INTERNATIONAL STANDARDIZED PROFILE

ISO/IEC ISP 11185-5

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1994-10-01

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

Part 5:
FVT218 — Logical Image 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 —

Partie 5: FVT218 — Objet de commande d'image logique

Reference number
ISO/IEC ISP 11185-5:1994(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 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 11185-5 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:

- *Part 1: FVT211, FVT212 — Sequenced and Unsequenced Application Control Objects*
- *Part 2: FVT213, FVT214 — Sequenced and Unsequenced Terminal Control Objects*
- *Part 3: FVT215, FVT216 — Application RIO Record Loading Control Object, Terminal RIO Record Notification Control Object*
- *Part 4: FVT217 — Horizontal Tabulation Control Object*
- *Part 5: FVT218 — Logical Image Control Object*
- *Part 6: FVT219 — Status Message Control Object*
- *Part 7: FVT2110 — Entry-Control Control Object*
- *Part 8: FVT221 — Forms FEICO (Field Entry Instruction Control Object) No.1*
- *Part 9: FVT222 — Paged FEICO (Field Entry Instruction Control Object) No.1*
- *Part 10: FVT231 — Forms FEPCO (Field Entry Pilot Control Object) No.1*
- *Part 11: FVT232 — Paged FEPCO (Field Entry Pilot Control Object) No.1*
- *Part 12: FVT2116, FVT2117, FVT2118, FVT2119 — Generalized Telnet Synch, Signal, Negotiation and Subnegotiation Control Objects*
- *Part 13: FVT2111 — Waiting Time Control Object*
- *Part 14: FVT2112 — Printer Control Object*
- *Part 15: FVT2113 — Field Definition Management Control Object*
- *Part 16: FVT2114 — Terminal Signal Titles Control Object*
- *Part 17: FVT2115 — Help Text Control Object*

Annex A of this part of ISO/IEC ISP 11185 forms an integral part of this International Standardized Profile.

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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 Profiles". 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 identifies 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 OSE 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 from a control object specification contained in the European S-mode Forms Functional Standard of ENV 41 208. 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 5:
FVT218 — Logical Image Control Object

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 assignment 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.

This part of ISO/IEC ISP 11185 contains the definition of a control object type that may be used to affect the manner in which y-arrays within the current update-window are represented in their image on a real device. The x-arrays with y-coordinate below some particular value are considered as moved from the top of the y-array to the bottom. The particular value is set by a data element of such a CO. This control permits the display object to be scrolled vertically through a form, or a text file, without the need to rewrite the entire display object at each movement of its position within the form or file.

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 FVT*abc*, 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*

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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 FVT2*bc*. 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 definition of the Miscellaneous Control Object type with the Profile identifier

FVT218 — Logical Image Control Object.

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.

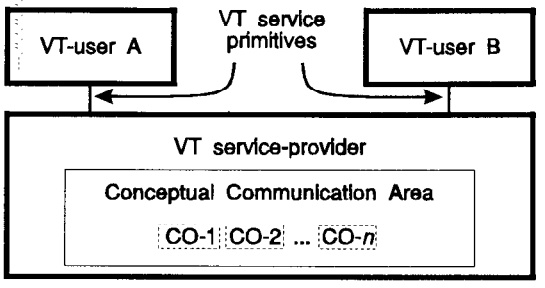

Figure 1 — Control objects in the VT Service model

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 a control object of the type whose specification is given in this part of ISO/IEC ISP 11185.

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 registered 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.

