Technical Specification Group Services and System Aspects
Meeting #19, Birmingham, UK, 17-20 March 2003

TSGS#19(03)0142

Source: **SA5 (Telecom Management)**

Title: **2 Rel-4/5 CRs 32.632 (Configuration Management (CM); Core Network Resources IRP: Network Resource Model)**

Document for: **Approval**

Agenda Item: **7.5.3**

Doc-1st-Level	Spec	CR	Rev	Phase	Subject	Cat	Ver-Current	Doc-2nd-Level	Workitem
SP-030142	32.632	005	-	Rel-4	**Change userLabel attribute from Read-Only to Read-Write**	F	4.2.0	S5-036114	OAM-CM
SP-030142	32.632	006	-	Rel-5	**CN Network Resource Model changed to the New Methodology - alignment with 32.102 (Telecommunication management; Architecture)**	F	5.1.0	S5-036327	OAM-NIM

3GPP TSG-SA5 Meeting #32bis
Sophia Antipolis, France, 20-24 January 2003

Tdoc ⌘S5-036114

CR-Form-v7

CHANGE REQUEST

⌘ **32.632** **CR** **005** ⌘**rev** **-** ⌘ Current version: **4.2.0** ⌘

*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 [X] Core Network [X]

Title:	⌘	Change `userLabel` attribute from Read-Only to Read-Write
Source:	⌘	S5
Work item code:	⌘	OAM-CM
Date:	⌘	28/02/2003
Category:	⌘	**F**
Release:	⌘	Rel-4

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 `userLabel` attribute needs to be both readable and writeable, as defined in Managed Function.
Summary of change:	⌘	Change `userLabel` attribute from Read-Only to Read-Write
Consequences if not approved:	⌘	Inconsistent interfaces
Clauses affected:	⌘	6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.6, 6.3.7, 6.3.8, 6.3.9, 6.3.10, 6.3.11, 6.3.12, 6.3.13, 6.3.14, 6.3.15, 6.3.16, 6.3.17, 6.3.18, 6.3.19, 6.3.20, 6.3.21, 6.3.22, 6.3.23, 6.3.24, 6.3.25

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

Other comments: ⌘

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.3.1 MOC `MscFunction`

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

It inherits from ManagedFunction.

Table 1: Attributes of `MscFunction`

Name	Qualifier	Description
`mscFunctionId`	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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 2: Notifications of `MscFunction`

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`

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

It inherits from ManagedFunction.

Table 3: Attributes of `HlrFunction`

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~~READ-ONLY~~, 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`

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

It inherits from ManagedFunction.

Table 5: Attributes of `VlrFunction`

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~~READ-ONLY~~, 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`

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

It inherits from ManagedFunction.

Table 7: Attributes of `AucFunction`

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~~READ-ONLY~~, 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`

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

It inherits from ManagedFunction.

Table 9: Attributes of `EirFunction`

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~~READ-ONLY~~, 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

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

It inherits from ManagedFunction.

Table 11: Attributes of `SmsIwmscFunction`

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~~READ-ONLY~~, 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

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

It inherits from ManagedFunction.

Table 13: Attributes of `SmsGmscFunction`

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~~READ-ONLY~~, 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

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

It inherits from ManagedFunction.

Table 15: Attributes of `GmscFunction`

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~~READ-ONLY~~, 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

This managed object class represents SGSN functionality. For more information about the SGSN, see 3GPP TS 23.002 [15].

It inherits from ManagedFunction.

Table 17: Attributes of SgsnFunction

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

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

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

It inherits from ManagedFunction.

Table 19: Attributes of GgsnFunction

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~~READ-ONLY~~, 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

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

It inherits from ManagedFunction.

Table 21: Attributes of BgFunction

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~~READ-ONLY~~, 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

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

It inherits from ManagedFunction.

Table 52: Attributes of SmlcFunction

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 53: 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

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

It inherits from ManagedFunction.

Table 54: Attributes of `GmlcFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 55: 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`

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

It inherits from ManagedFunction.

Table 56: Attributes of `ScfFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 57: 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`

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

It inherits from ManagedFunction.

Table 58: Attributes of `SrfFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 59: 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`

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

It inherits from ManagedFunction.

Table 60: Attributes of `CbcFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 61: 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`

This Managed Object Class represents CGF functionality. For more information about the CGF, see 3GPP TS 23.060 [18].

It inherits from ManagedFunction.

Table 64: Attributes of `CgfFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 65: 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`

This Managed Object Class represents MGW functionality. For more information about MGW, see 3GPP TS 23.002 [15].

It inherits from ManagedFunction.

Table 66: Attributes of `MgwFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 67: 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

This Managed Object Class represents GMSCServer functionality. For more information about GMSCServer, see 3GPP TS 23.002 [15].

It inherits from ManagedFunction.

Table 70: Attributes of `GmscServerFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 71: 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`

This Managed Object Class represents IWF functionality. For more information about IWF, see 3GPP TS 23.002 [15].

It inherits from ManagedFunction.

Table 76: Attributes of `IwfFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 77: 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

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

It inherits from ManagedFunction.

Table 78: Attributes of `MnpSrfFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 79: 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`

This Managed Object Class represents NPDB functionality. For more information about NPDB, see 3GPP TS 23.002 [15].

It inherits from ManagedFunction.

Table 80: Attributes of `NpdbFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 81: 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`

This Managed Object Class represents SGW functionality. For more information about SGW, see 3GPP TS 23.002 [15].

It inherits from ManagedFunction.

Table 82: Attributes of SgwFunction

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 83: 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

This Managed Object Class represents SSF functionality. For more information about SSF, see 3GPP TS 23.002 [15].

It inherits from ManagedFunction.

Table 84: Attributes of SsfFunction

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 85: 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

This Managed Object Class represents BS functionality. For more information about BS, see 3GPP TS 23.060 [18].

It inherits from ManagedFunction.

Table 86: Attributes of `BsFunction`

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~~READ-ONLY~~, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

Table 87: 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	

3GPP TSG-SA5 (Telecom Management) **S5-036327**
Meeting #33, Phoenix, USA, 24-28 February 2003

CR-Form-v7

CHANGE REQUEST

⌘ **32.632** **CR** **006** ⌘**rev** **-** ⌘ Current version: **5.1.0** ⌘

*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 **X**

Title:	⌘	CN Network Resource Model changed to the New Methodology - alignment with 32.102 (Telecommunication management; Architecture)
Source:	⌘	S5
Work item code:	⌘	OAM-NIM
Date:	⌘	28/02/2003
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 specification has been changed in accordance with TS 32.102. Unused abbreviations and definitions have been removed.
Consequences if not approved:	⌘	This document would not comply with 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:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply. For terms and definitions not found here, please refer to 3GPP TS 32.101 [1], 3GPP TS 32.102 [2] and 3GPP TS 32.600 [14].

Association: In general it is used to model relationships between Managed Objects. Associations can be implemented in several ways, such as:

(1) name bindings,
(2) reference attributes, and
(3) association objects.

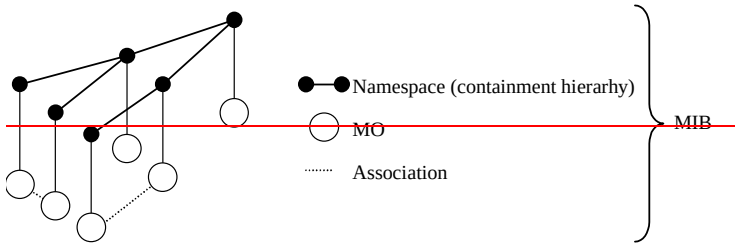
This IRP stipulates that containment associations shall be expressed through name bindings, but it does not stipulate the implementation for other types of associations as a general rule. These are specified as separate entities in the object models (UML diagrams). ~~Currently (in R99) however, all (non-containment) associations are modelled by means of reference attributes of the participating MOs.~~

Managed Element (ME): An instance of the Managed Object Class ManagedElement defined in [16].

Managed Object (MO): In the context of the present document, a Managed Object (MO) is a software object that encapsulates the manageable characteristics and behaviour of a particular Network Resource. The MO is instance of a MO class defined in a MIM/NRM. ~~An MO class~~This class, called **Information Object Class (IOC)** has attributes that provide information used to characterize the objects that belong to the class (the term "attribute" is taken from TMN and corresponds to a "property" according to CIM). Furthermore, ~~an MO class~~the IOC can have operations that represent the behaviour relevant for that class (the term "operation" is taken from TMN and corresponds to a "method" according to CIM). ~~An MO class~~The IOC may support the emission of notifications that provide information about an event occurrence within a network resource.

