Technical Specification Group Services and System Aspects
Meeting #20, Hämeenlinna, FINLAND, 09 - 12 June 2003

TSGS#20(03)0281

Source: **SA5 (Telecom Management)**

Title: **Rel-5 CR 32.632 (Configuration Management; Core Network Resources IRP: Network Resource Model) : CN Network Resource Model changed to the New Methodology - alignment with 32.102**

Document for: **Approval**

Agenda Item: **7.5.3**

Doc-1st-	Spec	CR	R	Ph	Subject	Cat	Ver	Doc-2nd-	Workite
SP-030281	32.632	007	-	Rel-5	**CN Network Resource Model changed to the New Methodology - alignment with 32.102**	F	5.2.0	S5-036667	OAM-NIM

3GPP TSG-SA5 (Telecom Management) **S5-036667**
Meeting #34, Sophia Antipolis, France, 19-23 May 2003

CR-Form-v7

CHANGE REQUEST

⌘ **32.632** **CR** **007** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	CN Network Resource Model changed to the New Methodology - alignment with 32.102
Source:	⌘	S5
Work item code:	⌘	OAM-NIM
Date:	⌘	19/05/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The model for the Core Network needs to be specified using the new methodology as defined in TS 32.102.
Summary of change:	⌘	The structure of this TS has been changed in accordance with TS 32.102.
Consequences if not approved:	⌘	This TS would not comply with SA5's TS 32.102.

Clauses affected:	⌘	Clauses 3 to 6.

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	

How to create CRs using this form:

4 System overview

4.1 System context

Figure 4.1 and 4.2 identify system contexts of the IRP defined by the present document in terms of its implementation called IRPAgent and the user of the IRPAgent, called IRPManager. For a definition of IRPManager and IRPAgent, see 3GPP TS 32.102 [2].
The IRPAgent implements and supports this IRP. The IRPAgent can reside in an Element Manager (EM; for definition see 3GPP TS 32.101 [1]) or a Network Element (NE) (see also [2] clause 8). In the former case, the interfaces (represented by a thick dotted line) between the EM and the NEs is not the subject of this IRP.
An IRPManager using this IRP shall choose one of the two System Contexts defined here, for each NE. For instance, if an EM is responsible for managing a number of NEs, the NM shall access this IRP through the EM and not directly to those NEs. For another IRP though, the System Context may be different.

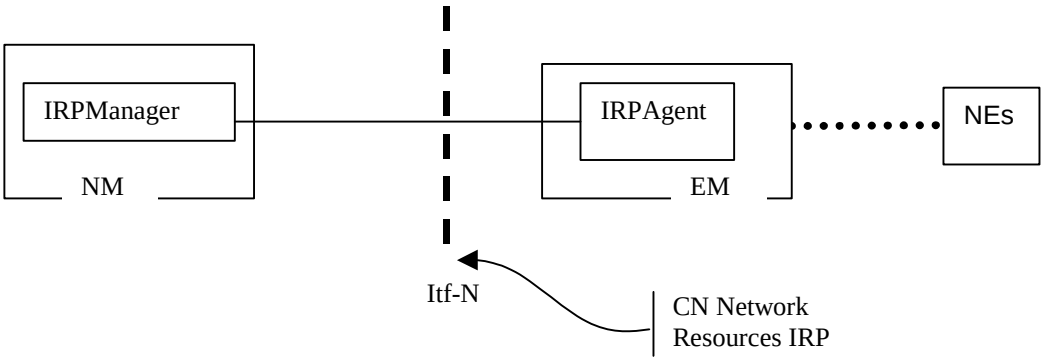


Figure 4.1: System Context A

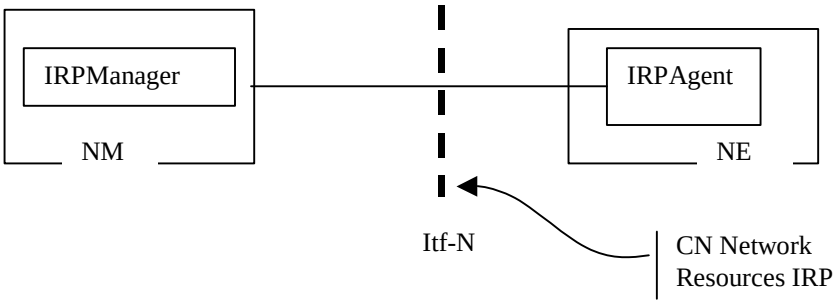
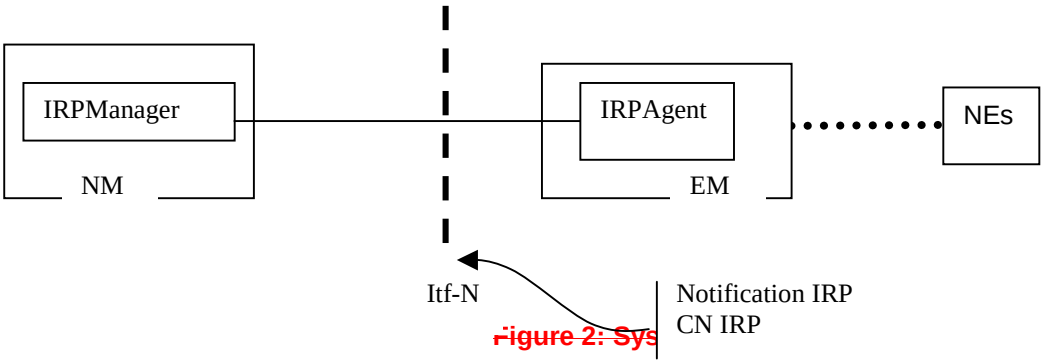
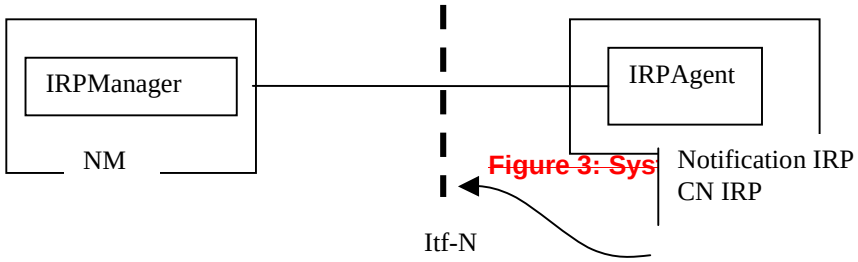


Figure 4.2: System Context B

~~Figure and Figure identify system contexts of the subject IRP in terms of its implementation called IRPAgent and the user of the IRPAgent, called IRPManager. For a definition of IRPManager and IRPAgent, see 3GPP TS 32.102 [2].~~
~~The IRPAgent implements and supports the Basic CM IRP. The IRPAgent can be an Element Manager (EM) or a mediator that interfaces one or more NEs (see Figure), or it can be a Network Element (NE) (see Figure). In the former case, the interfaces (represented by a thick dotted line) between the EM and the NEs are not subject of this IRP.~~
~~An IRPManager using this IRP shall choose one of the two System Contexts defined here, for each NE. For instance, if an EM is responsible for managing a number of NEs, the NM shall access this IRP through the EM and not directly to those NEs. For another IRP though, the System Context may be different.~~



~~Figure 2: Sys~~



~~Figure 3: Sys~~

4.2 Compliance rules

For general definitions of compliance rules related to qualifiers (Mandatory/Optional/Conditional) for *operations*, *notifications and parameters* (of operations and notifications) please refer to 3GPP TS 32.102 [2].
The following defines the meaning of Mandatory and Optional IOC attributes and associations between IOCs, in Solution Sets to the IRP defined by the present document:

- The IRPManager shall support all mandatory attributes/associations. The IRPManager shall be prepared to receive information related to mandatory as well as optional attributes/associations without failure; however the IRPManager does not have to support handling of the optional attributes/associations.
- The IRPAgent shall support all mandatory attributes/associations. It may support optional attributes/associations.

An IRPAgent that incorporates vendor-specific extensions shall support normal communication with a 3GPP SA5-compliant IRPManager with respect to all Mandatory and Optional information object classes, attributes, associations, operations, parameters and notifications without requiring the IRPManager to have any knowledge of the extensions.
Given that

- rules for vendor-specific extensions remain to be fully specified, and
- many scenarios under which IRPManager and IRPAgent interwork may exist,

it is recognised that in Release 4/5 the IRPManager, even though it is not required to have knowledge of vendor-specific extensions, may be required to be implemented with an awareness that extensions can exist and behave accordingly.
~~For general definitions of compliance rules related to qualifiers (Mandatory/Optional/Conditional) for *operations*, *notifications and parameters* (of operations and notifications) please refer to 3GPP TS 32.102 [2].~~
~~The following defines the meaning of Mandatory and Optional MOC attributes and associations between MOCs, in Solution Sets to the Basic CM IRP:~~

- ~~The IRPManager shall support all mandatory attributes/associations. The IRPManager shall be prepared to receive information related to mandatory as well as optional attributes/associations without failure; however the IRPManager does not have to support handling of the optional attributes/associations.~~
- ~~The IRPAgent shall support all mandatory attributes/associations. It may support optional attributes/associations.~~

~~An IRPAgent that incorporates vendor-specific extensions shall support normal communication with a 3GPP SA5-compliant IRPManager with respect to all Mandatory and Optional managed object classes, attributes, associations, operations, parameters and notifications without requiring the IRPManager to have any knowledge of the extensions.~~
~~Given that~~

- ~~rules for vendor-specific extensions remain to be fully specified, and~~
- ~~many scenarios under which IRPManager and IRPAgent interwork may exist,~~

~~it is recognised that in Release 4/5 the IRPManager, even though it is not required to have knowledge of vendor-specific extensions, may be required to be implemented with an awareness that extensions can exist and behave accordingly.~~

5 Modelling approach

The modelling approach is described in the Generic Network Resources IRP: NRM [16].
It should be noted that this model allows for combined managed element functionality, where more than one ‘function IOCs' (inherited from ManagedFunction) modelling more specific managed element functionality may be contained in the ManagedElement IOC.

6 IRP Information Model

~~6.1 Introduction~~6.1 Information entities imported and local labels

None.
~~As already introduced in the previous clause, the present clause defines the Core Network Resources IRP: Network Resource Model. That is, this model defines CN specific MOCs that shall be contained under the generic MOCs defined in [16].~~
~~The managed object classes in this NRM are protocol environment neutral and the model does not define the syntax or encoding of the operations and parameters.~~

~~It should be noted that this model allows for combined managed element functionality, where more than one 'function MOCs' (inherited from ManagedFunction) modelling more specific managed element functionality may be contained in the ManagedElement MOC.~~
~~The Information Service(s) to access managed objects of this NRM is defined elsewhere.~~
~~The corresponding Solution Set specifications provide protocol dependent definitions. They provide the actual realization of the operations and notifications defined in this subclause in each protocol environment. One may find that the class/attribute definitions in the protocol-neutral model differ from those defined in the Solution Sets (e.g. due to mappings to existing standard models that are applicable for a specific Solution Set).~~

6.2 Class diagrams~~Managed Object Class (MOC) diagrams~~

~~A general note regarding all the notification tables defined for each MOC below: Each MOC may potentially send the notifications listed in the notification table for the MOC. The notifications with qualifier (M) shall be supported by the MOC, and the notifications with qualifier (O) may be supported by the MOC.~~
~~For example: If Notification notifyObjectCreation defined in Basic CM IRP has the qualifier (M), then if a MOC is defined such that it emits such a notification, this notification shall be emitted when appropriate (i.e. when a new object is created). If Notification notifyChangedAlarm has the qualifier (O) in Alarm IRP (see 3GPP TS 32.111-2 [11]), then if a MOC is defined such that it emits such a notification, this notification may or may not be emitted when appropriate.~~
~~Further, if a notification in the qualifier column (of the MOC notification tables) has a reference to another specification, it means that the qualifier for the notification is specified in the referred specification.~~

6.2.1 Attributes and relationships

This sub-clause depicts the set of IOCs that encapsulate information relevant for this service. This sub-clause provides the overview of all information object classes in UML. Subsequent sub-clauses provide more detailed specification of various aspects of these information object classes.
Figures 6.2.1.1 to 6.2.1.5 show the name-containment relation and other types of relations of the CN NRM.

