ETSI TS 132 633 V6.3.0 (2006-03)

Technical Specification

**Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
Telecommunication management;
Configuration Management (CM);
Core network resources Integration Reference Point (IRP):
Common Object Request Broker Architecture (CORBA)
Solution Set (SS)
(3GPP TS 32.633 version 6.3.0 Release 6)**

**GLOBAL SYSTEM FOR
MOBILE COMMUNICATIONS**

Reference

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Foreword

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Contents

Foreword

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

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Introduction

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:

32.631:   "Configuration Management (CM); Core network resources Integration Reference Point (IRP): Requirements".

32.632:   "Configuration Management (CM); Core network resources Integration Reference Point (IRP): Network Resource Model (NRM)".

32.633:   "Configuration Management (CM); Core network resources Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)".

32.634:   "Configuration Management (CM); Core network resources Integration Reference Point (IRP): Common Management Information Protocol (CMIP) Solution Set (SS)".

32.635:   "Configuration Management (CM); Core network resources Integration Reference Point (IRP): Bulk CM eXtensible Markup Language (XML) file format definition".

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

1 Scope

The purpose of this *Core Network Resources IRP: CORBA Solution Set* is to define the mapping of the IRP information model (see TS 32.632 [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 32.632 V6.2.X.

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 32.632: " Telecommunication management; Configuration Management (CM); Core Network Resources Integration Reference Point (IRP): Network Resource Model (NRM)".

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

[5] 3GPP TS 32.303: " Telecommunication management; Configuration Management (CM); Notification 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 32.632 [3].

3.2 Abbreviations

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

CORBA	Common Object Request Broker Architecture
DN	Distinguished Name
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 Core Network Resources IRP is specified in TS 32.632[3].
This clause specifies features that are specific to the CORBA SS [3].

4.1   Notifications

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

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 MscServerFunction

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

Attributes of IOC MscFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
mscServerFunctionId	mscServerFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M
mccList	mccList	GenericNetworkResourcesIRPSystem::AttributeTypes:: LongSet	Read-Write, M
mncList	mncList	GenericNetworkResourcesIRPSystem::AttributeTypes:: LongSet	Read-Write, M
lacList	lacList	GenericNetworkResourcesIRPSystem::AttributeTypes:: LongSet	Read-Write, M
sacList	sacList	GenericNetworkResourcesIRPSystem::AttributeTypes:: LongSet	Read-Write, M
gcaList	gcaList	GenericNetworkResourcesIRPSystem::AttributeTypes:: LongSet	Read-Write, M
mscId	mscId	long	Read-Write, M
Associated With/mscServerFunction-GsmCell	mscServerFunction-GsmCell	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet	Read-Only, M
Associated With/mscServerFunction-ExternalGsmCell	mscServerFunction-ExternalGsmCell	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet	Read-Only, M
Associated With/mscServerFunction-CsMgwFunction	mscServerFunction-CsMgwFunction	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet	Read-Only, M

5.2.2   IOC HlrFunction

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

Attributes of IOC HlrFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
hlrFunctionId	hlrFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.3   IOC VlrFunction

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

Attributes of IOC VlrFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
vlrFunctionId	vlrFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.4   IOC AucFunction

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

Attributes of IOC AucFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
aucFunctionId	aucFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.5   IOC EirFunction

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

Attributes of IOC EirFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
eirFunctionId	eirFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.6   IOC SmsIwmscFunction

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

Attributes of IOC SmsIwmscFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
smsIwmscFunctionId	smsIwmscFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.7   IOC SmsGmscFunction

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

Attributes of IOC SmsGmscFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
smsGmscFunctionId	smsGmscFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.8 IOC SgsnFunction

