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Technical Specification

3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Part 7: Basic Configuration Management IRP: CMIP Solution Set 1:1 (Release 1999)



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Foreword

This Technical Specification (TS) has been produced by the 3rd Generation Partnership Project (3GPP).

The present document is part 7 of a multi-part TS covering the 3rd Generation Partnership Project: Technical Specification Group Services and System Aspects; Telecommunication Management; Configuration Management, as identified below:

- Part 1: “3G Configuration Management: Concept and Requirements”;
- Part 2: “Notification Integration Reference Point: Information Service Version 1”;
- Part 3: “Notification Integration Reference Point: CORBA Solution Set Version 1:1”;
- Part 4: “Notification Integration Reference Point: CMIP Solution Set Version 1:1”;
- Part 5: “Basic Configuration Management IRP: Information Model Version 1”;
- Part 6: “Basic Configuration Management IRP CORBA Solution Set Version 1:1”;
- Part 7: “Basic Configuration Management IRP CMIP Solution Set Version 1:1”;**
- Part 8: “Name Convention for Managed Objects”.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

Configuration Management (CM), in general, provides the operator with the ability to assure correct and effective operation of the 3G-network as it evolves. CM actions have the objective to control and monitor the actual configuration on the NEs and NRs, and they may be initiated by the operator or functions in the OSs or NEs.

CM actions may be requested as part of an implementation programme (e.g. additions and deletions), as part of an optimisation programme (e.g. modifications), and to maintain the overall Quality of Service. The CM actions are initiated either as a single action on a Network Element of the 3G-network or as part of a complex procedure involving actions on many Network Elements.

The Itf-N interface for Configuration Management is built up by a number of Integration Reference Points (IRPs) and a related Name Convention, which realise the functional capabilities over this interface. The basic structure of the IRPs is defined in 3GPP TS 32.101 [1] and 3GPP TS 32.102 [2]. For CM, a number of IRPs (and the Name Convention) are defined, used by this as well as other technical specifications for telecom management produced by 3GPP. All these documents are included in Parts 2 and onwards of the 3GPP TS 32.106.

This document constitutes 32.106 Part 7 - Basic Configuration Management IRP CMIP Solution Set Version 1:1.

1 Scope

The present document defines a CMIP Solution Set for the Basic CM IRP introduced in 3GPP TS 32.106-5 [15]. The version of this CMIP Solution Set is 1:1, where the first “1” means that it corresponds to the Information Model version 1, and the second “1” means that it is the first CMIP Solution Set corresponding to Information Model version 1.

Clause 4 maps the protocol- and technology-independent operations, parameters, notifications and the Network Resource Model specified in the Basic CM IRP Information Model (Chapter 6 of 3GPP 3GPP TS 32.106-5 [15]) onto the corresponding CMIP/CMISE equivalences. The important technical aspects specific to this CMIP Solution Set are also described there. The GDMO definitions are introduced in Clause 5. Clause 6 contains the ASN.1 definitions related to the GDMO definitions provided in clause 5.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TS 32.101: "3G Telecom Management principles and high level requirements".
- [2] 3GPP TS 32.102: "3G Telecom Management architecture".
- [3] 3GPP TS 32.106 Part 2: "Notification IRP: Information Service".
- [4] ITU-T Recommendation M.3100 (07/95) - Generic Network Information Model
- [5] ITU-T Recommendation M.3100 Corrigendum 1 (07/98)"
- [6] ITU-T Recommendation M.3100 Amendment 1 (03/99)"
- [7] ITU-T Recommendation X.710 (1991) - Common Management Information Service Definition for CCITT Applications.
- [8] ITU-T Recommendation X.721 (02/92) - Information Technology - Open Systems Interconnection – Structure of Management Information: Definition of Management Information.
- [9] ITU-T Recommendation X.730 (01/92) - Information Technology - Open Systems Interconnection – Systems Management: Object Management Function.
- [10] ITU-T Recommendation X.731 (02/92) - Information Technology - Open Systems Interconnection - Systems Management: State Management Function.
- [11] ITU-T Recommendation X.732 (01/92) - Information technology - Open Systems Interconnection - Systems Management: Attributes for Representing Relationships.
- [12] ETS 300 622 (GSM 12.20): “Digital cellular telecommunications system (Phase 2); Base Station System (BSS) Management Information, June 1996”.
- [13] 3GPP TS 32.106 Part 8: “Name Convention for Managed Objects”.
- [14] 3GPP TS 32.106 Part 1: “3G Configuration Management”.

[15] 3GPP TS 32.106 Part 5: “3G Configuration Management IRP: Information Model Version 1”.

[16] 3GPP TS 32.106 Part 4: “Notification Integration Reference Point: CMIP Solution Set Version 1:1”.

3 Definitions and abbreviations

3.1 Definitions

The terms and definitions introduced in 3GPP TS 32.106-1, 3GPP TS 32.106-2 and 3GPP TS 32.106-5 apply in this document.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CMIP	Common Management Information Protocol
DN	Distinguished Name
GDMO	Guidelines for the Definition of Managed Objects
IDL	Interface Definition Language
IEC	International Electro-technical Commission
ISO	International Standards Organization
ITU-T	International Telecommunication Union, Telecommunication Sector
MIB	Management Information Base
MIM	Management Information Model
MIT	Management Information Tree (or Naming Tree)
MOC	Managed Object Class
MOI	Managed Object Instance
NE	Network Element
NR	Network Resource
NRM	Network Resource Model
TMN	Telecommunications Management Network

4 Basic aspects

4.1 CMIP specific aspects

This clause describes some technical details specific to CMIP technology, which are not easy to be handled in the related GDMO definitions.

4.1.1 About Associations

In the GDMO definitions, except the containment relations, all associations among different object classes and object instances are modelled with dedicated pointers of the concerned objects, i.e. various relation role attributes. These pointers are normal object attributes and don't require any special treatment. The service operation *getMoAttributes* defined in 3GPP TS 32.106-5 [15] and mapped on M-GET in this CMIP solution set is applied for managers to retrieve the values of these association pointers and the notification *attributeValueChange* is applied for agents to report any change of the values of these association pointers.

4.1.2 About getContainment

In the GDMO definition the containment relations of the Managed Object Classes and those of the managed object instances are described by the name bindings. The service operation *getContainment* is defined in 3GPP TS 32.106-5 [15]

to enable managers to retrieve the management information about the containment tree of the local MIB of an agent. This service operation is mapped to CMISE *M-GET* in this CMIP solution set. The information about the containment relation of a local MIB is consists of all MOIs abstracted from the output parameter *AttributeList* of a *M-GET* operation.

4.1.3 About `getMoAttributes`

The service operation *getMoAttributes* defined in the Basic CM IRP IM (3GPP TS 32.106-5 [15]) provides the basic functionality required to retrieve managed objects and their attributes, which is a subset of the functionality provided by the corresponding CMISE service operation *M-GET*. *getMoAttributes* is mapped to *M-GET* in this standard. This doesn't mean any limitation for using *M-GET*. Users of this standard are encouraged to use the whole functionality provided by *M-Get*, especially the input parameter "Attribute Identifier List" (see ITU-T X.710 [7]).

