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Technical Specification

**Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
Telecommunication management;
Configuration Management;
Core network resources Integration Reference Point (IRP):
CORBA solution set
(3GPP TS 32.633 version 4.1.0 Release 4)**

**GLOBAL SYSTEM FOR
MOBILE COMMUNICATIONS**

Reference
RTS/TSGS-0532633v410

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Foreword

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Contents

Foreword

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

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Introduction

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

Due to the growing number of specifications to model new services and Resource Models for Configuration Management (CM), as well as the expected growth in size of each of them from 3GPP Release 4 onwards, a new structure of the specifications is already needed in Release 4. This structure is needed for several reasons, but mainly to enable more independent development and release for each part, as well as a simpler document identification and version handling. Another benefit would be that it becomes easier for bodies outside 3GPP, such as the ITU-T, to refer to telecom management specifications from 3GPP. The new structure of the specifications does not lose any information or functionality supported by the Release 1999. The restructuring also includes defining new IRPs for the Network Resource Models (Generic, Core Network and UTRAN NRM).

Finally, the Name convention for Managed Objects (in Release 1999: 32.106-8) has been moved to a separate number series used for specifications common between several management areas (e.g. CM, FM, PM).

The following table shows an overview of the mapping between the old Release 1999 and new Release 4 CM specification structure.

Table: Mapping between Release '99 and the new Rel-4 specifications

R99 Old no.	Old (R99) specification title	Rel-4 New no.	New (Rel-4) specification title
32.106-1	3G Configuration Management: Concept and Requirements	32.600	**3G Configuration Management: Concept and High-level Requirements**
32.106-1	<Notification IRP requirements from 32.106-1 and 32.106-2>	32.301	**Notification IRP**: Requirements
32.106-2	Notification IRP: IS	32.302	Notification IRP: Information Service
32.106-3	Notification IRP: CORBA SS	32.303	Notification IRP: CORBA SS
32.106-4	Notification IRP: CMIP SS	32.304	Notification IRP: CMIP SS
32.106-8	Name convention for Managed Objects	32.300	**Name Convention for Managed Objects**
32.106-1	<Basic CM IRP IS requirements from 32.106-1 and 32.106-5>	32.601	**Basic CM IRP**: Requirements
32.106-5	Basic CM IRP IM (Intro & IS part)	32.602	Basic CM IRP: Information Service
32.106-6	Basic CM IRP CORBA SS (IS related part)	32.603	Basic CM IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (IS related part)	32.604	Basic CM IRP: CMIP SS
32.106-8	Name convention for Managed Objects	32.300	**Name Convention for Managed Objects**
-	-	32.611	**Bulk CM IRP**: Requirements
-	-	32.612	Bulk CM IRP: Information Service
-	-	32.613	Bulk CM IRP: CORBA SS
-	-	32.614	Bulk CM IRP: CMIP SS
		32.615	Bulk CM IRP: XML file format definition
32.106-1	<Basic CM IRP Generic NRM requirements from 32.106-1 and 32.106-5>	32.621	**Generic Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (Generic NRM part)	32.622	Generic Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (Generic NRM related part)	32.623	Generic Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (Generic NRM related part)	32.624	Generic Network Resources IRP: CMIP SS
32.106-1	<Basic CM IRP CN NRM requirements from 32.106-1 and 32.106-5>	32.631	**Core Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (CN NRM part)	32.632	Core Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (CN NRM related part)	32.633	Core Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (CN NRM related part)	32.634	Core Network Resources IRP: CMIP SS
32.106-1	<Basic CM IRP UTRAN NRM requirements from 32.106-1 and 32.106-5>	32.641	**UTRAN Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (UTRAN NRM part)	32.642	UTRAN Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (UTRAN NRM related part)	32.643	UTRAN Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (UTRAN NRM related part)	32.644	UTRAN Network Resources IRP: CMIP SS
		32.651	**GERAN Network Resources IRP**: Requirements
		32.652	GERAN Network Resources IRP: NRM
		32.653	GERAN Network Resources IRP: CORBA SS
		32.654	GERAN Network Resources IRP: CMIP SS

1   Scope

The purpose of this *Core Network Resources IRP: CORBA Solution Set* is to define the mapping of the IRP information model (see 3GPP TS 32.632 [3]) to the protocol specific details necessary for implementation of this IRP in a CORBA/IDL environment.

