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AMENDMENT 2
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Information technology — Telecommunications and information exchange between systems — Elements of Management Information Related to OSI Transport Layer Standards

AMENDMENT 2:
Implementation conformance statement proformas

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Éléments d'information de gestion concernant les normes de la couche Transport OSI

AMENDEMENT 2: Proformes de déclaration de conformité de mise en œuvre

Reference number
ISO/IEC 10737:1994/Amd.2:1996(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 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.

Amendment 2 to International Standard ISO/IEC 10737 : 1994 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems.*

This Amendment is also published by ITU-T as Rec. X.284/Amd. 2 but not as identical text.

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Information technology – Telecommunications and information exchange between systems – Elements of Management Information Related to OSI Transport Layer standards

AMENDMENT 2:

Implementation conformance statement proformas

Page 1

Add the following as the last paragraph of Clause 1 "Scope".

"

Annexes D, E, F and G, which are integral parts of this International Standard provide ICS proformas associated with Transport layer management information.

"

Add the following reference to subclause 2.1:

"

- ITU-T Recommendation X.724 (1993) | ISO/IEC 10165-6:1994, *Information technology - Open Systems Interconnection - Structure of management information: Requirements and guidelines for implementation conformance statement proformas associated with OSI management* .

"

Page 2

Add the following references to subclause 2.2:

"

- CCITT Recommendation X.209 (1988), *Specification of basic encoding rules for abstract syntax notation one (ASN.1).*

  ISO/IEC 8825: 1990, *Information technology - Open Systems Interconnection - Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1).*

- CCITT Recommendation X.290 (1991), *OSI conformance testing methodology and framework for protocol Recommendations for CCITT applications - General concepts.*

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

- CCITT Recommendation X.291 (1992), *OSI conformance testing methodology and framework for protocol Recommendations for CCITT applications - Abstract test suite specification.*

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

  NOTE – ISO/IEC 9646-1:1994 and ISO/IEC 9646-2:1994 supersede ISO/IEC 9646-1:1991 and ISO/IEC 9646-2: 1991 respectively. However, when this International Standard was under development, the previous editions were valid and this International Standard is therefore based on these editions, which are listed below.

  ISO/IEC 9646-1: 1991, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts.*

  ISO/IEC 9646-2: 1991, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract test suite specification.*

- ITU-T Recommendation X.296 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications - Implementation Conformance Statements.*

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ISO/IEC 9646-7: 1995, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation conformance statements.*

"

Page 4

Add the following abbreviations to clause 4:

"

MCS	management conformance summary
MICS	management information conformance statement
MOCS	managed object conformance statement
MRCS	managed relationship conformance statement
NCMS	network connection management subprotocol

"

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Replace clause 7 with the following:

"

7 Conformance

Implementations claiming to conform to this International Standard shall comply with the conformance requirements as defined in the following subclauses.

7.1 Conformance requirements to this International Standard

7.1.1 Static conformance

The implementation shall conform to the requirements of this International Standard in the manager role, the agent role, or both roles. A claim of conformance to at least one role shall be made in Table D.1 of this International Standard.

If a claim of conformance is made for support in the manager role, the implementation shall support at least one management operation or notification or action of the managed objects specified by this International Standard. The conformance requirements in the manager role for those management operations, notifications and actions are identified in Table D.3 and further tables referenced by Annex D.

If a claim of conformance is made for support in the agent role, the implementation shall support one or more instances of the transport subsystem managed object class, the transport entity managed object class and the TSAP managed object class identified in Table D.4 of this International Standard and further tables referenced by Annex D.

If a claim of conformance is made for support in the agent role, the implementation shall support at least one name binding identified in Table D.7 of this International Standard for each supported managed object.

The implementation shall support the transfer syntax derived from the encoding rules specified in CCITT Rec. X.209 | ISO/IEC 8825 named {joint-iso-ccitt asn1(1) basicEncoding(1)} for the abstract data types referenced by the definitions for which support is claimed.

7.1.2 Dynamic conformance

Implementations claiming to conform to this International Standard shall support the elements of procedure and definitions of semantics corresponding to the definitions for which support is claimed.

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7.1.3 Management implementation conformance statement requirements

Any MCS proforma, MICS proforma, MOCS proforma, and MRCS proforma which conform to this International Standard shall be technically identical to the proformas specified in Annexes D, E, F, and G preserving table numbering and the index numbers of items, and differing only in pagination and page headers.

The supplier of an implementation which is claimed to conform to this International Standard shall complete a copy of the management conformance summary (MCS) provided in Annex D as part of the conformance requirements together with any other ICS proformas referenced as applicable from that MCS. Any MCS, MICS, MOCS and MRCS which conform to this International Standard shall:

- describe an implementation which conforms to this International Standard;
- have been completed in accordance with the instructions for completion given in ITU-T Rec. X.724 | ISO/IEC 10165-6;
- include the information necessary to uniquely identify both the supplier and the implementation.

7.2 Protocol specific conformance requirements

The supplier of an implementation which is claimed to conform to this International Standard shall support at least one protocol identified in Table D.2 of this International Standard.

7.2.1 Conformance to the ITU-T Recommendation X.224 | ISO/IEC 8073

An implementation claming conformance to ITU-T Recommendation X.224 | ISO/IEC 8073 in the agent role as a managed implementation shall:

a) conform to ITU-T Recommendation X.284 | ISO/IEC 10737 as defined in 7.1;

b) support the comodeTPM MO, the transportConnection MO and transportConnectionIVMO MO;

c) support the ncmsPM MO, the ncc MO and nccIVMO MO, if the supplier of an implementation support network connection management subprotocol.

7.2.2 Conformance to the ISO 8602

An implementation claming conformance to ISO 8602 in the agent role as a managed implementation shall:

a) conform to ITU-T Recommendation X.284 | ISO/IEC 10737 as defined in 7.1;

b) support the clmodeTPM MO.

"

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Add the following annexes after Annex C.

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Annex D
(normative)

MCS proforma[1)]

D.1 Introduction

D.1.1 Purpose and structure

The management conformance summary (MCS) is a statement by a supplier that identifies an implementation and provides information on whether the implementation claims conformance to any of the listed set of documents that specify conformance requirements to OSI management.

