INTERNATIONAL STANDARDIZED PROFILE

ISO/IEC ISP 10609-12

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

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

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 12: Définition du profil TC51, fourniture du service de transport en mode connexion OSI utilisant le service de réseau en mode connexion OSI dans un système final attaché à un RLE AMDP-DC

Reference number
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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) together form a system for worldwide standardization as a whole. 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 (ISO/IEC JTC 1/SGFS) 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.

S-liaison may be established with JTC 1/SGFS by specialized organizations involved in the work of functional standardization. This part of ISO/IEC ISP 10609 was prepared with the collaboration of the following S-liaisons:

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

ISO/IEC ISP 10609 consists of several 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*

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- *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*

This part of ISO/IEC ISP 10609 contains one annex, which is normative.

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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 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 12. Parts 1 to 4 of ISO/IEC ISP 10609 specify profile requirements that are subnetwork-independent, for each of the transport groups TB, TC, TD and TE, respectively. There are further parts which specify subnetwork-dependent and media-dependent requirements. 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 the relevant subnetwork-independent and subnetwork-dependent parts. This part identifies the specific requirements for profile TC51.

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

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

1 Scope

1.1 General

This International Standardized Profile 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 defines the TC51 profile which is applicable to the 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 subnetwork.

1.2 Position within the taxonomy

The taxonomy of profiles is defined in ISO/IEC TR 10000-2. This part of ISO/IEC ISP 10609 defines the profile:

TC51 Connection-mode Transport Service over connection-mode Network Service over CSMA/CD LAN subnetworks

1.3 Scenario

Figure 1 illustrates the configurations of systems to which the TC51 profile is applicable.

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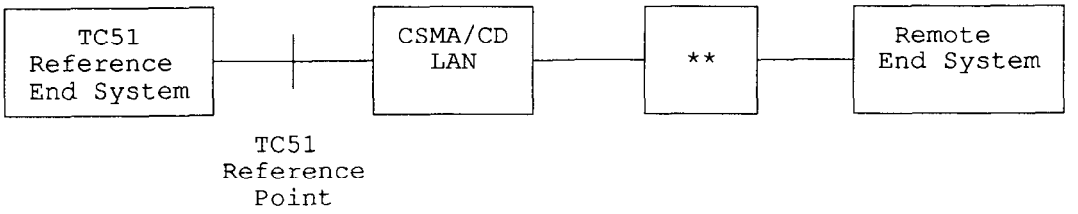

** other compatible network equipment covered by ISO/IEC TR 10000
- OSI relays
- OSI end systems
- other equipment

Figure 1 - Scenario of applicability of the TC51 profile

The TC51 profile specifies the required functions from the supporting protocol stack shown in figure 2 below.

Transport Layer	ISO/IEC 8073	
Network Layer	ISO/IEC 8878	
	ISO/IEC 8208	ISO/IEC 8881
Data Link Layer	ISO 8802-2 type 2	
	ISO/IEC 8802-3 Medium Access Control	
Physical Layer	ISO/IEC 8802-3 Physical Layer	

Figure 2 - Profile protocol stack for a TC51 End System

This profile does not specify the required functions for relays.

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 TR 10000-1 : 1992, *Information technology - Framework and taxonomy of International Standardized Profiles - Part 1: Framework*

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ISO/IEC TR 10000-2 : 1992, *Information technology - Framework and taxonomy of International Standardized Profiles - Part 2: Taxonomy of OSI Profiles*

ISO/IEC ISP 10609-2 : 1992, *Information technology - International Standardized Profiles TB, TC, TD and TE - Connection-mode Transport Service over connection-mode Network Service - Part 2: Subnetwork-type independent requirements for Group TC*

ISO/IEC ISP 10609-10 : 1994, *Information Technology - International Standardized Profiles TB, TC, TD and TE - Connection-mode Transport Service over connection-mode Network Service - Part 10: LAN subnetwork-dependent, media-independent requirements*

ISO/IEC ISP 10609-11 : 1994, *Information Technology - International Standardized Profiles TB, TC, TD and TE - Connection-mode Transport Service over connection-mode Network Service - Part 11: CSMA/CD LAN subnetwork-dependent, media-dependent requirements*

Additional normative references are found in each of the ISP parts listed above. These additional normative references are base standards used for development of the relevant ISP parts.

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

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

5 Requirements

5.1 Static conformance requirements

An implementation conforming to the profile defined in this part of ISO/IEC ISP 10609 shall:

a) support at least one point of attachment to an ISO/IEC 8802-3 CSMA/CD LAN subnetwork, through which it shall support all the features specified as static conformance requirements of parts 2, 10 and 11 of ISO/IEC ISP 10609;

b) implement all the features identified as requirements in the ISPICS requirements list in annex A.

5.2 Dynamic conformance requirements

An implementation conforming to the profile defined in this part of ISO/IEC ISP 10609 shall:

a) carry out the supported functions according to the applicable dynamic conformance requirements of parts 2, 10 and 11 of ISO/IEC ISP 10609;

b) behave in accordance with the requirements of the ISPICS requirements list in annex A.

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Annex A
(normative)

ISPICS requirements list

A.1 General options of the profile

There are no general options in this profile.

A.2 Standards selected and combined in the profile

This profile makes use of the following base standards:

- ISO/IEC 8073
- ISO/IEC 8878
- ISO/IEC 8208
- ISO/IEC 8881
- ISO 8802-2
- ISO/IEC 8802-3

A.3 Constraints on base standards

A conformant implementation of this profile shall:

a) meet all subnetwork-type independent constraints on operation of ISO/IEC 8073 as specified in the ISPICS requirements list in ISO/IEC ISP 10609-2;

b) meet all subnetwork-type dependent constraints on the operation of ISO/IEC 8878, ISO/IEC 8208, ISO/IEC 8881, ISO 8802-2 and ISO/IEC 8802-3 which are specified in the ISPICS requirements lists in ISO/IEC ISP 10609-10 and ISO/IEC ISP 10609-11.

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