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SLOVENSKI STANDARD
SIST EN ISP 11185-3:1997

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Information technology - International Standardized Profiles FVT2nn - Virtual Terminal Basic Class - Register of control object type definitions - Part 3: FVT215, FVT 216 - Application RIO Record Loading Control Object, Terminal RIO Record Notification Control Object (ISO/IEC ISP 11185-3:1994)

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Informationstechnik - Internationale Profilnorm FVT2nn - Virtuelles Terminal Grundstufe - Verzeichnis der Definitionen von Kontrollobjekttypen - Teil 3: FVT215, FVT216 - Anwendungskontrollobjekten - Terminalkontrollobjekt für das Quittieren von Informationsobjekten (ISO/IEC ISP 11185-3:1994)

Technologies de l'information - Profils normalisés internationaux FVT2nn - Classe de base de terminal virtuel - Registre de définitions de type d'objet de commande - Partie 3: FVT215, FVT216 - Objets de commande de charge d'enregistrement RIO pour application, objet de commande de notification d'enregistrement RIO (ISO/IEC ISP 11185-3:1994)

Ta slovenski standard je istoveten z: EN ISP 11185-3:1995

ICS:

35.100.05	X^ •|[b) ^Á] [¦æà} ã\^ ¦^zãç^	Multilayer applications

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EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN ISP 11185-3

September 1995

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Descriptors: data processing, information interchange, network interconnection, Open Systems Interconnection, communication procedure, control procedures, profiles

English version

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This European Standard was approved by CEN on 1995-09-07. 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.

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REPUBLIKA SLOVENIJA
MINISTRSTVO ZA ZNANOST IN TEHNOLOGIJO
Urad RS za standardizacijo in meroslovje
LJUBLJANA

SIST...... EN ISP 11185-3
PREVZET PO METODI RAZGLASITVE
-12- 1997

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 text of the International standard from ISO/IEC JTC 1 "Information technology" of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) has been taken over as a European Standard by CEN.

EN ISP 11185 parts 1-11 replaces ENV 41209:1990.

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 March 1996, and conflicting national standards shall be withdrawn at the latest by March 1996.

According to 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 and the United Kingdom.

Endorsement notice

The text of the International Standard ISO IEC/ISP 11185-3 :1994 has been approved by CEN as a European Standard without any modification.

INTERNATIONAL
STANDARDIZED
PROFILE

ISO/IEC

ISP

11185-3

First edition
1994-10-01

Information technology — International Standardized Profiles FVT2nn — Virtual Terminal Basic Class — Register of control object type definitions —

Part 3:

FVT215, FVT216 — Application RIO Record Loading Control Object, Terminal RIO Record Notification Control Object

Technologies de l'information — Profils normalisés internationaux FVT2nn — Classe de base de terminal virtuel — Registre de définitions de type d'objet de commande —

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ISO/IEC ISP 11185-3 : 1994 (E)

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electro-technical Commission) together 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 this work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC1. In addition to developing International Standards, ISO/IEC JTC1 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 11185-3 was prepared with the collaboration of

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

This International Standardized Profile ISO/IEC ISP 11185 forms an International Register of information objects in accordance with the procedures for the operation of OSI Registration Authorities laid down in ISO/IEC 9834. It is issued in parts, with additional parts being issued as further entries are added to the register. Each part is prepared in accordance with an approval and maintenance process laid down by the Special Group on Functional Standardization of ISO/IEC JTC1, *Information technology.*

ISO/IEC ISP 11185 is issued under the general title *Information technology — International Standardized Profiles FVT2nn — Virtual Terminal Basic Class — Register of control object type definitions.* At present the following parts are published or are in the course of preparation:

Annexes A and C of this part of ISO/IEC ISP 11185 form an integral part of this International Standardized Profile. Annex B is for information only.

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Introduction

This International Standardized Profile ISO/IEC ISP 11185 is defined within the
context of Functional Standardization, in accordance with the principles specified in
ISO/IEC TR 10000, "Framework and Taxonomy of International Standardized Pro-
files". 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.

