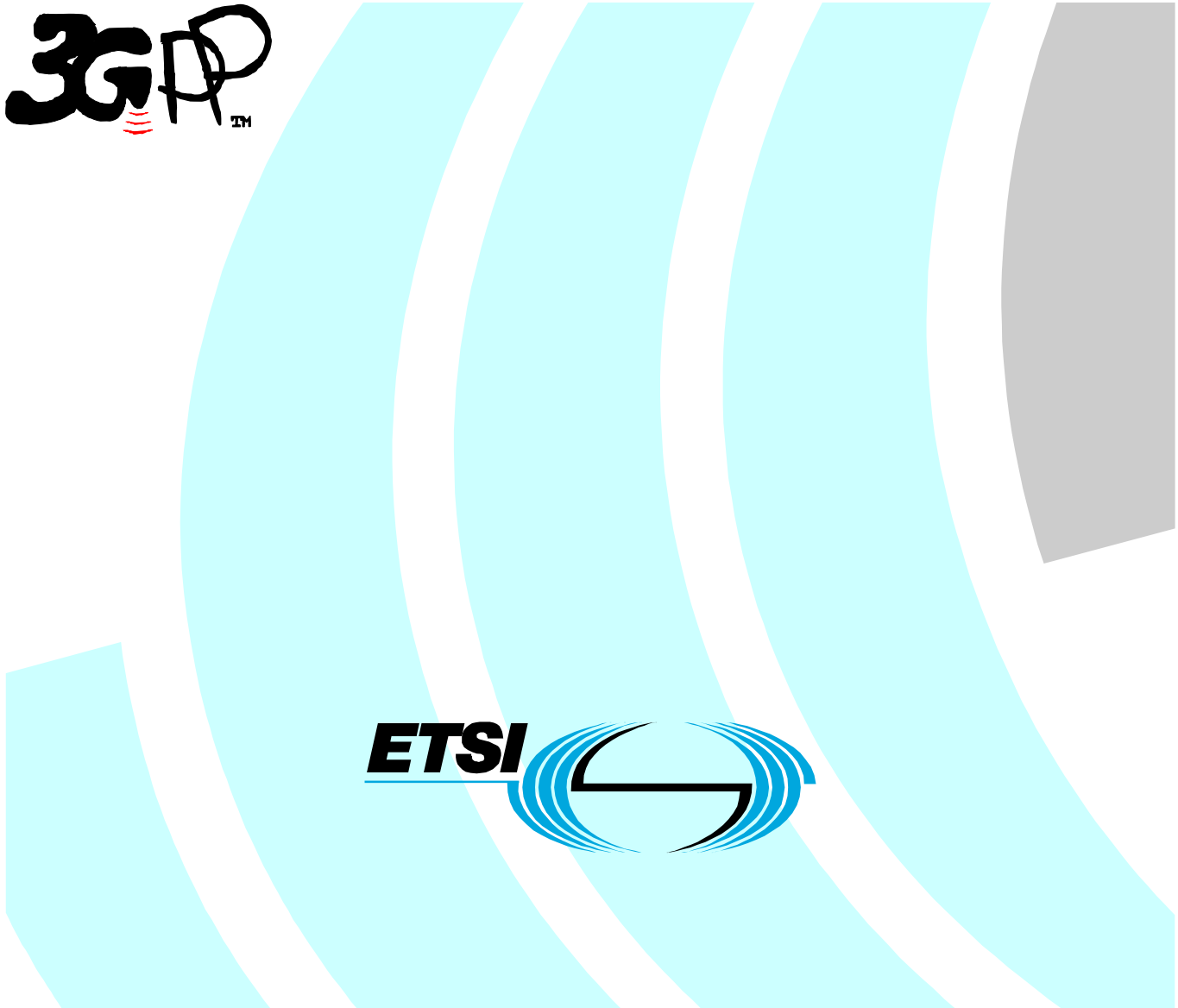
ETSI TS 132 643 V6.7.0 (2006-09)

Technical Specification

Universal Mobile Telecommunications System (UMTS);
Telecommunication management;
Configuration Management (CM);
UTRAN network resources Integration Reference Point (IRP):
Common Object Request Broker Architecture (CORBA)
Solution Set (SS)
(3GPP TS 32.643 version 6.7.0 Release 6)



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650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
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Foreword

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

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

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

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- 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:

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

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

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

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

32.645: "Configuration Management (CM); UTRAN 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 NEs and NRs, and they may be initiated by the operator or functions in the OSs or NEs.