NOTE: The name-containment relations between IOCs are indicated by UML "unidirectional aggregation by reference" ("hollow diamonds").

NOTE: The listed cardinality numbers represent transient as well as steady-state numbers, and reflect all managed object creation and deletion scenarios.

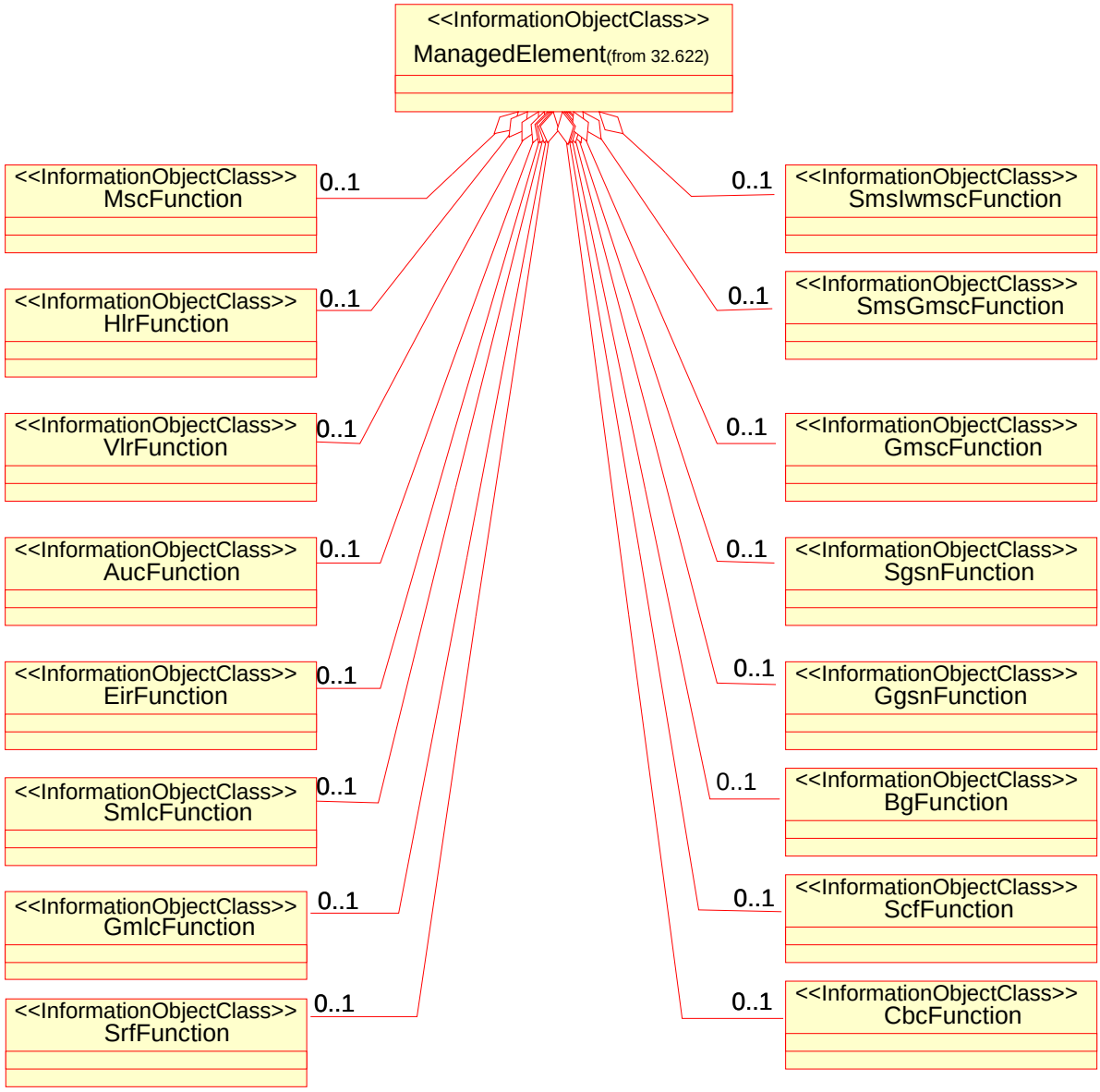


Figure 6.2.1.1: CN NRM Containment/Naming and Association diagram 1

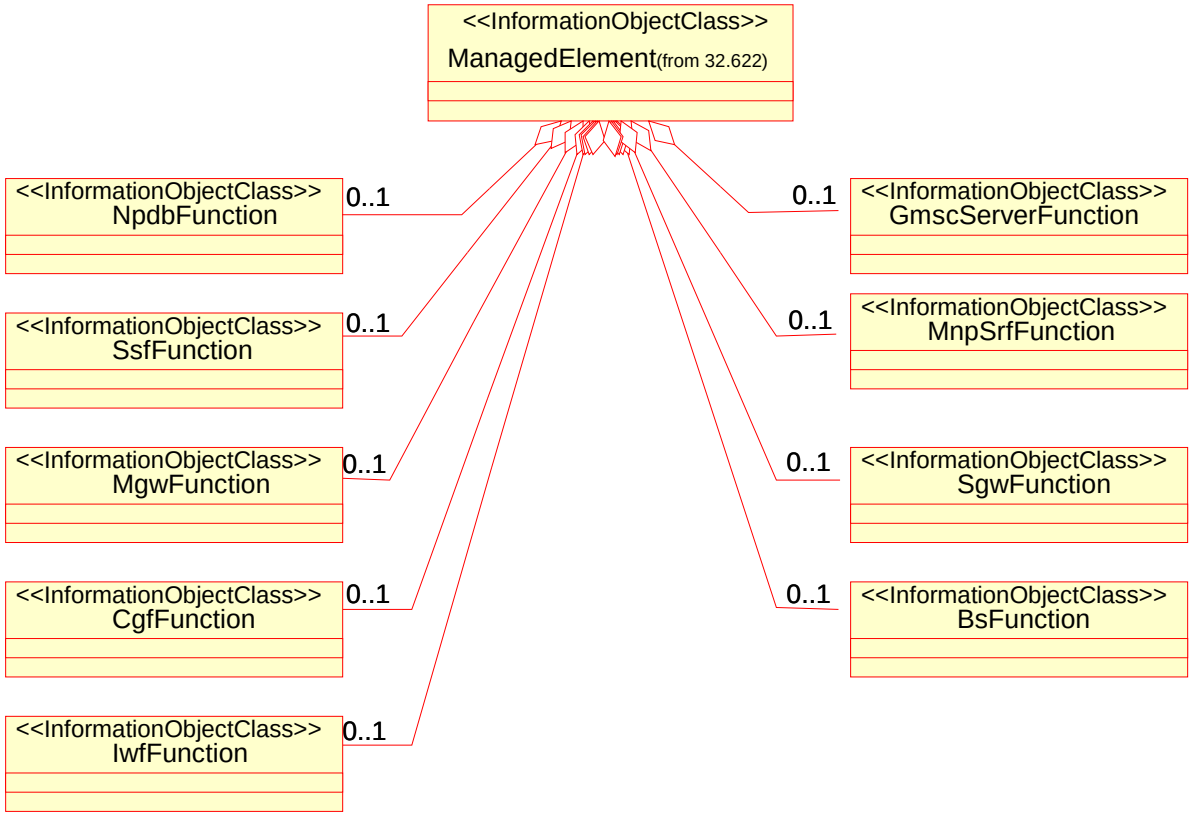


Figure 6.2.1.2: CN NRM Containment/Naming and Association diagram 2

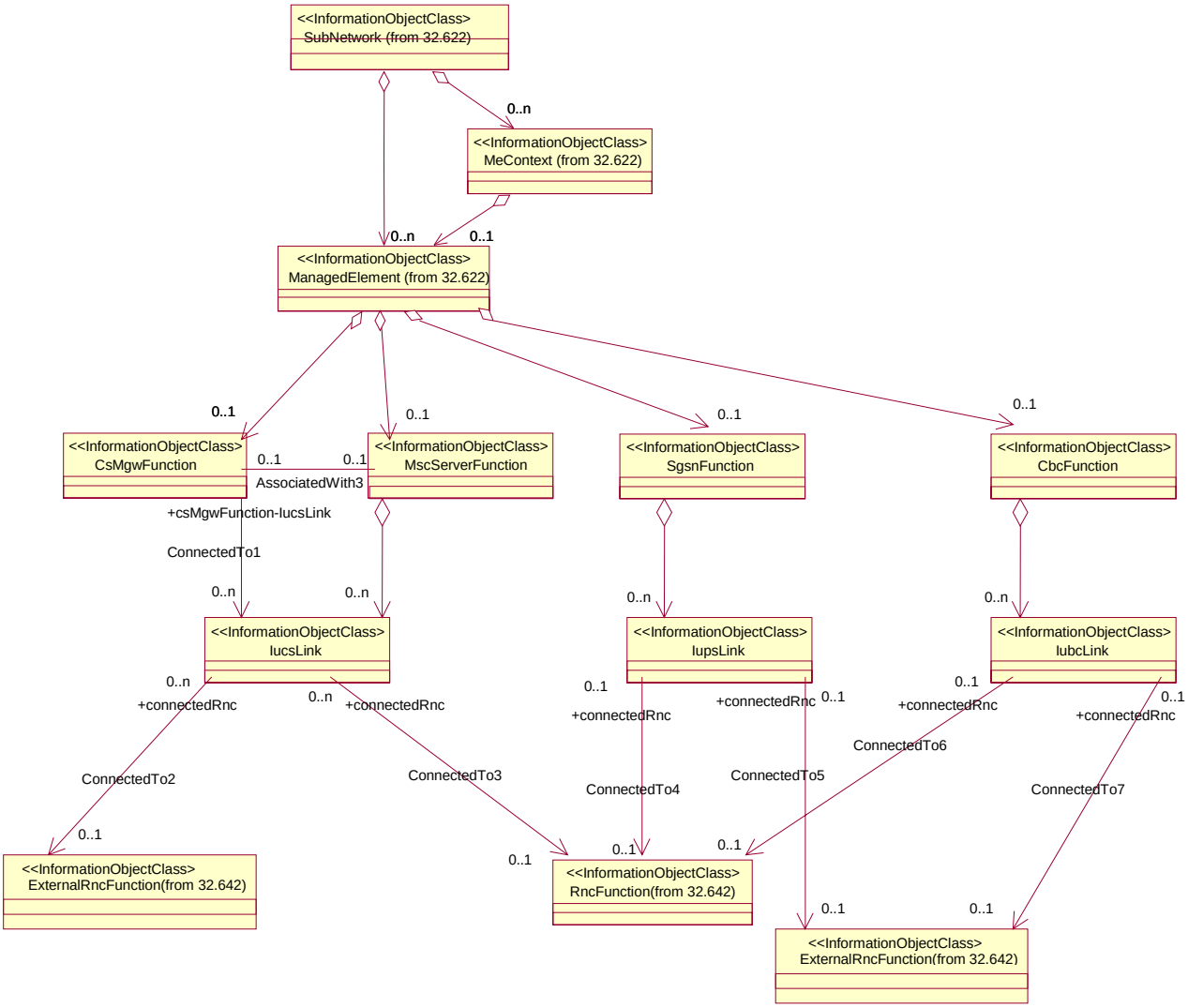
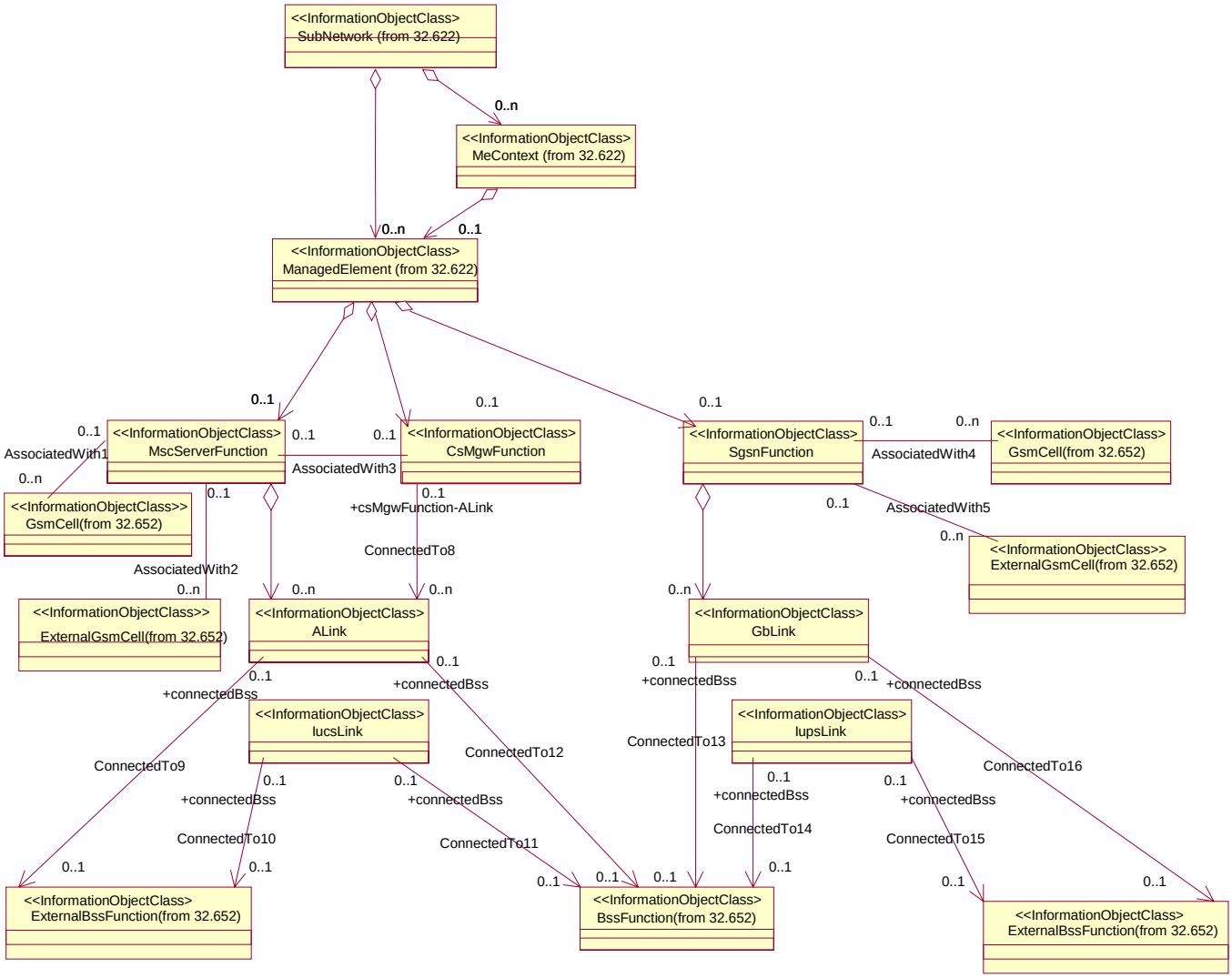


