



UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

**UIT-T**

SECTEUR DE LA NORMALISATION  
DES TÉLÉCOMMUNICATIONS  
DE L'UIT

**X.739**

**Amendement 1**  
(08/97)

SÉRIE X: RÉSEAUX POUR DONNÉES ET  
COMMUNICATION ENTRE SYSTÈMES OUVERTS  
Gestion OSI – Fonctions de gestion et fonctions ODMA

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Technologies de l'information – Interconnexion des  
systèmes ouverts – Gestion-systèmes: objets et  
attributs métriques

**Amendement 1: Formulaires de déclaration de  
conformité d'implémentation**

Recommandation UIT-T X.739 – Amendement 1

(Antérieurement Recommandation du CCITT)

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*Pour plus de détails, voir la Liste des Recommandations de l'UIT-T.*

**NORME INTERNATIONALE 10164-11**

**RECOMMANDATION UIT-T X.739**

**TECHNOLOGIES DE L'INFORMATION – INTERCONNEXION DES SYSTÈMES  
OUVERTS – GESTION-SYSTÈMES: OBJETS ET ATTRIBUTS MÉTRIQUES**

**AMENDEMENT 1**

**Formulaires de déclaration de conformité d'implémentation**

**Résumé**

La Rec. UIT-T X.739 | ISO/CEI 10164-11 offre un grand choix d'options possibles aux réalisateurs au moment d'élaborer un produit. Autrement dit, le système d'exploitation (OS, *operations system*) d'un constructeur qui a besoin d'interfonctionner avec l'OS d'un autre constructeur doit être élaboré sur la base d'un accord explicite commun que les deux concepteurs appliqueront aux options effectives à prévoir dans leur logiciel pour les messages de type X.739. Le présent amendement permet de spécifier les options des messages de façon à expliciter les textes ultérieurs qui concerneront les options effectivement choisies pour le produit. Il s'ensuit que les délais nécessaires pour procéder aux tests d'interfonctionnement entre un système de gestion provenant d'un vendeur et un système de gestion provenant d'un autre vendeur peuvent être réduits, parce que les concepteurs de produits disposeront d'une spécification plus explicite des messages.

**Source**

La Recommandation X.739, Amendement 1, de l'UIT-T a été approuvée le 9 août 1997. Un texte identique est publié comme Norme internationale ISO/CEI 10164-11.

## AVANT-PROPOS

L'UIT (Union internationale des télécommunications) est une institution spécialisée des Nations Unies dans le domaine des télécommunications. L'UIT-T (Secteur de la normalisation des télécommunications) est un organe permanent de l'UIT. Il est chargé de l'étude des questions techniques, d'exploitation et de tarification, et émet à ce sujet des Recommandations en vue de la normalisation des télécommunications à l'échelle mondiale.

La Conférence mondiale de normalisation des télécommunications (CMNT), qui se réunit tous les quatre ans, détermine les thèmes d'études à traiter par les Commissions d'études de l'UIT-T, lesquelles élaborent en retour des Recommandations sur ces thèmes.

L'approbation des Recommandations par les Membres de l'UIT-T s'effectue selon la procédure définie dans la Résolution n° 1 de la CMNT.

Dans certains secteurs des technologies de l'information qui correspondent à la sphère de compétence de l'UIT-T, les normes nécessaires se préparent en collaboration avec l'ISO et la CEI.

## NOTE

Dans la présente Recommandation, l'expression "Administration" est utilisée pour désigner de façon abrégée aussi bien une administration de télécommunications qu'une exploitation reconnue.

## DROITS DE PROPRIÉTÉ INTELLECTUELLE

L'UIT attire l'attention sur la possibilité que l'application ou la mise en œuvre de la présente Recommandation puisse donner lieu à l'utilisation d'un droit de propriété intellectuelle. L'UIT ne prend pas position en ce qui concerne l'existence, la validité ou l'applicabilité des droits de propriété intellectuelle, qu'ils soient revendiqués par un Membre de l'UIT ou par une tierce partie étrangère à la procédure d'élaboration des Recommandations.

A la date d'approbation de la présente Recommandation, l'UIT n'avait pas été avisée de l'existence d'une propriété intellectuelle protégée par des brevets à acquérir pour mettre en œuvre la présente Recommandation. Toutefois, comme il ne s'agit peut-être pas de renseignements les plus récents, il est vivement recommandé aux responsables de la mise en œuvre de consulter la base de données des brevets du TSB.

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## NORME INTERNATIONALE

## RECOMMANDATION UIT-T

**TECHNOLOGIES DE L'INFORMATION – INTERCONNEXION DES SYSTÈMES  
OUVERTS – GESTION-SYSTÈMES: OBJETS ET ATTRIBUTS MÉTRIQUES**

**AMENDEMENT 1**

**Formulaires de déclaration de conformité d'implémentation**

**1) Paragraphe 2.1**

Ajouter les références suivantes par ordre numérique:

- Recommandation UIT-T X.724 (1996) | ISO/CEI 10165-6:1997, *Technologies de l'information – Interconnexion des systèmes ouverts – Structure de l'information de gestion: spécifications et directives pour l'établissement des formulaires de déclaration de conformité d'instances d'implémentations associés à la gestion OSI.*
- Recommandation X.735 du CCITT (1992) | ISO/CEI 10164-6:1993, *Technologies de l'information – Interconnexion des systèmes ouverts – Gestion-systèmes: fonction de commande des registres de consignation.*
- Recommandation UIT-T X.738 (1993) | ISO/CEI 10164-13:1995, *Technologies de l'information – Interconnexion des systèmes ouverts – Gestion des systèmes: fonction de récapitulation.*

**2) Paragraphe 2.2**

Ajouter les références suivantes par ordre numérique:

- Recommandation X.290 du CCITT (1992), *Cadre général et méthodologie des tests de conformité OSI pour les Recommandations sur les protocoles pour les applications du CCITT – Concepts généraux.*  
  
ISO/CEI 9646-1:1994, *Technologies de l'information – Interconnexion de systèmes ouverts – Cadre général et méthodologie des tests de conformité OSI – Partie 1: Concepts généraux.*
- Recommandation X.291 du CCITT (1992), *Cadre général et méthodologie des tests de conformité OSI pour les Recommandations sur les protocoles pour les applications du CCITT – Spécification des suites de tests abstraites.*  
  
ISO/CEI 9646-2:1994, *Technologies de l'information – Interconnexion de systèmes ouverts – Cadre général et méthodologie des tests de conformité OSI – Partie 2: Spécification des suites de tests abstraites.*
- Recommandation UIT-T X.296 (1995), *Cadre général et méthodologie des tests de conformité OSI pour les Recommandations sur les protocoles pour les applications de l'UIT-T – Déclarations de conformité d'instance.*  
  
ISO/CEI 9646-7:1995, *Technologies de l'information – Interconnexion de systèmes ouverts (OSI) – Essais de conformité – Méthodologie générale et procédures – Partie 7: Déclarations de conformité des mises en œuvre.*

### 3) **Paragraphe 3.7**

Ajouter le texte suivant avant le paragraphe 3.7 existant et renuméroter le reste du paragraphe:

#### 3.7 **Définitions de test de conformité OSI**

La présente Recommandation | Norme internationale utilise les termes suivants définis dans la Rec. UIT-T X.290 | ISO/CEI 9646-1:

- a) formulaire PICS;
- b) déclaration de conformité d'une instance de protocole;
- c) déclaration de conformité d'un système.

### 4) **Article 4**

Ajouter les abréviations suivantes par ordre alphabétique:

ICS	Déclaration de conformité d'une implémentation ( <i>implementation conformance statement</i> )
MCS	Récapitulatif de conformité de gestion ( <i>management conformance summary</i> )
MICS	Récapitulatif de conformité d'information de gestion ( <i>management information conformance summary</i> )
MIDS	Déclaration de définition d'information de gestion ( <i>management information definition statement</i> )
MOCS	Déclaration de conformité d'objet géré ( <i>managed object conformance statement</i> )
MRCS	Déclaration de conformité de relation gérée ( <i>managed relationship conformance statement</i> )
PICS	Déclaration de conformité d'une implémentation de protocole ( <i>protocol implementation conformance statement</i> )

### 5) **Article 13**

Remplacer cet article par le texte suivant:

## 13 **Conformité**

Les réalisations réputées conformes à la présente Recommandation | Norme internationale répondront aux prescriptions de conformité définies dans les paragraphes qui suivent.

### 13.1 **Conformité statique**

La réalisation sera conforme aux prescriptions de la présente Recommandation | Norme internationale dans le rôle de gestionnaire, dans le rôle d'agent ou dans les deux. Une demande de conformité de l'un de ces rôles au moins sera faite dans le Tableau E.1.

En cas de demande de conformité du rôle de gestionnaire, la réalisation prendra en compte au moins une opération de gestion ou notification des objets gérés spécifiés dans la présente Recommandation | Norme internationale. Les prescriptions de conformité du rôle de gestionnaire pour ces opérations de notification et de gestion sont énoncées dans le Tableau E.2 et dans d'autres tableaux mentionnés dans l'Annexe E.

En cas de demande de conformité du rôle d'agent, la réalisation prendra en compte une ou plusieurs instances de classes d'objets gérés identifiées dans le Tableau E.3 et dans d'autres tableaux mentionnés dans l'Annexe E.

La réalisation prendra en compte la syntaxe de transfert obtenue à partir des règles de codage spécifiées dans la Rec. X.209 du CCITT | ISO/CEI 8825, appelées {joint-iso-itu-t asn1(1) basicEncoding(1)}, pour les types de données abstraites auxquels se rapportent les définitions pour lesquelles la conformité est demandée.



### 13.2 Conformité dynamique

Les réalisations réputées conformes à la présente Recommandation | Norme internationale prendront en compte les éléments de procédure et les définitions de sémantique correspondant aux définitions pour lesquelles cette conformité est demandée.

### 13.3 Prescriptions de la déclaration de conformité d'implémentation de gestion

Tout formulaire MCS, MICS, MOCS et MRCS qui est conforme à la présente Recommandation | Norme internationale doit être techniquement identique aux formulaires spécifiés dans les Annexes E, F, G et H, en respectant le numérotage des tableaux et les numéros d'ordre de la colonne "Index", et ne s'en écartant que par la pagination et les en-têtes de page.

Le fournisseur d'une réalisation qui est réputée conforme à la présente Recommandation | Norme internationale remplira un exemplaire du récapitulatif de conformité de gestion (MCS, *management conformance summary*) reproduit dans l'Annexe E dans le cadre des prescriptions de conformité avec tout autre formulaire ICS qualifié d'applicable par cette déclaration MCS. Un formulaire ICS conforme à la présente Recommandation | Norme internationale:

- décrira une réalisation qui est conforme à la présente Recommandation | Norme internationale;
- aura été rempli conformément aux instructions données à cet effet dans la Rec. UIT-T X.724 | ISO/CEI 10165-6;
- contiendra les informations nécessaires pour identifier de manière univoque tant le fournisseur que la réalisation.

## 6) Nouvelles Annexes E à N

Ajouter les annexes suivantes:

### Annexe E<sup>1)</sup>

#### Formulaire MCS

(Cette annexe fait partie intégrante de la présente Recommandation | Norme internationale)

#### E.1 Introduction

##### E.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.

##### E.1.2 Instructions for completing the MCS proforma to produce an 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.

##### E.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.

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

NOTE 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 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).

---

1) **Droits de reproduction du formulaire MCS**

Les utilisateurs de la présente Recommandation | Norme internationale sont autorisés à reproduire le formulaire MCS de la présente annexe pour utiliser celui-ci conformément à son objet. Ils sont également autorisés à publier le formulaire une fois celui-ci complété. Les instructions pour le formulaire MCS sont spécifiées dans la Rec. UIT-T X.724 | ISO/CEI 10165-6.

**E.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.
-------	------------------------	-------------------------	------

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

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

**Table X.1 – Title**

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

**Table X.1 – Title (continued)**

Index	Subindex	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:

					Support								
Index	A	B	C	D	E	F	G	Subindex	H	I	J	K	L
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 with the blank cell in the column G for row with Index 1, and X.1/1.2b corresponds to the blank cell in column L for row with Subindex 1.2.

