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Integration Reference Point (IRP);
Solution Set (SS) definitions
(3GPP TS 28.703 version 13.1.0 Release 13)

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Contents

Foreword

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Introduction

The present document is part of a TS-family covering the 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; as identified below:

28.701: "Core Network (CN) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".

28.702: "Core Network (CN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

28.703: "Core Network (CN) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".

1 Scope

The purpose of the present document is to define the mapping of the IRP information model (see TS 28.702 [3]) to the protocol specific details necessary for implementation of this IRP in a specific solution set environment.

This Solution Set specification is related to 3GPP TS 28.702 V13. 0.X.

2 References

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

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- 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: "Telecommunication management; Principles and high level requirements".

[2] 3GPP TS 32.102: "Telecommunication management; Architecture".

[3] 3GPP TS 28.702: "Telecommunication management; Core Network (CN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

[4] 3GPP TS 32.300: "Telecommunication management; Configuration Management (CM); Name convention for Managed Objects".

[5] W3C REC-xml-names-20060816: "Namespaces in XML 1.1 (Second Edition)".

[6] 3GPP TS 28.623: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".

[7] 3GPP TS 32.612: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Information Service (IS)".

[8] 3GPP TS 32.616: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Solution Set (SS) definitions".

[9] W3C REC-xml11-20060816: "Extensible Markup Language (XML) 1.1 (Second Edition)".

[10] Void

[11] W3C XML Schema Definition Language (XSD) 1.1 Part 1: Structures.

[12] W3C XML Schema Definition Language (XSD) 1.1 Part 2: Datatypes.

[13] 3GPP TS 28.626: "Telecommunication management; State Management Data Definition Integration Reference Point (IRP); Solution Set (SS) definitions".

3 Definitions and abbreviations

3.1 Definitions

For terms and definitions please refer to TS 32.101 [1], TS 32.102 [2] and TS 28.702 [3].

For the purposes of the present document, the following terms and definitions apply:

XML file: See definition in [6].

XML document: See definition in [6].

XML declaration: See definition in [6].

XML element: See definition in [6].

empty XML element: See definition in [6].

XML content (of an XML element): See definition in [6].

XML start-tag: See definition in [6].

XML end-tag: See definition in [6].

XML empty-element tag: See definition in [6].

XML attribute specification: See definition in [6].

DTD: See definition in [6].

XML schema: See definition in [6].

XML namespace: See definition in [6].

XML complex type: See definition in [6].

XML element type: See definition in [6].

3.2 Abbreviations

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

CM	Configuration Management
CORBA	Common Object Request Broker Architecture
DN	Distinguished Name
DTD	Document Type Definition
EDGE	Enhanced Data for GSM Evolution
GERAN	GSM/EDGE Radio Access Network
GSM	Global System for Mobile communication
IDL	Interface Definition Language (OMG)
IOC	Information Object Class
IRP	Integration Reference Point
IS	Information Service
MGW	Media GateWay
MO	Managed Object
MOC	Managed Object Class
NRM	Network Resource Model
OMG	Object Management Group
UMTS	Universal Mobile Telecommunications System
UTRAN	Universal Terrestrial Radio Access Network
XML	eXtensible Markup Language

Solution Set definitions

This specifications defines the following 3GPP Core network resources IRP Solution Set Definitions:

- 3GPP Core network resources IRP CORBA SS (Annex A)
- 3GPP Core network resources IRP XML definitions (Annex B)

Annex A (normative): CORBA Solution Set

A.0 General

This annex contains the CORBA Solution Set for the IRP whose semantics is specified in Core Network (CN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS) (TS 28.702 [3]).

A.1 Architectural features

The overall architectural feature of Core Network NRM IRP is specified in TS 28.702 [3].

This clause specifies features that are specific to the CORBA SS.

A.1.1 Syntax for Distinguished Names

See clause A.1.1 of [6].

A.1.2 Rules for NRM extensions

See clause A.1.2 of [6].

A.2 Mapping

A.2.1 General mappings

See clause A.2.1 of [6].

A.2.2 Information Object Class (IOC) mapping

A.2.2.1 IOC MscServerFunction

Mapping from NRM IOC MscServerFunction attributes to SS equivalent MOC MscServerFunction attributes

IS Attributes	SS Attributes	SS Type
id	mscServerFunctionId	string
mccList	mccList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
mncList	mncList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
lacList	lacList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
sacList	sacList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
gcaList	gcaList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
mscId	mscId	long
nriList	nriList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
defaultMsc	defaultMsc	short
mscServerFunction-GsmCell	mscServerFunctionGsmCell	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet
mscServerFunction-ExternalGsmCell	mscServerFunctionExternalGsmCell	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet
mscServerFunction-CsMgwFunction	mscServerFunctionCsMgwFunction	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet
mscServerFunction-MscPool	mscServerFunctionMscPool	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet

A.2.2.2 IOC HlrFunction

Mapping from NRM IOC HlrFunction attributes to SS equivalent MOC HlrFunction attributes

