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Network Resource Model (NRM)
Integration Reference Point (IRP);
Solution Set (SS) definitions
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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:

28.704: IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements.

28.705: IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS).

28.706: IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions.

1 Scope

The present document specifies the Solution Sets for the IMS NRM IRP.

The Solution Set definition is related to 3GPP TS 28.705 V14.0.X [3].

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

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

[3] 3GPP TS 28.705: "Telecommunication management; IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP): Information Service (IS)".

[4] 3GPP TS 32.306: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Solution Set (SS) definitions".

[5] 3GPP TS 28.623: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".

[6] 3GPP TS 32.300 “Telecommunication management; Configuration Management (CM); Name convention for Managed Objects”.

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

[8] 3GPP TS 32.612: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Information Service (IS)".

[9] 3GPP TS 32.616: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Solution Set (SS) definitions".

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

[11] Void

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

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

3 Definitions and abbreviations

3.1 Definitions

For terms and definitions please refer to TS 32.101 [1], TS 32.102 [2] and TS 28.705 [3].

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

XML file: See definition of [5].

XML document: See definition of [5].

XML declaration: See definition of [5].

XML element: See definition of [5].

empty XML element: See definition of [5].

XML content (of an XML element): See definition of [5].

XML start-tag: See definition of [5].

XML end-tag: See definition of [5].

XML empty-element tag: See definition of [5].

XML attribute specification: See definition of [5].

DTD: See definition of [5].

XML schema: See definition of [5].

XML namespace: See definition of [5].

XML complex type: See definition of [5].

XML element type: See definition of [5].

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)
IMS	IP Multimedia Subsystem
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
SS	Solution Set
UMTS	Universal Mobile Telecommunications System
UTRAN	Universal Terrestrial Radio Access Network
XML	eXtensible Markup Language

4 Solution Set definitions

This specification defines the following 3GPP IMS NRM IRP Solution Set definitions:

- 3GPP IMS NRM IRP CORBA SS (Annex A)

- 3GPP IMS NRM 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 IMS NRM IRP: Information Service (TS 28.705 [3]).

A.1 Architectural Features

The overall architectural feature of IMS NRM IRP is specified in 3GPP TS 28.705[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 [5].A.1.2 Rules for NRM extensions.

See clause A.1.2 of [5].

A.1.3 Notifications

Notifications are sent according to the Notification IRP: CORBA SS (see 3GPP TS 32.306 [4]).

A.2 Mapping

A.2.1 General mappings

See clause A.2.1 of [5].

A.2.2 Information Object Class (IOC) mapping

A.2.2.1 IOC ASFunction

Mapping from NRM IOC ASFunction attributes to SS equivalent MOC ASFunction

Attributes of IOC ASFunction in TS 28.705 [3]	SS Attributes	SS Type	Qualifier
id	asFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

A.2.2.2 IOC BGCFFunction

Mapping from NRM IOC BGCFFunction attributes to SS equivalent MOC BGCFFunction

Attributes of IOC BGCFFunction in TS 28.705 [3]	SS Attributes	SS Type	Qualifier
id	bgcfFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

A.2.2.3 IOC CSCFFunction

Mapping from NRM IOC CSCFFunction attributes to SS equivalent MOC CSCFFunction

Attributes of IOC CSCFFunction in TS 28.705 [3]	SS Attributes	SS Type	Qualifier
id	cscfFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

A.2.2.4 IOC HSSFunction

Mapping from NRM IOC HSSFunction attributes to SS equivalent MOC HSSFunction

Attributes of IOC HSSFunction in TS 28.705 [3]	SS Attributes	SS Type	Qualifier
id	hssFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

A.2.2.5 IOC IMSMGWFunction

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

Attributes of IOC IMSMGWFunction in TS 28.705 [3]	SS Attributes	SS Type	Qualifier
id	imsMgwFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

A.2.2.6 IOC MGCFFunction

Mapping from NRM IOC MGCFFunction attributes to SS equivalent MOC MGCFFunction

Attributes of IOC MGCFFunction in TS 28.705 [3]	SS Attributes	SS Type	Qualifier
id	mgcfFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

