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Technical Specification

Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
IP Multimedia Subsystem (IMS) Network Resource Model (NRM)
Integration Reference Point (IRP);
Common Object Request Broker Architecture (CORBA) Solution Set (SS)
(3GPP TS 32.733 version 9.1.0 Release 9)

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Foreword

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The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under http://webapp.etsi.org/key/queryform.asp.

Contents

Foreword

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

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

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- x the first digit:
  - 1 presented to TSG for information;
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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

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:

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

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

32.733: IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)

32.735: IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP); Bulk CM eXtensible Markup Language (XML) file format definition

1 Scope

The purpose of this *IMS NRM IRP: CORBA Solution Set* is to define the mapping of the IRP Information Service (see TS 32.732 [3]) to the protocol specific details necessary for implementation of this IRP in a CORBA/IDL environment.

This Solution Set specification is related to 3GPP TS 32.732.

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

[4] 3GPP TS 32.303: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)".

[5] 3GPP TS 32.623: "Telecommunication management; Configuration Management (CM); Generic Network Resources Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)".

3 Definitions and abbreviations

3.1 Definitions

For terms and definitions please refer to TS 32.101 [1], TS 32.102 [2] and TS 32.732 [3].

3.2 Abbreviations

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

CORBA	Common Object Request Broker Architecture
DN	Distinguished Name
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
SS	Solution Set

4 Architectural features

The overall architectural feature of IMS NRM IRP is specified in TS 32.732[3].
This clause specifies features that are specific to the CORBA SS.

4.1 Notifications

Notifications are sent according to the Notification IRP: CORBA SS (see TS 32.303 [4]).

5 Mapping

5.1 General mappings

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

5.2 Information Object Class (IOC) mapping

5.2.1 IOC ASFunction

Mapping from NRM IOC ASFunction attributes to SS equivalent MOC ASFunction

Attributes of IOC ASFunction in TS 32.732 [3]	SS Attributes	SS Type	Qualifier
asFunctionId	asFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

5.2.2 IOC BGCFFunction

Mapping from NRM IOC BGCFFunction attributes to SS equivalent MOC BGCFFunction

Attributes of IOC BGCFFunction in TS 32.732 [3]	SS Attributes	SS Type	Qualifier
bgcfFunctionId	bgcfFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

5.2.3 IOC CAMELIMSSFASFunction

Void.

5.2.4 IOC CSCFFunction

Mapping from NRM IOC CSCFFunction attributes to SS equivalent MOC CSCFFunction

Attributes of IOC CSCFFunction in TS 32.732 [3]	SS Attributes	SS Type	Qualifier
cscfFunctionId	cscfFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

5.2.5 IOC HSSFunction

Mapping from NRM IOC HSSFunction attributes to SS equivalent MOC HSSFunction

Attributes of IOC HSSFunction in TS 32.732 [3]	SS Attributes	SS Type	Qualifier
hssFunctionId	hssFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

5.2.6 IOC ICSCFFunction

Void.

5.2.7 IOC IMSMGWFunction

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

Attributes of IOC IMSMGWFunction in TS 32.732 [3]	SS Attributes	SS Type	Qualifier
imsMgwFunctionId	imsMgwFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

5.2.8 IOC MGCFFunction

Mapping from NRM IOC MGCFFunction attributes to SS equivalent MOC MGCFFunction

Attributes of IOC MGCFFunction in TS 32.732 [3]	SS Attributes	SS Type	Qualifier
mgcfFunctionId	mgcfFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

5.2.9 IOC MRFCFunction

Mapping from NRM IOC MRFCFunction attributes to SS equivalent MOC MRFCFunction

Attributes of IOC MRFCFunction in TS 32.732 [3]	SS Attributes	SS Type	Qualifier
mrfcFunctionId	mrfcFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

5.2.10 IOC MRFPFunction

Mapping from NRM IOC MRFPFunction attributes to SS equivalent MOC MRFPFunction

Attributes of IOC MRFPFunction in TS 32.732 [3]	SS Attributes	SS Type	Qualifier
mrfpFunctionId	mrfpFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

5.2.11 IOC OSASCSASFunction

Void.

