

INTERNATIONAL
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**Information technology — International
Standardized Profiles TB, TC, TD and
TE — Connection-mode Transport Service
over connection-mode Network Service —**

Part 25:

Subnetwork-type dependent requirements for
Q.931 circuit-switched operation

*Technologies de l'information — Profils normalisés internationaux TB, TC,
TD et TE — Service de transport en mode connexion sur service de
réseau en mode connexion —*

*Partie 25: Prescriptions dépendantes du type de sous-réseau pour la
couche réseau pour une opération commutée à un circuit Q.931*



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Contents

Page

Foreword	iii
Introduction	vi
1 Scope	1
2 Normative references	1
3 Definitions	1
4 Abbreviations	2
5 Subnetwork-type dependent requirements for Network Layer	2
5.1 Static conformance requirements	2
5.2 Dynamic conformance requirements	2
Annex A: ISPICS requirements list	4
A.1 Introduction	4
A.2 Notation	4
A.3 IPRL for CCITT Q.931	5
Annex B: Assumed base standard PICS proforma	7
B.1 Introduction	7
B.2 Q.931 PICS proforma, basic rate	13
B.3 Q.931 PICS proforma, primary rate	42

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. In addition to developing International Standards, ISO/IEC JTC 1 has created a Special Group on Functional Standardization for the processing of International Standardized Profiles.

An International Standardized Profile is an internationally agreed, harmonized document which identifies a standard or group of standards, together with options and parameters, necessary to accomplish a function or set of functions.

Draft International Standardized Profiles are circulated to national bodies for voting. Publication as an International Standardized Profile requires approval by at least 75% of the national bodies casting a vote.

International Standardized Profile ISO/IEC ISP 10609-25 was prepared with the collaboration of

- Asia-Oceania Workshop (AOW);
- European Workshop for Open Systems (EWOS);
- Open Systems Environment Implementors' Workshop (OIW).

ISO/IEC ISP 10609 consists of the following parts, under the general title *Information technology - International Standardized Profiles TB, TC, TD and TE - Connection-mode Transport Service over connection-mode Network Service*:

Part 1: Subnetwork-type independent requirements for Group TB

Part 2: Subnetwork-type independent requirements for Group TC

Part 3: Subnetwork-type independent requirements for Group TD

Part 4: Subnetwork-type independent requirements for Group TE

Part 5: Definition of profiles TB1111/TB1121

Part 6: Definition of profiles TC1111/TC1121

Part 7: Definition of profiles TD1111/TD1121

Part 8: Definition of profiles TE1111/TE1121

Part 9: Subnetwork-type dependent requirements for Network Layer, Data Link Layer and Physical Layer concerning permanent access to a packet switched data network using virtual calls

Part 10: LAN subnetwork-dependent, media-independent requirements

Part 11: CSMA/CD LAN subnetwork-dependent, media-dependent requirements

Part 12: Definition of profile TC51, provision of the OSI connection-mode Transport Service using the OSI connection-mode Network Service in an End System attached to a CSMA/CD LAN

Part 14: Definition of profile TC53, provision of the OSI connection-mode Transport Service using the OSI connection-mode Network Service in an End System attached to a Token Ring LAN

Part 15: Definition of profile TC54, provision of the OSI connection-mode Transport Service using the OSI connection-mode Network Service in an End System attached to an FDDI LAN

Part 20: Overview of the generalized multi-part ISP structure for TC and TD Group profiles for OSI usage of ISDN

Part 21: Subnetwork-type dependent requirements for Network Layer and Data Link Layer for ISDN B-channel X.25 DTE to DTE operation

Part 22: Subnetwork-type dependent requirements for Network Layer and Data Link Layer for ISDN B-channel X.25 DTE to DCE operation

Part 23: Subnetwork-type dependent requirements for Network Layer and Data Link Layer for Data Transfer concerning a packet switched mode Integrated Services Digital Network using virtual calls: B-channel access case

Part 24: Subnetwork-type dependent requirements for Network Layer and Data Link Layer for Data Transfer concerning a packet switched mode Integrated Services Digital Network using virtual calls: D-channel access case

Part 25: Subnetwork-type dependent requirements for Q.931 circuit-switched operation

Part 26: Subnetwork-type dependent requirements for Network Layer for Call Control procedures concerning the outgoing call of a packet switched mode Integrated Services Digital Network in case B using virtual calls