CM actions may be requested as part of an implementation programme (e.g. additions and deletions), as part of an optimisation programme (e.g. modifications), and to maintain the overall Quality of Service (QoS). The CM actions are initiated either as a single action on a Network Element (NE) of the 3G-network or as part of a complex procedure involving actions on many NEs.

The Itf-N interface for Configuration Management is built up by a number of Integration Reference Points (IRPs) and a related Name Convention, which realise the functional capabilities over this interface. The basic structure of the IRPs is defined in 3GPP TS 32.101 [1] and 3GPP TS 32.102 [2].For CM, a number of IRPs (and the Name Convention) are defined herein, used by this as well as other technical specifications for telecom management produced by 3GPP.

1 Scope

The purpose of this UTRAN Network Resources IRP: CORBA Solution Set is to define the mapping of the IRP information model (see 3GPP TS 32.642 [4]) 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 32.642 V6.4.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 32.600: "Telecommunication management; Configuration Management (CM); Concept and high-level requirements".

[4] 3GPP TS 32.642: "Telecommunication management; Configuration Management (CM); UTRAN network resources Integration Reference Point (IRP): Network Resource Model (NRM)".

[5] 3GPP TS 32.300: "Telecommunication management; Configuration Management (CM); Name convention for Managed Objects".

[6] OMG Notification Service, Version 1.0.

[7] OMG CORBA services: Common Object Services Specification, Update: November 22, 1996.

[8] The Common Object Request Broker: Architecture and Specification (for specification of valid version, see [1]).

[9] 3GPP TS 32.303: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)".

[10] 3GPP TS 32.111-3: "Telecommunication management; Fault Management; Part 3: Alarm 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 3GPP TS 32.101 [1], 3GPP TS 32.102 [2], 3GPP TS 32.600 [3] and 3GPP TS 32.642 [4].

3.2 Abbreviations

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

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

4 Architectural features

The overall architectural feature of UTRAN Network Resources IRP is specified in 3GPP TS 32.642 [4].
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 3GPP TS 32.303 [9]).

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 UTRAN NRM Information Object Class (IOC) mapping

5.2.1 IOC RncFunction

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

NRM Attributes of IOC RncFunction in 3GPP TS 32.642 [4]	SS Attributes	SS Type	Support Qualifier	Read	Write
rncFunctionId	rncFunctionId	string	M	M	-
userLabel	userLabel	string	M	M	M
mcc	mcc	long	M	M	M
mnc	mnc	long	M	M	M
rncId	rncId	long	M	M	M

5.2.2 IOC UtranCell

Mapping from NRM IOC UtranCell attributes and associations to SS equivalent MOC UtranCell attributes

NRM Associations/Attributes of IOC UtranCell in 3GPP TS 32.642 [4]	SS Attributes	SS Type	Support Qualifier	Read	Write
utranCellId	utranCellId	string	M	M	_
userLabel	userLabel	string	M	M	M
cId	cId	long	M	M	M
localCellId	localCellId	long	M	M	M
uarfcnUl	uarfcnUl	long	O	M	M
uarfcnDl	uarfcnDl	long	O	M	M
primaryScramblingCode	primaryScramblingCode	long	O	M	M
primaryCpichPower	primaryCpichPower	long	O	M	M
retAntennaFunctionList	retAntennaFunctionList	GenericNetworkResourceIRPSystem::AttributeTypes::MOReferenceSet	O	M	M
maximumTransmissionPower	maximumTransmissionPower	long	M	M	M
primarySchPower	primarySchPower	long	O	M	M
secondarySchPower	secondarySchPower	long	O	M	M
bchPower	bchPower	long	O	M	M
lac	lac	long	M	M	M
rac	rac	long	O	M	M
sac	sac	long	M	M	M
uraList	uraList	List of long	O	M	M
AssociatedWith/ utranCell-IubLink	utranCellIubLink	GenericNetworkResourceIRPSystem::AttributeTypes::MOReference	M	M	-
cellMode	cellMode	GenericNetworkResourceMAttributeTypes::cellModeEnumType	M	M	-
uarfcn	uarfcn	long	O	M	M
cellParameterId	cellParameterId	long	O	M	M
primaryCcpchPower	primaryCcpchPower	long	O	M	M
dwPchPower	dwPchPower	long	O	M	M
timeSlotList	timeSlotList	TDDNRMAttributeTypes::TimeSlotListConfigStructType	O	M	M
schPower	schPower	long	O	M	M
operationalState	operationalState	StateManagementIRPOptConstDefs::OperationalStateTypeOpt	O	M	-

