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ITU-T

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STANDARDIZATION SECTOR
OF ITU

Amendment 1
X.735
(04/95)

**DATA NETWORKS AND OPEN SYSTEM
COMMUNICATIONS OSI MANAGEMENT**

**INFORMATION TECHNOLOGY –
OPEN SYSTEMS INTERCONNECTION –
SYSTEMS MANAGEMENT:
LOG CONTROL FUNCTION**

**AMENDMENT 1: IMPLEMENTATION
CONFORMANCE STATEMENT PROFORMAS**

**Amendment 1 to
ITU-T Recommendation X.735**

(Previously “CCITT Recommendations”)

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. Some 179 member countries, 84 telecom operating entities, 145 scientific and industrial organizations and 38 international organizations participate in ITU-T which is the body which sets world telecommunications standards (Recommendations).

The approval of Recommendations by the Members of ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, 1993). In addition, the World Telecommunication Standardization Conference (WTSC), which meets every four years, approves Recommendations submitted to it and establishes the study programme for the following period.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC. The text of ITU-T Recommendation X.735, Amendment 1, was approved on 10th of April 1995. The identical text is also published as ISO/IEC International Standard 10164-6.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized private operating agency.

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ITU-T X-SERIES RECOMMENDATIONS

DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

(February 1994)

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Summary

This amendment includes tables, which document the mandatory and optional management information specific to the Log Control Management Function. This amendment will be used by Profile specifiers, for example those developing International Standardizes Profiles (ISPs), to specify an explicit subset of capability, which will afford interoperability between implementatations. The tables also include a column for equipment vendors to state the capability of their products in terms of the Profiles or base specification. The table structures comply with the Guidelines for Implementation Conformance Statement Proformas specified in ITU-T Recommendation X.724 | ISO/IEC 10165-6.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION –
SYSTEMS MANAGEMENT: LOG CONTROL FUNCTIONAMENDMENT 1
(to ITU-T Rec. X.735 | ISO/IEC 10164-6)

Implementation conformance statement proformas

- 1) *Add the following footnote to the first list item in 2.1:*
 “¹⁾ As amended by ITU-T Rec. X.701/Cor.2 | ISO/IEC 10040/Cor.2”
- 2) *Add the following reference to 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.*”
- 3) *Add the following references to 2.2:*
 “– CCITT Recommendation X.291 (1992), *OSI conformance testing methodology and framework for protocol Recommendations for CCITT applications – Abstract test suite specification.*
 ISO/IEC 9646-2:1991, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 2: Abstract test suite specification.*
 – ITU-T Recommendation X.296²⁾, *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – Implementation conformance statements.*
 ISO/IEC 9646-7²⁾, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 7: Implementation conformance statements.*
 And then add the following footnote:
 2) Presently at the stage of draft.
- 4) *Apply the following changes to 3.4:*
 Replace “dependent conformance” with “managed object conformance statement (MOCS)”.
 Replace “general conformance” with “management information conformance statement (MICS)”.
 Relabel items f) through i) as h) through k) and insert the following new items:
 “f) MICS proforma;
 g) MOCS proforma;”
- 5) *Apply the following change to 3.7:*
 Replace “system conformance statement” with the following:
 “a) PICS proforma;
 b) protocol implementation conformance statement;
 c) system conformance statement.”
- 6) *Renumber 3.8 as 3.9 and insert the following new subclause:*

“3.8 Implementation conformance statement proforma definitions

This Recommendation | International Standard makes use of the following terms defined in ITU-T Rec. X.724 | ISO/IEC 10165-6:

- a) Managed Relationship Conformance Statement (MRCS);
- b) Management Conformance Summary (MCS);
- c) MCS proforma;
- d) MRCS proforma.”

7) *Add the following abbreviations to clause 4:*

“ICS	Implementation Conformance Statement
MCS	Management Conformance Summary
MICS	Management Information Conformance Statement
MOCS	Managed Object Conformance Statement
MRCS	Managed Relationship Conformance Statement
PICS	Protocol Implementation Conformance Statement”

8) *Replace clause 13 with the following:*

“13 Conformance

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

13.1 Static conformance

The implementation shall conform to the requirements of this Recommendation | 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 A.1.

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

If a claim of conformance is made for support in the agent role, the implementation shall support one or more instances of the log managed object class identified in Table A.4. In the agent role, conformance may also be claimed to subclasses of the log record object class.