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

Attributes of IOC SgsnFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
sgsnFunctionId	sgsnFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M
mccList	mccList	GenericNetworkResourcesIRPSystem::AttributeTypes:: LongSet	Read-Write, M
mncList	mncList	GenericNetworkResourcesIRPSystem::AttributeTypes:: LongSet	Read-Write, M
lacList	lacList	GenericNetworkResourcesIRPSystem::AttributeTypes:: LongSet	Read-Write, M
racList	racList	GenericNetworkResourcesIRPSystem::AttributeTypes:: LongSet	Read-Write, M
sacList	sacList	GenericNetworkResourcesIRPSystem::AttributeTypes:: LongSet	Read-Write, M
sgsnId	sgsnId	long	Read-Write, M
Associated With/sgsnFunction-GsmCell	sgsnFunction-GsmCell	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet	Read-Only, M
Associated With/sgsnFunction-ExternalGsmCell	sgsnFunction-ExternalGsmCell	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet	Read-Only, M
proceduralStatus	There is no corresponding SS attribute.		

5.2.9 IOC GgsnFunction

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

Attributes of IOC GgsnFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
ggsnFunctionId	ggsnFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M
proceduralStatus	There is no corresponding SS attribute.		

5.2.10 IOC BgFunction

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

Attributes of IOC BgFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
bgFunctionId	bgFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.11 IOC GmscFunction

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

Attributes of IOC GmscFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
gmscFunctionId	gmscFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.12   IOC SmlcFunction

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

Attributes of IOC SmlcFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
smlcFunctionId	smlcFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.13   IOC GmlcFunction

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

Attributes of IOC GmlcFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
gmlcFunctionId	gmlcFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.14   IOC ScfFunction

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

Attributes of IOC ScfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
scfFunctionId	scfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.15   IOC SrfFunction

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

Attributes of IOC SrfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
srfFunctionId	srfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.16   IOC CbcFunction

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

Attributes of IOC CbcFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
cbcFunctionId	cbcFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.17   IOC CgfFunction

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

Attributes of IOC CgfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
cgfFunctionId	cgfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.18   IOC ImsMgwFunction

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

Attributes of IOC MgwFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
imsMgwFunctionId	imsMgwFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.19   IOC GmscServerFunction

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

Attributes of IOC GmscServerFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
gmscServerFunctionId	gmscServerFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.20   IOC IwfFunction

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

Attributes of IOC IwfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
iwfFunctionId	iwfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.21   IOC MnpSrfFunction

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

Attributes of IOC MnpSrfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
mnpSrfFunctionId	mnpSrfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.22   IOC NpdbFunction

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

Attributes of IOC NpdbFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
npdbFunctionId	npdbFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.23   IOC SgwFunction

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

Attributes of IOC SgwFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
sgwFunctionId	sgwFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.24   IOC SsfFunction

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

Attributes of IOC SsfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
ssfFunctionId	ssfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M

5.2.25   IOC BsFunction

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

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

5.2.26   IOC IucsLink

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

Attributes of IOC IucsLink in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
iucsLinkId	iucsLinkId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M
Connected To/connectedRnc	connectedRnc	GenericNetworkResourcesIRPSystem:: AttributeTypes::MOReference	Read-Only, M
Connected To/connectedBss	connectedBss	GenericNetworkResourcesIRPSystem:: AttributeTypes::MOReference	Read-Only, M

5.2.27   IOC IupsLink

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

Attributes of IOC IucsLink in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
iupsLinkId	iupsLinkId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M
Connected To/connectedRnc	connectedRnc	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, O
Connected To/connectedBss	connectedBss	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, O

5.2.28   IOC IubcLink

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

Attributes of IOC IucsLink in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
iubcLinkId	iubcLinkId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M
Connected To/connectedRnc	connectedRnc	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M

5.2.29 IOC ALink

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

Attributes of IOC IucsLink in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
aLinkId	aLinkId	string	Read-Only, M
userLabel	userLabel	string	Read- Write, M
Connected To/connectedBss	connectedBss	GenericNetworkResourcesIRPSystem::Attribute Types::MOReference	Read-Only, M