The MCS proforma is a document, in the form of a questionnaire that when completed by the supplier of an implementation becomes the MCS.

D.1.2 Instructions for completing the MCS proforma to produce an MCS[2)]

The supplier of the implementation shall enter an explicit statement in each of the boxes provided. Specific instruction is provided in the text which precedes each table.

D.1.3 Symbols, abbreviations and terms

For all annexes of this International Standard, the following common notations, defined in CCITT Rec. X.291 | ISO/IEC 9646-2 and ITU-T Rec. X.296 | ISO/IEC 9646-7 are used for the Status column:

m mandatory;

o optional;

c conditional;

x prohibited;

— not applicable or out of scope.

NOTES

1 – 'c', 'm', and 'o' are prefixed by a 'c:' when nested under a conditional or optional item of the same table;

2 – 'o' may be suffixed by '.N' (where N is a unique number) for mutually exclusive or selectable options among a set of status values. Support of at least one of the choices (from the items with the same values of N) is required.

For all annexes of this International Standard, the following common notations, defined in CCITT Rec. X.291 | ISO/IEC 9646-2 and ITU-T Rec. X.296 | ISO/IEC 9646-7 are used for the Support column:

Y implemented;

N not implemented;

— no answer required;

Ig the item is ignored (i.e. processed syntactically but not semantically).

[1)] Users of this International Standard may freely reproduce the MCS proforma in this annex so that it can be used for its intended purpose, and may further publish the completed MCS.

[2)] Instructions for completing the MCS proforma are specified in ITU-T Rec.X.724 | ISO/IEC 10165-6 .

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D.2 Identification of the implementation

D.2.1 Date of statement

The supplier of the implementation shall enter the date of this statement in the box below. Use the format DD-MM-YYYY.

Date of statement

D.2.2 Identification of the implementation

The supplier of the implementation shall enter information necessary to uniquely identify the implementation and the system(s) in which it may reside, in the box below.

D.2.3 Contact

The supplier of the implementation shall provide information on whom to contact if there are any queries concerning the content of the MCS, in the box below.

D.3 Identification of the International Standard in which the management information is defined

The supplier of the implementation shall enter the title, reference number and date of the publication of the International Standard which specifies the management information to which conformance is claimed, in the box below.

International Standard to which conformance is claimed

D.3.1 Technical corrigenda implemented

The supplier of the implementation shall enter the reference numbers of implemented technical corrigenda which modify the identified International Standard, in the box below.

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D.3.2 Amendments implemented

The supplier of the implementation shall state the titles and reference numbers of implemented amendments to the identified International Standard, in the box below.

D.4 Management conformance summary

The supplier of implementation shall state the capabilities and features supported and provide summary of conformance claims to Recommendations | International Standards using the tables in this annex.

The supplier of the implementation shall specify the roles that are supported, in Table D.1

Table D.1 – Roles

Index	Roles supported	Status	Support	Additional information
1	Manager role support	o.1		
2	Agent role support	o.1		

The supplier of the implementation shall specify the protocols that are supported, in Table D.2

Table D.2 – Protocol

Index	Protocol supported	Status	Support	Additional information
1	Connection-mode support	o.2		
2	Connectionless-mode support	o.2		

The supplier of the implementation shall specify support for management information in the manager role, in Table D.3

Table D.3 – Manager role minimum conformance requirement

Index	Item	Status	Support	Additional information
1	Operations on managed objects	c1		
2	Object creation notification for Transport entity managed object	c1		
3	Object deletion notification for Transport entity managed object	c1		
4	Communications Alarm notification for Transport entity managed object	c1		
5	Object creation notification for Connectionless-mode transport protocol machine managed object	c2		
6	Object deletion notification for Connectionless-mode transport protocol machine managed object	c2		
7	State change notification for Connectionless-mode transport protocol machine managed object	c2		
8	Communications Alarm notification for Connectionless-mode transport protocol machine managed object	c2		
9	Activate action for Connectionless-mode transport protocol machine managed object	c2		
10	Deactivate action for Connectionless-mode transport protocol machine managed object	c2		
11	Communications information notification for Connection-oriented transport protocol machine managed object	c3		
12	Object creation notification for Connection-oriented transport protocol machine managed object	c3		
13	Object deletion notification for Connection-oriented transport protocol machine managed object	c3		
14	State change notification for Connection-oriented transport protocol machine managed object	c3		
15	Activate action for Connection-oriented transport protocol machine managed object	c3		
16	Deactivate action for Connection-oriented transport protocol machine managed object	c3		
17	Object creation notification for TSAP managed object	c1		
18	Object deletion notification for TSAP managed object	c1		

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Table D.3 (concluded) – Manager role minimum conformance requirement

Index	Item	Status	Support	Additional information
19	Communications information notification for Transport connection managed object	c3		
20	Object creation notification for Transport connection managed object	c3		
21	Object deletion notification for Transport connection managed object	c3		
22	Communications information notification for NCMS protocol machine managed object	c4		
23	Object creation notification for NCMS protocol machine managed object	c4		
24	Object deletion notification for NCMS protocol machine managed object	c4		
25	State change notification for NCMS protocol machine managed object	c4		
26	Activate action for NCMS protocol machine managed object	c4		
27	Deactivate action for NCMS protocol machine managed object	c4		
28	Object creation notification for Network connection control managed object	c4		
29	Object deletion notification for Network connection control managed object	c4		

c1: if D.1/1a then o.3 else -

c2: if D.1/1a and D.2/2a then o.3 else -

c3: if D.1/1a and D.2/1a then o.3 else -

c4: if D.1/1a and D.2/1a then o else -

The supplier of the implementation shall specify support for management information in the agent role, in Table D.4

Table D.4 – Agent role minimum conformance requirement

Index	Item	Status	Support	Additional information
1	Transport subsystem managed object	m		
2	Transport entity managed object	m		
3	Connectionless transport protocol machine managed object	c5		
4	Connection oriented transport protocol machine managed object	c6		
5	Transport SAP managed object	m		
6	Transport connection managed object	c6		
7	Transport connection initial values managed object	c6		
8	NCMS protocol machine managed object	c7		
9	Network connection control managed object	c7		
10	Network connection control initial values managed object	c7		

c5: if D.1/2a and D.2/2a then m else -

c6: if D.1/2a and D.2/1a then m else -

c7: if D.1/2a and D.2/1a them o else -

Table D.5 – Logging of event records

Index		Status	Support	Additional information
1	Does the implementation support logging of event records in agent role?	c8		

c8: if D.1/2a then o else -

NOTE – Conformance to this International Standard does not require conformance to CCITT Rec. X.735 | ISO/IEC 10164-6.