**E.2 Identification of the implementation**

**E.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
-------------------

**E.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.

--

**E.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.

--

**E.3 Identification of the Recommendation | 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 Recommendation | International Standard which specifies the management information to which conformance is claimed, in the box below.

Recommendation   International Standard to which conformance is claimed
---

**E.3.1 Technical corrigenda implemented**

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

--

### E.3.2 Amendments implemented

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

--

### E.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 E.1.

**Table E.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 management information in the manager role, in Table E.2.

**Table E.2 – Manager role minimum conformance requirement**

Index	Item	Status	Support	Additional information
1	Operations on managed objects	c1		
2	Object creation notification from at least one metric managed object	c1		
3	Object deletion notification from at least one metric managed object	c1		
4	Attribute value change notification from at least one metric managed object	c1		
5	State change notification from at least one metric managed object	c1		
6	Quality of service alarm notification from at least one metric managed object	c1		

c1: if E.1/1a then o.2 else –.

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

**Table E.3 – Agent role minimum conformance requirement**

Index	Item	Status	Support	Additional information
1	Algorithm indicating mean monitor object class	c2		
2	Mean and minmax monitor object class	c2		
3	Mean and percentile monitor object class	c2		
4	Mean and variance monitor object class	c2		
5	Mean monitor object class	c2		
6	Monitor metric object class	c2		
7	Moving average mean monitor object class	c2		

c2: if E.1/2a then o.3 else –.

**Table E.4 – Logging of event records**

Index	Item	Status	Support	Additional information
1	Does the implementation support logging of event records in agent role?	c3		
c3: if E.1/2a then o.3 else –.				

NOTE – Conformance to this Recommendation | 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 Recommendation | International Standards summarized in the Tables E.5 to E.8. 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 E.6 to E.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.

**Table E.5 – 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		o			

**Table E.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	CCITT Rec. X.733   ISO/IEC 10164-4	Annex C all tables	alarmRecord	–	c4			
2	CCITT Rec. X.730   ISO/IEC 10164-1	Annex C all tables	objectCreation, objectDeletion and attribute valueChange records	–	c4			
3	CCITT Rec. X.731   ISO/IEC 10164-2	Annex C all tables	stateChange Record	–	c4			
4	CCITT Rec. X.739   ISO/IEC 10164-11	Annex G	meanAndVarianceMonitor	–	c5			
5	CCITT Rec. X.739   ISO/IEC 10164-11	Annex H	meanAndPercentileMonitor	–	c7			
6	CCITT Rec. X.739   ISO/IEC 10164-11	Annex I	meanAndMinMaxMonitor	–	c6			
7	CCITT Rec. X.739   ISO/IEC 10164-11	Annex J	movingAverageMeanMonitor	–	c11			
8	CCITT Rec. X.739   ISO/IEC 10164-11	Annex K	algorithmIndicatingMeanMonitor	–	c8			

Table E.6 (concluded)

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
9	CCITT Rec. X.739   ISO/IEC 10164-11	Annex L	meanMonitor	–	c9			
10	CCITT Rec. X.739   ISO/IEC 10164-11	Annex M	monitorMetric	–	c10			
c4: if (E.3/1a or E.3/2a or E.3/3a or E.3/4a or E.3/5a or E.3/6a or E.3/7a) and E.4/1a then m else –. c5: if E.3/4a then m else –. c6: if E.3/2a then m else –. c7: if E.3/3a then m else –. c8: if E.3/1a then m else –. c9: if E.3/5a then m else –. c10: if E.3/6a then m else –. c11: if E.3/7a then m else –.								

Table E.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	ITU-T Rec. X.739   ISO/IEC 10164-11	Annex N all tables	scanner-system	–	c12			
1	ITU-T Rec. X.738   ISO/IEC 10164-13	Annex O all tables	conflictingPackagesScanner-system	–	c12			
1	CCITT Rec. X.735   ISO/IEC 10164-6	Annex D Item D.1/1	logRecord-log	–	c12			
c12: if E.3/1a or E.3/2a or E.3/3a or E.3/4a or E.3/5a or E.3/6a or E.3/7a then o else –.								

Table E.8 – MICS support summary

Index	Identification of the document that includes the MRCS proforma	Table numbers of MICS proforma	Description	Constraints and values	Status	Support	Table numbers of MICS	Additional information
1	CCITT Rec. X.739   ISO/IEC 10164-11	Tables F.1 and F.2	management operations	–	c13			
2	CCITT Rec. X.730   ISO/IEC 10164-1	Table B.1	objectCreation, objectDeletion and attributeValueChange notifications	–	c14			
3	CCITT Rec. X.731   ISO/IEC 10164-2	Table B.1	stateChange notification	–	c15			
4	CCITT Rec. X.733   ISO/IEC 10164-4	Annex B Item B.1/1	qualityOfServiceAlarm notification	–	c16			
c13: if E.2/1a then m else –. c14: if E.2/2a or E.2/3a or E.3/4a then m else –. c15: if E.2/5a then m else –. c16: if E.2/6a then m else –.								

**Annexe F<sup>2)</sup>**

**Formulaire MICS**

(Cette annexe fait partie intégrante de la présente Recommandation | Norme internationale)

**F.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.

**F.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.

**F.3 Symbols, abbreviations and terms**

The following abbreviations are used throughout the MICS proforma:

- dmi-att joint-iso-itu-t ms(9) smi(3) part2(2) attribute(7)
- moa-att joint-iso-itu-t ms(9) function(2) part11(11) attribute(7)

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

**F.4 Statement of conformance to the management information**

**F.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 the following tables and complete them.

**Table F.1 – Attribute support**

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace	
				Status	Support	Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	c1		o.4		–	
2	nameBinding	{dmi-att 63}	–	c1		o.4		–	
3	packages	{dmi-att 66}	–	c1		o.4		–	
4	allomorphs	{dmi-att 50}	–	c1		o.4		–	
5	scannerId	{moa-att 25}	–	c1		o.4		–	
6	granularityPeriod	{moa-att 23}	–	c1		o.4		o.4	
7	administrativeState	{dmi-att 31}	–	c1		o.4		o.4	
8	operationalState	{dmi-att 35}	–	–		o.4		–	
9	availabilityStatus	{dmi-att 33}	–	–		o.4		–	

<sup>2)</sup> **Droits de reproduction du formulaire MICS**

Les utilisateurs de la présente Recommandation | Norme internationale sont autorisés à reproduire le formulaire MICS de la présente annexe pour utiliser celui-ci conformément à son objet. Ils sont également autorisés à publier le formulaire une fois celui-ci complété. Les instructions pour le formulaire MICS sont spécifiées dans la Rec. UIT-T X.724 | ISO/CEI 10165-6.



Table F.1 (continued)

				Set by create		Get		Replace	
10	periodSynchronizationTime	{ moa-att 24 }	–	c1		o.4		o.4	
11	startTime	{ dmi-att 68 }	–	c1		o.4		o.4	
12	stopTime	{ dmi-att 69 }	DMI default	c1		o.4		o.4	
13	intervalsOfDay	{ dmi-att 57 }	DMI default	c1		o.4		o.4	
14	weekMask	{ dmi-att 71 }	DMI default	c1		o.4		o.4	
15	schedulerName	{ dmi-att 67 }	–	c1		o.4		–	
16	observedObjectInstance	{ moa-att 16 }	–	c1		o.4		–	
17	observedAttributeId	{ moa-att 15 }	–	c1		o.4		–	
18	derivedGauge	{ moa-att 2 }	–	–		o.4		–	
19	previousScanCounterValue	{ moa-att 1 }	–	c1		o.4		o.4	
20	proceduralStatus	{ dmi-att 36 }	–	–		o.4		–	
21	modulusValue	{ moa-att 1 }	–	c1		o.4		o.4	
22	previousScanGaugeValue	{ moa-att 20 }	–	c1		o.4		o.4	
23	severityIndicatingGaugeThreshold	{ moa-att 18 }	–	c1		o.4		o.4	
24	specificProblemIndicator	{ moa-att 19 }	–	c1		o.4		o.4	
25	derivedGaugeTimestamp	{ moa-att 3 }	–	–		o.4		–	
26	estimateOfMean	{ moa-att 7 }	–	c2		o.4		o.4	
27	movingTimePeriod	{ moa-att 13 }	–	c2		o.4		o.4	
28	estimateOfMeanSeverityIndicatingGaugeThreshold	{ moa-att 6 }	–	c2		o.4		o.4	
29	algorithmIdentifier	{ moa-att 26 }	–	c3		o.4		o.4	
30	estimateOfLargest	{ moa-att 4 }	–	c4		o.4		o.4	
31	estimateOfSmallest	{ moa-att 9 }	–	c4		o.4		o.4	
32	secondMovingTimePeriod	{ moa-att 17 }	–	c5		o.4		o.4	
33	estimateOfVariance	{ moa-att 10 }	–	c6		o.4		o.4	
34	estimateOfLargestInReplication	{ moa-att 21 }	–	c7		o.4		o.4	
35	estimateOfSmallestInReplication	{ moa-att 22 }	–	c7		o.4		o.4	
36	estimateOfMedian	{ moa-att 7 }	–	c7		o.4		o.4	
37	estimateOf100-PCTPercentile	{ moa-att 11 }	–	c7		o.4		o.4	
38	estimateOfPCTPercentile	{ moa-att 8 }	–	c7		o.4		o.4	
39	numberOfReplications	{ moa-att 14 }	–	c7		o.4		o.4	
40	configurablePCT	{ moa-att 0 }	–	c7		o.4		o.4	

c1: if F.2/1a or F.3/1a or F.4/1a or F.5/1a or F.6/1a or F.7/1a or F.8/1a then o.4 else –.

c2: if F.2/1a or F.3/1a or F.4/1a or F.5/1a or F.6/1a or F.7/1a then o.4 else –.

c3: if F.6/1a then o.4 else –.

c4: if F.4/1a then o.4 else –.

c5: if F.2/1a or F.3/1a then o.4 else –.

c6: if F.2/1a then o.4 else –.

c7: if F.3/1a then o.4 else –.

Table F.1 (concluded)

Index	Add		Remove		Set to default		Additional information
	Status	Support	Status	Support	Status	Support	
1	-		-		-		
2	-		-		-		
3	-		-		-		
4	-		-		-		
5	-		-		-		
6	-		-		-		
7	-		-		-		
8	-		-		-		
9	-		-		-		
10	-		-		-		
11	o.4		o.4		o.4		
12	-		-		o.4		
13	o.4		o.4		o.4		
14	o.4		o.4		o.4		
15	-		-		-		
16	-		-		-		
17	-		-		-		
18	-		-		-		
19	-		-		-		
20	-		-		-		
21	-		-		-		
22	-		-		-		
23	o.4		o.4		-		
24	-		-		-		
25	-		-		-		
26	-		-		-		
27	-		-		-		
28	o.4		o.4		-		
29	-		-		-		
30	-		-		-		
31	-		-		-		
32	-		-		-		
33	-		-		-		
34	-		-		-		
35	-		-		-		
36	-		-		-		
37	-		-		-		
38	-		-		-		
39	-		-		-		
40	-		-		-		

**F.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 the following tables and complete them.

**F.4.2.1 Mean and variance monitor managed object class****Table F.2 – Create and delete support**

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	–	o.4		
1.1	Create with reference object	–	c:o		
2	Delete support	–	o.4		

**F.4.2.2 Mean and percentile monitor managed object class****Table F.3 – Create and delete support**

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	–	o.4		
1.1	Create with reference object	–	c:o		
2	Delete support	–	o.4		

**F.4.2.3 Mean and min max monitor managed object class****Table F.4 – Create and delete support**

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	–	o.4		
1.1	Create with reference object	–	c:o		
2	Delete support	–	o.4		

**F.4.2.4 Moving average mean monitor managed object class****Table F.5 – Create and delete support**

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	–	o.4		
1.1	Create with reference object	–	c:o		
2	Delete support	–	o.4		

**F.4.2.5 Algorithm indicating mean monitor managed object class****Table F.6 – Create and delete support**

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	–	o.4		
1.1	Create with reference object	–	c:o		
2	Delete support	–	o.4		

**F.4.2.6 Mean monitor managed object class**

**Table F.7 – Create and delete support**

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	–	o.4		
1.1	Create with reference object	–	c:o		
2	Delete support	–	o.4		

**F.4.2.7 Monitor metric managed object class**

**Table F.8 – Create and delete support**

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	–	o.4		
1.1	Create with reference object	–	c:o		
2	Delete support	–	o.4		

## Annexe G<sup>3)</sup> Formulaire MOCS

### Classe d'objets gérés de contrôleur de moyenne et de variance (Mean and variance monitor)

(Cette annexe fait partie intégrante de la présente Recommandation | Norme internationale)

#### G.1 Introduction

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

##### G.1.1 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.

##### G.1.2 Symbols, abbreviations and terms

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

The following abbreviations are used throughout this proforma:

dmi-att	joint-iso-itu-t ms(9) smi(3) part2(2) attribute(7)
dmi-not	joint-iso-itu-t ms(9) smi(3) part2(2) notification(10)
dmi-pkg	joint-iso-itu-t ms(9) smi(3) part2(2) package(4)
moa-mo	joint-iso-itu-t ms(9) function(2) part11(11) managedObjectClass(3)
moa-att	joint-iso-itu-t ms(9) function(2) part11(11) attribute(7)
moa-pkg	joint-iso-itu-t ms(9) function(2) part11(11) package(4)
m3100-pkg	itu-t recommendation(0) m(13) gnm(3100) m3100InformationModel(0) package(4)

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

#### G.2 Statement of conformance to the managed object class

**Table G.1 – Managed object class support**

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	meanAndVarianceMonitor	{moa-mo 3}		

If the answer to the actual class question in the managed object class support Table G.1 is no, then the supplier of the implementation shall fill in the actual class support Table G.2 below.