Figure 6.2.1.3: CN UTRAN NRM Containment/Naming and Association diagram 3

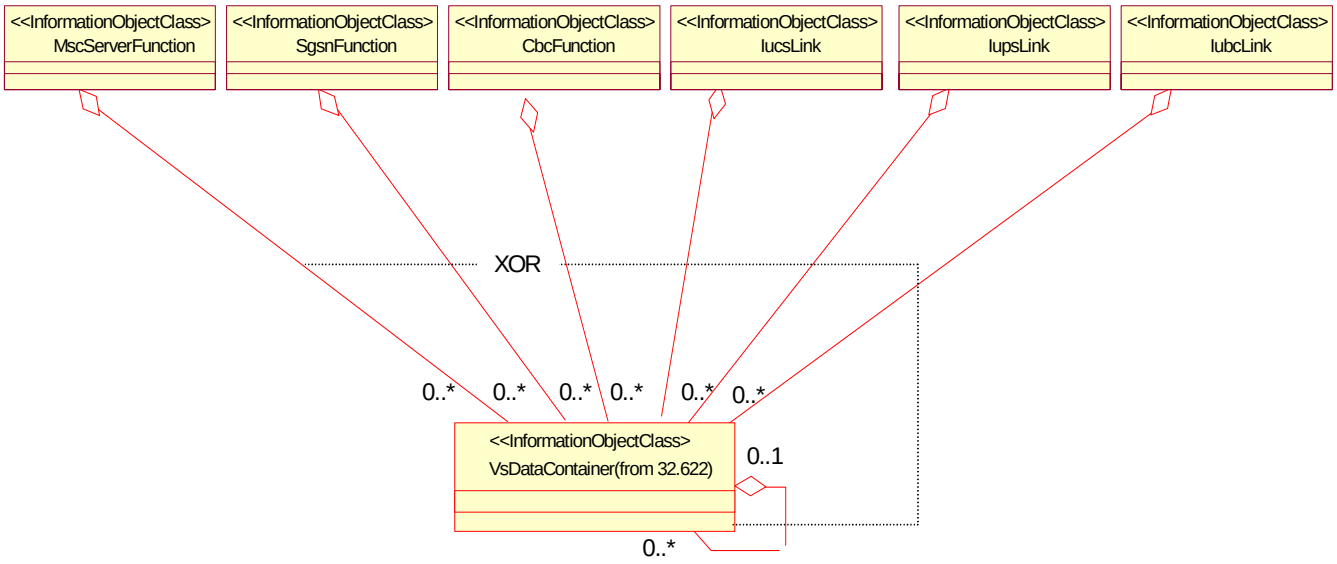


NOTE 1: The association between MscServer and GsmCell, and SgsnFunction and GsmCell is optional. It may be valid if both the MscServer and GsmCell, or SgsnFunction and GsmCell are managed by the same management node.

NOTE 2: The association between MscServer and CsMgwFunction is optional and is only mandatory when they belong to different ManagedElements.

Figure 6.2.1.4: CN GERAN NRM Containment/Naming and Association diagram 4

Each Managed Object is identified with a Distinguished Name (DN) according to 3GPP TS 32.300 [13] that expresses its containment hierarchy. As an example, the DN of a Managed Object representing a cell could have a format like: SubNetwork=Sweden,MeContext=MEC-Gbg-1,ManagedElement=MSC-Gbg-1,MscServerFunction=MSC-1.



NOTE: Each instance of the vsDataContainer shall only be contained under one IOC. The vsDataContainer can be contained under IOCs defined in other NRMs.

Figure 6.2.1.5: vsDataContainer Containment/Naming and Association in CN NRM

The vsDataContainer is only used for the Bulk CM IRP.

6.2.2 Inheritance

This sub-clause depicts the inheritance relationships that exist between IOCs.

Figures 6.2.2.1 and 6.2.2.2 show the inheritance hierarchy for the CN NRM.

