

**Implementation of
ENV 41208-1:1990**

Information Systems Interconnection — Basic class virtual terminal — S-mode forms —

Part 1: Virtual terminal service

Cooperating organizations

The joint European Standards Institution (CEN/CENELEC), under whose supervision this European Prestandard was prepared, comprises the National Committees of the following countries:

Austria	Italy
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National foreword

This Draft for Development is identical with the European Prestandard ENV 41208-1:1990 “*Information Systems Interconnection — Basic class virtual terminal — S-mode forms — Part 1: Virtual terminal service*”, prepared by CEN/CENELEC whose members have committed themselves to making it available in an appropriate form. In the UK the Draft for Development is the form now chosen for ENVs in the information technology area.

This Draft for Development is published under the direction of the Information Systems Technology Standards Policy Committee whose Technical Committee IST/21 has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on interpretation, or proposals for change, and to keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

NOTE International and European Standards, as well as overseas standards, are available from BSI Sales Department, BSI, Linford Wood, Milton Keynes MK14 6LE.

After two years this ENV will be reviewed by CEN/CENELEC members with a view to its:

- conversion into a European Standard (which would be implemented in the UK as a British Standard);
- extension once for a further two years;
- replacement by a revised ENV (which would be published in the UK as a revised Draft for Development);
- withdrawal.

The future of this Draft for Development is therefore dependent on that of the ENV.

This publication is not to be regarded as a British Standard.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ENV title page, pages 2 to 50 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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English Version

Information systems interconnection — Basic class virtual terminal — S-mode forms — Part 1: Virtual terminal service

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The European Prestandard (ENV) was accepted by CEN/CENELEC on 1990-07-02 as a prospective standard for provisional application. The period of validity of this ENV is limited initially to three years. After two years the members of CEN/CENELEC will be requested to submit their comments, particularly on the question whether the ENV can be converted into an EN.

CEN/CENELEC members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

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CEN/CENELEC

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Foreword

ENV 41208-1 first appeared as a work item approved in 1988 when it was assigned to EWOS/EGVT.

EWOS delivered the proposed draft standard in October 1989. It was distributed for ballot in December 1989. The result of the ballot was positive. There were however some important comments.

In order to discuss the comments received and if possible incorporate them into the ENV to be published, it was decided to hold a voting meeting on 2 July 1990 with the drafting body, EWOS/EGVT and the CEN/CENELEC members in order to vote on an amended (if any) version.

Some proposed changes were approved and the outcome of the voting meeting was positive.

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0 Introduction

The concept and structure of Functional Standards for Information Systems Interconnection are laid down in CEN/CENELEC/CEPT Memorandum M-IT-01. The purpose of a Functional Standard is to recommend when and how certain Information Technology standards should be used. This is Part 1 of a multi-part Functional Standard. It specifies Application Function A/4121 as defined in the CEN/CENELEC/CEPT Memorandum M-IT-02 by giving the requirements of the Virtual Terminal Service and referencing the checklists given in Part 2 for the requirements of the Virtual Terminal Protocol and in Part 3 for the requirements of the Underlying Layers.

1 Scope and field of application

1.1 Scope

This Functional Standard supports applications where the terminal representation of the interactive data stream is character oriented. The use of character repertoires which provide for simple graphics (eg videotex or line drawing) is optionally supported. Support is not provided for general graphics data streams (eg GKS).

This Functional Standard supports the use of coloured or monochrome screens for character representation together with a number of levels of emphasis (eg blink, reverse video, bold, underline, italic).

This Functional Standard includes a specification of those capabilities of the Virtual Terminal that must be realised in the real terminal device. The details of the mapping between the terminal end system and real terminal devices through which these capabilities are realised is not part of this Functional Standard.

This Functional Standard includes a minimum specification for the human interface with the terminal. Enhancements to this minimum specification are permitted in an implementation-dependent manner.

This Functional Standard supports the use of an auxiliary monochrome or colour printer attached to the terminal configuration. This is intended for use as a means of printing screen contents or small amounts of information, not for bulk printing for which a file transfer oriented profile such as FTAM (ENV 41204) or MHS (ENV 41201–ENV 41202) should be used.