5.2.30 IOC GbLink

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

Attributes of IOC IucsLink in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
gbLinkId	gbLinkId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M
Connected To/connectedBss	connectedBss	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M

5.2.31 IOC CsMgwFunction

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

Attributes of IOC MgwFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
csMgwFunctionId	csMgwFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M
Associated With/csMgwFunction-MscServerFunction	csMgwFunction-MscServerFunction	GenericNetworkResources IRPSystem::AttributeTypes ::MOReference	Read-Only, M
Connected To/csMgwFunction-IucsLink	csMgwFunction-IucsLink	GenericNetworkResources IRPSystem::AttributeTypes ::MOReferenceSet	Read-Only, M
Connected To /csMgwFunction-ALink	csMgwFunction-ALink	GenericNetworkResources IRPSystem::AttributeTypes ::MOReferenceSet	Read-Only, M

5.2.32 IOC ScscfFunction

Mapping from NRM IOC ScscfFunction attributes to SS equivalent MOC ScscfFunction

Attributes of IOC ScscfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
scscfFunctionId	scscfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M

5.2.33 IOC PcscfFunction

Mapping from NRM IOC PcscfFunction attributes to SS equivalent MOC PcscfFunction

Attributes of IOC PcscfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
pcscfFunctionId	pcscfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M

5.2.34   IOC IcscfFunction

Mapping from NRM IOC IcscfFunction attributes to SS equivalent MOC IcscfFunction

Attributes of IOC IcscfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
icscfFunctionId	icscfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M

5.2.35   IOC SlfFunction

Mapping from NRM IOC SlfFunction attributes to SS equivalent MOC SlfFunction

Attributes of IOC SlfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
slfFunctionId	slfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M

5.2.36   IOC BgcfFunction

Mapping from NRM IOC BgcfFunction attributes to SS equivalent MOC BgcfFunction

Attributes of IOC BgcfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
bgcfFunctionId	bgcfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M

5.2.37   IOC MrfcFunction

Mapping from NRM IOC MrfcFunction attributes to SS equivalent MOC MrfcFunction

Attributes of IOC MrfcFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
mrfcFunctionId	mrfcFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M

5.2.38   IOC MrfpFunction

Mapping from NRM IOC MrfpFunction attributes to SS equivalent MOC MrfpFunction

Attributes of IOC MrfpFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
mrfpFunctionId	mrfpFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M

5.2.39   IOC AsFunction

Mapping from NRM IOC AsFunction attributes to SS equivalent MOC AsFunction

Attributes of IOC AsFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
asFunctionId	asFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M

5.2.40   IOC MgcfFunction

Mapping from NRM IOC MgcfFunction attributes to SS equivalent MOC MgcfFunction

Attributes of IOC MgcfFunction in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
mgcfFunctionId	mgcfFunctionId	string	Read-Only, M
userLabel	userLabel	string	Read-Write, M

5.2.41   MOC `Link_As_Auc`

Mapping from NRM IOC `Link_As_Auc` attributes to SS equivalent MOC `Link_As_Auc`

NRM Attributes of MOC `Link_ As_Auc` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.42   MOC `Link_As_Hlr`

Mapping from NRM IOC `Link_As_Hlr` attributes to SS equivalent MOC `Link_As_Hlr`

NRM Attributes of MOC `Link_ As_Hlr` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.43 MOC `Link_As_Scscf`

Mapping from NRM IOC `Link_As_Scscf` attributes to SS equivalent MOC `Link_As_Scscf`

NRM Attributes of MOC `Link_As_Scscf` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkTypeType	string	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.44 MOC `Link_As_Slf`

Mapping from NRM IOC `Link_As_Slf` attributes to SS equivalent MOC `Link_As_Slf`

NRM Attributes of MOC `Link_As_Scscf` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.45 MOC `Link_Bgcf_Bgcf`

Mapping from NRM IOC `Link_Bgcf_Bgcf` attributes to SS equivalent MOC `Link_Bgcf_Bgcf`

