

Information technology - International Standardized Profile TAnnnn - Connection-mode Transport Service over Connectionless-mode Network Service - Part 1: General overview and subnetwork-independent requirements (ISO/IEC ISP 10608-1:1992)

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Informationstechnik - Internationale Profilnorm TAnnnn - Verbindungsorientierter Transportdienst über verbindungslosem Vermittlungsdienst - Teil 1: Allgemeiner Überblick und Teilnetz-unabhängige Anforderungen (ISO/IEC ISP 10608-1:1992)

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Technologies de l'information - Profil normalisé international TAnnnn - Service de transport en mode connexion sur le service de réseau en mode sans connexion - Partie 1: Introduction générale et spécifications indépendantes du sous-réseau (ISO/IEC ISP 10608-1:1992)

Ta slovenski standard je istoveten z: EN ISP 10608-1:1994

ICS:

33.040.40	Podatkovna komunikacijska omrežja	Data communication networks
35.100.01	Medsebojno povezovanje odprtih sistemov na splošno	Open systems interconnection in general
35.100.05	X [^] • [[b ^ Á] [æ à } ž \ ^] ^ z a c ^	Multilayer applications

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EUROPEAN STANDARD

EN ISP 10608-1

NORME EUROPÉENNE

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December 1994

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Descriptors: data processing, information interchange, network interconnection, open systems interconnection, data transmission, communication procedure, control procedures, transport layer, network layer, profiles

English version

**Information technology - International Standardized
Profile TAnnnn - Connection-mode Transport
Service over Connectionless-mode Network
Service - Part 1: General overview and
subnetwork-independent requirements (ISO/IEC
ISP 10608-1:1992)**

Technologies de l'information - Profil
normalisé international TAnnnn - Service de
transport en mode connexion sur le service de
réseau en mode sans connexion - Partie 1:
Introduction générale et spécifications
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Informationstechnik - Internationale Profilnorm
TAnnnn - Verbindungsorientierter
Transportdienst über verbindungslosem
Vermittlungsdienst - Teil 1: Allgemeiner
Überblick und Teilnetz-unabhängige
Anforderungen (ISO/IEC ISP 10608-1:1992)

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REPUBLIKA SLOVENIJA
MINISTRSTVO ZA ZNANOST IN TEHNOLOGIJO
Urad RS za standardizacijo in meroslovje
LJUBLJANA
SIST..... EN ISP 10608-1
PREVZET PO METODI RAZGLASITVE

-12- 1997

This European Standard was approved by CEN on 1994-12-05. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

The Technical Board decided to submit the International Standard

Information Technology - International Standardized Profile TAnnnn - Connection-mode Transport Service over Connectionless-mode Network Services - Part 1: General overview and subnetwork-independent requirements (ISO/IEC ISP 10608-1:1992)

for adoption by the Unique Acceptance Procedure (UAP), in accordance with clause 4.6 of the CEN/CENELEC Internal Regulations, Part 2 of April 1990.

The result of the Unique Acceptance Procedure was positive.

This European Standard and EN ISP 10608-2 supersede EN 41102:1990 which shall be withdrawn.

For the time being this standard exists in the English version only.

This document is the first part of a multi-part Functional Standard identified in ISO/IEC TR 10000-2. In M-IT-02 this standard, which contains common text for all T/A profiles, is identified under "T/A - Local Area Network".

M-IT-02 CEN/CENELEC/ETSI Memorandum on taxonomy of profiles and directory of functional standards (standards.iteh.ai)

This European Standard shall be given the status of a National Standard, either by publication of an identical text or by endorsement at the latest by June 1995, and conflicting national standards shall be withdrawn at the latest by June 1995.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

Endorsement Notice

The text of the International Standard ISO/IEC ISP 10608-1:1992 was approved by CEN as a European Standard without any modification.