This Functional Standard supports a style of operation where the character data is displayed on a whole screen (paged) basis and there is a structure of fields to a page recognised by the VT service. A terminal system may be capable of holding more than one page of character information at any given time in local buffer storage. The total amount of such buffered information is available for update by the host subject to access controls in force at any given time, but, in addition, update by the terminal is governed by a number of entry rules (eg local validation rules) that the application may specify for data entry to the defined fields. In addition, facilities are available for local storage of the screen format and entry rules which effectively amount to a screen field template. Such screen templates may be either predefined for use at the terminal or may be down line loaded to the terminal from the host application. These facilities may be combined to potentially off-load a significant amount of host application terminal processing which is an important consideration when large numbers of terminals are involved. Other advantages of the use of this style of operation are reduced load on communications facilities and improved reaction time to users' actions.

This Functional Standard includes support for a locally attached auxiliary printer as part of the terminal configuration. Support for this is mandatory but any given terminal configuration may not necessarily include such a printer. The specification includes a means for the terminal end to inform the host end whether or not a printer is attached. No further means is provided for management of the printer as a resource shared amongst a population of terminal systems.

1.2 Field of Application

The Virtual Terminal service and protocol have been so designed that they can be used by pairs of applications or by pairs of terminals but this use will be minimal and this Functional Standard is not intended for this type of use. Where it is necessary for terminal to terminal communication to take place, then this type of use is likely to fall into the category of interpersonal messaging (MHS) or into the category of file transfer (FTAM). A VT may of course be used for access to a remote mailbox facility.

This Functional Standard is intended for application environments where it is necessary for a terminal population to be able to access different applications running on a variety of host computers from diverse suppliers. This Functional Standard may be specified for procurement where this environment pertains and also where it can be foreseen that a single supplier environment will expand as the result of future procurement to encompass a mixture of hardware and suppliers. In certain circumstances use of this Functional Standard can make terminal system procurement independent of the main application system procurement. Use of this Functional Standard will enable terminal procurement to be made resulting in a mix of terminal systems from different suppliers.

This Functional Standard may be used when it is intended to expand an existing application environment which does not currently use VT. This may be done as part of a migration strategy where the application environment is seen as evolving and is likely to have an extended lifetime.

This Functional Standard may be used where the connection between a terminal system and an application host is local, is made across a LAN or a WAN, or is made across a concatenation of such networks.

This Functional Standard is not intended to support the type of application where bulk data is transferred into a work station for local processing and the resulting bulk data is transferred back again (see either MHS or FTAM ENVs).

2 Conformity

2.1 Conformity Principles

The body of this Functional Standard states requirements upon systems for the purpose of achieving interworking. In addition, the Functional Standard contains a number of recommendations that are not strictly required for conformity but should be implemented whenever possible, in order to increase the possibility of interworking.

A claim of conformity to the Functional Standard is a claim that all requirements in the body of each of Parts 1, 2 and 3 of the Standard are satisfied. Section 2.2 states the relationship between these requirements and those of the base standards. In addition, any supplier claiming conformity shall make available a statement of support or non-support of each recommendation identified in the Functional Standard.

2.2 Relationship with Base Standards

This Functional Standard specifies implementation options or selections such that conformant implementations will satisfy the conformance requirements of ISO 9041-1 clause 13.

Products conforming to this Functional Standard shall state whether they support the Application and/or Terminal VT-user role, shall implement all the supported (s) features (identified in Table 1–Table 10 below and the tables of Parts 2 and 3 of this Functional Standard), all the additional features supported for the role concerned (sh for host implementations, st for terminals) and shall state which optionally supported (os) features are implemented.

Claims of conformity shall be defined in terms of clause 13 of ISO 9041-1.

3 References

3.1 Base References

ISO 646:1983, *Information Processing — ISO 7-Bit Coded Character Set for Information Interchange*.

ISO 2022:1982, *Information Processing — ISO 7-Bit and 8-Bit Coded Character Sets — Code Extension Techniques*.