A.2.2.7 IOC MRFCFunction

Mapping from NRM IOC MRFCFunction attributes to SS equivalent MOC MRFCFunction

Attributes of IOC MRFCFunction in TS 28.705 [3]	SS Attributes	SS Type	Qualifier
id	mrfcFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

A.2.2.8 IOC MRFPFunction

Mapping from NRM IOC MRFPFunction attributes to SS equivalent MOC MRFPFunction

Attributes of IOC MRFPFunction in TS 28.705 [3]	SS Attributes	SS Type	Qualifier
id	mrfpFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

A.2.2.9 IOC SLFFunction

Mapping from NRM IOC SLFFunction attributes to SS equivalent MOC SLFFunction

Attributes of IOC SLFFunction in TS 28.705 [3]	SS Attributes	SS Type	Qualifier
id	slfFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

A.2.2.10 IOC Link_CAMELIMSSFAS_HSS

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.11 IOC Link_AS_ICSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.12 IOC Link_AS_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.13 IOC Link_AS_SLF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.14 IOC Link_BGCF_BGCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.15 IOC Link_BGCF_MGCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.16 IOC Link_BGCF_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.17 IOC Link_HSS_ICSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.18 IOC Link_ICSCF_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.19 IOC Link_ICSCF_MGCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.20 IOC Link_ICSCF_PCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.21 IOC Link_PCSCF_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.22 IOC Link_HSS_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.23 IOC Link_ICSCF_SLF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.24 IOC Link_IMSMGW_MGCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.25 IOC Link_MGCF_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.26 IOC Link_MRFC_MRFP

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.27 IOC Link_MRFC_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.28 IOC Link_SCSCF_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.29 IOC Link_SCSCF_SLF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.30 IOC Link_HSS_SIPAS

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.31 IOC Link_HSS_OSASCSAS

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.32 IOC Link_PCSCF_ECSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.33 IOC Link_BGCF_ECSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

A.2.2.34 IOC Link_MGCF_ECSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 28.623 [5].

document may not be subclassed or extended. New interfaces may be defined with vendor-specific methods.

A.3 Solution Set definitions

A.3.1 IDL definition structure

Clause A.3.2 defines the MO classes for the IMS NRM IRP.