**Table G.2 – Actual class support**

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

#### <sup>3)</sup> Droits de reproduction du formulaire MOCS

Les utilisateurs de la présente Recommandation | Norme internationale sont autorisés à reproduire le formulaire MOCS de la présente annexe pour utiliser celui-ci conformément à son objet. Ils sont également autorisés à publier le formulaire une fois celui-ci complété. Les instructions pour le formulaire MOCS sont spécifiées dans la Rec. UIT-T X.724 | ISO/CEI 10165-6.

**G.3 Packages**

**Table G.3 – Package support**

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional information
1	topPackage	–	–	m		
2	packagesPackage	{dmi-pkg 16}	–	c1		
3	allomorphicPackage	{dmi-pkg 17}	–	c2		
4	scannerPackage	–	–	m		
5	availabilityStatusPackage	{dmi-pkg 22}	–	c3		
6	duration	{dmi-pkg 26}	–	o		
7	dailyScheduling	{dmi-pkg 25}	–	o		
8	weeklyScheduling	{dmi-pkg 29}	–	o		
9	externalScheduler	{dmi-pkg 27}	–	o		
10	periodSynchronizationPackage	{moa-pkg 10}	–	o		
11	createDeleteNotificationPackage	{m3100-pkg 10}	–	o		
12	attributeValueChangeNotificationPackage	{m3100 pkg 4}	–	o		
13	stateChangeNotificationPackage	{m3100-pkg 28}	–	o		
14	monitorMetricPackage	–	–	m		
15	counterDifferencePackage	{moa-pkg 2}	–	o		
16	counterOverflowPackage	{moa-pkg 3}	–	o		
17	gaugeDifferencePackage	{moa-pkg 8}	–	o		
18	derivedGaugeThresholdPackage	{moa-pkg 4}	–	o		
19	specificProblemsIndicationPackage	{moa-pkg 9}	–	o		
20	derivedGaugeTimestampPackage	{moa-pkg 5}	–	o		
21	meanMonitorPackage	–	–	m		
22	estimateOfMeanThresholdPackage	{moa-pkg 6}	–	o		
23	movingAverageMeanMonitorPackage	–	–	m		
24	meanAndVarianceMonitorPackage	–	–	m		
c1: if G.3/3a or G.3/5a or G.3/6a or G.3/7a or G.3/8a or G.3/9a or G.3/10a or G.3/11a or G.3/12a or G.3/13a or G.3/15a or G.3/16a or G.3/17a or G.3/18a or G.3/19a or G.3/20a or G.3/22a then m else –. c2: if G.1/1b then m else –. c3: if G.3/6a or G.3/7a or G.3/8a or G.3/9a then m else –.						

## G.4 Attributes

Table G.4 – Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace	
				Status	Support	Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	m		m		x	
2	nameBinding	{dmi-att 63}	–	o		m		c4	
3	packages	{dmi-att 66}	–	c5		c6		c7	
4	allomorphs	{dmi-att 50}	–	c8		c9		c4	
5	scannerId	{moa-att 25}	–	o		m		c4	
6	granularityPeriod	{moa-att 23}	–	m		m		m	
7	administrativeState	{dmi-att 31}	–	m		m		m	
8	operationalState	{dmi-att 35}	–	x		m		x	
9	availabilityStatus	{dmi-att 33}	off-duty required	c10		c11		c10	
10	periodSynchronizationTime	{moa-att 24}	–	c12		c12		c12	
11	startTime	{dmi-att 68}	–	c13		c13		c13	
12	stopTime	{dmi-att 69}	DMI default	c13		c13		c13	
13	intervalsOfDay	{dmi-att 57}	DMI default	c14		c14		c14	
14	weekMask	{dmi-att 71}	DMI default	c15		c15		c15	
15	schedulerName	{dmi-att 67}	–	c16		c17		c18	
16	observedObjectInstance	{moa-att 16}	–	m		m		x	
17	observedAttributeId	{moa-att 15}	–	m		m		x	
18	derivedGauge	{moa-att 2}	–	x		m		x	
19	previousScanCounterValue	{moa-att 1}	–	c19		c19		c19	
20	proceduralStatus	{dmi-att 36}	–	c20		c21		c20	
21	modulusValue	{moa-att 1}	–	c22		c22		c22	
22	previousScanGaugeValue	{moa-att 20}	–	c23		c23		c23	
23	severityIndicatingGaugeThreshold	{moa-att 18}	–	c24		c24		c24	
24	specificProblemIndicator	{moa-att 19}	–	c25		c25		c25	
25	derivedGaugeTimestamp	{moa-att 3}	–	c26		c27		c26	
26	estimateOfMean	{moa-att 7}	–	m		m		m	
27	movingTimePeriod	{moa-att 13}	–	m		m		m	
28	estimateOfMeanSeverityIndicatingGaugeThreshold	{moa-att 6}	–	c28		c28		c28	
29	secondMovingTimePeriod	{moa-att 17}	–	m		m		m	
30	estimateOfVariance	{moa-att 10}	–	m		m		m	

Table G.4 (continued)

Index	Add		Remove		Set to default		Additional information
	Status	Support	Status	Support	Status	Support	
1	–		–		x		
2	–		–		c4		
3	c7		c7		c7		
4	c4		c4		c4		
5	–		–		c4		
6	–		–		c4		
7	–		–		c4		
8	–		–		x		
9	c10		c10		c10		
10	–		–		c4		
11	–		–		c4		
12	–		–		c13		
13	c14		c14		c14		
14	c15		c15		c15		
15	–		–		c18		
16	–		–		x		
17	–		–		x		
18	–		–		x		
19	–		–		c4		
20	–		–		c20		
21	–		–		c4		
22	–		–		c4		
23	c24		c24		c4		
24	–		–		c4		
25	–		–		c26		
26	–		–		c4		
27	–		–		c4		
28	c28		c28		c4		
29	–		–		c4		
30	–		–		c4		
c4: if G.1/1b then x else –. c5: if G.3/2a then o else –. c6: if G.3/2a then m else –. c7: if G.3/2a then x else –. c8: if G.3/3a then o else –. c9: if G.3/5a then m else –.							



**Table G.4** (concluded)

c10:	if G.3/5a then x else –.
c11:	if G.3/5a then m else –.
c12:	if G.3/10a then m else –.
c13:	if G.3/6a then m else –.
c14:	if G.3/7a then m else –.
c15:	if G.3/8a then m else –.
c16:	if G.3/9a then o else –.
c17:	if G.3/9a then m else –.
c18:	if G.3/9a then x else –.
c19:	if G.3/15a then m else –.
c20:	if G.3/15a or G.3/17a then x else –.
c21:	if G.3/15a or G.3/17a then m else –.
c22:	if G.3/16a then m else –.
c23:	if G.3/17a then m else –.
c24:	if G.3/18a then m else –.
c25:	if G.3/19a then m else –.
c26:	if G.3/20a then x else –.
c27:	if G.3/20a then m else –.
c28:	if G.3/22a then m else –.

**G.5 Notifications****Table G.5 – Notification support**

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support		Additional information
					Con-firmed	Non-con-firmed	
1	objectCreation	{dmi-not 6}	–	c29			
2	objectDeletion	{dmi-not 7}	–	c29			
3	attributeValueChange	{dmi-not 1}	–	c30			
4	stateChange	{dmi-not 14}	–	c31			
5	qualityofServiceAlarm	{dmi-not 11}	–	c32			
c29: if G.3/11a then m else –. c30: if G.3/12a then m else –. c31: if G.3/13a then m else –. c32: if G.3/18a or G.3/22a then m else –.							

Table G.5 (continued)

Index	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
1	1.1	sourceIndicator	{ dmi-att 26 }	0 to 2	o		
	1.2	attributeList	{ dmi-att 9 }	–	o		
	1.3	notificationIdentifier	{ dmi-att 16 }	–	c33		
	1.4	correlatedNotifications	{ dmi-att 12 }	–	o		
	1.4.1	correlatedNotifications		–	c:m		
	1.4.2	sourceObjectInst		–	c:o		
	1.4.2.1	distinguishedName		–	c:o.1		
	1.4.2.2	nonSpecificForm		–	c:o.1		
	1.4.2.3	localDistinguishedName		–	c:o.1		
	1.5	additionalText	{ dmi-att 7 }	–	o		
	1.6	additionalInformation	{ dmi-att 6 }	–	o		
2	2.1	sourceIndicator	{ dmi-att 26 }	0 to 2	o		
	2.2	attributeList	{ dmi-att 9 }	–	o		
	2.3	notificationIdentifier	{ dmi-att 16 }	–	c34		
	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.2		
	2.4.2.2	nonSpecificForm		–	c:o.2		
	2.4.2.3	localDistinguishedName		–	c:o.2		
	2.5	additionalText	{ dmi-att 7 }	–	o		
	2.6	additionalInformation	{ dmi-att 6 }	–	o		
3	3.1	sourceIndicator	{ dmi-att 26 }	0 to 2	o		
	3.2	attributeIdentifierList	{ dmi-att 8 }	–	o		
	3.3	attributeValueChangeDefinition	{ dmi-att 10 }	–	m		
	3.3.1	attributeId		–	m		
	3.3.2	oldAttributeValue		–	o		
	3.3.3	newAttributeValue		–	m		
	3.4	notificationIdentifier	{ dmi-att 16 }	–	c35		
	3.5	correlatedNotifications	{ dmi-att 12 }	–	o		
	3.5.1	correlatedNotifications		–	c:m		
	3.5.2	sourceObjectInst		–	c:o		
	3.5.2.1	distinguishedName		–	c:o.3		
	3.5.2.2	nonSpecificForm		–	c:o.3		
	3.5.2.3	localDistinguishedName		–	c:o.3		
	3.6	additionalText	{ dmi-att 7 }	–	o		
3.7	additionalInformation	{ dmi-att 6 }	–	o			
c33: if G.5/1.4a then m else o.							
c34: if G.5/2.4a then m else o.							
c35: if G.5/3.5a then m else o.							

