

Implementation of
ENV 41112:1991

Information Systems Interconnection — ISDN — Provision of the OSI connection-mode transport service over the OSI connection-mode network service by using an ISDN circuit-mode 64 kbit/s unrestricted bearer service — Demand case

Cooperating organizations

The joint European Standards Institution (CEN/CENELEC), under whose supervision this European Prestandard was prepared, comprises the National Committees of the following countries:

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Norway
France	Portugal
Germany	Spain
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Iceland	Switzerland
Ireland	United Kingdom

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National foreword

This Draft for Development is identical with the European Prestandard ENV 41112:1991 *“Information Systems Interconnection — ISDN — Provision of the OSI connection-mode transport service over the OSI connection-mode network service by using an ISDN circuit-mode 64 kbit/s unrestricted bearer service — Demand case”* prepared by CEN/CENELEC whose members have committed themselves to making it available in an appropriate form. In the UK the Draft for Development is the form now chosen for ENVs in the information technology area.

This Draft for Development is published under the direction of the Information Systems Technology Standards Policy Committee whose Technical Committee IST/6 has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on interpretation, or proposals for change, and to keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

NOTE International and European Standards, as well as overseas standards, are available from BSI Sales Department, BSI, Linford Wood, Milton Keynes, MK14 6LE.

After two years this ENV will be reviewed by CEN/CENELEC members with a view to its:

- conversion into a European Standard (which would be implemented in the UK as a British Standard);
- extension once for a further two years;
- replacement by a revised ENV (which would be published in the UK as a revised Draft for Development);
- withdrawal.

The future of this Draft for Development is therefore bound to that of the ENV and the Draft for Development will not be reviewed or developed separately.

This publication is not to be regarded as a British Standard.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ENV title page, pages 2 to 26 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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Descriptors: Data processing, Information interchange, Data transfer, Open systems interconnection, ISDN, Communication Procedures, Connection oriented transmission, Services, Network layer, Transport layer

English version

Information Systems Interconnection — ISDN — Provision of the OSI connection-mode transport service over the OSI connection-mode network service by using an ISDN circuit-mode 64 kbit/s unrestricted bearer service — Demand case

Interconnexion de systèmes d'information —
RNIS — Fourniture du service de transport OSI
en mode connexion utilisant le service de réseau
OSI en mode connexion utilisant un service
support RNIS en mode circuit à 64 kbit/s sans
restriction — établissement à la demande

Kommunikation von Informationssystemen —
ISDN (Diensteintegrierendes digitales
Nachrichtennetz) — Erbringung des
verbindungsorientierten
OSI-Transportdienstes über dem
verbindungsorientierten
OSI-Vermittlungsdienst unter Benutzung eines
leitungsvermittelnden uneingeschränkten
Obertragungsdienstes über Wählverbindung
mit 64 kbit/s

This European Prestandard (ENV) was approved by CEN/CENELEC on 1990-10-25 as a prospective standard for provisional application. The period of validity of this ENV is limited initially to three years. After two years the members of CEN/CENELEC will be requested to submit their comments, particularly on the question whether the ENV can be converted into an EN.

CEN/CENELEC members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN/CENELEC members are the national standards bodies and national committees, respectively, of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN/CENELEC

The Joint European Standards Institution
Organisation Commune Européenne de Normalisation
Die Gemeinsame Europäische Normungsorganisation

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Foreword

This European Prestandard (ENV) was developed by the ETSI TC TE7 and submitted by the CEN/CENELEC Central Secretariat to the members for Formal Vote on 90-01-31.

The results of the ballot, which was negative, were circulated to the members on 90-05-09.

In order to secure the adoption of the document as a European Standard, the comments of the Formal Vote were taken to the ETSI TC TE whereafter it was decided to hold a voting/resolution meeting with the intention of possibly incorporating any changes into the ENV.

The joint CEN/CENELEC-ETSI voting/resolution meeting was held in Rome on 90-10-24/26 the result of which was positive. The document has consequently been adopted as a European Prestandard.

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0 Introduction

This is one of a set of Functional Standards that specify requirements across a number of layers of the OSI Reference Model (ISO 7498) for systems wishing to implement a particular function. The standard specifies these requirements by reference to the base standards for various layers, thereby providing a common reference for procurement purposes.

This standard makes specific choices concerning the implementation of options in the base standards to achieve interworking by the minimization of incompatible systems with the respect to communication. This makes it possible to tailor the requirements in the base standards to the particular function for which this standard is designed and relieves purchasers from the need to select options across the range of base standards.

Functional Standards in no way eliminate the need for base standards as both, taken together, provide a common infrastructure for a wide variety of potential uses.

This Functional Standard specifies telecommunication function T/1112 as defined in the CEN/CENELEC/CEPT Memorandum M-IT-02.

1 Scope and field of application

This Functional Standard specifies a set of protocols to provide the function defined below. The requirements placed on an end system in this Functional Standard are solely those necessary for operation of the protocol set specified. It does not specify total end system capability.

This Functional Standard is defined in terms of the use of a single B channel for end-to-end communication between end systems, and the associated D channel required to control the connection across the ISDN. No distinction is made in this Functional Standard between the use of a B channel provided by a Basic interface and the use of a B channel provided by a Primary Rate interface. The use of multiple B channels to support a single Transport Layer connection is outside the scope of this Functional Standard.