IS Attributes	SS Attributes	SS Type
id	hlrFunctionId	string

A.2.2.3 IOC VlrFunction

Mapping from NRM IOC VlrFunction attributes to SS equivalent MOC VlrFunction attributes

IS Attributes	SS Attributes	SS Type
id	vlrFunctionId	string

A.2.2.4 IOC AucFunction

Mapping from NRM IOC AucFunction attributes to SS equivalent MOC AucFunction attributes

IS Attributes	SS Attributes	SS Type
id	aucFunctionId	string

A.2.2.5 IOC EirFunction

Mapping from NRM IOC EirFunction attributes to SS equivalent MOC EirFunction attributes

IS Attributes	SS Attributes	SS Type
id	eirFunctionId	string

A.2.2.6 IOC SmsIwmscFunction

Mapping from NRM IOC SmsIwmscFunction attributes to SS equivalent MOC SmsIwmscFunction attributes

IS Attributes	SS Attributes	SS Type
id	smsIwmscFunctionId	string

A.2.2.7 IOC SmsGmscFunction

Mapping from NRM IOC SmsGmscFunction attributes to SS equivalent MOC SmsGmscFunction attributes

IS Attributes	SS Attributes	SS Type
id	smsGmscFunctionId	string

A.2.2.8 IOC SgsnFunction

Mapping from NRM IOC SgsnFunction attributes to SS equivalent MOC SgsnFunction attributes

IS Attributes	SS Attributes	SS Type
id	sgsnFunctionId	string
mccList	mccList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
mncList	mncList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
lacList	lacList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
racList	racList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
sacList	sacList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
sgsnId	sgsnId	long
proceduralStatus	See mapping in 3GPP TS 28.626 [13] (State Management Data Definition IRP SS).	See 3GPP TS 28.626 [13].
nriList	nriList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
sgsnFunction-GsmCell	sgsnFunctionGsmCell	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet
sgsnFunction-ExternalGsmCell	sgsnFunctionExternalGsmCell	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet
sgsnFunction-SgsnPool	sgsnFunctionSgsnPool	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet

A.2.2.9 IOC GgsnFunction

Mapping from NRM IOC GgsnFunction attributes to SS equivalent MOC GgsnFunction attributes

IS Attributes	SS Attributes	SS Type
id	ggsnFunctionId	string
proceduralStatus	See mapping in 3GPP TS 28.626 [13] (State Management Data Definition IRP SS).	See 3GPP TS 28.626 [13].

A.2.2.10 IOC BgFunction

Mapping from NRM IOC BgFunction attributes to SS equivalent MOC BgFunction attributes

IS Attributes	SS Attributes	SS Type
id	bgFunctionId	string

A.2.2.11 IOC GmscFunction

Mapping from NRM IOC GmscFunction attributes to SS equivalent MOC GmscFunction attributes

IS Attributes	SS Attributes	SS Type
id	gmscFunctionId	string

A.2.2.12 IOC SmlcFunction

Mapping from NRM IOC SmlcFunction attributes to SS equivalent MOC SmlcFunction attributes

IS Attributes	SS Attributes	SS Type
id	smlcFunctionId	string

A.2.2.13 IOC GmlcFunction

Mapping from NRM IOC GmlcFunction attributes to SS equivalent MOC GmlcFunction attributes

IS Attributes	SS Attributes	SS Type
id	gmlcFunctionId	string

A.2.2.14 IOC ScfFunction

Mapping from NRM IOC ScfFunction attributes to SS equivalent MOC ScfFunction attributes

IS Attributes	SS Attributes	SS Type
id	scfFunctionId	string

A.2.2.15 IOC SrfFunction

Mapping from NRM IOC SrfFunction attributes to SS equivalent MOC SrfFunction attributes

IS Attributes	SS Attributes	SS Type
id	srfFunctionId	string

A.2.2.16 IOC CbcFunction

Mapping from NRM IOC CbcFunction attributes to SS equivalent MOC CbcFunction attributes

IS Attributes	SS Attributes	SS Type
id	cbcFunctionId	string

A.2.2.17 IOC CgfFunction

Mapping from NRM IOC CgfFunction attributes to SS equivalent MOC CgfFunction attributes

IS Attributes	SS Attributes	SS Type
id	cgfFunctionId	string

A.2.2.18 IOC GmscServerFunction

Mapping from NRM IOC GmscServerFunction attributes to SS equivalent MOC GmscServerFunction attributes

IS Attributes	SS Attributes	SS Type
id	gmscServerFunctionId	string

A.2.2.19 IOC IwfFunction

Mapping from NRM IOC IwfFunction attributes to SS equivalent MOC IwfFunction attributes

IS Attributes	SS Attributes	SS Type
id	iwfFunctionId	string

A.2.2.20 IOC MnpSrfFunction

Mapping from NRM IOC MnpSrfFunction attributes to SS equivalent MOC IwfFunction attributes