A.3.2 IDL specification “IMSNRMDefs.idl”

```
// File: IMSNRMDefs.idl
#ifndef _IMSNRMDEFS_IDL_
#define _IMSNRMDEFS_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 IMSNRMDefs
{
      /**
       *  Definitions for MO class ASFunction
       */
      interface ASFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "ASFunction";

         // Attribute Names
         //
         const string asFunctionId = "asFunctionId";
         const string linkList = "linkList";
      };
      /**
       *  Definitions for MO class SIPASFunction
       */
      interface SIPASFunction : ASFunction
      {
         const string CLASS = "SIPASFunction";

         // All Attributes inherited from ASFunction
      };
      /**
       *  Definitions for MO class OSASCSASFunction
       */
      interface OSASCSASFunction : ASFunction
      {
         const string CLASS = "OSASCSASFunction";

         // All Attributes inherited from ASFunction
      };
      /**
       *  Definitions for MO class CAMELIMSSFASFunction
       */
      interface CAMELIMSSFASFunction : ASFunction
      {
         const string CLASS = "CAMELIMSSFASFunction";

         // All Attributes inherited from ASFunction
      };
      /**
       *  Definitions for MO class BGCFFunction
       */
      interface BGCFFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "BGCFFunction";

         // Attribute Names
         //
         const string bgcfFunctionId = "bgcfFunctionId";
         const string linkList = "linkList";
      };
      /**
       *  Definitions for MO class CSCFFunction
       */
      interface CSCFFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "CSCFFunction";
         // Attribute Names
         //
         const string cscfFunctionId = "cscfFunctionId";
         const string linkList = "linkList";
```

```
};
/**
 *  Definitions for MO class ICSCFFunction
 */
interface ICSCFFunction : CSCFFunction
{
   const string CLASS = "ICSCFFunction";

   // All Attributes inherited from CSCFFunction
   //
};
 *  Definitions for MO class IMSMGWFunction
 */
interface IMSMGWFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "IMSMGWFunction";

   // Attribute Names
   //
   const string imsMgwFunctionId = "imsMgwFunctionId";
   const string linkList = "linkList";
};
/**
 *  Definitions for MO class MGCFFunction
 */
interface MGCFFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "MGCFFunction";

   // Attribute Names
   //
   const string mgcfFunctionId = "mgcfFunctionId";
   const string linkList = "linkList";
};
/**
 *  Definitions for MO class MRFCFunction
 */
interface MRFCFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "MRFCFunction";

   // Attribute Names
   //
   const string mrfcFunctionId = "mrfcFunctionId";
   const string linkList = "linkList";
};
/**
 *  Definitions for MO class MRFPFunction
 */
interface MRFPFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "MRFPFunction";

   // Attribute Names
   //
   const string mrfpFunctionId = "mrfpFunctionId";
   const string linkList = "linkList";
};
/**
 *  Definitions for MO class PCSCFFunction
 */
interface PCSCFFunction : CSCFFunction
{
   const string CLASS = "PCSCFFunction";
   // All Attributes inherited from CSCFFunction
   //
};
/**
 *  Definitions for MO class SCSCFFunction
 */
interface SCSCFFunction : CSCFFunction
{
   const string CLASS = "SCSCFFunction";

   // All Attributes inherited from CSCFFunction
   //
};
/**
```

```
     *  Definitions for MO class SLFFunction
     */
    interface SLFFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
    {
       const string CLASS = "SLFFunction";

       // Attribute Names
       //
       const string slfFunctionId = "slfFunctionId";
       const string linkList = "linkList";
    };
    /**
     *  Definitions for MO class ECSCFFunction
     */
    interface ECSCFFunction : CSCFFunction
    {
       const string CLASS = "ECSCFFunction";
       // All Attributes inherited from CSCFFunction
       //
    };

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

       // All Attributes inherited from Link

    };
   /**
     *  Definitions for MO class Link_AS_SLF
     */
    interface Link_AS_SLF : GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_AS_SLF";
       // All Attributes inherited from Link

    };
   /**
     *  Definitions for MO class Link_BGCF_BGCF
     */
    interface Link_BGCF_BGCF : GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_BGCF_BGCF";
       // All Attributes inherited from Link

    };
   /**
     *  Definitions for MO class Link_BGCF_MGCF