NRM Attributes of MOC `Link_Bgcf_Bgcf` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.46 MOC `Link_Bgcf_ImsMgw`

Mapping from NRM IOC `Link_Bgcf-ImsMgw` attributes to SS equivalent MOC `Link_Bgcf_ImsMgw`

NRM Attributes of `Link_Bgcf_ImsMgw` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.47 MOC `Link_Bgcf_Scscf`

Mapping from NRM IOC `Link_Bgcf_Scscf` attributes to SS equivalent MOC `Link_Bgcf_Scscf`

NRM Attributes of `Link_Bgcf_Scscf` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.48 MOC Link_Hlr_Scscf

Mapping from NRM IOC `Link_Hlr_Scscf` attributes to SS equivalent MOC `Link_Hlr_Scscf`

NRM Attributes of `Link_Cscf_Mrfc` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.49 MOC `Link_Icscf_Slf`

Mapping from NRM IOC `Link_Icscf_Slf` attributes to SS equivalent MOC `Link_Icscf_Slf`

NRM Attributes of Link_Icscf_Sl in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.50 MOC `Link_ImsMgw_Mgcf`

Mapping from NRM IOC `Link_ImsMgw_Mgcf` attributes to SS equivalent MOC `Link_ImsMgw_Mgcf`

NRM Attributes of Link_ImsMgw_Mgcf in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.51 MOC `Link_ImsMgw_Scscf`

Mapping from NRM IOC `Link_ImsMgw_Scscf` attributes to SS equivalent MOC `Link_ImsMgw_Scscf`

NRM Attributes of Link_ImsMgw_Scscf in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.52   MOC `Link_Mrfc_Mrfp`

Mapping from NRM IOC `Link_Mrfc_Mrfp` attributes to SS equivalent MOC `Link_Mrfc_Mrfp`

NRM Attributes of `Link_Mrfc_Mrfp` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.53   MOC `Link_Mrfc_Scscf`

Mapping from NRM IOC `Link_Mrfc_Scscf` attributes to SS equivalent MOC `Link_Mrfc_Scscf`

NRM Attributes of `Link_Mrfc_Scscf` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

5.2.54   MOC `Link_Scscf_Slf`

Mapping from NRM IOC `Link_Scscf_Slf` attributes to SS equivalent MOC `Link_Scscf_Slf`

NRM Attributes of `Link_Scscf_Slf` in TS 32.632 [3]	SS Attributes	SS Type	Qualifier
linkId inherited from Link	linkId	string	Read-Only, M
objectClass inherited from Link	CLASS	string	Read-Only, M
objectInstance inherited from Link	No direct mapping.	string	Read-Only, M
userLabel inherited from Link	userLabel	string	Read-Only, M
aEnd inherited from Link	aEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
zEnd inherited from Link	zEnd	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	Read-Only, M
linkType inherited from Link	linkType	LinkTypeType	Read-Only, O
protocolName inherited from Link	protocolName	string	Read-Only, O
protocolVersion inherited from Link	protocolVersion	string	Read-Only, O

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 "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";
     };


     /**
      *  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";
};


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

ETSI

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


   /**
    *  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 ImsMgwFunction
 */
interface ImsMgwFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
   const string CLASS = "ImsMgwFunction";

   // Attribute Names
   //
   const string imsMgwFunctionId = "imsMgwFunctionId";
};


/**
 *  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 ScscfFunction
 */
interface ScscfFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
{
    const string CLASS = "ScscfFunction";


    // Attribute Names
    //
    const string scscfFunctionId = "scscfFunctionId";
};


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


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

```
      // Attribute Names
      //
      const string icscfFunctionId = "icscfFunctionId";
   };


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

      // Attribute Names
      //
      const string slfFunctionId = "slfFunctionId";
   };


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

      // Attribute Names
      //
      const string bgcfFunctionId = "bgcfFunctionId";
   };


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

      // Attribute Names
      //
      const string mrfcFunctionId = "mrfcFunctionId";
   };


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

      // Attribute Names
      //
      const string mrfpFunctionId = "mrfpFunctionId";
   };


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

      // Attribute Names
      //
      const string asFunctionId = "asFunctionId";
   };


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