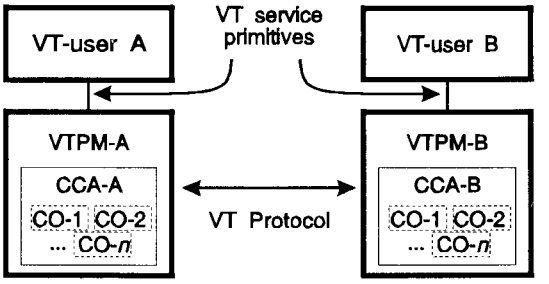

Figure 2 — Control objects in the VT Protocol model

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

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content of its CCA. This is illustrated in figure 2. The control object type definition given in this part of ISO/IEC ISP 11185 is expressed in terms of this 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/IEC 9834-1:1993, *Information technology — Open Systems Interconnection — Procedures for the Operation of OSI Registration Authorities — Part 1: General Procedures.*

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

ISO/IEC TR 10000-1:1992, *Information technology — Framework and taxonomy of International Standardized Profiles — Part 1: Framework* (second edition).

ISO/IEC TR 10000-2:1992, *Information technology — Framework and taxonomy of International Standardized Profiles — Part 2: Taxonomy of Profiles* (second edition).

3 Definitions

For the purposes of this part of ISO/IEC ISP 11185 the following definitions apply.

3.1 General OSI terminology

3.1.1 This part of ISO/IEC ISP 11185 makes use of the following terms defined in ISO/TR 8509:

a) service primitive;

b) service-provider.

3.1.2 This part of ISO/IEC ISP 11185 makes use of the following terms defined in ISO 8822:

a) abstract syntax;

b) presentation context.

3.1.3 This part of ISO/IEC ISP 11185 makes use of the following terms defined in ISO/IEC 8824:

a) any type;

b) object descriptor type;

c) object identifier.

3.1.4 This part of ISO/IEC ISP 11185 makes use of the following terms defined in ISO/IEC 9834-1:

a) registration;

b) registration-hierarchical-name.

3.2 Terminology of VT base standards

3.2.1 This part of ISO/IEC ISP 11185 makes use of the following terms defined in ISO 9040:

a) control object;

b) device object;

c) display object;

d) object updating device;

e) update-window;

f) VT-user;

g) VTE-parameter;

h) VTE-profile.

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3.2.2 This part of ISO/IEC ISP 11185 makes use of the following term defined in ISO 9041-1:

a) protocol element.

4 Abbreviations

For the purposes of this part of ISO/IEC ISP 11185 the following abbreviations apply.

AOW OSI Asia-Oceania Workshop;
EWOS European Workshop for Open Systems;
OIW OSE Implementors Workshop;
OSE Open Systems Environment.

All other abbreviations used are defined in ISO/IEC TR 10000-1 or ISO 9040.

5 Principles of conformance to VT Profiles

An implementation of the Virtual Terminal Protocol conforms to an FVT2*nn* Profile that defines a control object type if the protocol implementation is capable of sending and receiving PDUs corresponding to all update operations permitted for that CO type.

Conformance of a protocol implementation to an FVT2*nn* Profile does not place requirements on the ability of the implementation to negotiate the presence in the CCA of an instance of this CO type. Such requirements fall within the scope of conformance to an FVT1*nn* Profile that specifies a VTE-profile.

A system that includes an implementation of the VT Protocol may be claimed to conform also to an AVT*nn* Profile. Conformance to an AVT*nn* Profile may require that CO update operations received by the VT-user component of the system are interpreted in accordance with the semantics defined within the appropriate CO type definition. Conformance to CO semantics is not within the scope of conformance to any FVT*nnn* Profile.

The conformance requirements of the Virtual Terminal Protocol are specified in clause 13 of ISO 9041-1. The supplier of a protocol implementation which is claimed to conform to ISO 9041-1 is required to complete a copy of the PICS proforma provided in ISO/IEC 9041-2. Annex A of this part of ISO/IEC ISP 11185 provides an ISPICS Requirements List (IPRL) for the Profile FVT218 specified herein. This IPRL specifies constraints on the answers that may be given in the completed PICS for a protocol implementation that claims conformance to this Profile.

6 Entry number

The remaining clauses of this part of ISO/IEC ISP 11185 provide the entry for a Logical Image Control Object in the International Register of VT Control Object Type Definitions. The entry is structured in accordance with the requirements of ISO/IEC 9834-5. These requirements specify that this International Register shall consist of a number of sub-registers, each corresponding to a major classification of VT Control Object.