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.

NOTE – Prior to the publication of this amendment, this Recommendation | International Standard identified general and dependent conformance classes. A claim of conformance similar to general conformance class can be made by stating support in the manager role, the agent role, or both roles, for the log control functional unit in Table A.2. A claim of conformance similar to dependent conformance class can be made by stating support for at least one of the items in Tables A.3 or A.4.

13.2 Dynamic conformance

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

13.3 Management implementation conformance statement requirements

Any MCS proforma, MICS proforma, MOCS proforma, and MRCS proforma which conforms to this Recommendation | International Standard shall be technically identical to the proformas specified in Annexes A, B, C and D 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 Recommendation | International Standard shall complete a copy of the Management Conformance Summary (MCS) provided in Annex A as part of the conformance requirements together with any other ICS proformas referenced as applicable from that MCS. An ICS which conforms to this Recommendation | International Standard shall:

- describe an implementation which conforms to this Recommendation | 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.”

- 9) Relabel Annexes A and B as E and F respectively, and insert the following annexes:

Annex A

MCS proforma³⁾

(This annex forms an integral part of this Recommendation | International Standard)

A.1 Introduction

A.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.

A.1.2 Instructions for completing the MCS proforma to produce a MCS

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.

A.1.3 Symbols, abbreviations and terms

For all annexes of this Recommendation | 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 "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 selectable options among a set of status values. Support of at least one of the choices (from the items with the same value of N) is required.

For all annexes of this Recommendation | 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).

A.1.4 Table format

Some of the tables in this Recommendation | International Standard have been split because the information is too wide to fit on the page. Where this occurs, the index number of the first block of columns are the index numbers of the corresponding rows of the remaining blocks of columns. A complete table reconstructed from the constituent parts should have the following layout:

Index	First block of columns	Second block of columns	Etc.
-------	------------------------	-------------------------	------

³⁾ Users of this Recommendation | 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. Instructions for the MCS proforma are specified in ITU-T Rec. X.724 | ISO/IEC 10165-6.

In this Recommendation | International Standard the constituent parts of the table appear consecutively, starting with the first block of columns.

When a table with sub-rows is too wide to fit on a page, the continuation table(s) have been constructed with index numbers identical to the index numbers in the corresponding rows of the first table, and with sub-index numbers corresponding to the sub-rows within each indexed row. For example, if Table X.1 has 2 rows and the continuation of Table X.1 has 2 sub-rows for each row, the tables are presented as follows:

Table X.1 – Title

Index	A	B	C	D	Support		G
					E	F	
1	a	b	–				
2	a	b	–				

Table X.1 (concluded) – Title

Index	Sub-index	H	I	J	K	L
1	1.1	h	i	j		
	1.2	h	i	j		
2	2.1	h	i	j		
	2.2	h	i	j		

A complete table reconstructed from the constituent parts should have the following layout:

Index	A	B	C	D	Support		G	Sub-index	H	I	J	K	L
					E	F							
1	a	b	–					1.1	h	i	j		
								1.2	h	i	j		
2	a	b	–					2.1	h	i	j		
								2.2	h	i	j		

References made to cells within tables shall be interpreted as references within reconstructed tables. In the example above, the reference X.1/1d corresponds to the blank cell in column G for row with Index 1, and X.1/1.2b corresponds to the blank cell in column L for row with Sub-index 1.2.

A.2 Identification of the implementation

A.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

A.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.

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A.2.3 Contact

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

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A.3 Identification of the Recommendations | International Standards 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 Recommendations | International Standards which specify the management information to which conformance is claimed, in the box below.

Recommendations International Standards to which conformance is claimed

A.3.1 Technical corrigenda implemented

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

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A.3.2 Amendments implemented

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

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A.4 Management conformance summary

The supplier of the implementation shall state the capabilities and features supported and provide a 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 A.1.

Table A.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 support for the systems management functional units, in Table A.2.

Table A.2 – Systems management functional units

Index	Systems management functional unit name	Manager		Agent		Additional information
		Status	Support	Status	Support	
1	log control functional unit	c1		c2		
2	monitor log functional unit	c1		c2		
c1: if A.1/1a then o else –. c2: if A.1/2a then o else –.						