~~**Management Information Base (MIB)**: A MIB is an instance of an NRM and has some values on the defined attributes and associations specific for that instance. In the context of the present document, an MIB consists of:~~

~~(1)a Name space (describing the MO containment hierarchy in the MIB through Distinguished Names),~~
~~(2)a number of Managed Objects with their attributes and~~
~~(3)a number of Associations between these MOs. Also note that TMN (ITU-T Recommendation X.710 [7]) defines a concept of a Management Information Tree (also known as a Naming Tree) that corresponds to the name space (containment hierarchy) portion of this MIB definition. Figure 1 depicts the relationships between a Name space and a number of participating MOs (the shown association is of a non-containment type)~~



~~**Figure 1: Relationships between a Name space and a number of participating MOs**~~

Management Information Model (MIM): Also referred to as NRM – see the definition below.

~~**Name space**: A name space is a collection of names. The IRP name convention (see 3GPP TS 32.300 [13]) restricts the name space to a hierarchical containment structure, including its simplest form – the one-level, flat name space.~~
~~All Managed Objects in a MIB shall be included in the corresponding name space and the MIB/name space shall only support a strict hierarchical containment structure (with one root object). A Managed Object that contains another is said to be the superior (parent); the contained Managed Object is referred to as the subordinate (child). The parent of all MOs in a single name space is called a Local Root. The ultimate parent of all MOs of all managed systems is called the Global Root.~~

Network Resource Model (NRM): A model representing the actual managed telecommunications network resources that a System is providing through the subject IRP. An NRM identifies and describes ~~Managed Object Classes~~IOCs, their associations, attributes and operations. The NRM is also referred to as "MIM" (see above), which originates from the ITU-T TMN.

Node B: A logical node responsible for radio transmission/reception in one or more cells to/from the User Equipment. It terminates the Iub interface towards the RNC.

3.2 Abbreviations

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

AUC	AUthentication Centre
BG	Border Gateway
BS	Billing System
CBC	Cell Broadcast Center
CGF	Charging Gateway Functionality
~~CMIP~~	~~Common Management Information Protocol~~
~~CMIS~~	~~Common Management Information Service~~
CN	Core Network
~~CORBA~~	~~Common Object Request Broker Architecture~~
~~DMTF~~	~~Distributed Management Task Force~~
DN	Distinguished Name (see 3GPP TS 32.300 [13])
EIR	Equipment Identity Register
EM	Element Manager
FM	Fault Management
FNR	Flexible Number Register
GDMO	Guidelines for the Definition of Managed Objects
GGSN	Gateway GPRS Support Node
GMLC	Gateway Mobile Location Center
GMSC	Gateway MSC
GMSC Server	Gateway MSC Server
GPRS	General Packet Radio System
HLR	Home Location Register
IDL	Interface Definition Language
~~IEC~~	~~International Electro-technical Commission~~
~~IETF~~	~~Internet Engineering Task Force~~
IOC	Information Object Class
IRP	Integration Reference Point
ISO/IEC	International Standards Organization
ITU-T	International Telecommunication Union, Telecommunication Sector
IWF	Interworking Function
NM	Network Manager
NE	Network Element
ME	Managed Element
MGW	Media Gateway
~~MIB~~	~~Management Information Base~~
MIM	Management Information Model
~~MIT~~	~~Management Information Tree (or Naming Tree)~~
MNP-SRF	Mobile Number Portability/Signalling Relay Function
MO	Managed Object
~~MOC~~	~~Managed Object Class~~
MOI	Managed Object Instance
MSC	Mobile Services Switching Centre
MSC Server	Mobile Services Switching Centre Server
NE	Network Element
NPDB	Number Portability Database
NR	Network Resource
NRM	Network Resource Model
OSI	Open Systems Interconnection
PM	Performance Management
RDN	Relative Distinguished Name (see 3GPP TS 32.300 [13])
SGW	Signalling Gateway
SCF	Service Control Function
SGSN	Serving GPRS Support Node
SMLC	Serving Mobile Location Center
SMS	Short Message Service
SMS-GMSC	SMS Gateway MSC
SMS-IWMSC	SMS Interworking MSC
~~SNMP~~	~~Simple Network Management Protocol~~

SRF	Specialised Resource Function
~~SS~~	~~Solution Set~~
SSF	Service Switching Function
TMN	Telecommunications Management Network
UML	Unified Modelling Language
UMTS	Universal Mobile Telecommunications System
UTRAN	UMTS Terrestrial Radio Access Network
VLR	Visitor Location Register
~~WBEM~~	~~Web-Based Enterprise Management~~
~~XML~~	~~eXtensible Mark-up Language~~

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.

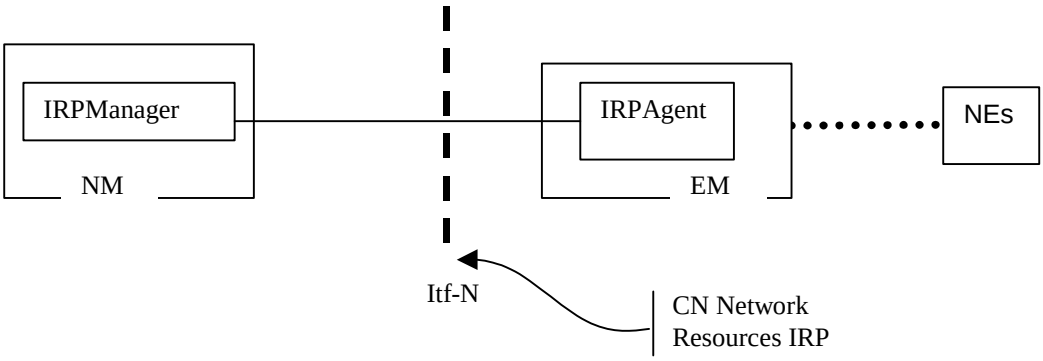


Figure 4.1: System Context A

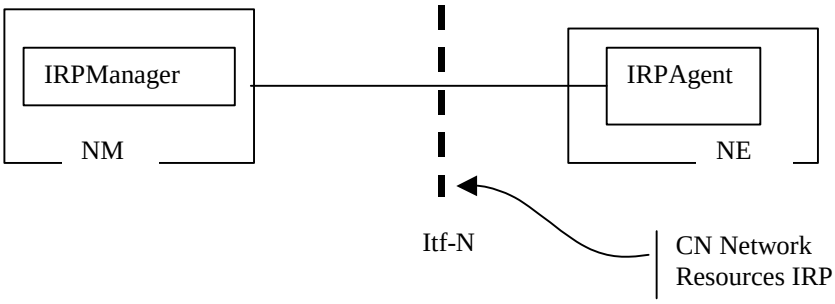


Figure 4.2: System Context B

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.

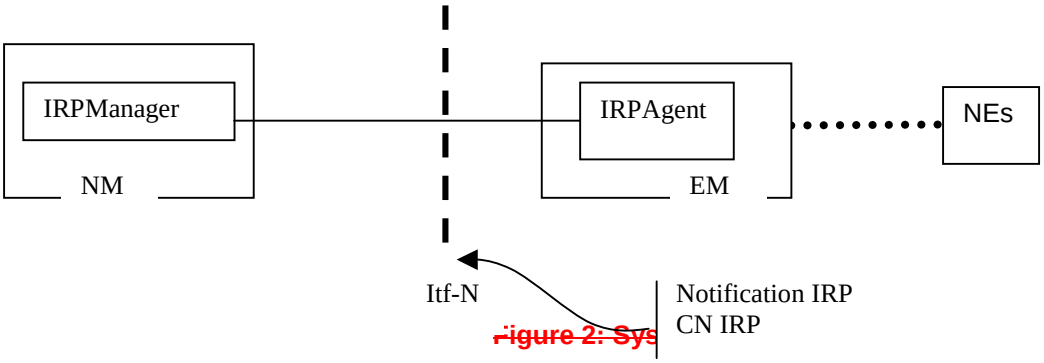


Figure 2: Sys

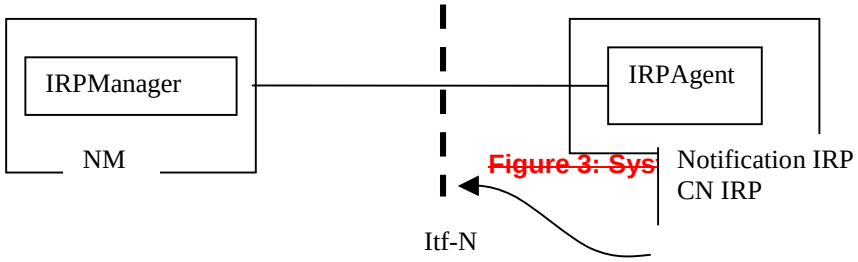


Figure 3: Sys

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.

