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

**ETSI**

European Telecommunications Standards Institute

**ETSI Secretariat**

**Postal address:** F-06921 Sophia Antipolis CEDEX - FRANCE

**Office address:** 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE

**X.400:** c=fr, a=atlas, p=etsi, s=secretariat - **Internet:** secretariat@etsi.fr

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

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## Foreword

This European Telecommunication Standard (ETS) has been produced by the Signalling Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS is part 2 of a multi-part standard covering the V5.1 interface specification as described below:

Part 1: V5.1 interface specification;

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

Part 3: Test Suite Structure and Test Purposes (TSS&TP).

NOTE 1: At the time of publication of this ETS, the final structure of further part(s) and/or separate ETS(s) containing the test specifications was still under study.

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 2: It is however possible to use this ETS 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.

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## 1 Scope

This second part of ETS 300 324 defines the Protocol Implementation Conformance Statement (PICS) proforma for the implementation flexibility allowed for a V5.1 interface defined in ETS 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.

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

## 2 Normative references

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

- [1] ETS 300 324-1 (1993): "Signalling Protocols and Switching (SPS); V interfaces at the digital Local Exchange (LE); V5.1 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 this ETS, the following definitions apply:

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

**Static conformance review:** a 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 this ETS, 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 ETS 300 324-1 [1] is required to complete a copy of the PICS proforma provided in this ETS 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 this ETS, ETSI grants that users of this ETS 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:

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IUT version:

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#### 6.1.2 System Under Test (SUT) identification

SUT name:

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Hardware configuration:

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Operating system:

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#### 6.1.3 Product supplier

Name:

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Address:

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---

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Telephone number:

---

Facsimile number:

---

Additional information:

---

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**6.1.4 Client**

Name:

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Address:

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---

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Telephone number:

---

Facsimile number:

---

Additional information:

---

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**6.1.5 PICS contact person**

Name:

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Telephone number:

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Facsimile number:

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Additional information:

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**6.2 PICS/System Conformance Statement (SCS)**

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

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**6.3 Identification of the protocol**

This PICS proforma applies to the following standard:

**ETS 300 324-1 (1994):** "Signalling Protocols and Switching (SPS); V interfaces at the digital Local Exchange (LE); V5.1 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 ETS 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
M2	PSTN ports?		O.1	6.1.1	<input type="checkbox"/> Yes <input type="checkbox"/> No
M3	semipermanent leased lines?		O	6.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
M4	communication channel time slot allocation?		M	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M41	communication path for control functions on TS 16?		M	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M421	communication path for P-type data on TS 16?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M422	communication path for P-type data on TS 15?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M423	communication path for P-type data on TS 31?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M431	communication path for F-type data on TS 16?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M432	communication path for F-type data on TS 15?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M433	communication path for F-type data on TS 31?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M441	communication path for D-channel signalling on TS 16?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M442	communication path for D-channel signalling on TS 15?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M443	communication path for D-channel signalling on TS 31?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M451	communication path for PSTN signalling on TS 16?	M2 NOT M2	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M452	communication path for PSTN signalling on TS 15?	M2 NOT M2	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M453	communication path for PSTN signalling on TS 31?	M1 AND M2 NOT (M1 AND M2)	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M51	allocation of bearer channels to user ports by provisioning?		M	7.2.2	<input type="checkbox"/> Yes <input type="checkbox"/> No
M52	allocation of EFaddr to ISDN user ports by provisioning?	M1 NOT M1	M N/A	7.2.2	<input type="checkbox"/> Yes <input type="checkbox"/> No
M53	allocation of L3addr to PSTN user ports by provisioning?	M2 NOT M2	M N/A	7.2.2	<input type="checkbox"/> Yes <input type="checkbox"/> No
M6	envelop function?		M	9	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Predicated imaginary features</b>					
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	<input type="checkbox"/> Yes <input type="checkbox"/> No
P1.2	layer 1 coaxial?	MX.1 NOT MX.1	M N/A	4	<input type="checkbox"/> Yes <input type="checkbox"/> No
P1.3	interface control procedures?		M	14.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
P1.4	detection of loss of signals; 1 ms below 20 dB?		O.1	14.3.2	<input type="checkbox"/> Yes <input type="checkbox"/> No
P1.5	detection of loss of signals; 10 consecutive ZEROs?		O.1	14.3.2	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
P2.12	format of fields for data link envelop?		M	9.2	<input type="checkbox"/> Yes <input type="checkbox"/> No
P2.13	envelop address value for control protocol?		M	10.3.2.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
P2.14	envelop address value for PSTN protocol?	M2 NOT M2	M N/A	10.3.2.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
P2.15	envelop address values for ISDN ports?	M1 NOT M1	M N/A	9.2.2.2	<input type="checkbox"/> Yes <input type="checkbox"/> No
P2.2	data link sublayer of LAPV5 for control protocol?		M	10	<input type="checkbox"/> Yes <input type="checkbox"/> No
P2.3	data link sublayer of LAPV5 for PSTN protocol?	M2 NOT M2	M N/A	10	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
P3.12	tone generators?	M2 NOT M2	M N/A	13.1.2	<input type="checkbox"/> Yes <input type="checkbox"/> No
P3.13	announcement?	M2 NOT M2	M N/A	13.1.2	<input type="checkbox"/> Yes <input type="checkbox"/> 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 synchronisation?	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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.2	ESTABLISH ACK?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.3	SIGNAL?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.4	SIGNAL ACK?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.5	STATUS?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.6	STATUS ENQUIRY?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.7	DISCONNECT?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.8	DISCONNECT COMPLETE?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.9	PROTOCOL PARAMETER?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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