4.1.4 Allowed Alarms of MOCs

Neither the Basic CM IRP IM (3GPP TS 32.106-5 [15]) nor Alarm IRP IS (3GPP TS 32.111-2 [3]) specifies the allowed alarms of each MOC in the sense of *EventType* or/and *ExtendedEventType*. Table 1 defines the allowed alarms of each MOCs for this CMIP Solution Set. Further study of table 1 and its relationship to 3GPP TS 32.106-5 [15] is planned for Releases 4/5.

Table 1: Allowed alarms of MOCs

MOCs	Legal Alarms
G3SubNetwork	EnvironmentalAlarm
G3ManagedElement	environmentalAlarm equipmentAlarm communicationsAlarm processingErrorAlarm
ManagementNode	environmentalAlarm equipmentAlarm communicationsAlarm processingErrorAlarm
ManagedFunction	communicationsAlarm processingErrorAlarm QualityofServiceAlarm
IRPAgent	communicationsAlarm processingErrorAlarm
AlarmIRP	alarmListRebuiltAlarm

The MOCs, which do not appear in table 1, may not issue any alarm except the alarms that are defined allowed for its parent MOC(s).

4.2 Mapping

The semantics of the Basic CM IRP IM are defined in 3GPP TS 32.106-5 [15]. The definitions of the management services and management information defined there are independent of any implementation technology and protocol. This subclause maps these technology and protocol independent definitions onto the equivalencies of the CMIP Solution Set of the Basic CM IRP.

4.2.1 Mapping of Operations

Table 2 maps the operations defined in the Basic CM IRP Information Service onto the equivalent Actions/Services of the CMIP Solution Set. The CMIP Actions/Services are qualified as Mandatory (M) or Optional (O).

Table 2: Mapping of operations

Operations of Information Services of the Basic CM IRP defined in 3GPP TS 32.106-5 [15]	Equivalent operation of the CMIP solution set of the Basic CM IRP	Qualifier
getMoAttributes	M-GET (CMISE Service)	M
getContainment	M-GET (CMISE Service)	O
getBasicCmIRPVersion	M-ACTION getBasicCmIRPVersion (Action of MOC bcmControl)	M

4.2.2 Mapping of operation parameters

Tables 3, 4 and 5 in the following subclauses show the parameters of each operation defined in the Information Service described in 3GPP TS 32.106-5 [15] and their equivalences in the CMIP Solution Set.

4.2.2.1 Mapping of Parameters of 'getMoAttributes'

Table 3: Mapping of parameters of 'getMoAttributes'

Parameters of the operation 'getMoAttributes' defined in 3GPP TS 32.106-5 [15]	CMISE M-GET parameters	Qualifier
baseObjectInstance	Base object instance	M
scope	Scope	M
filter	Filter	M
no equivalence	Invoker identifier This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getMoAttributes'.	O
no equivalence	Basic object class This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getMoAttributes'.	M
no equivalence	Access Control This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getMoAttributes'.	O
no equivalence	Synchronisation This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getMoAttributes'.	O
attributeListIn	Attribute identifier list	M
managedObjectClass	Managed object class	M
managedObjectInstance	Managed object instance	M
attributeListOut	Attribute list	M
status	Errors	M
no equivalence	Current time This is a CMISE specific parameter. There is no equivalence parameter defined in the Information Service for 'getMoAttributes'.	O

4.2.2.2 Mapping of Parameters of 'getContainment'

Table 4: Mapping of parameters of 'getContainment'

Parameters of the operation 'getContainment' defined in 3GPP TS 32.106-5 [15]	CMISE M-GET parameter	Qualifier
baseObjectInstance	Base object instance	M
scope	Scope	O
no equivalence	filter This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getContainment'. The value of this parameter shall be 'empty'.	O
no equivalence	Invoker identifier This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getContainment'.	O
no equivalence	Basic object class This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getContainment'.	M
no equivalence	Access Control This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getContainment'.	O
no equivalence	Synchronisation This is a CMISE specific parameter. There is no equivalent parameter defined in the Information Service for 'getContainment'.	O
no equivalence	Attribute identifier list This is a CMISE specific parameter. There is no equivalence parameter defined in the Information Service for 'getContainment'. It is recommended to use 'objectClass' or/and 'nameBinding' defined in X.721 for the MOC top as the value of this input parameter.	O
containment	Managed object class	M
	Managed object instance	M
	Attribute list	M
status	Errors	M
no equivalence	Current time This is a CMISE specific parameter. There is no equivalence parameter defined in the Information Service for 'getMoAttributes'.	O

4.2.2.3 Mapping of parameters of 'getBasicCmIRPVersion'

Table 5: Mapping of parameters of "getBasicCmIRPVersion"

Operation parameters of the Basic CM IRP Information Services	CMISE M-ACTION Parameters	Qualifier
no equivalence	Invoke identifier	M
no equivalence	Linked identifier	O
no equivalence	Mode	M
no equivalence	Base object class (input)	M
no equivalence	Base object instance (input)	M
no equivalence	Scope	O
no equivalence	Filter	O
no equivalence	Managed object class (output)	O
no equivalence	Managed object instance (output)	O
no equivalence	Access control	O
no equivalence	Synchronization	O
no equivalence	Action type	M
no equivalence	Action information	O
no equivalence	Current time	O
versionNumberList, status	Action reply	O
no equivalence	Errors	O

4.2.3 Mapping of notifications

Table 6 maps the notifications defined in the Basic CM IRP Information Service onto the equivalent notification of the CMIP Solution Set. The CMIP notifications are qualified as Mandatory (M) or Optional (O).

Table 6: Mapping of notifications

Notifications of Basic CM IRP Information Service	Notifications of the Basic CM IRP CMIP solution set	Qualifier
notifyObjectCreation	objectCreation ITU-T X.721 {smi2Notification 6}	O
notifyObjectDeletion	objectDeletion ITU-T X.721 {smi2Notification 7}	O
notifyAttributeValueChange	attributeValueChange ITU-T X.721 {smi2Notification 1}	O

4.2.4 Mapping of notification parameters

Tables 7, 8 and 9 in the following subclauses show the parameters of each notification defined in the Information Service described in 3GPP TS 32.106-5 [15] and their equivalence in the CMIP Solution Set.

The mapping of common parameters of all kinds of notifications defined in 3GPP TS 32.106-2 [3] is described in 3GPP TS 32.106-4 [16] and will not be repeated in the present document. These common parameters are *managedObjectClass*, *managedObjectInstance*, *NotificationId*, *eventType*, *extendedEventType*, *eventTime* and *systemDN*.