Table G.5 (continued)

Index	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
4	4.1	sourceIndicator	{ dmi-att 26 }	0 to 2	o		
	4.2	attribute identifier list	{ dmi-att 8 }	–	o		
	4.3	stateChangeDefinition	{ dmi-att 28 }	–	m		
	4.3.1	attributeId		–	m		
	4.3.2	oldAttributeValue		–	o		
	4.3.3	newAttributeValue		–	m		
	4.4	notificationIdentifier	{ dmi-att 16 }	–	c36		
	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.4		
	4.5.2.2	nonSpecificForm		–	c:o.4		
	4.5.2.3	localDistinguishedName		–	c:o.4		
	4.6	additionalText	{ dmi-att 7 }	–	o		
4.7	additionalInformation	{ dmi-att 6 }	–	o			
5	5.1	probableCause	{ dmi-att 18 }	threshold Crossed	m		
	5.1.1	globalValue	–	–	o.41		
	5.1.2	localValue	–	–	o.41		
	5.2	specificProblems	{ dmi-att 27 }	–	c21		
	5.2.1	global	–	–	c:o.42		
	5.2.2	local	–	–	c:o.42		
	5.3	perceivedSeverity	{ dmi-att 17 }	defined on a per object basis	m		
	5.4	backedupStatus	{ dmi-att 11 }	–	o		
	5.5	backupObject	{ dmi-att 40 }	for backUp relationships	o		
	5.5.1	distinguishedName	–	–	c:o.43		
	5.5.2	nonSpecificForm	–	–	c:o.43		
	5.5.3	localDistinguishedName	–	–	c:o.43		
	5.6	trendIndication	{ dmi-att 30 }	–	o		
	5.7	thresholdInfo	{ dmi-att 29 }	–	m		
	5.7.1	triggeredThreshold	–	–	m		
	5.7.2	observedValue	–	–	m		
	5.7.2.1	integer	–	–	o.44		
	5.7.2.2	real	–	–	o.44		
	5.7.3	thresholdLevel	–	–	o		
	5.7.3.1	up	–	–	c:o.45		
	5.7.3.1.1	high	–	–	c:m		
	5.7.3.1.1.1	integer	–	–	c:o.46		
	5.7.3.1.1.2	real	–	–	c:o.46		
5.7.3.1.2	low	–	–	c:o			
5.7.3.1.2.1	integer	–	–	c:o.47			
5.7.3.1.2.2	real	–	–	c:o.47			
c36: if G.5/4.5a then m else o.							

Table G.5 (concluded)

Index	Subindex	Notification field name label	Value of object identifier of attribute type associated with field	Constraints and values	Status	Support	Additional information
	5.7.3.2	down	–	–	c:o.45		
	5.7.3.2.1	high	–	–	c:m		
	5.7.3.2.1.1	integer	–	–	c:o.48		
	5.7.3.2.1.2	real	–	–	c:o.48		
	5.7.3.2.2	low	–	–	c:m		
	5.7.3.2.2.1	integer	–	–	c:o.49		
	5.7.3.2.2.2	real	–	–	c:o.49		
	5.7.4	armTime	–	–	c:o		
	5.8	notificationIdentifier	{dmi-att 16}	–	c37		
	5.9	correlatedNotifications	{dmi-att 12}	–	o		
	5.9.1	correlatedNotificationIds	–	–	c:m		
	5.9.2	sourceObjectInst	–	–	c:o		
	5.9.2.1	distinguishedName	–	–	c:o.55		
	5.9.2.2	nonSpecificForm	–	–	c:o.55		
	5.9.2.3	localDistinguishedName	–	–	c:o.55		
	5.10	stateChangeDefinition	{dmi-att 28}	–	m		
	5.10.1	attributeId	–	–	c:m		
	5.10.2	oldAttributeValue	–	–	c:o		
	5.10.3	newAttributeValue	–	–	c:m		
	5.11	monitoredAttributes	{dmi-att 15}	observed Object Instance, observed AttributeId, other attributes which are metrics	m		
	5.12	proposedRepairActions	{dmi-att 19}	–	o		
	5.12.1	global	–	–	c:o.50		
	5.12.2	local	–	–	c:o.50		
	5.13	additionalText	{dmi-att 7}	–	o		
	5.14	additionalInformation	{dmi-att 6}	required for some objects	o		
c37: if G.5/5.9a then m else o.							

## Annexe H<sup>4)</sup> Formulaire MOCS

### Classe d'objets gérés de contrôleur de moyenne et de fractile (Mean and percentile monitor)

(Cette annexe fait partie intégrante de la présente Recommandation | Norme internationale)

#### H.1 Introduction

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

##### H.1.1 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.

##### H.1.2 Symbols, abbreviations and terms

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

The following abbreviations are used throughout this proforma:

dmi-att	joint-iso-itu-t ms(9) smi(3) part2(2) attribute(7)
dmi-not	joint-iso-itu-t ms(9) smi(3) part2(2) notification(10)
dmi-pkg	joint-iso-itu-t ms(9) smi(3) part2(2) package(4)
moa-mo	joint-iso-itu-t ms(9) function(2) part11(11) managedObjectClass(3)
moa-att	joint-iso-itu-t ms(9) function(2) part11(11) attribute(7)
moa-pkg	joint-iso-itu-t ms(9) function(2) part11(11) package(4)
m3100-pkg	itu-t recommendation(0) m(13) gnm(3100) m3100InformationModel(0) package(4)

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

#### H.2 Statement of conformance to the managed object class

**Table H.1 – Managed object class support**

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	meanAndPercentileMonitor	{moa-mo 2}		

If the answer to the actual class question in the managed object class support Table H.1 is no, then the supplier of the implementation shall fill in the actual class support Table H.2 below.

**Table H.2 – Actual class support**

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

#### 4) Droits de reproduction du formulaire MOCS

Les utilisateurs de la présente Recommandation | Norme internationale sont autorisés à reproduire le formulaire MOCS de la présente annexe pour utiliser celui-ci conformément à son objet. Ils sont également autorisés à publier le formulaire une fois celui-ci complété. Les instructions pour le formulaire MOCS sont spécifiées dans la Rec. UIT-T X.724 | ISO/CEI 10165-6.

**H.3 Packages**

**Table H.3 – Package support**

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional Information
1	topPackage	–	–	m		
2	packagesPackage	{dmi-pkg 16}	–	c1		
3	allomorphicPackage	{dmi-pkg 17}	–	c2		
4	scannerPackage	–	–	m		
5	availabilityStatusPackage	{dmi-pkg 22}	–	c3		
6	duration	{dmi-pkg 26}	–	o		
7	dailyScheduling	{dmi-pkg 25}	–	o		
8	weeklyScheduling	{dmi-pkg 29}	–	o		
9	externalScheduler	{dmi-pkg 27}	–	o		
10	periodSynchronizationPackage	{moa-pkg 10}	–	o		
11	createDeleteNotificationPackage	{m3100-pkg 10}	–	o		
12	attributeValueChangeNotificationPackage	{m3100 pkg 4}	–	o		
13	stateChangeNotificationPackage	{m3100-pkg 28}	–	o		
14	monitorMetricPackage	–	–	m		
15	counterDifferencePackage	{moa-pkg 2}	–	o		
16	counterOverflowPackage	{moa-pkg 3}	–	o		
17	gaugeDifferencePackage	{moa-pkg 8}	–	o		
18	derivedGaugeThresholdPackage	{moa-pkg 4}	–	o		
19	specificProblemsIndicationPackage	{moa-pkg 9}	–	o		
20	derivedGaugeTimestampPackage	{moa-pkg 5}	–	o		
21	meanMonitorPackage	–	–	m		
22	estimateOfMeanThresholdPackage	{moa-pkg 6}	–	o		
23	movingAverageMeanMonitorPackage	–	–	m		
24	meanAndPercentileMonitorPackage	–	–	m		
25	configurablePercentilePackage	{moa-pkg 1}	–	o		
c1: if H.3/3a or H.3/5a or H.3/6a or H.3/7a or H.3/8a or H.3/9a or H.3/10a or H.3/11a or H.3/12a or H.3/13a or H.3/15a or H.3/16a or H.3/17a or H.3/18a or H.3/19a or H.3/20a or H.3/22a or H.3/25a then m else –. c2: if H.1/1b then m else –. c3: if H.3/6a or H.3/7a or H.3/8a or H.3/9a then m else –.						

## H.4 Attributes

Table H.4 – Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace	
				Status	Support	Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	m		m		x	
2	nameBinding	{dmi-att 63}	–	o		m		c4	
3	packages	{dmi-att 66}	–	c5		c6		c7	
4	allomorpha	{dmi-att 50}	–	c8		c9		c4	
5	scannerId	{moa-att 25}	–	o		m		c4	
6	granularityPeriod	{moa-att 23}	–	m		m		m	
7	administrativeState	{dmi-att 31}	–	m		m		m	
8	operationalState	{dmi-att 35}	–	x		m		x	
9	availabilityStatus	{dmi-att 33}	off-duty required	c10		c11		c10	
10	periodSynchronizationTime	{moa-att 24}	–	c12		c12		c12	
11	startTime	{dmi-att 68}	–	c13		c13		c13	
12	stopTime	{dmi-att 69}	DMI default	c13		c13		c13	
13	intervalsOfDay	{dmi-att 57}	DMI default	c14		c14		c14	
14	weekMask	{dmi-att 71}	DMI default	c15		c15		c15	
15	schedulerName	{dmi-att 67}	–	c16		c17		c18	
16	observedObjectInstance	{moa-att 16}	–	m		m		x	
17	observedAttributeId	{moa-att 15}	–	m		m		x	
18	derivedGauge	{moa-att 2}	–	x		m		x	
19	previousScanCounterValue	{moa-att 1}	–	c19		c19		c19	
20	proceduralStatus	{dmi-att 36}	–	c20		c21		c20	
21	modulusValue	{moa-att 1}	–	c22		c22		c22	
22	previousScanGaugeValue	{moa-att 20}	–	c23		c23		c23	
23	severityIndicatingGaugeThreshold	{moa-att 18}	–	c24		c24		c24	
24	specificProblemIndicator	{moa-att 19}	–	c25		c25		c25	
25	derivedGaugeTimestamp	{moa-att 3}	–	c26		c27		c26	
26	estimateOfMean	{moa-att 7}	–	m		m		m	
27	movingTimePeriod	{moa-att 13}	–	m		m		m	
28	estimateOfMeanSeverityIndicatingGaugeThreshold	{moa-att 6}	–	c28		c28		c28	
29	secondMovingTimePeriod	{moa-att 17}	–	m		m		m	
30	estimateOfLargestInReplication	{moa-att 21}	–	m		m		m	
31	estimateOfSmallestInReplication	{moa-att 22}	–	m		m		m	
32	estimateOfMedian	{moa-att 7}	–	m		m		m	
33	estimateOf100-PCTPercentile	{moa-att 11}	–	m		m		m	
34	estimateOfPCTPercentile	{moa-att 8}	–	m		m		m	
35	numberOfReplications	{moa-att 14}	–	m		m		m	
36	configurablePCT	{moa-att 0}	–	c29		c29		c29	

Table H.4 (continued)

Index	Add		Remove		Set to default		Additional information
	Status	Support	Status	Support	Status	Support	
1	–		–		x		
2	–		–		c4		
3	c7		c7		c7		
4	c4		c4		c4		
5	–		–		c4		
6	–		–		c4		
7	–		–		c4		
8	–		–		x		
9	c10		c10		c10		
10	–		–		c4		
11	–		–		c4		
12	–		–		c13		
13	c14		c14		c14		
14	c15		c15		c15		
15	–		–		c18		
16	–		–		x		
17	–		–		x		
18	–		–		x		
19	–		–		c4		
20	–		–		c20		
21	–		–		c4		
22	–		–		c4		
23	c24		c24		c4		
24	–		–		c4		
25	–		–		c26		
26	–		–		c4		
27	–		–		c4		
28	c28		c28		c4		
29	–		–		c4		
30	–		–		c4		
31	–		–		c4		
32	–		–		c4		
33	–		–		c4		
34	–		–		c4		
35	–		–		c4		
36	–		–		c4		
c4: if H.1/1b then x else –. c5: if H.3/2a then o else –. c6: if H.3/2a then m else –. c7: if H.3/2a then x else –.							



