INTERNATIONAL STANDARD

ISO/IEC 9834-4

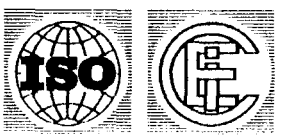
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Information technology — Open Systems Interconnection — Procedures for the operation of OSI Registration Authorities —

Part 4:
Register of VTE Profiles

Technologies de l'information — Interconnexion de systèmes ouverts — Procédures pour des organismes d'enregistrement OSI particuliers —

Partie 4: Enregistrement des profils de terminaux virtuels VTE



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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. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 9834-4 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

ISO/IEC 9834 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Procedures for the operation of OSI Registration Authorities*:

— *Part 1: General procedures*

— *Part 2: Registration procedures for OSI document types*

— *Part 3: Registration of object identifier component values for joint ISO-CCITT use*

— *Part 4: Register of VTE Profiles*

— *Part 5: Register of VT Control Object Definitions*

— *Part 6: Registration of AP titles and AE titles*

Annex A forms an integral part of this part of ISO/IEC 9834. Annex B is for information only.

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Introduction

The Open Systems Interconnection (OSI) Standards for Basic Class Virtual Terminals (VT), ISO 9040 and ISO 9041–1, have a requirement for

a) unambiguous names for the identification and definition of registered VTE-profiles; and

b) a register of VTE-profile definitions.

This part of ISO/IEC 9834 specifies the procedures to be followed in preparing and maintaining a register of VTE-profiles and their names. Such registers can be maintained by any organisation capable of allocating ASN.1 object identifier values. This part of ISO/IEC 9834 also specifies the procedures for preparing and maintaining the International Register.

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Information technology – Open Systems Interconnection – Procedures for the operation of OSI Registration Authorities –

Part 4 :
Register of VTE Profiles

1 Scope

This part of ISO/IEC 9834 specifies the contents of register entries recording information about VTE-profiles and assigning unambiguous names of ASN.1 type OBJECT IDENTIFIER to VTE-profile definitions. The VTE-profiles in this register are defined for use with implementations of VT protocols claiming to conform to ISO 9041–1.

The VTE-profile names to which this document refers are for use in fields of the VT communication protocol defined in ISO 9041–1 which need to identify the VTE-profiles defined in the register entries.

A name registered in accordance with this part of ISO/IEC 9834 shall serve as an identification of the VTE-profile associated with it in the register.

The presence of a register entry in the International Register carries no implications of required support for that VTE-profile in any Virtual Terminal implementation.

NOTE – Nonetheless, within a VTE-profile entry, requirements may be expressed relating to implementations claiming to support that entry (such requirements are described in clause A.10).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 9834. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 9834 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

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 9834-1 : 1991, *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.*

3 Definitions

For the purposes of this part of ISO/IEC 9834, the following terms are used which are defined in ISO 9040.

a) VT-association
b) VT-functional-unit
c) VT-mode

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d) VTE-parameter
e) VTE-profile
f) registered VTE-profile
g) profile argument
h) special profile argument
i) service parameter
j) display object
k) control object
l) device object
m) mode, A-mode, S-mode

4 Abbreviations

For the purposes of this part of ISO/IEC 9834, the following abbreviations apply.

VTE	Virtual Terminal Environment
ISO	International Organisation for Standardisation
OSI	Open Systems Interconnection
ASN.1	Abstract Syntax Notation One

5 Subcommittee

The responsible subcommittee shall be ISO/IEC JTC1/SC21.

6 Role of Registration Authority

The Registration Authority performs a technical role in ensuring that entries conform to this part of ISO/IEC 9834 and represent useful and clear specifications.

7 Contents of Register Entries

The contents of Register Entries are specified in annex A.

8 Format of Register Entries

Register Entry proposals shall be in the form specified in annex A.

9 Part 1 applicability

All clauses of ISO/IEC 9834-1 shall apply.

10 Activity

The volume of activity is not expected to exceed five registrations per year.

11 Change

Inclusion or modification or deletion of Register Entries in the International Register shall require the same consensus of ISO Member Bodies, and shall follow similar procedures, to that used for the agreement of an International Standard, except that final approval by ISO/IEC Councils is not required.

12 Availability

Copies of Register Entries shall be made available to any requester by the Registration Authority.