INTERNATIONAL
STANDARDIZED
PROFILE

ISO/IEC
ISP
10608-1

First edition
1992-12-15

**Information technology — International
Standardized Profile TAnnnn —
Connection-mode Transport Service over
Connectionless-mode Network Service —
Part 1:
General overview and
subnetwork-independent requirements**

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*Technologies de l'information — Profil normalisé international TAnnnn —
Service de transport en mode connexion sur le service de réseau en mode
sans connexion —*

*Partie 1: Introduction générale et spécifications indépendantes du
sous-réseau*



Reference number
ISO/IEC ISP 10608-1:1992(E)

ISO/IEC ISP 10608-1:1992 (E)

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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 elaboration 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 10608-1 was prepared with the collaboration of

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

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ISO/IEC ISP 10608 consists of the following parts, under the general title *Information technology — International Standardized Profile TAnnnn — Connection-mode Transport Service over Connectionless-mode Network Service*:

- *Part 1: General overview and subnetwork-independent requirements*
- *Part 2: TA51 profile including subnetwork-dependent requirements for CSMA/CD Local Area Networks (LANs)*
- *Part 4: Definition of profile TA53 for operation over a Token Ring LAN subnetwork*
- *Part 5: TA1111/TA1121 profiles including subnetwork-dependent requirements for X.25 packet-switched data networks using virtual calls*
- *Part 13: MAC sublayer and physical layer dependent requirements for Token Ring local area network*

Annexes A, B and C form an integral part of this part of ISO/IEC ISP 10608. Annexes D and E are for information only.

ISO/IEC ISP 10608-1:1992 (E)**Introduction**

This part of ISO/IEC ISP 10608 (International Standardized Profile) is defined within the context of Functional Standardization, in accordance with the principles specified by ISO/TR 10000-1:1990. The context of Functional Standardization is one part of 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 basis for the development of uniform, internationally recognized system tests.

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 tests and test centers. ISPs are produced not simply to legitimize a particular choice of base standards and options, but to promote real system interoperability. 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 10608 consists of several parts, of which this is Part 1. ISO/IEC 10608-1 specifies subnetwork-type independent requirements for Group TA profiles. ISO/IEC 10608-2 specifies subnetwork-type dependent requirements for Profile TA51. ISO/IEC ISP 10608-3 specifies subnetwork-type dependent requirements for Profile TA52. ISO/IEC ISP 10608-4 specifies subnetwork-type dependent requirements for Profile TA53. ISO/IEC ISP 10608-5 specifies subnetwork-type dependent requirements for Profiles TA1111 and TA1121.

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Information technology - International Standardized Profile TAnnnn - Connection-mode Transport Service over Connectionless-mode Network Service

Part 1: General overview and subnetwork-type independent requirements

1 Scope

This part of ISO/IEC ISP 10608 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 Connectionless-mode Network Service.

This part of ISO/IEC ISP 10608 is applicable to the provision of the Connection-mode Transport Service in end systems attached to any type of subnetwork from which the standardized Connectionless-mode Network Service can be made available.

Profiles of the Connection-mode Transport Service over Connectionless-mode Network Service are members of a single group, Group TA, and support a single transport class, i.e., Class 4.

2 Normative References

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP 10608. 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 10608 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 the CCITT maintains published editions of its current Recommendations.

ISO 8072:1986, *Information processing systems - Open Systems Interconnection - Transport service definition*.

(See also CCITT Recommendation X.214 -1988).

ISO/IEC 8073:1988, *Information processing systems - Open Systems Interconnection - Connection oriented transport protocol specification*.

(See also CCITT Recommendation X.224 -1988).

ISO/IEC 8073:1988 /Add.2: 1989, *Information processing systems - Open Systems Interconnection - Connection oriented transport protocol specification - Addendum 2: Class four operation over connectionless network service*.

ISO/IEC 8073:1988 /Amd.3: 1992, *Information processing systems - Open Systems Interconnection - Connection oriented transport protocol specification - Amendment 3: Protocol implementation conformance statement (PICS) proforma*.

ISO/IEC 8073: /Cor.1:1990, *Information processing systems - Open Systems Interconnection - Connection oriented transport protocol specification - Technical corrigendum 1*.

ISO/IEC 8073: /Cor.2:1990, *Information processing systems - Open Systems Interconnection - Connection oriented transport protocol specification - Technical corrigendum 2*.

ISO/IEC 8073: /Cor.4:1991, *Information processing systems - Open Systems Interconnection - Connection oriented transport protocol specification - Technical corrigendum 4*.

ISO/IEC 8073: /Cor.5:1991, *Information processing systems - Open Systems Interconnection - Connection*

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oriented transport protocol specification - Technical corrigendum 5.

ISO 8348: 1987, *Information processing systems - Data communications - Network service definition.*

(See also CCITT Recommendation X.213 - 1988).

ISO 8348: /Add.1: 1987, *Information processing systems - Data communications - Network service definition - Addendum 1: Connectionless-mode transmission.*

ISO 8348: /Add.2: 1988, *Information processing systems - Data communications - Network service definition - Addendum 2: Network layer addressing.*

ISO 8473: 1988, *Information processing systems - Data communications - Protocol for providing the connectionless-mode network service.*

3 Definitions

All of the terms used in this part of ISO/IEC ISP 10608 are defined either in the referenced base standards (see clause 2) or in the International Standards listed in annex E.