**Table H.4** (concluded)

c8:	if H.3/3a then o else –.
c9:	if H.3/5a then m else –.
c10:	if H.3/5a then x else –.
c11:	if H.3/5a then m else –.
c12:	if H.3/10a then m else –.
c13:	if H.3/6a then m else –.
c14:	if H.3/7a then m else –.
c15:	if H.3/8a then m else –.
c16:	if H.3/9a then o else –.
c17:	if H.3/9a then m else –.
c18:	if H.3/9a then x else –.
c19:	if H.3/15a then m else –.
c20:	if H.3/15a or H.3/17a then x else –.
c21:	if H.3/15a or H.3/17a then m else –.
c22:	if H.3/16a then m else –.
c23:	if H.3/17a then m else –.
c24:	if H.3/18a then m else –.
c25:	if H.3/19a then m else –.
c26:	if H.3/20a then x else –.
c27:	if H.3/20a then m else –.
c28:	if H.3/22a then m else –.
c29:	if H.3/25a then m else –.

**H.5 Notifications****Table H.5 – Notification support**

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support		Additional information
					Con-firmed	Non-con-firmed	
1	objectCreation	{dmi-not 6}	–	c30			
2	objectDeletion	{dmi-not 7}	–	c30			
3	attributeValueChange	{dmi-not 1}	–	c31			
4	stateChange	{dmi-not 14}	–	c32			
5	qualityofServiceAlarm	{dmi-not 11}	–	c33			
c30: if H.3/11a then m else –. c31: if H.3/12a then m else –. c32: if H.3/13a then m else –. c33: if H.3/18a or H.8/22a then m else –.							

The detailed requirements for each of the above notifications for this managed object class are as specified in Table G.5. For this reason the table is not repeated here. The supplier of the implementation needs to complete a copy of Table G.5 for this managed object class if the support is different.

## Annexe I<sup>5)</sup> Formulaire MOCS

### Classe d'objets gérés de contrôleur de moyenne et de minimum/maximum (Mean and min max monitor)

(Cette annexe fait partie intégrante de la présente Recommandation | Norme internationale)

#### I.1 Introduction

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

#### I.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.

#### I.3 Symbols, abbreviations and terms

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

The following abbreviations are used throughout this proforma:

dmi-att	joint-iso-itu-t ms(9) smi(3) part2(2) attribute(7)
dmi-not	joint-iso-itu-t ms(9) smi(3) part2(2) notification(10)
dmi-pkg	joint-iso-itu-t ms(9) smi(3) part2(2) package(4)
moa-mo	joint-iso-itu-t ms(9) function(2) part11(11) managedObjectClass(3)
moa-att	joint-iso-itu-t ms(9) function(2) part11(11) attribute(7)
moa-pkg	joint-iso-itu-t ms(9) function(2) part11(11) package(4)
m3100-pkg	itu-t recommendation(0) m(13) gnm(3100) m3100InformationModel(0) package(4)

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

#### I.4 Mean and min max monitor managed object class

##### I.4.1 Statement of conformance to the managed object class

**Table I.1 – Managed object class support**

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	meanAndMinMaxMonitor	{moa-mo 1}		

<sup>5)</sup> **Droits de reproduction du formulaire MOCS**

Les utilisateurs de la présente Recommandation | Norme internationale sont autorisés à reproduire le formulaire MOCS de la présente annexe pour utiliser celui-ci conformément à son objet. Ils sont également autorisés à publier le formulaire une fois celui-ci complété. Les instructions pour le formulaire MOCS sont spécifiées dans la Rec. UIT-T X.724 | ISO/CEI 10165-6.

If the answer to the actual class question in the managed object class support Table I.1 is no, then the supplier of the implementation shall fill in the actual class support Table I.2 below.

**Table I.2 – Actual class support**

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

**I.4.2 Packages****Table I.3 – Package support**

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional Information
1	topPackage	–	–	m		
2	packagesPackage	{dmi-pkg 16}	–	c1		
3	allomorphicPackage	{dmi-pkg 17}	–	c2		
4	scannerPackage	–	–	m		
5	availabilityStatusPackage	{dmi-pkg 22}	–	c3		
6	duration	{dmi-pkg 26}	–	o		
7	dailyScheduling	{dmi-pkg 25}	–	o		
8	weeklyScheduling	{dmi-pkg 29}	–	o		
9	externalScheduler	{dmi-pkg 27}	–	o		
10	periodSynchronizationPackage	{moa-pkg 10}	–	o		
11	createDeleteNotificationPackage	{m3100-pkg 10}	–	o		
12	attributeValueChangeNotificationPackage	{m3100 pkg 4}	–	o		
13	stateChangeNotificationPackage	{m3100-pkg 28}	–	o		
14	monitorMetricPackage	–	–	m		
15	counterDifferencePackage	{moa-pkg 2}	–	o		
16	counterOverflowPackage	{moa-pkg 3}	–	o		
17	gaugeDifferencePackage	{moa-pkg 8}	–	o		
18	derivedGaugeThresholdPackage	{moa-pkg 4}	–	o		
19	specificProblemsIndicationPackage	{moa-pkg 9}	–	o		
20	derivedGaugeTimestampPackage	{moa-pkg 5}	–	o		
21	meanMonitorPackage	–	–	m		
22	estimateOfMeanThresholdPackage	{moa-pkg 6}	–	o		
23	movingAverageMeanMonitorPackage	–	–	m		
24	meanAndMinMaxMonitorPackage	–	–	m		
c1: if I.3/3a or I.3/5a or I.3/6a or I.3/7a or I.3/8a or I.3/9a or I.3/10a or I.3/11a or I.3/12a or I.3/13a or I.3/15a or I.3/16a or I.3/17a or I.3/18a or I.3/19a or I.3/20a or I.3/22a then m else –. c2: if I.1/1b then m else –. c3: if I.3/6a or I.3/7a or I.3/8a or I.3/9a then m else –.						

I.4.3 Attributes

Table I.4 – Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace	
				Status	Support	Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	m		m		x	
2	nameBinding	{dmi-att 63}	–	o		m		c4	
3	packages	{dmi-att 66}	–	c5		c6		c7	
4	allomorphs	{dmi-att 50}	–	c8		c9		c4	
5	scannerId	{moa-att 25}	–	o		m		c4	
6	granularityPeriod	{moa-att 23}	–	m		m		m	
7	administrativeState	{dmi-att 31}	–	m		m		m	
8	operationalState	{dmi-att 35}	–	x		m		x	
9	availabilityStatus	{dmi-att 33}	off-duty required	c10		c11		c10	
10	periodSynchronizationTime	{moa-att 24}	–	c12		c12		c12	
11	startTime	{dmi-att 68}	–	c13		c13		c13	
12	stopTime	{dmi-att 69}	DMI default	c13		c13		c13	
13	intervalsOfDay	{dmi-att 57}	DMI default	c14		c14		c14	
14	weekMask	{dmi-att 71}	DMI default	c15		c15		c15	
15	schedulerName	{dmi-att 67}	–	c16		c17		c18	
16	observedObjectInstance	{moa-att 16}	–	m		m		x	
17	observedAttributeId	{moa-att 15}	–	m		m		x	
18	derivedGauge	{moa-att 2}	–	x		m		x	
19	previousScanCounterValue	{moa-att 1}	–	c19		c19		c19	
20	proceduralStatus	{dmi-att 36}	–	c20		c21		c20	
21	modulusValue	{moa-att 1}	–	c22		c22		c22	
22	previousScanGaugeValue	{moa-att 20}	–	c23		c23		c23	
23	severityIndicatingGaugeThreshold	{moa-att 18}	–	c24		c24		c24	
24	specificProblemIndicator	{moa-att 19}	–	c25		c25		c25	
25	derivedGaugeTimestamp	{moa-att 3}	–	c26		c27		c26	
26	estimateOfMean	{moa-att 7}	–	m		m		m	
27	movingTimePeriod	{moa-att 13}	–	m		m		m	
28	estimateOfMeanSeverityIndicatingGaugeThreshold	{moa-att 6}	–	c28		c28		c28	
29	estimateOfLargest	{moa-att 4}	–	m		m		m	
30	estimateOfSmallest	{moa-att 9}	–	m		m		m	

**Table I.4** (continued)

Index	Add		Remove		Set to default		Additional information
	Status	Support	Status	Support	Status	Support	
1	–		–		x		
2	–		–		c4		
3	c7		c7		c7		
4	c4		c4		c4		
5	–		–		c4		
6	–		–		c4		
7	–		–		c4		
8	–		–		x		
9	c10		c10		c10		
10	–		–		c4		
11	–		–		c4		
12	–		–		c13		
13	c14		c14		c14		
14	c15		c15		c15		
15	–		–		c18		
16	–		–		x		
17	–		–		x		
18	–		–		x		
19	–		–		c4		
20	–		–		c20		
21	–		–		c4		
22	–		–		c4		
23	c24		c24		c4		
24	–		–		c4		
25	–		–		c26		
26	–		–		c4		
27	–		–		c4		
28	c28		c28		c4		
29	–		–		c4		
30	–		–		c4		

c4: if I.1/1b then x else –.  
c5: if I.3/2a then o else –.  
c6: if I.3/2a then m else –.  
c7: if I.3/2a then x else –.  
c8: if I.3/3a then o else –.  
c9: if I.3/5a then m else –.  
c10: if I.3/5a then x else –.

**Table I.4** (concluded)

c11: if I.3/5a then m else –.
c12: if I.3/10a then m else –.
c13: if I.3/6a then m else –.
c14: if I.3/7a then m else –.
c15: if I.3/8a then m else –.
c16: if I.3/9a then o else –.
c17: if I.3/9a then m else –.
c18: if I.3/9a then x else –.
c19: if I.3/15a then m else –.
c20: if I.3/15a or I.3/17a then x else –.
c21: if I.3/15a or I.3/17a then m else –.
c22: if I.3/16a then m else –.
c23: if I.3/17a then m else –.
c24: if I.3/18a then m else –.
c25: if I.3/19a then m else –.
c26: if I.3/20a then x else –.
c27: if I.3/20a then m else –.
c28: if I.3/22a then m else –.

**I.4.4 Notifications**

**Table I.5 – Notification support**

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support		Additional information
					Con- firmed	Non- con- firmed	
1	objectCreation	{dmi-not 6}	–	c29			
2	objectDeletion	{dmi-not 7}	–	c29			
3	attributeValueChange	{dmi-not 1}	–	c30			
4	stateChange	{dmi-not 14}	–	c31			
5	qualityofServiceAlarm	{dmi-not 11}	–	c32			
c29: if I.3/11a then m else –. c30: if I.3/12a then m else –. c31: if I.3/13a then m else –. c32: if I.3/18a or I.12/22a then m else –.							

The detailed requirements for each of the above notifications for this managed object class are as specified in Table G.5. For this reason the table is not repeated here. The supplier of the implementation needs to complete a copy of Table G.5 for this managed object class if the support is different.

## Annexe J<sup>6)</sup> Formulaire MOCS

### Classe d'objets gérés de contrôleur de moyenne à fenêtre glissante (Moving average mean monitor)

(Cette annexe fait partie intégrante de la présente Recommandation | Norme internationale)

#### J.1 Introduction

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

#### J.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.

#### J.3 Symbols, abbreviations and terms

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

The following abbreviations are used throughout this proforma:

dmi-att	joint-iso-itu-t ms(9) smi(3) part2(2) attribute(7)
dmi-not	joint-iso-itu-t ms(9) smi(3) part2(2) notification(10)
dmi-pkg	joint-iso-itu-t ms(9) smi(3) part2(2) package(4)
moa-mo	joint-iso-itu-t ms(9) function(2) part11(11) managedObjectClass(3)
moa-att	joint-iso-itu-t ms(9) function(2) part11(11) attribute(7)
moa-pkg	joint-iso-itu-t ms(9) function(2) part11(11) package(4)
m3100-pkg	itu-t recommendation(0) m(13) gnm(3100) m3100InformationModel(0) package(4)

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

#### J.4 Moving average mean monitor managed object class

##### J.4.1 Statement of conformance to the managed object class

**Table J.1 – Managed object class support**

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	movingAverageMeanMonitor	{moa-mo 6}		

#### <sup>6)</sup> Droits de reproduction du formulaire MOCS

Les utilisateurs de la présente Recommandation | Norme internationale sont autorisés à reproduire le formulaire MOCS de la présente annexe pour utiliser celui-ci conformément à son objet. Ils sont également autorisés à publier le formulaire une fois celui-ci complété. Les instructions pour le formulaire MOCS sont spécifiées dans la Rec. UIT-T X.724 | ISO/CEI 10165-6.