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Annex A

(normative)

Form of register entries

The headings of this annex are those that shall be used in the register entry. The contents of each clause and sub-clause are defined in the corresponding text below.

NOTE – An example of a register entry appears in annex B, and should be consulted as this annex is read.

A.1 Entry number

The form of this clause is determined by the authority maintaining the register. It is intended for human use only, and provides unambiguous identification of the register entry within the scope of the authority maintaining the register, but not outside it. An example is:

ISO–09 the ninth register entry for VTE-profiles.

A.2 Name of sponsoring authority

This clause shall contain the name of the sponsoring authority (as defined in ISO/IEC 9834-1) which was the proposer of the register entry.

A.3 Date

This clause shall contain the date a proposal was first submitted to the responsible subcommittee, or the date of approval of a register entry.

A.4 Identifier

This clause specifies a value of the ASN.1 type OBJECT IDENTIFIER which identifies the VTE-profile defined by this register entry, and which is used in the profile identifier field of the VT protocol elements which reference this profile.

NOTE – Values of the ASN.1 type OBJECT IDENTIFIER provide globally unambiguous identification of information objects, and are never re-used.

Where an OSI VTE-Profile register entry is copied with no technical change from one register to a different one, the object identifier value originally allocated may be retained to identify the same object in the new register or a new value may be allocated. The old object identifier value shall not be re-used to identify a different object.

New object identifiers allocated by the International Registration Authority for VTE-profiles shall be of the form:

{iso standard 9834 vte–profile(4) x}

where x is the number of the VTE-profile in the International Register.

Object identifiers which are allocated by other registration authorities may be of any form permitted to them under ISO/IEC 8824 but subject to qualification by ISO/IEC 9834-1.

A.5 Descriptor value

This clause specifies a value of ASN.1 ObjectDescriptor which is to be associated with the identifier in clause A.4. Where entries are copied from one register to another, changes to this clause shall be regarded as editorial, not technical.

The ObjectDescriptor value provides human-readable text describing the VTE-profile covered by the register entry. It should be chosen to provide a high probability of globally unambiguous identification of the VTE-profile, but this cannot be guaranteed.

A.6 Mode

This clause states which mode of operation (A or S) this registered profile is designed for.

A.7 VT functional units

This clause states which VT-functional-units are required, which are optional and which are prohibited for operation using this registered VTE-profile.

A.8 Profile arguments

This clause lists the profile arguments that are associated with this registered VTE-profile and defines them. By convention, profile arguments are named "r1", "r2"....."rn".

In most cases, a profile argument is directly equivalent to a VTE-parameter (in the directed graph) and this relationship shall be indicated in the profile argument definition. A value type and/or range may be given.

Special profile arguments have no direct equivalents in the directed graph and shall be given a local identifier number (ASN.1 INTEGER type) which has a significance particular to this registered VTE-profile. Symbolically they take the form Pp-1, Pp-2.....Pp-n. The value type of a special profile argument is specified.

Profile arguments may have default values specified by the VTE-profile. For arguments which map to VTE-parameters, the profile argument default may be defined independently from the parameter default defined in ISO 9040 for the associated VTE-parameter. The VTE-profile may also reference the VTE parameter default for use as the profile argument default. Special profile arguments may have any valid value specified as a default.

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The existence and value of profile argument defaults should be included in this clause of the register entry.

A.9 VTE-profile body

The main body of the VTE-profile definition is presented in a BNF style notation or in any other suitable notation. Some VTE-parameters are given unique values by the profile definition. Other VTE-parameters are subject to evaluation by a profile argument. All VTE-parameters shall be specified in the VTE-profile body irrespective of the defaults defined in the standards. This means that users of the register will be able to obtain *all* the necessary information from one place. Some of the VTE-parameters in the directed graph, e.g. mode and functional-units, are assigned values by the service parameters VT-mode and VT-functional-units in VT-ASSOCIATE *and, therefore, do not appear in the VTE-profile definitions.*

The following symbols are used in the BNF-style notation:

{ }	enclose a grouping for syntactic purposes; there is no implication of optional repetition.
,	separates elementary or grouped parameters in a list.
( )	encloses an explanatory comment.
.	ends the syntactic block.
IF...THEN { }	indicates conditional occurrence of a piece of the VTE-profile dependent usually on a special profile argument of boolean type.