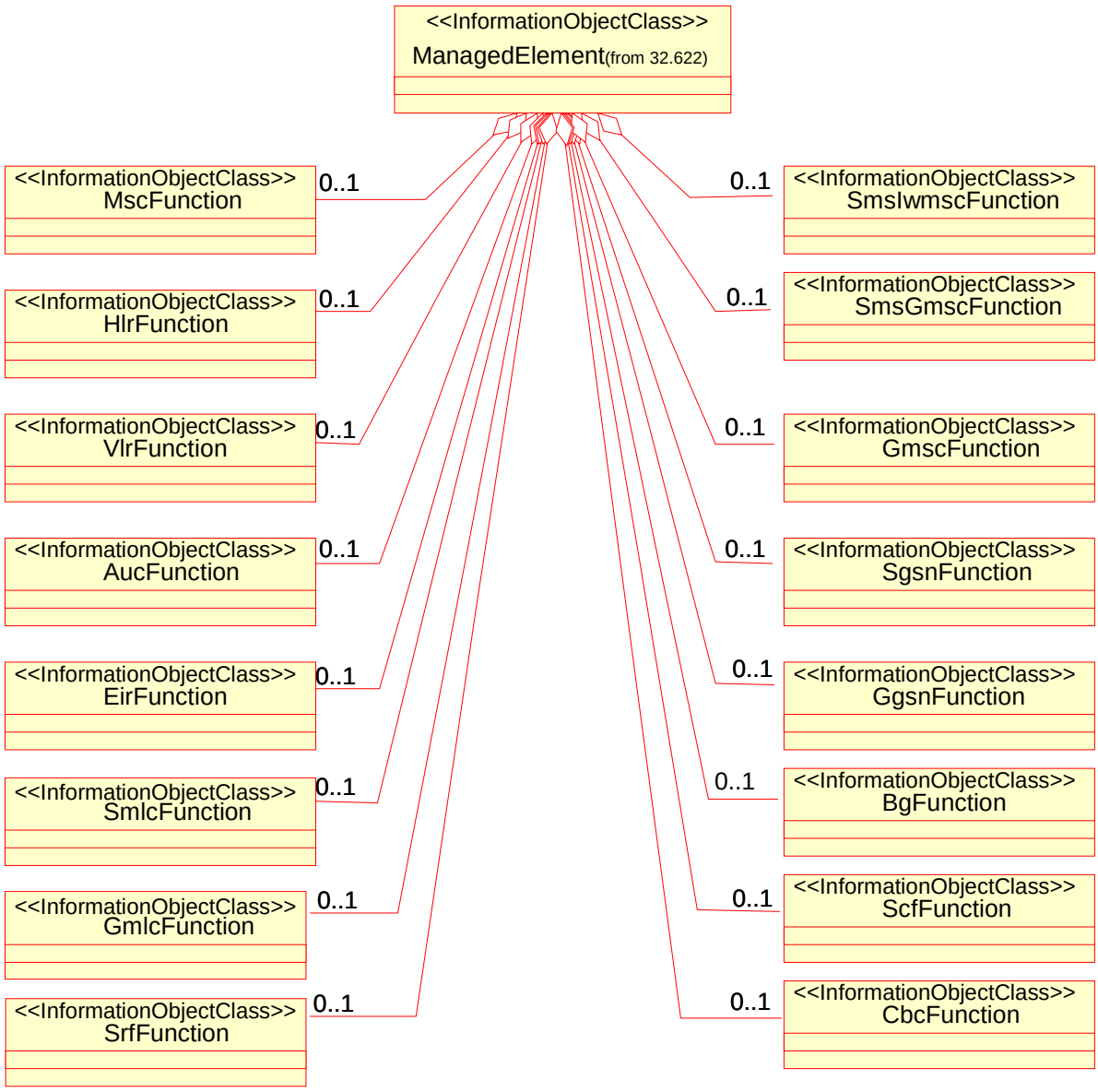


Figure 6.2.1.1: CN NRM Containment/Naming and Association diagram 1

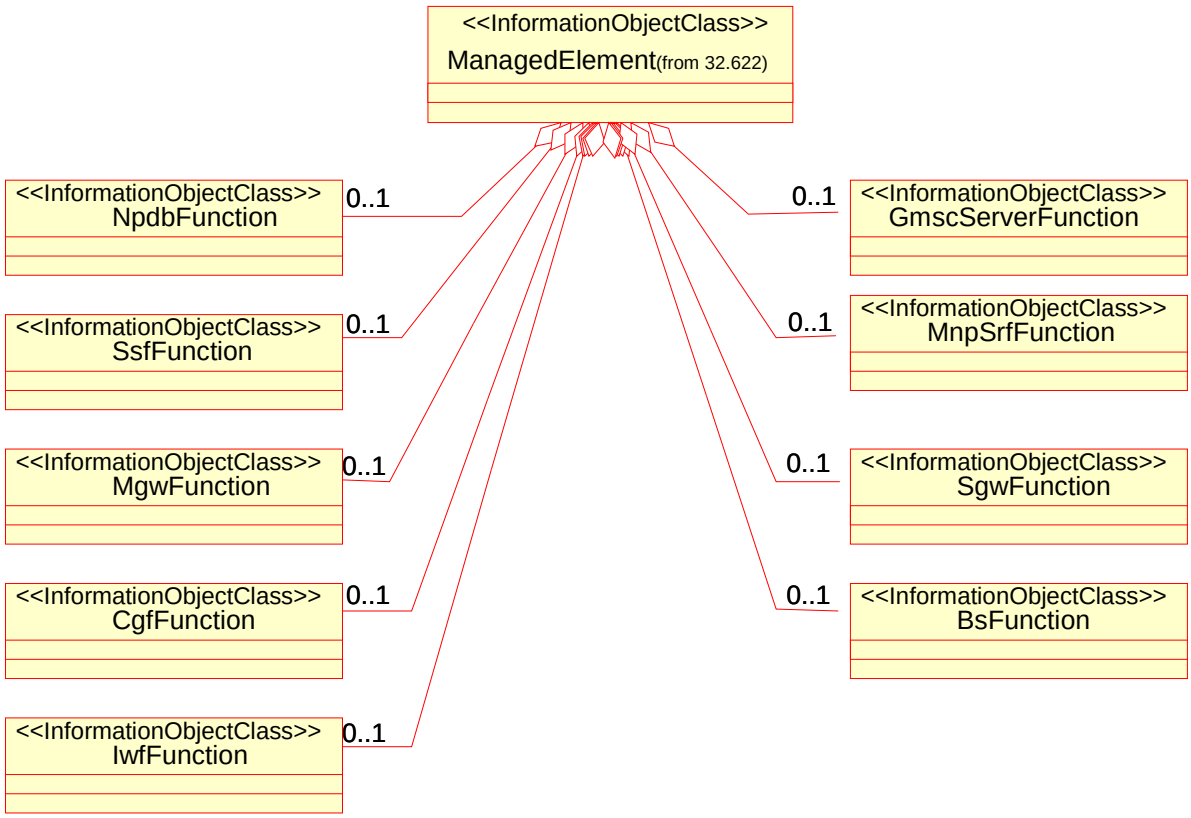


Figure 6.2.1.2: CN NRM Containment/Naming and Association diagram 2

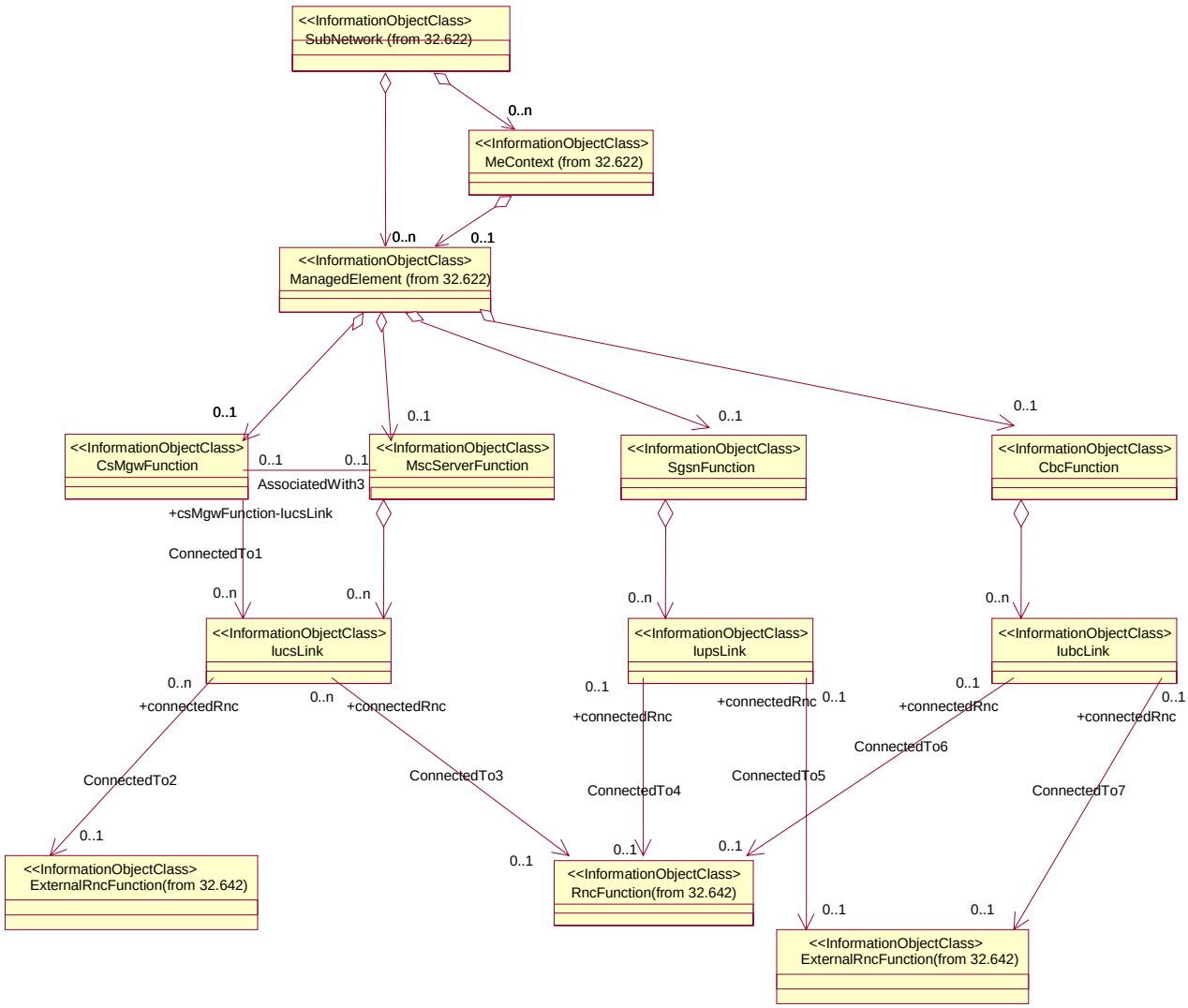
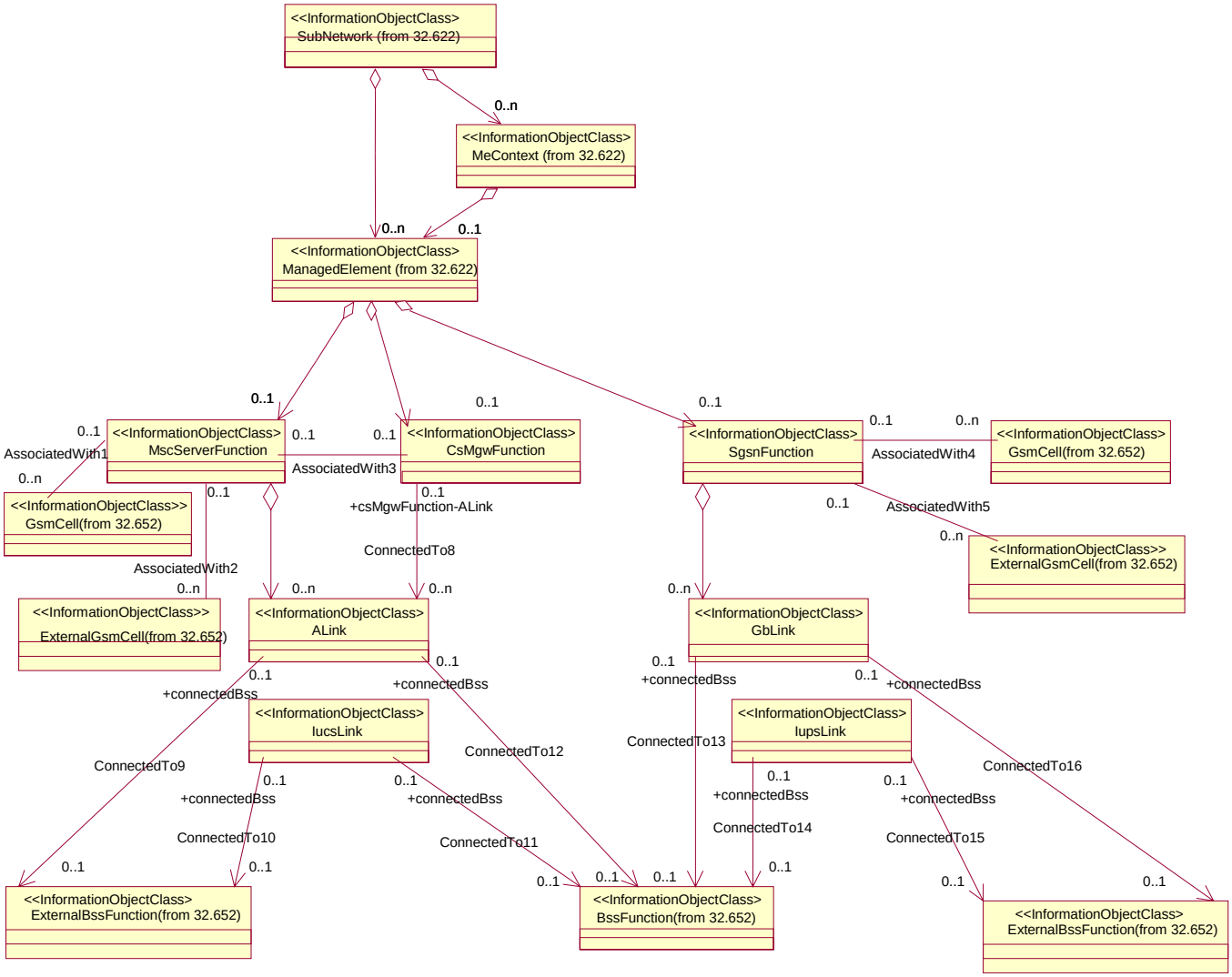