NOTE: For all support qualifiers with the value 'O', see attribute constraints in 3GPP TS 32.642 [4].

5.2.3 IOC NodeBFunction

Mapping from NRM IOC NodeBFunction attributes and associations to SS equivalent MOC NodeBFunction attributes

NRM Attributes of IOC NodeBFunction in 3GPP TS 32.642 [4]	SS Attributes	SS Type	Support Qualifier	Read	Write
nodeBFunctionId	nodeBFunctionId	string	M	M	-
userLabel	userLabel	string	M	M	M
ConnectedTo/ nodeBFunction-IubLink	nodeBFunctionIubLink	GenericNRIRPSystem::AttributeTypes::MOReference	M	M	-

5.2.4 IOC IubLink

Mapping from NRM IOC IubLink attributes and associations to SS equivalent MOC IubLink attributes

NRM Attributes of IOC IubLink in 3GPP TS 32.642 [4]	SS Attributes	SS Type	Support Qualifier	Read	Write
iubLinkId	iubLinkId	string	M	M	-
userLabel	userLabel	string	M	M	M
AssociatedWith/ iubLink-UtranCell	iubLinkUtranCell	GenericNRIRPSystem::AttributeTypes::MOReferenceSet	M	M	M
ConnectedTo/ iubLink-NodeBFunction	iubLinkNodeBFunction	GenericNRIRPSystem::AttributeTypes::MOReference	M	M	-
AssociatedWith1/ iubLink-ATMChannelTerminationPoint	iubLinkATMChannelTerminationPoint	GenericNRIRPSystem::AttributeTypes::MOReference	M	M	-

5.2.5 IOC UtranRelation

Mapping from NRM IOC UtranRelation attributes and associations to SS equivalent MOC UtranRelation attributes

NRM Attributes of IOC UtranRelation in 3GPP TS 32.642 [4]	SS Attributes	SS Type	Support Qualifier	Read	Write
utranRelationId	utranRelationId	string	M	M	-
adjacentCell	adjacentCell	string	M	M	M
cellMode	cellMode	GenericNRMAttributeTypes:: cellModeEnumType	M	M	-
uarfcnUl	uarfcnUl	long	O	M	-
uarfcnDl	uarfcnDl	long	O	M	-
primaryScramblingCode	primaryScramblingCode	long	O	M	-
primaryCpichPower	primaryCpichPower	long	O	M	-
lac	lac	long	O	M	-
uarfcn	uarfcn	long	O	M	-
cellParameterId	cellParameterId	long	O	M	-
primaryCcpchPower	primaryCcpchPower	long	O	M	-

NOTE: For all support qualifiers with the value 'O', see attribute constraints in 3GPP TS 32.642 [4].