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

Table A.3 – Manager role minimum conformance requirement

Index	Item	Status	Support	Additional information
1	Operations on managed objects	c3		
2	State change notification for log managed objects	c4		
3	Object creation notification for log managed objects	c4		
4	Object deletion notification for log managed objects	c4		
5	Attribute value change notification for log managed objects	c4		
6	Processing error alarm notification for log managed objects	c4		
c3: if A.2/1a or A.2/2a then m else (if A.1/1a then o.2 else –). c4: if A.2/1a then m else (if A.2/2a then o.2 else (if A.1/1a then o.2 else –)). NOTE – Manager role minimum conformance requires support for at least one of the items identified in this table. Support for either of the functional units identified in Table A.2 mandates support for some of those items. Conditions c3 and c4 express both of these requirements.				

The supplier of the implementation shall specify support for management information in the agent role, in Table A.4. If additional subclasses of log records are supported, the supplier of the implementation shall list the classes in the Additional information column.

Table A.4 – Agent role minimum conformance requirement

Index	Item	Status	Support	Additional information
1	Log managed object class	c5		
2	Sub-classes of log records associated with notifications emitted by the log managed object	c6		
3	Additional sub-classes of log records	c7		
c5: if A.1/2a then m else –. c6: if A.1/2a and A.5/1a then m else –. c7: if A.1/2a then o else –. NOTE – Condition c6 makes it mandatory, if logging is supported, to support the event log records associated with the notifications supported.				

Table A.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 A.1/2a then o else –.				

The supplier of the implementation shall provide information on claims of conformance to any of the Recommendations | International Standards summarized in Tables A.6 to A.9. For each Recommendation | 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 A.6 to A.9, 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.

Table A.6 – PICS support summary

Index	Identification of the document that includes the PICS proforma	Table numbers of PICS proforma	Description	Constraints and values	Status	Support	Table numbers of PICS	Additional information
1	CCITT Rec. X.730 ISO/IEC 10164-1	Annex E all tables	SM application context	OBJECT IDENTIFIER	m			

NOTE – Conformance to the MAPDUs defined in this Recommendation | International Standard can be claimed by completing the corresponding tables in the MICS and MOCS annexes of the referenced Recommendations | International Standards.

Table A.7 – 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	CCITT Rec. X.730 ISO/IEC 10164-1	Annex C all tables	objectCreation, objectDeletion and attributeValueChange records	–	c9			
2	CCITT Rec. X.731 ISO/IEC 10164-2	Annex C all tables	stateChange record	–	c9			
3	CCITT Rec. X.733 ISO/IEC 10164-4	Annex C all tables	alarmRecord	–	c9			
4	CCITT Rec. X.735 ISO/IEC 10164-6	Annex C all tables	log	–	m			
c9: if A.4/2a then m else –.								

Table A.8 – 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	CCITT Rec. X.735 ISO/IEC 10164-6	Item D.1/1	logRecord-log name binding	–	c10			
1	CCITT Rec. X.735 ISO/IEC 10164-6	Item D.1/2	log-system name binding	–	c11			
c10: if A.5/1a then o else –.								
c11: if A.4/1a then o else –.								

Table A.9 – 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	CCITT Rec. X.735 ISO/IEC 10164-6	Tables B.1 and B.2	management operations	–	c12			
2	CCITT Rec. X.730 ISO/IEC 10164-1	Table B.1	objectCreation, objectDeletion and attributeValueChange notifications	–	c13			
3	CCITT Rec. X.731 ISO/IEC 10164-2	Table B.1	stateChange notification	–	c14			
4	CCITT Rec. X.733 ISO/IEC 10164-4	Item B.1/4	processingErrorAlarm notification	–	c15			
c12: if A.3/1a then m else –.								
c13: if A.3/3a or A.3/4a or A.3/5a then m else –.								
c14: if A.3/2a then m else –.								
c15: if A.3/6a then m else –.								

Annex B

MICS proforma⁴⁾

(This annex forms an integral part of this Recommendation | International Standard)

B.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 Recommendation | International Standard, to provide conformance information in a standard form.

B.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 Additional information column shall be used to identify the object classes for which the management operations are supported. The supplier of the implementation shall state which items are supported in the tables below and if necessary, provide additional information.