Figure 6.2.1.3: CN UTRAN NRM Containment/Naming and Association diagram 3

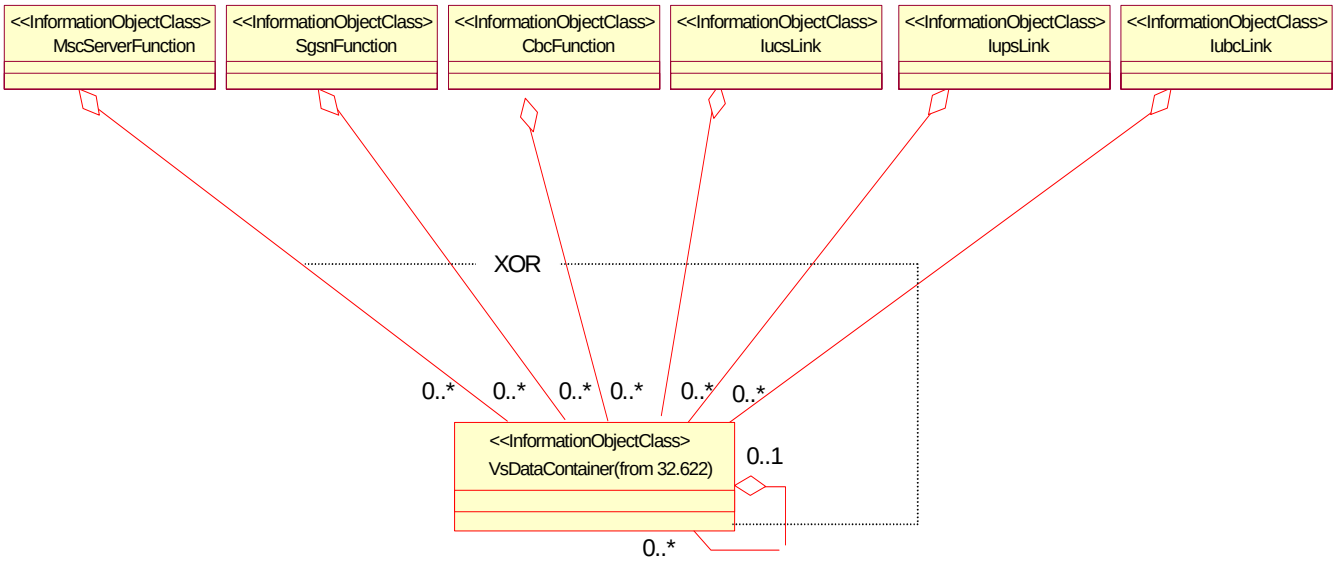


NOTE 1: The association between MscServer and GsmCell, and SgsnFunction and GsmCell is optional. It may be valid if both the MscServer and GsmCell, or SgsnFunction and GsmCell are managed by the same management node.

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.