This entry is the eighth in the sub-register for Miscellaneous Control Objects. This register assigns it the entry number:

MISCO-8.

7 Name of sponsoring authority

This entry is sponsored by the European Workshop for Open Systems (EWOS).

8 Date

The date of submission of this proposal was 1992-09-02.

9 Identifier

The name assigned to an information object by an International Register is required by ISO/IEC 9834-1 to be a registration-hierarchical-name. A registration-hierarchical-name may have more than one form. The permitted forms include an ASN.1 object identifier as defined in ISO/IEC 8824 and a relative distinguished name as defined in ISO/IEC 9594-2.

In accordance with A.4 of ISO/IEC 9834-5, this register assigns the following object identifier form for the name of this register entry:

{ iso(1) identified-organization(3) ewos(16) eg(2) vt(7) controlObject(0) cotypemisc(0) li(1) }.

In accordance with 20.1.1 of ISO 9040, this object identifier shall be used as the value of the CO-type-identifier VTE-parameter for a control object in order to identify this register entry as the source of the information structure and semantic content of the control object.

This register does not assign any other form to the name of this entry.

NOTE — By ISO/IEC 9834-1 a relative distinguished name for the purposes of the OSI Directory may only be assigned together with an object identifier when the object identifier form is generated under the arc { joint-iso-ccitt(2) country(16) country-name }.

10 Descriptor value

The value of the ASN.1 object descriptor type assigned to this register entry is:

"EWOS VT CO for Logical Image Control".

11 CO parameters

This register entry specifies the following values for VTE-parameters of this control object type:

CO-access:	any valid value
CO-priority:	"normal"
CO-trigger:	"not selected"
CO-structure:	equal to the value of the z-window VTE-parameter for the display object concerned

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FOR *n* = 1 TO (value of CO-structure) DO
{ CO-element-id: *n*
CO-category: "integer"
CO-size: equal to the value of the y-bound VTE-parameter for the display object concerned }.

When a control object of this type is referenced by an A-mode VTE-profile then the device-control-object VTE-parameter of one or more device objects should be used to associate the control object with a particular display object, in accordance with note 3 to table 11 of ISO 9040. It is this display object that is used to determine the value of CO-structure, and of CO-size for each data element, for this control object.

12 CO values, syntax and semantics

This CO type enables a VT-user to specify which x-array of each y-array within the current update-window for the z-dimension of a display object should be regarded as the logical top of the y-array concerned. Such specification has no effect on the VT Protocol. This facility is provided to allow one VT-user to communicate to its peer VT-user the 'behaviour pattern' to be followed in the formation of the image of the y-array on a real device. It is not a protocol violation if the real device does not behave in the intended manner.

For the purpose of image formation, when this facility is in use, y-coordinate values smaller than that of the logical top should be considered as increased by the value of the y-bound VTE-parameter, so that the corresponding x-arrays follow below the x-array with coordinate y = y-bound. Then if the logical top has y-coordinate value *m*, the image of the y-array on the real device should be as if this facility were not in use but the y-coordinate of each x-array were reduced by (*m* - 1).

Each data element refers to that y-array within the current update-window for the z-dimension for which the z-coordinate differs from the CO-element-id by an integer multiple of the value of the z-window VTE-parameter. A zero value for the data element signifies that the facility is disabled for the y-array concerned. A positive value gives the y-coordinate of the logical top x-array of the y-array concerned. Note that values 0 and 1 are thus equivalent. Value 0 must be defined since the initial value of all CO data elements of category "integer" is zero, by 20.2.4 of ISO 9040.

The update syntax used by the VT Protocol for updates to this CO type is fully defined in ISO 9041-1.

13 Additional information

A CO of this type requires the use of the Structured Control Objects VT functional unit.