4.2.4.1 Mapping of parameters of the notification 'notifyObjectCreation'

Table 7: Mapping of parameters of the notification 'notifyObjectCreation'

Parameters of the Basic CM IRP IS notification 'notifyObjectCreation'	Parameters of the CMIP SS notification 'objectCreation'	Qualifier
correlatedNotifications	correlatedNotifications	O
sourceIndicator	sourceIndicator	O
attributeList	attributeList	O
no equivalence	additionalText	O
no equivalence	additionalInformation	O

4.2.4.2 Mapping of parameters of the notification 'notifyObjectDeletion'

Table 8: Mapping of parameters of the notification 'notifyObjectDeletion'

Parameter of the Basic CM IRP IS notification 'notifyObjectDeletion'	parameter of the CMIP SS notification 'objectDeletion'	Qualifier
correlatedNotifications	correlatedNotifications	O
sourceIndicator	sourceIndicator	O
attributeList	attributeList	O
no equivalence	additionalText	O
no equivalence	additionalInformation	O

4.2.4.3 Mapping of parameters of the notification 'notifyAttributeValueChange'

Table 9: Mapping of parameters of the notification 'notifyAttributeValueChange'

Parameter of the Basic CM IRP IS notification 'notifyAttributeValueChange'	parameter of the CMIP SS notification 'attributeValueChange'	Qualifier
correlatedNotifications	correlatedNotifications	O
sourceIndicator	sourceIndicator	O
attributeValueChangeDefinition	attributeValueChangeDefinition	M
no equivalence	attributeIdentifierList	O
no equivalence	additionalText	O
no equivalence	additionalInformation	O

4.2.5 Mapping of MOCs

Table 10 maps the MOCs defined in the CM IRP Network Resource Model onto the equivalent MOCs of the CMIP Solution Set.

Table 10: Mapping of MOCs

MOCs of the Basic CM IRP NRM	MOCs of the CMIP SS
AlarmIRP	alarmControl (defined in 3GPP TS 32.111-4 [16])
AucFunction	aucFunction
BasicCmIRP	bcmControl
G3ManagedElement	g3ManagedElement
G3SubNetwork	g3SubNetwork
GgsnFunction	ggsnFunction
GmscFunction	gmscFunction
HlrFunction	hlrFunction
IRPAgent	irpAgent
IubLink	iubLink
ManagedFunction	managedFunction
ManagementNode	managementNode
MeContext	meContext
MscFunction	mscFunction
NodeBFunction	nodeBFunction
NotificationIRP	notificationControl (defined in 3GPP TS 32.106-4 [16])
RncFunction	rncFunction
SgsnFunction	sgsnFunction
SmsGmscFunction	smsGmscFunction
SmsIwmscFunction	smsIwmscFunction
UtranCell	utranCell
VlrFunction	vlrFunction

4.2.6 Mapping of Attributes

Table 11: Mapping of Attributes

Attribute defined in 3GPP TS 32.106-5 [15]	Attribute defined in this CMIP SS
alarmIRPIId	alarmControllId
aucFunctionId	aucFunctionId
basicCmIRPIId	basicCmControllId
bgFunctionId	bgFunctionId
dnPrefix	system Title
eirFunctionId	eirFunctionId
g3ManagedElementId	g3ManagedElementId
g3SubNetworkId	g3SubNetworkId
ggsnFunctionId	ggsnFunctionId
gmscFunctionId	gmscFunctionId
hlrFunctionId	hlrFunctionId
irpAgentId	irpAgentId
irpVersion	supportedBcmIRPVersions supportedAlarmIRPVersion (3GPP TS 32.111-4 [16]) supportedNotificationIRPVersion (3GPP TS 32.106-4 [16])
iubLinkId	iubLinkId
iubLink-NodeBFunction	iubLinkNodeBFunctionLink
iubLink-UtranCell	iubLinkUtranCellLink
locationName	locationName
managedBy	meManagedBy
managedElementType	managedElementType
managementNodeId	managementNodeId
manages	mnManagesList
meContextId	meContextId
mscFunctionId	mscFunctionId
vlrFunctionId	vlrFunctionId
nodeBFunctionId	nodeBFunctionId
nodeBFunction-IubLink	nodeBiubLinkLink
notificationIRPIId	notificationControllId
rncFunctionId	rncFunctionId
sgsnFunctionId	sgsnFunctionId
smsGmscFunctionId	smsGmscFunctionId
smsIwmscFunctionId	smsIwmscFunctionId
systemDN	no equivalence
userDefinedState	userDefinedState
userLabel	userLabel
utranCellId	utranCellId
utranCell-IubLink	utranCelliubLinkLink
vendorName	vendorName

5 GDMO Definitions

5.1 Managed Object Classes (MOCs)

aucFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

aucFunctionBasicPackage PACKAGE

BEHAVIOUR

aucFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"An instance of MOC represents the logical function of an AUC";;

ATTRIBUTES

aucFunctionId GET;;;

REGISTERED AS {ts32-106-7BCMObjectClass 1};

bcmControl MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

bcmControlBasicPackage,

bcmIRPVersionPackage;

REGISTERED AS {ts32-106-7BCMObjectClass 2};

bgFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

bgFunctionBasicPackage PACKAGE

BEHAVIOUR

bgFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"An instance of MOC represents the logical function of an BG";;

ATTRIBUTES

bgFunctionId GET;;;

REGISTERED AS {ts32-106-7BCMObjectClass 3};

eirFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

eirFunctionBasicPackage PACKAGE

BEHAVIOUR

eirFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"An instance of MOC represents the logical function of an EIR";;

ATTRIBUTES

eirFunctionId GET;;;

REGISTERED AS {ts32-106-7BCMObjectClass 4};

ggsnFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

ggsnFunctionBasicPackage PACKAGE

BEHAVIOUR

ggsnFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"An instance of MOC represents the logical function of an GGSN";;

ATTRIBUTES

ggsnFunctionId GET;;;

REGISTERED AS {ts32-106-7BCMObjectClass 5};

g3ManagedElement MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

g3ManagedElementBasicPackage,

g3ManagedElementAssociationPackage;

CONDITIONAL PACKAGES

"Recommendation M.3100: 1995":createDeleteNotificationsPackage PRESENT IF

"the objectCreation and the objectDeletion defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":attributeValueChangeNotificationPackage PRESENT IF

"the attributeValueChange notifications defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":processingErrorAlarmPackage PRESENT IF

"the processingErrorAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":environmentalAlarmPackage PRESENT IF

"the environmentalAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

communicationsAlarmPackage PRESENT IF

"the communicationsAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

equipmentAlarmPackage PRESENT IF

"the equipmentAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.";

REGISTERED AS {ts32-106-7BCMObjectClass 6};

g3SubNetwork MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

g3SubNetworkBasicPackage;

CONDITIONAL PACKAGES

"Recommendation M.3100: 1995":attributeValueChangeNotificationPackage PRESENT IF

"the attributeValueChange notifications defined in Recommendation X.721
are supported by an instance of this class.",

"Recommendation M.3100: 1995":environmentalAlarmPackage PRESENT IF

"the environmentalAlarm notifications defined in Recommendation X.721
are supported by an instance of this class.";