This Functional Standard defines:

- 1) The provision of the OSI Connection-mode Transport Service [ISO 8072] between an end system (the "reference end system") attached to an ISDN (Public/Private), and another end system (the "compatible end system") which is either attached to the same ISDN, or is indirectly accessible through the provided network service.
- 2) The provision of the OSI Connection-mode Network Service [ISO 8348] between the reference end system and the compatible end system.

This Functional Standard uses the X.25 PLP operating in the B channel to convey all the elements, of all three phases, of the OSI Connection-mode Network Service. The D channel is used only to establish and release the necessary circuit-switched connections across the ISDN.

2 Document references

2.1 Directly Referenced Standards

The following standards are directly referenced in this Functional Standard and are essential for the operation of this Functional Standard

[E.164]	<i>Numbering Plan for the ISDN Era (1984)</i>
[I.112]	<i>Vocabulary of Terms for ISDNs</i>
[I.430]	<i>ISDN Basic User-network Interface — Layer 1 Specification (1988)</i>
[I.431]	<i>ISDN Primary Rate User-network Interface — Layer 1 Specification (1988)</i>
[ISO 7498]	<i>Information Processing Systems — Open Systems Interconnection — Basic reference model.</i>
[ISO 7776]	<i>Information Processing Systems — Data Communications — HDLC — Description of the X.25 LAPB compatible DTE single link procedure. (IS:1986).</i>
[ISO 8072]	<i>Information Processing Systems — Open Systems Interconnection — Transport Service Definition. (IS:1986).</i>
[ISO 8073]	<i>Information Processing Systems — Open Systems Interconnection — Transport Protocol Specification. (IS:1988).</i>

- [ISO 8073/AD1] *Information Processing Systems — Open Systems Interconnection — Connection-oriented Transport Protocol Specification — Addendum 1: Network Connection Management Subprotocol. (IS:1988).*
- [ISO 8208] *Information Processing Systems — Data Communications — X.25 packet level protocol for DTE. (IS:1989).*
- [ISO 8348] *Information Processing Systems — Data Communications — Network Service definition. (IS:1987).*
- [ISO 8878] *Information processing Systems — Data Communications — Use of X.25 to provide the OSI Connection-oriented Network Service. (IS:1987).*
- [ISO 9574] *Information Processing Systems — Data Communications — Provision of the OSI Connection-mode Network Service by Packet Mode Terminal Equipment connected to an Integrated Services Digital Network (ISDN). (IS:1989).*
- [Q.920] *ISDN User-network Interface Data Link Layer — General Aspects (1988)*
- [Q.921] *ISDN User-network Interface Data Link Layer Specification (1988)*
- [Q.930] *ISDN User-network Interface Layer 3 — General Aspects (1988)*
- [Q.931] *ISDN User-network Interface Layer 3 Specification for Basic Call Control (1988)*
- [prETS 300012] *Layer 1 of the ISDN basic user network interface. Application of CCITT Recommendation I.430.*
- [prETS 300011] *Layer 1 of the ISDN primary rate user network interface. Application of CCITT Recommendation I.430.*
- [prETS 300125] *ISDN User-Network interface data link layer specification. Application of CCITT Recommendations Q.920/I.440 and Q.921/I.441.*
- [T/S 46-21] *ISDN User-Network interface data link layer specification (SDL Diagrams). Application of CCITT Recommendations Q.920/I.440 and Q.921/I.441.*
- [prETS 300102-1] *ISDN User-Network interface layer 3 specification for basic call control. Application of CCITT Recommendations Q.930/I.450 and Q.931/I.451.*
- [prETS 300102-2] *ISDN User-Network interface layer 3 specification for basic call control (SDL Diagrams). Application of CCITT Recommendations Q.930/I.450 and Q.931/I.451.*
- [X.2] *International data transmission services and optional user facilities in Public Data Networks (PDNs). (1988)*
- [X.25] *Interface between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) for Terminals operating in the Packet Mode and connected to Public Data Networks by Dedicated Circuit. (1988)*
- [X.214] *Transport Service Definition for Open Systems Interconnection for CCITT Applications. (1988)*
- [X.224] *Transport Protocol Specification for Open Systems Interconnection for CCITT Applications. (1988)*
- M-IT-02 *CEN/CENELEC/CEPT Memorandum on the Directory of Functional Standards (June 1988).*

2.2 Other References

- [ISO 8348/AD2] *Information Processing Systems — Data Communications — Network Service Definition — Addendum 2: Network Layer Addressing. (IS:1988).*
- [Q.932] *ISDN User-network Interface Layer 3 Specification — Generic procedures for the control of ISDN supplementary services (1988).*
- [X.1] *International user classes of service in Public Data Networks and Integrated Services Digital Network (ISDNs). (1988)*
- [X.10] *Categories of access for data terminal equipment (DTE) to public data transmission services provided by PDNs and/or ISDN, through terminal adaptors. (1988)*
- [X.31] *Support of Packet Mode Terminal Equipment by an ISDN. (1988)*
- [X.121] *International Numbering Plan for Public Data Networks. (1988)*