If the answer to the actual class question in the managed object class support Table J.1 is no, then the supplier of the implementation shall fill in the actual class support Table J.2 below.

**Table J.2 – Actual class support**

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

**J.4.2 Packages**

**Table J.3 – Package support**

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional Information
1	topPackage	–	–	m		
2	packagesPackage	{dmi-pkg 16}	–	c1		
3	allomorphicPackage	{dmi-pkg 17}	–	c2		
4	scannerPackage	–	–	m		
5	availabilityStatusPackage	{dmi-pkg 22}	–	c3		
6	duration	{dmi-pkg 26}	–	o		
7	dailyScheduling	{dmi-pkg 25}	–	o		
8	weeklyScheduling	{dmi-pkg 29}	–	o		
9	externalScheduler	{dmi-pkg 27}	–	o		
10	periodSynchronizationPackage	{moa-pkg 10}	–	o		
11	createDeleteNotificationPackage	{m3100-pkg 10}	–	o		
12	attributeValueChangeNotificationPackage	{m3100 pkg 4}	–	o		
13	stateChangeNotificationPackage	{m3100-pkg 28}	–	o		
14	monitorMetricPackage	–	–	m		
15	counterDifferencePackage	{moa-pkg 2}	–	o		
16	counterOverflowPackage	{moa-pkg 3}	–	o		
17	gaugeDifferencePackage	{moa-pkg 8}	–	o		
18	derivedGaugeThresholdPackage	{moa-pkg 4}	–	o		
19	specificProblemsIndicationPackage	{moa-pkg 9}	–	o		
20	derivedGaugeTimestampPackage	{moa-pkg 5}	–	o		
21	meanMonitorPackage	–	–	m		
22	estimateOfMeanThresholdPackage	{moa-pkg 6}	–	o		
23	movingAverageMeanMonitorPackage	–	–	m		
c1: if J.3/3a or J.3/5a or J.3/6a or J.3/7a or J.3/8a or J.3/9a or J.3/10a or J.3/11a or J.3/12a or J.3/13a or J.3/15a or J.3/16a or J.3/17a or J.3/18a or J.3/19a or J.3/20a or J.3/22a then m else –. c2: if J.1/1b then m else –. c3: if J.3/6a or J.3/7a or J.3/8a or J.3/9a then m else –.						



## J.4.3 Attributes

Table J.4 – Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace	
				Status	Support	Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	m		m		x	
2	nameBinding	{dmi-att 63}	–	o		m		c4	
3	packages	{dmi-att 66}	–	c5		c6		c7	
4	allomorpha	{dmi-att 50}	–	c8		c9		c4	
5	scannerId	{moa-att 25}	–	o		m		c4	
6	granularityPeriod	{moa-att 23}	–	m		m		m	
7	administrativeState	{dmi-att 31}	–	m		m		m	
8	operationalState	{dmi-att 35}	–	x		m		x	
9	availabilityStatus	{dmi-att 33}	off-duty required	c10		c11		c10	
10	periodSynchronizationTime	{moa-att 24}	–	c12		c12		c12	
11	startTime	{dmi-att 68}	–	c13		c13		c13	
12	stopTime	{dmi-att 69}	DMI default	c13		c13		c13	
13	intervalsOfDay	{dmi-att 57}	DMI default	c14		c14		c14	
14	weekMask	{dmi-att 71}	DMI default	c15		c15		c15	
15	schedulerName	{dmi-att 67}	–	c16		c17		c18	
16	observedObjectInstance	{moa-att 16}	–	m		m		x	
17	observedAttributeId	{moa-att 15}	–	m		m		x	
18	derivedGauge	{moa-att 2}	–	x		m		x	
19	previousScanCounterValue	{moa-att 1}	–	c19		c19		c19	
20	proceduralStatus	{dmi-att 36}	–	c20		c21		c20	
21	modulusValue	{moa-att 1}	–	c22		c22		c22	
22	previousScanGaugeValue	{moa-att 20}	–	c23		c23		c23	
23	severityIndicatingGaugeThreshold	{moa-att 18}	–	c24		c24		c24	
24	specificProblemIndicator	{moa-att 19}	–	c25		c25		c25	
25	derivedGaugeTimestamp	{moa-att 3}	–	c26		c27		c26	
26	estimateOfMean	{moa-att 7}	–	m		m		m	
27	movingTimePeriod	{moa-att 13}	–	m		m		m	
28	estimateOfMeanSeverityIndicatingGaugeThreshold	{moa-att 6}	–	c28		c28		c28	

Table J.4 (continued)

Index	Add		Remove		Set to default		Additional information
	Status	Support	Status	Support	Status	Support	
1	–		–		x		
2	–		–		c4		
3	c7		c7		c7		
4	c4		c4		c4		
5	–		–		c4		
6	–		–		c4		
7	–		–		c4		
8	–		–		x		
9	c10		c10		c10		
10	–		–		c4		
11	–		–		c4		
12	–		–		c13		
13	c14		c14		c14		
14	c15		c15		c15		
15	–		–		c18		
16	–		–		x		
17	–		–		x		
18	–		–		x		
19	–		–		c4		
20	–		–		c20		
21	–		–		c4		
22	–		–		c4		
23	c24		c24		c4		
24	–		–		c4		
25	–		–		c26		
26	–		–		c4		
27	–		–		c4		
28	c28		c28		c4		
c4: if J.1/1b then x else –. c5: if J.3/2a then o else –. c6: if J.3/2a then m else –. c7: if J.3/2a then x else –. c8: if J.3/3a then o else –. c9: if J.3/5a then m else –. c10: if J.3/5a then x else –. c11: if J.3/5a then m else –. c12: if J.3/10a then m else –. c13: if J.3/6a then m else –.							

**Table J.4** (concluded)

c14: if J.3/7a then m else –.
c15: if J.3/8a then m else –.
c16: if J.3/9a then o else –.
c17: if J.3/9a then m else –.
c18: if J.3/9a then x else –.
c19: if J.3/15a then m else –.
c20: if J.3/15a or J.3/17a then x else –.
c21: if J.3/15a or J.3/17a then m else –.
c22: if J.3/16a then m else –.
c23: if J.3/17a then m else –.
c24: if J.3/18a then m else –.
c25: if J.3/19a then m else –.
c26: if J.3/20a then x else –.
c27: if J.3/20a then m else –.
c28: if J.3/22a then m else –.

**J.4.4 Notifications****Table J.5 – Notification support**

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support		Additional information
					Con-firmed	Non-con-firmed	
1	objectCreation	{dmi-not 6}	–	c29			
2	objectDeletion	{dmi-not 7}	–	c29			
3	attributeValueChange	{dmi-not 1}	–	c30			
4	stateChange	{dmi-not 14}	–	c31			
5	qualityofServiceAlarm	{dmi-not 11}	–	c32			
c29: if J.3/11a then m else –. c30: if J.3/12a then m else –. c31: if J.3/13a then m else –. c32: if J.3/18a or J.16/22a then m else –.							

The detailed requirements for each of the above notifications for this managed object class are as specified in Table J.5. For this reason the table is not repeated here. The supplier of the implementation needs to complete a copy of Table J.5 for this managed object class if the support is different.

## Annexe K<sup>7)</sup> Formulaire MOCS

### Classe d'objets gérés de contrôleur d'algorithme indicateur de moyenne (Algorithm indicating mean monitor)

(Cette annexe fait partie intégrante de la présente Recommandation | Norme internationale)

#### K.1 Introduction

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

#### K.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.

#### K.3 Symbols, abbreviations and terms

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

The following abbreviations are used throughout this proforma:

dmi-att	joint-iso-itu-t ms(9) smi(3) part2(2) attribute(7)
dmi-not	joint-iso-itu-t ms(9) smi(3) part2(2) notification(10)
dmi-pkg	joint-iso-itu-t ms(9) smi(3) part2(2) package(4)
moa-mo	joint-iso-itu-t ms(9) function(2) part11(11) managedObjectClass(3)
moa-att	joint-iso-itu-t ms(9) function(2) part11(11) attribute(7)
moa-pkg	joint-iso-itu-t ms(9) function(2) part11(11) package(4)
m3100-pkg	itu-t recommendation(0) m(13) gnm(3100) m3100InformationModel(0) package(4)

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

#### K.4 Algorithm indicating mean monitor managed object class

##### K.4.1 Statement of conformance to the managed object class

**Table K.1 – Managed object class support**

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	algorithmIndicating MeanMonitor	{moa-mo 8}		

<sup>7)</sup> **Droits de reproduction du formulaire MOCS**

Les utilisateurs de la présente Recommandation | Norme internationale sont autorisés à reproduire le formulaire MOCS de la présente annexe pour utiliser celui-ci conformément à son objet. Ils sont également autorisés à publier le formulaire une fois celui-ci complété. Les instructions pour le formulaire MOCS sont spécifiées dans la Rec. UIT-T X.724 | ISO/CEI 10165-6.

If the answer to the actual class question in the managed object class support Table K.1 is no, then the supplier of the implementation shall fill in the actual class support Table K.2 below.

**Table K.2 – Actual class support**

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

**K.4.2 Packages**

**Table K.3 – Package support**

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional Information
1	topPackage	–	–	m		
2	packagesPackage	{dmi-pkg 16}	–	c1		
3	allomorphicPackage	{dmi-pkg 17}	–	c2		
4	scannerPackage	–	–	m		
5	availabilityStatusPackage	{dmi-pkg 22}	–	c3		
6	duration	{dmi-pkg 26}	–	o		
7	dailyScheduling	{dmi-pkg 25}	–	o		
8	weeklyScheduling	{dmi-pkg 29}	–	o		
9	externalScheduler	{dmi-pkg 27}	–	o		
10	periodSynchronizationPackage	{moa-pkg 10}	–	o		
11	createDeleteNotificationPackage	{m3100-pkg 10}	–	o		
12	attributeValueChangeNotificationPackage	{m3100 pkg 4}	–	o		
13	stateChangeNotificationPackage	{m3100-pkg 28}	–	o		
14	monitorMetricPackage	–	–	m		
15	counterDifferencePackage	{moa-pkg 2}	–	o		
16	counterOverflowPackage	{moa-pkg 3}	–	o		
17	gaugeDifferencePackage	{moa-pkg 8}	–	o		
18	derivedGaugeThresholdPackage	{moa-pkg 4}	–	o		
19	specificProblemsIndicationPackage	{moa-pkg 9}	–	o		
20	derivedGaugeTimestampPackage	{moa-pkg 5}	–	o		
21	meanMonitorPackage	–	–	m		
22	estimateOfMeanThresholdPackage	{moa-pkg 6}	–	o		
23	algorithmIndicatingMeanMonitorPackage	–	–	m		
c1: if K.3/3a or K.3/5a or K.3/6a or K.3/7a or K.3/8a or K.3/9a or K.3/10a or K.3/11a or K.3/12a or K.3/13a or K.3/15a or K.3/16a or K.3/17a or K.3/18a or K.3/19a or K.3/20a or K.3/22a then m else –. c2: if K.1/1b then m else –. c3: if K.3/6a or K.3/7a or K.3/8a or K.3/9a then m else –.						