REGISTERED AS {ts32-106-7BCMObjectClass 7};

hlrFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

hlrFunctionBasicPackage PACKAGE

BEHAVIOUR

hlrFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"An instance of MOC represents the logical function of a HLR";;

ATTRIBUTES

hlrFunctionId GET;;;

REGISTERED AS {ts32-106-7BCMObjectClass 8};

gmscFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

gmscFunctionBasicPackage PACKAGE

BEHAVIOUR

gmscFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"An instance of MOC represents the logical function of a GMSC";;

ATTRIBUTES

gmscFunctionId GET;;;

REGISTERED AS {ts32-106-7BCMObjectClass 9};

irpAgent MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

irpAgentBasicPackage;

CONDITIONAL PACKAGES

"Recommendation M.3100: 1995":processingErrorAlarmPackage PRESENT IF

"the processingErrorAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

communicationsAlarmPackage PRESENT IF

"the communicationsAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.";

REGISTERED AS {ts32-106-7BCMObjectClass 10};

iubLink MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

iubLinkBasicPackage,

iubLinkAssociationPackage;

REGISTERED AS {ts32-106-7BCMObjectClass 11};

managedFunction MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

managedFunctionBasicPackage;

CONDITIONAL PACKAGES

"Recommendation M.3100: 1995":createDeleteNotificationsPackage PRESENT IF

"the objectCreation and the objectDeletion defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":attributeValueChangeNotificationPackage PRESENT IF

"the attributeValueChange notifications defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":processingErrorAlarmPackage PRESENT IF

"the processingErrorAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

communicationsAlarmPackage PRESENT IF

"the communicationsAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

qualityOfServiceAlarmPackage PRESENT IF

"the qualityOfServiceAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.";

REGISTERED AS {ts32-106-7BCMObjectClass 12};

managementNode MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

managementNodeBasicPackage,
managementNodeAssociationPackage;

CONDITIONAL PACKAGES

"Recommendation M.3100: 1995":createDeleteNotificationsPackage PRESENT IF

"the objectCreation and the objectDeletion defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":attributeValueChangeNotificationPackage PRESENT IF

"the attributeValueChange notifications defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":processingErrorAlarmPackage PRESENT IF

"the processingErrorAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":environmentalAlarmPackage PRESENT IF

"the environmentalAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

communicationsAlarmPackage PRESENT IF

"the communicationsAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

equipmentAlarmPackage PRESENT IF

"the equipmentAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.";

REGISTERED AS {ts32-106-7BCMObjectClass 13};

meContext MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

meContextBasicPackage;

CONDITIONAL PACKAGES

"Recommendation M.3100: 1995":createDeleteNotificationsPackage PRESENT IF

"the objectCreation and the objectDeletion defined in Recommendation X.721 are supported by an instance of this class.";

REGISTERED AS {ts32-106-7BCMObjectClass 14};

mscFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

mscFunctionBasicPackage PACKAGE

BEHAVIOUR

mscFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"An instance of MOC represents the logical function of a MSC";;

ATTRIBUTES

mscFunctionId GET;;;
REGISTERED AS {ts32-106-7BCMObjectClass 15};

nodeBFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;
CHARACTERIZED BY
nodeBFunctionBasicPackage,
nodeBFunctionAssociationPackage;
REGISTERED AS {ts32-106-7BCMObjectClass 16};

rncFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;
CHARACTERIZED BY
rncFunctionBasicPackage;
REGISTERED AS {ts32-106-7BCMObjectClass 17};

sgsnFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;
CHARACTERIZED BY
sgsnFunctionBasicPackage PACKAGE
BEHAVIOUR
sgsnFunctionBasicPackageBehaviour BEHAVIOUR
DEFINED AS
"An instance of MOC represents the logical function of an SGSN";
ATTRIBUTES
sgsnFunctionId GET;;;
REGISTERED AS {ts32-106-7BCMObjectClass 18};

smsGmscFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;
CHARACTERIZED BY
smsGmscFunctionBasicPackage PACKAGE
BEHAVIOUR
smsGmscFunctionBasicPackageBehaviour BEHAVIOUR
DEFINED AS
"An instance of MOC represents the logical function of an smsGMSC";
ATTRIBUTES
smsGmscFunctionId GET;;;
REGISTERED AS {ts32-106-7BCMObjectClass 19};

smsIwmscFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

smsIwmscFunctionBasicPackage PACKAGE

BEHAVIOUR

smsIwmscFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"An instance of MOC represents the logical function of an smsIWMSC";;

ATTRIBUTES

smsIwmscFunctionId GET;;;

REGISTERED AS {ts32-106-7BCMObjectClass 20};

utranCell MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

utranCellBasicPackage,

utranCellIubLinkAssociationPackage;

REGISTERED AS {ts32-106-7BCMObjectClass 21};

vlrFunction MANAGED OBJECT CLASS

DERIVED FROM managedFunction;

CHARACTERIZED BY

vlrFunctionBasicPackage PACKAGE

BEHAVIOUR

vlrFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"An instance of MOC represents the logical function of a VLR";;

ATTRIBUTES

vlrFunctionId GET;;;

REGISTERED AS {ts32-106-7BCMObjectClass 22};

5.2 Packages

bcmControlBasicPackage PACKAGE

BEHAVIOUR

bcmControlBasicPackageBehaviour;

ATTRIBUTES

bcmControlId GET;

REGISTERED AS {ts32-106-7BCMPackage 1};

bcmIRPVersionPackage PACKAGE

BEHAVIOUR

bcmIRPVersionPackageBehaviour;

ATTRIBUTES

supportedBcmIRPVersions GET;

ACTIONS

getBcmIRPVersion;

REGISTERED AS {ts32-106-7BCMPackage 2};

communicationsAlarmPackage PACKAGE

NOTIFICATIONS

"Recommendation X.721:1992": communicationsAlarm;

REGISTERED AS {ts32-106-7BCMPackage 3};

equipmentAlarmPackage PACKAGE

NOTIFICATIONS

"Recommendation X.721:1992": equipmentAlarm;

REGISTERED AS {ts32-106-7BCMPackage 4};

g3ManagedElementAssociationPackage PACKAGE

BEHAVIOUR

g3ManagedElementAssociationPackageBehaviour;

ATTRIBUTES

meManagedBy GET;

REGISTERED AS {ts32-106-7BCMPackage 5};

g3ManagedElementBasicPackage PACKAGE

BEHAVIOUR

g3ManagedElementBasicPackageBehaviour;

ATTRIBUTES

managedElementId GET,

managedElementType GET,

userDefinedState GET,

"Recommendation X.721: 1992" : systemTitle GET,

"Recommendation M.3100: 1995" : userLabel GET,

"Recommendation M.3100: 1995" : vendorName GET,

"Recommendation M.3100: 1995" : locationName GET;

REGISTERED AS {ts32-106-7BCMPackage 6};

g3SubNetworkBasicPackage PACKAGE

BEHAVIOUR

g3SubNetworkBasicPackageBehaviour;