5.2.6 IOC ExternalUtranCell

Mapping from NRM IOC ExternalUtranCell attributes and associations to SS equivalent MOC ExternalUtranCell attributes

NRM Attributes of IOC ExternalUtranCell in 3GPP TS 32.642 [4]	SS Attributes	SS Type	Support Qualifier	Read	Write
externalUtranCellId	externalUtranCellId	string	M	M	-
userLabel	userLabel	string	M	M	M
cId	cId	long	M	M	M
mcc	mcc	long	M	M	M
mnc	mnc	long	M	M	M
rncId	rncId	long	M	M	M
uarfcnUl	uarfcnUl	long	O	M	M
uarfcnDl	uarfcnDl	long	O	M	M
primaryScramblingCode	primaryScramblingCode	long	O	M	M
primaryCpichPower	primaryCpichPower	long	O	M	M
uarfcn	uarfcn	long	O	M	M
cellParameterId	cellParameterId	long	O	M	M
primaryCcpchPower	primaryCcpchPower	long	O	M	M
cellMode	cellMode	GenericNRMAttributeTypes::cellModeEnumType	M	M	-
lac	lac	long	M	M	M
rac	rac	long	O	M	M
controllingRnc	controllingRnc	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReference	O	M	-
NOTE: For all support qualifiers with the value 'O', see attribute constraints in 3GPP TS 32.642 [4].					

5.2.7 IOC AntennaFunction

NRM Attributes of IOC antennaFunction in 3GPP TS 32.642 [4]	SS Attributes	SS Type	Support Qualifier	Read	Write
antennaFunctionId	antennaId	string	O	M	-
retUtranCellList	retUtranCellList	GenericNetworkResourceIRPSystem::AttributeTypes::MOReferenceSet	O	M	M
retTiltValue	retTiltValue	short	O	M	M
bearing	bearing	short	O	M	M
maxTiltValue	maxTiltValue	short	O	M	M
minTiltValue	minTiltValue	short	O	M	M
mechanicalOffset	mechanicalOffset	short	O	M	M
retGroupName	retGroupName	string	O	M	M
height	height	short	O	M	M
baseElevation	baseElevation	short	O	M	O
latitude	latitude	long	O	M	O
longitude	longitude	long	O	M	O
maxAzimuthValue	maxAzimuthValue	short	O	M	M
minAzimuthValue	minAzimuthValue	short	O	M	M
horizBeamwidth	horizBeamwidth	short	O	M	M
vertBeamwidth	vertBeamwidth	short	O	M	M
patternLabel	patternLabel	string	O	M	O
NOTE: For all support qualifiers with the value 'O', see attribute constraints in 3GPP TS 32.642 [4].					

5.2.8 IOC ExternalRncFunction

Mapping from NRM IOC ExternalRncFunction attributes and associations to SS equivalent MOC ExternalRncFunction attributes

NRM Attributes of IOC ExternalRncFunction in 3GPP TS 32.642 [4]	SS Attributes	SS Type	Support Qualifier	Read	Write
externalRncFunctionId	externalRncFunctionId	string	M	M	-
userLabel	userLabel	string	M	M	M
mcc	mcc	long	M	M	M
mnc	mnc	long	M	M	M
rncId	rncId	long	M	M	M
controlledCellList	controlledCellList	GenericNetworkResourcesIRPSystem::AttributeTypes::MOReferenceSet	O	M	-
NOTE: For all support qualifiers with the value 'O', see attribute constraints in 3GPP TS 32.642 [4].					

6 Rules for management information model extensions

This clause discusses how the models and IDL definitions provided 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 IOCs may be supported. The vendor-specific IOCs may support new types of attributes. The 3GPP SA5-specified notifications may be issued referring to the vendor-specific IOCs and vendor-specific attributes. New IOCs shall be distinguishable from 3GPP SA5 IOCs by name. 3GPP SA5-specified and vendor-specific attributes may be used in vendor-specific IOCs. Vendor-specific attribute names shall be distinguishable from existing attribute names.