Part 27: Subnetwork-type dependent requirements for Network Layer for Call Control procedures concerning the incoming call of a packet switched mode Integrated Services Digital Network in case B using virtual calls

Part 28: Subnetwork-type dependent requirements for Data Link Layer for end systems attached to an ISDN subnetwork

Part 30: Definition of profile TC1131

Part 31: Definition of profile TC1231

Part 32: Definition of profile TC4111

Part 33: Definition of profile TC4211

Part 34: Definition of profile TC43111

Part 35: Definition of profile TC43112

Part 36: Definition of profile TC43211

Part 37: Definition of profile TC43212

Part 38: Definition of profile TC4331

Part 40: Definition of profile TD1131

Part 41: Definition of profile TD1231

Part 42: Definition of profile TD4111

Part 43: Definition of profile TD4211

Part 44: Definition of profile TD43111

Part 45: Definition of profile TD43112

Part 46: Definition of profile TD43211

Part 47: Definition of profile TD43212

Part 48: Definition of profile TD4331

Annexes A and B form an integral part of this part of ISO/IEC ISP 10609.

Introduction

This International Standardized Profile (ISP) is defined in accordance with the principles specified by ISO/IEC Technical Report 10000, "Information technology - Framework and taxonomy of International Standardized Profiles".

The context of Functional Standardization is one area in the overall field of Information Technology (IT) standardization activities, covering base standards, profiles, and registration mechanisms. A profile defines a combination of base standards that collectively perform a specific well-defined IT function. Profiles standardize the use of options and other variations in the base standards, and provide a base for the development of uniform, internationally recognized system tests.

ISPs are produced not simply to "legitimize" a particular choice of base standards and options, but to promote real system interoperability. One of the most important roles for an ISP is to serve as the basis for the development (by organizations other than ISO and IEC) of internationally recognized test methods. The development and widespread acceptance of tests based on this and other ISPs is crucial to the successful realization of this goal.

ISO/IEC ISP 10609 consists of several parts of which this is part 25. This part of ISO/IEC ISP 10609 specifies subnetwork-dependent requirements. There are further parts which specify profile requirements that are subnetwork-independent. In addition, for each individual profile there is a part of ISO/IEC ISP 10609 which identifies the specific requirements of that profile, making reference to appropriate material from parts 2 or 3, and from the subnetwork dependent parts of ISO/IEC ISP 10609.

Information technology — International Standardized Profiles TB, TC, TD and TE — Connection-mode Transport Service over connection-mode Network Service —

Part 25:

Subnetwork-type dependent requirements for Q.931 circuit-switched operation

1 Scope

ISO/IEC ISP 10609 is applicable to end systems concerned with operating in the Open Systems Interconnection (OSI) environment. It specifies a combination of OSI standards, which collectively provide the connection-mode Transport Service using the connection-mode Network Service.

This part of ISO/IEC ISP 10609 specifies the requirements for Network Layer that apply specifically to configurations involving access to an ISDN subnetwork using a circuit-mode bearer service.

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP 10609. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this part of ISO/IEC ISP 10609 are warned against automatically applying any more recent editions of the documents listed below, since the nature of references made by ISPs to such documents is that they may be specific to a particular edition. Members of IEC and ISO maintain registers of currently valid International Standards and ISPs, and ITU-T maintains published editions of its current Recommendations.

CCITT Rec. Q.930 (1988), *ISDN User-network Interface Layer 3 - General Aspects*.

CCITT Rec. Q.931 (1988), *ISDN User-network Interface Layer 3 Specification for Basic Call Control*.

3 Definitions

The terms used in this part of ISO/IEC ISP 10609 are defined in the referenced base standards (see clause 2).