14 Usage

A control object of this type may be used whenever there is a requirement for a vertical scrolling mechanism to be used with a display object that is bounded in the y-dimension. As an illustration, use of such a CO enables a y-array to be scrolled vertically by a form-filling application through a form larger than one y-array with a minimum of network interaction. To move the y-array forward by *n* lines through the form, the top *n* lines currently held in the DO are overwritten by the next *n* lines that it is desired to include. The data element that gives the logical top of this y-array is then increased by *n* (and decreased by the value of the y-bound VTE-parameter if the new value then exceeds y-bound). The FDCO should also be updated to specify correctly the field structure of the newly included *n* lines of the form.

Such scrolling is separate from and in addition to the ability of a VT-user to scroll the images displayed by its real devices through a y-array that is larger than the image area. It is also distinct, in both nature and application, from the facilities provided by the ripple functional unit specified in ISO 9040/AMD2. If the content of the y-array were given a backward ripple in the y-direction by *n* x-arrays and the new lines of the form were written to the bottom *n* x-arrays that were emptied by the ripple operation then the content of the DO would move relative to its field structure. Use of a CO of this type enables the text to remain correctly positioned relative to the field structure of the form for that part of the form which remains present in the DO throughout the update process.

If neither a CO of this type nor the ripple functional unit is available, any movement of the display object through the form would require the content of the DO and its field structure both to be rewritten in their entirety. For a large DO and a small movement through the form, the saving in network traffic that becomes possible through use of this CO type can be very substantial.

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Annex A
(normative)

ISPICS Requirements List

A.1 Protocol requirements

This annex provides an ISPICS Requirements List (IPRL) for the Profile FVT218 specified in this part of ISO/IEC ISP 11185. The PICS proforma for the VT protocol is given in ISO/IEC 9041-2. This IPRL specifies constraints on the answers that may be given in the completed PICS for an implementation that claims conformance to this Profile.

These constraints are given in tables A.1 and A.2. The notation used in the tables is as follows. Individual items in a PICS proforma are referenced by the means specified in A.9.1 of ISO 9646-2. Such a reference has the form *x-y/z*, where *x* is the number of the ISO Standard that specifies the protocol, *y* is a reference within the PICS proforma of this Standard to the smallest subclause that contains the item concerned, and *z* is the reference number of the item within that subclause. Where this IPRL needs to present the constraints on a particular item as two or more separate cases, a suffix of the form '*.n*' is added to the item reference where *n* is a serial number that labels the different cases.

The item name is taken from the PICS proforma. The "status" columns of the IPRL tables take priority over the corresponding "status" columns of the PICS proforma and they use the notation of that proforma. They refine the PICS proforma status values by evaluating conditional expressions or converting optional values to a more specific form.

Where an IPRL table has a "Profile values" column, the status value applies separately to each listed Profile value.

For any column in an IPRL table that corresponds to an answer column in the PICS proforma, the values listed are the acceptable answers for the item concerned. The following special notation is used in these columns:

Any	The IPRL places no constraint on the answer;
n/a	The column is not relevant to this item.

A.2 Profile-specific requirements

An IPRL may also specify constraints on the answers to additional questions that concern Profile-specific conformance requirements which are outside the scope of any referenced base standard. These questions will be given in the IPRL itself.

This IPRL does not specify any Profile-specific constraints.

Table A.1 — VTE requirements for FVT218 (Logical Image CO)

Item reference no. 9041-	Name of item	Status	Numbers supported	Negotiable
A2.1/7 A.3.8/11	Structured Control Objects Parametric COs	m m	n/a ≥1	n/a Any

Table A.2 — PDU requirements for FVT218 (Logical Image CO)

Item reference no. 9041-	Name of item	Profile values	SENDING Status	RECEIVING Status
A.5.15.4/8.1 A.5.15.4/8.2	integerUpdate "	See note 1 See note 2	m o	m m

NOTES

1 This references all non-negative integer values that do not exceed the value of y-bound for the display object concerned.

2 This references all non-negative integer values that exceed the value of y-bound for the display object concerned.

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