IS Attributes	SS Attributes	SS Type
id	mnpSrfFunctionId	string

A.2.2.21 IOC NpdbFunction

Mapping from NRM IOC NpdbFunction attributes to SS equivalent MOC NpdbFunction attributes

IS Attributes	SS Attributes	SS Type
id	npdbFunctionId	string

A.2.2.22 IOC SgwFunction

Mapping from NRM IOC SgwFunction attributes to SS equivalent MOC SgwFunction attributes

IS Attributes	SS Attributes	SS Type
id	sgwFunctionId	string

A.2.2.23 IOC SsfFunction

Mapping from NRM IOC SsfFunction attributes to SS equivalent MOC SsfFunction attributes

IS Attributes	SS Attributes	SS Type
id	ssfFunctionId	string

A.2.2.24 IOC BsFunction

Mapping from NRM IOC BsFunction attributes to SS equivalent MOC BsFunction attributes

IS Attributes	SS Attributes	SS Type
id	bsFunctionId	string

A.2.2.25 IOC IucsLink

Mapping from NRM IOC IucsLink attributes to SS equivalent MOC IucsLink attributes

IS Attributes	SS Attributes	SS Type
id	iucsLinkId	string
connectedRnc	connectedRnc	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference
connectedBss	connectedBss	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference
connectedHNBGW	connectedHNBGW	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference

A.2.2.26 IOC IupsLink

Mapping from NRM IOC IupsLink attributes to SS equivalent MOC IupsLink attributes

IS Attributes	SS Attributes	SS Type
id	iupsLinkId	string
connectedRnc	connectedRnc	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference
connectedBss	connectedBss	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference
connectedHNBGW	connectedHNBGW	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference

A.2.2.27 IOC IubcLink

Mapping from NRM IOC IubcLink attributes to SS equivalent MOC IubcLink attributes

IS Attributes	SS Attributes	SS Type
id	iubcLinkId	string
connectedRnc	connectedRnc	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference
connectedHNBGW	connectedHNBGW	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference

A.2.2.28 IOC ALink

Mapping from NRM IOC ALink attributes to SS equivalent MOC ALink attributes

IS Attributes	SS Attributes	SS Type
id	aLinkId	string
connectedBss	connectedBss	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference

A.2.2.29 IOC GbLink

Mapping from NRM IOC GbLink attributes to SS equivalent MOC GbLink attributes

IS Attributes	SS Attributes	SS Type
gbLinkId	gbLinkId	string
connectedBss	connectedBss	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference

A.2.2.30 IOC CsMgwFunction

Mapping from NRM IOC CsMgwFunction attributes to SS equivalent MOC CsMgwFunction attributes

IS Attributes	SS Attributes	SS Type
id	csMgwFunctionId	string
csMgwFunction-MscServerFunction	csMgwFunctionMscServerFunction	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference
csMgwFunction-MscServerFunction	csMgwFunction-MscServerFunction	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference
csMgwFunction-IucsLink	csMgwFunctionIucsLink	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet
csMgwFunction-ALink	csMgwFunctionALink	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet

A.2.2.31 IOC BmScFunction

Mapping from NRM IOC BmScFunction attributes to SS equivalent MOC BmScFunction attributes

IS Attributes	SS Attributes	SS Type
id	bmScFunctionId	string

A.2.2.32 IOC Link_BmSc_Ggsn

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [6].

A.2.2.33 IOC Link_Ggsn_Sgsn

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [6].

A.2.2.34 CircuitEndPointSubgroup

Mapping from NRM IOC CircuitEndPointSubgroup attributes to SS equivalent MOC CircuitEndPointSubgroup attributes

IS Attributes	SS Attributes	SS Type
id	circuitEndPointSubgroupId	String

A.2.2.35 IOC MscPool

Mapping from NRM IOC MscPool attributes to SS equivalent MOC MscPool attributes

IS Attributes	SS Attributes	SS Type
id	id	string
mscPool-MscServerFunction	mscPoolMscServerFunction	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet

A.2.2.36 IOC MscPoolArea

Mapping from NRM IOC MscPoolArea attributes to SS equivalent MOC MscPoolArea attributes

IS Attributes	SS Attributes	SS Type
id	id	string
lacList	lacList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
pLMNIdList	pLMNIdList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
mscPoolArea-MscPool	mscPoolAreaMscPool	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet

A.2.2.37 IOC SgsnPool

Mapping from NRM IOC SgsnPool attributes to SS equivalent MOC SgsnPool attributes

IS Attributes	SS Attributes	SS Type
Id	id	String
sgsnPool-SgsnFunction	sgsnPoolSgsnFunction	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet

A.2.2.38 IOC SgsnPoolArea

Mapping from NRM IOC SgsnPoolArea attributes to SS equivalent MOC SgsnPoolArea attributes

IS Attributes	SS Attributes	SS Type
id	id	String
racList	racList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
pLMNIdList	pLMNIdList	GenericNetworkResourcesIRPSystem::AttributeTypes::LongSet
sgsnPoolArea-SgsnPool	sgsnPoolAreaSgsnPool	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet

A.3 Solution Set definitions

A.3.1 IDL definition structure

Clause A.3.2 defines the MO classes for the Core Network NRM IRP.