4 Abbreviations

The following abbreviations are used in this part of ISO/IEC ISP 10609:

AEF	Address Extension Facility
BCD	Binary Coded Decimal
DCE	Data Circuit-terminating Equipment
DTE	Data Terminating Equipment
HIC	Highest Incoming Channel
HOC	Highest Outgoing Channel
HTC	Highest Two-way Channel
LIC	Lowest Incoming Channel
LOC	Lowest Outgoing Channel
LTC	Lowest Two-way Channel
LAPB	Link Access Protocol Balanced
NSAP	Network Service Access Point
OSI	Open Systems Interconnection
SABM	Set Asynchronous Balanced Mode
SABME	Set Asynchronous Balanced Mode Extended
VC	Virtual Call
XID	eXchange Identification

5 Subnetwork-type dependent requirements for Network Layer

5.1 Static conformance requirements

5.1.1 Overall requirements

An implementation conforming to this part of ISO/IEC ISP 10609 shall:

- (a) meet the static conformance requirements in accordance with CCITT Q.931 (and detailed in the Q.931 PICS proforma) and provide OSI Network Service;
- (b) comply with the additional static conformance requirements for CCITT Q.931 in 5.1.2 below and as described in ISO/IEC 9574;
- (c) implement all the features identified as requirements in the ISPICS Requirements List in Annex A.

5.1.2 Additional static conformance requirements

The additional static conformance requirements are defined in the IPRL in Annex A.3.

5.2 Dynamic conformance requirements

5.2.1 Overall requirements

An implementation conforming to this part of ISO/IEC ISP 10609 shall:

- (a) implement the Protocol procedures as described in CCITT Q.931;
- (b) meet the additional dynamic conformance requirements for CCITT Q.931 in 5.2.2 below;
- (c) behave in accordance with the requirements of the ISPICS Requirements List in Annex A.

5.2.2 Additional dynamic conformance requirements

Additional requirements other than clause A.3 are specified as follows:

- a) Encoding of the field values of Information elements;
The value of the field "Coding Standard" in the following information elements shall be encoded as the "CCITT standardized coding."

Information elements

Cause, Call state, Channel Identification and Progress indicator.

- b) Treatment of the field values of Information elements:
On the receipt of the following information elements, the field "Coding Standard" encoded as "CCITT standardized coding" shall be accepted.

Information elements

Cause, Call state, Channel Identification and Progress indicator.

Annex A (normative)

ISPICS requirements list

A.1 Introduction

The IPRLs in this annex specify requirements for implementation of the Network Layer.

Network Layer IPRL in clause A.3 specifies the additional requirements for CCITT Q.931 PICS Proforma. The requirements of the CCITT Q.931 PICS Proforma apply to each item for which there is no entry in the IPRL (clause A.3).

These IPRLs specify subnetwork-type dependent requirements for an end system attached to an ISDN subnetwork using a circuit-mode bearer service.

A conforming implementation shall satisfy the mandatory conformance requirements of the base standards referenced in this part of ISO/IEC ISP 10609.

A.2 Notation

The following symbols are used to identify the capabilities to be supported by a conforming implementation:

a) Base Standard Status Notation

M	mandatory
O	optional
C	conditional
cp <n>	If the capability <n> stated in the predicate list is supported, then the support of the capability under question is "Optional". Otherwise (i.e., if the capability <n> stated in the predicate list is not supported), then the support of the capability under question is "Not Applicable N/A".
sp <n>	If the capability <n> stated in the predicate list is supported, then the support of the capability under question is "Mandatory". Otherwise (i.e., if the capability <n> stated in the predicate list is not supported), then the support of the capability under question is "Not Applicable N/A".

b) IPRL Status Notation

The Status column of Profile features is entered using the one character or the two character notation. The one character notation indicates the static conformance requirements only. For the two character notation, the first character indicates the static conformance requirements and the second indicates the dynamic conformance requirements.

1) Static

- m mandatory, mandatory to be implemented
o optional, optional to be implemented
o.<n> optional, but at least one of the group of options labelled by the same numeral <n> is required
i out of scope, not relevant to this part of ISO/IEC ISP 10609

2) Dynamic

- m mandatory, mandatory to be used
x excluded, prohibited to be used in the context of this part of ISO/IEC ISP 10609.

