

Information technology — Open Systems Interconnection — Virtual Terminal Basic Class Protocol —

**Part 2: Protocol Implementation
Conformance Statement (PICS)
proforma**

ICS 35.100.60

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The UK participation in its preparation was entrusted to Technical Committee IST/21, Open Systems Interconnection, Data Management and Open Distributed Processing, which has the responsibility to:

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

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ISO/IEC title page, pages ii to vi, pages 1 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.

This British Standard, having been prepared under the direction of the DISC Board, was published under the authority of the Standards Board and comes into effect on 15 October 1997

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ISBN 0 580 28586 3

Amendments issued since publication

Amd. No.	Date	Comments

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INTERNATIONAL STANDARD

ISO/IEC 9041-2

Second edition
1997-06-15

Information technology — Open Systems Interconnection — Virtual Terminal Basic Class Protocol —

Part 2:

Protocol Implementation Conformance
Statement (PICS) proforma

*Technologies de l'information — Interconnexion de systèmes ouverts
(OSI) — Protocole de classe de base de terminal virtuel —*

Partie 2: Déclaration de conformité de mise en œuvre du protocole (PICS)



Reference number
ISO/IEC 9041-2:1997(E)

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Descriptors: Data processing, information interchange, network interconnection, open systems interconnection, application layer, communication procedure, protocols, implementation.

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 and 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. 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 9041-2 was prepared by Joint Technical Committee ISO/IEC JTC1, *Information technology*, Subcommittee SC21, *Open systems interconnection, data management and open distributed processing*.

This second edition cancels and replaces the first edition (ISO/IEC 9041-2:1993), which has been technically revised.

ISO/IEC 9041 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Virtual Terminal Basic Class Protocol*.

— *Part 1: Specification;*

— *Part 2: Protocol Implementation Conformance Statement (PICS) proforma.*

Annex A and Annex B form an integral part of this part of ISO/IEC 9041.

Introduction

ISO/IEC 9041 is one of a set of International Standards produced to facilitate the interconnection of information processing systems. It is related to other International Standards in the set as defined by the Reference Model for Open Systems Interconnection (ISO/IEC 7498-1). The Reference Model subdivides the area of standardization for interconnection into a series of layers of specification, each of manageable size. The goal of Open Systems Interconnection is to allow, with a minimum of technical agreement outside the interconnection standards, the interconnection of information processing systems:

- from different manufacturers;
- under different managements;
- of different levels of complexity; and
- of different technologies.

ISO/IEC 9041-1 specifies the protocol for the application-service element for the Basic Class Virtual Terminal.

To evaluate the conformance of a particular implementation, it is necessary to have a description of the capabilities and options which have been implemented. Such a description is called a Protocol Implementation Conformance Statement (PICS).

This part of ISO/IEC 9041 includes the PICS proforma for the Basic Class Virtual Terminal protocol as defined in ISO/IEC 9041-1.

1 Scope

This part of ISO/IEC 9041 provides the PICS proforma for the Basic Class Virtual Terminal protocol as specified in ISO/IEC 9041-1 in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-2.

This part of ISO/IEC 9041 defines a guideline to be used when appraising the conformance of Virtual Terminal implementations. It does not specify either the Virtual Terminal Protocol or the Virtual Terminal Service description.

2 Conformance

The supplier of a protocol implementation which is claimed to conform to ISO/IEC 9041-1 is required to complete a copy of the PICS proforma provided in Annex A and is required to provide the information necessary to identify both the supplier and the implementation.

When an implementation is claimed to support more than one Application Profile, the PICS proforma may be completed either in respect of one Application Profile or, by the use of conditional support answers, in respect of the implementation as a whole. In the latter case the predicates referenced by the conditional answers shall be defined in the System Conformance Statement (SCS) that accompanies the completed PICS.

3 Normative references

ISO/IEC 9040:1997, *Information technology — Open Systems Interconnection — Virtual Terminal Basic Class Service*.