**K.4.3 Attributes**

**Table K.4 – Attribute support**

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace	
				Status	Support	Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	m		m		x	
2	nameBinding	{dmi-att 63}	–	o		m		c4	
3	packages	{dmi-att 66}	–	c5		c6		c7	
4	allomorpha	{dmi-att 50}	–	c8		c9		c4	
5	scannerId	{moa-att 25}	–	o		m		c4	
6	granularityPeriod	{moa-att 23}	–	m		m		m	
7	administrativeState	{dmi-att 31}	–	m		m		m	
8	operationalState	{dmi-att 35}	–	x		m		x	
9	availabilityStatus	{dmi-att 33}	off-duty required	c10		c11		c10	
10	periodSynchronizationTime	{moa-att 24}	–	c12		c12		c12	
11	startTime	{dmi-att 68}	–	c13		c13		c13	
12	stopTime	{dmi-att 69}	DMI default	c13		c13		c13	
13	intervalsOfDay	{dmi-att 57}	DMI default	c14		c14		c14	
14	weekMask	{dmi-att 71}	DMI default	c15		c15		c15	
15	schedulerName	{dmi-att 67}	–	c16		c17		c18	
16	observedObjectInstance	{moa-att 16}	–	m		m		x	
17	observedAttributeId	{moa-att 15}	–	m		m		x	
18	derivedGauge	{moa-att 2}	–	x		m		x	
19	previousScanCounterValue	{moa-att 1}	–	c19		c19		c19	
20	proceduralStatus	{dmi-att 36}	–	c20		c21		c20	
21	modulusValue	{moa-att 1}	–	c22		c22		c22	
22	previousScanGaugeValue	{moa-att 20}	–	c23		c23		c23	
23	severityIndicatingGaugeThreshold	{moa-att 18}	–	c24		c24		c24	
24	specificProblemIndicator	{moa-att 19}	–	c25		c25		c25	
25	derivedGaugeTimestamp	{moa-att 3}	–	c26		c27		c26	
26	estimateOfMean	{moa-att 7}	–	m		m		m	
27	movingTimePeriod	{moa-att 13}	–	m		m		m	
28	estimateOfMeanSeverityIndicatingGaugeThreshold	{moa-att 6}	–	c28		c28		c28	
29	algorithmIdentifier	{moa-att 26}	–	m		m		m	

Table K.4 (continued)

Index	Add		Remove		Set to default		Additional information
	Status	Support	Status	Support	Status	Support	
1	–		–		x		
2	–		–		c4		
3	c7		c7		c7		
4	c4		c4		c4		
5	–		–		c4		
6	–		–		c4		
7	–		–		c4		
8	–		–		x		
9	c10		c10		c10		
10	–		–		c4		
11	–		–		c4		
12	–		–		c13		
13	c14		c14		c14		
14	c15		c15		c15		
15	–		–		c18		
16	–		–		x		
17	–		–		x		
18	–		–		x		
19	–		–		c4		
20	–		–		c20		
21	–		–		c4		
22	–		–		c4		
23	c24		c24		c4		
24	–		–		c4		
25	–		–		c26		
26	–		–		c4		
27	–		–		c4		
28	c28		c28		c4		
29	–		–		c4		
c4: if K.1/1b then x else –. c5: if K.3/2a then o else –. c6: if K.3/2a then m else –. c7: if K.3/2a then x else –. c8: if K.3/3a then o else –. c9: if K.3/5a then m else –. c10: if K.3/5a then x else –. c11: if K.3/5a then m else –.							

**Table K.4** (concluded)

c12: if K.3/10a then m else –.
c13: if K.3/6a then m else –.
c14: if K.3/7a then m else –.
c15: if K.3/8a then m else –.
c16: if K.3/9a then o else –.
c17: if K.3/9a then m else –.
c18: if K.3/9a then x else –.
c19: if K.3/15a then m else –.
c20: if K.3/15a or K.3/17a then x else –.
c21: if K.3/15a or K.3/17a then m else –.
c22: if K.3/16a then m else –.
c23: if K.3/17a then m else –.
c24: if K.3/18a then m else –.
c25: if K.3/19a then m else –.
c26: if K.3/20a then x else –.
c27: if K.3/20a then m else –.
c28: if K.3/22a then m else –.

**K.4.4 Notifications**

**Table K.5 – Notification support**

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support		Additional information
					Con-firmed	Non-con-firmed	
1	objectCreation	{dmi-not 6}	–	c29			
2	objectDeletion	{dmi-not 7}	–	c29			
3	attributeValueChange	{dmi-not 1}	–	c30			
4	stateChange	{dmi-not 14}	–	c31			
5	qualityofServiceAlarm	{dmi-not 11}	–	c32			
c29: if K.3/11a then m else –. c30: if K.3/12a then m else –. c31: if K.3/13a then m else –. c32: if K.3/18a or K.3/22a then m else –.							

The detailed requirements for each of the above notifications for this managed object class are as specified in Table G.5. For this reason the table is not repeated here. The supplier of the implementation needs to complete a copy of Table G.5 for this managed object class if the support is different.



## Annexe L<sup>8)</sup> Formulaire MOCS

### Classe d'objets gérés de contrôleur de moyenne (Mean monitor)

(Cette annexe fait partie intégrante de la présente Recommandation | Norme internationale)

#### L.1 Introduction

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

#### L.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.

#### L.3 Symbols, abbreviations and terms

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

The following abbreviations are used throughout this proforma:

dmi-att	joint-iso-itu-t ms(9) smi(3) part2(2) attribute(7)
dmi-not	joint-iso-itu-t ms(9) smi(3) part2(2) notification(10)
dmi-pkg	joint-iso-itu-t ms(9) smi(3) part2(2) package(4)
moa-mo	joint-iso-itu-t ms(9) function(2) part11(11) managedObjectClass(3)
moa-att	joint-iso-itu-t ms(9) function(2) part11(11) attribute(7)
moa-pkg	joint-iso-itu-t ms(9) function(2) part11(11) package(4)
m3100-pkg	itu-t recommendation(0) m(13) gnm(3100) m3100InformationModel(0) package(4)

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

#### L.4 Mean monitor managed object class

##### L.4.1 Statement of conformance to the managed object class

**Table L.1 – Managed object class support**

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	MeanMonitor	{moa-mo 4}		

#### <sup>8)</sup> Droits de reproduction du formulaire MOCS

Les utilisateurs de la présente Recommandation | Norme internationale sont autorisés à reproduire le formulaire MOCS de la présente annexe pour utiliser celui-ci conformément à son objet. Ils sont également autorisés à publier le formulaire une fois celui-ci complété. Les instructions pour le formulaire MOCS sont spécifiées dans la Rec. UIT-T X.724 | ISO/CEI 10165-6.

If the answer to the actual class question in the managed object class support Table L.1 is no, then the supplier of the implementation shall fill in the actual class support Table L.2 below.

**Table L.2 – Actual class support**

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

**L.4.2 Packages**

**Table L.3 – Package support**

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional Information
1	topPackage	–	–	m		
2	packagesPackage	{dmi-pkg 16}	–	c1		
3	allomorphicPackage	{dmi-pkg 17}	–	c2		
4	scannerPackage	–	–	m		
5	availabilityStatusPackage	{dmi-pkg 22}	–	c3		
6	duration	{dmi-pkg 26}	–	o		
7	dailyScheduling	{dmi-pkg 25}	–	o		
8	weeklyScheduling	{dmi-pkg 29}	–	o		
9	externalScheduler	{dmi-pkg 27}	–	o		
10	periodSynchronizationPackage	{moa-pkg 10}	–	o		
11	createDeleteNotificationPackage	{m3100-pkg 10}	–	o		
12	attributeValueChangeNotificationPackage	{m3100 pkg 4}	–	o		
13	stateChangeNotificationPackage	{m3100-pkg 28}		o		
14	monitorMetricPackage	–	–	m		
15	counterDifferencePackage	{moa-pkg 2}	–	o		
16	counterOverflowPackage	{moa-pkg 3}	–	o		
17	gaugeDifferencePackage	{moa-pkg 8}	–	o		
18	derivedGaugeThresholdPackage	{moa-pkg 4}	–	o		
19	specificProblemsIndicationPackage	{moa-pkg 9}	–	o		
20	derivedGaugeTimestampPackage	{moa-pkg 5}	–	o		
21	meanMonitorPackage	–		m		
22	estimateOfMeanThresholdPackage	{moa-pkg 6}	–	o		
c1: if L.3/3a or L.3/5a or L.3/6a or L.3/7a or L.3/8a or L.3/9a or L.3/10a or L.3/11a or L.3/12a or L.3/13a or L.3/15a or L.3/16a or L.3/17a or L.3/18a or L.3/19a or L.3/20a or L.3/22a then m else –. c2: if L.1/1b then m else –. c3: if L.3/6a or L.3/7a or L.3/8a or L.3/9a then m else –.						

## L.4.3 Attributes

Table L.4 – Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace	
				Status	Support	Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	m		m		x	
2	nameBinding	{dmi-att 63}	–	o		m		c4	
3	packages	{dmi-att 66}	–	c5		c6		c7	
4	allomorpha	{dmi-att 50}	–	c8		c9		c4	
5	scannerId	{moa-att 25}	–	o		m		c4	
6	granularityPeriod	{moa-att 23}	–	m		m		m	
7	administrativeState	{dmi-att 31}	–	m		m		m	
8	operationalState	{dmi-att 35}	–	x		m		x	
9	availabilityStatus	{dmi-att 33}	off-duty required	c10		c11		c10	
10	periodSynchronizationTime	{moa-att 24}	–	c12		c12		c12	
11	startTime	{dmi-att 68}	–	c13		c13		c13	
12	stopTime	{dmi-att 69}	DMI default	c13		c13		c13	
13	intervalsOfDay	{dmi-att 57}	DMI default	c14		c14		c14	
14	weekMask	{dmi-att 71}	DMI default	c15		c15		c15	
15	schedulerName	{dmi-att 67}	–	c16		c17		c18	
16	observedObjectInstance	{moa-att 16}	–	m		m		x	
17	observedAttributeId	{moa-att 15}	–	m		m		x	
18	derivedGauge	{moa-att 2}	–	x		m		x	
19	previousScanCounterValue	{moa-att 1}	–	c19		c19		c19	
20	proceduralStatus	{dmi-att 36}	–	c20		c21		c20	
21	modulusValue	{moa-att 1}	–	c22		c22		c22	
22	previousScanGaugeValue	{moa-att 20}	–	c23		c23		c23	
23	severityIndicatingGaugeThreshold	{moa-att 18}	–	c24		c24		c24	
24	specificProblemIndicator	{moa-att 19}	–	c25		c25		c25	
25	derivedGaugeTimestamp	{moa-att 3}	–	c26		c27		c26	
26	estimateOfMean	{moa-att 7}	–	m		m		m	
27	movingTimePeriod	{moa-att 13}	–	m		m		m	
28	estimateOfMeanSeverityIndicatingGaugeThreshold	{moa-att 6}	–	c28		c28		c28	

Table L.4 (continued)

Index	Add		Remove		Set to default		Additional information
	Status	Support	Status	Support	Status	Support	
1	–		–		x		
2	–		–		c4		
3	c7		c7		c7		
4	c4		c4		c4		
5	–		–		c4		
6	–		–		c4		
7	–		–		c4		
8	–		–		x		
9	c10		c10		c10		
10	–		–		c4		
11	–		–		c4		
12	–		–		c13		
13	c14		c14		c14		
14	c15		c15		c15		
15	–		–		c18		
16	–		–		x		
17	–		–		x		
18	–		–		x		
19	–		–		c4		
20	–		–		c20		
21	–		–		c4		
22	–		–		c4		
23	c24		c24		c4		
24	–		–		c4		
25	–		–		c26		
26	–		–		c4		
27	–		–		c4		
28	c28		c28		c4		
c4: if L.1/1b then x else –. c5: if L.3/2a then o else –. c6: if L.3/2a then m else –. c7: if L.3/2a then x else –. c8: if L.3/3a then o else –. c9: if L.3/5a then m else –. c10: if L.3/5a then x else –. c11: if L.3/5a then m else –.							

Table L.4 (concluded)

c12: if L.3/10a then m else –.
c13: if L.3/6a then m else –.
c14: if L.3/7a then m else –.
c15: if L.3/8a then m else –.
c16: if L.3/9a then o else –.
c17: if L.3/9a then m else –.
c18: if L.3/9a then x else –.
c19: if L.3/15a then m else –.
c20: if L.3/15a or L.3/17a then x else –.
c21: if L.3/15a or L.3/17a then m else –.
c22: if L.3/16a then m else –.
c23: if L.3/17a then m else –.
c24: if L.3/18a then m else –.
c25: if L.3/19a then m else –.
c26: if L.3/20a then x else –.
c27: if L.3/20a then m else –.
c28: if L.3/22a then m else –.