The supplier of the implementation shall provide information on claims of conformance to any of the International Standards summarized in the following tables. For each International Standard that the supplier of the implementation claims conformance to, the corresponding conformance statement(s) shall be completed, or referenced by, the MCS. The supplier of the implementation shall complete the Support, Table numbers and Additional information columns.

In tables D.6, D.7 and D.8, the Status column is used to indicate whether the supplier of the implementation is required to complete the referenced tables or referenced items. Conformance requirements are as specified in the referenced tables or referenced items and are not changed by the value of the MCS Status column. Similarly, the Support column is used by the supplier of the implementation to indicate completion of the referenced tables or referenced items.

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Table D.6 – MOCS support summary

Index	Identification of the document that includes the MOCS proforma	Table numbers of MOCS proforma	Description	Constraints and values	Status	Support	Table numbers of MOCS	Additional information
1	"ISO/IEC 10737"	Table F.1 - F.4	transportSubsystem	—	m			
2	"ISO/IEC 10737"	Table F.5 - F.11	transportEntity	—	m			
3	"ISO/IEC 10737"	Table F.1 2- F.19	clmodeTPM	—	c9			
4	"ISO/IEC 10737"	Table F.20 - F.27	comodeTPM	—	c10			
5	"ISO/IEC 10737"	Table F.28 - F.32	tSAP	—	m			
6	"ISO/IEC 10737"	Table F.33 - F.39	transportConnection	—	c11			
7	"ISO/IEC 10737"	Table F.40 - F.43	transportConnectionIVMO	—	c12			
8	"ISO/IEC 10737"	Table F.44 - F.47	communicationInformation Record	—	c13			
9	"ISO/IEC 10737"	Table F.48 - F.54	ncmsPM	—	c14			
10	"ISO/IEC 10737"	Table F.55 - F.59	ncc	—	c15			
11	"ISO/IEC 10737"	Table F.60 - F.63	nccIVMO	—	c16			
12	"ISO/IEC 10164-1"	Table C.1 - C.4	objectCreationRecord	—	c17			
13	"ISO/IEC 10164-1"	Table C.5 - C.8	objectDeletionRecord	—	c17			
14	"ISO/IEC 10164-2"	Table C.1 - C.4	stateChangeRecord	—	c17			
15	"ISO/IEC 10164-4"	Table C.1 - C.4	alarmRecord	—	c17			

c9: if D.4/3a then m else -

c10: if D.4/4a then m else -

c11: if D.4/6a then m else -

c12: if D.4/7a then m else -

c13: if (D.4/4a or D.4/6a or D.4/8a) and D.5/1a then m else -

c14: if D.4/8a then m else -

c15: if D.4/9a then m else -

c16: if D.4/10a then m else -

c17: if D.5/1a then m else -

Table D.7 – MRCS support summary

Index	Identification of the document that includes the MRCS proforma	Table numbers of MRCS proforma	Description	Constraints and values	Status	Support	Table numbers of MRCS	Additional information
1	"ISO/IEC 10737"	Table G.1/1	transportSubsystem-system	—	o.4			
2	"ISO/IEC 10737"	Table G.1/2	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": subsystem-system	—	o.4			
3	"ISO/IEC 10737"	Table G.1/3	transportEntity-transportSubsystem-Automatic	—	o.5			
4	"ISO/IEC 10737"	Table G.1/4	transportEntity-transportSubsystem-Management	—	o.5			
5	"ISO/IEC 10737"	Table G.1/5	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": communicationsEntity-sybsystems	—	o.5			
6	"ISO/IEC 10737"	Table G.1/6	clmodeTPM-transportEntity-Automatic	—	c18			
7	"ISO/IEC 10737"	Table G.1/7	clmodeTPM-transportEntity-Management	—	c18			
8	"ISO/IEC 10737"	Table G.1/8	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": clProtocolMachine-entity	—	c18			

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Table D.7 (concluded) – MRCS support summary

Index	Identification of the document that includes the MRCS proforma	Table numbers of MRCS proforma	Description	Constraints and values	Status	Support	Table numbers of MRCS	Additional information
9	"ISO/IEC 10737"	Table G.1/9	comodeTPM-transportEntity-Automatic	—	c19			
10	"ISO/IEC 10737"	Table G.1/10	comodeTPM-transportEntity-Management	—	c19			
11	"ISO/IEC 10737"	Table G.1/11	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": coProtocolMachine-entity	—	c19			
12	"ISO/IEC 10737"	Table G.1/12	tSAP-transportEntity-Automatic	—	o.8			
13	"ISO/IEC 10737"	Table G.1/13	tSAP-transportEntity-Management	—	o.8			
14	"ISO/IEC 10737"	Table G.1/14	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": sap1-communicationsEntity	—	o.8			
15	"ISO/IEC 10737"	Table G.1/15	transportConnection-comodeTPM	—	c20			
16	"ISO/IEC 10737"	Table G.1/16	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": singlePeerConnection-coProtocolMachine	—	c20			
17	"ISO/IEC 10737"	Table G.1/17	transportConnectionIVMO-comodeTPM	—	c21			
18	"ISO/IEC 10737"	Table G.1/18	ncmsPM-transportEntity-Automatic	—	c22			
19	"ISO/IEC 10737"	Table G.1/19	ncmsPM-transportEntity-Management	—	c22			
20	"ISO/IEC 10737"	Table G.1/20	ncc-ncmsPM	—	c23			
21	"ISO/IEC 10737"	Table G.1/21	nccIVMO-ncmsPM	—	c24			
22	"ISO/IEC 10164-6"	Table D.1/1	logRecord-log	—	c25			