ISO/IEC 9041-1:1997, *Information technology — Open Systems Interconnection — Virtual Terminal Basic Class Protocol — Part 1: Specification*.

ISO/IEC 9646-1:1994, *Information technology — Open Systems Interconnection — Conformance testing methodology and framework — Part 1: General concepts*.

ISO/IEC 9646-2:1994, *Information technology — Open Systems Interconnection — Conformance testing methodology and framework — Part 2: Abstract Test Suite specification*.

ISO/IEC TR 10000-2:1995, *Information technology — Frame-work and taxonomy of International Standardized Profiles — Part 2: Principles and Taxonomy for OSI profiles*.

NOTE Throughout the tables in this part of ISO/IEC 9041, references to the base text of ISO/IEC 9040 and ISO/IEC 9041-1 are made in the base reference columns using the abbreviations S or P with a clause number. This should be interpreted to mean a reference to the Service standard or to the Protocol standard respectively. Where the letter T appears with S or P, the reference is to a table number in the service or the protocol. To obtain a reference for a particular entry, the reader should either take the reference as specified or take the previous (higher) reference in that column of the table.

4 Definitions

This part of ISO/IEC 9041 uses the following terms defined in ISO/IEC 9646-1:

- a) PICS proforma;
- b) protocol implementation conformance statement (PICS);

5 Abbreviations

This part of ISO/IEC 9041 uses the following abbreviation defined in ISO/IEC 9646-1:

PICS: Protocol Implementation Conformance Statement

Annex A (normative)

Protocol Implementation Conformance Statement (PICS) Proforma for the Virtual Terminal Basic Class Protocol¹⁾

A.1 Identification

A.1.1 *Guidance for completion*

This clause is used to record the date of completion of the PICS, and to describe the supplier of the implementation, the implementation itself and the standards to which the implementation is claimed to conform.

A.1.2 *Date*

Table A.1 — Date

Ref.	Question	Response
1	Date of statement (yy-mm-dd)	

A.1.3 *Supplier details*

Table A.2 — Supplier details

Ref.	Question	Response
1	Organisation	
2	Contact name (s)	
3	Address	
4	Telephone	
5	Telex	
6	Fax	
7	E-mail	
8	Other information	

¹⁾ Copyright release for PICS proformas

Users of this International Standard may freely reproduce the PICS proforma in this annex so that it can be used for its intended purpose and may further publish the completed PICS.

A.1.4 Implementation details**Table A.3 — Implementation details**

Ref.	Question	Response
1	Implementation name	
2	Version	
3	Hardware name	
4	Hardware version	
5	Operating system name	
6	Operating system version	
7	Special configuration requirements	
8	Other Information	

A.1.5 Claimed compliance to standards**A.1.5.1 ISO/IEC 9041****Table A.4 — Protocol details**

Ref.	Question	Response
1	Are all the mandatory features of ISO/IEC 9041-1 implemented? See note.	
2		

A.1.5.2

NOTE Answering “no” to this question indicates non-conformance to ISO/IEC 9041-1. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming.

A.1.5.3 Corrigenda implemented

Table A.5 shall be used to list Corrigenda to ISO/IEC 9041-1 and its amendments which have been implemented. Only those corrigenda should be listed which affect conformance.

Table A.5 — Corrigenda details

Ref.	Number	Description
1		
2		
3		

A.1.5.4 Defect report solutions implemented

There is not necessarily a one to one correspondence between defect reports solutions and Corrigenda. Only those defect report solutions which affect conformance should be listed.

Table A.6 — Defect report details

Ref.	Number	Description
1		
2		
3		

A.1.5.5 Application profiles

Support for specified Application Profiles shall be indicated by the following categorization for the “Support” column.

y: supported

This Application Profile is supported by the implementation.

—: not supported

This Application Profile is not supported by the implementation.