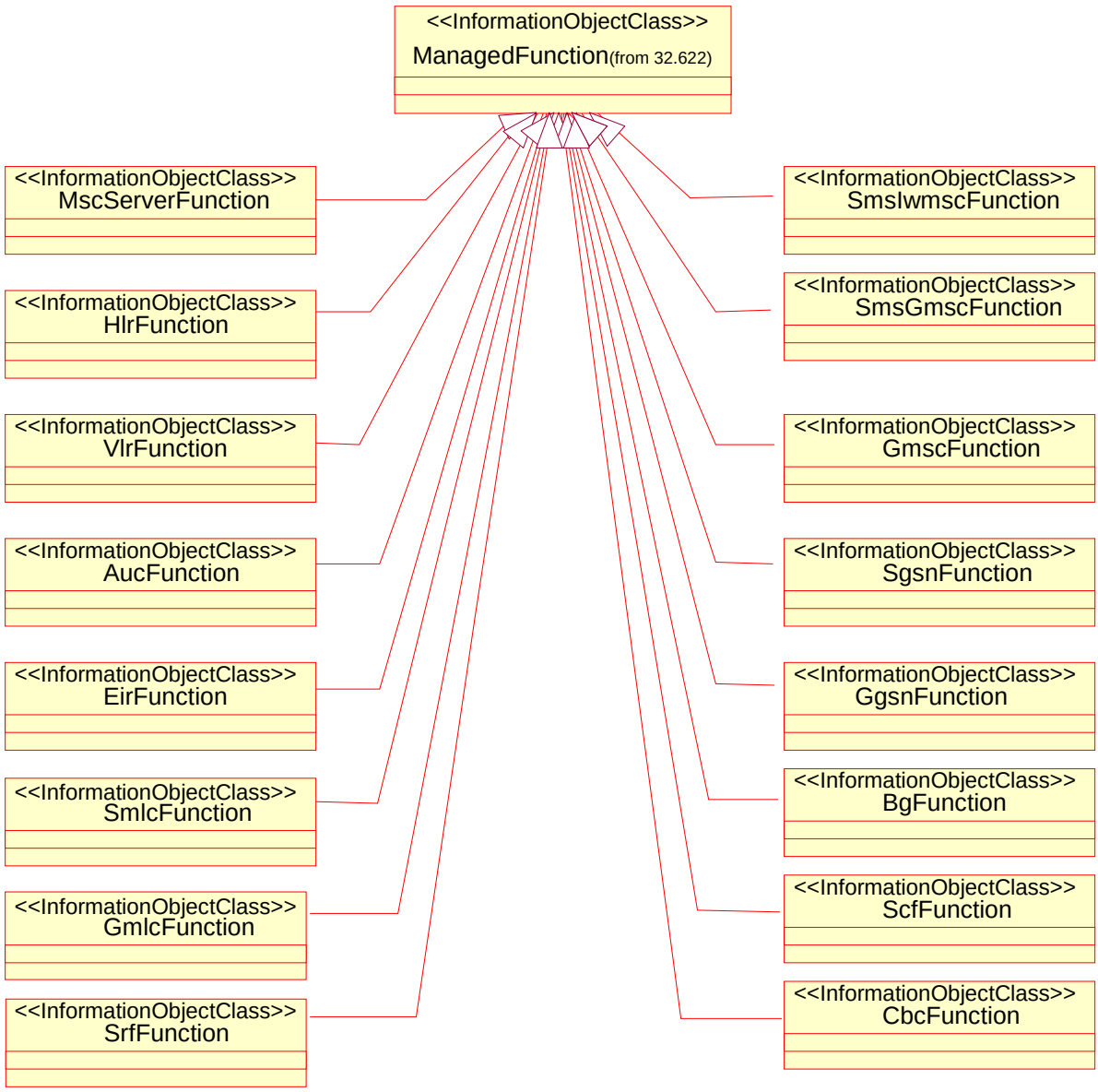


Figure 6.2.2.1: CN NRM Inheritance Hierarchy 1

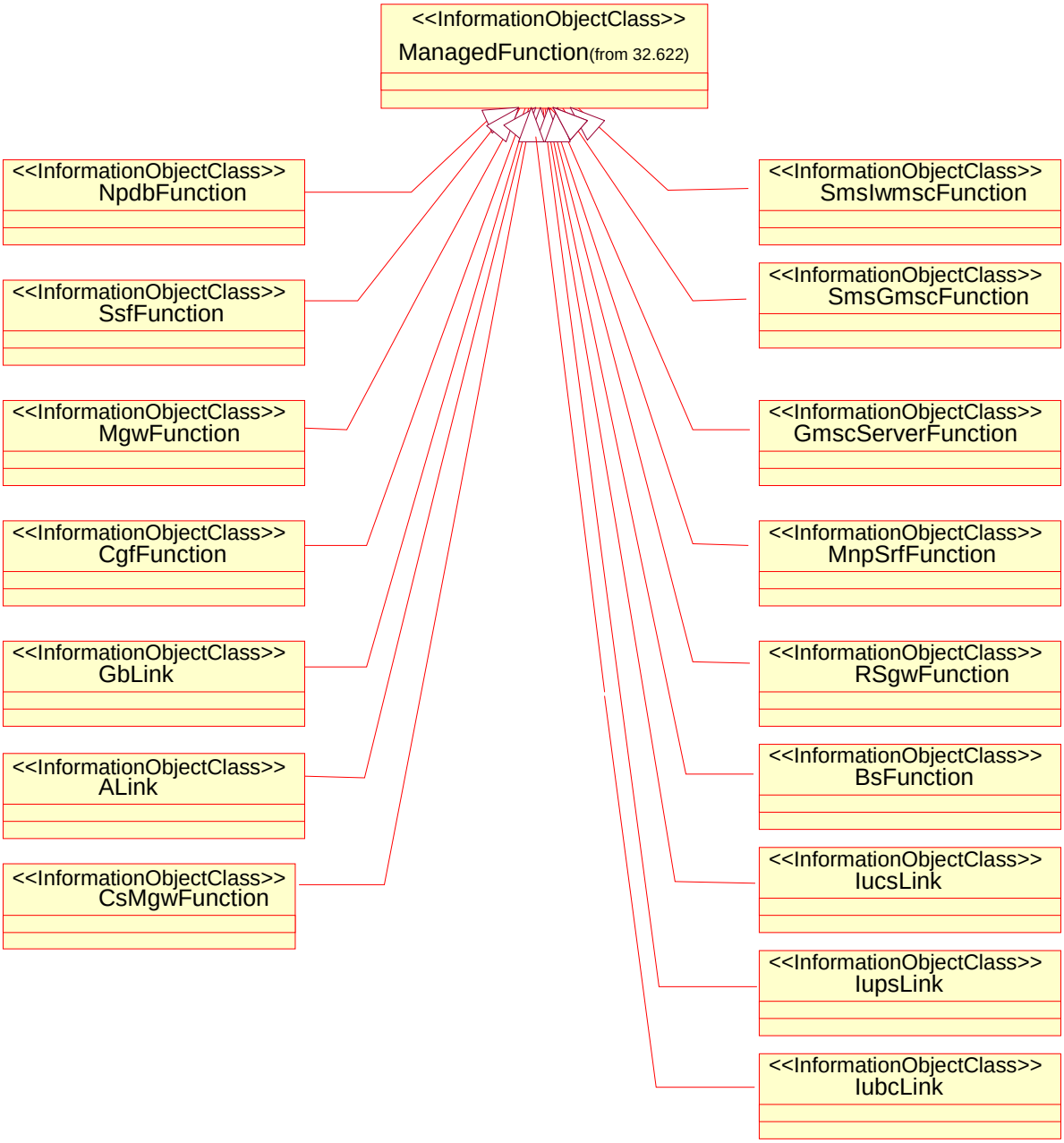


Figure 6.2.2.2: CN NRM Inheritance Hierarchy 2

6.2.1 Inheritance hierarchy

Figures 4 and 5 show the inheritance hierarchy for the CN NRM.

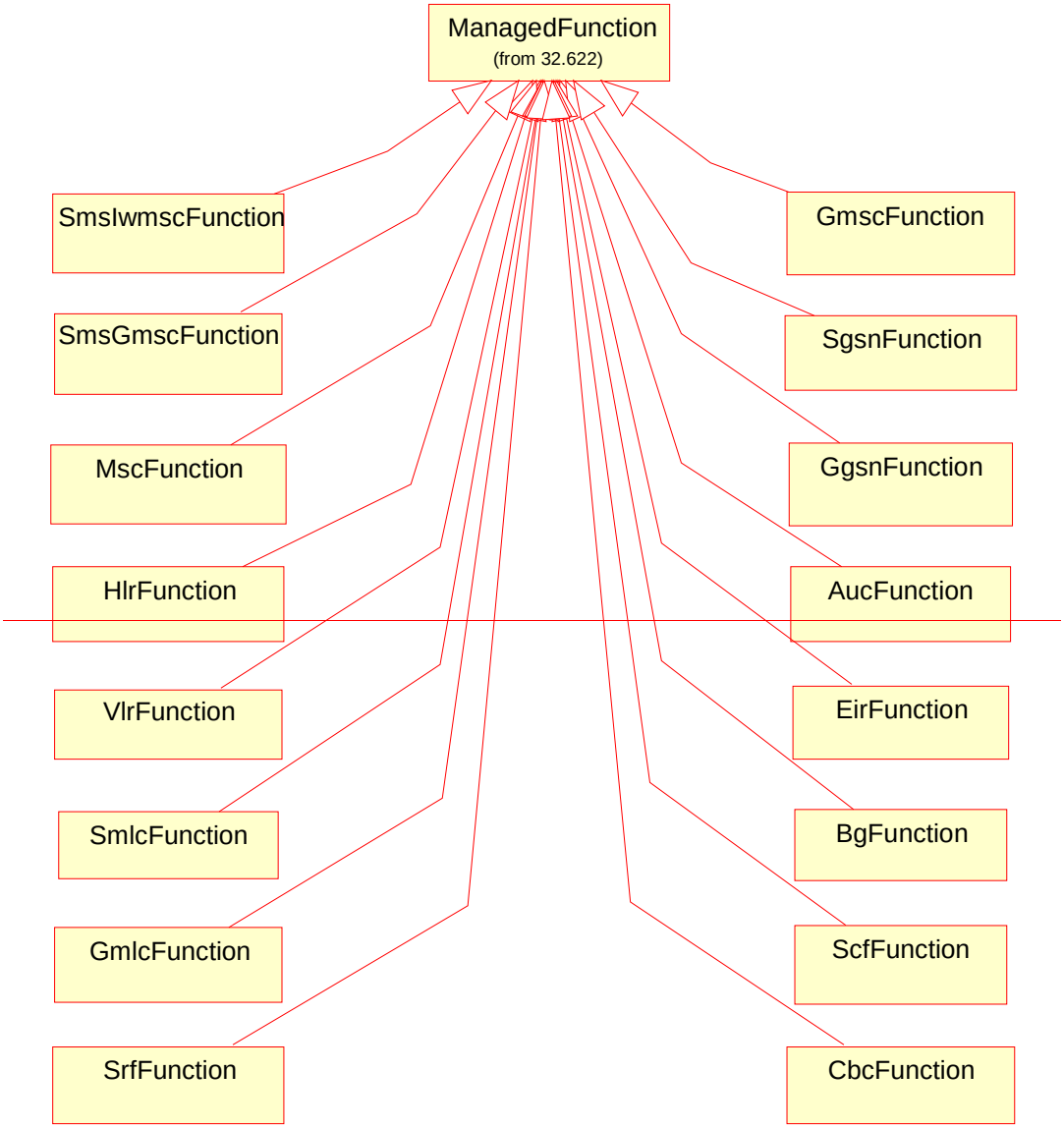
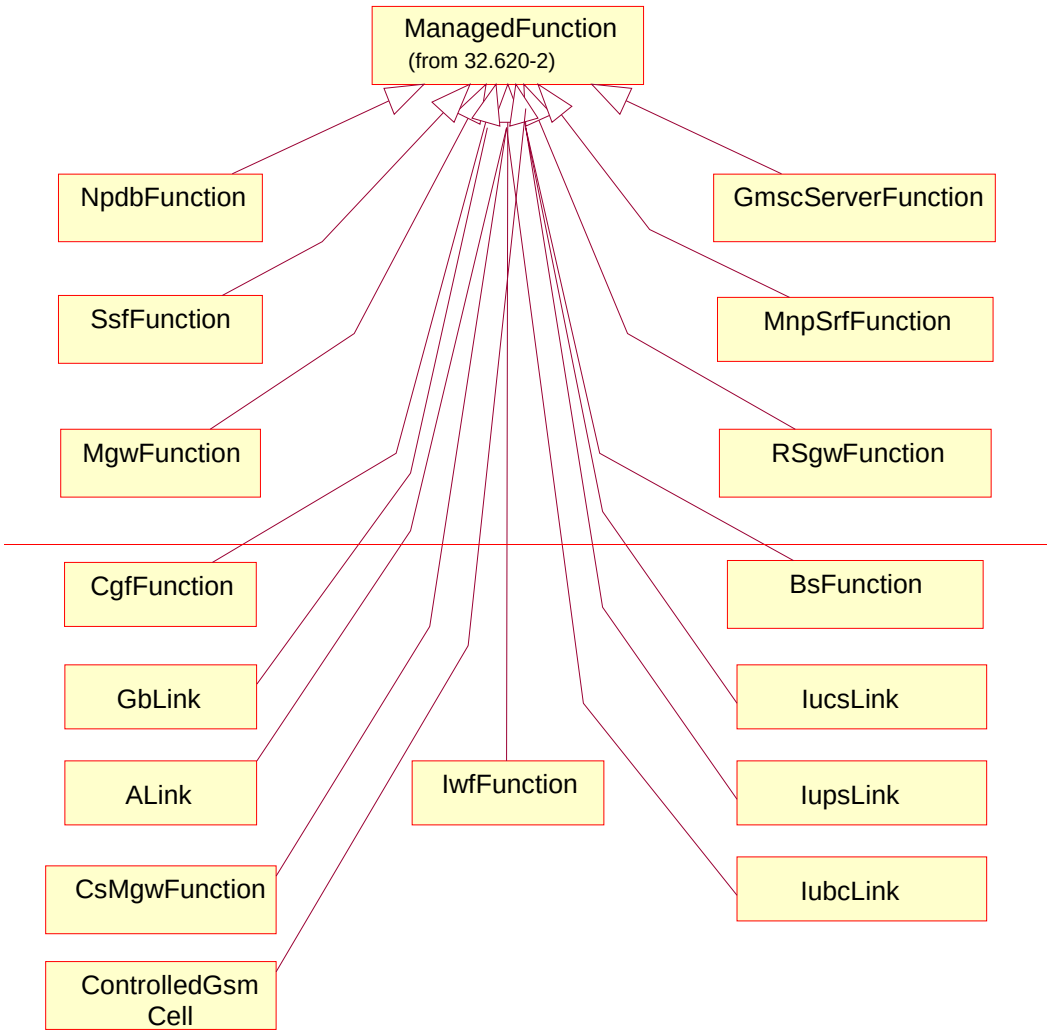


