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**Source:** SA5 (Telecom Management)

**Title:** 2 Rel-4 CRs 32.632 & 32.633 (Core Network Resources IRP: NRM & CORBA SS) : Align with Rel-4 Network Architecture (23.002) by changing Roaming Signalling Gateway (R-SGW) to Signalling Gateway (SGW)

**Document for:** Approval

**Agenda Item:** 7.5.3

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Doc-1 <sup>st</sup> -Level	Spec	CR	R	Phase	Subject	Cat	Ver Cur	Ver New	Doc-2 <sup>nd</sup> -Level	Workite m
SP-020302	32.632	002	-	Rel-4	Align with Rel-4 Network Architecture (23.002) by changing Roaming Signalling Gateway (R-SGW) to Signalling Gateway (SGW)	F	4.1.0	4.2.0	S5-026059	OAM-CM
SP-020302	32.633	001	-	Rel-4	Align with Rel-4 Network Architecture (23.002) by changing Roaming Signalling Gateway (R-SGW) to Signalling Gateway (SGW)	F	4.0.0	4.1.0	S5-026060	OAM-CM

## CHANGE REQUEST

⌘ **32.632 CR 002** ⌘ rev - ⌘ Current version: **4.1.0** ⌘

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

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Align with Rel-4 Network Architecture (23.002) by changing Roaming Signalling Gateway (R-SGW) to Signalling Gateway (SGW)		
<b>Source:</b>	⌘ SA5		
<b>Work item code:</b>	⌘ OAM-CM	<b>Date:</b>	⌘ 05/04/2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ <b>REL-4</b>
	<i>Use <u>one</u> of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use <u>one</u> of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ To align with the REL-4 Network Architecture (23.002)		
<b>Summary of change:</b>	⌘ Change R-SGW to SGW in the Network Resource Model (NRM)		
<b>Consequences if not approved:</b>	⌘ Core Network NRM will not reflect the REL-4 Network Architecture (23.002)		

<b>Clauses affected:</b>	⌘		
<b>Other specs affected:</b>	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications ⌘ <input checked="" type="checkbox"/> O&M Specifications	⌘	32.633 (CORBA solution set)
<b>Other comments:</b>	⌘ If this "parent" 32632CR002 (Core Network Resources IRP: NRM) is approved, then also its "child" 32.633CR001 (CORBA solution set) can be approved.		

### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

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- 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.

## 3.2 Abbreviations

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

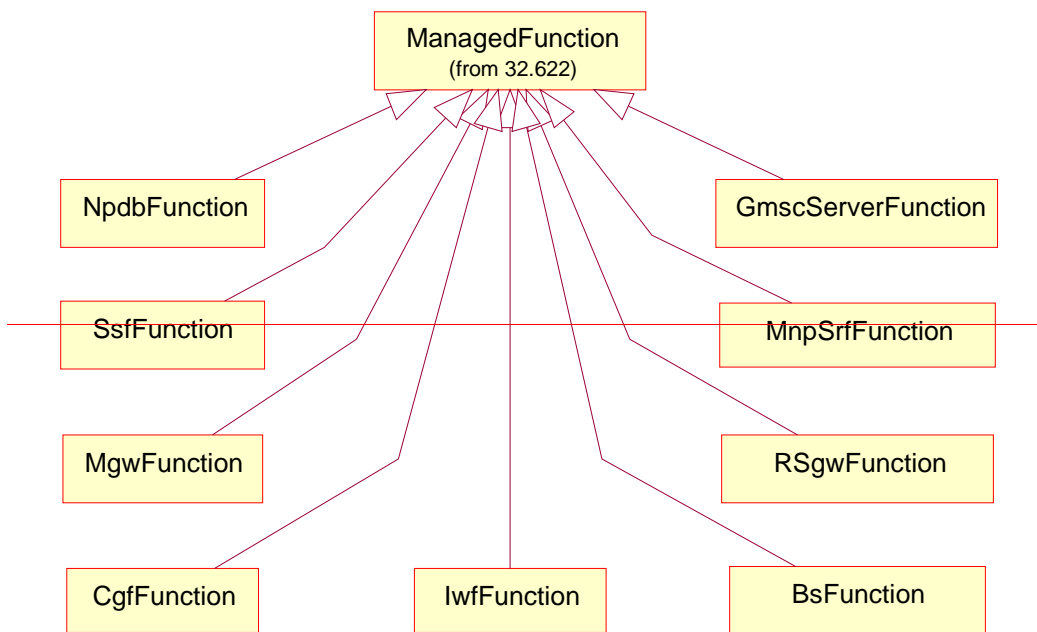
AUC	AUthentication Centre
BG	Border Gateway
BS	Billing System
CBC	Cell Broadcast Center
CGF	Charging Gateway Functionality
CMIP	Common Management Information Protocol
CMIS	Common Management Information Service
CN	Core Network
CORBA	Common Object Request Broker Architecture
DMTF	Distributed Management 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
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])
R-SGW	Roaming-Signalling Gateway
SCF	Service Control Function
SGSN	Serving GPRS Support Node
SMLC	Serving Mobile Location Center