A.3 IPRL for CCITT Q.931

Base Standard Features				
Major Capabilities (MC)				
Item	Name of item	Status	Predicate	Reference
MC 1.5	interpret in-band information sent from the network on outgoing calls?	O	cp 1	5.1.2, 5.1.3, 5.1.7, 5.4
MC 1.7	generate local tones and local alerting indications?	O	cp 1	5.1.2, 5.1.7
MC 2.4	send in-band information on incoming calls?	O	cp 2	5.2.6
MC 6	support call rearrangement procedures (for the coincidence of S and T interfaces only)?	O		5.6
MC 4.1	wait for the network to send a RELEASE message on the receipt of a DISCONNECT message with Progress indicator information element #8?	O	cp 2	5.3.4.1
MC 4.2	respond with a RELEASE message on the receipt of a DISCONNECT message with Progress indicator information element #8?	O	cp 2	5.3.4.1
MC 12	support procedures for establishment of bearer connection prior to call acceptance?	O		Annex N
MC 15	support procedures for bearer service change?	O		Annex O

Profile Features	
ISP reference	Status
	ox
	ox
	ox
	ox
	ox
	ox
	ox

Base Standard Features					Profile features	
Supported Messages (Message Structure)						
Item	Name of item	Status	Direction	Reference	ISP reference	Status
MS 1	Alerting					
MS 1.6	Signal?	O	NW to User			ox Note 1
MS 4	Connect					
MS 4.6	Signal?	O	NW to User			ox Note 1
MS 5	Connect acknowledge					
MS 5.4	Signal?	O	NW to User			ox Note 1
MS 6	Disconnect					
MS 6.4	Progress Indicator?	O	Both			ox Note 1
MS 6.6	Signal?	O	NW to User			ox Note 1
MS 8	Information					
MS 8.6	Signal?	O	NW to User			ox Note 1
MS 11	Release					
MS 11.5	Signal?	O	NW to User			ox Note 1
MS 12	Release complete					
MS 12.5	Signal?	O	NW to User			ox Note 1
MS 19	Setup					
MS 19.11	Signal?	O	NW to User			ox Note 1
MS 20	Setup acknowledge					
MS 20.5	Signal?	O	NW to User			ox Note 1
Implemented Information Elements : Bearer Capability - Transmission						
BT3.2	Octet 3 bit 6 and 7			4.5.5		
	Coding, CCITT	O				mm

NOTE 1 - For reception, this IE shall be ignored (as if it did not appear in the message), if present.

Base Standard Features				Profile Features	
Information Element Structure					
Item	Name of item	Reference	Status	ISP reference	Status
IS 1	Bearer Capability				
IS 1.2	information transfer capability, 2. Unrestricted digital transfer mode, 1. Circuit		O	5.1.2	mm
IS 1.3			O	5.1.2	mm
IS 1.4			O	5.1.2	mm
IS 1.10	Octet 5, user information layer 1 protocol		O	5.1.2	ox
IS 1.30	Octet 6, user information layer 2 protocol		O	5.1.2	ox
IS 1.31	Octet 7, user information layer 3 protocol		O	5.1.2	ox

Annex B¹ (normative)

Assumed base standard PICS proformas

B.1 Introduction

This annex contains the PICS proforma information for the base standard, CCITT Q.931, which does not yet have an internationally stable PICS proforma.

B.1.1 Purpose

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 OSI protocol. Such a statement is called a Protocol Implementation Conformance Statement (PICS).

B.1.2 Scope

Annex B.2 provides the PICS proforma for the Basic Rate ISDN Network Layer protocol (Basic Rate Interface, User side, circuit mode, on demand case) as specified in CCITT Recommendation Q.931 in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-2.

Annex B.3 provides the PICS proforma for the Primary Rate ISDN Network Layer protocol (Primary Rate Interface, User side, circuit mode, on demand case) as specified in CCITT Recommendation Q.931 in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-2.

It is however clarified that the packet interworking (section 6 of Recommendation Q.931) and the user-to-user signalling (section 7 of Recommendation Q.931) are excluded from the present PICS proforma.

B.1.3 Normative references

- ISO/IEC 9646-1:1994, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts*.
(see also ITU-T Recommendation X.290 (1995)).
- ISO/IEC 9646-2:1994, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification*.
(see also ITU-T Recommendation X.291 (1995)).
- CCITT Recommendation Q.931:1988, *Digital Subscriber Signalling System No. 1, Network Layer, ISDN User-Network Interface Layer 3 Specification for Basic Call Control*.

¹ Copyright release for PICS proformas.

Users of this International Standardized Profile may freely reproduce the PICS proforma in this annex so that it can be used for its intended purpose and may further freely publish the completed PICS.