#### L.4.4 Notifications

Table L.5 – Notification support

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support		Additional information
					Con-firmed	Non-con-firmed	
1	objectCreation	{ dmi-not 6 }	–	c29			
2	objectDeletion	{ dmi-not 7 }	–	c29			
3	attributeValueChange	{ dmi-not 1 }	–	c30			
4	stateChange	{ dmi-not 14 }	–	c31			
5	qualityofServiceAlarm	{ dmi-not 11 }	–	c32			
c29: if L.3/11a then m else –. c30: if L.3/12a then m else –. c31: if L.3/13a then m else –. c32: if L.3/18a or L.3/22a then m else –.							

The detailed requirements for each of the above notifications for this managed object class are as specified in Table G.5. For this reason the table is not repeated here. The supplier of the implementation needs to complete a copy of Table G.5 for this managed object class if the support is different.

## Annexe M<sup>9)</sup> Formulaire MOCS

### Classe d'objets gérés pour contrôleur métrique (Monitor metric)

(Cette annexe fait partie intégrante de la présente Recommandation | Norme internationale)

#### M.1 Introduction

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

#### M.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.

#### M.3 Symbols, abbreviations and terms

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

The following abbreviations are used throughout this proforma:

dmi-att	joint-iso-itu-t ms(9) smi(3) part2(2) attribute(7)
dmi-not	joint-iso-itu-t ms(9) smi(3) part2(2) notification(10)
dmi-pkg	joint-iso-itu-t ms(9) smi(3) part2(2) package(4)
moa-mo	joint-iso-itu-t ms(9) function(2) part11(11) managedObjectClass(3)
moa-att	joint-iso-itu-t ms(9) function(2) part11(11) attribute(7)
moa-pkg	joint-iso-itu-t ms(9) function(2) part11(11) package(4)
m3100-pkg	itu-t recommendation(0) m(13) gnm(3100) m3100InformationModel(0) package(4)

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

#### M.4 Monitor metric managed object class

##### M.4.1 Statement of conformance to the managed object class

**Table M.1 – Managed object class support**

Index	Managed object class template label	Value of object identifier for class	Support of all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	monitorMetric	{moa-mo 5}		

<sup>9)</sup> **Droits de reproduction du formulaire MOCS**

Les utilisateurs de la présente Recommandation | Norme internationale sont autorisés à reproduire le formulaire MOCS de la présente annexe pour utiliser celui-ci conformément à son objet. Ils sont également autorisés à publier le formulaire une fois celui-ci complété. Les instructions pour le formulaire MOCS sont spécifiées dans la Rec. UIT-T X.724 | ISO/CEI 10165-6.

If the answer to the actual class question in the managed object class support Table M.1 is no, then the supplier of the implementation shall fill in the actual class support Table M.2 below.

**Table M.2 – Actual class support**

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

#### M.4.2 Packages

**Table M.3 – Package support**

Index	Package template label	Value of object identifier for package	Constraints and values	Status	Support	Additional Information
1	topPackage	–	–	m		
2	packagesPackage	{dmi-pkg 16}	–	c1		
3	allomorphicPackage	{dmi-pkg 17}	–	c2		
4	scannerPackage	–	–	m		
5	availabilityStatusPackage	{dmi-pkg 22}	–	c3		
6	duration	{dmi-pkg 26}	–	o		
7	dailyScheduling	{dmi-pkg 25}	–	o		
8	weeklyScheduling	{dmi-pkg 29}	–	o		
9	externalScheduler	{dmi-pkg 27}	–	o		
10	periodSynchronizationPackage	{moa-pkg 10}	–	o		
11	createDeleteNotificationPackage	{m3100-pkg 10}	–	o		
12	attributeValueChangeNotificationPackage	{m3100 pkg 4}	–	o		
13	stateChangeNotificationPackage	{m3100-pkg 28}	–	o		
14	monitorMetricPackage	–	–	m		
15	counterDifferencePackage	{moa-pkg 2}	–	o		
16	counterOverflowPackage	{moa-pkg 3}	–	o		
17	gaugeDifferencePackage	{moa-pkg 8}	–	o		
18	derivedGaugeThresholdPackage	{moa-pkg 4}	–	o		
19	specificProblemsIndicationPackage	{moa-pkg 9}	–	o		
20	derivedGaugeTimestampPackage	{moa-pkg 5}	–	o		
c1: if M.3/3a or M.3/5a or M.3/6a or M.3/7a or M.3/8a or M.3/9a or M.3/10a or M.3/11a or M.3/12a or M.3/13a or M.3/15a or M.3/16a or M.3/17a or M.3/18a or M.3/19a or M.3/20a or M.3/22a then m else –. c2: if M.1/1b then m else –. c3: if M.3/6a or M.3/7a or M.3/8a or M.3/9a then m else –.						

## M.4.3 Attributes

Table M.4 – Attribute support

Index	Attribute template label	Value of object identifier for attribute	Constraints and values	Set by create		Get		Replace	
				Status	Support	Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	m		m		x	
2	nameBinding	{dmi-att 63}	–	o		m		c4	
3	packages	{dmi-att 66}	–	c5		c6		c7	
4	allomorpha	{dmi-att 50}	–	c8		c9		c4	
5	scannerId	{moa-att 25}	–	o		m		c4	
6	granularityPeriod	{moa-att 23}	–	m		m		m	
7	administrativeState	{dmi-att 31}	–	m		m		m	
8	operationalState	{dmi-att 35}	–	x		m		x	
9	availabilityStatus	{dmi-att 33}	off-duty required	c10		c11		c10	
10	periodSynchronizationTime	{moa-att 24}	–	c12		c12		c12	
11	startTime	{dmi-att 68}	–	c13		c13		c13	
12	stopTime	{dmi-att 69}	DMI default	c13		c13		c13	
13	intervalsOfDay	{dmi-att 57}	DMI default	c14		c14		c14	
14	weekMask	{dmi-att 71}	DMI default	c15		c15		c15	
15	schedulerName	{dmi-att 67}	–	c16		c17		c18	
16	observedObjectInstance	{moa-att 16}	–	m		m		x	
17	observedAttributeId	{moa-att 15}	–	m		m		x	
18	derivedGauge	{moa-att 2}	–	x		m		x	
19	previousScanCounterValue	{moa-att 1}	–	c19		c19		c19	
20	proceduralStatus	{dmi-att 36}	–	c20		c21		c20	
21	modulusValue	{moa-att 1}	–	c22		c22		c22	
22	previousScanGaugeValue	{moa-att 20}	–	c23		c23		c23	
23	severityIndicatingGaugeThreshold	{moa-att 18}	–	c24		c24		c24	
24	specificProblemIndicator	{moa-att 19}	–	c25		c25		c25	
25	derivedGaugeTimestamp	{moa-att 3}	–	c26		c27		c26	



Table M.4 (continued)

Index	Add		Remove		Set to default		Additional information
	Status	Support	Status	Support	Status	Support	
1	–		–		x		
2	–		–		c4		
3	c7		c7		c7		
4	c4		c4		c4		
5	–		–		c4		
6	–		–		c4		
7	–		–		c4		
8	–		–		x		
9	c10		c10		c10		
10	–		–		c4		
11	–		–		c4		
12	–		–		c13		
13	c14		c14		c14		
14	c15		c15		c15		
15	–		–		c18		
16	–		–		x		
17	–		–		x		
18	–		–		x		
19	–		–		c4		
20	–		–		c20		
21	–		–		c4		
22	–		–		c4		
23	c24		c24		c4		
24	–		–		c4		
25	–		–		c26		

c4: if M.1/1b then x else –.  
c5: if M.3/2a then o else –.  
c6: if M.3/2a then m else –.  
c7: if M.3/2a then x else –.  
c8: if M.3/3a then o else –.  
c9: if M.3/5a then m else –.  
c10: if M.3/5a then x else –.  
c11: if M.3/5a then m else –.  
c12: if M.3/10a then m else –.  
c13: if M.3/6a then m else –.  
c14: if M.3/7a then m else –.

**Table M.4 (concluded)**

c15: if M.3/8a then m else –.
c16: if M.3/9a then o else –.
c17: if M.3/9a then m else –.
c18: if M.3/9a then x else –.
c19: if M.3/15a then m else –.
c20: if M.3/15a or M.3/17a then x else –.
c21: if M.3/15a or M.3/17a then m else –.
c22: if M.3/16a then m else –.
c23: if M.3/17a then m else –.
c24: if M.3/18a then m else –.
c25: if M.3/19a then m else –.
c26: if M.3/20a then x else –.
c27: if M.3/20a then m else –.

**M.4.4 Notifications**

**Table M.5 – Notification support**

Index	Notification type template label	Value of object identifier for notification type	Constraints and values	Status	Support		Additional information
					Con-firmed	Non-con-firmed	
1	objectCreation	{ dmi-not 6 }	–	c28			
2	objectDeletion	{ dmi-not 7 }	–	c28			
3	attributeValueChange	{ dmi-not 1 }	–	c29			
4	stateChange	{ dmi-not 14 }	–	c30			
5	qualityofServiceAlarm	{ dmi-not 11 }	–	c31			
c28: if M.3/11a then m else –. c29: if M.3/12a then m else –. c30: if M.3/13a then m else –. c31: if M.3/18a then m else –.							

The detailed requirements for each of the above notifications for this managed object class are as specified in Table G.5. For this reason the table is not repeated here. The supplier of the implementation needs to complete a copy of Table G.5 for this managed object class if the support is different.

Annexe N<sup>10)</sup>**Formulaire MRCS pour les corrélations de noms**

(Cette annexe fait partie intégrante de la présente Recommandation | Norme internationale)

**N.1 Introduction**

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

The following abbreviation is used in this proforma:

moa-nb          joint-iso-itu-t ms(9) function(2) part11(11) nameBinding(6)

**N.2 Instructions for completing the MRCS proforma for name binding to produce a MRCS**

The supplier of the implementation shall state which items are supported in the tables below and if necessary provide additional information.

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

**N.3 Statement of conformance to the name binding****Table N.1 – Name binding support**

Index	Name binding template label	Value of object identifier for name binding	Constraints and values	Status	Support	Additional information
1	scanner–system	{moa-nb 0}	–	o		

**Table N.1 (concluded)**

Index	Subindex	Operation	Constraints and values	Status	Support	Additional information
1	1.1	Create support	–	c:m		
	1.1.1	Create with reference object	–	c:m		
	1.1.2	Create with automatic instance naming	–	c:m		
	1.2	Delete support	–	c:m		
	1.2.1	Delete only if no contained objects	–	c:m		
	1.2.2	Delete contained objects	–	c:x		

NOTE – The conflictingPackageScanner-system name binding in ITU-T Rec. X.738 | ISO/IEC 10164-13 is equivalent to the scanner-system name binding, and, in addition, provides for indicating errors.

**<sup>10)</sup> Droits de reproduction du formulaire MRCS**

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## SÉRIES DES RECOMMANDATIONS UIT-T

Série A	Organisation du travail de l'UIT-T
Série B	Moyens d'expression: définitions, symboles, classification
Série C	Statistiques générales des télécommunications
Série D	Principes généraux de tarification
Série E	Exploitation générale du réseau, service téléphonique, exploitation des services et facteurs humains
Série F	Services de télécommunication non téléphoniques
Série G	Systèmes et supports de transmission, systèmes et réseaux numériques
Série H	Systèmes audiovisuels et multimédias
Série I	Réseau numérique à intégration de services
Série J	Transmission des signaux radiophoniques, télévisuels et autres signaux multimédias
Série K	Protection contre les perturbations
Série L	Construction, installation et protection des câbles et autres éléments des installations extérieures
Série M	RGT et maintenance des réseaux: systèmes de transmission, de télégraphie, de télécopie, circuits téléphoniques et circuits loués internationaux
Série N	Maintenance: circuits internationaux de transmission radiophonique et télévisuelle
Série O	Spécifications des appareils de mesure
Série P	Qualité de transmission téléphonique, installations téléphoniques et réseaux locaux
Série Q	Commutation et signalisation
Série R	Transmission télégraphique
Série S	Equipements terminaux de télégraphie
Série T	Terminaux des services télématiques
Série U	Commutation télégraphique
Série V	Communications de données sur le réseau téléphonique
<b>Série X</b>	<b>Réseaux pour données et communication entre systèmes ouverts</b>
Série Y	Infrastructure mondiale de l'information
Série Z	Langages de programmation