NRM IOCs may be subclassed. Subclassed IOCs 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 IOC shall support all attributes of its superior class. Vendor-specific attributes cannot be added to 3GPP SA5 NRM IOCs 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 IOCs be represented in IDL. 3GPP SA5's NRM IOCs 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 IOCs) 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 "UtranNetworkResourcesNRMDefs.idl")

```
//File:UtranNetworkResourcesNRMDefs.idl
#ifndef _UTRANNETWORKRESOURCESNRMDEFS_IDL_
#define _UTRANNETWORKRESOURCESNRMDEFS_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 UtranNetworkResourcesNRMDefs
{



      /**
       *  Definitions for MO class RncFunction
       */
      interface RncFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "RncFunction";
         // Attribute Names
         //
         const string rncFunctionId = "rncFunctionId";
         const string mcc= "mcc";
         const string mnc= "mnc";
         const string rncId= "rncId";
      };
      /**
       *  Definitions for MO class UtranCell
       */
      interface UtranCell : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "UtranCell";
         // Attribute Names
         //
         const string utranCellId = "utranCellId";
         const string utranCellIubLink = "utranCellIubLink";
         const string cId= "cId";
         const string localCellId= "localCellId";
         const string uarfcnUl= "uarfcnUl";
         const string uarfcnDl= "uarfcnDl";
         const string primaryScramblingCode= "primaryScramblingCode";
         const string primaryCpichPower= "primaryCpichPower";
         const string maximumTransmissionPower= "maximumTransmissionPower";
         const string retAntennaFunctionList= "retAntennaFunctionList";
         const string primarySchPower= "primarySchPower";
         const string secondarySchPower= "secondarySchPower";
         const string bchPower= "bchPower";
         const string cellMode = "cellMode";
         const string uarfcn= "uarfcn";
         const string cellParameterId= "cellParameterId";
         const string primaryCcpchPower= "primaryCcpchPower";
         const string dwPchPower= "dwPchPower";
         const string timeSlotList= "timeSlotList";
         const string schPower= "schPower";
         const string lac= "lac";
         const string rac= "rac";
         const string sac= "sac";
         const string uraList= "uraList";
         const string operationalState = "operationalState";
      };

      interface AntennaFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
```

```
      {
         const string CLASS= "AntennaFunction";
         // Attribute Names
         //
         const string antennaId= "antennaFunctionId";
         const string retUtranCellList= "retUtranCellList";
         const string retTiltValue= "retTiltValue";
         const string bearing= "bearing";
         const string maxTiltValue= "maxTiltValue";
         const string minTiltValue= "minTiltValue";
         const string mechanicalOffset= "mechanicalOffset";
         const string retGroupName= "retGroupName";
         const string height= "height";
         const string baseElevation= "baseElevation";
         const string latitude= "latitude";
         const string longitude= "longitude";
         const string maxAzimuthValue= "maxAzimuthValue";
         const string minAzimuthValue= "minAzimuthValue";
         const string horizBeamwidth= "horizBeamwidth";
         const string vertBeamwidth= "vertBeamwidth";
         const string patternLabel= "patternLabel";
      };


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

      /**
       *  Definitions for MO class IubLink
       */
      interface IubLink : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "IubLink";
         // Attribute Names
         //
         const string iubLinkId = "iubLinkId";
         const string iubLinkNodeBFunction = "iubLinkNodeBFunction";
         const string iubLinkUtranCell = "iubLinkUtranCell";
         const string iubLinkATMChannelTerminationPoint = "iubLinkATMChannelTerminationPoint";

      };
};
      /**
       *  Definitions for MO class UtranRelation
       */
      interface UtranRelation : GenericNetworkResourcesNRMDefs::Top
      {
         const string CLASS = "UtranRelation";
         // Attribute Names
         //
         const string utranRelationId = "utranRelationId";
         const string adjacentCell = "adjacentCell";
         const string uarfcnUl= "uarfcnUl";
         const string uarfcnDl= "uarfcnDl";
         const string primaryScramblingCode= "primaryScramblingCode";
         const string primaryCpichPower= "primaryCpichPower";
         const string cellMode = "cellMode";
         const string uarfcn= "uarfcn";
         const string cellParameterId= "cellParameterId";
         const string primaryCcpchPower= "primaryCcpchPower";
         const string lac= "lac";
};
/**
       *  Definitions for MO class ExternalUtranCell
       */
      interface ExternalUtranCell  : GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "ExternalUtranCell";
         // Attribute Names
```

```
         //
         const string externalUtranCellId = "externalUtranCellId";
         const string cId= "cId";
         const string mcc= "mcc";
         const string mnc= "mnc";
         const string rncId= "rncId";
         const string uarfcnUl= "uarfcnUl";
         const string uarfcnDl= "uarfcnDl";
         const string primaryScramblingCode= "primaryScramblingCode";
         const string primaryCpichPower= "primaryCpichPower";
         const string cellMode = "cellMode";
         const string uarfcn= "uarfcn";
         const string cellParameterId= "cellParameterId";
         const string primaryCcpchPower= "primaryCcpchPower";
         const string lac= "lac";
         const string rac= "rac";
         const string controllingRnc = "controllingRnc";
      };
      /**
       *  Definitions for MO class ExternalRncFunction
       */
      interface ExternalRncFunction :
         GenericNetworkResourcesNRMDefs::ManagedFunction
      {
         const string CLASS = "ExternalRncFunction";
         // Attribute Names
         //
         const string externalRncFunctionId = "externalRncFunctionId";
         const string mcc = "mcc";
         const string mnc = "mnc";
         const string rncId = "rncId";
         const string controlledCellList = "controlledCellList";
      };
/**
    *  This module adds datatype definitions for both FDD and TDD mode
    *  attributes used in the NRM which are not the basic datatypes
    *  already defined in CORBA.
    */
module GenericNRMAttributeTypes
{
      enum CellModeEnumType
      {
         FDDMode,
         TDDMode_1_28Mcps,
         TDDMode_3_84Mcps
      };
};
/**
    *  This module adds datatype definitions for TDD mode attributes
    *  used in the NRM which are not the basic datatypes already defined
    *  in CORBA.
    */
   module TDDNRMAttributeTypes
   {
      enum TimeSlotDirectionType
      {
         UL,
         DL
      };
      enum TimeSlotStatusType
      {
         Active,
         Not_Active
      };
      struct TimeSlotConfigStructType
      {
         short timeSlotId;
         TimeSlotDirectionType timeSlotDirection;
         TimeSlotStatusType timeSlotStatus;
      };
      typedef sequence<TimeSlotConfigStructType> TimeSlotListConfigStructType;
   };
#endif //_UTRANNETWORKRESOURCESNRMDEFS_IDL_
```