ISO 2375:1985, *Data Processing — Procedure for Registration of Escape Sequences*.

ISO 6429:1988, *Information Processing — Control Functions for 7-bit and 8-bit Coded Character Sets*.

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

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

3.2 Additional References

M-IT-01:1986, *CEN/CENELEC/CEPT Memorandum on the Concept and Structure of Functional Standards for Information Technology*.

M-IT-02:1989, *CEN/CENELEC/CEPT Memorandum on Directory of Functional Standards*.

ENV 41208-2:1990, *Basic Class VT — S-mode Forms Functional Standard — Part 2: VT Protocol Checklist*.

ENV 41208-3:1990, *Basic Class VT — S-mode Forms Functional Standard — Part 3: Underlying Layers Checklist*.

ENV 41209:1990, *Basic Class VT — Common Control Objects*.

OIW Stable Agreements V3E4:1990, *NIST Stable Implementation Agreements for Open Systems Interconnection Protocols*. Version 3 Edition 4 (September 1990)

4 Definitions

For the purposes of this Functional Standard, the following definitions apply.

4.1

current location for next character entry

the element of the Display Object that would be updated by a logical keystroke corresponding to character entry. If the VTE-parameter access-outside-fields has the value “allowed”, the location may depend on whether data entry is currently in TEXT or LOGICAL-TEXT mode

4.2

entry invoke character

the character box graphic element used to indicate on a real device to the human user where the next character entry is to be made. It need not be an element of any repertoire currently negotiated for the display device concerned

4.3

field entry location

the current location for next character entry by a LOGICAL-TEXT operation

4.4

local action

an action performed by the local processing function of the terminal end system

4.5

selectable field

a field in which character entry is not permitted but information is conveyed by the selection of one such field from a number of alternatives

4.6

logical keystroke event

the field entry event generated by a logical keystroke that does not correspond to character entry into the Display Object

The remaining terms used in this Functional Standard are defined in the base references.

5 Abbreviations

For the purposes of this Functional Standard the following abbreviations apply.

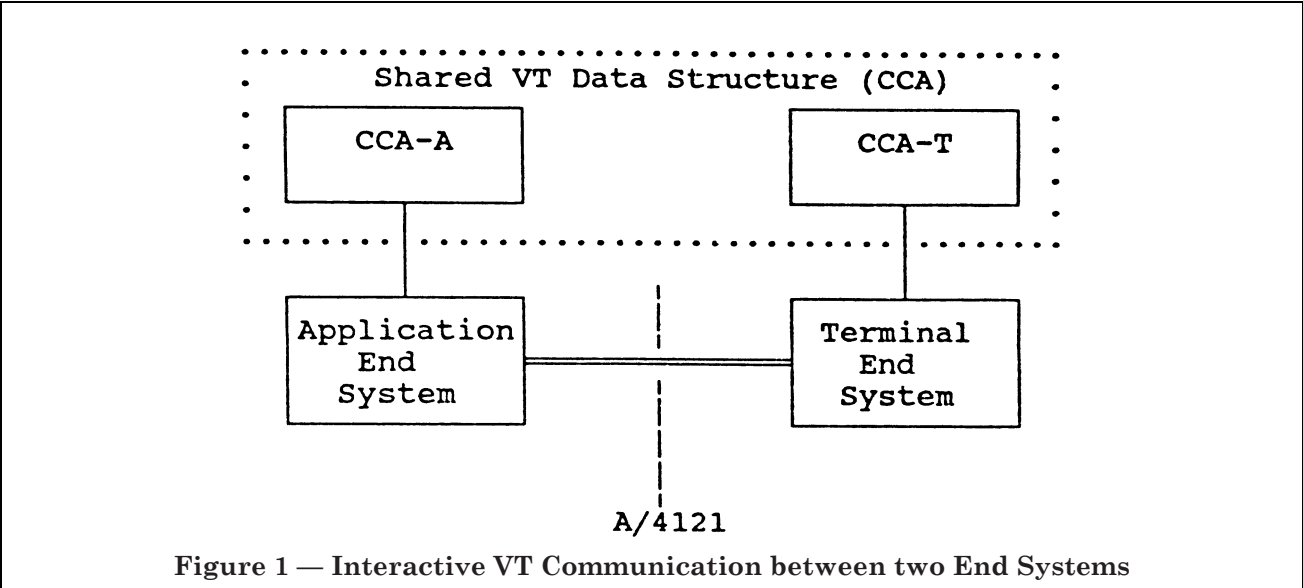
ASN.1	Abstract Syntax Notation One
EWOS	European Workshop for Open Systems
FTAM	File Transfer, Access and Management
GKS	Graphical Kernel System
IRV	International Reference Version
MHS	Message Handling System
NIST	National Institute of Standards and Technology