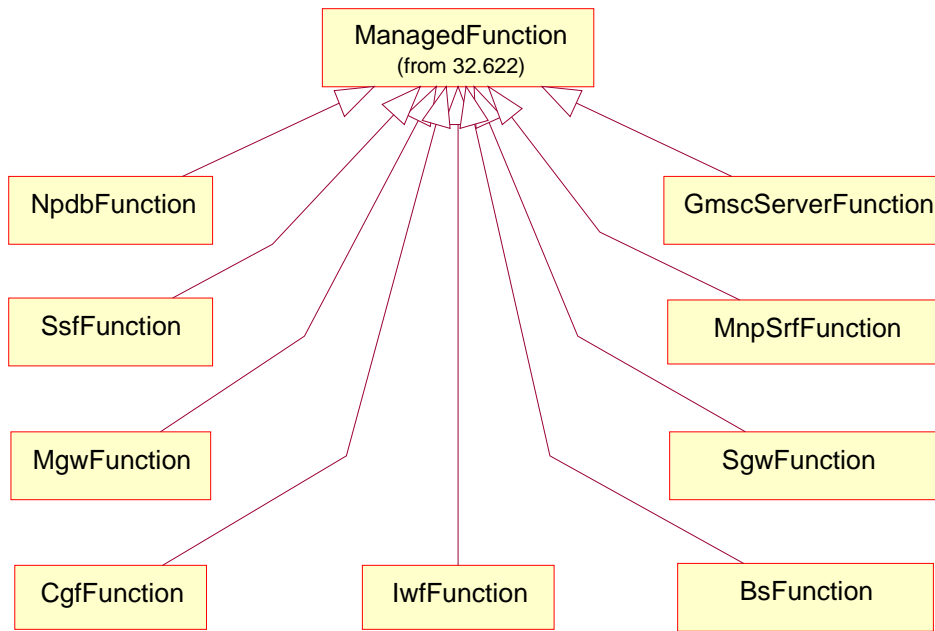
SMS	Short Message Service
SMS-GMSC	SMS Gateway MSC
SMS-IWMSC	SMS Interworking MSC
SNMP	Simple Network Management Protocol
SRF	Specialised Resource Function
SS	Solution Set
SSF	Service Switching Function
TMN	Telecommunications Management Network
UML	Unified Modelling Language
UMTS	Universal Mobile Telecommunications System
UTRAN	UMTS Terrestrial Radio Access Network
VLR	Visitor Location Register
WBEM	Web-Based Enterprise Management
XML	eXtensible Mark-up Language

### 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**

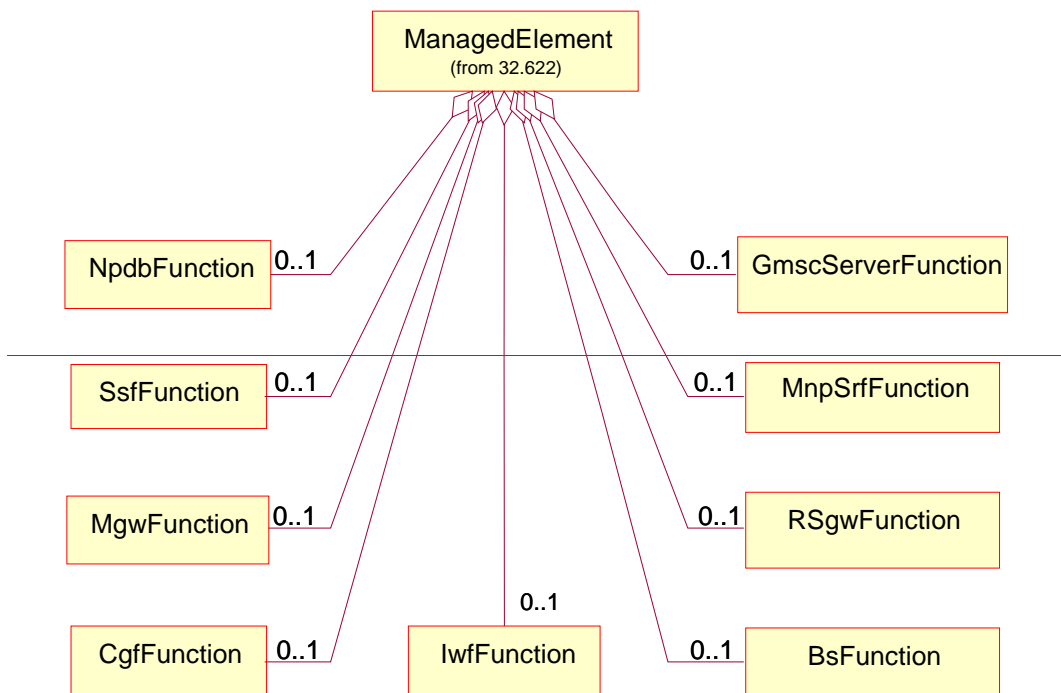
## 6.2.2 Containment/Naming and Association diagrams