B.1.4 Definitions

The PICS proforma in this annex uses the following terms defined in ISO/IEC 9646-1:

1. A Protocol Implementation Conformance Statement (PICS) is a statement made by the supplier of an OSI implementation or system, stating which capabilities have been implemented for a given OSI protocol.
2. A PICS proforma is 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.
3. A static conformance review is a review of the extent to which the static conformance requirements are met by the IUT, accomplished by comparing the PICS with the static conformance requirements expressed in the relevant CCITT Recommendation(s).

B.1.5 Symbols and conventions

M	Mandatory requirement (to be observed in all cases).
C	Conditional requirement (to be observed if the relevant conditions apply).
O	Option (may be selected to suit the implementation, provided that any requirements applicable to the option are observed).
O.<n>	Options, but support is required for either at least one or only one of the options in the group labelled by the same numeral <n>.
IUT	Implementation under test.
SUT	System under test.
SCS	System conformance statement.
N/A	Not applicable.
NW	Network.
Yes	Supported.
No	Not supported.
cp <n>	Completion predicate - If the Major Capability <n> stated in the predicate list is supported, then the support of this capability is optional. Otherwise the support of the capability is N/A.
sp <n>	Status predicate - If the Major Capability <n> stated in the predicate list is supported, then the support of this capability is Mandatory. Otherwise the support of the capability is N/A.

B.1.6 Conformance

The supplier of a protocol implementation which is claimed to conform to CCITT Recommendation Q.931 is required to complete a copy of the PICS proforma provided in the following sections and is required to provide the information necessary to identify both the supplier and the implementation.

B.1.7 Instructions for completing the PICS proforma**Identification of the implementation**

Identification of the Implementation Under test (IUT) and the system in which it resides (the System Under Test, or SUT) should be filled out 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 out if they are not one and the same.

A person who can answer queries regarding information supplied in the PICS should be named in the contact person section.

The System Conformance Statement (SCS) as defined in ISO/IEC 9646-1 is a document supplied by the client or product supplier that summarises which OSI International Standards or CCITT Recommendations are implemented and to which conformance is claimed. The PICS/SCS section should describe the relationship of the PICS to the SCS.

Global statement of conformance

If the answer to the statement in this section is 'Yes', all subsequent sections shall be completed to facilitate selection of test cases for optional functions.

If the answer to the statement in this section is 'No', all subsequent sections should be completed, and all non-supported mandatory capabilities shall be identified and explained in the Comments section of each table.

Major capabilities

Each question in this section refers to a major function of the protocol. Answering 'Yes' to a particular question states that the implementation supports all the mandatory procedures for that function defined in the referenced sections of the Recommendation. Answering 'No' to particular question in this section states that the implementation does not support that function of the protocol.

Subsidiary capabilities

Indicating support for an item in this section states that the implementation has the ability to support other functions of the protocol beyond the major ones.

Call states

Indicating support for an item in this section states that the implementation has the capability to support the call states that may exist on the user-side of the user-network interface. The status of some call states is conditional based on whether or not a major capability is supported.

Supported messages received by the IUT

Indicating support for an item in this section states that the implementation has the ability to recognise and interpret the message listed in that item. The status of some messages is conditional based on whether or not a major capability is supported. The table also provides the identity value of each message in decimal notation.

Supported messages transmitted by the IUT

Indicating support for an item in this section states that the implementation has the ability of transmitting the message listed in that item. The status of some messages is conditional based on whether or not a major capability is supported. The table also provides the identity value of each message in decimal notation.

Message structure

Indicating support for an item in this section states that the implementation has the ability to support the message structures described in terms of the information elements to be included and the direction in which the message is sent. Some of these items may be optionally included.

Information elements received by the IUT

Indicating support for an item in this section states that the implementation has the ability to recognise and interpret the information elements contained in the received messages. The status of some information elements is conditional based on whether or not a major capability is supported. The tabulation indicates the length of the information element and its identity value in decimal notation.

Information elements transmitted by the IUT

Indicating support for an item in this section states that the implementation has the ability of transmitting the information elements listed in the items, contained in the transmitted messages. The status of some information elements is conditional based on whether or not a major capability is supported. The tabulation indicates the length of the information element and its identity value in decimal notation.

Information elements structure

Indicating support for an item in this section states that the implementation has the ability to support the contents of the main information elements, particularly those which affect interworking (Bearer capability, Channel identification, High layer compatibility, Low layer compatibility) listed in the items. Additional information is provided against those items for which an indication of support is not required. This is emphasised by shading the appropriate areas in the table.