B.3 Symbols, abbreviations and terms

The following abbreviation is used throughout the MICS proforma:

dmi-att joint-iso-ccitt ms(9) smi(3) part2(2) attribute(7)

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

B.4 Statement of conformance to the management information

B.4.1 Attributes

The specifier of a manager role implementation that claims to support management operations on the attributes specified in this Recommendation | International Standard shall import a copy of Table B.1 and complete it.

⁴⁾ Users of this Recommendation | International Standard may freely reproduce the MICS proforma in this annex so that it can be used for its intended purpose, and may further publish the completed MICS.

Table B.1 – Attribute support

Index	Attribute template label	Value of object identifier for the attribute	Constraints and values	Set by create		Get	
				Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	c1		o.3	
2	nameBinding	{dmi-att 63}	–	c1		o.3	
3	packages	{dmi-att 66}	–	c1		o.3	
4	allomorphs	{dmi-att 50}	–	c1		o.3	
5	logId	{dmi-att 2}	–	c1		o.3	
6	discriminatorConstruct	{dmi-att 56}	–	c1		o.3	
7	administrativeState	{dmi-att 31}	–	c1		o.3	
8	operationalState	{dmi-att 35}	–	–		o.3	
9	availabilityStatus	{dmi-att 33}	–	–		o.3	
10	logFullAction	{dmi-att 58}	–	c1		o.3	
11	maxLogSize	{dmi-att 62}	–	c1		o.3	
12	currentLogSize	{dmi-att 54}	–	–		o.3	
13	numberOfRecords	{dmi-att 64}	–	c1		o.3	
14	capacityAlarmThreshold	{dmi-att 67}	–	c1		o.3	
15	startTime	{dmi-att 68}	–	c1		o.3	
16	stopTime	{dmi-att 69}	–	c1		o.3	
17	intervalsOfDay	{dmi-att 57}	–	c1		o.3	
18	weekMask	{dmi-att 71}	–	c1		o.3	
19	schedulerName	{dmi-att 67}	–	c1		o.3	
c1: if B.2/1a then o else –.							

Table B.1 (concluded) – Attribute support

Index	Replace		Add		Remove		Set to default		Additional information
	Status	Support	Status	Support	Status	Support	Status	Support	
1	–		–		–		–		
2	–		–		–		–		
3	–		–		–		–		
4	–		–		–		–		
5	–		–		–		–		
6	o.3		–		–		o.3		
7	o.3		–		–		–		
8	–		–		–		–		
9	–		–		–		–		
10	o.3		–		–		–		
11	o.3		–		–		–		
12	–		–		–		–		
13	–		–		–		–		
14	o.3		o.3		o.3		–		
15	o.3		–		–		–		
16	o.3		–		–		o.3		
17	o.3		o.3		o.3		o.3		
18	o.3		o.3		o.3		o.3		
19	–		–		–		–		

B.4.2 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 Recommendation | International Standard shall import a copy of Table B.2 and complete it.

Table B.2 – Create and delete support

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	log managed object	o.3		
1.1	Create with reference object	–	c:o		
2	Delete support	log and logRecord managed objects	o.3		

Annex C

MOCS proforma⁵⁾

(This annex forms an integral part of this Recommendation | International Standard)

C.1 Introduction

The purpose of this MOCS proforma is to provide a mechanism for a supplier of an implementation which claims conformance, in the agent role, to a managed object class, to provide conformance information in a standard form.

C.2 Instructions for completing the MOCS proforma to produce a MOCS

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

C.3 Symbols, abbreviations and terms

The following abbreviations are used throughout the MOCS proforma:

dmi-att joint-iso-ccitt ms(9) smi(3) part2(2) attribute(7)
 dmi-moc joint-iso-ccitt ms(9) smi(3) part2(2) managedObjectClass(3)
 dmi-nb joint-iso-ccitt ms(9) smi(3) part2(2) nameBinding(6)
 dmi-not joint-iso-ccitt ms(9) smi(3) part2(2) notification(10)
 dmi-pkg joint-iso-ccitt ms(9) smi(3) part2(2) package(4)

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

The following conditional expression is commonly used throughout this MOCS proforma:

c1: if C.3/3a or C.3/5a or C.3/6a or C.3/7a or C.3/8a or C.3/9a or C.3/10a or C.3/11a, then m else –.