A.3.2 IDL specification "CoreNetworkResourcesNRMDefs.idl"

```
// File: CoreNetworkResourcesNRMDefs.idl
#ifndef _CORENETWORKRESOURCESNRMDEFS_IDL_
#define _CORENETWORKRESOURCESNRMDEFS_IDL_
#include "GenericNetworkResourcesNRMDefs.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 MscServerFunction
       */
      interface MscServerFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "MscServerFunction";
         // Attribute Names
         //
         const string mscServerFunctionId = "mscServerFunctionId";
         const string mccList = "mccList";
         const string mncList = "mncList";
         const string lacList = "lacList";
         const string sacList = "sacList";
         const string gcaList = "gcaList";
         const string mscId = "mscId";
         const string mscServerFunctionGsmCell = "mscServerFunctionGsmCell";
         const string mscServerFunctionExternalGsmCell = "mscServerFunctionExternalGsmCell";
         const string mscServerFunctionCsMgwFunction = "mscServerFunctionCsMgwFunction";
         const string mscServerFunctionMscPool = "mscServerFunctionMscPool";
         const string nriList = "nriList";
         const string defaultMsc = "defaultMsc";

      };
      /**
       *  Definitions for MO class HlrFunction
       */
      interface HlrFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "HlrFunction";
         // Attribute Names
         //
         const string hlrFunctionId = "hlrFunctionId";
      };
      /**
       *  Definitions for MO class VlrFunction
       */
      interface VlrFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "VlrFunction";
         // Attribute Names
         //
         const string vlrFunctionId = "vlrFunctionId";
      };
      /**
       *  Definitions for MO class AucFunction
       */
      interface AucFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "AucFunction";
         // Attribute Names
         //
         const string aucFunctionId = "aucFunctionId";
      };
```

```
/**
 *  Definitions for MO class EirFunction
 */
interface EirFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "EirFunction";
   // Attribute Names
   //
   const string eirFunctionId = "eirFunctionId";
};
/**
 *  Definitions for MO class SmsIwmscFunction
 */
interface SmsIwmscFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "SmsIwmscFunction";
   // Attribute Names
   //
   const string smsIwmscFunctionId = "smsIwmscFunctionId";
};
/**
 *  Definitions for MO class SmsGmscFunction
 */
interface SmsGmscFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "SmsGmscFunction";
   // Attribute Names
   //
   const string smsGmscFunctionId = "smsGmscFunctionId";
};
/**
 *  Definitions for MO class SgsnFunction
 */
interface SgsnFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "SgsnFunction";
   // Attribute Names
   //
   const string sgsnFunctionId = "sgsnFunctionId";
   const string mccList = "mccList";
   const string mncList = "mncList";
   const string lacList = "lacList";
   const string racList = "racList";
   const string sacList = "sacList";
   const string sgsnId = "sgsnId";
   const string sgsnFunctionGsmCell = "sgsnFunctionGsmCell";
   const string sgsnFunctionExternalGsmCell = "sgsnFunctionExternalGsmCell";
   const string sgsnFunctionSgsnPool = "sgsnFunctionSgsnPool";
   const string nriList = "nriList";
   const string proceduralStatus = "proceduralStatus";

};
/**
 *  Definitions for MO class GgsnFunction
 */
interface GgsnFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "GgsnFunction";
   // Attribute Names
   //
   const string ggsnFunctionId = "ggsnFunctionId";
   const string proceduralStatus = "proceduralStatus";

};
/**
 *  Definitions for MO class BgFunction
 */
interface BgFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "BgFunction";
   // Attribute Names
   //
   const string bgFunctionId = "bgFunctionId";
};
/**
 *  Definitions for MO class GmscFunction
 */
interface GmscFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
```

```
{
   const string CLASS = "GmscFunction";
   // Attribute Names
   //
   const string gmscFunctionId = "gmscFunctionId";
};
/**
 *  Definitions for MO class SmlcFunction
 */
interface SmlcFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "SmlcFunction";
   // Attribute Names
   //
   const string smlcFunctionId = "smlcFunctionId";
};
/**
 *  Definitions for MO class GmlcFunction
 */
interface GmlcFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "GmlcFunction";
   // Attribute Names
   //
   const string gmlcFunctionId = "gmlcFunctionId";
};
/**
 *  Definitions for MO class ScfFunction
 */
interface ScfFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "ScfFunction";
   // Attribute Names
   //
   const string scfFunctionId = "scfFunctionId";
};
/**
 *  Definitions for MO class SrfFunction
 */
interface SrfFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "SrfFunction";
   // Attribute Names
   //
   const string srfFunctionId = "srfFunctionId";
};
/**
 *  Definitions for MO class CbcFunction
 */
interface CbcFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "CbcFunction";
   // Attribute Names
   //
   const string cbcFunctionId = "cbcFunctionId";
};
/**
 *  Definitions for MO class CgfFunction
 */
interface CgfFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "CgfFunction";
   // Attribute Names
   //
   const string cgfFunctionId = "cgfFunctionId";
};
/**
 *  Definitions for MO class GmscServerFunction
 */
interface GmscServerFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "GmscServerFunction";
   // Attribute Names
   //
   const string gmscServerFunctionId = "gmscServerFunctionId";
};
/**
 *  Definitions for MO class IwfFunction
```

```
 */
interface IwfFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "IwfFunction";