Figure 4: CN NRM Inheritance Hierarchy 1

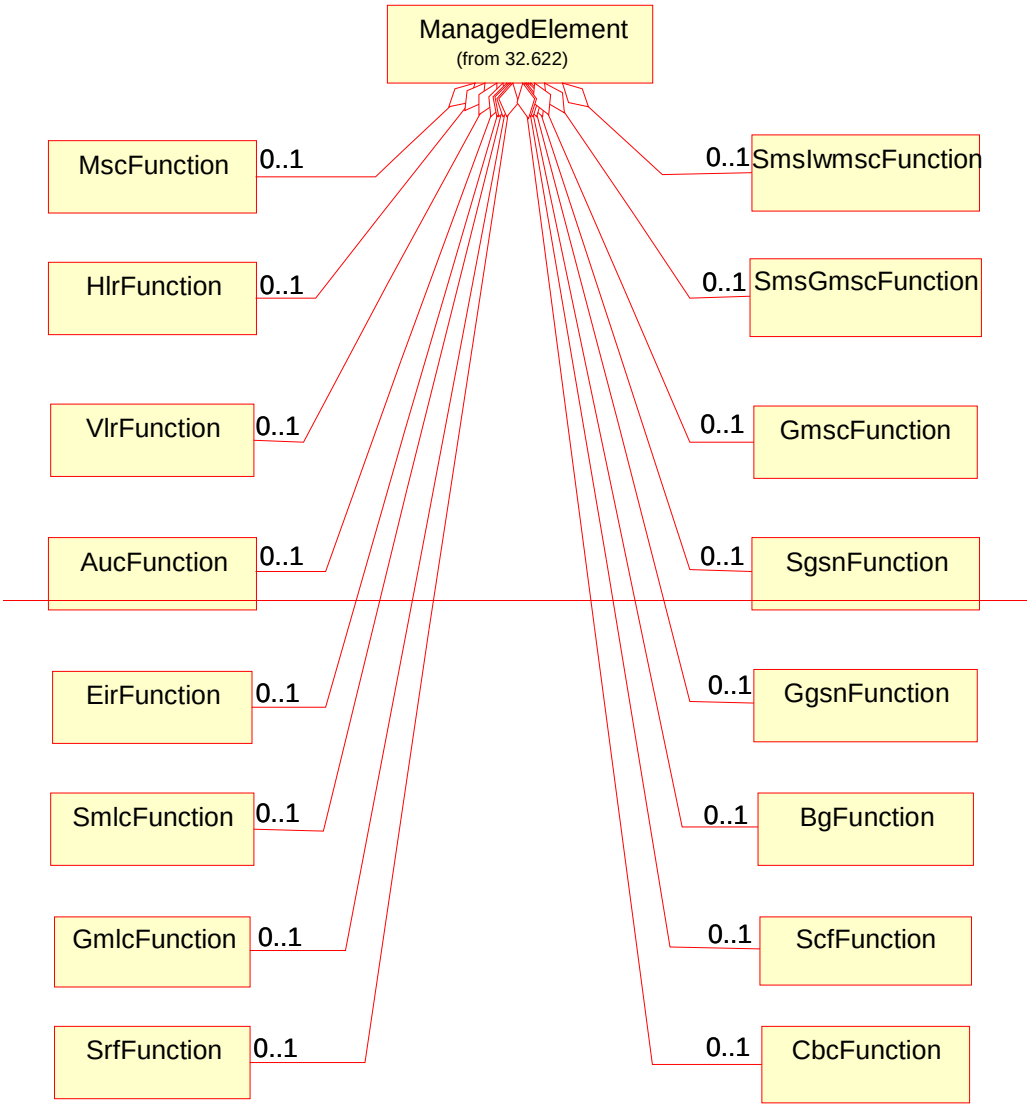


~~Figure 5: CN NRM Inheritance Hierarchy 2~~

6.2.2 Containment/Naming and Association diagrams

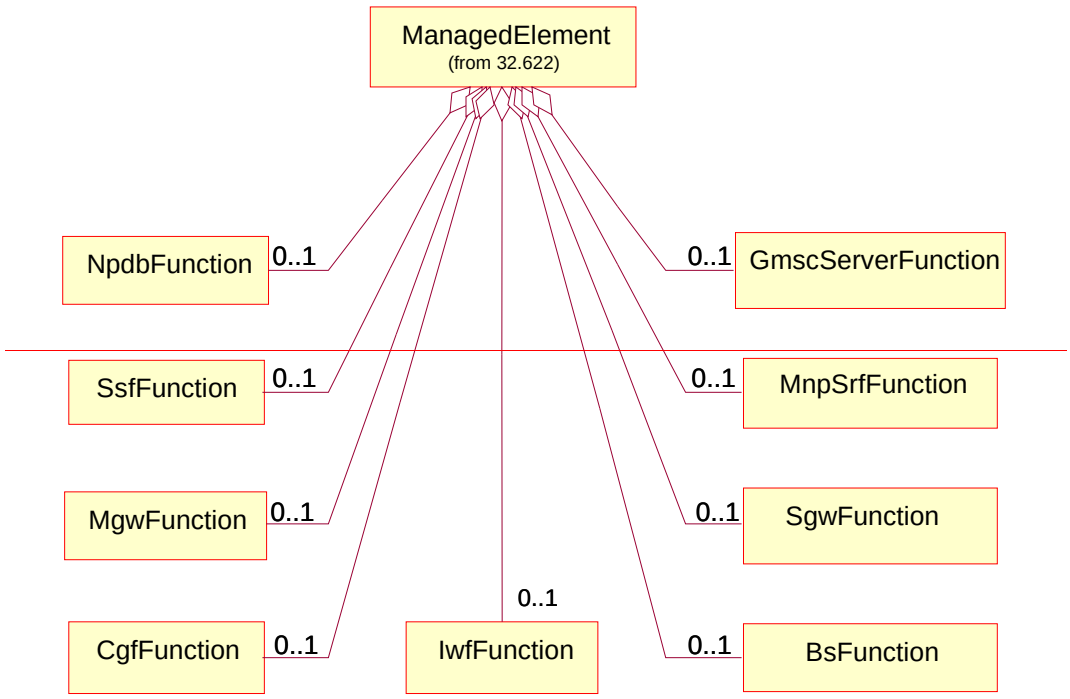
Figures 6, 7, 8, 9 and 10 show the containment/naming hierarchy and the associations of the CN NRM.

NOTE: The Managed Object containment/naming relationships are in the diagram(s) below indicated by UML "Aggregation by reference" ("hollow diamonds").

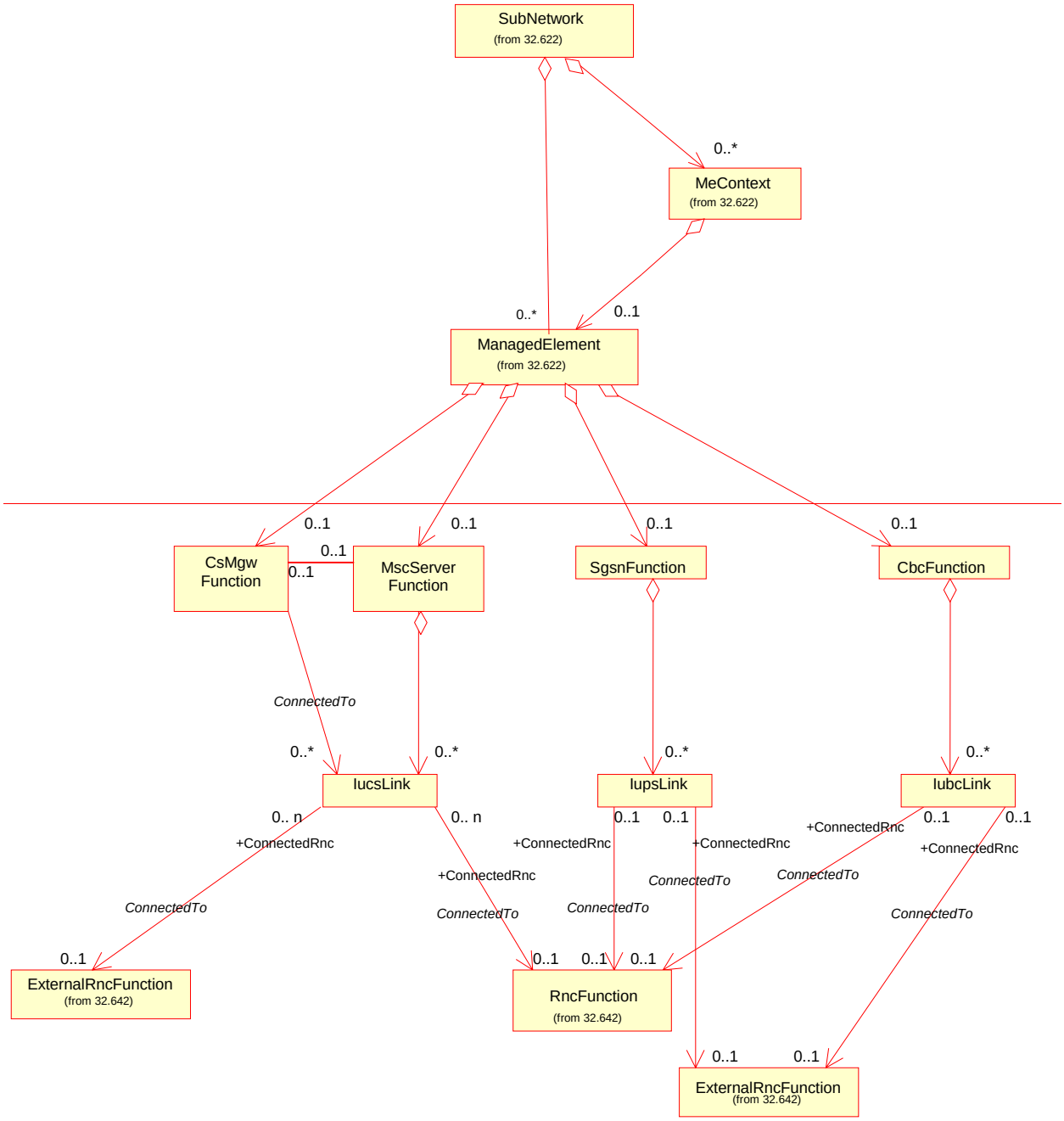


NOTE: The listed cardinality numbers represent transient as well as steady-state numbers, and reflect all managed object creation and deletion scenarios.

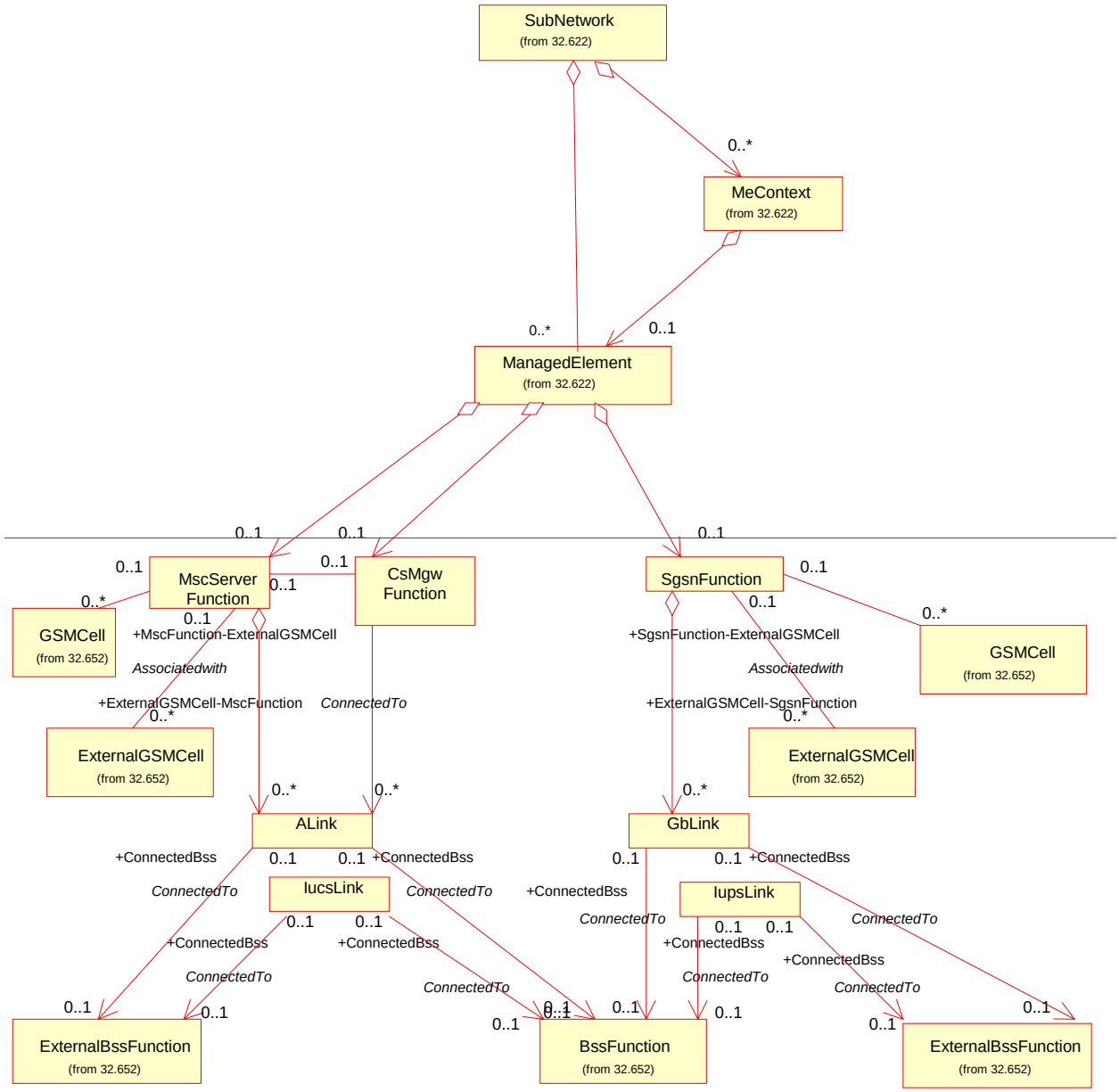
Figure 6: CN NRM Containment/Naming and Association diagram 1