C.4 Log managed object class

C.4.1 Statement of conformance to the managed object class

The supplier of the implementation shall state whether or not all mandatory features of the log managed object class are supported, and if the actual class supported is the same as the managed object class to which conformance is claimed, in Table C.1.

Table C.1 – Managed object class support

Index	Managed object class template label	Value of object identifier for the managed object class	Does the implementation support all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	log	{dmi-moc 6}		

⁵⁾ Users of this Recommendation | International Standard may freely reproduce the MOCS proforma in this annex so that it can be used for its intended purpose, and may further publish the completed MOCS. Instructions for completing the MOCS proforma are specified in ITU-T Rec. X.724 | ISO/IEC 10165-6.

If the answer to the actual class question in the managed object class support table is “N”, the supplier of the implementation shall supply the actual class support details, in Table C.2.

Table C.2 – Actual class support

Index	Actual managed object class template label	Value of object identifier for the managed object class	Additional information
1			

C.4.2 Packages

See Table C.3.

Table C.3 – Package support

Index	Package template label	Value of object identifier for the package	Constraints and values	Status	Support	Additional information
1	topPackage	–	–	m		
2	packagesPackage	{dmi-pkg 16}	–	c1		
3	allomorphicPackage	{dmi-pkg 17}	–	c2		
4	logPackage	–	–	m		
5	finiteLogSizePackage	{dmi-pkg 12}	–	o		
6	logAlarmPackage	{dmi-pkg 13}	–	o		
7	availabilityStatusPackage	{dmi-pkg 22}	–	c3		
8	durationPackage	{dmi-pkg 26}	–	o		
9	dailySchedulingPackage	{dmi-pkg 25}	–	o		
10	weeklySchedulingPackage	{dmi-pkg 29}	–	o		
11	externalSchedulerPackage	{dmi-pkg 27}	–	o		
c2: if C.1/1b then – else m.						
c3: if C.3/9a or C.3/10a or C.3/11a then m else –.						

C.4.3 Attributes

See Table C.4.

Table C.4 – Attribute support

Index	Attribute template label	Value of object identifier for the attribute	Constraints and values	Set by create		Get	
				Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	m		m	
2	nameBinding	{dmi-att 63}	–	o		m	
3	packages	{dmi-att 66}	–	c4		c1	
4	allomorphs	{dmi-att 50}	–	c5		c6	
5	logId	{dmi-att 2}	–	o		m	
6	discriminatorConstruct	{dmi-att 56}	see C.4.5	m		m	
7	administrativeState	{dmi-att 31}	–	m		m	
8	operationalState	{dmi-att 35}	–	x		m	
9	availabilityStatus	{dmi-att 33}	Permitted: LogAvailability Required: UnscheduledLogAvailability if C.3/7a off-duty required	x		m	
10	logFullAction	{dmi-att 58}	“wrap” and “halt”	m		m	
11	maxLogSize	{dmi-att 62}	–	c7		c7	
12	currentLogSize	{dmi-att 54}	–	c14		c7	
13	numberOfRecords	{dmi-att 64}	–	c14		c7	
14	capacityAlarmThreshold	{dmi-att 67}	SET OF INTEGER (0..100) treat as counter threshold	c8		c8	
15	startTime	{dmi-att 68}	–	c9		c9	
16	stopTime	{dmi-att 69}	DMI default	c9		c9	
17	intervalsOfDay	{dmi-att 57}	DMI default	c10		c10	
18	weekMask	{dmi-att 71}	DMI default	c11		c11	
19	schedulerName	{dmi-att 67}	–	c12		c13	
c4: if C.3/2a then o else –. c5: if C.3/3a then o else –. c6: if C.3/3a then m else –. c7: if C.3/5a then m else –. c8: if C.3/6a then m else –. c9: if C.3/8a then m else –. c10: if C.3/9a then m else –. c11: if C.3/10a then m else –. c12: if C.3/11a then o else –. c13: if C.3/11a then m else –. c14: if C.1/1b then x else –.							

(continued)

Table C.4 (concluded) – Attribute support

Index	Replace		Add		Remove		Set to default		Additional information
	Status	Support	Status	Support	Status	Support	Status	Support	
1	x		–		–		x		
2	c14		–		–		c14		
3	x		x		x		x		
4	c14		c14		c14		c14		
5	c14		–		–		c14		
6	m		–		–		m		
7	m		–		–		c14		
8	x		–		–		x		
9	x		x		x		x		
10	m		–		–		c14		
11	c7		–		–		c14		
12	c14		–		–		c14		
13	c14		–		–		c14		
14	c8		c8		c8		c14		
15	c9		–		–		c14		
16	c9		–		–		c9		
17	c10		c10		c10		c10		
18	c11		c11		c11		c11		
19	x		–		–		x		

C.4.4 Notifications

See Table C.5.