   // Attribute Names
   //
   const string iwfFunctionId = "iwfFunctionId";
};
/**
 *  Definitions for MO class MnpSrfFunction
 */
interface MnpSrfFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "MnpSrfFunction";
   // Attribute Names
   //
   const string mnpSrfFunctionId = "mnpSrfFunctionId";
};
/**
 *  Definitions for MO class NpdbFunction
 */
interface NpdbFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "NpdbFunction";
   // Attribute Names
   //
   const string npdbFunctionId = "npdbFunctionId";
};
/**
 *  Definitions for MO class SgwFunction
 */
interface SgwFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "SgwFunction";
   // Attribute Names
   //
   const string sgwFunctionId = "sgwFunctionId";
};
/**
 *  Definitions for MO class SsfFunction
 */
interface SsfFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "SsfFunction";
   // Attribute Names
   //
   const string ssfFunctionId = "ssfFunctionId";
};

/**
 *  Definitions for MO class BsFunction
 */
interface BsFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "BsFunction";
   // Attribute Names
   //
   const string bsFunctionId = "bsFunctionId";
};
/**
 *  Definitions for MO class IucsLink
 */
interface IucsLink : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "IucsLink";
   // Attribute Names
   //
   const string iucsLinkId = "iucsLinkId";
   const string connectedRnc = "connectedRnc";
   const string connectedBss = "connectedBss";
   const string connectedHNBGW = "connectedHNBGW";
};
/**
 *  Definitions for MO class IupsLink
 */
interface IupsLink : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "IupsLink";
```

```
      // Attribute Names
      //
      const string iupsLinkId = "iupsLinkId";
      const string connectedRnc = "connectedRnc";
      const string connectedBss = "connectedBss";
      const string connectedHNBGW = "connectedHNBGW";
   };
   /**
    *  Definitions for MO class IubcLink
    */
   interface IubcLink : GenericNetworkResourcesNRMDefs::ManagedFunction
   {
      const string CLASS = "IubcLink";
      // Attribute Names
      //
      const string iubcLinkId = "iubcLinkId";
      const string connectedRnc = "connectedRnc";
      const string connectedHNBGW = "connectedHNBGW";
   };
   /**
    *  Definitions for MO class ALink
    */
   interface ALink : GenericNetworkResourcesNRMDefs::ManagedFunction
   {
      const string CLASS = "ALink";
      // Attribute Names
      //
      const string aLinkId = "aLinkId";
      const string connectedBss = "connectedBss";
   };
   /**
    *  Definitions for MO class GbLink
    */
   interface GbLink : GenericNetworkResourcesNRMDefs::ManagedFunction
   {
      const string CLASS = "GbLink";
      // Attribute Names
      //
      const string gbLinkId = "gbLinkId";
      const string connectedBss = "connectedBss";
   };
   /**
    *  Definitions for MO class CsMgwFunction
    */
   interface CsMgwFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
   {
      const string CLASS = "CsMgwFunction";
      // Attribute Names
      //
      const string csMgwFunctionId = "csMgwFunctionId";
      const string csMgwFunctionMscServerFunction = "csMgwFunctionMscServerFunction";
      const string csMgwFunctionIucsLink = "csMgwFunctionIucsLink";
      const string csMgwFunctionALink = "csMgwFunctionALink";
   };
   /**
    *  Definitions for MO class BmScFunction
    */

   interface BmScFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
   {
      const string CLASS = "BmScFunction";
      //Attribute Names
      //
      const string bmScFunctionId = "bmScFunctionId";
   };

  /**
    *  Definitions for MO class Link_BmSc_Ggsn
    */
   interface Link_BmSc_Ggsn : GenericNetworkResourcesNRMDefs::Link
   {
      const string CLASS = "Link_BmSc_Ggsn";

      // All Attributes inherited from Link
   };

  /**
    *  Definitions for MO class Link_Ggsn_Sgsn
```

```
       */
      interface Link_Ggsn_Sgsn : GenericNetworkResourcesNRMDefs::Link
      {
         const string CLASS = "Link_Ggsn_Sgsn";

         // All Attributes inherited from Link
      };
       /*  Definitions for MO class CircuitEndPointSubgroup
       */

      interface CircuitEndPointSubgroup: GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "CircuitEndPointSubgroup";
         //Attribute Names
         const string circuitEndPointSubgroupId = "circuitEndPointSubgroupId";
      };

     /**
       *  Definitions for MO class MscPool
       */
      interface MscPool: GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "MscPool";
         //Attribute Names
         const string id = "id";
         const string mscPoolMscServerFunction = "mscPoolMscServerFunction";
      };

     /**
       *  Definitions for MO class MscPoolArea
       */
      interface MscPoolArea: GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "MscPoolArea";
         //Attribute Names
         const string id = "id";
         const string lacList = "lacList";
         const string pLMNIdList = "pLMNIdList";
         const s

       /*  Definitions for MO class SgsnPool
       */

      interface SgsnPool: GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "SgsnPool";
         //Attribute Names
         const string id = "id";
         const string sgsnPoolSgsnFunction = "sgsnPoolSgsnFunction";
      };
       /*  Definitions for MO class SgsnPoolArea
       */

       /*  Definitions for MO class SgsnPoolArea
       */

      interface SgsnPoolArea: GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "SgsnPoolArea";
         //Attribute Names
         const string id = "id";
         const string racList = "racList";
         const string pLMNIdList = "pLMNIdList";
         const string sgsnPoolAreaSgsnPool = "sgsnPoolAreaSgsnPool";
      };

};
#endif // _CORENETWORKRESOURCESNRMDEFS_IDL_
```