~~Figure 7: CN NRM Containment/Naming and Association diagram 2~~



~~Figure 8: CN-UTRAN NRM Containment/Naming and Association diagram 3~~

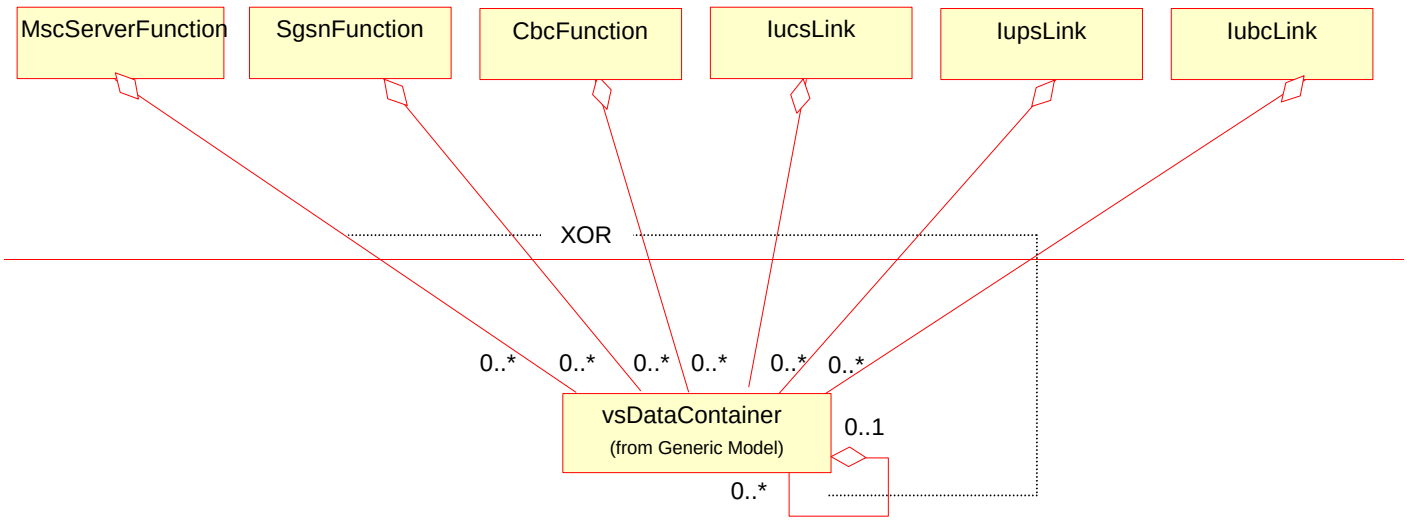


~~NOTE 1: The association between MscServer and GsmCell, and SgsnFunction and GsmCell is optional. It may be valid if both the MscServer and GsmCell, or SgsnFunction and GsmCell are managed by the same management node.~~

~~NOTE 2: The association between MscServer and CsMgwFunction is optional and is only mandatory when they belong to different ManagedElements.~~

~~Figure 9: CN-GERAN NRM Containment/Naming and Association diagram 4~~

~~Each Managed Object is identified with a Distinguished Name (DN) according to 3GPP TS 32.300 [13] that expresses its containment hierarchy. As an example, the DN of a Managed Object representing a cell could have a format like: SubNetwork=Sweden,MeContext=MEC-Gbg-1,ManagedElement=MSC-Gbg-1,MscServerFunction=MSC-1.~~



~~NOTE 1: The listed cardinality numbers represent transient as well as steady-state numbers, and reflect all managed object creation and deletion scenarios.~~

~~NOTE 2: Each instance of the vsDataContainer shall only be contained under one MOC. The vsDataContainer can be contained under MOCs defined in other NRMs.~~

~~Figure 10: vsDataContainer Containment/Naming and Association in CN NRM~~

~~The vsDataContainer is only used for the Bulk CM IRP.~~

6.3 Information Object Classes definition~~Managed Object Class (MOC) definitions~~

6.3.1 ~~MOC~~ MscServerFunction

6.3.1.1 Definition

This ~~Managed Object Class~~IOC represents MSCserver functionality. For more information about the MSC, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.1.2 Attributes

Table 1: Attributes of MscServerFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
mscServerFunctionId	+	M	M	-
userLabel	+	M	M	M
mccList	+	M	M	M
mncList	+	M	M	M
lacList	+	M	M	M
sacList	+	M	M	M
gcaList	+	O	M	M

mscId	+	M	M	M
mscServerFunction-GSMcell	+	M	M	-
mscServerFunction-ExternalGSMcell	+	M	M	-
mscServerFunction-CsMgwFunction	+	M	M	-

Name	Qualifier	Description
mscServerFunctionId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ- WRITE, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.
mccList	READ-WRITE,M	List of Mobile Country Codes, MCC. It is a part of the PLMN Id (Ref. 3 GPP TS 23.003 [3]).
mncList	READ-WRITE,M	List of Mobile Network Codes, MNC. It is a part of the PLMN Id (Ref. 3 GPP TS 23.003 [3]).
lacList	READ-WRITE,M	List of Location Area Codes covered by MSC (Ref. 3 GPP TS 23.003 [3]).
sacList	READ-WRITE,M	List of Service Area Codes covered by MSC (Ref. 3 GPP TS 23.003 [3]).
gcaList	READ-WRITE,O	List of Group Call Area (Ref. 3 GPP TS 23.003 [3]).
mscId	READ-WRITE,M	Unique MSC ID (Ref. 3 GPP TS 23.002).
mscServerFunction-GSMcell	READ-ONLY,M	The value of this attribute shall be the DN of the related GSMcell instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this MscServerFunction is associated with to 0-* GSMcell.
mscServerFunction-ExternalGSMcell	READ-ONLY,M	The value of this attribute shall be the DN of the related ExternalGSMcell instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this MscServerFunction is associated with to 0-* ExternalGSMcell.
mscServerFunction-CsMgwFunction	READ- ONLY,M	The value of this attribute shall be the DN of the related CsMgwFunction instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this MscServerFunction is associated with to 0-* CsMgwFunction.

Table 2: Notifications of `MscServerFunction`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.2 ~~MOC~~ `HlrFunction`

6.3.2.1 Definition

This ~~Managed Object Class~~IOC represents HLR functionality. For more information about the HLR, see 3GPP TS 23.002 [15]. ~~It inherits from ManagedFunction.~~

6.3.2.2 Attributes

Table 3: Attributes of `HlrFunction`

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
hlrFunctionId	+	M	M	-

userLabel	+	M	M	M

Name	Qualifier	Description
hlrFunctionId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ- WRITE, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 4: Notifications of `HlrFunction`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.3 MOC VlrFunction

6.3.3.1 Definition

This Managed Object ClassIOC represents VLR functionality. For more information about the VLR, see 3GPP TS 23.002 [15]. It inherits from ManagedFunction.

6.3.3.2 Attributes

Table 5: Attributes of `VlrFunction`

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
vlrFunctionId	+	M	M	-
userLabel	+	M	M	M

Name	Qualifier	Description
vlrFunctionId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ- WRITE, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 6: Notifications of `VlrFunction`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.4 ~~MOC~~ AucFunction

6.3.4.1 Definition

This ~~Managed Object Class~~IOC represents AUC functionality. For more information about the AUC, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.4.2 Attributes

Table 7: Attributes of AucFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
aucFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~aucFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 8: Notifications of AucFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.5 ~~MOC~~ EirFunction

6.3.5.1 Definition

This ~~Managed Object Class~~IOC represents EIR functionality. For more information about the EIR, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.5.2 Attributes

Table 9: Attributes of EirFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
eirFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~eirFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 10: Notifications of `EirFunction`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.6 ~~MOC~~ SmsIwmscFunction

6.3.6.1 Definition

This ~~Managed Object Class~~IOC represents SMS-IWMSC functionality. For more information about the SMS-IWMSC, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.6.2 Attributes

Table 11: Attributes of `SmsIwmscFunction`

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
SmsIwmscFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~SmsIwmscFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 12: Notifications of `SmsIwmscFunction`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.7 ~~MOC~~ SmsGmscFunction

6.3.7.1 Definition

This ~~Managed Object Class~~IOC represents SMS-GMSC functionality. For more information about the SMS-GMSC, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.7.2 Attributes

Table 13: Attributes of SmsGmscFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
SmsGmscFunctionId	+	M	M	-
userLabel	+	M	M	M

Name	Qualifier	Description
SmsGmscFunctionId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ- WRITE, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 14: Notifications of SmsGmscFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.8 MOC GmscFunction

6.3.8.1 Definition

This Managed Object ClassIOC represents GMSC functionality. For more information about the GMSC, see 3GPP TS 23.002 [15].

It inherits from ManagedFunction.

6.3.8.2 Attributes

Table 15: Attributes of GmscFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
gmscFunctionId	+	M	M	-
userLabel	+	M	M	M

Name	Qualifier	Description
gmscFunctionId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ- WRITE, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 16: Notifications of GmscFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.9 ~~MOC~~ SgsnFunction

6.3.9.1 Definitions

This ~~managed object class~~IOC represents SGSN functionality. For more information about the SGSN, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.9.2 Attributes

Table 17: Attributes of SgsnFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
sgsnFunctionId	+	M	M	-
userLabel	+	M	M	M
mccList	+	M	M	M
mncList	+	M	M	M
lacList	+	M	M	M
racList	+	M	M	M
sacList	+	M	M	M
sgsnId	+	M	M	M
sgsnFunction-GSMCell	+	M	M	-
sgsnFunction-ExternalGSMCell	+	M	M	-

~~Name~~	~~Qualifier~~	~~Description~~
~~sgsnFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~
~~mccList~~	~~READ-WRITE,M~~	~~List of Mobile Country Codes, MCC. It is a part of the PLMN Id (Ref. 3 GPP TS 23.003 [3]).~~
~~mncList~~	~~READ-WRITE,M~~	~~List of Mobile Network Codes, MNC. It is a part of the PLMN Id (Ref. 3 GPP TS 23.003 [3]).~~
~~lacList~~	~~READ-WRITE,M~~	~~List of Location Area Codes covered by SGSN (Ref. 3 GPP TS 23.003 [3]).~~
~~racList~~	~~READ-WRITE,M~~	~~List of Routing Area Codes covered by SGSN (Ref. 3 GPP TS 23.003 [3]).~~
~~sacList~~	~~READ-WRITE,M~~	~~List of Service Area Codes covered by SGSN (Ref. 3 GPP TS 23.003 [3]).~~
~~sgsnId~~	~~READ-WRITE,M~~	~~Unique SGSN ID (Ref. 3GPP TS 23.002).~~
~~sgsnFunction-GSMCell~~	~~READ-ONLY,M~~	~~The value of this attribute shall be the DN of the related GSMcell instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this SgsnFunction is associated with to 0-* GSMcell.~~
~~sgsnFunction-ExternalGSMCell~~	~~READ-ONLY,M~~	~~The value of this attribute shall be the DN of the related ExternalGSMcell instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this SgsnFunction is associated with to 0-* ExternalGSMcell.~~

Table 18: Notifications of SgsnFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.10 ~~MOC~~ GgsnFunction

6.3.10.1 Definitions

This ~~Managed Object Class~~IOC represents GGSN functionality. For more information about the GGSN, see 3GPP TS 23.002 [15].
It inherits from ManagedFunction.