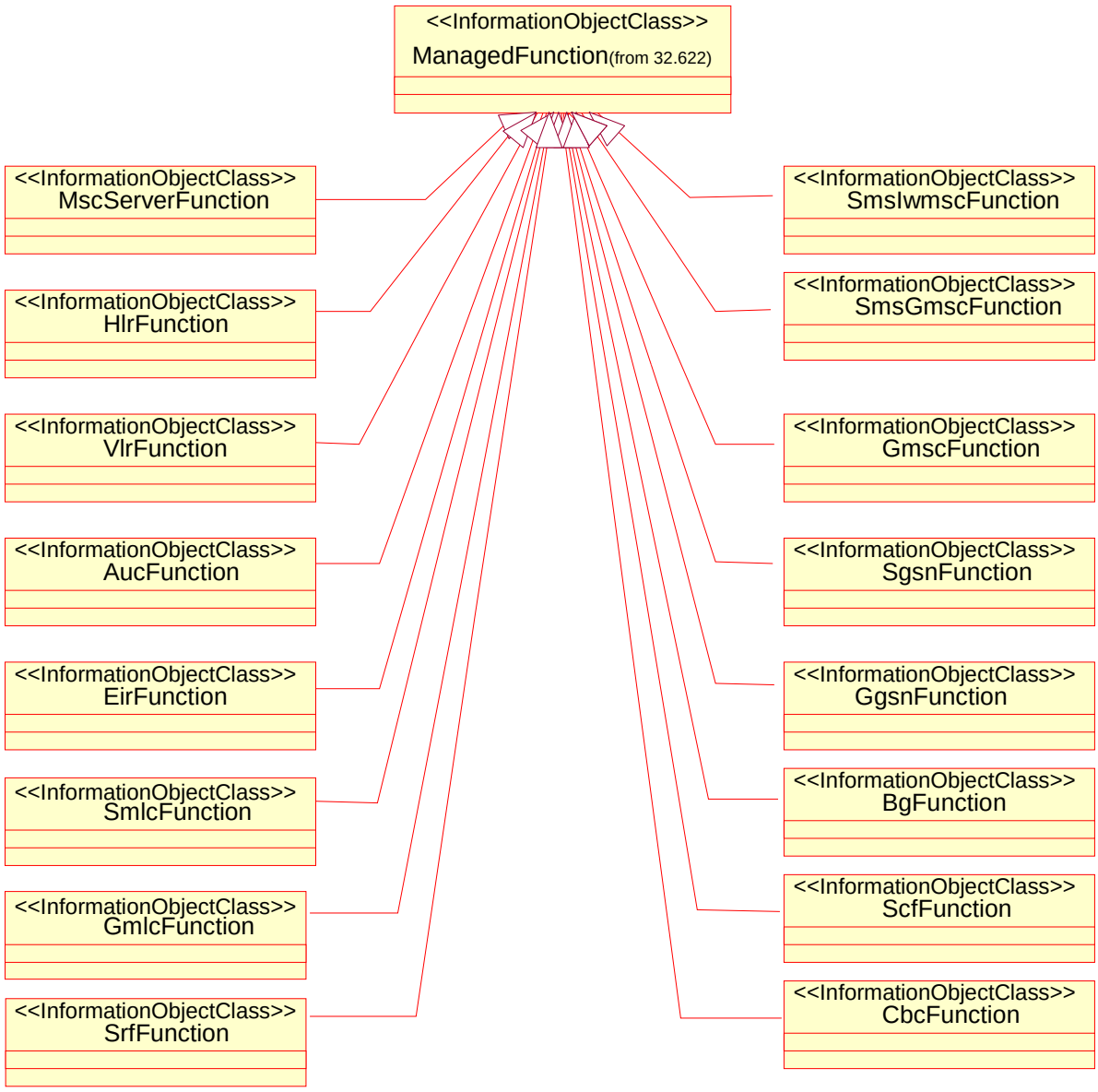


Figure 6.2.2.1: CN NRM Inheritance Hierarchy 1

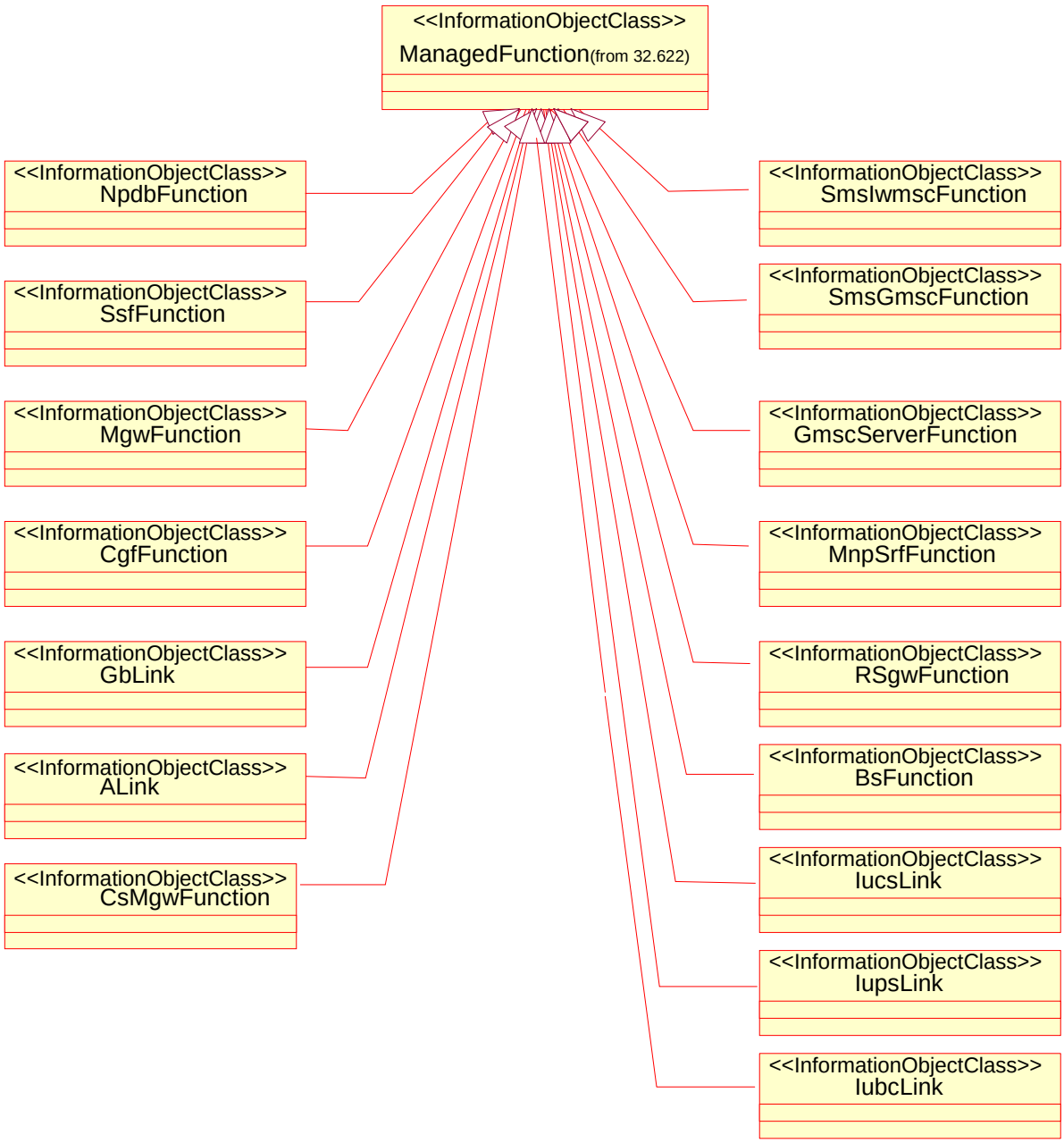


Figure 6.2.2.2: CN NRM Inheritance Hierarchy 2