ATTRIBUTES

g3SubNetworkId GET,

"Recommendation X.721: 1992": systemTitle GET,

"Recommendation M.3100: 1995" : userLabel GET;
REGISTERED AS {ts32-106-7BCMPackage 7};

irpAgentBasicPackage PACKAGE

BEHAVIOUR

irpAgentBasicPackageBehaviour;

ATTRIBUTES

irpAgentId GET,

"Recommendation M.3100: 1995" : userLabel GET,

supportedIRPs GET;

REGISTERED AS {ts32-106-7BCMPackage 8};

iubLinkAssociationPackage PACKAGE

BEHAVIOUR

iubLinkAssociationPackageBehaviour;

ATTRIBUTES

iubLinkNodeBFunctionLink GET,

iubLinkUtranCellLink GET;

REGISTERED AS {ts32-106-7BCMPackage 9};

iubLinkBasicPackage PACKAGE

BEHAVIOUR

iubLinkBasicPackageBehaviour;

ATTRIBUTES

iubLinkId GET;

REGISTERED AS {ts32-106-7BCMPackage 11};

managedFunctionBasicPackage PACKAGE

BEHAVIOUR

managementFunctionBasicPackageBehaviour;

ATTRIBUTES

"Recommendation M.3100: 1995" : userLabel GET;

REGISTERED AS {ts32-106-7BCMPackage 12};

managementNodeAssociationPackage PACKAGE

BEHAVIOUR

managementNodeAssociationPackageBehaviour;

ATTRIBUTES

mnManagesList GET;

REGISTERED AS {ts32-106-7BCMPackage 13};

managementNodeBasicPackage PACKAGE

ATTRIBUTES

managementNodeId GET,
userDefinedState GET,
"Recommendation M.3100: 1995" : userLabel GET,
"Recommendation M.3100: 1995" : vendorName GET,
"Recommendation M.3100: 1995" : locationName GET;

REGISTERED AS {ts32-106-7BCMPackage 14};

meContextBasicPackage PACKAGE**BEHAVIOUR**

meContextBasicPackageBehaviour;

ATTRIBUTES

meContextId GET,
"Recommendation X.721: 1992" : systemTitle GET;

REGISTERED AS {ts32-106-7BCMPackage 15};

nodeBFunctionAssociationPackage PACKAGE**BEHAVIOUR**

nodeBFunctionAssociationPackageBehaviour;

ATTRIBUTES

nodeBiubLinkLink GET;

REGISTERED AS {ts32-106-7BCMPackage 17};

nodeBFunctionBasicPackage PACKAGE**BEHAVIOUR**

nodeBFunctionBasicPackageBehaviour;

ATTRIBUTES

nodeBFunctionId GET;

REGISTERED AS {ts32-106-7BCMPackage 18};

qualityOfServiceAlarmPackage PACKAGE**NOTIFICATIONS**

"Recommendation X.721:1992": qualityofServiceAlarm;

REGISTERED AS {ts32-106-7BCMPackage 19};

rncFunctionBasicPackage PACKAGE**BEHAVIOUR**

rncFunctionBasicPackageBehaviour;

ATTRIBUTES

rncFunctionId GET;

REGISTERED AS {ts32-106-7BCMPackage 20};

utranCellIubLinkAssociationPackage PACKAGE

BEHAVIOUR

utranCellIubLinkAssociationPackageBehaviour;

ATTRIBUTES

utranCellIubLinkLink GET;

REGISTERED AS {ts32-106-7BCMPackage 21};

utranCellBasicPackage PACKAGE

BEHAVIOUR

utranCellBasicPackageBehaviour;

ATTRIBUTES

utranCellId GET;

REGISTERED AS {ts32-106-7BCMPackage 23};

5.3 Actions

getBCmIRPVersion ACTION

BEHAVIOUR

getBCmIRPVersionBehaviour;

MODE CONFIRMED;

WITH REPLY SYNTAX TS32-106-7TypeModule.GetBCmIRPVersionReply;

REGISTERED AS {ts32-106-7BCMAction 1};

5.4 Attributes

aucFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule.GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

aucFunctionIdBehaviour;

REGISTERED AS {ts32-106-7BCMAtribute 1};

bcmControlId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule.GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

bcmControlIdBehaviour;

REGISTERED AS {ts32-106-7BCMAtribute 2};

bgFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule.GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

bgFunctionIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 3};

eirFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

eirFunctionIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 4};

ggsnFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

ggsnFunctionIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 5};

gmscFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

gmscFunctionIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 6};

g3SubNetworkId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

g3SubNetworkIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 7};

hlrFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

hlrFunctionIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 8};

irpAgentId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

irpAgentIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 9};

iubLinkNodeBFunctionLink ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectPointer;

MATCHES FOR EQUALITY;

BEHAVIOUR

iubLinkNodeBFunctionLinkBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 10};

iubLinkUtranCellLink ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectPointerList;

MATCHES FOR EQUALITY;

BEHAVIOUR

iubLinkUtranCellLinkBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 11};

iubLinkId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

iubLinkIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 12};

managedElementId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

managedElementIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 13};

managedElementType ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .ManagedElementType;

MATCHES FOR EQUALITY;

BEHAVIOUR

managedElementBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 14};

managementNodeId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

managmentNodeIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 15};

meContextId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

meContextIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 16};

meManagedBy ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectPointer;

MATCHES FOR EQUALITY;

BEHAVIOUR

meManagedByBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 17};

mnManagesList ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectPointerList;

MATCHES FOR EQUALITY;

BEHAVIOUR

mnManagesListBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 18};

mscFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

mscFunctionIdBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 19};

nodeBiubLinkLink ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectPointer;

MATCHES FOR EQUALITY;

BEHAVIOUR

nodeBiubLinkLinkBehaviour;

REGISTERED AS {ts32-106-7BCMAAttribute 20};

nodeBFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;

MATCHES FOR EQUALITY;
BEHAVIOUR
nodeBFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 22};

rncFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
rncFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 23};

sgsnFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
sgsnFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 24};

smsIwmscFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
smsIwmscFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 25};

smsGmscFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
smsGmscFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 26};

supportedBcmIRPVersions ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .SupportedBcmIRPVersions;
MATCHES FOR EQUALITY;
BEHAVIOUR
supportedBcmIRPVersionsBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 27};

supportedIRPs ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .SupportedIRPs;

MATCHES FOR EQUALITY;
BEHAVIOUR
supportedIRPsBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 28};

vlrFunctionId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
vlrFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 29};

utranCelliubLinkLink ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectPointer;
MATCHES FOR EQUALITY;
BEHAVIOUR
utranCelliubLinkLinkBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 30};

userDefinedState ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .UserDefinedState;
MATCHES FOR EQUALITY;
BEHAVIOUR
userDefinedStateBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 32};

utranCellId ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
utranCellIdBehaviour;
REGISTERED AS {ts32-106-7BCMAAttribute 33};