2   References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1]   3GPP TS 32.101: "3G Telecom Management principles and high level requirements".

[2]   3GPP TS 32.102: "3G Telecom Management architecture".

[3]   3GPP TS 32.632: "Core Network Resources IRP: NRM".

[4]   3GPP TS 32.300: "Name Convention for Managed Objects".

[5]   3GPP TS 32.303: "Notification IRP: CORBA Solution Set".

3   Definitions and abbreviations

3.1   Definitions

For terms and definitions please refer to 3GPP TS 32.101 [1], 3GPP TS 32.102 [2] and 3GPP TS 32.632 [3].

3.2   Abbreviations

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

CORBA	Common Object Request Broker Architecture
DN	Distinguished Name
IS	Information Service
IDL	Interface Definition Language (OMG)
IRP	Integration Reference Point
MO	Managed Object
MOC	Managed Object Class
NRM	Network Resource Model
OMG	Object Management Group
SS	Solution Set

4   Architectural features

The overall architectural feature of Core Network Resources IRP is specified in 3GPP TS 32.632[3].
This clause specifies features that are specific to the CORBA SS.[3]

4.1 Notifications

Notifications are sent according to the Notification IRP: CORBA SS (see 3GPP TS 32.303 [5]).

5 Mapping

5.1 General mappings

The IS parameter name managedObjectInstance is mapped into DN.

Attributes modelling associations as defined in the NRM (here also called "reference attributes") are in this SS mapped to attributes. The names of the reference attributes in the NRM are mapped to the corresponding attribute names in the MOC. When the cardinality for an association is 0..1 or 1..1 the datatype for the reference attribute is defined as an MOReference. The value of an MO reference contains the distinguished name of the associated MO. When the cardinality for an association allows more than one referred MO, the reference attribute will be of type MOReferenceSet, which contains a sequence of MO references.

If a reference attribute is changed, an AttributeValueChange notification is emitted.

5.2 Core Network NRM Managed Object Class (MOC) mapping

5.2.1 MOC `MscFunction`

Table 1: Mapping from NRM `MOC` `MscFunction` attributes to SS equivalent MOC `MscFunction` attributes

NRM Attributes of MOC `MscFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
mscFunctionId	mscFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Only, M

5.2.2 MOC `HlrFunction`

Table 2: Mapping from NRM `MOC` `HlrFunction` attributes to SS equivalent MOC `HlrFunction` attributes

NRM Attributes of MOC `HlrFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
hlrFunctionId	hlrFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Only, M

5.2.3 MOC `VlrFunction`

Table 3: Mapping from NRM `MOC` `VlrFunction` attributes to SS equivalent MOC `VlrFunction` attributes

NRM Attributes of MOC `VlrFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
vlrFunctionId	vlrFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Only, M

5.2.4 MOC `AucFunction`

Table 4: Mapping from NRM MOC `AucFunction` attributes to SS equivalent MOC `AucFunction` attributes

NRM Attributes of MOC `AucFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
`aucFunctionId`	`aucFunctionId`	string	Read-Only, M
`userLabel`	`userLabel`	string	Read-Only, M

5.2.5 MOC `EirFunction`

Table 5: Mapping from NRM MOC `EirFunction` attributes to SS equivalent MOC `EirFunction` attributes

NRM Attributes of MOC `EirFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
`EirFunctionId`	`eirFunctionId`	string	Read-Only, M
`UserLabel`	`userLabel`	string	Read-Only, M

5.2.6 MOC `SmsIwmscFunction`

Table 6: Mapping from NRM MOC `SmsIwmscFunction` attributes to SS equivalent MOC `SmsIwmscFunction` attributes

NRM Attributes of MOC `SmsIwmscFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
`smsIwmscFunctionId`	`smsIwmscFunctionId`	string	Read-Only, M
`userLabel`	`userLabel`	string	Read-Only, M