c18: if D.6/3a then o.6 else -

c19: if D.6/4a then o.7 else -

c20: if D.6/6a then o.9 else -

c21: if D.6/7a then m else -

c22: if D.6/8a then o.10 else -

c23: if D.6/9a then m else -

c24: if D.6/10a then m else -

c25: if D.6/8a or D.6/12a or D.6/13a or D.6/14a or D.6/15a then o else -

Table D.8 – MICS support summary

Index	Identification of the document that includes the MICS proforma	Table numbers of MICS proforma	Description	Constraints and values	Status	Support	Table numbers of MICS	Additional information
1	"ISO/IEC 10737"	Table E.1 to E.23	management operations	—	c26			
2	"ISO/IEC 10737"	Table E.24	notifications	—	c27			
3	"ISO/IEC 10737"	Table E.25	actions	—	c28			

c26: if D.3/1a then m else -

c27: if D.3/2a or D.3/3a or D.3/4a or D.3/5a or D.3/6a or D.3/7a or D.3/8a or D.3/11a or D.3/12a or D.3/13a or D.3/14a or D.3/17a or D.3/18a or D.3/19a or D.3/20a or D.3/21a or D.3/22a or D.3/23a or D.3/24a or D.3/25a or D.3/28a or D.3/29a then m else -

c28: if D.3/9a or D.3/10a or D.3/15a or D.3/16a or D.3/26a or D.3/27a then m else -

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Annex E
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MICS proforma[1)]

E.1 Introduction

The purpose of this MICS proforma is to provide a mechanism for a supplier of an implementation which claims conformance, in the manager role, to management information specified in this International Standard, to provide conformance information in a standard form.

E.2 Instructions for completing the MICS proforma to produce a MICS

The MICS proforma contained in this annex is comprised of information in tabular form, in accordance with ITU-T Rec. X.724 | ISO/IEC 10165-6. In addition to the general guidance given in ITU-T Rec. X.724 | ISO/IEC 10165-6. The supplier of the implementation shall state which items are supported in tables below and if necessary, provide additional information.

E.3 Symbols, abbreviations and terms

The MICS proforma contained in this Annex is comprised of information in tabular form, in accordance with CCITT Rec. X.291 | ISO/IEC 9646-2.

The notations used in the Status and Support columns are specified in D.1.3.

E.4 Statement of conformance to the management information

E.4.1 Attributes

The specifier of a manager role implementation that claims to support management operations on the attributes specified in this International Standard shall import a copy of the following tables and complete them.

E.4.1.1 The transport subsystem managed object

Table E.1 – transportSubsystem Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	-		o.11		-		-		-		-		
2	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	-		o.11		-		-		-		-		
3	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	-		o.11		-		-		-		-		
4	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	-		o.11		-		-		-		-		
5	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": subsystemId	{2 9 3 5 7 11}	GraphicString	-		o.11		-		-		-		-		

[1)] 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.

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E.4.1.2 The transport entity managed object

Table E.2 – transportEntity Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	actualNSAP	{2 14 0 7 4}	SET OF other	-		o.11		-		-		-		-		
2	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	c1		o.11		-		-		-		-		
3	checksumErrorsDetected	{2 14 0 7 6}	INTEGER	-		o.11		-		-		-		-		
4	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": communicationsEntityId	{2 9 3 5 7 0}	GraphicString	c1		o.11		-		-		-		-		
5	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": localSapNames	{2 9 3 5 7 6}	SET OF ObjectInstance	-		o.11		-		-		-		-		
6	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	c1		o.11		-		-		-		-		
7	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	c1		o.11		-		-		-		-		
8	"Rec. X.721 | ISO/IEC 10165-2 : 1992": operationalState	{2 9 3 2 7 35}	ENUMERATED	-		o.11		-		-		-		-		
9	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	c1		o.11		-		-		-		-		
10	protocolErrors	{2 14 0 7 7}	INTEGER	-		o.11		-		-		-		-		
11	targetNSAP	{2 14 0 7 3}	SET OF other	c1		o.11		o.11		o.11		o.11		-		
12	undecodedNSDUs	{2 14 0 7 5}	INTEGER	-		o.11		-		-		-		-		

c1: if E.16/1a then o.11 else -

E.4.1.3 The connectionless-mode transpoet protocol machine managed object

Table E.3 – clmodeTPM Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	"Rec. X.721 | ISO/IEC 10165-2 : 1992": administrativeState	{2 9 3 2 7 31}	ENUMERATED	c2		o.11		o.11		-		-		-		
2	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	c2		o.11		-		-		-		-		
3	clChecksumOption	{2 14 0 7 9}	BOOLEAN	c2		o.11		o.11		-		-		o.11		
4	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": clProtocolMachineId	{2 9 3 5 7 2}	GraphicString	c2		o.11		-		-		-		-		
5	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	c2		o.11		-		-		-		-		
6	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	c2		o.11		-		-		-		-		

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Table E.3 (concluded) – clmodeTPM Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
7	"Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsReceivedCounter	{2 9 3 2 7 78}	INTEGER	-		o.11		-		-		-		-		
8	"Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsSentCounter	{2 9 3 2 7 80}	INTEGER	-		o.11		-		-		-		-		
9	"Rec. X.721 | ISO/IEC 10165-2 : 1992": operationalState	{2 9 3 2 7 35}	ENUMERATED	-		o.11		-		-		-		-		
10	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	c2		o.11		-		-		-		-		
11	"Rec. X.721 | ISO/IEC 10165-2 : 1992": pdusReceivedCounter	{2 9 3 2 7 86}	INTEGER	-		o.11		-		-		-		-		
12	"Rec. X.721 | ISO/IEC 10165-2 : 1992": pdusSentCounter	{2 9 3 2 7 88}	INTEGER	-		o.11		-		-		-		-		
13	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": totalRemoteSAPs	{2 9 3 5 7 13}	INTEGER	-		o.11		-		-		-		-		
14	undeliverablePDUsCounter	{2 14 0 7 10}	INTEGER	-		o.11		-		-		-		-		