5.5 Name Bindings

alarmControl-irpAgent NAME BINDING

SUBORDINATE OBJECT CLASS "3GPP TS 32.111-4":alarmControl;
NAMED BY SUPERIOR OBJECT CLASS irpAgent;
WITH ATTRIBUTE "3GPP TS 32.111-4":alarmControlId;
BEHAVIOUR
alarmControl-irpAgentBehavior;
CREATE WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 1};

aucFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS aucFunction;

NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;

WITH ATTRIBUTE aucFunctionId;

BEHAVIOUR

aucFunction-g3ManagedElementBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 2};

bcmControl-irpAgent NAME BINDING

SUBORDINATE OBJECT CLASS bcmControl;

NAMED BY SUPERIOR OBJECT CLASS irpAgent;

WITH ATTRIBUTE bcmControlId;

BEHAVIOUR

bcmControl-irpAgentBehavior;

CREATE WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 3};

bsFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS bgFunction;

NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;

WITH ATTRIBUTE bgFunctionId;

BEHAVIOUR

bgFunction-g3ManagedElementBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 4};

eirFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS eirFunction;

NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;

WITH ATTRIBUTE eirFunctionId;

BEHAVIOUR

eirFunction-g3ManagedElementBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 5};

ggsnFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS ggsnFunction;
NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;
WITH ATTRIBUTE ggsnFunctionId;
BEHAVIOUR
 ggsnFunction-g3ManagedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 6};

gmscFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS mscFunction;
NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;
WITH ATTRIBUTE gmscFunctionId;
BEHAVIOUR
 gmscFunction-g3ManagedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 7};

g3ManagedElement-meContext NAME BINDING

SUBORDINATE OBJECT CLASS g3ManagedElement;
NAMED BY SUPERIOR OBJECT CLASS meContext;
WITH ATTRIBUTE managedElementId;
BEHAVIOUR
 g3ManagedElement-meContextBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 8};

g3ManagedElement-g3SubNetwork NAME BINDING

SUBORDINATE OBJECT CLASS g3ManagedElement;
NAMED BY SUPERIOR OBJECT CLASS g3SubNetwork;
WITH ATTRIBUTE managedElementId;
BEHAVIOUR
 g3ManagedElement-g3SubNetworkBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 9};

hlrFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS hlrFunction;

NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;
WITH ATTRIBUTE hlrFunctionId;
BEHAVIOUR
 hlrFunction-g3ManagedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 10};

irpAgent-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS irpAgent;
NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;
WITH ATTRIBUTE irpAgentId;
BEHAVIOUR
 irpAgent-g3ManagedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 11};

irpAgent-g3SubNetwork NAME BINDING

SUBORDINATE OBJECT CLASS irpAgent;
NAMED BY SUPERIOR OBJECT CLASS g3SubNetwork;
WITH ATTRIBUTE irpAgentId;
BEHAVIOUR
 irpAgent-g3SubNetworkBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 12};

irpAgent-managementNode NAME BINDING

SUBORDINATE OBJECT CLASS irpAgent;
NAMED BY SUPERIOR OBJECT CLASS managementNode;
WITH ATTRIBUTE irpAgentId;
BEHAVIOUR
 irpAgent-managementNodeBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 13};

iubLink-rncFunction NAME BINDING

SUBORDINATE OBJECT CLASS iubLink;
NAMED BY SUPERIOR OBJECT CLASS rncFunction;
WITH ATTRIBUTE iubLinkId;

BEHAVIOUR

iubLink-rncFunctionBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 14};

managementNode-g3SubNetwork NAME BINDING

SUBORDINATE OBJECT CLASS managementNode;

NAMED BY SUPERIOR OBJECT CLASS g3SubNetwork;

WITH ATTRIBUTE managementNodeId;

BEHAVIOUR

managementNode-g3SubNetworkBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 15};

meContext-g3SubNetwork NAME BINDING

SUBORDINATE OBJECT CLASS meContext;

NAMED BY SUPERIOR OBJECT CLASS g3SubNetwork;

WITH ATTRIBUTE meContextId;

BEHAVIOUR

meContext-g3SubNetworkBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 16};

mscFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS mscFunction;

NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;

WITH ATTRIBUTE mscFunctionId;

BEHAVIOUR

mscFunction-g3ManagedElementBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 17};

nodeBFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS nodeBFunction;

NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;

WITH ATTRIBUTE nodeBFunctionId;

BEHAVIOUR

nodeBFunction-g3ManagedElementBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 18};

notificationControl-irpAgent NAME BINDING

SUBORDINATE OBJECT CLASS "3GPP TS 32.106-4".notificationControl;
NAMED BY SUPERIOR OBJECT CLASS irpAgent;
WITH ATTRIBUTE "3GPP TS 32.106-4".notificationControlId;
BEHAVIOUR
notificationControl-irpAgentBehavior;
CREATE WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 19};

rncFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS rncFunction;
NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;
WITH ATTRIBUTE rncFunctionId;
BEHAVIOUR
rncFunction-g3ManagedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 20};

sgsnFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS sgsnFunction;
NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;
WITH ATTRIBUTE sgsnFunctionId;
BEHAVIOUR
sgsnFunction-g3ManagedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-106-7BCMNameBinding 21};

smsGmscFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS smsGmscFunction;
NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;
WITH ATTRIBUTE smsGmscFunctionId;
BEHAVIOUR
smsGmscFunction-g3ManagedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 22};

smsIwmscFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS smsIwmscFunction;

NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;

WITH ATTRIBUTE smsIwmscFunctionId;

BEHAVIOUR

 smsIwmscFunction-g3ManagedElementBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 23};

utranCell-rncFunction NAME BINDING

SUBORDINATE OBJECT CLASS utranCell;

NAMED BY SUPERIOR OBJECT CLASS rncFunction;

WITH ATTRIBUTE utranCellId;

BEHAVIOUR

 utranCell-rncFunctionBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 24};

vlrFunction-g3ManagedElement NAME BINDING

SUBORDINATE OBJECT CLASS vlrFunction;

NAMED BY SUPERIOR OBJECT CLASS g3ManagedElement;

WITH ATTRIBUTE vlrFunctionId;

BEHAVIOUR

 vlrFunction-g3ManagedElementBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-106-7BCMNameBinding 25};

5.6 Behaviours

alarmControl-irpAgentBehavior BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a irpAgent contains and controls an alarmControl. When automatic instance naming is used, the choice of name bindings left as a local matter.";

aucFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a aucFunction instance.";

aucFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a aucFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

bcmControlBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"The object class bcmControl offers the functions defined in the CM IRP IS enabling to control the behaviour and to retrieve the management information related a Basic CM IRP agent.

An instance of the 'BCmControl' MOC is identified by the value of the attribute 'bcmControlId'.";

bcmControlIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute names an instance of the 'bcmControl' object class.";

bcmIRPVersionPackageBehaviour BEHAVIOUR

DEFINED AS

"This package has been defined to allow the Manager to get information about the Basic CM IRP versions supported by the Agent.

The attribute 'supportedBCmIRPVersions' indicates all versions of the Basic IRP currently supported by the Agent. .