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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.31	pulse type: Pulsed reversed polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.33	pulse type: Pulsed on hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.34	pulse type: Pulsed reduced battery ?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.35	pulse type: Pulsed no battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.36	pulse type: Initial ring?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.37	pulse type: Meter pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.38	pulse type: 50 Hz pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.39	pulse type: Register recall?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.40	pulse type: Pulsed off hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.42	pulse type: Earth loop pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.48	pulse type: Pulsed normal battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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
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

Table 12 (concluded)

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
U1.73	steady signal: High loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.74	steady signal: Anomalous loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.79	cause type: Protocol discriminator error?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.80	cause type: L3 address error?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.81	cause type: Message type unrecognized?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.82	cause type: Out of sequence information element?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.83	cause type: Repeated optional information element?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.84	cause type: Mandatory information element missing?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.85	cause type: Unrecognized information element?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.86	cause type: Mandatory information element content error?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.87	cause type: Optional information element content error?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.88	cause type: Message not compatible with state?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.89	cause type: Repeated mandatory information element?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.90	cause type: Too many information elements?	M2 NOT M2	M N/A	13.4.7.9	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.92	acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.93	suppression indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.7	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.94	acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.7	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.95	digit acknowledge request indicator?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.5	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U2.6	layer 3 addresses?		M	14.4.2.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U6.4	switch-over to new variant?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	<input type="checkbox"/> Yes <input type="checkbox"/> No
U6.5	re-provisioning started?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	<input type="checkbox"/> Yes <input type="checkbox"/> No
U6.6	cannot re-provision?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	<input type="checkbox"/> Yes <input type="checkbox"/> No
U6.7	request variant and interface ID?		M	14.4.2.5.5	<input type="checkbox"/> Yes <input type="checkbox"/> No
U6.8	variant and interface ID?		M	14.4.2.5.5	<input type="checkbox"/> Yes <input type="checkbox"/> No
U6.9	blocking started?	P5.3 NOT P5.3	M N/A	14.4.2.5.5	<input type="checkbox"/> Yes <input type="checkbox"/> No
U6.10	restart?		M	14.4.2.5.5	<input type="checkbox"/> Yes <input type="checkbox"/> No
U6.11	restart acknowledge?		M	14.4.2.5.5	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
M2	PSTN ports?		O.1	6.1.1	<input type="checkbox"/> Yes <input type="checkbox"/> No
M3	semipermanent leased lines?		O	6.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
M4	communication channel time slot allocation?		M	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M41	communication path for control functions on TS 16?		M	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M421	communication path for P-type data on TS 16?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M422	communication path for P-type data on TS 15?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M423	communication path for P-type data on TS 31?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M431	communication path for F-type data on TS 16?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M432	communication path for F-type data on TS 15?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M433	communication path for F-type data on TS 31?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M441	communication path for D-channel signalling on TS 16?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M442	communication path for D-channel signalling on TS 15?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M443	communication path for D-channel signalling on TS 31?	M1 NOT M1	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M451	communication path for PSTN signalling on TS 16?	M2 NOT M2	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M452	communication path for PSTN signalling on TS 15?	M2 NOT M2	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M453	communication path for PSTN signalling on TS 31?	M1 AND M2 NOT (M1 AND M2)	M N/A	8.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
M51	allocation of bearer channels to user ports by provisioning?	MX.4 NOT MX.4	M O	7.2.2	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
M6	envelop function?		M	9	<input type="checkbox"/> Yes <input type="checkbox"/> No
M7	permanent line capability?		O	6.2, 14.1	<input type="checkbox"/> Yes <input type="checkbox"/> No