- OIW
- NIST Workshop for Implementors of OSI
- STCO
- Sequenced Terminal Control Object
- UTC0
- Unsequenced Terminal Control Object

The remaining abbreviations used in this Functional Standard are defined in the base references.

6 Scenario description

This Functional Standard describes the operations that may be made on the Conceptual Communication Area (CCA), the service provided by the VT service provider to VT service users, together with the necessary communications between the two communicating implementations.



The model is one of two end systems establishing an association and operating upon the shared Conceptual Communication Area (CCA). The CCA includes a single Display Object (DO) whose contents are made available to the human user of the real terminal through a real display device. This display device shall be capable of imaging any array element of the DO that is within the current update windows of the DO. If all such elements are not imaged simultaneously then means shall be provided for the human user to scan the image through the current update windows.

ISO 9041
ISO 8650
ISO 8824, ISO 8825
ISO 8823
ISO 8327
+ Add. 2

Figure 2 — VT Protocol Stack

The mapping between the CCA and real devices shall be such as to enable the real input devices of the terminal end system to be capable of making any change to the CCA that is permitted by the base standard ISO 9040 in the context of the profile parameters currently in force. This mapping shall also be such as to indicate to the human user of the real terminal devices whenever the real display device does not uniquely represent the content of any of the elements of the Display Object currently imaged by that device, possibly overridden by the Selectable Field or Entry Invoke Character FEI parameters. It shall provide a means for the human user to be made aware of the true content of such elements. The details of the mapping between the CCA and real devices through which these requirements are realised are not part of this Functional Standard.

This Functional Standard defines Control Objects for the control of data entry by a local processing function in accordance with the model described in **B.18.4** of the informative Annex B of ISO 9040. The application of this processing model to this Functional Standard is described in Annex D.

This Part of this Functional Standard defines the selection of specific VT Service options (clause 7), specific VT Environment parameters (clause 8), a specific parametrised VTE profile (clause 9) including a strategy for parameter negotiation, a set of optional control objects (clause 10) and a minimum specification for the human user interface (clause 11). Part 2 of this Functional Standard provides a checklist for the required options of the Virtual Terminal Protocol. Part 3 of this Functional Standard provides a checklist for the requirements of the underlying upper layers.

7 VT service options

7.1 Functional Units

Table 1 summarises the VT functional units available to the VT service user. To specify the support for each functional unit, the following classification is used:

s: supported	This functional unit shall be supported by implementations conforming to this Functional Standard. However, it is not a requirement that this functional unit shall be used in all instances of communication. Conformant implementations shall be able to interwork with other implementations not supporting this functional unit by negotiating it out.
os: optionally supported	It is left to implementations as to whether this functional unit is supported or not. The support of functional units with “os” level of support is determined by negotiation when the VT-association is established.
—: not supported	This functional unit is outside the scope of this Functional Standard.

Table 1 — Functional Units

Base Ref	Feature	Support
S 10.1.1	Switch Profile Negotiation	os
S 10.1.2	Multiple Interaction Negotiation	—
S 10.2	Negotiated Release	—
S 10.3	Urgent Data	os
S 10.4	Break	s
S 10.5	Enhanced Access-rules	s
S 10.6	Structured Control Objects	s
S 10.7	Blocks	—
S 10.8	Fields	s
S 10.9	Reference Information Objects	s

7.2 Mode

Table 2 below summarises VT modes of operation available to the VT service user, in terms of the possible values for the VT-mode parameter of the VT-ASSOCIATE service. To specify the support for each value, the following classification is used:

s: supported	This mode shall be supported by implementations conforming to this Functional Standard.
os: optionally supported	It is left to implementations as to whether this mode is supported or not.
—: not supported	This mode is outside the scope of this Functional Standard.