Supported timers

Indicating support for an item in this section states that the implementation has a timer that operates in accordance with the description in section 9.2 of Q.931 and the relevant behaviour in section 5. Specific values for the timers implemented should be stated in the PIXIT.

B.1.8 Identification of the implementation**Implementation Under Test (IUT) identification**

IUT name:

IUT version:

System Under Test (SUT) identification

SUT name:

Hardware configuration:

Operating system:

Product supplier

Name:

Address:

Telephone number:

Facsimile number:

Additional information:

Client

Name:

Address:

Telephone number:

Facsimile number:

Additional information:

PICS contact person

Name:

Telephone number:

Facsimile number:

Additional information:

PICS/System Conformance Statement

Provide the relationship of the PICS with the System Conformance Statement for the system:

Identification of the protocol

This PICS proforma applies to the following Recommendation:

- CCITT Recommendation Q.931:1988, *Digital Subscriber Signalling System No. 1, Network Layer, ISDN User-Network Interface Layer 3 Specification for Basic Call Control.*

B.2 Q.931 PICS proforma, basic rate**B.2.1 Global statement of conformance**

The implementation described in this PICS meets all the mandatory requirements of the referenced Recommendation:

- ☐ Yes
☐ No

NOTE - Answering 'No' indicates non-conformance to the specified protocol Recommendation. Non-supported mandatory capabilities are to be identified in the following tables with an explanation by the implementor explaining why the implementation is non-conforming.

B.2.2 Major capabilities

Item	Major capability Does the implementation...	Status	Predicate	Reference	Support
MC 1	support outgoing calls?	O.1		5.1	☐ Yes ☐ No
MC 1.1	support procedures of en-bloc sending?	O.2	cp 1	5.1.1, 5.1.5.1, 5.1.8	☐ Yes ☐ No
MC 1.2	support procedures of overlap sending?	O.2	cp 1	5.1.3, 5.1.5.2, 5.1.8	☐ Yes ☐ No
MC 1.3	send notification of interworking in an outgoing Setup message if the implementation is the point at which a call enters an ISDN environment from a non-ISDN environment?	C	sp 1	5.1.6	☐ Yes ☐ No
MC 1.4	support transit network selection?	O	cp 1	5.1.10, Annex C	☐ Yes ☐ No
MC 1.5	interpret in-band information sent from the network on outgoing calls?	O	cp 1	5.1.2, 5.1.3, 5.1.7, 5.4	☐ Yes ☐ No
MC 1.6	interpret notification of interworking sent from the network on outgoing calls?	O	cp 1	5.1.6	☐ Yes ☐ No
MC 1.7	generate local tones and local alerting indications?	O	cp 1	5.1.2, 5.1.7	☐ Yes ☐ No
MC 2	support incoming calls?	O.1		5.2	☐ Yes ☐ No
MC 2.1	support procedures of en-bloc receiving?	C	sp 2	5.2.1, 5.2.5.1	☐ Yes ☐ No
MC 2.2	support procedures of overlap receiving?	O	cp 2	5.2.1, 5.2.4	☐ Yes ☐ No
MC 2.3	send notification of interworking on incoming calls if the implementation is the point at which a call leaves an ISDN environment for a non-ISDN environment?	C	sp 2	5.2.6	☐ Yes ☐ No
MC 2.4	send in-band information on incoming calls?	O	cp 2	5.2.6	☐ Yes ☐ No
MC 2.5	accept the Setup message on the point-to-point data link?	O.3	cp 2	5.2.1, 5.2.3.1	☐ Yes ☐ No
MC 2.6	accept the Setup message on the broadcast data link?	O.3	cp 2	5.2.1, 5.2.3.1	☐ Yes ☐ No
MC 2.7	check the High layer compatibility information element?	O	cp 2	5.2.2, Annex B.3.3	☐ Yes ☐ No
MC 3	support user-initiated call clearing?	M		5.3.3	☐ Yes ☐ No
MC 4.1	wait for the network to send a RELEASE message on the receipt of a DISCONNECT message with Progress indicator information element #8?	O	cp 2	5.3.4.1	☐ Yes ☐ No
MC 4.2	respond with a RELEASE message on the receipt of a DISCONNECT message with Progress indicator information element #8?	O	cp 2	5.3.4.1	☐ Yes ☐ No
MC 4.3	support call clearing initiated by the network with tones/announcements not provided?	M		5.3.4.2	☐ Yes ☐ No