Table 19 (concluded)

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
	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 ETS 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 envelop?		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	<input type="checkbox"/> Yes <input type="checkbox"/> No
P3.2	PSTN protocol entity?	M2 NOT M2	M N/A	13.2	<input type="checkbox"/> Yes <input type="checkbox"/> No
P3.3	PSTN call control entity?	M2 NOT M2	M N/A	13.5 - 13.7	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No

6.6.2.3.3 Port control protocol

Table 24

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	<input type="checkbox"/> Yes <input type="checkbox"/> No
P4.12	performance monitoring?	M1 AND MX.3 NOT (M1 AND MX.3)	M N/A	14.1.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
P4.2	PSTN user port status indication and control?	M2 NOT M2	M N/A	14.2	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
P5.2	verify re-provisioning?	MX.1 NOT MX.1	M N/A	14.5	<input type="checkbox"/> Yes <input type="checkbox"/> No
P5.3	re-provisioning synchronisation?	MX.1 NOT MX.1	M N/A	14.5	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.2	ESTABLISH ACK?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.3	SIGNAL?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.4	SIGNAL ACK?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.5	STATUS?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.6	STATUS ENQUIRY?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.7	DISCONNECT?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.8	DISCONNECT COMPLETE?	M2 NOT M2	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.9	PROTOCOL PARAMETER?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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

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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.31	pulse type: Pulsed reversed polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.33	pulse type: Pulsed on hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.34	pulse type: Pulsed reduced battery ?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.35	pulse type: Pulsed no battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.36	pulse type: Initial ring?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.37	pulse type: Meter pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.38	pulse type: 50 Hz pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.39	pulse type: Register recall?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.40	pulse type: Pulsed off hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.42	pulse type: Earth loop pulse?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.48	pulse type: Pulsed normal battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.3	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.52	steady signal: Reversed polarity?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.55	steady signal: Off hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.56	steady signal: On hook?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.61	steady signal: Reduced battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.62	steady signal: No battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.64	steady signal: Normal battery?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.65	steady signal: Stop ringing?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.66	steady signal: Start pilot frequency?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.67	steady signal: Stop pilot frequency?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
U1.72	steady signal: Low loop impedance?	M2 AND MX.2 NOT (M2 AND MX.2)	M N/A	13.4.7.4	<input type="checkbox"/> Yes <input type="checkbox"/> No

Table 29 (concluded)

Index	Protocol capability Does the implementation support ...	Conditions for status	Status	Reference	Support
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

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

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, ETSs 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 dependant 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.

### **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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December 1995	Converted into Adobe Acrobat Portable Document Format (PDF)