5.2.7 MOC `SmsGmscFunction`

Table 7: Mapping from NRM MOC `SmsGmscFunction` attributes to SS equivalent MOC `SmsGmscFunction` attributes

NRM Attributes of MOC `SmsGmscFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
`SmsGmscFunctionId`	`smsGmscFunctionId`	string	Read-Only, M
`UserLabel`	`userLabel`	string	Read-Only, M

5.2.8 MOC `SgsnFunction`

Table 8: Mapping from NRM MOC `SgsnFunction` attributes to SS equivalent MOC `SgsnFunction` attributes

NRM Attributes of MOC `SgsnFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
`SgsnFunctionId`	`sgsnFunctionId`	string	Read-Only, M
`UserLabel`	`userLabel`	string	Read-Only, M

5.2.9 MOC GgsnFunction

Table 9: Mapping from NRM MOC GgsnFunction attributes to SS equivalent MOC GgsnFunction attributes

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

5.2.10 MOC BgFunction

Table 10: Mapping from NRM MOC BgFunction attributes to SS equivalent MOC BgFunction attributes

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

5.2.11 MOC GmscFunction

Table 11: Mapping from NRM MOC GmscFunction attributes to SS equivalent MOC GmscFunction attributes

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

5.2.12 MOC SmlcFunction

Table 12: Mapping from NRM MOC SmlcFunction attributes to SS equivalent MOC SmlcFunction attributes

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

5.2.13 MOC GmlcFunction

Table 13: Mapping from NRM MOC GmlcFunction attributes to SS equivalent MOC GmlcFunction attributes

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

5.2.14 MOC `ScfFunction`

Table 14: Mapping from NRM MOC `ScfFunction` attributes to SS equivalent MOC `ScfFunction` attributes

NRM Attributes of MOC `ScfFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
ScfFunctionId	scfFunctionId	string	Read-Only, M
UserLabel	userLabel	string	Read-Only, M

5.2.15 MOC `SrfFunction`

Table 15: Mapping from NRM MOC `SrfFunction` attributes to SS equivalent MOC `SrfFunction` attributes

NRM Attributes of MOC `SrfFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
SrfFunctionId	srfFunctionId	string	Read-Only, M
UserLabel	userLabel	string	Read-Only, M

5.2.16 MOC `CbcFunction`

Table 16: Mapping from NRM MOC `CbcFunction` attributes to SS equivalent MOC `CbcFunction` attributes

NRM Attributes of MOC `CbcFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
CbcFunctionId	cbcFunctionId	string	Read-Only, M
UserLabel	userLabel	string	Read-Only, M

5.2.17 MOC `CgfFunction`

Table 17: Mapping from NRM MOC `CgfFunction` attributes to SS equivalent MOC `CgfFunction` attributes

NRM Attributes of MOC `CgfFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
CgfFunctionId	cgfFunctionId	string	Read-Only, M
UserLabel	userLabel	string	Read-Only, M

5.2.18 MOC `MgwFunction`

Table 18: Mapping from NRM MOC `MgwFunction` attributes to SS equivalent MOC `MgwFunction` attributes

NRM Attributes of MOC `MgwFunction` in 3GPP TS 32.632 [3]	SS Attributes	SS Type	Qualifier
MgwFunctionId	mgwFunctionId	string	Read-Only, M
UserLabel	userLabel	string	Read-Only, M

5.2.19 MOC GmscServerFunction

Table 19: Mapping from NRM MOC GmscServerFunction attributes to SS equivalent MOC GmscServerFunction attributes

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

5.2.20 MOC IwfFunction

Table 20: Mapping from NRM MOC IwfFunction attributes to SS equivalent MOC IwfFunction attributes

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

5.2.21 MOC MnpSrfFunction

Table 21: Mapping from NRM MOC MnpSrfFunction attributes to SS equivalent MOC IwfFunction attributes

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

5.2.22 MOC NpdbFunction

Table 22: Mapping from NRM MOC NpdbFunction attributes to SS equivalent MOC NpdbFunction attributes

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

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

5.2.24 MOC SsfFunction

Table 24: Mapping from NRM MOC SsfFunction attributes to SS equivalent MOC SsfFunction attributes

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

5.2.25 MOC BsFunction

Table 25: Mapping from NRM MOC BsFunction attributes to SS equivalent MOC BsFunction attributes

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

6 Rules for NRM extensions

This clause discusses how the models and IDL definitions provided in the present document can be extended for a particular implementation and still remain compliant with 3GPP SA5's specifications.