Annex B (normative): XML definitions

B.0 General

This annex contains the XML definitions for the Core Network NRM IRP as it applies to Itf-N, in accordance with Core Network NRM IRP IS definitions [3].

The XML file formats are based on XML [9], XML Schema [11] [12] and XML Namespace [5] standards.

B.1 Architectural features

The overall architectural feature of Core Network NRM IRP IS is specified in 3GPP TS 28.702 [3].
This clause specifies features that are specific to the XML Schema definitions.

B.1.1 Syntax for Distinguished Names

The syntax of a Distinguished Name is defined in 3GPP TS 32.300 [4].

B.2 Mapping

The mapping is not present in the current version of this specification.

B.3 Solution Set definitions

B.3.1 XML definition structure

The overall description of the file format of configuration data XML files is provided by 3GPP TS 32.616 [8].

B.3.2 of the present document defines the NRM-specific XML schema `coreNrm.xsd` for the Core Network NRM IRP defined in 3GPP TS 28.702 [3].

XML schema `coreNrm.xsd` explicitly declares NRM-specific XML element types for the related NRM.

The definition of those NRM-specific XML element types complies with the generic mapping rules defined in 3GPP TS 32.616 [8].

B.3.2 XML schema "coreNrm.xsd"

```
<?xml version="1.1" encoding="UTF-8"?>

<!--
  3GPP TS 28.703 Core Network NRM IRP
  Bulk CM Configuration data file NRM-specific XML schema
  coreNrm.xsd
-->

<schema
  targetNamespace="http://www.3gpp.org/ftp/specs/archive/28_series/28.703#coreNrm"
  elementFormDefault="qualified"
  attributeFormDefault="unqualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn="http://www.3gpp.org/ftp/specs/archive/28_series/28.623#genericNrm"
  xmlns:cn="http://www.3gpp.org/ftp/specs/archive/28_series/28.703#coreNrm"
   xmlns:sm="http://www.3gpp.org/ftp/specs/archive/28_series/28.626#stateManagementIRP"
>
```

```
  <import namespace="http://www.3gpp.org/ftp/specs/archive/28_series/28.623#genericNrm"/>
  <import namespace="http://www.3gpp.org/ftp/specs/archive/28_series/28.626#stateManagementIRP"/>

  <!-- Core Network NRM IRP class associated XML elements -->
  <complexType name="longList">
    <sequence>
      <element name="em" type="long" minOccurs="0" maxOccurs="unbounded"/>
    </sequence>
</complexType>

  <complexType name="PLMNId">
    <sequence>
      <element name="mcc" type="short"/>
      <element name="mNc" type="short"/>
    </sequence>
  </complexType>
  <complexType name="PLMNIdList">
    <sequence>
      <element name="pLMNId" type="cn:PLMNId" maxOccurs="6" />
    </sequence>
  </complexType>

  <element
    name="MscServerFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string"/>
                  <element name="mccList" type="cn:longList"/>
                  <element name="mncList" type="cn:longList"/>
                  <element name="lacList" type="cn:longList"/>
                  <element name="sacList" type="cn:longList"/>
                  <element name="gcaList" type="cn:longList" minOccurs="0"/>
                  <element name="mscId" type="long"/>
                  <element name="mscServerFunctionGsmCell" type="xn:dnList"/>
                  <element name="mscServerFunctionExternalGsmCell" type="xn:dnList"/>
                  <element name="mscServerFunctionCsMgwFunction" type="xn:dnList"/>
                     <element name="nriList" type="cn:longList"/>
                   <element name="mscServerFunctionMscPool" type="xn:dnList" minOccurs="0"/>
                     <element name="defaultMsc" type="cn:defaultMscType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="cn:IucsLink"/>
              <element ref="cn:ALink"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="HlrFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
```

```
  name="VlrFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="AucFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="EirFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="SmsIwmscFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
```

```
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="SmsGmscFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="GmscFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="SgsnFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="mccList" type="cn:longList"/>
                <element name="mncList" type="cn:longList"/>
                <element name="lacList" type="cn:longList"/>
                <element name="racList" type="cn:longList"/>
                <element name="sacList" type="cn:longList"/>
                <element name="sgsnId" type="long"/>
                <element name="sgsnFunctionGsmCell" type="xn:dnList"/>
                <element name="sgsnFunctionExternalGsmCell" type="xn:dnList"/>
                <element name="sgsnFunctionSgsnPool" type="xn:dn"/>
                <element name="nriList" type="cn:longList"/>
                <element name="proceduralStatus" type="sm:proceduralStatusType"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="cn:GbLink"/>
              <element ref="cn:IupsLink"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
```

```
  </complexType>
</element>

<element
  name="GgsnFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="proceduralStatus" type="sm:proceduralStatusType"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="BgFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="SmlcFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="GmlcFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
```

```
            </all>
          </complexType>
        </element>
        <choice minOccurs="0" maxOccurs="unbounded">
          <element ref="xn:VsDataContainer"/>
        </choice>
      </sequence>
    </extension>
  </complexContent>
 </complexType>
</element>

<element
 name="ScfFunction"
 substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
 <complexType>
  <complexContent>
   <extension base="xn:NrmClass">