     */
    interface Link_BGCF_MGCF : GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_BGCF_MGCF";
       // All Attributes inherited from Link

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

       // All Attributes inherited from Link
    };
   /**
     *  Definitions for MO class Link_SCSCF_ICSCF
     */
    interface Link_SCSCF_ICSCF: GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_SCSCF_ICSCF";
       // All Attributes inherited from Link
    };
   /**
     *  Definitions for MO class Link_ICSCF_Mgcf
     */
```

```
    interface Link_ICSCF_Mgcf: GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_ICSCF_Mgcf";
       // All Attributes inherited from Link
    };

  /**
    *  Definitions for MO class Link_ICSCF_PCSCF
     */
    interface Link_ICSCF_PCSCF: GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_ICSCF_PCSCF";
       // All Attributes inherited from Link
    };
   /**
     *  Definitions for MO class Link_PCSCF_SCSCF
     */
    interface Link_PCSCF_SCSCF: GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_PCSCF_SCSCF";
       // All Attributes inherited from Link
    };
   /**
     *  Definitions for MO class Link_ICSCF_SLF
     */
    interface Link_ICSCF_SLF : GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_ICSCF_SLF";

       // All Attributes inherited from Link
    };
   /**
     *  Definitions for MO class Link_IMSMGW_MGCF
     */
    interface Link_IMSMGW_MGCF : GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_IMSMGW_MGCF";

       // All Attributes inherited from Link
    };
   /**
     *  Definitions for MO class Link_MGCF_SCSCF
     */
    interface Link_MGCF_SCSCF : GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_MGCF_SCSCF";

       // All Attributes inherited from Link
    };
   /**
     *  Definitions for MO class Link_MRFC_MRFP
     */
    interface Link_MRFC_MRFP : GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_MRFC_MRFP";

       // All Attributes inherited from Link
    };
   /**
     *  Definitions for MO class Link_MRFC_SCSCF
     */
    interface Link_MRFC_SCSCF : GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_MRFC_SCSCF";

       // All Attributes inherited from Link
    };
   /**
     *  Definitions for MO class Link_SCSCF_SCSCF
     */
    interface Link_SCSCF_SCSCF : GenericNetworkResourcesNRMDefs::Link
    {
       const string CLASS = "Link_SCSCF_SCSCF";

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

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

   // All Attributes inherited from Link
};
/**
 *  Definitions for MO class HSSFunction
 */
interface HSSFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "HSSFunction";

   // Attribute Names
   //
   const string hssFunctionId = "hssFunctionId";
   const string linkList = "linkList";
};
/**
 *  Definitions for MO class Link_HSS_SCSCF
 */
interface Link_HSS_SCSCF : GenericNetworkResourcesNRMDefs::Link
{
   const string CLASS = "Link_HSS_SCSCF";

   // All Attributes inherited from Link
};
/**
 *  Definitions for MO class Link_HSS_ICSCF
 */
interface Link_HSS_ICSCF : GenericNetworkResourcesNRMDefs::Link
{
   const string CLASS = "Link_HSS_ICSCF";

   // All Attributes inherited from Link
};
/**
 *  Definitions for MO class Link_HSS_SIPAS
 */
interface Link_HSS_SIPAS : GenericNetworkResourcesNRMDefs::Link
{
   const string CLASS = "Link_HSS_SIPAS";

   // All Attributes inherited from Link
};
/**
 *  Definitions for MO class Link_HSS_OSASCSAS
 */
interface Link_HSS_OSASCSAS : GenericNetworkResourcesNRMDefs::Link
{
   const string CLASS = "Link_HSS_OSASCSAS";

   // All Attributes inherited from Link
};
/**
 *  Definitions for MO class Link_CAMELIMSSFAS_HSS
 */
interface Link_CAMELIMSSFAS_HSS : GenericNetworkResourcesNRMDefs::Link
{
   const string CLASS = "Link_CAMELIMSSFAS_HSS";

   // All Attributes inherited from Link
};
/**
 *  Definitions for MO class Link_AS_ICSCF
 */
interface Link_AS_ICSCF : GenericNetworkResourcesNRMDefs::Link
{
   const string CLASS = "Link_AS_ICSCF";

   // All Attributes inherited from Link

};

/**
 *  Definitions for MO class Link_PCSCF_ECSCF
 */
```

```
      interface Link_PCSCF_ECSCF : GenericNetworkResourcesNRMDefs::Link
      {
         const string CLASS = "Link_PCSCF_ECSCF";

         // All Attributes inherited from Link

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

         // All Attributes inherited from Link

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

         // All Attributes inherited from Link

      };

};

#endif // _IMSNRMDEFS_IDL_
```

