INTERNATIONAL STANDARDIZED PROFILE

ISO/IEC ISP 10609-23

First edition
1995-12-15

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

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

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 23: Prescriptions dépendantes du type de sous-réseau pour la couche réseau et la couche liaison de données pour le transfert de données concernant un réseau numérique de services intégré en mode de commutation de paquets employant des appels virtuels: cas d'accès sur canal B

Reference number
ISO/IEC ISP 10609-23:1995(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 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 10609-23 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

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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

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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

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

Part 30: Definition of profile TC1131

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Part 32: Definition of profile TC4111

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Part 40: Definition of profile TD1131

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Part 43: Definition of profile TD4211

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Part 44: Definition of profile TD43111

Part 45: Definition of profile TD43112

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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 basis 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 23. This part of ISO/IEC ISP 10609 specifies subnetwork-dependent and media-dependent requirements. There are further parts which specify the 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 part 1 and from the subnetwork dependent parts of ISO/IEC ISP 10609.

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

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

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 subnetwork-type dependent requirements for Network Layer and Data Link Layer concerning data transfer using virtual call where end systems attached to a packet mode ISDN (B-channel access case).

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.

ISO/IEC 9574:1992, *Information technology - Provision of the OSI connection-mode network service by packet mode terminal equipment connected to an integrated services digital network (ISDN). (See also CCITT Recommendation X.612-1992).*

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ISO/IEC ISP 10609-9:1992, *Information technology - International Standardized Profiles TB, TC, TD and TE - Connection-mode Transport Service over connection-mode Network Service - 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.*

3 Definitions

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

4 Abbreviations

ISDN: Integrated Services Digital Network

5 Subnetwork-type dependent requirements for Network Layer

This clause specifies subnetwork-type dependent requirements for end system operation regarding packet switched signalling and data transfer when the end system is connected to an ISDN at the S/T reference point and supports packet mode operation in case B using virtual calls, to provide connection-mode Network Service as defined by ISO/IEC 8348.

This clause covers the following two cases of case B access as defined in ISO/IEC 9574.

– B-channel: Permanent access, and

NOTE - At the date of publication, there is no difference from a terminal point of view between "permanent" and "semi-permanent" connections. However, ITU-T may define a procedure that would allow an ISDN terminal to have a semi-permanent connection set up in support of permanent B-channel. At that time, amendments to this profile may be necessary. This profile uses the term "permanent".

– B-channel: Demand access

A conforming implementation's constraints on supported functions and parameters for the Network Layer concerning packet switched signalling and data transfer are the same as the specifications given in ISO/IEC ISP 10609-9, clause A.2.

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5.1 Static conformance requirements

The specifications given in ISO/IEC ISP 10609-9, subclause 5.1 for the static conformance requirements are to be used.

5.2 Dynamic conformance requirements

The specifications given in ISO/IEC ISP 10609-9, subclause 5.2 for the dynamic conformance requirements are to be used.

6 Subnetwork-type dependent requirements for Data Link Layer

X.25 LAPB as specified in ISO/IEC 7776 shall be used over the B-channel.

A conforming implementation's constraints on supported functions and parameters for the Data Link Layer concerning data transfer are the same as the specifications given in ISO/IEC ISP 10609-9, clause A.3.

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Descriptors: data processing, information interchange, network interconnection, open systems interconnection, data transmission, connection oriented transmission, packet transmission, services, profiles, network layer, data link layer.

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