6.2.1 Inheritance hierarchy

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

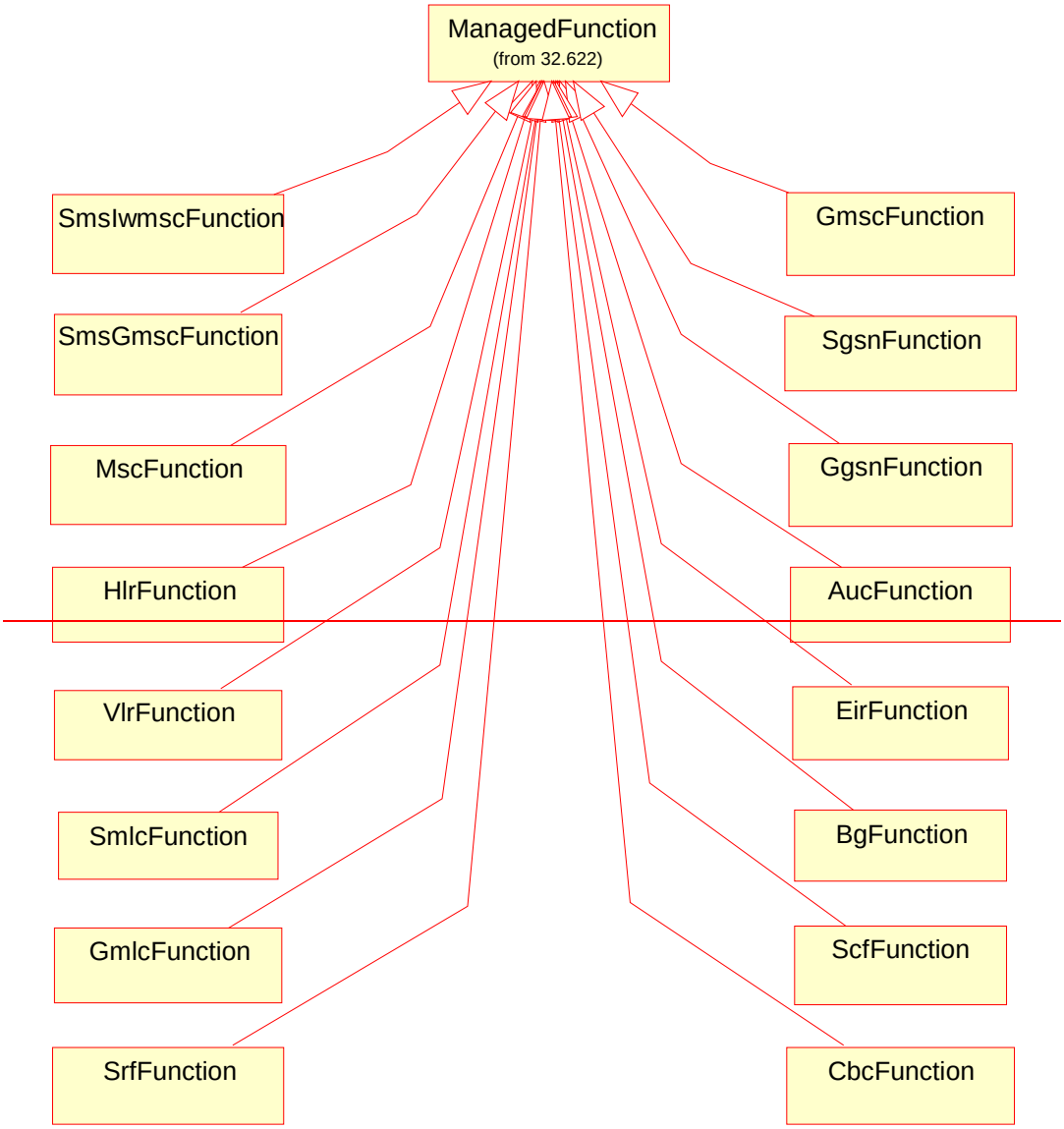
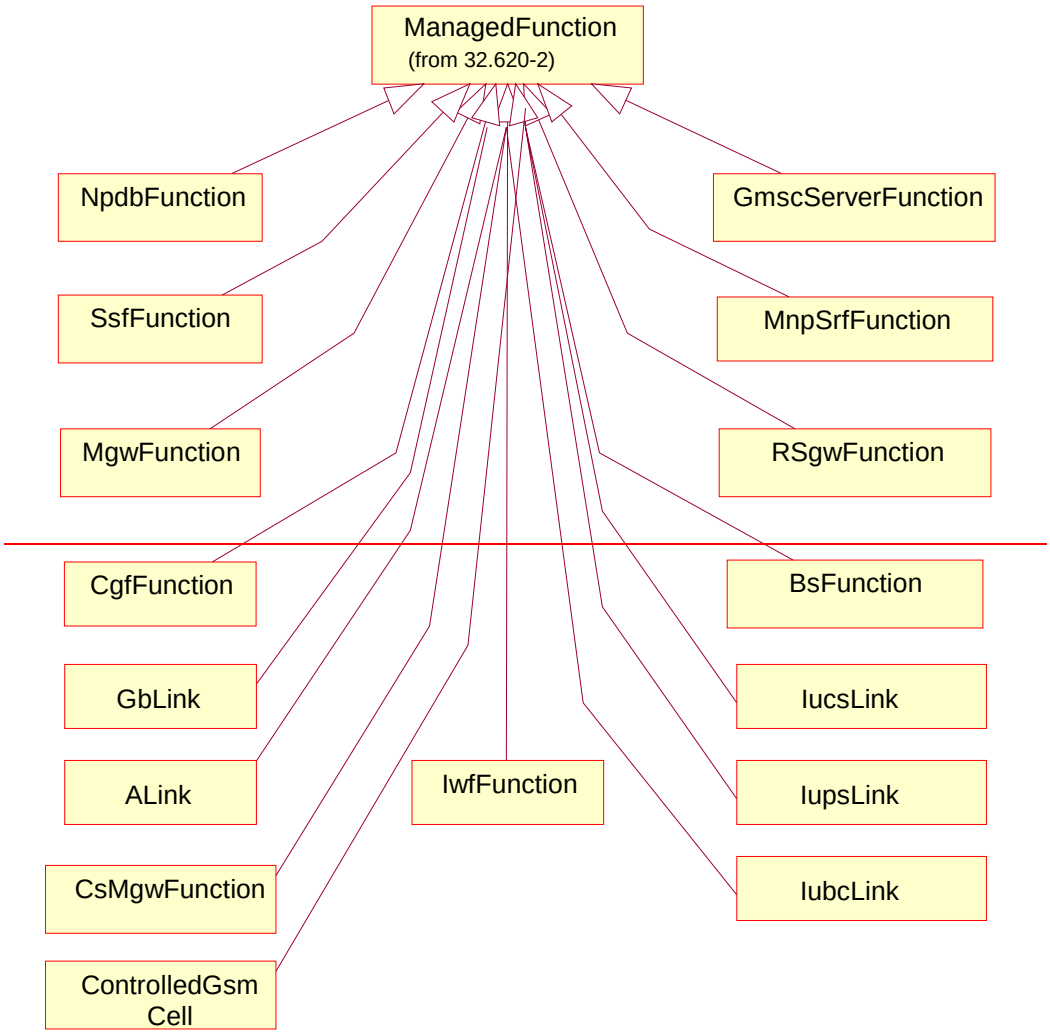


