulse type: Pulsed c-wire connected to earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.47	pulse type: Pulsed c-wire disconnected?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.48	pulse type: Pulsed normal battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	[] Yes [] No
U1.49	pulse type: Pulsed a-wire disconnected?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	[] Yes [] No
U1.50	pulse type: Pulsed b-wire disconnected?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	[] Yes [] No

6.6.3.1.4 Information elements, steady signals

Table 29

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.51	steady signal: Normal polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.52	steady signal: Reversed polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.53	steady signal: Battery on c-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.54	steady signal: No battery on c-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.55	steady signal: Off hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.56	steady signal: On hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.57	steady signal: Battery on a-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.58	steady signal: A-wire on earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.59	steady signal: No battery on a-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.60	steady signal: No battery on b-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.61	steady signal: Reduced battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.62	steady signal: No battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.63	steady signal: Alternate reduced power/no power?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.64	steady signal: Normal battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.65	steady signal: Stop ringing?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.66	steady signal: Start pilot frequency?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.67	steady signal: Stop pilot frequency?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.68	steady signal: Low impedance on b-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.69	steady signal: B-wire connected to earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.70	steady signal: B-wire disconnected from earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.71	steady signal: Normal battery on b-wire?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.72	steady signal: Low loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.73	steady signal: High loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.74	steady signal: Anomalous loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.75	steady signal: A-wire disconnected from earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.76	steady signal: C-wire on earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.77	steady signal: C-wire disconnected from earth?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.97	steady signal: Signal: Ramp to Reversed Polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No
U1.98	steady signal: Signal: Ramp to Normal Polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	[] Yes [] No

6.6.3.1.5 Information elements, cause types

Table 30

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.78	cause type: Response to status enquiry?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.79	cause type: Protocol discriminator error?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.80	cause type: L3 address error?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.81	cause type: Message type unrecognized?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.82	cause type: Out of sequence information element?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.83	cause type: Repeated optional information element?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.84	cause type: Mandatory information element missing?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.85	cause type: Unrecognized information element?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.86	cause type: Mandatory information element content error?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.87	cause type: Optional information element content error?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.88	cause type: Message not compatible with state?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.89	cause type: Repeated mandatory information element?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No
U1.90	cause type: Too many information elements?	M2 NOT M2	M N/A	13.4.7.9	☐ Yes ☐ No

6.6.3.1.6 Information elements, information element fields

Table 31

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.91	suppression indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.92	acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	☐ Yes ☐ No
U1.93	suppression indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.7	☐ Yes ☐ No
U1.94	acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.7	☐ Yes ☐ No
U1.95	digit acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.5	☐ Yes ☐ No
U1.96	repetition indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.11	☐ Yes ☐ No

6.6.3.2 Control protocol

6.6.3.2.1 Messages

Table 32

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U2.1	common control and port control messages?		M	14.4.1	☐ Yes ☐ No

6.6.3.2.2 Information elements, general

Table 33

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U2.5	protocol discriminator?		M	14.4.2.2	☐ Yes ☐ No
U2.6	layer 3 addresses?		M	14.4.2.3	☐ Yes ☐ No

6.6.3.2.3 Information elements, port control

Table 34

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U3.1	FE101 activate access?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U3.2	FE102 activation initiated by user?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U3.3	FE103 DS activated?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U3.4	FE104 access activated?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U3.5	FE105 deactivate access?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U3.6	FE106 access deactivated?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U4.1	FE201/202 unblock?		M	14.4.2.5.4	☐ Yes ☐ No
U4.2	FE203/204 block?		M	14.4.2.5.4	☐ Yes ☐ No
U4.3	FE205 block request?		M	14.4.2.5.4	☐ Yes ☐ No
U5.1	FE206 performance grading?	M1 AND MX.3 NOT (M1 AND MX.3)	M N/A	14.4.2.5.4	☐ Yes ☐ No
U5.2	FE207 D-channel block?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No
U5.3	FE208 D-channel unblock?	M1 NOT M1	M N/A	14.4.2.5.4	☐ Yes ☐ No

6.6.3.2.4 Information elements, common control

Table 35

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U6.1	verify re-provisioning?	P5.2 NOT P5.2	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.2	ready for re-provisioning?	P5.2 OR P5.3 NOT (P5.2 OR P5.3)	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.3	not ready for re-provisioning?	P5.2 OR P5.3 NOT (P5.2 OR P5.3)	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.4	switch-over to new variant?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.5	re-provisioning started?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.6	cannot re-provision?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.7	request variant and interface ID?		M	14.4.2.5.5	☐ Yes ☐ No
U6.8	variant and interface ID?		M	14.4.2.5.5	☐ Yes ☐ No
U6.9	blocking started?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	☐ Yes ☐ No
U6.10	restart?		M	14.4.2.5.5	☐ Yes ☐ No
U6.11	restart acknowledge?		M	14.4.2.5.5	☐ Yes ☐ No

Annex A (informative): Instructions for completing the PICS proforma

A.1 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 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.

The SCS as defined in ISO/IEC 9646-1 [2] is a document supplied by the client or product supplier that summarizes which OSI International Standards, ITU-T (CCITT) Recommendations, ENs or other standards are implemented and to which conformance is claimed. The PICS/SCS subclause should describe the relationship of the PICS to the SCS.

A.2 Global statement of conformance

If the answer to the statement in this subclause is "Yes", all subsequent subclauses should be completed to facilitate selection of test cases for optional functions.

If the answer to the statement in this subclause is "No", all subsequent subclauses should be completed, and all non-supported mandatory capabilities should be identified and explained.

A.3 Main features

Each question in this subclause refers to a major function of the protocol which requires clarification in the PICS. Answering "Yes" to a particular question states that the implementation supports all the mandatory procedures for that function defined in the referenced subclauses of the respective standard(s). Answering "No" to a particular question in this subclause states that the implementation does not support that function of the protocol. Some of these items are optional and in some cases the option is dependent on the implementation of other items. In these cases, if the invoking capability is supported, the ability to support the item is mandatory. These conditions are made clear in the text of each item.

When an item is not applicable (Status = N/A) the support column shall be left blank.

A.4 Protocol

Indicating support for an item in this subclause states that the implementation has the capability to support the protocol provisions that may exist.

A.5 Protocol data units

Indicating support for an item in this subclause states that the implementation has the capability to support the protocol provisions that may exist.

History

Document history		
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V1.2.3	June 1999	Publication
V2.1.1	December 1999	One-step Approval Procedure OAP 200014: 1999-12-08 to 2000-04-07