c2: if E.17/1a then o.11 else -

E.4.1.4 The connection-oriented transport protocol machine managed object

Table E.4 – comodeTPM Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	"Rec. X.721 | ISO/IEC 10165-2 : 1992": administrativeState	{2 9 3 2 7 31}	ENUMERATED	c3		o.11		o.11		-		-		-		
2	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	c3		o.11		-		-		-		-		
3	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": coProtocolMachineId	{2 9 3 5 7 3}	GraphicString	c3		o.11		-		-		-		-		
4	localErrorDisconnects	{2 14 0 7 18}	INTEGER	-		o.11		-		-		-		-		
5	localSuccessfulConnections	{2 14 0 7 14}	INTEGER	-		o.11		-		-		-		-		
6	localUnsuccessfulConnections	{2 14 0 7 16}	INTEGER	-		o.11		-		-		-		-		
7	maxConnections	{2 14 0 7 13}	INTEGER	c3		o.11		o.11		-		-		o.11		
8	maxOpenConnections	{2 14 0 7 21}	INTEGER	-		o.11		-		-		-		o.11		
9	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	c3		o.11		-		-		-		-		
10	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	c3		o.11		-		-		-		-		
11	"Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsReceivedCounter	{2 9 3 2 7 78}	INTEGER	-		o.11		-		-		-		-		
12	"Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsSentCounter	{2 9 3 2 7 80}	INTEGER	-		o.11		-		-		-		-		

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Table E.4 (concluded) – comodeTPM Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
13	openConnections	{2 14 0 7 12}	INTEGER	-		o.11		-		-		-		-		
14	"Rec. X.721 | ISO/IEC 10165-2 : 1992": operationalState	{2 9 3 2 7 35}	ENUMERATED	-		o.11		-		-		-		-		
15	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o.11		o.11		-		-		-		-		
16	remoteErrorDisconnects	{2 14 0 7 19}	INTEGER	-		o.11		-		-		-		-		
17	remoteSuccessfulConnections	{2 14 0 7 15}	INTEGER	-		o.11		-		-		-		-		
18	remoteUnsuccessfulConnections	{2 14 0 7 17}	INTEGER	-		o.11		-		-		-		-		
19	unassociatedTPDUs	{2 14 0 7 20}	INTEGER	-		o.11		-		-		-		-		

c3: if E.18/1a then o.11 else -

E.4.1.5 The TSAP managed object

Table E.5 – tSAP Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	c4		o.11		-		-		-		-		
2	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	c4		o.11		-		-		-		-		
3	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	c4		o.11		-		-		-		-		
4	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	c4		o.11		-		-		-		-		
5	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": sap1Address	{2 9 3 5 7 8}	INTEGER	-		o.11		-		-		-		-		
6	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": sapId	{2 9 3 5 7 10}	GraphicString	c4		o.11		-		-		-		-		
7	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": userEntityNames	{2 9 3 5 7 15}	SET OF ObjectInstance	-		o.11		-		-		-		-		

c4: if E.19/1a then o.11 else -

E.4.1.6 The transport connection managed object

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Table E.6 – transportConnection Attribute support

				Set by create		Get		Replace		Add		Remove		Set to default		
Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	acknowledgeTime	{2 14 0 7 47}	SEQUENCE	-		o.11		-		-		-		-		
2	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	-		o.11		-		-		-		-		
3	calledNSAPAddress	{2 14 0 7 58}	OCTET STRING	-		o.11		-		-		-		-		
4	calledTSelector	{2 14 0 7 56}	OCTET STRING	-		o.11		-		-		-		-		
5	callingNSAPAddress	{2 14 0 7 57}	OCTET STRING	-		o.11		-		-		-		-		
6	callingTSelector	{2 14 0 7 55}	OCTET STRING	-		o.11		-		-		-		-		
7	checksumNonuse	{2 14 0 7 43}	BOOLEAN	-		o.11		-		-		-		-		
8	connectionDirection	{2 14 0 7 60}	ENUMERATED	-		o.11		-		-		-		-		
9	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": connectionId	{2 9 3 5 7 1}	GraphicString	-		o.11		-		-		-		-		
10	explicitFlowControl	{2 14 0 7 45}	BOOLEAN	-		o.11		-		-		-		-		
11	extendedFormat	{2 14 0 7 41}	BOOLEAN	-		o.11		-		-		-		-		
12	inactivityTime	{2 14 0 7 46}	SEQUENCE	-		o.11		-		-		-		-		
13	localReference	{2 14 0 7 53}	INTEGER	-		o.11		-		-		-		-		
14	maxTPDUSize	{2 14 0 7 51}	INTEGER	-		o.11		-		-		-		-		
15	maxTransmissions	{2 14 0 7 52}	INTEGER	-		o.11		-		-		-		-		
16	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	-		o.11		-		-		-		-		
17	networkConnectionIDs	{2 14 0 7 61}	SET OF other	-		o.11		-		-		-		-		
18	networkExpeditedData	{2 14 0 7 42}	BOOLEAN	-		o.11		-		-		-		-		
19	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	-		o.11		-		-		-		-		
20	"Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsReceivedCounter	{2 9 3 2 7 78}	INTEGER	-		o.11		-		-		-		-		
21	"Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsSentCounter	{2 9 3 2 7 80}	INTEGER	-		o.11		-		-		-		-		
22	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	-		o.11		-		-		-		-		
23	"Rec. X.721 | ISO/IEC 10165-2 : 1992": pdusReceivedCounter	{2 9 3 2 7 86}	INTEGER	-		o.11		-		-		-		-		
24	"Rec. X.721 | ISO/IEC 10165-2 : 1992": pdusRetransmittedErrorCounter	{2 9 3 2 7 87}	INTEGER	-		o.11		-		-		-		-		
25	"Rec. X.721 | ISO/IEC 10165-2 : 1992": pdusSentCounter	{2 9 3 2 7 88}	INTEGER	-		o.11		-		-		-		-		
26	protocolClass	{2 14 0 7 40}	ENUMERATED	-		o.11		-		-		-		-		
27	protocolErrors	{2 14 0 7 7}	INTEGER	-		o.11		-		-		-		-		
28	reassignmentTime	{2 14 0 7 48}	SEQUENCE	-		o.11		-		-		-		-		
29	reassignmentsAfterFailure	{2 14 0 7 62}	INTEGER	-		o.11		-		-		-		-		
30	receiptConfirmation	{2 14 0 7 44}	BOOLEAN	-		o.11		-		-		-		-		
31	relatingNCCMONames	{2 14 0 7 66}	SET OF other	-		o.11		-		-		-		-		
32	remoteReference	{2 14 0 7 54}	INTEGER	-		o.11		-		-		-		-		
33	respondingNSAPAddress	{2 14 0 7 59}	OCTET STRING	-		o.11		-		-		-		-		
34	retransmissionTime	{2 14 0 7 49}	SEQUENCE	-		o.11		-		-		-		-		
35	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": supportedConnectionNames	{2 9 3 5 7 12}	SET OF ObjectInstance	-		o.11		-		-		-		-		
36	transportExpeditedService	{2 14 0 7 65}	BOOLEAN	-		o.11		-		-		-		-		
37	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": underlyingConnectionNames	{2 9 3 5 7 14}	SET OF ObjectInstance	-		o.11		-		-		-		-		
38	windowTimer	{2 14 0 7 50}	SEQUENCE	-		o.11		-		-		-		-		