Item	Major capability Does the implementation...	Status	Predicate	Reference	Support
MC 5	support restart procedure? Note.	O		5.5	☐ Yes ☐ No
MC 6	support call rearrangement procedures?	O		5.6	☐ Yes ☐ No
MC 7.1	support response to Status enquiry message?	M		5.8.10	☐ Yes ☐ No
MC 7.2	support sending of Status enquiry message?	O		5.8.10	☐ Yes ☐ No
MC 8	support symmetric call operation?	O		Annex D	☐ Yes ☐ No
MC 9	support network specific facility selection?	O	cp 1	Annex E	☐ Yes ☐ No
MC 10	support Low layer compatibility information element negotiation?	O		Annex M	☐ Yes ☐ No
MC 11.1	support user-to-user signalling during the set-up and clearing phases of a call (service 1)?	O		7.1.1, 7.1.3	☐ Yes ☐ No
MC 11.2	support user-to-user signalling during call establishment (service 2)?	O		7.1.1, 7.1.4	☐ Yes ☐ No
MC 11.3	support user-to-user signalling in the Active state of a call (service 3)?	O		7.1.1, 7.1.5	☐ Yes ☐ No
MC 12	support procedures for establishment of bearer connection prior to call acceptance?	O		Annex N	☐ Yes ☐ No
MC 13	support message segmentation procedures?	O		Annex K	☐ Yes ☐ No
MC 15	support procedures for bearer service change?	O		Annex O	☐ Yes ☐ No

- O.1 Support of at least one of these options is required.
O.2 Support of at least one of these options is required.
O.3 Support of at least one of these options is required.
O.4 Support of one, and only one, of these options is required.

NOTE - Mandatory if the user is aware that the configuration of the interface is point-to-point.

Comments:

B.2.3 Subsidiary capabilities

Item	Subsidiary capability Does the implementation...	Status	Predicate	Reference	Support
	Call procedures				
SC 1	send the called party address information in the Called party number information element?	O.1	cp 1	5.1.1, 5.1.3	☐ Yes ☐ No
SC 2	send the called party address information in the Keypad facility information element?	O.1	cp 1	5.1.1, 5.1.3	☐ Yes ☐ No
SC 3	support the sending of Connect acknowledge message during outgoing call establishment?	O	cp 1	5.1.8	☐ Yes ☐ No
SC 4	monitor the status of B-channels?	O	cp 1	5.1.1	☐ Yes ☐ No
SC 5	check the bearer service provided?	C	sp 2	5.2.2, Annex B.3.2	☐ Yes ☐ No
SC 6	check the Low layer compatibility information element if available?	C	sp 2	5.2.2	☐ Yes ☐ No
SC 7	use the Bearer capability information element for Low layer compatibility information element checking if the Setup message received does not include the Low layer compatibility information element?	C	sp 2	Annex B.3.3	☐ Yes ☐ No
SC 8	attempt Low layer compatibility information element negotiation when a mismatch is found in Low or High layer compatibility information element checking?	C	sp 2 and sp 10	Annex B.3.4, Annex M	☐ Yes ☐ No
	General errors				
SC 9	Ignore a received message with protocol discrimination error?	M		5.8.1	☐ Yes ☐ No
SC 10	ignore a received message too short to contain a complete information element?	M		5.8.2	☐ Yes ☐ No
	Call reference errors				
SC 11	ignore a received message with Call reference bits 5 to 8 not equal to 0?	M		5.8.3.1	☐ Yes ☐ No
SC 12	ignore a received message if the call reference information element octet 1, bits 1 through 4 indicates a length greater than the maximum length supported?	M		5.8.3.1	☐ Yes ☐ No
SC 13	clear call on receiving any message other than Setup, Release, Release complete, Status, Resume, with unrecognisable Call reference value?	M		5.8.3.2	☐ Yes ☐ No
SC 14	ignore a received Setup or Resume message with unrecognisable Call reference value?	M		5.8.3.2	☐ Yes ☐ No
SC 15	take no action on receiving a Release complete message with unrecognisable Call reference value?	M		5.8.3.2	☐ Yes ☐ No