6.3.10.2 Attributes

Table 19: Attributes of GgsnFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
ggsnFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~ggsnFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 20: Notifications of GgsnFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.11 ~~MOC~~ BgFunction

6.3.11.1 Definitions

This ~~Managed Object Class~~IOC represents BG functionality. For more information about the BG, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.11.2 Attributes

Table 21: Attributes of BgFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
bgFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~bgFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 22: Notifications of BgFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.12 ~~MOC~~ SmlcFunction

6.3.12.1 Definitions

This ~~Managed Object Class~~IOC represents SMLC functionality. For more information about the SMLC, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.12.2 Attributes

Table 23: Attributes of SmlcFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
smlcFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~smlcFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 24: Notifications of SmlcFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.13 ~~MOC~~ GmlcFunction

6.3.13.1 Definitions

This ~~Managed Object Class~~IOC represents GMLC functionality. For more information about the GMLC, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.13.2 Attributes

Table 25: Attributes of GmlcFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
gmlcFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~gmlcFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 26: Notifications of GmlcFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.14 ~~MOC~~ ScfFunction

6.3.14.1 Definitions

This ~~Managed Object Class~~IOC represents SCF functionality (also referred to as gsmSCF). For more information about the SCF, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.14.2 Attributes

Table 27: Attributes of ScfFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
scfFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~scfFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 28: Notifications of ScfFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.15 ~~MOC~~ SrfFunction

6.3.15.1 Definitions

This ~~Managed Object Class~~IOC represents SRF functionality (also referred to as gsmSRF). For more information about the SRF, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.15.2 Attributes

Table 29: Attributes of SrfFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
srfFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~srfFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 30: Notifications of SrfFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.16 ~~MOC~~ CbcFunction

6.3.16.1 Definitions

This ~~Managed Object Class~~IOC represents CBC functionality. For more information about the CBC, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.16.2 Attributes

Table 31: Attributes of CbcFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
cbcFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~cbcFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 32: Notifications of CbcFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.17 ~~MOC~~ CgfFunction

6.3.17.1 Definitions

This ~~Managed Object Class~~IOC represents CGF functionality. For more information about the CGF, see 3GPP TS 23.060 [18]. ~~It inherits from ManagedFunction.~~

6.3.17.2 Attributes

Table 33: Attributes of CgfFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
cgfFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~cgfFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 34: Notifications of CgfFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.18 ~~MOC~~ MgwFunction

6.3.18.1 Definitions

This ~~Managed Object Class~~IOC represents IM-MGW functionality. For more information about MGW, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.18.2 Attributes

Table 35: Attributes of MgwFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
mgwFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~mgwFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 36: Notifications of MgwFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.19 ~~MOC~~ GmscServerFunction

6.3.19.1 Definitions

This ~~Managed Object Class~~IOC represents GMSCServer functionality. For more information about GMSCServer, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.19.2 Attributes

Table 37: Attributes of GmscServerFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
gmscServerFunctionId	+	M	M	-
userLabel	+	M	M	M

Name	Qualifier	Description
gmscServerFunctionId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ- WRITE, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 38: Notifications of `GmscServerFunction`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.20 MOC IwfFunction

6.3.20.1 Attributes

This Managed Object ClassIOC represents IWF functionality. For more information about IWF, see 3GPP TS 23.002 [15]. It inherits from ManagedFunction.

6.3.20.2 Attributes

Table 39: Attributes of `IwfFunction`

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
iwfFunctionId	+	M	M	-
userLabel	+	M	M	M

Name	Qualifier	Description
iwfFunctionId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ- WRITE, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 40: Notifications of `IwfFunction`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.21 ~~MOC~~ MnpSrfFunction

6.3.21.1 Definitions

This ~~Managed Object Class~~IOC represents MNP-SRF functionality (also known as FNR). For more information about MNP-SRF, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.21.2 Attributes

Table 41: Attributes of `MnpSrfFunction`

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
mnpSrfFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~mnpSrfFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 42: Notifications of `MnpSrfFunction`

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.22 ~~MOC~~ NpdbFunction

6.3.22.1 Definitions

This ~~Managed Object Class~~IOC represents NPDB functionality. For more information about NPDB, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.22.2 Attributes

Table 43: Attributes of `NpdbFunction`

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
npdbFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~npdbFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 44: Notifications of NpdbFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.23 ~~MOC~~ SgwFunction

6.3.23.1 Definitions

This ~~Managed Object Class~~IOC represents SGW functionality. For more information about SGW, see 3GPP TS 23.002 [15]. ~~It inherits from ManagedFunction.~~

6.3.23.2 Attributes

Table 45: Attributes of SgwFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
sgwFunctionId	+	M	M	-
userLabel	+	M	M	M

~~Name~~	~~Qualifier~~	~~Description~~
~~sgwFunctionId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ- WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~

Table 46: Notifications of SgwFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.24 ~~MOC~~ SsfFunction

6.3.24.1 Definitions

This ~~Managed Object Class~~IOC represents SSF functionality. For more information about SSF, see 3GPP TS 23.002 [15]. ~~It inherits from ManagedFunction.~~

6.3.24.2 Attributes

Table 47: Attributes of SsfFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
ssfFunctionId	+	M	M	-
userLabel	+	M	M	M

Name	Qualifier	Description
ssfFunctionId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ- WRITE, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 48: Notifications of SsfFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.25 MOC BsFunction

6.3.25.1 Definitions

This Managed Object ClassIOC represents BS functionality. For more information about BS, see 3GPP TS 23.060 [18]. It inherits from ManagedFunction.

6.3.25.2 Attributes

Table 49: Attributes of BsFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
bsFunctionId	+	M	M	-
userLabel	+	M	M	M

Name	Qualifier	Description
bsFunctionId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ- WRITE, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 50: Notifications of BsFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.26 ~~MOC~~ IucsLink

6.3.26.1 Definitions

This ~~Managed Object Class~~IOC represents a Iu-cs interface link connecting a MSCserver to the RNC or BSC. For more information about the Iu interface, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.26.2 Attributes

Table 51: Attributes of IucsLink

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
iucslinkId	+	M	M	-
userLabel	+	M	M	M
connectedRnc	+	M	M	-
connectedBss	+	M	M	-

~~Name~~	~~Qualifier~~	~~Description~~
~~iucslinkId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ-WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~
~~connectedRnc~~	~~READ-ONLY, M~~	~~The value of this attribute shall be the DN of the related RncFunction or ExternalRncFunction instance. This is a reference attribute modelling the role (of the association ConnectedTo) that this IucsLink is connected to 0-1 RncFunction or 0-1 ExternalRncFunction.~~
~~connectedBss~~	~~READ-ONLY, M~~	~~The value of this attribute shall be the DN of the related BssFunction or ExternalBssFunction instance. This is a reference attribute modelling the role (of the association ConnectedTo) that this IucsLink is connected to 0-1 BssFunction or 0-1 ExternalBssFunction.~~

Table 52: Notifications of IucsLink

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.27 ~~MOC~~ IupsLink

6.3.27.1 Definitions

This ~~Managed Object Class~~IOC represents a Iu-ps interface link connecting a SGSN to the RNC or BSC. For more information about the Iu interface, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.27.2 Attributes

Table 53: Attributes of IupsLink

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
iupslinkId	+	M	M	-
userLabel	+	M	M	M
connectedRnc	+	O	M	-
connectedBss	+	O	M	-

~~Name~~	~~Qualifier~~	~~Description~~
~~iupslinkId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ-WRITE, M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~
~~connectedRnc~~	~~READ-ONLY, O~~	~~The value of this attribute shall be the DN of the related RncFunction or ExternalRncFunction instance. This is a reference attribute modelling the role (of the association ConnectedTo) that this IupsLink is connected to 0-1 RncFunction or 0-1 ExternalRncFunction.~~ ~~This attribute shall be present if IupsLink is connected to an RNC.~~
~~connectedBss~~	~~READ-ONLY, O~~	~~The value of this attribute shall be the DN of the related BssFunction or ExternalBssFunction instance. This is a reference attribute modelling the role (of the association ConnectedTo) that this IupsLink is connected to 0-1 BssFunction or 0-1 ExternalBssFunction.~~ ~~This attribute shall be present if IupsLink is connected to a BSS.~~

NOTE: An instance of an IupsLink can only be connected to an RNC or a BSS.

Table 54: Notifications of IupsLink

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.28 ~~MOC~~ IubcLink

6.3.28.1 Definitions

This ~~Managed Object Class~~IOC represents a Iu-bc interface link connecting a CBC to the RNC. For more information about the Iu interface, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.28.2 Attributes

Table 55: Attributes of IubcLink

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
iubclinkId	+	M	M	-
userLabel	+	M	M	M
connectedRnc	+	M	M	-

Name	Qualifier	Description
iubclinkId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ-WRITE, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.
connectedRnc	READ-ONLY, M	The value of this attribute shall be the DN of the related RncFunction or ExternalRncFunction instance. This is a reference attribute modelling the role (of the association ConnectedTo) that this IubcLink is connected to 0-1 RncFunction or 0-1 ExternalRncFunction.

Table 56: Notifications of IubcLink

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.29 MOC ALink

6.3.29.1 Definitions

This Managed Object ClassIOC represents the A interface link connecting a MSC to the GERAN. For more information about the GERAN, see 3GPP TS 23.002 [15].
It inherits from ManagedFunction.

6.3.29.2 Attributes

Table 57: Attributes of Alink

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
aLinkId	+	M	M	-
userLabel	+	M	M	M
connectedBss	+	M	M	-

Name	Qualifier	Description
aLinkId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ-WRITE,M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.
connectedBss	READ-ONLY, M	The value of this attribute shall be the DN of the related BssFunction or ExternalBssFunction instance. This is a reference attribute modelling the role (of the association ConnectedTo) that this aLink is connected to 0-1 BssFunction or 0-1 ExternalBssFunction.

Table 58: Notifications of ALink

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.30 ~~MOC~~ GbLink

6.3.30.1 Definitions

This ~~Managed Object Class~~IOC represents the Gb interface link connecting a SGSN to the GERAN. For more information about the GERAN, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.30.2 Attributes

Table 59: Attributes of GbLink

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
gbLinkId	+	M	M	-
userLabel	+	M	M	M
connectedBss	+	M	M	-

~~Name~~	~~Qualifier~~	~~Description~~
~~gbLinkId~~	~~READ-ONLY, M~~	~~An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.~~
~~userLabel~~	~~READ-WRITE,M~~	~~A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.~~
~~connectedBss~~	~~READ-ONLY, M~~	~~The value of this attribute shall be the DN of the related BssFunction or ExternalBssFunction instance. This is a reference attribute modelling the role (of the association ConnectedTo) that this gbLink is connected to 0-1 BssFunction or 0-1 ExternalBssFunction.~~

Table 60: Notifications of GbLink

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.~~32~~31 ~~MOC~~ CsMgwFunction

6.3.31.1 Definitionss

This ~~Managed Object Class~~IOC represents CS-MGW functionality. For more information about MGW, see 3GPP TS 23.002 [15].
~~It inherits from ManagedFunction.~~

6.3.31.2 Attributes

Table 6361: Attributes of CsMgwFunction

Attribute name	Visibility	Support Qualifier	Read Qualifer	Write Qualifier
csmgwFunctionId	+	M	M	-
userLabel	+	M	M	M
csMgwFunction-MscServerFunction	+	M	M	-
csMgwFunction- IucsLink	+	M	M	-
csMgwFunction- ALink	+	M	M	-

Name	Qualifier	Description
csmgwFunctionId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ-WRITE, M	A user-friendly (and user-assigned) name of the associated object. Inherited from ManagedFunction.
csMgwFunction-MscServerFunction	READ-ONLY, M	The value of this attribute shall be the DN of the related mscServerFunction instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this csMgwFunction is associated with to 0-* mscServerFunction.
csMgwFunction-IucsLink	READ-ONLY, M	The value of this attribute shall be the DN of the related IucsLink instance. This is a reference attribute modelling the role (of the association ConnectedTo) that this csMgwFunction is connected to 0-* IucsLink.
csMgwFunction-ALink	READ-ONLY, M	The value of this attribute shall be the DN of the related ALink instance. This is a reference attribute modelling the role (of the association ConnectedTo) that this csMgwFunction is connected to 0-* ALink.

Table 6462: Notifications of CsMgwFunction

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.4 Information relationships definitionAssociations

6.4.1 Association **AssociatedWith1** (M)

6.4.1.1 Definition

This represents a bi-directional relationassociation models the relationship between the MscServerFunction and GSMCell. The role of the relation shall be mapped to a reference attribute of the IOC. The name of the reference attribute shall be the role name.Each association has two roles. These two roles model each MOC's association with the other MOC. Each role is in the MOC definition mapped to a reference attribute with the same name.