4 Abbreviations

All of the abbreviations and acronyms used in this part of ISO/IEC ISP 10608 are defined either in the referenced base standards (see clause 2) or in the International Standards listed in annex E.

5 Subnetwork-type Independent Requirements**5.1 General**

The requirements stated in this clause apply uniformly to all conforming end systems, without regard to the type of subnetworks to which those end systems might be attached. Additional requirements apply to end systems according to the type of subnetworks to which they are attached; these requirements are specified in subsequent parts of ISO/IEC ISP 10608.

5.2 Transport Layer Requirements

This part of ISO/IEC ISP 10608 specifies provision of the connection-mode Transport Service, as defined in ISO 8072, using class 4 of the connection-mode Transport Protocol, as defined in ISO 8073 and ISO 8073/Add.2 which defines operation of class 4 over the connectionless-mode Network Service.

Additional requirements are given in annex A and C which define the IPRL for the Transport protocol. Annex B contains defect reports related to ISO/IEC 8073 along with the statement of any consequential requirements for implementors of these profiles.

5.2.1 Static conformance requirements

A conforming implementation shall

- a) satisfy the conformance requirements as stated in clause 14 of ISO 8073.
- b) support of the mandatory features for class 4 over CLNS as defined in ISO 8073 and ISO 8073/Add.2.
- c) if it claims to be capable of initiating TC establishment, be capable of demonstrating the sending of a CR TPDU with
 - 1) class 4 as the preferred class.
- d) if it claims to be capable of responding to TC establishment, be capable of demonstrating the acceptance of a CR TPDU with class 4 as the preferred class.
- e) if it claims to be capable of initiating TC establishment, be capable of
 - 1) transmitting a Called TSAP-ID field in a CR TPDU,
 - 2) when necessary, transmitting a Calling TSAP-ID field in a CR TPDU that can convey any one of the Transport Selectors implemented by the system.
- f) if it claims to be capable of responding to a TC establishment attempt, be capable of

- 1) transmitting a Calling TSAP-ID field in a CC TPDU,
 - 2) when necessary, transmitting a Called TSAP-ID field in a CC TPDU that can convey any one of the Transport Selectors implemented by the system.
- g) be capable of configuring the initial values of the following parameters:
- T1 Local retransmission time
 - N Maximum number of retransmissions
 - I Inactivity time
 - W Window time
- h) if an implementation is operating any policy which delays the transmission of AK TPDU's, the maximum amount of time by which a single AK TPDU can be delayed shall be indicated to the remote transport entity using the acknowledge time parameter.

5.2.2 Dynamic conformance requirements

a) TSAP-ID

The implementation shall support remote TSAP-ID parameters of variable size up to and including 32 octets using any encoding and any value.

Local T-selectors shall not exceed 32 octets in length.

On receipt of a CR TPDU the absence of a Calling or a Called TSAP-ID parameter shall be treated as equivalent to a zero length Calling or Called TSAP-ID parameter.

The absence of the CC Calling TSAP-ID parameter on receipt indicates that the value of the CC Calling TSAP-ID parameter is equivalent to the value of the CR Calling TSAP-ID parameter.

The absence of the CC Called TSAP-ID parameter on receipt indicates that the value of the CC Called TSAP-ID parameter is equivalent to the value of the CR Called TSAP-ID parameter.

Figure 1 summarizes the handling of Called and Calling TSAP-ID parameters in CR and CC TPDU's.

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		CR Called					CR Calling		
		no param	0 len	len>0			no param	0 len	len>0
CC Called	no param	NIL	NIL	note 1	CC Calling	no param	NIL	NIL	note 4
	0 len	NIL	NIL	Invalid		0 len	NIL	NIL	Invalid
	len >0	Invalid	Invalid	note 2		len >0	Invalid	Invalid	note 3

Notes:

- 1 CC Called is equivalent to CR Called.
- 2 CC Called must match in length and value to CR Called.
- 3 CC Calling must match in length and value to CR Calling.
- 4 CC Calling is equivalent to CR Calling.

Figure 1 - Handling of Called and Calling TSAP-ID parameters

b) Option selection on connection establishment

A conforming implementation shall implement the "non-use of checksum" function. It is recommended that