Table 2 — VT Mode

Base Ref	VT-mode parameter values	Support
S 28.1.3.6	“S-mode”	s
S 28.1.3.6	“A-mode”	—
S 28.1.3.6	“either-S”	os
S 28.1.3.6	“either-A”	os

Choice of mode implies the number of display objects that are supported. Other VT Functional Standards are being developed supporting A-mode operation. Implementors may wish to ensure that their implementations may interwork with implementations supporting A-mode Functional Standards. This may be achieved by supporting separately the value “A-mode” for the VT-mode parameter, or by supporting mode switching within the present Functional Standard through use of either of the values “either-S” or “either-A”.

8 VT-Environment parameters

This section lists the VTE-parameters that are required by this Functional Standard and specifies the values that each may carry. It is assumed that any implementation shall support those parameters that are required for the default s-mode profile. These are not specifically listed in this section.

To specify the level of support for each VTE-parameter, the following classification is used:

- s: supported

This VTE-parameter value shall be supported by all implementations claiming conformance to this Functional Standard. However, it is not a requirement that the VTE-parameter value shall be used in all instances of communication, unless stated otherwise in this Functional Standard. Where possible, conformant implementations shall be able to interwork with other implementations not supporting this VTE-parameter value by negotiation.

NOTE The point of the last sentence is to maximise the possibility of conformant implementations being able to interwork with non-conformant implementations. If a VTE-parameter is not specified as being negotiable as a VTE-profile argument, it is not possible to negotiate values for it.
- sh: supported by hosts

This VTE-parameter value shall be supported as above by all host implementations claiming conformance to this Functional Standard. The value used in a particular instance of communication is determined within this Functional Standard by the terminal. A terminal implementation need only support a subset (possibly only one) of the values so marked for a particular VTE-parameter.
- st: supported by terminals

This VTE-parameter value shall be supported as above by all terminal implementations claiming conformance to this Functional Standard. The value used in a particular instance of communication is determined within this Functional Standard by the host. A host implementation need only support a subset (possibly only one) of the values so marked for a particular VTE-parameter.
- os: optionally supported

Implementations claiming conformance to this Functional Standard may or may not implement this VTE-parameter value. Only VTE-parameters which are negotiable as a VTE-profile argument may be given the “os” classification.
- : not supported

This VTE-parameter value is outside the scope of this Functional Standard.

8.1 Display Object Parameters

Table 3 — Miscellaneous Display Object VTE-Parameters

Base Ref	VTE-Parameter Name	Support
S 18.1	display-object-name “A”	s
	others	—
S 18.1	erasure-capability “yes”	s
	“no”	—
S 18.1	DO-access “WAVAR”	s
	“WACT”, “WACA”	—
S 18.1	block-definition-capability “no”	s
	“yes”	—
S 18.1	field-definition-capability “yes”	s
	“no”	—
S 18.2.2	max-fields “unbounded”	s
	others	—
S 18.2.2	max-field-elements Value 1	st
	Value 2 . . . n	—
	“unbounded”	st
S 18.2.2	access-outside-fields “allowed”	os # 1
	“not allowed”	s
NOTE 1 When access-outside-fields takes the value “allowed”, the terminal should provide a mechanism for the human user to control whether data is being entered as LOGICAL TEXT or as TEXT.		

8.2 Display Addressing Parameters

Table 4 lists the requirements of this Functional Standard for the display addressing VTE-parameters. The requirements on the VTE-parameters x-bound and y-bound are that all integer values x-bound = m, y-bound = n shall be supported for which the product of m and n does not exceed 6164. This provides support for the maximum printable area of ISO 3535/A4 paper size as specified in CCITT Recommendation T.60 when print is spaced at 12 characters per 25.4 mm and 6 lines per 25.4 mm, namely 67 lines of 92 characters.

