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Technical Specification

Universal Mobile Telecommunications System (UMTS);
Telecommunication Management;
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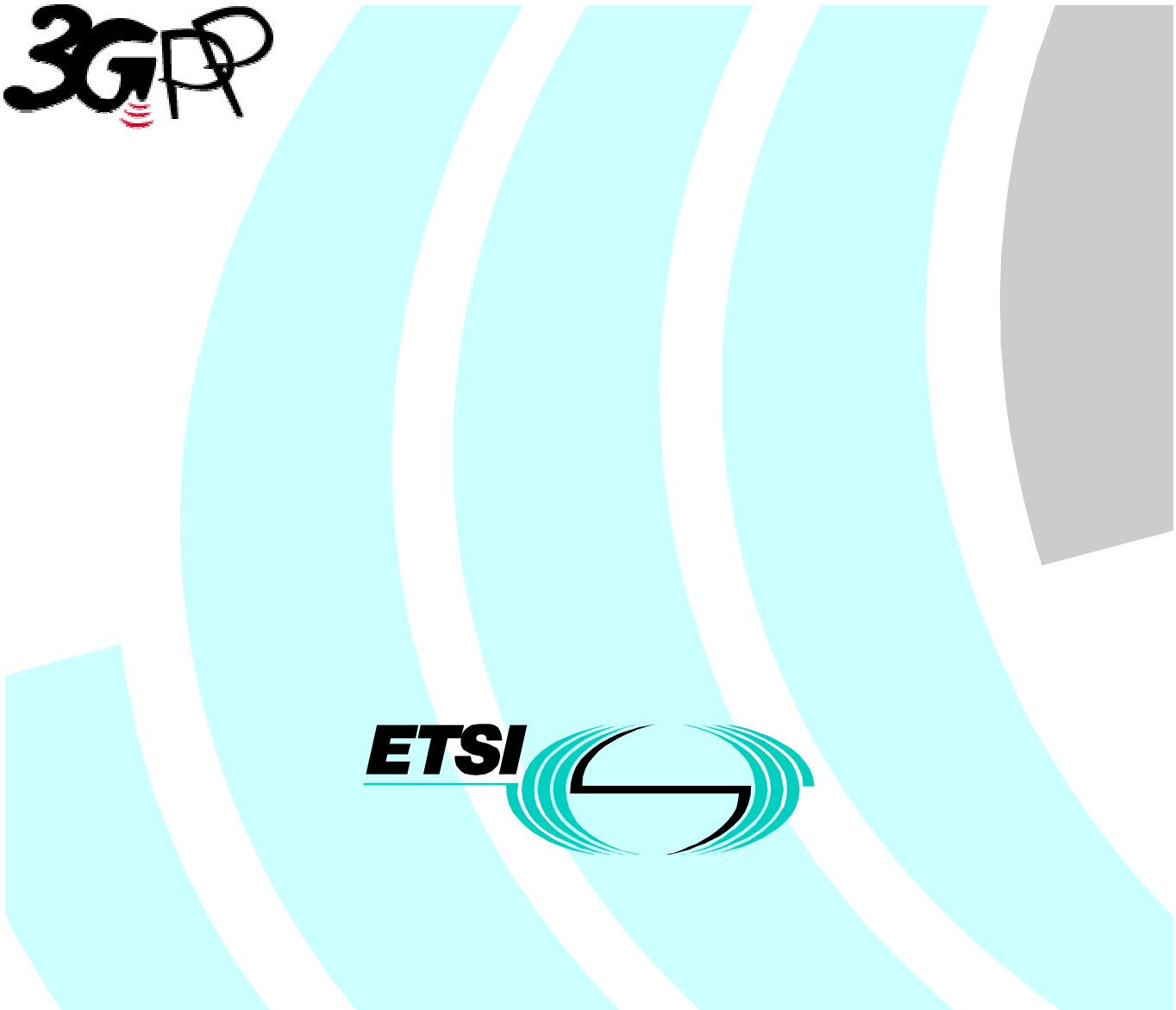
Part 7: Basic Configuration
Management IRP: CMIP Solution Set Version 1:1
(3GPP TS 32.106-7 version 3.0.0 Release 1999)



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Foreword

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Contents

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".

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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 Clause5. 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.