5.2.12 IOC PCSCFFunction

Void.

5.2.13 IOC SCSCFFunction

Void.

5.2.14 IOC SIPASFunction

Void.

5.2.15 IOC SLFFunction

Mapping from NRM IOC SLFFunction attributes to SS equivalent MOC SLFFunction

Attributes of IOC SLFFunction in TS 32.732 [3]	SS Attributes	SS Type	Qualifier
slfFunctionId	slfFunctionId	string	Read-Only, M
linkList	linkList	GenericNetworkResourcesIRPSystem::AttributeTypes::LinkListSet	Read-Only, O

5.2.16 Reserved for Future Use

...

5.2.50 Reserved for Future Use

5.2.51 Void

5.2.52 IOC Link_CAMELIMSSFAS_HSS

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.53 IOC Link_AS_ICSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.54 IOC Link_AS_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.55 IOC Link_AS_SLF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.56 IOC Link_BGCF_BGCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.57 Void

5.2.58 IOC Link_BGCF_MGCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.59 IOC Link_BGCF_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.60 Void

5.2.61 IOC Link_HSS_ICSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.62 IOC Link_ICSCF_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.63 IOC Link_ICSCF_MGCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.64 Void

5.2.65 IOC Link_ICSCF_PCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.66 IOC Link_PCSCF_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.67 Void

5.2.68 IOC Link_HSS_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.69 IOC Link_ICSCF_SLF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.70 IOC Link_IMSMGW_MGCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.71 IOC Link_MGCF_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.72 IOC Link_MRFC_MRFP

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.73 IOC Link_MRFC_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.74 IOC Link_SCSCF_SCSCF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.75 IOC Link_SCSCF_SLF

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.76 IOC Link_HSS_SIPAS

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

5.2.77 IOC Link_HSS_OSASCSAS

All attributes are inherited from Link. See mapping of attributes for Link IOC in 3GPP TS 32.623 [5].

6 Rules for NRM extensions

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

6.1 Allowed extensions

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

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

When subclassing, the 3GPP SA5-specified containment rules and their specified cardinality shall still be followed. As an example, ManagementNode (or its subclasses) shall be contained under SubNetwork (or its subclasses).

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

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

6.2 Extensions not allowed

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

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

Annex A (normative): CORBA IDL, NRM Definitions

A.1 IDL specification (file name "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 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_ICSCF_SCSCF
 */
interface Link_ICSCF_SCSCF : GenericNetworkResourcesNRMDefs::Link
{
   const string CLASS = "Link_ICSCF_SCSCF";
   // 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
};

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

      };

};

#endif // _IMSNRMDEFS_IDL_
```

Annex B (informative): Change history

Change history								
Date	**TSG #**	**TSG Doc.**	**CR**	**R**	**Subject/Comment**	**Cat**	**Old**	**New**
Sep 2006	SA_33	SP-060564	--	--	Submitted to TSG SA #33 for Information	--	--	1.0.0
Dec 2006	SA_34	SP-060751	--	--	Submitted to TSG SA #34 for Approval	--	2.0.0	7.0.0
Mar 2007	SA_35	SP-070047	0001	--	Add HssFunction to the CORBA SS	F	7.0.0	7.1.0
Jun 2007	SA_36	SP-070276	0002	--	Add missing Link_As_Icscf To IMS NRM - Align with TS 23.002	F	7.1.0	7.2.0
Jun 2007	SA_36	SP-070276	0003	--	Correct definitions of AsFunctions - Align with 23.002	F	7.1.0	7.2.0
Sep 2007	SA_37	SP-070612	0004	--	Add missing link attributes to IMS NRM - Align with 3GPP2	F	7.2.0	7.3.0
Dec 2008	SA_42	--	--	--	Upgrade to Release 8	--	7.3.0	8.0.0
Dec 2009	-	-	-	-	Update to Rel-9 version	--	8.0.0	9.0.0
Dec 2010	SA_50	SP-100859	0005	5	Correcting CscfFunction definition of IMS NRM - Align with TS 32.732 IS	F	9.0.0	9.1.0

History

Document history		
V9.0.0	February 2010	Publication
V9.1.0	January 2011	Publication