The Open Systems Interconnection (OSI) Standard ISO 9040 for the Virtual Terminal
Basic Class Service identified a requirement for an International Register of VT Control
Object type definitions. Procedures for the operation of this International Register are
laid down in ISO/IEC 9834-5. This International Standardized Profile provides this
register. The individual entries in this register constitute Interchange Format and
Representation Profiles (F-Profiles) within the framework of ISO/IEC TR 10000.

This part of ISO/IEC ISP 11185 was developed in close cooperation between the three
Regional OSI Workshops, namely the OSI Implementors' Workshop (OIW) of the
United States, the European Workshop for Open Systems (EWOS) and the OSI
Asia-Oceania Workshop (AOW). It was developed under the editorship of EWOS.
The text is harmonized between these three Workshops and it has been ratified by
the plenary assemblies of each Workshop.

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Information technology — International Standardized Profiles FVT2nn — Virtual Terminal Basic Class — Register of control object type definitions

Part 3:
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1 Scope

1.1 General

The concept of Profiles for OSI, and the structure of the International Standardized Profiles that document them, are defined in ISO/IEC TR 10000-1. Such Profiles are divided into a number of different classes and sub-classes. Two of these classes contain sub-classes comprising functions of the Virtual Terminal Basic Class Service and Protocol specified in the base standards ISO 9040 and ISO 9041. These are the Application Profiles (A-Profiles) and the Interchange Format and Representation Profiles (F-Profiles).

The relationship between A-Profiles and F-Profiles is described in 7.3.2 of ISO/IEC TR 10000-1 and is as follows. Application Layer base standards require, implicitly or explicitly, the structure of information carried or referenced by them to be specified for each instance of communication. It is the purpose of F-Profiles to specify such information structures. Particular functional requirements may then be met by the combination of an A-Profile with one or more F-Profiles.

Establishment of a VT-association involves the selection by negotiation of a particular Virtual Terminal Environment profile (VTE-profile), and of particular values for any arguments of that VTE-profile. The VTE-profile specification, and possibly also the values of certain VTE-profile arguments, may in turn reference the definitions of VT control object types and assign-ment types. These VTE-profiles, control object types and assignment types are thus information structures that require explicit reference within the VT protocol. Particular instances of these structures are fully defined within the base standards, but the base standards also provide for further instances to be defined by registration. Each registered instance constitutes an F-Profile within the framework of ISO/IEC TR 10000.

The Virtual Terminal Basic Class Service and Protocol may be used to realise a wide range of distinct functions. Particular functions may be realised through the selection of appropriate VT functional units, F-Profiles and other VTE-profile argument values. The specification of the selection required to realise a particular function and to promote interoperability constitutes a Virtual Terminal A-Profile within the framework of ISO/IEC TR 10000.

The three International Registers of VT information structures and the specifications of VT Application Profiles are each published as a separate multi-part ISP as follows:

ISO/IEC ISP 11184 is the Register of VTE-profiles;

ISO/IEC ISP 11185 is the Register of control object type definitions;

ISO/IEC ISP 11186 is the Register of assignment-type definitions;

ISO/IEC ISP 11187 contains the specifications of VT Application Profiles.

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This part of ISO/IEC ISP 11185 contains the type definitions of two control objects that may be used to

a) load the contents of a RIO record from local storage at a terminal;

b) store the contents of a RIO record to local storage at a terminal;

c) remove VT data items from local storage at a terminal; and

d) enquire the status of a VT data item held in local storage at a terminal.

1.2 Position within the taxonomy

The taxonomy of International Standardized Profiles for OSI is laid down in ISO/IEC TR 10000-2. Within the classification scheme of this taxonomy, the OSI Profiles specified in this International Standardized Profile are in the Virtual Terminal Registered Object sub-class of the class of Interchange Format and Representation Profiles.

A Profile within this subclass has a Profile identifier of the form FVTabc, where abc is a structured numerical identifier that identifies the position of the Profile within each of the three levels of subdivision of the subclass. The values of a and b are single digits but c is an integer that is not necessarily a single digit.

In principle the ISO Virtual Terminal model allows for multiple classes of operation, although at the time of publication of this International Standardized Profile only the Basic Class has been defined. The value of the identifier component a distinguishes between distinct types of information object as follows:

a = 1   for Basic Class VTE-profiles;

a = 2   for Basic Class Control Objects;

a = 3   for Basic Class Assignment Types.