With the action 'getBasicCmIRPVersion' a manager can find out the versions of the Basic CM IRP CMIP solution sets the Agent supports.";

bcmControl-irpAgentBehavior BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a irpAgent contains and controls an bcmControl. When automatic instance naming is used, the choice of name bindings left as a local matter.";

bgFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a bgFunction instance.";

bgFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains

and controls a bgFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

eirFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a eirFunction instance.";

eirFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a eirFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

getBCmIRPVersionBehaviour BEHAVIOUR

DEFINED AS

"A Manager invokes this action to enquiry about the versions of the Basic CM IRP CMIP solution set which the concerned Agent supports.

The 'Action information' field contains no data:

The 'Action response' is composed of the following data:

* versionNumbersList It contains a list of versions supported by the concerned agent which are backwards compatible. A list containing no element, i.e. a NULL list means that the concerned agent doesn't support any version of the Notification IRP.

* status It contains the results of this action. Possible values: noError (0), error (the value indicates the reason of the error).";

ggsnFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a ggsnFunction instance.";

ggsnFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a ggsnFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

g3ManagedElement-meContextBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a meContext contains and controls a 3gManagedElement. When automatic instance naming is used, the choice of name bindings left as a local matter.";

g3ManagedElement-g3SubNetworkBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gMnetwork contains and controls a 3gManagedElement. When automatic instance naming is used, the choice of name bindings left as a local matter.";

g3ManagedElementAssociationPackageBehaviour BEHAVIOUR

DEFINED AS

"The attribute 'meManagedBy' points to the g3ManagmentNode instance which manages this g3ManagedElement instance. It implements the attribute *managedBy* of MOC G3ManagedElement defined in TS32.106-5.";

g3ManagedElementBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"This managed object class represents telecommunications equipment within the telecommunications network that performs managed element functions, i.e. provides support and/or service to the subscriber. A managed element communicates with a manager (directly or indirectly) over one or more standard interfaces for the purpose of being monitored and/or controlled. A managed element contains equipment that may or may not be geographically distributed. A Managed Element is often referred to as a 'node' or a 'network element'.";

g3SubNetworkBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"This managed object class represents collections of interconnected telecommunications and management objects (logical or physical) capable of exchanging information. A network may be nested within another (larger) network, thereby forming a containment relationship.";

g3SubNetworkIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute names an instance of the '3gSubNetwork' object class.";

gmscFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a gmscFunction instance.";

gmscFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a gmscFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

hlrFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a hlrFunction instance.";

hlrFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a hlrFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

irpAgentBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"This MOC may have only one instance in R99. The instance of this MOC represents the behavior of an IRP Agent which implements one or more IRPs, e.g. AlarmIRP defined in 3GPP TS 32.111-2, NotificationIRP defined in TS32.106-2 and Basic CM IRP defined in 3GPP TS 32.106-5";

irpAgentIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies an irpAgent instance.";

irpAgent-g3SubNetworkBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a g3SubNetwork contains and controls a irpAgent. When automatic instance naming is used, the choice of name bindings left as a local matter.";

irpAgent-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a g3ManagedElement contains and controls a irpAgent. When automatic instance naming is used, the choice of name bindings left as a local matter.";

irpAgent-managementNodeBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a managementNode contains and controls a irpAgent. When automatic instance naming is used, the choice of name bindings left as a local matter.";

iubLinkNodeBFunctionLinkBehaviour BEHAVIOUR

DEFINED AS

"This attribute points to the nodeBFunction instance which this iubLink instance connects directly to.";

iubLink-rncFunctionBehaviour BEHAVIOUR**DEFINED AS**

"The name binding represents a relationship in which a rncFunction contains and controls a iubLink. When automatic instance naming is used, the choice of name bindings left as a local matter.";

iubLinkAssociationPackageBehaviour BEHAVIOUR**DEFINED AS**

"The attribute 'iubLinkNodeBFunctionLink' points to the nodeBFunction instance which this iubLink instance connects to. The attribute 'iubLinkUtranCellLink' points from an iubLink to a list of utranCell.";

iubLinkBasicPackageBehaviour BEHAVIOUR**DEFINED AS**

"This managed object class models the Iub Link between a Node-B and a RNC.";

iubLinkIdBehaviour BEHAVIOUR**DEFINED AS**

"This attribute names an instance of the 'iubLink' object class.";

iubLinkUtranCellLinkBehaviour BEHAVIOUR**DEFINED AS**

"This attribute points from an iubLink instance to a list of utranCell instance";

managedElementBehaviour BEHAVIOUR**DEFINED AS**

"This is a multi-value attribute specifying the sub-classes of managedFunction this managedElement instance is containing, for instances, RNC, NodeB or RNC+NodeB.";

managedElementIdBehaviour BEHAVIOUR**DEFINED AS**

"This attribute names an instance of the '3gManagedElement' object class.";

managementFunctionBasicPackageBehaviour BEHAVIOUR**DEFINED AS**

"This Managed Object class corresponds to the class gsmManagedFunction defined in GSM 12.20 0 and is provided for sub-classing only. It provides the attributes

that are common to functional MO classes. Note that a managed element may contain several managed functions. The ManagedFunction may be extended in the future if more common characteristics to functional objects are identified.";

managementNode-g3SubNetworkBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gSubNetwork contains and controls a managementNode. When automatic instance naming is used, the choice of name bindings left as a local matter.";

managementNodeAssociationPackageBehaviour BEHAVIOUR

DEFINED AS

"The attribute 'mnManagesList' points to all g3ManagedElement instances which this managementNode instance manages. It implements the attribute *manages* of MOC ManagementNode defined in TS32.106-5.";

managementNodeBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"This managed object class represents a telecommunications management system (EM or NM) within the TMN, that manages a number of Managed Elements. The management system communicates with the MEs directly or indirectly over one or more standard interfaces for the purpose of monitoring and/or controlling these MEs.";

managementNodeIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute names an instance of the 'managmentNode' object class.";

meContext-g3SubNetworkBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gSubnetwork contains and controls a meContext. When automatic instance naming is used, the choice of name bindings left as a local matter.";

meContextBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"This managed object class represents the Managed Element from the network perspective. It can be used to hold surveillance status information, and also planning status information for the case when the managed element is part of a planned configuration in a management system, before it has been taken into service. It can also support unambiguous naming in all cases, also for scenarios when the Managed Elements have been pre-configured where some of them may have equal names (to avoid necessary administration to make all of them globally

unique at creation/installation time). Thus, by means of globally unique names for the MEContext instances, and by using these in the DN, the DNs for all MEs (and MOIs contained in them) can be assured to be globally unique, even in such a scenario as described above.";

meContextIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute names an instance of the 'MEContext' object class.";

meManagedByBehaviour BEHAVIOUR

DEFINED AS

"This attribute points to the managementNode instance which manages the related 3gManagedElement instance.";

mnManagesListBehaviour BEHAVIOUR

DEFINED AS

"This attribute points to all 3gManagedElement instances which this 3gManagementNode instance manages.";

mscFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a mscFunction instance.";

mscFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a mscFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