Table A.7 — Application profile support

Ref.	Feature	Status	Reference	Support
	Profiles in the TR10000-2 Taxonomy			
	AVT1n A-mode Application Profiles			
1	AVT11 A-mode Default Profile	c1	S A.4	
2	AVT12 Telnet			
3	AVT13 Scroll			
4	AVT14 CCITT X.3 PAD Interworking			
5	AVT15 Transparent			
6	AVT16 Generalized Telnet			
	AVT2n S-mode Application Profiles			
7	AVT21 S-mode Default	c1	S A.3	
8	AVT22 Forms			
9	AVT23 Paged			
10	AVT24 Enhanced Forms			
11	AVT25 Enhanced Paged			
	List of other registered Application Profiles supported			

A.1.5.6 Other information

Table A.8 — Other details

Ref.	Response
1	

A.2 VT service options

A.2.1 Functional units

Table A.9 summarizes the VT functional units available to the VT service user. The following classification is used in the “status” column:

o: optional

This functional unit is defined as optional in ISO/IEC 9040 and may be supported by implementations claiming to conform with ISO/IEC 9041.

c: conditional

This functional unit is defined as optional but it is also defined as conditional on the selection of other functional units defined as optional in ISO/IEC 9040 and shall be supported wherever those conditions are met by implementations claiming to conform with ISO/IEC 9041.

To specify the level of support for each Functional Unit, the following classification shall be used to fill in the “support” column:

y: supported

This functional unit is supported.

—: not supported

This functional unit is not supported.

Table A.9 — Functional units

Ref.	Functional Units	Status	Base Ref.	Support
1	Switch Profile Negotiation	c2	S 10.1.1	
2	Multiple Interaction Negotiation	o	S 10.1.2	
3	Negotiated Release	o	S 10.2	
4	Urgent Data	o	S 10.3	
5	Break	o	S 10.4	
6	Enhanced Access-rules	o	S 10.5	
7	Structured Control Objects	c3	S 10.6	
8	Blocks	o	S 10.7	
9	Fields	o	S 10.8	
10	Reference	o	S 10.9	
11	Ripple	o	S 10.10	
12	Exceptions	o	S 10.11	
13	Context	o	S 10.12	

A.2.2 Mode

Table A.10 below summarises the VT mode of operation facilities available to the VT service user.

The following classification is used in the “status” column:

o: optional

This mode is defined as optional in ISO/IEC 9040 and may be supported by implementations claiming to conform with ISO/IEC 9041.

c: conditional

This mode is defined as conditional in ISO/IEC 9040. Either S-mode or A-mode shall be supported by implementations claiming to conform with ISO/IEC 9041.

To specify the level of support for each mode, the following classification shall be used to fill in the “support” column:

y: supported

This mode is supported.

—: not supported

This mode is not supported.

Table A.10 — VT mode

Ref.	Feature	Status	Base Ref.	Support
1	S-mode	o	S 8.1	
2	A-mode	o	S 8.2	
3	Mode switching	o	S 8	

A.3 VT environment parameters

This clause lists the VTE-parameters that are required by ISO/IEC 9040 for the single Display Object defined for S-mode or the screen Display Object for A-mode and specifies the values that each may carry. The following classification is used in the “status” column:

m: mandatory

This VTE-parameter or value is mandatory in ISO/IEC 9040 and shall be supported by implementations claiming to conform with ISO/IEC 9041.

o: optional

This VTE-parameter or value is optional in ISO/IEC 9040 may be supported by implementations claiming to conform with ISO/IEC 9041.

c: conditional

This VTE-parameter or value is conditional and support is conditional on the value(s) of other VTE-parameter(s) in ISO/IEC 9040 and shall be supported wherever those conditions are met by implementations claiming to conform with ISO/IEC 9041.

To specify the level of support for each VTE-parameter, the following classification shall be used to fill in the “support” column:

y: supported

This VTE-parameter or parameter value is supported by this implementation.

—: not supported

This VTE-parameter or parameter value is not supported by this implementation.

The “allowed values” column identifies for each item the values that it is permitted to take as defined in ISO/IEC 9040.