Values of a greater than 3 are reserved for future developments.

This International Standardized Profile ISO/IEC ISP 11185 contains the specifications of the Profiles with identifiers of the form FVT2bc. For this form of identifier, the component b distinguishes between the five major classifications of Basic Class Control Objects as follows:

b = 1   for Miscellaneous Control Objects;

b = 2   for Field Entry Instruction Control Objects;

b = 3   for Field Entry Pilot Control Objects;

b = 4   for Reference Information Objects;

b = 5   for Termination Conditions Control Objects.

Each of these classifications corresponds to a sub-register under the procedures of ISO/IEC 9834-5. The identifier component c is the serial number of the control object type in the appropriate sub-register. Values of b greater than 5 are reserved for new classifications of Basic Class Control Objects that may be defined in future amendments to ISO 9040.

This part of ISO/IEC ISP 11185 contains the type definitions of the Basic Class Control Objects with the Profile identifiers

FVT215   — Application RIO Record Loading CO;

FVT216   — Terminal RIO Record Notification CO.

1.3 Scenario

The specification of the Virtual Terminal Service is given in ISO 9040. It is based on a model in which two VT-users communicate by means of a shared Conceptual Communication Area (CCA) that is a conceptual part of the VT service-provider. Information exchange is modelled by one VT-user updating the content of the CCA and the changed state of the CCA then being made accessible to the peer VT-user.

Control objects (COs) form one of the types of information object that may be present in the CCA. This is illustrated in figure 1, in which CO-1, CO-2, ... CO-n represent a number of different control objects present in the CCA. The negotiation during establishment of a VT-association will determine whether or not these will include control objects of either or both of the types whose definitions are given in this part of ISO/IEC ISP 11185.
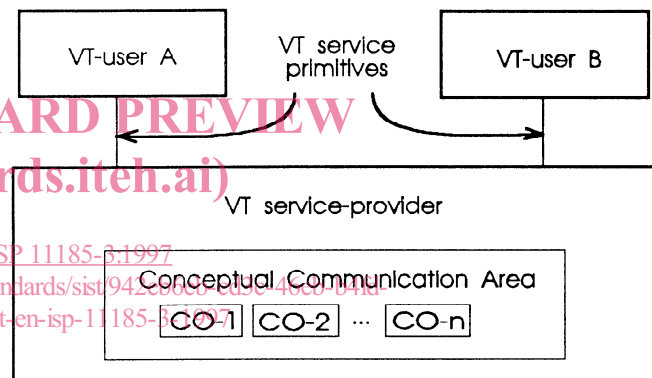

Figure 1 - Control objects in the VT Service Model

The CCA is structured by the Virtual Terminal Service into a number of components. For a control object the Data Structure Definition (DSD) component of the CCA contains the syntax of its information content, including the range of possible values and the permitted update operations. The current value of its information content is contained in the Control, Signal and Status store (CSS) component. Updates to the current value take place through the issue of VT service primitives by one VT-user to the service-provider. Changes of state of the CCA are made accessible through the issue of VT service primitives by the service-provider to the peer VT-user.

By clause 14 of ISO 9040, COs enable VT-users to handle control information related to virtual terminal functions and to real devices. This control is exercised by the VT-users through semantics associated with the information content and with the update operations of the CO. Definition of the semantics, or specification of the source of the semantics if the semantic details are not fully prescribed, forms part of the registered definition of the CO. These semantics are not however of concern to the VT service-provider itself. The DSD will contain an ASN.1 object identifier that identifies the regis-

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tered definition, but the VT service-provider merely acts as a repository of this value. It is only the VT-user that requires knowledge of the registered definition.

> NOTE 1 – The VTE-parameter values that determine the syntax of the information content may not be negotiated explicitly during association establishment. Moreover, in the case of non-parametric COs these values do not determine the details of the syntax. Such values and details form part of the registered definition of the CO. Since the VT service-provider is not required to have knowledge of this registered definition, in principle the VT-users provide the VT service-provider with such information through local management procedures. Whether or not this is necessary in practice depends on the configuration of the implementations concerned.