nodeBiubLinkLinkBehaviour BEHAVIOUR

DEFINED AS

"This attribute points to the IubLink instance which connects to the related nodeBFunction instance directly.";

nodeBFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a nodeBFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

nodeBFunctionAssociationPackageBehaviour BEHAVIOUR

DEFINED AS

"The attribute 'nodeBiubLinkLink' points to the iubLink instance which connects to this nodeBFunction instance directly. It implements the attribute nodeB-IubLink of MOC NodeBFunction defined in TS32.106-5.";

nodeBFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"This managed object class represents the NodeB functionality.";

nodeBFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute names an instance of the 'nodeBFunction' object class.";

notificationControl-irpAgentBehavior BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a irpAgent contains and controls an otificationControl. When automatic instance naming is used, the choice of name bindings left as a local matter.";

rncFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a rncFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

rncFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"This MOC represents RNC function.";

rncFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute names an instance of the 'rncFunction' object class.";

sgsnFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a sgsnFunction instance.";

sgsnFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a sgsnFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

smsGmscFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a smsGmscFunction instance.";

smsGmscFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a smsGmscFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

smsIwmscFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a iwmscFunction instance.";

smsIwmscFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a 3gManagedElement contains and controls a smsIwmscFunction. When automatic instance naming is used, the choice of name bindings left as a local matter.";

supportedBcmIRPVersionsBehaviour BEHAVIOUR

DEFINED AS

"This attribute provides the information concerning the Basic CM IRP versions currently supported by the Agent.";

supportedIRPsBehaviour BEHAVIOUR

DEFINED AS

"This attribute provides the information about IRPs an IRPAgent supports.";

utranCellIubLinkLinkBehaviour BEHAVIOUR

DEFINED AS

"This attribute implements the attribute UtranCell-IubLink of MOC UtranCell Defined in TS32.106-5.";

userDefinedStateBehaviour BEHAVIOUR

DEFINED AS

"This attribute specifies an operator defined state for operator specific usage.";

utranCell-rncFunctionBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a rncFunction contains and

controls a `utranCell`. When automatic instance naming is used, the choice of name bindings left as a local matter.";

utranCellIubLinkAssociationPackageBehaviour BEHAVIOUR

DEFINED AS

"The attribute 'utranCellIubLinkLink' points to the `IubLink` instance which connects to this `utranCell` instance.";

utranCellNodeBAssociationPackageBehaviour BEHAVIOUR

DEFINED AS

"The attribute 'utranCellNodeBLink' points to the `nodeBFunction` instance which connects to this `utranCell` instance.";

utranCellBasicPackageBehaviour BEHAVIOUR

DEFINED AS

"This managed object class represents the radio cell controlled by the RNC.";

utranCellIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute names an instance of the 'utranCell' object class.";

vlrFunctionIdBehaviour BEHAVIOUR

DEFINED AS

"This attribute identifies a `vlrFunction` instance.";

vlrFunction-g3ManagedElementBehaviour BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a `3gManagedElement` contains and controls a `vlrFunction`. When automatic instance naming is used, the choice of name bindings left as a local matter.";

6. ASN.1 Definitions

```
TS32-106-7TypeModule { ccitt (0) identified-organization (4) etsi (0)
    mobileDomain (0) umts-Operation-Maintenance (3) ts-32-106 (106) part7 (7)
    informationModel (0) asn1Module (2) version1 (1) }
```

DEFINITIONS IMPLICIT TAGS ::=

BEGIN

--EXPORTS everything

IMPORTS

ObjectInstance FROM CMIP-1 {joint-iso-ccitt ms(9) cmip(1) modules(0) protocol(3)};

-- 3GPP TS 32.106-7 related Object Identifiers

baseNodeUMTS OBJECT IDENTIFIER ::= {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-Operation-Maintenance(3)}

ts32-106Prefix OBJECT IDENTIFIER ::= { baseNodeUMTS ts-32-106(106)}

ts32-106Part7 OBJECT IDENTIFIER ::= { ts32-106Prefix part7(7)}

ts32-106-7InfoModel OBJECT IDENTIFIER ::= { ts32-106Part7 informationModel(0)}

ts32-106-7BCMObjectClass OBJECT IDENTIFIER ::= { ts32-106-7InfoModel managedObjectClass(3)}

ts32-106-7BCMPackage OBJECT IDENTIFIER ::= { ts32-106-7InfoModel package(4)}

ts32-106-7BCMPParameter OBJECT IDENTIFIER ::= { ts32-106-7InfoModel parameter(5)}

ts32-106-7BCMNameBinding OBJECT IDENTIFIER ::= { ts32-106-7InfoModel nameBinding(6)}

ts32-106-7BCMAtribute OBJECT IDENTIFIER ::= { ts32-106-7InfoModel attribute(7)}

ts32-106-7BCMAction OBJECT IDENTIFIER ::= { ts32-106-7InfoModel action(9)}

ts32-106-7BCMNotification OBJECT IDENTIFIER ::= { ts32-106-7InfoModel notification(10)}

-- Start of 3gPP SA5 own definitions

ErrorCauses ::= ENUMERATED

```
{
noError (0),
wrongInput (1),
unspecifiedErrorReason (255)
}
```

GeneralObjectId ::= INTEGER

GeneralObjectPointer ::= ObjectInstance

GeneralObjectPointerList ::= SEQUENCE OF ObjectInstance

GeneralUserLable ::= GraphicString

GetBCmIRPVersionReply ::= SEQUENCE

```
{
versionNumbersList SupportedBCmIRPVersions,
status ErrorCauses
}
```

IRPNames ::= SET OF ENUMERATED

```
{
notificationIRP (1),
alarmIRP      (2),
basicCMIRP    (3)
}
IRPVersionNumber ::= GraphicString
ManagedElementType ::= SET OF ENUMERATED
{
rnc      (1),
nodeB    (2),
msc      (3),
hLR      (4),
vLR      (5),
aUC      (6),
eIR      (7),
sms-IWNSC (8),
sms-GMSC (9),
sGSN     (10),
gGSN     (11),
bG       (12),
gmsc     (13)
}
SupportedBCmIRPVersions ::= SET OF IRPVersionNumber
SupportedIRPs ::= SET OF IRPNames
UserDefinedState ::= INTEGER

END -- of TS32-106-7TypeModule
```

Annex A (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
Dec 2000	S_10	SP-000515	--	--	Approved at TSG SA #10 and placed under Change Control.	1.0.0	3.0.0
Mar 2001	S_11	SP-010031	001	--	Making 32106-7 (CMP SS) compliant to 32106-5 (IS/IM)	3.0.0	3.1.0
Mar 2001	S_11	SP-010031	002	--	Update 32.106-7 based on CR 001 of 32.106-5 (S5-010133)	3.0.0	3.1.0
Jun 2001	S_12	SP-010284	003	--	Correction of UTRAN attributes	3.1.0	3.2.0
Dec 2001	S_14	SP-010636	004	--	Correction of improper module name in GDMO definition	3.2.0	3.3.0