



SLOVENSKI STANDARD
SIST ETS 300 011-3 E2:2003

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Digitalno omrežje z integriranimi storitvami (ISDN) – Primarni vmesnik uporabnik-omrežje (UNI) – 3. del: Izjava o skladnosti izvedbe (ICS) in dodatne informacije za preskušanje izvedbe (IXIT) – Proforma specifikacija za vmesnika IA in IB

Integrated Services Digital Network (ISDN); Primary rate User-Network Interface (UNI); Part 3: Implementation Conformance Statement (ICS) and Implementation eXtra Information for Testing (IXIT) proforma specification for interface IA and IB

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ICS:

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
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**Integrated Services Digital Network (ISDN);
Primary rate User-Network Interface (UNI);
Part 3: Implementation Conformance Statement (ICS) and
Implementation eXtra Information for Testing (IXIT)
proforma specification for interface I_A and I_B**

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Foreword

This second edition European Telecommunication Standard (ETS) was produced by the Transmission and Multiplexing (TM) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS aims to meet urgent requirements of network operators and equipment manufacturers who are designing equipment to operate with an Integrated Services Digital Network (ISDN) primary rate access User Network Interface (UNI).

This ETS is based upon CCITT Recommendation I.431 and provides modifications and further requirements to that document. It also is affected by CCITT Recommendations G.703, G.704 and G.706, and modifications to these CCITT Recommendations are provided within this ETS.

This ETS also takes into account requirements contained in ECMA Standard 104: "Physical layer at the primary rate access interface between data processing equipment and private switching networks (1985)", which are given in annex A.

This ETS consists of 3 parts as follows:

Part 1: "Layer 1 specification";

Part 2: "Conformance test specification for interface I_A and I_B";

Part 3: "Implementation Conformance Statement (ICS) and Implementation eXtra Information for Testing (IXIT) proforma specification for Interface I_A and I_B".

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Date of adoption of this ETS:	6 March 1998
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Introduction

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a telecommunication specification. Such a statement is called an Implementation Conformance Statement (ICS).

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1 Scope

This second edition European Telecommunication Standard (ETS) provides the Implementation Conformance Statement (ICS) and Implementation eXtra Information for Testing (IXIT) proforma for the Primary rate User Network Interface (UNI), layer 1 specification defined in ETS 300 011-1 [1] in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-4 [3] and ETS 300 406 [2].

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 amendments or revision. For undated references the latest edition of the publication referred to applies.

- [1] ETS 300 011-1 (1996): "Integrated Services Digital Network (ISDN); Primary rate User Network Interface (UNI); Part 1: Layer 1 specification".
- [2] ETS 300 406 (1995): "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".
- [3] ISO/IEC 9646-1 (1994): "Information technology - Open Systems Interconnection - Conformance Testing Methodology and Framework - Part 1: General concepts".
- [4] ISO/IEC 9646-7 (1995): "Information technology - Open systems interconnection Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".
- [5] EN 60603-7 (1993): "Connectors for frequencies below 3 MHz for use with printed boards - Part 7: Detail specification for connectors, 8-way, including fixed and free connectors with common mating features".
- [6] CCITT Recommendation X.200 (1994): "Information technology - Open Systems Interconnection - Basic reference model: The basic model".
- [7] ETS 300 011-2 (1996): "Integrated Services Digital Network (ISDN); Primary rate User Network Interface (UNI); Part 2: Conformance test specification for interface I_A and I_B".
- [8] ISO/IEC 10173 (1991): "Information technology - Integrated Services Digital Network (ISDN) primary access connector at reference points S and T".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of this ETS, the following definitions apply:

interface I_A: User side of the ISDN UNI for the primary rate access.

interface I_B: Network side of the ISDN UNI for the primary rate access.

network side: NT1, LT and ET functional groups in case of an interface at the T reference point; or relevant parts of the NT2 functional group in case of an interface at the S reference point.

Network Termination (NT): An equipment providing interface I_B

NOTE: This term is used in this ETS to indicate network-terminating aspects of NT1 and NT2 functional groups where these have an I_B interface.