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E.4.1.7 The transport connection IVMO

Table E.7 – transportConnectionIVMO Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace		Add		Remove		Set to default		Additional information
				Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	
1	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	o.11		o.11		-		-		-		-		
2	checksumNonuse	{2 14 0 7 43}	BOOLEAN	o.11		o.11		o.11		-		-		o.11		
3	explicitFlowControl	{2 14 0 7 45}	BOOLEAN	o.11		o.11		o.11		-		-		o.11		
4	extendedFormat	{2 14 0 7 41}	BOOLEAN	o.11		o.11		o.11		-		-		o.11		
5	inactivityTime	{2 14 0 7 46}	SEQUENCE	o.11		o.11		o.11		-		-		o.11		
6	maxTPDUSize	{2 14 0 7 51}	INTEGER	o.11		o.11		o.11		-		-		o.11		
7	maxTransmissions	{2 14 0 7 52}	INTEGER	o.11		o.11		o.11		-		-		o.11		
8	maximumWindow	{2 14 0 7 36}	INTEGER	o.11		o.11		o.11		-		-		o.11		
9	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o.11		o.11		-		-		-		-		
10	networkExpeditedData	{2 14 0 7 42}	BOOLEAN	o.11		o.11		o.11		-		-		o.11		
11	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	o.11		o.11		-		-		-		-		
12	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o.11		o.11		-		-		-		-		
13	protocolClasses	{2 14 0 7 26}	SET OF ENUMERATED	o.11		o.11		o.11		-		-		o.11		
14	reassignmentTime	{2 14 0 7 48}	SEQUENCE	o.11		o.11		o.11		-		-		o.11		
15	receiptConfirmation	{2 14 0 7 44}	BOOLEAN	o.11		o.11		o.11		-		-		o.11		
16	retransmissionTime	{2 14 0 7 49}	SEQUENCE	o.11		o.11		o.11		-		-		o.11		
17	transportConnectionIVMOId	{2 14 0 7 25}	GraphicString	-		o.11		-		-		-		-		
18	transportExpeditedService	{2 14 0 7 65}	BOOLEAN	o.11		o.11		o.11		-		-		o.11		
19	windowTimer	{2 14 0 7 50}	SEQUENCE	o.11		o.11		o.11		-		-		o.11		

E.4.1.8 The communication information record managed object ["ISO/IEC 10165-5 : 1994"]

Table E.8 – communicationInformationRecord Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace		Add		Remove		Set to default		Additional information
				Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	
1	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	-		o.11		-		-		-		-		
2	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	-		o.11		-		-		-		-		
3	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	-		o.11		-		-		-		-		
4	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	-		o.11		-		-		-		-		
5	"Rec. X.721 | ISO/IEC 10165-2 : 1992": logRecordId	{2 9 3 2 7 3}		-		o.11		-		-		-		-		
6	"Rec. X.721 | ISO/IEC 10165-2 : 1992": loggingTime	{2 9 3 2 7 59}		-		o.11		-		-		-		-		

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Table E.8 (concluded) – communicationInformationRecord Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace		Add		Remove		Set to default		Additional information
				Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	
7	"Rec. X.721 | ISO/IEC 10165-2 : 1992": managedObjectClass	{2 9 3 2 7 60}		-		o.11		-		-		-		-		
8	"Rec. X.721 | ISO/IEC 10165-2 : 1992": managedObjectInstance	{2 9 3 2 7 61}		-		o.11		-		-		-		-		
9	"Rec. X.721 | ISO/IEC 10165-2 : 1992": eventType	{2 9 3 2 7 14}		-		o.11		-		-		-		-		
10	"Rec. X.721 | ISO/IEC 10165-2 : 1992": eventTime	{2 9 3 2 7 13}		-		o.11		-		-		-		-		
11	"Rec. X.721 | ISO/IEC 10165-2 : 1992": notificationIdentifier	{2 9 3 2 7 16}		-		o.11		-		-		-		-		
12	"Rec. X.721 | ISO/IEC 10165-2 : 1992": correlatedNotifications	{2 9 3 2 7 12}		-		o.11		-		-		-		-		
13	"Rec. X.721 | ISO/IEC 10165-2 : 1992": additionalText	{2 9 3 2 7 7}		-		o.11		-		-		-		-		
14	"Rec. X.721 | ISO/IEC 10165-2 : 1992": additionalInformation	{2 9 3 2 7 6}		-		o.11		-		-		-		-		
15	informationType	{2 14 0 7 43}		-		o.11		-		-		-		-		
16	informationData	{2 14 0 7 45}		-		o.11		-		-		-		-		