[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 *attributeValueChang*e 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 planed 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
alarmIRPId	alarmControlId
aucFunctionId	aucFunctionId
basicCmIRPId	basicCmControlId
bgFunctionId	bgFunctionId
dnPrefix	systemTitle
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
nodeBFunction-UtranCell	nodeButranCellLinkList
notificationIRPId	notificationControlId
rncFunctionId	rncFunctionId
sgsnFunctionId	sgsnFunctionId
smsGmscFunctionId	smsGmscFunctionId
smsIwmscFunctionId	smsIwmscFunctionId
systemDN	no equivalence
userDefinedState	userDefinedState
userLabel	userLabel
utranCellId	utranCellId
utranCell-IubLink	utranCelliubLinkLink
utranCell-NodeBFunction	utranCellNodeBLink
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,
    iubLinkMandatoryAssociationPackage;
  CONDITIONAL PACKAGES
    iubLinkOptionalAssociationPackage  PRESENT IF
   “the attribute IubLink-UtranCell of MOC IubLink defined in 3GPP TS 32.106-5 is supported by
        an instance of this class.”;
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,
    nodeBFunctionMandatoryAssociationPackage;
  CONDITIONAL PACKAGES
    nodeBFunctionOptionalAssociationPackage PRESENT IF
   “the attribute NodeB-UtranCell of MOC NodeBFunction defined in
        3GPP TS 32.106-5 is supported by an instance of this class.”;
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;
  CONDITIONAL PACKAGES
    utranCellNodeBAssociationPackage PRESENT IF
   “the attribute UtranCell-NodeB of MOC UtranCell defined in 3GPP TS 32.106-5 is
         supported by an instance of this class.”,
    utranCellIubLinkAssociationPackage PRESENT IF
   “the attribute UtranCell-IubLink of MOC UtranCell defined in 3GPP TS 32.106-5 is
         supported by an instance of this class.”;
 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};

iubLinkMandatoryAssociationPackage PACKAGE
  BEHAVIOUR
    iubLinkMandatoryAssociationPackageBehaviour;
  ATTRIBUTES
    iubLinkNodeBFunctionLink GET;
REGISTERED AS {ts32-106-7BCMPackage 9};

iubLinkOptionalAssociationPackage  PACKAGE
  BEHAVIOUR
    iubLinkOptionalAssociationPackageBehaviour;
  ATTRIBUTES
    iubLinkUtranCellLink GET;
REGISTERED AS {ts32-106-7BCMPackage 10};


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;
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};

nodeBFunctionOptionalAssociationPackage PACKAGE
  BEHAVIOUR
    nodeBFunctionOptionalAssociationPackageBehaviour;
  ATTRIBUTES
    nodeButranCellLinkList GET;
REGISTERED AS {ts32-106-7BCMPackage 16};

nodeBFunctionMandatoryAssociationPackage PACKAGE
  BEHAVIOUR
    nodeBFunctionMandatoryAssociationPackageBehaviour;
  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};

utranCellNodeBAssociationPackage PACKAGE
  BEHAVIOUR
    utranCellNodeBAssociationPackageBehaviour;
  ATTRIBUTES
    utranCellNodeBLink GET;
REGISTERED AS {ts32-106-7BCMPackage 22};

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-BCM-TypeModule.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 {ts32-106-7BCMAttribute 1};

bcmControlId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    bcmControlIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 2};

bgFunctionId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    bgFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 3};

eirFunctionId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    eirFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 4};

ggsnFunctionId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    ggsnFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 5};

gmscFunctionId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    gmscFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 6};

g3SubNetworkId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    g3SubNetworkIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 7};

hlrFunctionId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    hlrFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 8};

irpAgentId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    irpAgentIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 9};

iubLinkNodeBFunctionLink ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectPointer;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    iubLinkNodeBFunctionLinkBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 10};

iubLinkUtranCellLink ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectPointerList;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    iubLinkUtranCellLinkBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 11};

iubLinkId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    iubLinkIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 12};