It is possible to define VT control objects in a VTE-profile. Where such a control object may be of more general use and may be used in more than one VTE-profile, it is recommended that it be registered separately in the register of VT Control Objects (see ISO/IEC 9834–5). Where a CO is defined in a VTE-profile, each parameter associated with the CO shall be defined and the contents, semantics and where applicable the update syntax shall be defined (see ISO/IEC 9834–5 for *examples of CO definition*).

A.10 Additional information

Additional notes are included here, as necessary, to state any conditions on the use of the VTE-profile.

Requirements may be specified here to be placed on any implementation which claims to support the registered VTE-profile.

This clause is optional and if present is normative.

A.11 Usage

A typical use of the VTE-profile is given here for information only. This clause is mandatory.

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Annex B

(informative)

Example of register entry

1 Entry number

ISO-3

2 Name of sponsoring body

The sponsoring body is ISO/IEC JTC1/SC21/WG5

3 Date

The date of submission of this proposal is November 17th 1991.

4 Identifier

{iso standard 9834 vte–profile(4) 3}

5 Descriptor value

"S-mode single bounded page with optional printer"

6 Mode

Use of this profile requires S-mode to have been selected.

7 VT functional units

The kernel functional unit is required for operation with this VTE-profile.

8 Profile arguments

This VTE-profile has three arguments.

Profile argument r1 is mandatory and enables negotiation of a value for the VTE-parameters x-bound and device-minimum-x-array-length. It takes an integer value greater than zero.

Profile argument r2 is optional and enables the negotiation of a value for the VTE-parameters y-bound and device-minimum-y-array-length. It takes a value greater than zero. The default value is 24.

Profile argument r3 is optional and enables negotiation of the existence of the second device object for mapping to an auxiliary device such as a printer. This is special profile argument Pp-1, with numeric identifier value 1 and type BOOLEAN; it takes the values "true" and "false". Default is "false".

9 VTE-profile body

```
Display-objects *(single occurrence)* =
 {display-object-name = DO,
  dimensions = 2, *(default value)*

   x-dimension =
     {x-bound = profile-argument-r1,
      x-addressing = "no constraint",
      x-absolute = "yes"
     *(x-window assumes default value)* },

   y-dimension =
     {y-bound = profile-argument-r2,
      y-addressing = "no constraint",
      y-absolute = "yes"
     *(y-window assumes default value)* }}

Device-objects *(single or double occurrence)* =
  {device-object-name = DVD,
   device-display-object = DO,
   device-default-initial-value = "true",
   device-emphasis= {"BN ",null,null,null,null,"CN "},

*(This selection is made from the recommended ISO 6429
based specification given in ISO 9040 clause B.17.3 and
allows the following effects - "normal", "emphasise(bold)" and
"invisible")*

   device-minimum-array-length = profile-argument-r1,
   device-minimum-array-length = profile-argument-r2

*(other device parameters assume default values or are not
required)*  }

IF r3 = "true" THEN  *(device is present only if profile argument
                r3 = "true")*

 {device-name = DVP,
  device-display-object = DO,
  access-control-on-default-CO = "WAVAR",
  device-emphasis = {"BN ",null,null,null,null,"CN "},

*(This selection is made from the recommended ISO 6429
based specification given in ISO 9040 clause B.17.3 and
allows the following effects - "normal", "emphasise(bold)" and
"invisible")*

   device-minimum-x-array-length = profile-argument-r1,
   device-minimum-y-array-length = profile-argument-r2

*(other device parameters assume default values or are not
required)*  } .
```


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NOTE – This example of a VTE-profile is incomplete. However, all VTE-parameters shall be specified in the VTE-profile body irrespective of the defaults defined in the standards. This means that users of the register will be able to obtain all the necessary information from one place.

10 Additional information

Only the first boolean of the default control object contained in each device object is defined. This boolean is defined as the "on/off" switch for the device where the value "true" = "on" and "false" = "off". These values were chosen so that the initial value for device object DVD means the device is "on" and output from the display object is being mapped to the device. The initial value for the second device object DVP is the default, "false", which means this device object, if present, is initially "off".

11 Usage

A typical use for this VTE-profile is for applications which require single-page-oriented two-way-alternate conversational operation with absolute addressing capability. It is readily mappable on to conventional screen-mode video devices.

The second device object could be used, for example, when the main device is a VDU screen and allows the existence of a second device, for example a "hard copy" printer, to be declared where some aspect of its use is visible on the VT-association.

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