The control object types defined in this part of ISO/IEC ISP 11185 assume an asymmetry between the two communicating end systems. One end system is assumed to have a terminal role and to contain devices for the input and display of data and for signalling. These devices form part of the VT-user component of that end system. The other end system is assumed to have an application role and to contain an application package that the terminal end system desires to access. This asymmetry may, but need not, be recognised by the VT Service; provision for such recognition exists only in an S-mode VT-association.

The Virtual Terminal Protocol specification given in ISO 9041-1 models the VT service-provider in terms of protocol exchange between two Virtual Terminal Protocol Machines (VTPMs), each with its own CCA. The CCA of each VTPM is updated both by service primitives received from its own VT-user and by protocol elements received from the peer VTPM. Corresponding service primitives and protocol elements are issued by the VTPM to provide notification of changes to the content of its CCA. This is illustrated in figure 2 in the context of the asymmetric end systems described above. The control object type definitions given in this part of ISO/IEC ISP 11185 are expressed in terms of this model.

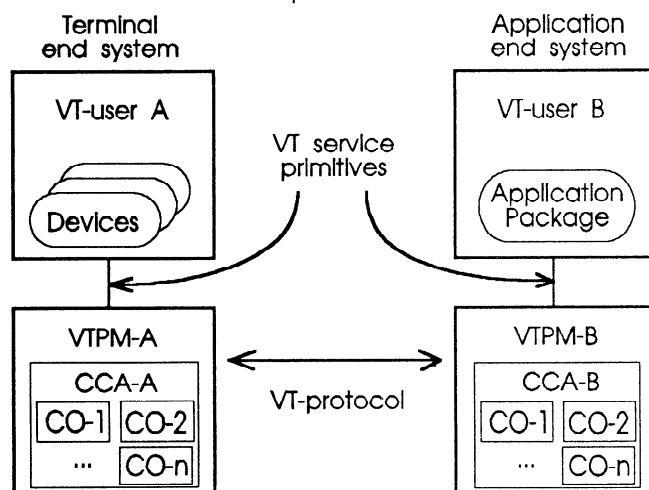Terminal end system / Application end system

Figure 2 - Control objects in the VT Protocol model

For certain types of control object the abstract syntax of ISO 9041-1 does not provide a complete specification for the representation of CO update operations. This arises where the abstract syntax of ISO 9041-1 makes use of an ASN.1 any

type, or where symbolic values have to be encoded in terms of an ASN.1 integer type. Control object type definitions are required by ISO/IEC 9834-5 to provide the necessary refinement of the abstract syntax.

> NOTE 2 – Since an abstract syntax is made available for use through its inclusion in a presentation context, and since the Presentation service-provider has no knowledge of control object type definitions, in principle the VT-users provide the Presentation service-provider with these refinements to the abstract syntax through local management procedures. Whether or not this is necessary in practice depends on the configuration of the implementations concerned.

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP 11185. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this International Standardized Profile 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 CCITT maintains published editions of its current recommendations.

ISO 7498:1984, *Information processing systems - Open Systems Interconnection - Basic Reference Model.*

ISO/TR 8509:1987, *Information processing systems - Open Systems Interconnection - Service conventions.*

ISO 8822:1988, *Information processing systems - Open Systems Interconnection - Connection oriented presentation service definition.*

ISO/IEC 8824:1990, *Information technology - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1).*

ISO 9040:1990, *Information technology - Open Systems Interconnection - Virtual Terminal Basic Class Service.*

ISO 9041-1:1990, *Information technology - Open Systems Interconnection - Virtual Terminal Basic Class Protocol - Part 1: Specification.*

ISO/IEC 9041-2:1993, *Information technology - Open Systems Interconnection - Virtual Terminal Basic Class Protocol - Part 2: Protocol Implementation Conformance Statement (PICS) Proforma.*

ISO 9834-1:1993, *Information technology - Open Systems Interconnection - Procedures for the Operation of OSI Registration Authorities - Part 1: General Procedures.*

ISO 9834-5:1991, *Information technology - Open Systems Interconnection - Procedures for the Operation of OSI Registration Authorities - Part 5: Register of VT Control Object Definitions.*

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