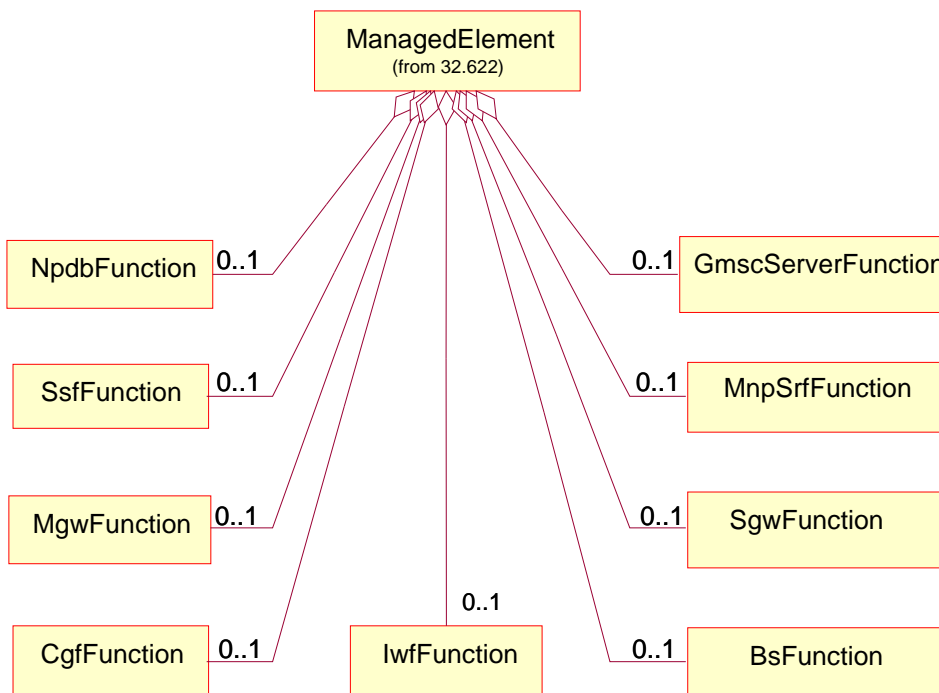
Figures 6 and 7 show the containment/naming hierarchy and the associations of the CN NRM.

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**

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,MscFunction=MSC-1.

## 6.3 Managed Object Class (MOC) definitions

### 6.3.23 MOC **R**SgwFunction

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

It inherits from ManagedFunction.

**Table 82: Attributes of **R**SgwFunction**

Name	Qualifier	Description
<b>R</b> 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-ONLY, M	A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction.

**Table 83: Notifications of `RSgwFunction`**

<b>Name</b>	<b>Qualifier</b>	<b>Notes</b>
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	



## CHANGE REQUEST

⌘ **32.633 CR 001** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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## 5.2.23 MOC SgwFunction

**Table 23: Mapping from NRM MOC SgwFunction attributes to SS equivalent MOC SgwFunction attributes**

NRM Attributes of MOC SgwFunction in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
sgwFunctionId	sgwFunctionId	string	Read-Only, M
UserLabel	userLabel	string	Read-Only, M

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## Annex A (normative): CORBA IDL, NRM Definitions

```

#ifndef CoreNetworkResourcesNRMDefs_idl
#define CoreNetworkResourcesNRMDefs_idl

#pragma prefix "3gppsa5.org"

/**
 * This module defines constants for each MO class name and
 * the attribute names for each defined MO class.
 */
module CoreNetworkResourcesNRMDefs
{

    /**
     * Definitions for MO class SgwFunction
     */
    interface SgwFunction
    {
        const string CLASS = "SgwFunction";

        // Attribute Names
        //
        const string sgwFunctionId = "sgwFunctionId";
        const string userLabel = "userLabel";
    };

```