Figure 4: CN NRM Inheritance Hierarchy 1

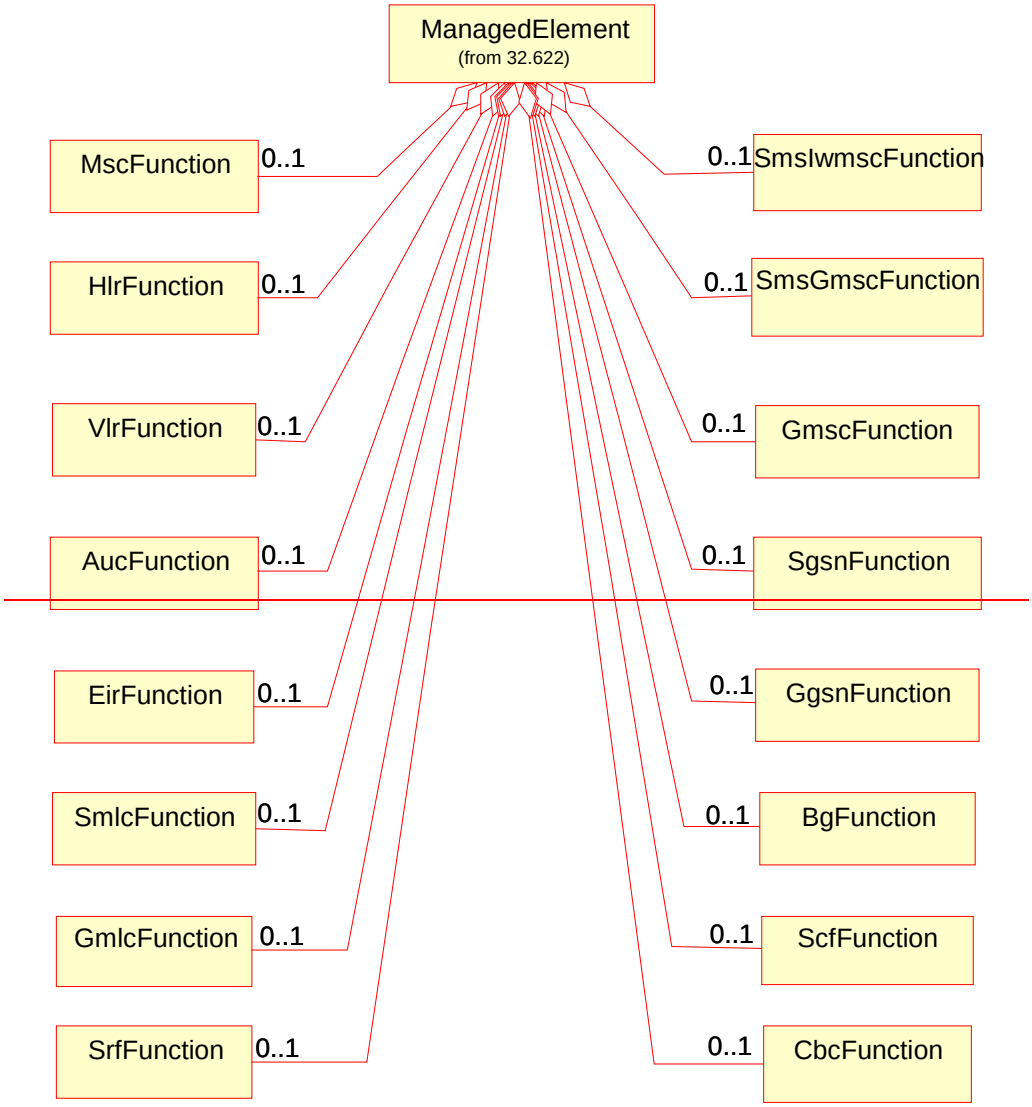


~~Figure 5: CN NRM Inheritance Hierarchy 2~~

6.2.2 Containment/Naming and Association diagrams

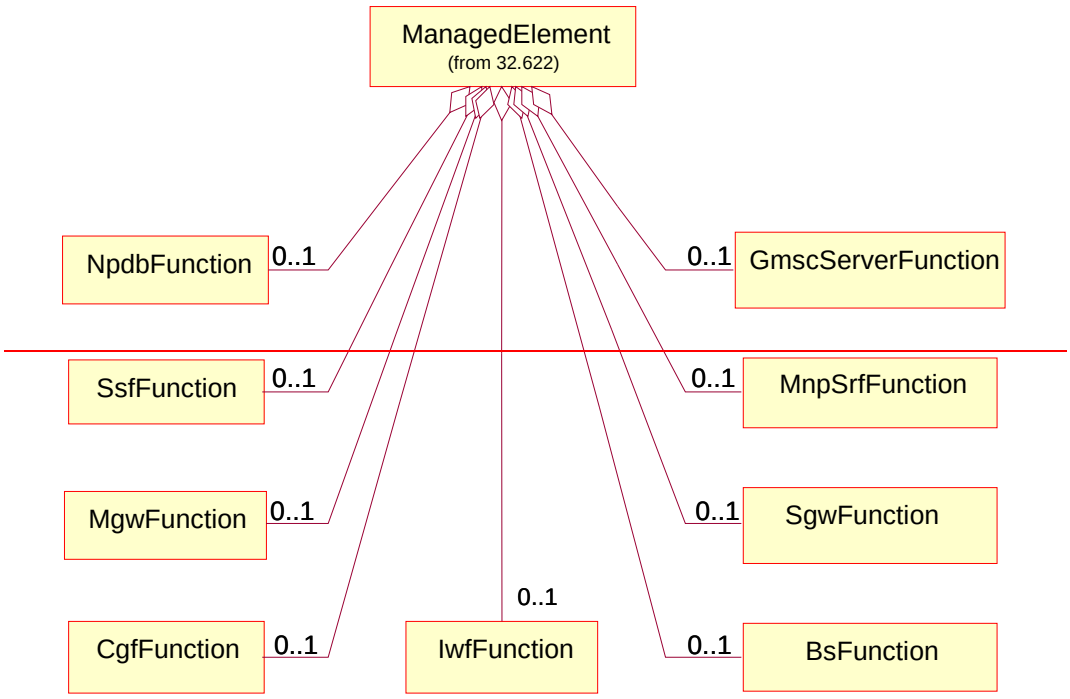
Figures 6, 7, 8, 9 and 10 show the containment/naming hierarchy and the associations of the CN NRM.