Annex B (normative): XML definitions

B.0 General

This annex provides the NRM-specific part related to the IMS NRM IRP [3] of the XML file format definition for the Bulk Configuration Management IRP IS [8].

The main part of this XML file format definition is provided by 3GPP TS 32.616 [9].

The XML file formats are based on XML [10], XML Schema [12] [13] and XML Namespace [7] standards.

B.1 Architectural features

B.1.0 Introduction

The overall architectural feature of IMS NRM IRP is specified in 3GPP TS 28.705 [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 [6].

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 [9].

B.3.2 of the present document defines the NRM-specific XML schema `imsNrm.xsd` for the IMS NRM IRP IS defined in 3GPP TS 28.705 [3].

XML schema `imsNrm.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 [9].

B.3.2 XML Schema “imsNrm.xsd”

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

<!--
  3GPP TS 28.706 IMS NRM IRP
  Bulk CM Configuration data file NRM-specific XML schema
  imsNrm.xsd
-->

<schema
  targetNamespace="http://www.3gpp.org/ftp/specs/archive/28_series/28.706#imsNrm"
  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:im="http://www.3gpp.org/ftp/specs/archive/28_series/28.706#imsNrm"
>

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

  <!--IMS NRM IRP IS class associated XML elements -->

  <element
    name="ASFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string"/>
                  <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:ASFunctionOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="CAMELIMSSFASFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string"/>
                  <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:ASFunctionOptionallyContainedNrmClass"/>
              <element ref="im:CAMELIMSSFASFunctionOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
```

```
    </complexType>
  </element>

  <element
    name="OSASCSASFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string"/>
                  <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:ASFunctionOptionallyContainedNrmClass"/>
              <element ref="im:OSASCSASFunctionOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="SIPASFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string"/>
                  <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:ASFunctionOptionallyContainedNrmClass"/>
              <element ref="im:SIPASFunctionOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="BGCFFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string"/>
                  <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:BGCFFunctionOptionallyContainedNrmClass"/>
```

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

<element
  name="ICSCFFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="im:ICSCFFunctionOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="IMSMGWFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="im:IMSMGWFunctionOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

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

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

<element
  name="MRFCFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="im:MRFCFunctionOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="MRFPFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="im:MRFPFunctionOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

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

```
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="im:PCSCFFunctionOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="SCSCFFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="im:SCSCFFunctionOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="ECSCFFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string"/>
                <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="im:ECSCFFunctionOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="SLFFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
```

```
              <all>
                <element name="userLabel" type="string"/>
                <element name="vnfParametersList" type="xn:vnfParametersListType" minOccurs="0"/>
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="im:SLFFunctionOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>


<element name="Link_AS_SCSCF" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
      <complexType>
          <complexContent>
              <extension base="xn:NrmClass">
                  <sequence>
                      <element name="attributes" minOccurs="0">
                          <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>
                      </element>
                      <choice minOccurs="0" maxOccurs="unbounded">
                          <element ref="im:Link_AS_SCSCFOptionallyContainedNrmClass"/>
                          <element ref="xn:VsDataContainer"/>
                      </choice>
                  </sequence>
              </extension>
          </complexContent>
      </complexType>
  </element>

  <element name="Link_AS_SLF" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
      <complexType>
          <complexContent>
              <extension base="xn:NrmClass">
                  <sequence>
                      <element name="attributes" minOccurs="0">
                          <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>
                      </element>
                      <choice minOccurs="0" maxOccurs="unbounded">
                          <element ref="im:Link_AS_SLFOptionallyContainedNrmClass"/>
                          <element ref="xn:VsDataContainer"/>
                      </choice>
                  </sequence>
              </extension>
          </complexContent>
      </complexType>
  </element>

  <element name="Link_BGCF_BGCF" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
      <complexType>
          <complexContent>
              <extension base="xn:NrmClass">
                  <sequence>
                      <element name="attributes" minOccurs="0">
```

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

<element name="Link_BGCF_MGCF" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
    <complexType>
        <complexContent>
            <extension base="xn:NrmClass">
                <sequence>
                    <element name="attributes" minOccurs="0">
                        <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>
                    </element>
                    <choice minOccurs="0" maxOccurs="unbounded">
                        <element ref="im:Link_BGCF_MGCFOptionallyContainedNrmClass"/>
                        <element ref="xn:VsDataContainer"/>
                    </choice>
                </sequence>
            </extension>
        </complexContent>
    </complexType>
</element>

<element name="Link_BGCF_SCSCF" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
    <complexType>
        <complexContent>
            <extension base="xn:NrmClass">
                <sequence>
                    <element name="attributes" minOccurs="0">
                        <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>
                    </element>
                    <choice minOccurs="0" maxOccurs="unbounded">
                        <element ref="im:Link_BGCF_SCSCFOptionallyContainedNrmClass"/>
                        <element ref="xn:VsDataContainer"/>
                    </choice>
                </sequence>
            </extension>
        </complexContent>
    </complexType>
</element>

<element name="Link_ICSCF_SCSCF"
  substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass"
>
```

```
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <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>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:Link_ICSCF_SCSCFOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>
  <element name="Link_ICSCF_MGCF"
    substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <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>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:Link_ICSCF_MGCFOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element name="Link_ICSCF_PCSCF"
    substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <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>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:Link_ICSCF_PCSCFOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
```