Table C.5 – Log object notification support

Index	Notification type template label	Value of object identifier for the notification type	Constraints and values	Status	Support		Additional information
					Confirmed	Non-confirmed	
1	stateChange	{ dmi-not 14 }	–	m			
2	objectCreation	{ dmi-not 6 }	–	m			
3	objectDeletion	{ dmi-not 7 }	–	m			
4	attributeValueChange	{ dmi-not 1 }	–	m			
5	processingErrorAlarm	{ dmi-not 10 }	–	m			

(continued)

Table C.5 (continued) – Log object notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
1	1.1	sourceIndicator	{dmi-att 26}	ENUMERATED 0 to 2	o		
	1.2	attributeIdentifierList	{dmi-att 8}	–	o		
	1.3	stateChangeDefinition	{dmi-att 28}	–	m		
	1.3.1	attributeID	–	–	m		
	1.3.2	oldAttributeValue	–	–	o		
	1.3.3	newAttributeValue	–	–	m		
	1.4	notificationIdentifier	{dmi-att 16}	INTEGER	c15		
	1.5	correlatedNotifications	{dmi-att 12}	–	o		
	1.5.1	correlatedNotifications	–	–	c:m		
	1.5.2	sourceObjectInst	–	–	c:o		
	1.5.2.1	distinguishedName	–	–	c:o.4		
	1.5.2.2	nonSpecificForm	–	–	c:o.4		
	1.5.2.3	localDistinguishedName	–	–	c:o.4		
	1.6	additionalText	{dmi-att 7}	–	o		
	1.7	additionalInformation	{dmi-att 6}	–	o		
2	2.1	sourceIndicator	{dmi-att 26}	ENUMERATED 0 to 2	o		
	2.2	attributeList	{dmi-att 9}	–	o		
	2.3	notificationIdentifier	{dmi-att 16}	INTEGER	c16		
	2.4	correlatedNotifications	{dmi-att 12}	–	o		
	2.4.1	correlatedNotifications	–	–	c:m		
	2.4.2	sourceObjectInst	–	–	c:o		
	2.4.2.1	distinguishedName	–	–	c:o.5		
	2.4.2.2	nonSpecificForm	–	–	c:o.5		
	2.4.2.3	localDistinguishedName	–	–	c:o.5		
	2.5	additionalText	{dmi-att 7}	–	o		
	2.6	additionalInformation	{dmi-att 6}	–	o		
3	3.1	sourceIndicator	{dmi-att 26}	ENUMERATED 0 to 2	o		
	3.2	attributeList	{dmi-att 9}	–	o		
	3.3	notificationIdentifier	{dmi-att 16}	INTEGER	c17		
	3.4	correlatedNotifications	{dmi-att 12}	–	o		
	3.4.1	correlatedNotifications	–	–	c:m		
	3.4.2	sourceObjectInst	–	–	c:o		
	3.4.2.1	distinguishedName	–	–	c:o.6		
	3.4.2.2	nonSpecificForm	–	–	c:o.6		
	3.4.2.3	localDistinguishedName	–	–	c:o.6		
	3.5	additionalText	{dmi-att 7}	–	o		
	3.6	additionalInformation	{dmi-att 6}	–	o		
c15: if C.5/1.5a then m else o. c16: if C.5/2.4a then m else o. c17: if C.5/3.4a then m else o.							