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

```
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    managedElementIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 13};

managedElementType ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .ManagedElementType;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    managedElementBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 14};

managementNodeId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    managmentNodeIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 15};

meContextId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    meContextIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 16};


meManagedBy ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .GeneralObjectPointer;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    meManagedByBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 17};

mnManagesList ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .GeneralObjectPointerList;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    mnManagesListBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 18};

mscFunctionId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
```

```
  BEHAVIOUR
    mscFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 19};

nodeBiubLinkLink ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .GeneralObjectPointer;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    nodeBiubLinkLinkBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 20};

nodeButranCellLinkList ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .GeneralObjectPointerList;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    nodeButranCellLinkListBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 21};

nodeBFunctionId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    nodeBFunctionIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 22};

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

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

smsIwmscFunctionId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    smsIwmscFunctionIdBehaviour;
```

```
REGISTERED AS {ts32-106-7BCMAttribute 25};

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

supportedBcmIRPVersions ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .SupportedBCmIRPVersions;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    supportedBCmIRPVersionsBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 27};

supportedIRPs ATTRIBUTE
WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .SupportedIRPs;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    supportedIRPsBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 28};

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

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

utranCellNodeBLink ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-106-7TypeModule .GeneralObjectPointer;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    utranCellNodeBLinkBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 31};
```

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

utranCellId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule .GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    utranCellIdBehaviour;
REGISTERED AS {ts32-106-7BCMAttribute 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-rncFunctionBahaviour;
  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-g3SubNetworkBahaviour;
  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-g3SubNetworkBahaviour;
  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-rncFunctionBahaviour;
  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-rncFunctionBahaviour 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.";

iubLinkMandatoryAssociationPackageBehaviour BEHAVIOUR
DEFINED AS
"The attribute 'iubLinkNodeBFunctionLink' points to the nodeBFunction instance which this iubLink instance connects to.";

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.";

iubLinkOptionalAssociationPackageBehaviour BEHAVIOUR
DEFINED AS
"This package defines an attribute implementing the association XXX, pointing from an iubLink to a list of utranCell, defined in 32.106-5. This is an optional package. An instance of utranCell has to be associated by an iubLink instance by using this package or/and associated by an nodeBFunction by using the package nodeBOptionalAssociationPackage.";

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 'gManagedElement' 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-g3SubNetworkBahaviour 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.";

managmentNodeIdBehaviour BEHAVIOUR
DEFINED AS
"This attribute names an instance of the 'managmentNode' object class.";

meContext-g3SubNetworkBahaviour 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 3gManagmentNode 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 connectes to the related nodeBFunction instance directly.";

nodeButranCellLinkListBehaviour BEHAVIOUR
DEFINED AS
"This attribute points to all the untranCell instances which the related nodeBFunction instance connects directly to.";

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.";

nodeBFunctionOptionalAssociationPackageBehaviour BEHAVIOUR
DEFINED AS
"The attribute 'nodeButranCellLinkList' points to all the utranCell instances which this nodeBFunction instance connects directly to. It implements the attribute `NodeBFunction-UtranCell` of MOC NodeBFunction defined in TS32.106-5. ";

nodeBFunctionMandatoryAssociationPackageBehaviour BEHAVIOUR
DEFINED AS
"The attribute 'nodeBiubLinkLink' points to the iubLink instance which connectes 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.";

utranCellNodeBLinkBehaviour BEHAVIOUR
DEFINED AS
" This attribute implements the attribute UtranCell-NodeBFunction of MOC UtranCell
Defined in TS32.106-5.";

userDefinedStateBehaviour BEHAVIOUR
DEFINED AS
"This attribute specifies an operator defined state for operator specific usage.";

utranCell-rncFunctionBahaviour 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 connectes to this utranCell instance.";

utranCellNodeBAssociationPackageBehaviour BEHAVIOUR
DEFINED AS
"The attribute 'utranCellNodeBLink' points to the nodeBFunction instance which connectes 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)}
ts32-106-7BCMParameter       OBJECT IDENTIFIER ::= { ts32-106-7InfoModel parameter(5)}
ts32-106-7BCMNameBinding  OBJECT IDENTIFIER ::= { ts32-106-7InfoModel nameBinding(6)}
ts32-106-7BCMAttribute    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					
TSG SA#	Version	CR	Tdoc SA	New Version	Subject/Comment
S_10	1.0.0	-	SP-000515	3.0.0	Approved at TSG SA #10 and placed under Change Control

History

Document history		
V3.0.0	December 2000	Publication