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

<element name="Link_PCSCF_SCSCF"
    substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <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>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:Link_PCSCF_SCSCFOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>
    <element name="Link_ICSCF_SLF" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
        <complexType>
            <complexContent>
                <extension base="xn:NrmClass">
                    <sequence>
                        <element name="attributes" minOccurs="0">
                            <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>
                        </element>
                        <choice minOccurs="0" maxOccurs="unbounded">
                            <element ref="im:Link_ICSCF_SLFOptionallyContainedNrmClass"/>
                            <element ref="xn:VsDataContainer"/>
                        </choice>
                    </sequence>
                </extension>
            </complexContent>
        </complexType>
    </element>

    <element name="Link_IMSMGW_MGCF" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
        <complexType>
            <complexContent>
                <extension base="xn:NrmClass">
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                    </choice>
                </sequence>
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                                <element name="protocolVersion" type="string" minOccurs="0"/>
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                    </choice>
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                                <element name="protocolVersion" type="string" minOccurs="0"/>
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                    </element>
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                    </choice>
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          <element ref="xn:VsDataContainer"/>
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                                 <element name="protocolVersion" type="string" minOccurs="0"/>
                                 <element name="userLabel" type="string"/>
                                 <element name="zEnd" type="xn:dn"/>
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                     <choice minOccurs="0" maxOccurs="unbounded">
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                         <element ref="xn:VsDataContainer"/>
                     </choice>
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     </complexType>
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                     </element>
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                         <element ref="xn:VsDataContainer"/>
                     </choice>
                 </sequence>
             </extension>
         </complexContent>
     </complexType>
 </element>

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                    </sequence>
                </extension>
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        </complexType>
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                            </complexType>
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                        </choice>
                    </sequence>
                </extension>
            </complexContent>
        </complexType>
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    <element name="Link_CAMELIMSSFAS_HSS"
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                                </all>
                            </complexType>
                        </element>
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                        </choice>
                    </sequence>
                </extension>
            </complexContent>
        </complexType>
    </element>

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

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                <element name="zEnd" type="xn:dn"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
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            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
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            </element>
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    <element name="Link_MRFC_MRFPOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
    <element name="Link_MRFC_SCSCFOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
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    <element name="Link_SCSCF_SLFOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
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    <element name="Link_HSS_SCSCFOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
    <element name="Link_HSS_ICSCFOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
    <element name="Link_HSS_SIPASOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
    <element name="Link_HSS_OSASCSASOptionallyContainedNrmClass" type="xn:NrmClass"
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    <element name="Link_CAMELIMSSFAS_HSSOptionallyContainedNrmClass" type="xn:NrmClass"
abstract="true"/>
    <element name="Link_AS_ICSCFOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
   <element name="Link_PCSCF_ECSCFOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
   <element name="Link_BGCF_ECSCFOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
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</schema>
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Annex C (informative): Change history

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2014-06	SA#64	SP-140332	0001	-		Upgrade W3C XML Schema version from 1.0 to 1.1	11.1.0
		SP-140360	0002	-		remove the feature support statements	11.1.0
2014-09	SA#65	SP-140560	0003	-		Update the link from Solution Set to Information Service due to the end of Release 12	12.0.0
2016-01	SA#70					Update to Rel-13 (MCC)	13.0.0
2016-03	SA#71	SP-160031	0006	-		Make the XML schema well formed	13.1.0
2016-06	SA#72	SP-160407	0004	-	F	Update the link from IRP Solution Set to IRP Information Service	13.2.0
2017-03	SA#75	-	-	-		Promotion to Release 14 without technical change	14.0.0
2017-06	SA#76	SP-170514	0008	-	F	Update the link from IRP Solution Set to IRP Information Service	14.1.0
2017-06	SA#76	SP-170510	0009	-	B	Update the XML Schema definitions to align with IS to support Configuration Management for mobile networks that include virtualized network functions	14.1.0
2018-06	-	-	-	-	-	Update to Rel-15 version (MCC)	**15.0.0**
2020-07	-	-	-	-	-	Update to Rel-16 version (MCC)	**16.0.0**
2022-03	-	-	-	-	-	Update to Rel-17 version (MCC)	**17.0.0**

History

Document history		
V17.0.0	April 2022	Publication