The “default” column identifies for each item which of the “allowed values” is defined to be the default value in ISO/IEC 9040.

The “supported values” column shall be filled in to identify which of the “allowed values” is supported by this implementation. If all “allowed values” are supported, then “all” shall be used to fill in this column.

If it is not possible to fit in sufficient information in the table for a specific entry, then a reference may be inserted in the “Extra Info Ref” column. Additional sheets may then be filled in to satisfy the reference.

A.3.1 Display object parameters (S-mode)

Table A.11 — Miscellaneous display object VTE parameters (S-mode)

Ref.	Name of Item	Reference	Status	Support	Default	Type/Length/Value		Negotiable	Extra Info. Ref.
						Allowed Values	Supported Values		
1	display-object-name	S 18.1	m			Any Printable String			
2	erasure-capability	S 18.1	o		“no”	“yes”, “no”			
3	DO-access	S 18.1	m			“WAVAR”			
4	block-definition-capability	S 18.1	c4		“no”	“yes”, “no”			
5	b-bound	S 18.2.1	c4		1	1....N, “unbounded”			
6	field-definition-capability	S 18.1	c5		“no”	“yes”, “no”			
7	max-fields	S 18.2.2	c5		1	1....N, “unbounded”			
8	max-field-elements	S 18.2.2	c5		1	1....N, “unbounded”			
9	access-outside-fields	S 18.2.2	c5		“allowed”	“allowed”, “not allowed”			
10	ripple-capability	S 18.1	c89		“no”	“yes”, “no”			

A.3.2 Display object parameters (A-mode DO A)**Table A.12 — Miscellaneous display object VTE parameters (A-mode DO A)**

Ref.	Name of Item	Reference	Status	Support	Default	Type/Length/Value		Negotiable	Extra Info. Ref.
						Allowed Values	Supported Values		
1	display-object-name	S 18.1	m			Any PrintableString			
2	erasure-capability	S 18.1	o		“no”	“yes”, “no”			
3	DO-access	S 18.1	m		see note	“WACI” & “WACA”			
4	block-definition-capability	S 18.1	c4		“no”	“yes”, “no”			
5	b-bound	S 18.2.1	c4		1	1....N, “unbounded”			
6	field-definition-capability	S 18.1	c5		“no”	“yes”, “no”			
7	max-fields	S 18.2.2	c5		1	1....N, “unbounded”			
8	max-field-elements	S 18.2.2	c5		1	1....N, “unbounded”			
9	access-outside-fields	S 18.2.2	c5		“allowed”	“allowed”, “not allowed”			
10	ripple-capability	S 18.1	c89		“no”	“yes”, “no”			

NOTE In A-mode, one display object takes the value “WACI” whilst the other takes the value “WACA”.

A.3.3 Display object parameters (A-mode DO B)**Table A.13 — Miscellaneous display object VTE parameters (A-mode DO B)**

Ref.	Name of Item	Reference	Status	Support	Default	Type/Length/Value		Negotiable	Extra Info. Ref.
						Allowed Values	Supported Values		
1	display-object-name	S 18.1	m			Any PrintableString			
2	erasure-capability	S 18.1	o		“no”	“yes”, “no”			
3	DO-access	S 18.1	m		see note	“WACI” & “WACA”			
4	block-definition-capability	S 18.1	c4		“no”	“yes”, “no”			
5	b-bound	S 18.2.1	c4		1	1....N, “unbounded”			
6	field-definition-capability	S 18.1	c5		“no”	“yes”, “no”			
7	max-fields	S 18.2.2	c5		1	1....N, “unbounded”			
8	max-field-elements	S 18.2.2	c5		1	1....N, “unbounded”			
9	access-outside-fields	S 18.2.2	c5		“allowed”	“allowed”, “not allowed”			
10	ripple-capability	S 18.1	c89		“no”	“yes”, “no”			

NOTE In A-mode, one display object takes the value “WACI” whilst the other takes the value “WACA”.