E.4.1.9 The NCMS Protocol Machine managed object

Table E.9 – ncmsPM Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace		Add		Remove		Set to default		Additional information
				Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	
1	"Rec. X.721 | ISO/IEC 10165-2 : 1992": administrativeState	{2 9 3 2 7 31}	ENUMERATED	c5		o.11		o.11		-		-		-		
2	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	c5		o.11		-		-		-		-		
3	ncmsPMId	{2 14 0 7 67}	GraphicString	c5		o.11		-		-		-		-		
4	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	c5		o.11		-		-		-		-		
5	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	c5		o.11		-		-		-		-		
6	"Rec. X.721 | ISO/IEC 10165-2 : 1992": operationalState	{2 9 3 2 7 35}	ENUMERATED	-		o.11		-		-		-		-		
7	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	c5		o.11		-		-		-		-		

c5: if E.21/1a then o.11 else -

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E.4.1.10 The Network Connection Control Managed Object

Table E.10 – ncc Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace		Add		Remove		Set to default		Additional information
				Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	
1	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	o.11		o.11		-		-		-		-		
2	nccId	{2 14 0 7 68}	GraphicString	o.11		o.11		-		-		-		-		
3	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o.11		o.11		-		-		-		-		
4	ncc-COL	{2 14 0 7 70}	ENUMERATED	-		o.11		-		-		-		-		
5	nc-REC	{2 14 0 7 72}	ENUMERATED	-		o.11		-		-		-		-		
6	nc-REF	{2 14 0 7 73}	INTEGER	-		o.11		-		-		-		-		
7	nc-PREF	{2 14 0 7 71}	ENUMERATED	-		o.11		-		-		-		-		
8	nc-Right	{2 14 0 7 75}	ENUMERATED	-		o.11		-		-		-		-		
9	ncRecoveries	{2 14 0 7 74}	INTEGER	-		o.11		-		-		-		-		
10	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	o.11		o.11		-		-		-		-		
11	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o.11		o.11		-		-		-		-		
12	ttrNCTime	{2 14 0 7 79}	SEQUENCE	-		o.11		-		-		-		-		
13	tpdNCTime	{2 14 0 7 78}	SEQUENCE	-		o.11		-		-		-		-		
14	tfrNCTime	{2 14 0 7 77}	SEQUENCE	-		o.11		-		-		-		-		
15	sourceOfAllocation	{2 14 0 7 76}	ENUMERATED	-		o.11		-		-		-		-		
16	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": underlyingConnectionNames	{2 9 3 5 7 14}	SET OF ObjectInstance	-		o.11		-		-		-		-		

E.4.1.11 The Network Connection Control Initial Value Managed Object

Table E.11 – nccIVMO Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace		Add		Remove		Set to default		Additional information
				Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	Status	Support	
1	"Rec. X.721 | ISO/IEC 10165-2 : 1992": allomorphs	{2 9 3 2 7 50}	SET OF ObjectClass	o.11		o.11		-		-		-		-		
2	nccIVMOId	{2 14 0 7 69}	GraphicString	o.11		o.11		-		-		-		-		
3	"Rec. X.721 | ISO/IEC 10165-2 : 1992": nameBinding	{2 9 3 2 7 63}	OBJECT IDENTIFIER	o.11		o.11		-		-		-		-		
4	ncc-COL	{2 14 0 7 70}	ENUMERATED	o.11		o.11		o.11		-		-		o.11		
5	nc-REC	{2 14 0 7 72}	ENUMERATED	o.11		o.11		o.11		-		-		o.11		
6	nc-PREF	{2 14 0 7 71}	ENUMERATED	o.11		o.11		o.11		-		-		o.11		
7	nc-Right	{2 14 0 7 75}	ENUMERATED	o.11		o.11		o.11		-		-		o.11		
8	"Rec. X.721 | ISO/IEC 10165-2 : 1992": objectClass	{2 9 3 2 7 65}	ObjectClass	o.11		o.11		-		-		-		-		
9	"Rec. X.721 | ISO/IEC 10165-2 : 1992": packages	{2 9 3 2 7 66}	SET OF OBJECT IDENTIFIER	o.11		o.11		-		-		-		-		
10	ttrNCTime	{2 14 0 7 79}	SEQUENCE	o.11		o.11		o.11		-		-		o.11		
11	tpdNCTime	{2 14 0 7 78}	SEQUENCE	o.11		o.11		o.11		-		-		o.11		
12	tfrNCTime	{2 14 0 7 77}	SEQUENCE	o.11		o.11		o.11		-		-		o.11		

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E.4.2 Attribute groups

The specifier of a manager role implementation that claims to support management operations on the attribute groups specified in this International Standard shall import a copy of the following tables and complete them.

E.4.2.1 The transport entity managed object

Table E.12 – transportEntity Attribute group support

				Get		Set to default		
Index	Attribute group template label	Value of object identifier for attribute group	Constraints and values	Status	Support	Status	Support	Additional information
1	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": counters	{2 9 3 5 8 0}	checksumErrorsDetected protocolErrors undecodedNSDUs	o.11		-		

E.4.2.2 The connectionless-mode transport protocol machine managed object

Table E.13 – clmodeTPM Attribute group support

				Get		Set to default		
Index	Attribute group template label	Value of object identifier for attribute group	Constraints and values	Status	Support	Status	Support	Additional information
1	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": counters	{2 9 3 5 8 0}	"Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsReceivedCounter "Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsSentCounter "Rec. X.721 | ISO/IEC 10165-2 : 1992": pdusReceivedCounter "Rec. X.721 | ISO/IEC 10165-2 : 1992": pdusSentCounter undeliverablePDUsCounter	o.11		-		
2	"Rec. X.721 | ISO/IEC 10165-2 : 1992": state	{2 9 3 2 8 1}	"Rec. X.721 | ISO/IEC 10165-2 : 1992": administrativeState "Rec. X.721 | ISO/IEC 10165-2 : 1992": operationalState	o.11		-		

E.4.2.3 The connection-oriented transport protocol machine managed object

Table E.14 – comodeTPM Attribute group support

				Get		Set to default		
Index	Attribute group template label	Value of object identifier for attribute group	Constraints and values	Status	Support	Status	Support	Additional information
1	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": counters	{2 9 3 5 8 0}	localErrorDisconnects localSuccessfulConnections localUnsuccessfulConnections maxOpenConnections "Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsReceivedCounter "Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsSentCounter openConnections remoteErrorDisconnects remoteSuccessfulConnections remoteUnsuccessfulConnections unassociatedTPDUs	o.11		-		
2	"Rec. X.721 | ISO/IEC 10165-2 : 1992": state	{2 9 3 2 8 1}	"Rec. X.721 | ISO/IEC 10165-2 : 1992": administrativeState "Rec. X.721 | ISO/IEC 10165-2 : 1992": operationalState	o.11		-		