Table 4 — Addressing VTE-Parameters

Base Ref	Addressing Parameter		Support
S 18.1	dimensions	“one” “two” “three”	— — s
S 18.2.3	x-dimension x-bound x-addressing x-absolute x-window	“unbounded” value 1 . . . n “no constraint” others “yes” “no” x-bound others	— st # 1 s — s — s —
S 18.2.3	y-dimension y-bound y-addressing y-absolute y-window	“unbounded” value 1 . . . n “no constraint” others “yes” “no” y-bound others	— st # 1 s — s — s —
S 18.2.3	z-dimension z-bound z-addressing z-absolute z-window	“unbounded” value 1 . . . n “no constraint” others “yes” “no” value 0 value 1 value 2 . . . n “unbounded”	s # 2 — s — — s — s os —

NOTE 1 The precise values of the VTE-parameters x-bound and y-bound that should be supported are specified in the text.

NOTE 2 The value for z-bound of “unbounded” and a specific value for z-window means that as y-arrays at higher values of z are updated, lower numbered y-arrays move out of the z-window and can no longer be updated. This allows a simple mapping for an auxiliary printer which if left “on” can print a page every time the z-window moves forward. Any other value combination makes this style of operation for a printer difficult to map.

8.3 Character Attributes VTE-Parameters

Table 5 — Character Attribute Parameters

Base Ref	Character Attribute Parameter	Support
S 18.1	repertoire-capability 1 others	s # 1 os
S 18.2.4	repertoire-assignment # 2 { value iso2022 { “2842”H } } others	s os
S 18.2.4	font capability 1 others	s # 1 os
S 18.3	font-assignment “device-dependent” others	s os
S 18.2.6	DO-emphasis # 3 subattribute “a” “BFN” subattribute “b” “UDNORrLIS” subattribute “c” “SFN” subattribute “d” “NP” subattribute “e” “DN” subattribute “f” “CN” subattribute “g” “IU” subattribute “h” “FCN”	st st st st st st st st
S 18.1	foreground-colour-capability 1, . . . , 8 others	st —
S 18.2.5	foreground-colour-assignment while, black, red, cyan, blue, yellow, green, magenta others	st # 4 —
S 18.1	background-colour-capability 1, . . . , 8 others	st —
S 18.2.5	background-colour-assignment black, white, cyan, red yellow, blue, magenta, green others	st # 4 —

NOTE 1 This parameter value is not explicitly negotiated. A terminal may indicate that it supports a value greater than 1 by including the corresponding “assignment” VTE-profile argument an appropriate number of times in the VTE-profile-arg-offer-list parameter of a VT-ASSOCIATE request.

NOTE 2 This supported repertoire-assignment is a value of ASN.1 type CDS.RepertoireAssignment as defined in ISO 9041-1. It designates the repertoire consisting only of the G-set with ISO 2375 Reg. No. 6 (ASCII) located in the GL position of the code table. Support is not required for ISO 2375 Reg. No. 2, the IRV of ISO 646:1983, even though this is the default repertoire of ISO 9040.

The escape sequences to be used in accordance with 18.2.4.1 of ISO 9040 for GL and GR sets of other repertoires should be those specified in the ISO 2375 Register as corresponding to their use as G0 and G1 sets respectively. Escape sequences corresponding to G2 and G3 sets should not be used. ISO 9041-1 does not provide a means of encoding the symbolic value “void” in the ASN.1 sequence of escape sequences that designates a repertoire-assignment-value. Void values should be omitted from this ASN.1 sequence as the escape sequences themselves distinguish between the G0, G1, C0 and C1 components of the repertoire.

Repertoires that are recommended for use in a European context are specified in Annex B.

NOTE 3 The syntax and semantics for the DO-emphasis VTE-parameter are specified in Definitive Note 2 to the profile specification of clause 9.1.1.

NOTE 4 The colour values are deliberately arranged in complemented pairs so that the device object colour parameters may choose a meaningful subset.