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

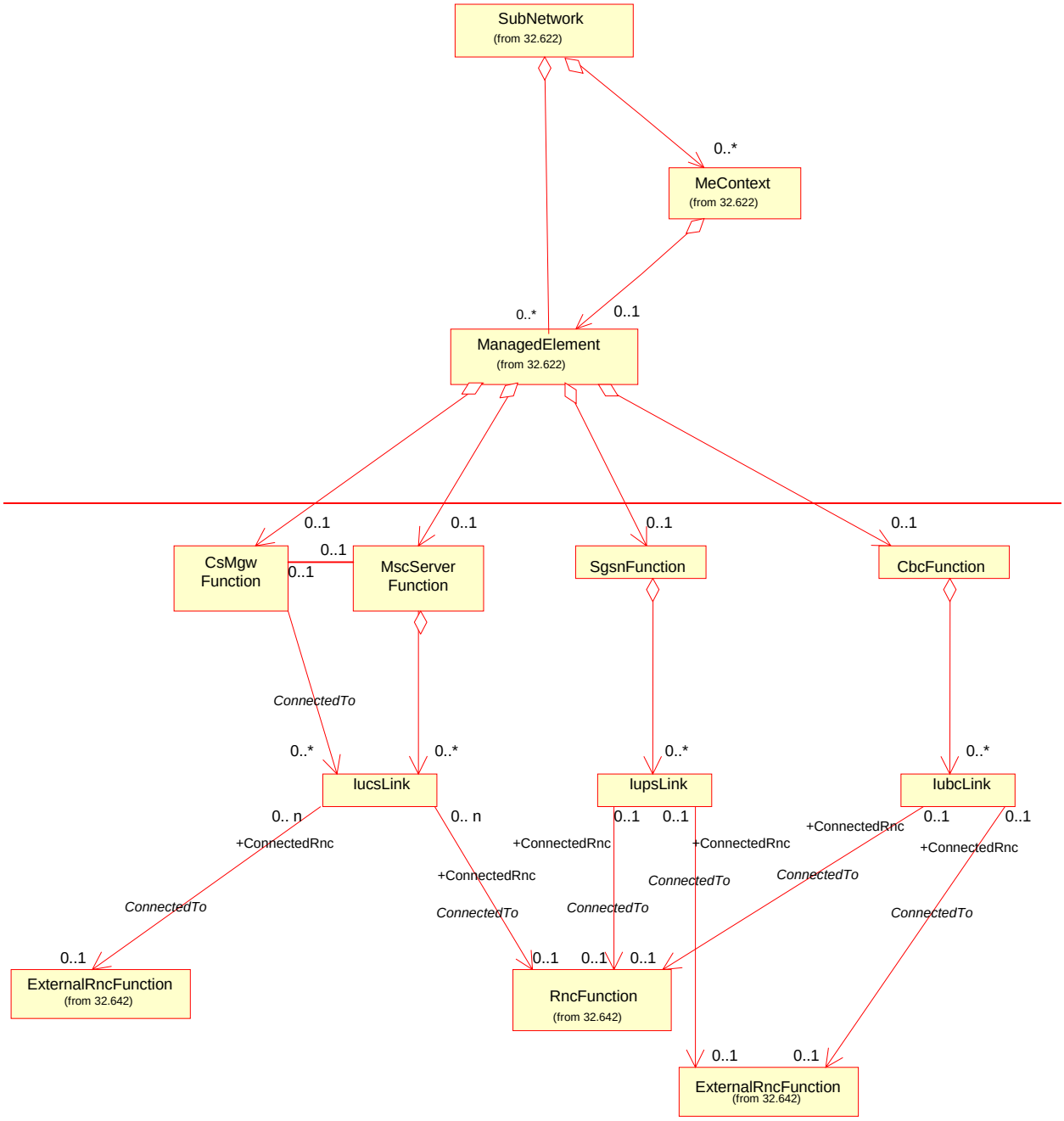


NOTE: The listed cardinality numbers represent transient as well as steady-state numbers, and reflect all managed object creation and deletion scenarios.

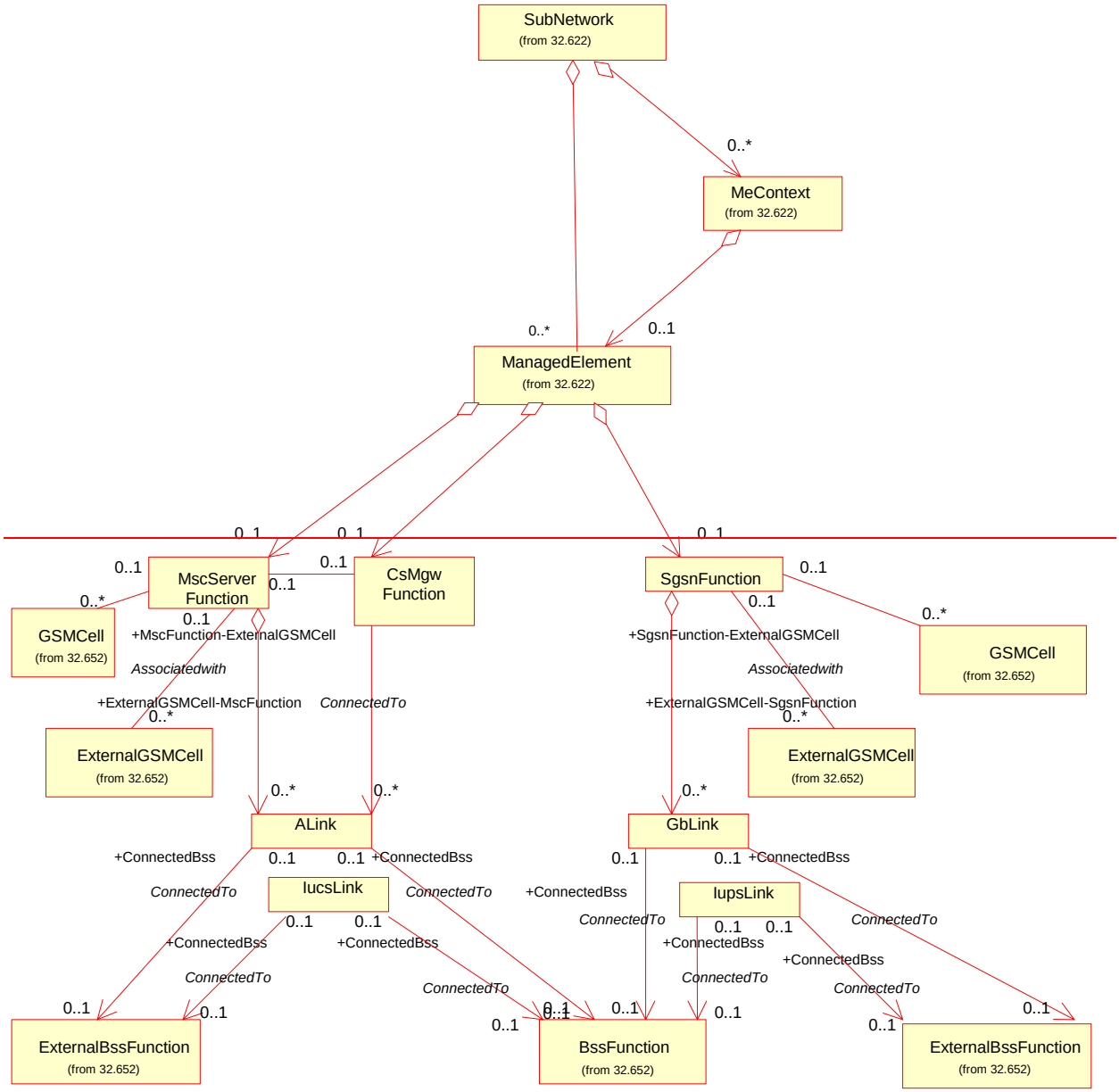
Figure 6: CN NRM Containment/Naming and Association diagram 1



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



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

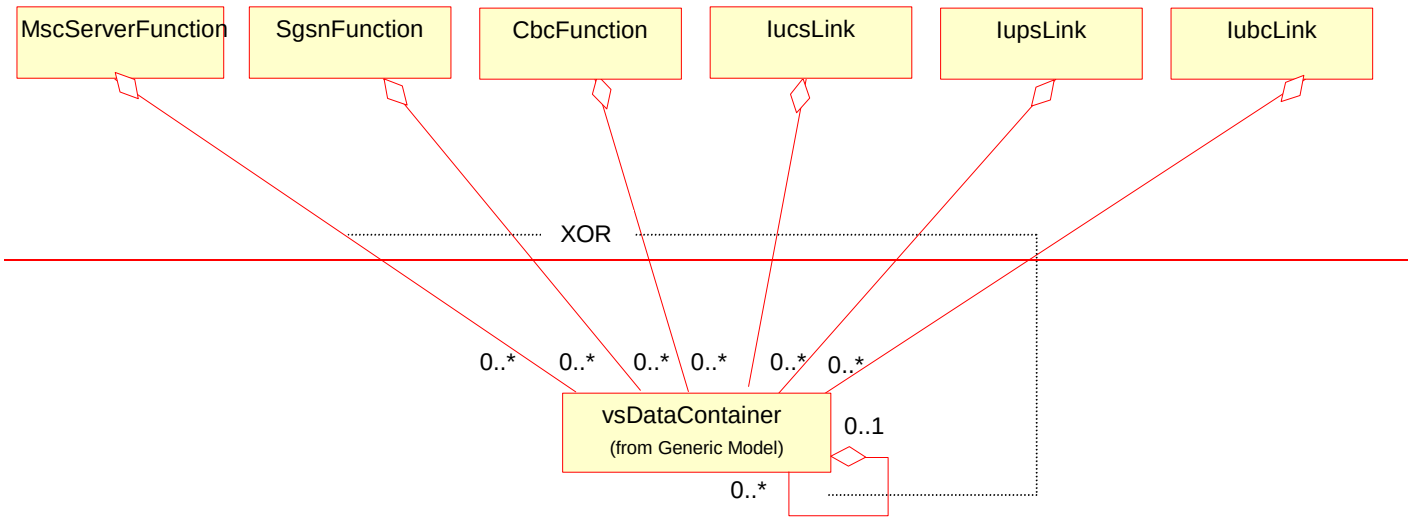


~~NOTE 1: The association between MscServer and GsmCell, and SgsnFunction and GsmCell is optional. It may be valid if both the MscServer and GsmCell, or SgsnFunction and GsmCell are managed by the same management node.~~

~~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 ClassIOC 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 Qualifer
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 Class~~IOC 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 Class~~IOC 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 definition~~Associations~~

6.4.1 ~~Association~~ AssociatedWith1 (M)

6.4.1.1 Definition

This represents a bi-directional relation~~association 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.