    <sequence>
     <element name="attributes" minOccurs="0">
      <complexType>
       <all>
        <element name="userLabel" type="string"/>
       </all>
      </complexType>
     </element>
     <choice minOccurs="0" maxOccurs="unbounded">
      <element ref="xn:VsDataContainer"/>
     </choice>
    </sequence>
   </extension>
  </complexContent>
 </complexType>
</element>

<element name="IucsLink">
 <complexType>
  <complexContent>
   <extension base="xn:NrmClass">
    <sequence>
     <element name="attributes" minOccurs="0">
      <complexType>
       <all>
        <element name="userLabel" type="string"/>
        <element name="connectedRnc" type="xn:dn" minOccurs="0"/>
        <element name="connectedBss" type="xn:dn" minOccurs="0"/>
        <element name="connectedHNBGW" type="xn:dn" minOccurs="0"/>
       </all>
      </complexType>
     </element>
     <choice minOccurs="0" maxOccurs="unbounded">
      <element ref="xn:VsDataContainer"/>
     </choice>
    </sequence>
   </extension>
  </complexContent>
 </complexType>
</element>

<element name="IupsLink">
 <complexType>
  <complexContent>
   <extension base="xn:NrmClass">
    <sequence>
     <element name="attributes" minOccurs="0">
      <complexType>
       <all>
        <element name="userLabel" type="string"/>
        <element name="connectedRnc" type="xn:dn" minOccurs="0"/>
        <element name="connectedBss" type="xn:dn" minOccurs="0"/>
        <element name="connectedHNBGW" type="xn:dn" minOccurs="0"/>
       </all>
      </complexType>
     </element>
     <choice minOccurs="0" maxOccurs="unbounded">
      <element ref="xn:VsDataContainer"/>
     </choice>
    </sequence>
   </extension>
  </complexContent>
 </complexType>
</element>

<element name="IubcLink">
 <complexType>
  <complexContent>
   <extension base="xn:NrmClass">
```

```
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="connectedRnc" type="xn:dn"/>
                <element name="connectedHNBGW" type="xn:dn" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="ALink">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="connectedBss" type="xn:dn"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="GbLink">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="connectedBss" type="xn:dn"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="SrfFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
```

```
  name="CbcFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="cn:IubcLink"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="CgfFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="GmscServerFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="IwfFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
```

```
          <element ref="xn:VsDataContainer"/>
        </choice>
      </sequence>
    </extension>
  </complexContent>
 </complexType>
</element>

<element
 name="MnpSrfFunction"
 substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
 <complexType>
  <complexContent>
   <extension base="xn:NrmClass">
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       <all>
        <element name="userLabel" type="string"/>
       </all>
      </complexType>
     </element>
     <choice minOccurs="0" maxOccurs="unbounded">
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     </choice>
    </sequence>
   </extension>
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</element>

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   <extension base="xn:NrmClass">
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       <all>
        <element name="userLabel" type="string"/>
       </all>
      </complexType>
     </element>
     <choice minOccurs="0" maxOccurs="unbounded">
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     </choice>
    </sequence>
   </extension>
  </complexContent>
 </complexType>
</element>

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 substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
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   <extension base="xn:NrmClass">
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       <all>
        <element name="userLabel" type="string"/>
       </all>
      </complexType>
     </element>
     <choice minOccurs="0" maxOccurs="unbounded">
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    </sequence>
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  </complexContent>
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              <element name="userLabel" type="string"/>
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          </complexType>
        </element>
        <choice minOccurs="0" maxOccurs="unbounded">
          <element ref="xn:VsDataContainer"/>
        </choice>
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    </extension>
  </complexContent>
 </complexType>
</element>

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   <extension base="xn:NrmClass">
    <sequence>
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      <complexType>
       <all>
        <element name="userLabel" type="string"/>
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      </complexType>
     </element>
     <choice minOccurs="0" maxOccurs="unbounded">
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     </choice>
    </sequence>
   </extension>
  </complexContent>
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</element>

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 substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
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   <extension base="xn:NrmClass">
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        <element name="csMgwFunctionMscServerFunction" type="string" />
        <element name="csMgwFunctionIucsLink" type="xn:dnList"/>
        <element name="csMgwFunctionALink" type="xn:dnList"/>
       </all>
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 name="BmScFunction"
 substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
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   <extension base="xn:NrmClass">
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        <element name="userLabel" type="string"/>
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      </complexType>
     </element>
     <choice minOccurs="0" maxOccurs="unbounded">
      <element ref="xn:VsDataContainer"/>
     </choice>
    </sequence>
   </extension>
  </complexContent>
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  </element>

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                                    <element name="linkType" type="xn:linkType" minOccurs="0"/>
                                    <element name="protocolName" type="string" minOccurs="0"/>
                                    <element name="protocolVersion" type="string" minOccurs="0"/>
                                    <element name="userLabel" type="string"/>
                                    <element name="zEnd" type="xn:dn"/>
                                </all>
                            </complexType>
                        </element>
                        <choice minOccurs="0" maxOccurs="unbounded">
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                        </choice>
                    </sequence>
                </extension>
            </complexContent>
        </complexType>
    </element>

<element name="Link_Ggsn_Sgsn" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
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                            <complexType>
                                <all>
                                    <element name="aEnd" type="xn:dn"/>
                                    <element name="linkType" type="xn:linkType" minOccurs="0"/>
                                    <element name="protocolName" type="string" minOccurs="0"/>
                                    <element name="protocolVersion" type="string" minOccurs="0"/>
                                    <element name="userLabel" type="string"/>
                                    <element name="zEnd" type="xn:dn"/>
                                </all>
                            </complexType>
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                        <choice minOccurs="0" maxOccurs="unbounded">
                            <element ref="xn:VsDataContainer"/>
                        </choice>
                    </sequence>
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            </complexContent>
        </complexType>
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    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
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                </all>
              </complexType>
            </element>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
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      <complexContent>
        <extension base="xn:NrmClass">
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            <element name="attributes" minOccurs="0">
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                <all>
                  <element name="mscPoolMscServerFunction" type="xn:dnList" />
                </all>
              </complexType>
            </element>
          </sequence>
        </extension>
      </complexContent>
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    </complexType>
  </element>
  <element name="MscPoolArea" substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass">
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      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="lacList" type="cn:longList"/>
                  <element name="pLMNIdList" type="cn:PLMNIdList" minOccurs="0"/>
                  <element name="mscPoolAreaMscPool" type="xn:dnList"/>
                </all>
              </complexType>
            </element>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>
  <simpleType name="defaultMscType">
    <restriction base="unsignedShort">
      <minInclusive value="0"/>
      <maxInclusive value="1"/>
    </restriction>
  </simpleType>
  <element name="SgsnPool" substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass">
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="sgsnPoolSgsnFunction" type="xn:dnList"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="xn:VsDataContainer" />
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>
  <element name="SgsnPoolArea" substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass">
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
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                  <element name="pLMNIdList" type="cn:PLMNIdList" minOccurs="0"/>
                  <element name="sgsnPoolAreaSgsnPool" type="xn:dnList"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
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            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>
</schema>
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Annex C (informative): Change history

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2014-03	SA#63	SP-140031	001	1	F	Correction of proceduralStatus attribute mapping and datatype	11.1.0
2014-06	SA#64	SP-140332	002	-	F	Upgrade W3C XML Schema version from 1.0 to 1.1	11.2.0
		SP-140360	003	-	F	remove the feature support statements	11.2.0
2014-09	SA#65	SP-140560	004	-	C	Update the link from Solution Set to Information Service due to the end of Release 12	12.0.0
2014-12	SA#66	SP-140798	006	-	F	Update SS-IS version link	12.1.0
2016-01						Update to Rel-13 (MCC)	13.0.0
2016-06	SA#72	SP-160407	0007	-	F	Update the link from IRP Solution Set to IRP Information Service	13.1.0

History

Document history		
V13.0.0	January 2016	Publication
V13.1.0	August 2016	Publication