Item	Subsidiary capability Does the implementation...	Status	Predicate	Reference	Support
SC 16	transmit a Release complete message on receiving a Release message with unrecognisable Call reference value?	M		5.8.3.2	☐ Yes ☐ No
SC 17	transmit a Status message on receiving any message other than Restart, Restart acknowledge, Status, with unrecognisable Call reference value?	M		5.8.3.2	☐ Yes ☐ No
SC 18	ignore a Setup message containing a Call reference value relating to an existing call?	M		5.8.3.2	☐ Yes ☐ No
	Message type, message sequence errors				
SC 19	transmit a Status message on receipt of an unexpected message other than Release, Release complete or of an unrecognisable message in any other state than the Null state?	O.2		5.8.4	☐ Yes ☐ No
SC 20	transmit a Status enquiry message on receipt of an unexpected message other than Release, Release complete or of an unrecognisable message in any other state than the Null state?	O.2		5.8.4	☐ Yes ☐ No
SC 21	clear call on receipt of an unexpected Release, Release complete message?	M		5.8.4	☐ Yes ☐ No
	General information errors				
SC 22	support general information element error procedures in codesets other than 0?	O		5.8.5	☐ Yes ☐ No
SC 23	process information elements regardless of their order in the message?	O.3		5.8.5.1	☐ Yes ☐ No
SC 24	ignore out of sequence information elements?	O.3		5.8.5.1	☐ Yes ☐ No
SC 25	ignore not permitted repetitions of an information element?	M		5.8.5.2	☐ Yes ☐ No
SC 26	handle permitted repetitions (up to a limit) of an information element?	M		5.8.5.2	☐ Yes ☐ No
	Mandatory information elements errors				
SC 27	take no action, except for the sending of a Status message, on receipt of a message other than Setup, Disconnect, Release, Release complete, with mandatory information elements missing or with invalid content?	M		5.8.6.1, 5.8.6.2	☐ Yes ☐ No
SC 28	return a Release complete message, on receipt of a Setup or Release message with mandatory information elements missing or with invalid content?	M		5.8.6.1, 5.8.6.2	☐ Yes ☐ No

Item	Subsidiary capability Does the implementation...	Status	Predicate	Reference	Support
SC 29	clear the call on receipt of a Disconnect message with mandatory information elements missing or with invalid content?	M		5.8.6.1, 5.8.6.2	☐ Yes ☐ No
SC 30	handle a Release complete message as normal even if it has mandatory information elements missing or with invalid content?	M		5.8.6.1, 5.8.6.2	☐ Yes ☐ No
SC 31	treat information elements with length exceeding the maximum as with invalid content?	M		5.8.6.2	☐ Yes ☐ No
	Non-mandatory information elements errors				
SC 32	transmit a Status message on receipt of a message other than Disconnect, Release, Release complete, with unrecognised non-mandatory information elements?	M		5.8.7.1	☐ Yes ☐ No
SC 33	transmit a Release message on receipt of a Disconnect message with unrecognised non-mandatory information elements?	M		5.8.7.1	☐ Yes ☐ No
SC 34	transmit a Release complete message on receipt of a Release message with unrecognised non-mandatory information elements?	M		5.8.7.1	☐ Yes ☐ No
SC 35	take no action on receipt of a Release complete message with unrecognised non-mandatory information elements?	M		5.8.7.1	☐ Yes ☐ No
SC 36	ignore incorrect or unrecognisable non-mandatory information elements?	O.4		5.8.7.2	☐ Yes ☐ No
SC 37	transmit a Status message on receipt of a message with incorrect non-mandatory information elements?	O.4		5.8.7.2	☐ Yes ☐ No
SC 38	truncate and process non-mandatory information elements which are too long?	O.5		5.8.7.2	☐ Yes ☐ No
SC 39	treat as incorrect non-mandatory information elements which are too long?	O.5		5.8.7.2	☐ Yes ☐ No
SC 40	truncate and process a Call identity information element too long?	M		5.8.7.2	☐ Yes ☐ No
	Data link reset				
SC 41	clear calls in overlap sending/receiving?	C	sp 1.2 or sp 2.2	5.8.8	☐ Yes ☐ No
SC 42	maintain calls in the establishment phase or Active Phase?	M		5.8.8	☐ Yes ☐ No