6.1 Allowed extensions

Vendor-specific MOCs may be supported. The vendor-specific MOCs may support new types of attributes. The 3GPP SA5-specified notifications may be issued referring to the vendor-specific MOCs and vendor-specific attributes. New MOCs shall be distinguishable from 3GPP SA5 MOCs by name. 3GPP SA5-specified and vendor-specific attributes may be used in vendor-specific MOCs. Vendor-specific attribute names shall be distinguishable from existing attribute names.

NRM MOCs may be subclassed. Subclassed MOCs shall maintain the specified behaviour of the 3GPP SA5's superior classes. They may add vendor-specific behaviour with vendor-specific attributes. When subclassing, naming attributes cannot be changed. The subclassed MOC shall support all attributes of its superior class. Vendor-specific attributes cannot be added to 3GPP SA5 NRM MOCs without subclassing.

When subclassing, the 3GPP SA5-specified containment rules and their specified cardinality shall still be followed. As an example, `ManagementNode` (or its subclasses) shall be contained under `SubNetwork` (or its subclasses). Also, in Rel-4, there may only be 0 or 1 `ManagementNode` (or its subclasses) contained under `SubNetwork` (or its subclasses).

Managed Object Instances may be instantiated as CORBA objects. This requires that the MOCs be represented in IDL. 3GPP SA5's NRM MOCs are not currently specified in IDL, but may be specified in IDL for instantiation or subclassing purposes. However, management information models should not require that IRPManagers access the instantiated managed objects other than through supported methods in the present document.

Extension rules related to notifications (Notification categories, Event Types, Extended Event Types etc.) are for further study.

6.2 Extensions not allowed

The IDL specifications in the present document cannot be edited or altered. Any additional IDL specifications shall be specified in separate IDL files.

IDL interfaces (note: not MOCs) specified in the present document may not be subclassed or extended. New interfaces may be defined with vendor-specific methods.

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 MscFunction
       */
      interface MscFunction
      {
         const string CLASS = "MscFunction";

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


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

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


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

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


      /**
```

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

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


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

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


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

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


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

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


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

   // Attribute Names
```

```
      //
      const string sgsnFunctionId = "sgsnFunctionId";
      const string userLabel = "userLabel";
   };


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

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


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

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


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

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


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

      // Attribute Names
      //
      const string smlcFunctionId = "smlcFunctionId";
      const string userLabel = "userLabel";
   };
```

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

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


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

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



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

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


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

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


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

```
    // Attribute Names
    //
    const string cgfFunctionId = "cgfFunctionId";
    const string userLabel = "userLabel";
};


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

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


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

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


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

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


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

    // Attribute Names
    //
    const string mnpSrfFunctionId = "mnpSrfFunctionId";
    const string userLabel = "userLabel";
};
```

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

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


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

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


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

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


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

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


};

#endif
```

Annex B (informative): Change history

<table>
<tr><td colspan="8" align="center">Change history</td></tr>
<tr><th>Date</th><th>TSG #</th><th>TSG Doc.</th><th>CR</th><th>Rev</th><th>Subject/Comment</th><th>Old</th><th>New</th></tr>
<tr><td>Jun 2001</td><td>S_12</td><td>SP-010283</td><td>--</td><td>--</td><td>Approved at TSG SA #12 and placed under Change Control</td><td>2.0.0</td><td>4.0.0</td></tr>
<tr><td>Jun 2002</td><td>S_16</td><td>SP-020302</td><td>001</td><td>--</td><td>Align with Rel-4 Network Architecture (23.002) by changing Roaming Signalling Gateway (R-SGW) to Signalling Gateway (SGW)</td><td>4.0.0</td><td>4.1.0</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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</table>

History

Document history		
V4.0.0	June 2001	Publication
V4.1.0	June 2002	Publication