(continued)

Table C.5 (continued) – Log object notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
4	4.1	sourceIndicator	{dmi-att 26}	ENUMERATED 0 to 2	o		
	4.2	attributeIdentifierList	{dmi-att 8}	–	o		
	4.3	attributeValueChange Definition	{dmi-att 10}	–	m		
	4.3.1	attributeID	–	–	m		
	4.3.2	oldAttributeValue	–	–	o		
	4.3.3	newAttributeValue	–	–	m		
	4.4	notificationIdentifier	{dmi-att 16}	INTEGER	c18		
	4.5	correlatedNotifications	{dmi-att 12}	–	o		
	4.5.1	correlatedNotifications	–	–	c:m		
	4.5.2	sourceObjectInst	–	–	c:o		
	4.5.2.1	distinguishedName	–	–	c:o.7		
	4.5.2.2	nonSpecificForm	–	–	c:o.7		
	4.5.2.3	localDistinguishedName	–	–	c:o.7		
	4.6	additionalText	{dmi-att 7}	–	o		
	4.7	additionalInformation	{dmi-att 6}	–	o		
5	5.1	probableCause	{dmi-att 18}	–	m		
	5.1.1	globalValue	–	OBJECT IDENTIFIER	o.8		
	5.1.2	localValue	–	INTEGER	o.8		
	5.2	specificProblems	{dmi-att 27}	–	o		
	5.2.1	global	–	OBJECT IDENTIFIER	c:o.9		
	5.2.2	local	–	INTEGER	c:o.9		
	5.3	perceivedSeverity	{dmi-att 17}	ENUMERATED 0 to 5	m		
	5.4	backedUpStatus	{dmi-att 11}	–	o		
	5.5	backUpObject	{dmi-att 40}	for backUp relationships	o		
	5.5.1	distinguishedName	–	–	c:o.10		
	5.5.2	nonSpecificForm	–	–	c:o.10		
	5.5.3	localDistinguishedName	–	–	c:o.10		
	5.6	trendIndication	{dmi-att 30}	ENUMERATED 0 to 2	o		
	5.7	thresholdInfo	{dmi-att 29}	for threshold attributes	o		
	5.7.1	triggeredThreshold	–	–	c:m		
	5.7.2	observedValue	–	–	c:m		
	5.7.2.1	integer	–	–	c:o.11		
	5.7.2.2	real	–	–	c:o.11		
	5.7.3	thresholdLevel	–	–	c:o		
	5.7.3.1	up	–	–	c:o.12		
	5.7.3.1.1	high	–	–	c:m		
	5.7.3.1.1.1	integer	–	–	c:o.13		
	5.7.3.1.1.2	real	–	–	c:o.13		
	5.7.3.1.2	low	–	for gauge thresholds	c:o		
	5.7.3.1.2.1	integer	–	–	c:o.14		
	5.7.3.1.2.2	real	–	–	c:o.14		

c18: if C.5/4.5a then m else o.

(continued)

Table C.5 (concluded) – Log object notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
5	5.7.3.2	down	–	–	c:o.12		
	5.7.3.2.1	high	–	–	c:m		
	5.7.3.2.1.1	integer	–	–	c:o.15		
	5.7.3.2.1.2	real	–	–	c:o.15		
	5.7.3.2.2	low	–	–	c:m		
	5.7.3.2.2.1	integer	–	–	c:o.16		
	5.7.3.2.2.2	real	–	–	c:o.16		
	5.7.4	armTime	–	–	c:o		
	5.8	notificationIdentifier	{dmi-att 16}	INTEGER	c19		
	5.9	correlatedNotifications	{dmi-att 12}	–	o		
	5.9.1	correlatedNotifications	–	–	c:m		
	5.9.2	sourceObjectInst	–	–	c:o		
	5.9.2.1	distinguishedName	–	–	c:o.17		
	5.9.2.2	nonSpecificForm	–	–	c:o.17		
	5.9.2.3	localDistinguishedName	–	–	c:o.17		
	5.10	stateChangeDefinition	{dmi-att 28}	–	o		
	5.10.1	attributeId	–	–	c:m		
	5.10.1.1	global	–	OBJECT IDENTIFIER	c:o.18		
	5.10.1.2	local	–	INTEGER	c:o.18		
	5.10.2	oldAttributeValue	–	–	c:o		
	5.10.3	newAttributeValue	–	–	c:m		
	5.11	monitoredAttributes	{dmi-att 15}	–	o		
	5.12	proposedRepairActions	{dmi-att 19}	–	o		
	5.12.1	global	–	OBJECT IDENTIFIER	c:o.19		
	5.12.2	local	–	INTEGER	c:o.19		
	5.13	additionalText	{dmi-att 7}	–	o		
	5.14	additionalInformation	{dmi-att 6}	–	o		
c19: if C.5/5.9a then m else o.							