Network Termination type 1 (NT1): This functional group includes functions broadly equivalent to layer 1 (physical) of the OSI reference model. These functions are associated with the proper physical and electromagnetic termination of the network. NT1 functions are:

- line transmission termination;
- layer 1 maintenance functions and performance monitoring;
- timing;
- layer 1 multiplexing;
- interface termination.

Network Termination type 2 (NT2): This functional group includes functions broadly equivalent to layer 1 and higher layers of the CCITT Recommendation X.200 [6] reference model. Private Telecommunication Network Exchanges (PTNXs), local area networks and terminal controllers are examples of equipment or combinations of equipment that provide NT2 functions. NT2 functions include:

- layer 2 and layer 3 protocol handling;
- layer 2 and layer 3 multiplexing;
- switching;
- concentration;
- maintenance functions;
- interface termination and other layer 1 functions.

Private Telecommunication Network Exchange (PTNX): A nodal identity in a private telecommunication network which provides autonomous and automatic switching and call handling functions used for the provision of telecommunication services which are based on the definitions for those of the public ISDN.

Private Network Termination (PNT): A remote unit of equipment which terminates a transmission system employed between the PTNX and the interface I_B and the S reference point.

Terminal Equipment (TE): An equipment providing an interface I_A .

User side: Terminal terminating layer 1 aspects of TE1, Terminal Adapter (TA) and NT2 functional groups.

3.2 Symbols

For the purposes of this ETS, the following symbols apply:

ONE	binary "1"
ZERO	binary "0"

3.3 Abbreviations

For the purpose of this ETS, the following abbreviations apply:

AIS	Alarm Indication Signal
CRC	Cyclic Redundancy Check
HDB3	High-Density Bi-polar 3 (line code)
HDLC	High level Data Link Control
ICS	Implementation Conformance Statement
IUT	Implementation Under Test
IXIT	Implementation eXtra Information for Testing
LOS	Loss Of Signal
MPH	Management (entity) - PPhysical (layer) [primitive]
MPH-AI	MPH - Activate Indication
MPH-DI	MPH - Error Indication
NOF	Normal Operational Frames
NT	Network Termination
PCTR	Protocol Conformance Test Report
PH	Physical (layer)
PH-AI	PH - Activate Indication

PH-DI	PH - Deactivate Indication
PNT	Private Network Termination
PRBS	Pseudo-Random Binary Sequence
PTN	Private Telecommunications Network
PTNX	Private Telecommunications Network Exchange
RAI	Remote Alarm Indication
RSE	Remote Single layer Embedded
SCS	System Conformance Statement
SCTR	System Conformance Test Report
SMF	Sub-MultiFrame
SUT	System Under Test
TA	Terminal Adapter
TE	Terminal Equipment

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Annex A (normative): ICS proforma for ETS 300 011-1

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 Implementation Conformance Statement (ICS) proforma in this annex so that it can be used for its intended purposes and may further publish the completed ICS.

A.1 Guidance for completing the ICS proforma

A.1.1 Purposes and structure

The purpose of this ICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in ETS 300 011-1 [1] may provide information about the implementation in a standardized manner.

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

- guidance for completing the ICS proforma;
- identification of the implementation;
- identification of the reference ETS;
- global statement of conformance.

A.1.2 Abbreviations and conventions

The ICS proforma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [4].

Item column

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

Item description column

The item description column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "is <item description> supported by the implementation?"

Status column

The following notations, defined in ISO/IEC 9646-7 [4], are used for the status column:

m	mandatory - the capability is required to be supported;
o	optional - the capability may be supported or not;
n/a	not applicable - in the given context, it is impossible to use the capability;
x	prohibited (excluded) - there is a requirement not to use this capability in the given context;
o.i	qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer which identifies a unique group of related optional items and the logic of their selection which is defined immediately following the table;
ci	conditional - the requirement on the capability ("m", "o", "x" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying a unique conditional status expression which is defined immediately following the table.

Reference column

The reference column makes reference to ETS 300 011-1 [1], except where explicitly stated otherwise.