6.4.1.2 Roles

Table 63: Roles of the relation AssociatedWith1

Name	Definition
mscServerFunction-Gsmcell	This role (when present) represents mscServerFunction capability to identify the set of related GSMcell. MscServerFunction-GSMcell shall carry the set of GSMcell's DN(s).
gSMcell- MscServerFunction	This role (when present) represents GSMcell capability to identify one related mscServerFunction. When the role is absent, the gSMcell-mscServerFunction shall contain no information. When it is present, it shall contain one mscServerFunction DN.

6.4.1.3 Constraints

6.4.2 **AssociatedWith2** (M)

6.4.2.1 Definition

This represents a bi-directional relation between the MscServerFunction and ExternalGSMCell.
The role of the relation shall be mapped to a reference attribute of the IOC. The name of the reference attribute shall be the role name.

6.4.2.2 Roles

Table 64: Roles of the relation AssociatedWith2

Name	Definition
mscServerFunction-ExternalGSMcell	This role (when present) represents mscServerFunction capability to identify the set of related externalGSMcell. MscServerFunction-externalGSMcell shall carry the set of externalGSMcell's DN(s).
externalGSMcell- MscServerFunction	This role (when present) represents externalGSMcell capability to identify one related mscServerFunction. When the role is absent, the externalGSMcell-mscServerFunction shall contain no information. When it is present, it shall contain one mscServerFunction DN.

6.4.2.3 Constraints

6.4.3 **AssociatedWith3** (M)

6.4.3.1 Definition

This represents a bi-directional relation between the MscServerFunction and CsMgwFunction.
The role of the relation shall be mapped to a reference attribute of the IOC. The name of the reference attribute shall be the role name.

6.4.3.2 Roles

Table 65: Roles of the relation AssociatedWith3

Name	Definition
mscServerFunction-CsMgwFunction	This role (when present) represents mscServerFunction capability to identify the related CsMgwFunction. MscServerFunction- CsMgwFunction shall carry the CsMgwFunction DN.
csMgwFunction - MscServerFunction	This role (when present) represents CsMgwFunction capability to identify one related mscServerFunction. When the role is absent, the CsMgwFunction - mscServerFunction shall contain no information. When it is present, it shall contain one MscServerFunction DN.

6.4.3.3 Constraints

6.4.4 **AssociatedWith4** (M)

6.4.4.1 Definition

This represents a bi-directional relation between the SgsnFunction and GsmCell.
The role of the relation shall be mapped to a reference attribute of the IOC. The name of the reference attribute shall be the role name.

6.4.4.2 Roles

Table 66: Roles of the relation AssociatedWith4

Name	Definition
sgsnFunction-GsmCell	This role (when present) represents sgsnFunction capability to identify the set of related GSMcell. sgsnFunction - GSMcell shall carry the set of GSMcell's DN(s).
gsmCell - SgsnFunction	This role (when present) represents GSMcell capability to identify one related sgsnFunction. When the role is absent, the gSMcell- sgsnFunction shall contain no information. When it is present, it shall contain one sgsnFunction DN.

6.4.4.3 Constraints

6.4.5 **AssociatedWith5** (M)

6.4.5.1 Definition

This represents a bi-directional relation between the SgsnFunction and ExternalGsmCell.
The role of the relation shall be mapped to a reference attribute of the IOC. The name of the reference attribute shall be the role name.

6.4.5.2 Roles

Table 67: Roles of the relation AssociatedWith5

Name	Definition
sgsnFunction-ExternalGsmCell	This role (when present) represents sgsnFunction capability to identify the set of related externalGSMcell. sgsnFunction -externalGSMcell shall carry the set of externalGSMcell's DN(s).
externalGsmCell - SgsnFunction	This role (when present) represents externalGSMcell capability to identify one related sgsnFunction. When the role is absent, the externalGsmcell-sgsnFunction shall contain no information. When it is present, it shall contain one sgsnFunction DN.

6.4.5.3 Constraints

6.4.~~2~~6 ~~Association~~ **ConnectedTo1** (M)

6.4.6.1 Definition

This represents a uni-directional relation~~association models the relationship~~ between the CsMgwFunction and IucsLink. ~~Each association has one role. This role models the MOC's association with the other MOC. The role is in the MOC definition mapped to a reference attribute with the same name.~~ The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.6.2 Roles

Table 68: Roles of the relation ConnectedTo1

Name	Definition
csMgwFunction- IucsLink	This role (when present) represents csMgwFunction capability to identify the set of connected IucsLinks. When the role is present, the csMgwFunction-IucsLink shall carry the set of IucsLink's DN(s).

6.4.6.3 Constraints

6.4.7 **ConnectedTo2** (M)

6.4.7.1 Definition

This represents a uni-directional relation between the IucsLink and ExternalRncFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.7.2 Roles

Table 69: Roles of the relation ConnectedTo2

Name	Definition
connectedRnc	This role (when present) represents IOC IucsLink capability to identify one connected Rnc. When present, it shall contain one RNC DN.

6.4.7.3 Constraints

6.4.8 **ConnectedTo3** (M)

6.4.8.1 Definition

This represents a uni-directional relation between the IucsLink and RncFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.8.2 Roles

Table 70: Roles of the relation ConnectedTo3

Name	Definition
connectedRnc	This role (when present) represents IOC IucsLink capability to identify one connected Rnc. When present, it shall contain one RNC DN.

6.4.8.3 Constraints

6.4.9 **ConnectedTo4** (M)

6.4.9.1 Definition

This represents a uni-directional relation between the IupsLink and RncFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.9.2 Roles

Table 71: Roles of the relation ConnectedTo4

Name	Definition
connectedRnc	This role (when present) represents IOC IupsLink capability to identify one connected Rnc. When present, it shall contain one RNC DN.

6.4.9.3 Constraints

6.4.10 **ConnectedTo5** (M)

6.4.10.1 Definition

This represents a uni-directional relation between the IupsLink and ExternalRncFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.10.2 Roles

Table 72: Roles of the relation ConnectedTo5

Name	Definition
connectedRnc	This role (when present) represents IOC IupsLink capability to identify one connected Rnc. When present, it shall contain one RNC DN.

6.4.10.3 Constraints

6.4.11 **ConnectedTo6** (M)

6.4.11.1 Definition

This represents a uni-directional relation between the IubcLink and RncFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.11.2 Roles

Table 73: Roles of the relation ConnectedTo6

Name	Definition
connectedRnc	This role (when present) represents IOC IubcLink capability to identify one connected Rnc. When present, it shall contain one RNC DN.

6.4.11.3 Constraints

6.4.12 **ConnectedTo7** (M)

6.4.12.1 Definition

This represents a uni-directional relation between the IubcLink and ExternalRncFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.12.2 Roles

Table 74: Roles of the relation ConnectedTo7

Name	Definition
connectedRnc	This role (when present) represents IOC IubcLink capability to identify one connected Rnc. When present, it shall contain one RNC DN.

6.4.12.3 Constraints

6.4.13 **ConnectedTo8** (M)

6.4.13.1 Definition

This represents a uni-directional relation between the CsMgwFunction and Alink.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.13.2 Roles

Table 75: Roles of the relation ConnectedTo8

Name	Definition
csMgwFunction-ALink	This role (when present) represents csMgwFunction capability to identify the set of connected ALinks. When the role is present, the csMgwFunction- ALink shall carry the set of ALink's DN(s).

6.4.13.3 Constraints

6.4.14 **ConnectedTo9** (M)

6.4.14.1 Definition

This represents a uni-directional relation between the Alink and ExternalBssFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.14.2 Roles

Table 76: Roles of the relation ConnectedTo9

Name	Definition
connectedBss	This role (when present) represents IOC ALink capability to identify one connected Bss. When present, it shall contain one Bss DN.

6.4.14.3 Constraints

6.4.15 **ConnectedTo10** (M)

6.4.15.1 Definition

This represents a uni-directional relation between the Iucslink and ExternalBssFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.15.2 Roles

Table 77: Roles of the relation ConnectedTo10

Name	Definition
connectedBss	This role (when present) represents IOC IucsLink capability to identify one connected Bss. When present, it shall contain one Bss DN.

6.4.15.3 Constraints

6.4.16 **ConnectedTo11** (M)

6.4.16.1 Definition

This represents a uni-directional relation between the Iucslink and BssFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.16.2 Roles

Table 78: Roles of the relation ConnectedTo11

Name	Definition
connectedBss	This role (when present) represents IOC IucsLink capability to identify one connected Bss. When present, it shall contain one Bss DN.

6.4.16.3 Constraints

6.4.17 **ConnectedTo12** (M)

6.4.17.1 Definition

This represents a uni-directional relation between the Alink and BssFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.17.2 Roles

Table 79: Roles of the relation ConnectedTo12

Name	Definition
connectedBss	This role (when present) represents IOC Alink capability to identify one connected Bss. When present, it shall contain one Bss DN.

6.4.17.3 Constraints

6.4.18 **ConnectedTo13** (M)

6.4.18.1 Definition

This represents a uni-directional relation between the Gblink and BssFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.18.2 Roles

Table 80: Roles of the relation ConnectedTo13

Name	Definition
connectedBss	This role (when present) represents IOC GbLink capability to identify one connected Bss. When present, it shall contain one Bss DN.

6.4.18.3 Constraints

6.4.19 **ConnectedTo14** (M)

6.4.19.1 Definition

This represents a uni-directional relation between the Iupslink and BssFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.19.2 Roles

Table 81: Roles of the relation ConnectedTo14

Name	Definition
connectedBss	This role (when present) represents IOC IupsLink capability to identify one connected Bss. When present, it shall contain one Bss DN.

6.4.19.3 Constraints

6.4.20 **ConnectedTo15** (M)

6.4.20.1 Definition

This represents a uni-directional relation between the Iupslink and ExternalBssFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.20.2 Roles

Table 82: Roles of the relation ConnectedTo15

Name	Definition
connectedBss	This role (when present) represents IOC IupsLink capability to identify one connected Bss. When present, it shall contain one Bss DN.

6.4.20.3 Constraints

6.4.21 **ConnectedTo16** (M)

6.4.21.1 Definition

This represents a uni-directional relation between the Gblink and ExternalBssFunction.
The role of the relation shall be mapped to a reference attribute of the IOC.

6.4.21.2 Roles

Table 83: Roles of the relation ConnectedTo16

Name	Definition
connectedBss	This role (when present) represents IOC GbLink capability to identify one connected Bss. When present, it shall contain one Bss DN.

6.4.21.3 Constraints

6.5 Information attributes definition

6.5.1 Definition and legal values

The table below defines the attributes that are present in several information object classes of this TS.

Table 84: Attributes

Attribute Name	Definition	Legal Values
lacList	List of Location Area Codes covered by MSC (Ref. 3 GPP TS 23.003 [3]).	
sacList	List of Service Area Codes covered by MSC (Ref. 3 GPP TS 23.003 [3]).	
gcaList	List of Group Call Area (Ref. 3 GPP TS 23.003 [3]).	
mscId	Unique MSC ID (Ref. 3 GPP TS 23.002).	
mccList	List of Mobile Country Codes, MCC (part of the PLMN Id, Ref. 3 GPP TS 23.003 [3]).	
mncList	List of Mobile Network Codes, MNC (part of the PLMN Id, Ref. 3 GPP TS 23.003 [3]).	
mscServerFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
hlrFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
vlrFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
aucFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
eirFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
smsIwmscFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
smsGmscFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
gmscFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
sgsnFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
sgsnId	Unique SGSN ID (Ref. 3GPP TS 23.002).	
ggsnFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
bgFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object	

Attribute Name	Definition	Legal Values
	instance.	
smlcFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
gmlcFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
scfFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
srfFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
cbcFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
cgfFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
mgwFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
gmscServerFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
mnpSrfFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
npdbFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
sgwFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
ssfFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
bsFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
iucslinkId	An attribute whose 'name+value' can be used as an	

Attribute Name	Definition	Legal Values
	RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
iupslinkId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
iubclinkId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
aLinkId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
gbLinkId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
csmgwFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
hlrFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
hlrFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
hlrFunctionId	An attribute whose 'name+value' can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
userLabel	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.	

6.5.2 Constraints

None.

6.6 Particular information configurations

Not applicable.