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E.4.2.4 The transport connection managed object

Table E.15 – transportConnection Attribute group support

Index	Attribute group template label	Value of object identifier for attribute group	Constraints and values	Get		Set to default		Additional information
				Status	Support	Status	Support	
1	"CCITT Rec. X.723 (1993) | ISO/IEC 10165-5 : 1994": counters	{2 9 3 5 8 0}	"Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsReceivedCounter "Rec. X.721 | ISO/IEC 10165-2 : 1992": octetsSentCounter "Rec. X.721 | ISO/IEC 10165-2 : 1992": pdusReceivedCounter "Rec. X.721 | ISO/IEC 10165-2 : 1992": pdusRetransmittedErrorCounter "Rec. X.721 | ISO/IEC 10165-2 : 1992": pdusSentCounter protocolErrors	o.11		-		

E.4.3 Create and delete management operations

The specifier of a manager role implementation that claims to support the create or delete management operations on the managed objects specified in this International Standard shall import a copy of the following tables and complete them.

E.4.3.1 The transport entity managed object

Table E.16 — Create and delete support

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	transportEntity MO	o		
1.1	Create with reference object	—	—		
2	Delete support	transportEntity MO	o		

E.4.3.2 The connectionless-mode transport protocol machine managed object

Table E.17 — Create and delete support

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	clmodeTPM MO	o		
1.1	Create with reference object	—	—		
2	Delete support	clmodeTPM MO	o		

E.4.3.3 The connection-oriented transport protocol machine managed object

Table E.18 — Create and delete support

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	comodeTPM MO	o		
1.1	Create with reference object	—	—		
2	Delete support	comodeTPM MO	o		

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E.4.3.4 The TSAP managed object

Table E.19 — Create and delete support

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	tSAP MO	o		
1.1	Create with reference object	—	—		
2	Delete support	tSAP MO	o		

E.4.3.5 The transport connection IVMO

Table E.20 — Create and delete support

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	transportConnection IVMO	o.11		
1.1	Create with reference object	—	o.11		
2	Delete support	transportConnection IVMO	o.11		

E.4.3.6 The NCMS Protocol Machine managed object

Table E.21 — Create and delete support

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	ncmsPM MO	o		
1.1	Create with reference object	—	—		
2	Delete support	ncmsPM MO	o		

E.4.3.7 The Network Connection Control Managed Object

Table E.22 — Create and delete support

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	ncc MO	o.11		
1.1	Create with reference object	—	o.11		
2	Delete support	ncc MO	o.11		

E.4.3.8 The Network Connection Control Initial Value Managed Object

Table E.23 — Create and delete support

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	ncc IVMO MO	o.11		
1.1	Create with reference object	—	o.11		
2	Delete support	ncc IVMO MO	o.11		

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E.4.4 Notifications

The specifier of a manager role implementation that claims to support the notifications specified in this International Standard shall import a copy of this table and complete it.

Table E.24 – Notification support

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support		Additional information	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
					Confirmed	Nonconfirmed								
1	"Rec. X.721 | ISO/IEC 10165-2 : 1992": communicationsAlarm	{2 9 3 2 10 2}		c6				1.1	AlarmInfo		**Information Syntax** SEQUENCE	c6		
								1.1.1	probableCause	{2 9 3 2 7 18}	CHOICE	c:m		
								1.1.1.1	globalValue	-	OBJECT IDENTIFIER	c:m		
								1.1.1.2	localValue	-	INTEGER	c:m		
								1.1.2	specificProblems	{2 9 3 2 7 27}	SET OF CHOICE	c:m		
								1.1.2.1	OBJECT IDENTIFIER	-	OBJECT IDENTIFIER	c:m		
								1.1.2.2	INTEGER	-	INTEGER	c:m		
								1.1.3	perceivedSeverity	{2 9 3 2 7 17}	ENUMERATED	c:m		
								1.1.4	backedUpStatus	{2 9 3 2 7 11}	BOOLEAN	c:m		
								1.1.5	backUpObject	{2 9 3 2 7 40}	ObjectInstance	c:m		
								1.1.6	trendIndication	{2 9 3 2 7 30}	ENUMERATED	c:m		
								1.1.7	thresholdInfo	{2 9 3 2 7 29}	SEQUENCE	c:m		
								1.1.7.1	triggeredThreshold	-	AttributeId	c:m		
								1.1.7.2	observedValue	-	CHOICE	c:m		
								1.1.7.2.1	integer	-	INTEGER	c:m		
								1.1.7.2.2	real	-	REAL	c:m		
								1.1.7.3	thresholdLevel	-	CHOICE	c:m		
								1.1.7.3.1	up	-	SEQUENCE	c:m		
								1.1.7.3.1.1	high	-	CHOICE	c:m		
								1.1.7.3.1.1.1	integer	-	INTEGER	c:m		
								1.1.7.3.1.1.2	real	-	REAL	c:m		
								1.1.7.3.1.2	low	-	CHOICE	c:m		
								1.1.7.3.1.2.1	integer	-	INTEGER	c:m		
								1.1.7.3.1.2.2	real	-	REAL	c:m		
								1.1.7.3.2	down	-	SEQUENCE	c:m		
								1.1.7.3.2.1	high	-	CHOICE	c:m		
								1.1.7.3.2.1.1	integer	-	INTEGER	c:m		
								1.1.7.3.2.1.2	real	-	REAL	c:m		
								1.1.7.3.2.2	low	-	CHOICE	c:m		
								1.1.7.3.2.2.1	integer	-	INTEGER	c:m		
								1.1.7.3.2.2.2	real	-	REAL	c:m		
								1.1.7.4	armTime	-	GeneralizedTime	c:m		
								1.1.8	notificationIdentifier	{2 9 3 2 7 16}	INTEGER	c:m		

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