8.4 Control Objects and their Parameters

Table 6 lists the requirements of this Functional Standard for Control Objects and their parameters. The default control object for each device consists of 8 boolean values. Within this Functional Standard the 1st boolean is mandatory and is defined as the “on/off” switch for the device where the value “true” = “on” and “false” = “off”.

Table 6 — Control Object Types

Base Ref	Control Object Type	Support
S 23.1	Device default COs	s # 1
S 20.3.3	Field Definition CO (FDCO) FD: { vt-b-sco-fdco } # 2	s
S 20.3.4	Field Entry Instruction COs (FEICO) EI: "mandatory-feico" # 4 Registered FEICOs # 3	s os
S 20.3.5	Field Entry Pilot COs (FEPCO) EP: "mandatory-fepeco" # 4 Registered FEPCOs # 3	s os
S 20.3.6	Context CO (CCO) CC: { vt-b-sco-cco } # 2	s
S 20.3.7	Transmission Policy CO (TPCO) TP: { vt-b-sco-tpco } # 2	s
S 20.3.8	Termination Conditions COs (TCCO) Registered TCCOs # 3	os
S 21	Reference Information Objects (RIO) Registered RIOs # 3	os
S 20.1.1	Private Miscellaneous COs Form Waiting Time CO WT: "waiting-time" # 4	s
S 20.1.1	Registered Miscellaneous COs Horizontal Tabulation CO HT: { ewos-vt-co-misc-ht } # 5 Logical Image Control CO LI: { ewos-vt-co-misc-li } # 5 Status Message CO SM: { ewos-vt-co-misc-sm } # 5 CO-size for CO-element-id = 1 values 0,1 others CO-size for CO-element-id = 2 values 0,1 others CO-repertoire-assignment for CO-element-id > 2 { value iso2022 { "2842"H } } others Entry Control CO EC: { ewos-vt-co-misc-ec } # 5 Sequenced Application CO SA: { oiw-vt-co-misc-sa } # 6 Unsequenced Application CO UA: { oiw-vt-co-misc-ua } # 6 Sequenced Terminal CO ST: { oiw-vt-co-misc-st } # 6 Unsequenced Terminal CO UT: { oiw-vt-co-misc-ut } # 6 Other registered COs # 3, # 7	st st st st st os st os st os st os st os st os st os os st os s s s s s s os

NOTE 1 Support for the default control object associated with each device is mandatory. Its semantics are as specified in the text.

NOTE 2 The CO type identified by this ASN.1 OBJECT IDENTIFIER is defined in the Base Standard ISO 9040. This CO is always present in the VTE-profile. Support is mandatory only for a single occurrence with the specified value of CO-name.

NOTE 3 Registered COs may be negotiated into use in a particular instance of communication through profile arguments provided for this purpose. They are identified by the CO-type-identifier of type ASN.1 OBJECT IDENTIFIER given in their register entry. Any statement of conformance to this Functional Standard should include a statement of which combinations of CO-name and CO-type-identifier values are supported. If the register entry specifies any VTE-parameters of the CO by means of additional profile arguments, the supported values of such arguments should also be stated.

NOTE 4 This value of the VTE-parameter CO-type-identifier is of type ASN.1 PrintableString. The corresponding CO is fully defined within this Functional Standard and is always present in the VTE-profile. Support is mandatory only for a single occurrence with the specified value of CO-name.

NOTE 5 The registered definition of this CO type is contained within this Functional Standard. It is given in clause 10. The inclusion of this CO in the VTE-profile is subject to negotiation using the profile arguments provided for this purpose. Terminal support is mandatory only for a single occurrence with the specified value of CO-name.

NOTE 6 The CO type identified by this ASN.1 OBJECT IDENTIFIER is registered with the Registration Authority for the NIST Workshop for Implementors of OSI as an arc from the value

{ iso identified-organization oiw(14) vtsig(12) }.

This CO is always present in the VTE-profile. Support is mandatory only for a single occurrence with the specified value of CO-name. A description technically aligned with the registration entry is given in ENV 41209.

NOTE 7 Additional COs of generic type “miscellaneous” may be needed if they are referenced by a registered FEICO or FEPCO.