C.4.5 Discriminator construct complexity requirements

The supplier of the implementation shall list the attributes, derived from notifications, that it is able to discriminate, in Table C.6.

Table C.6 – Discrimination input attribute requirements

Notification attribute name	Value of object identifier for the attribute type associated with the field	Additional information
NOTE – These attributes may include the managedObjectClass, eventType, managedObjectInstance, perceivedSeverity, and securityAlarmSeverity attributes specified in CCITT Rec. X.721 ISO/IEC 10165-2.		

Table C.7 – DiscriminatorConstruct CMISFilter parameter support

Index	Parameter name	Agent			Manager			Additional information
		Status	Support	Maximum number of FilterItem	Status	Support	Maximum number of FilterItem	
1	item	m		–	m		–	
2	and	m			m			
3	or	m			m			
4	not	m		–	m		–	

Table C.8 – Discriminator Construct CMISFilter complexity limitations

Index	Complexity limitation	Agent	Manager	Additional information
1	Maximum nesting depth of CMISFilter expressions in an “AND”			
2	Maximum nesting depth of CMISFilter expressions that may occur in an “OR”			
3	Maximum number of FilterItem parameters in a CMISFilter parameter			

Table C.9 – FilterItem Parameter Support

Index	Parameter name	Agent			Manager			Additional information
		Status	Support	Constraints	Status	Support	Constraints	
1	equality	o.20		–	m		–	
2	substrings	o.20		–	m		–	
2.1	initialString	m		–	m		–	
2.1.1	attributeId	m		–	m		–	
2.1.2	string	m		–	m		–	
2.2	anyString	m		–	m		–	
2.2.1	attributeId	m		–	m		–	
2.2.2	string	m		–	m		–	
2.3	finalString	m		–	m		–	
2.3.1	attributeId	m		–	m		–	
2.3.2	string	m		–	m		–	
3	greaterOrEqual	o.20		–	m		–	
4	lessOrEqual	o.20		–	m		–	
5	present	o.20		–	m		–	
6	subsetOf	o.20		–	m		–	
7	supersetOf	o.20		–	m		–	
8	nonNullSetIntersection	o.20		–	m		–	

Annex D

MRCS proforma for name binding⁶⁾

(This annex forms an integral part of this Recommendation | International Standard)

D.1 Introduction

The purpose of this MRCS proforma for name bindings is to provide a mechanism for a supplier which claims conformance, in the agent role, to a name binding to provide conformance information in a standard form.

D.2 Instructions for completing the MRCS proforma for name binding to produce an MRCS

The MRCS proforma contained in this annex is comprised of information in tabular form, in accordance with ITU-T Rec. X.724 | ISO/IEC 10165-6. The supplier of the implementation shall state which items are supported in Table D.1 and if necessary provide additional information.

Notations used in the Status and Support columns are specified in A.1.3.

D.3 Symbols, abbreviations and terms

The following abbreviation is used in this MRCS proforma:

dmi-nb joint-iso-ccitt ms(9) smi(3) part2(2) nameBinding(6)

D.4 Statement of conformance to the name binding

See Table D.1.

Table D.1 – Name binding support

Index	Name binding template label	Value of object identifier for the name binding	Constraints and values	Status	Support	Additional information
1	logRecord-log	{dmi-nb 3}	–	o		
2	log-system	{dmi-nb 2}	–	o		

Table D.1 (concluded) – Name binding support

Index	Sub-index	Operation	Constraints and values	Status	Support	Additional information
1	1.1	Create support	–	x		
	1.1.1	Create with reference object	–	–		
	1.1.2	Create with automatic instance naming	–	–		
	1.2	Delete support	–	m		
	1.2.1	Delete only if no contained objects	–	m		
	1.2.2	Delete contained objects	–	–		
2	2.1	Create support	–	m		
	2.1.1	Create with reference object	–	m		
	2.1.2	Create with automatic instance naming	–	m		
	2.2	Delete support	–	m		
	2.2.1	Delete only if no contained objects	–	m		
	2.2.2	Delete contained objects	–	–		

⁶⁾ Users of this Recommendation | International Standard may freely reproduce the MRCS proforma in this annex so that it can be used for its intended purpose, and may further publish the completed MRCS. Instructions for completing the MRCS proforma are specified in ITU-T Rec. X.724 | ISO/IEC 10165-6.