```
      // Attribute Names
      //
      const string mgcFunctionId = "mgcFunctionId";
   };


   /**
    *  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";
   };


   /**
    *  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";
   };


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

      // Attribute Names
      //
      const string iubcLinkId = "iubcLinkId";
      const string connectedRnc = "connectedRnc";
   };


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

    // All Attributes inherited from Link

 };


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

    // All Attributes inherited from Link

 };

/**
  *  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_ImsMgw
  */
    interface Link_Bgcf_ImsMgw : GenericNetworkResourcesNRMDefs::Link
    {
        const string CLASS = "Link_Bgcf_ImsMgw";
        // 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_Hlr_Scscf
  */
    interface Link_Hlr_Scscf : GenericNetworkResourcesNRMDefs::Link
    {
        const string CLASS = "Link_Hlr_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_ImsMgw_Scscf
  */
    interface Link_ImsMgw_Scscf : GenericNetworkResourcesNRMDefs::Link
    {
        const string CLASS = "Link_ImsMgw_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_Slf
     */
    interface Link_Scscf_Slf : GenericNetworkResourcesNRMDefs::Link
    {
        const string CLASS = "Link_Scscf_Slf";

        // All Attributes inherited from Link
    };

};

#endif // _CORENETWORKRESOURCESNRMDEFS_IDL_
```

Annex B (informative):
Change history

Change history								
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Cat	Old	New
Jun 2001	SA_12	SP-010283	--	--	Approved at TSG SA #12 and placed under Change Control	--	2.0.0	4.0.0
Jun 2002	SA_16	SP-020302	0001	--	Align with Rel-4 Network Architecture (23.002) by changing Roaming Signalling Gateway (R-SGW) to Signalling Gateway (SGW)	F	4.0.0	4.1.0
Sep 2002	SA_17	SP-020489	0002	--	Upgrade to Rel-5 the CORBA SS for Core Network NRM (add Managed Object Classes (MOCs)	C	4.1.0	5.0.0
Dec 2002	SA_18	SP-020747	0003	--	Removal of faulty attribute uraList (alignment with Rel-5 32.632 Network Resource Model)	F	5.0.0	5.1.0
Sep 2004	SA_25	SP-040567	0004	--	Correction in Rules for NRM extensions - Align with 32.622 (Generic NRM IS)	F	5.1.0	5.2.0
Sep 2004	SA_25	SP-040582	0005	--	Correction of modelling of Media GateWay (MGW)	F	5.1.0	5.2.0
Sep 2004	SA_25	SP-040581	0006	--	Add Inheritance in CORBA IDL	B	5.2.0	6.0.0
Dec 2004	SA_26	SP-040809	0007	--	Add new IMS Entities	B	6.0.0	6.1.0
Dec 2004	SA_26	SP-040809	0008	--	Add restart notification to GSN objects using 'proceduralStatus' attribute - Align with IS in 32.632	B	6.0.0	6.1.0
Mar 2005	SA_27	SP-050047	0011	--	Align with 32.632, regarding the IS template and UML repertoire	F	6.1.0	6.2.0
Mar 2005	SA_27	SP-050047	0012	--	Correct List of Long Attributes	A	6.1.0	6.2.0
Mar 2005	SA_27	SP-050047	0013	--	Add IMS links to CN NRM CORBA SS	B	6.1.0	6.2.0
Mar 2006	SA_31	SP-060103	0014	--	Name correction of BgcfFunction - Align with 32.632 Information Service (IS)	F	6.2.0	6.3.0

History

Document history		
V6.1.0	December 2004	Publication
V6.2.0	March 2005	Publication
V6.3.0	March 2006	Publication