Annex B (informative): Change history

Change history								
Date	**TSG #**	**TSG Doc.**	**CR**	**R**	**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
Dec 2001	SA_14	SP-010646	0001	--	Change type "integer" to "long" in the UTRAN Network Resources IRP: CORBA SS	F	4.0.0	4.1.0
Sep 2002	SA_17	SP-020493	0002	--	Upgrade to Rel-5	C	4.1.0	5.0.0
Jun 2003	SA_20	SP-030283	0004	--	Deletion of UTRAN attribute relationType from CORBA SS.	A	5.0.0	5.1.0
Dec 2003	SA_22	SP-030646	0006	--	Correction of the number of possible URAs from 1 to 8	A	5.1.0	5.2.0
Mar 2004	SA_23	SP-040129	0007	--	Enhancement of CORBA SS for support of both FDD and TDD modes	B	5.2.0	6.0.0
Jun 2004	SA_24	SP-040254	0009	--	The specification does not support all UMTS frequency bands	A	6.0.0	6.1.0
Sep 2004	SA_25	SP-040589	0011	--	Add the operationalState to the UtranCell – Align the CORBA SS with 32.642 CM; UTRAN network resources IRP NRM	A	6.1.0	6.2.0
Sep 2004	SA_25	SP-040595	0012	--	Include ATM in CM UTRAN network resources IRP CORBA Solution Set	B	6.1.0	6.2.0
Sep 2004	SA_25	SP-040590	0013	--	Correct the definintions in the 'CellModeEnumType' and 'TimeSlotStatusType'	F	6.1.0	6.2.0
Sep 2004	SA_25	SP-040586	0015	--	Align the CORBA SS with 32.642 Configuration Management (CM); UTRAN network resources IRP NRM	A	6.1.0	6.2.0
Sep 2004	SA_25	SP-040587	0016	--	Add support for Remote control of Electrical Tilting (RET) antenna to CORBA IDL and Add Inheritance	B	6.1.0	6.2.0
Dec 2004	SA_26	SP-040810	0017	--	Correct IDL compilation error	F	6.2.0	6.3.0
Dec 2004	SA_26	SP-040810	0018	--	Correct IDL compilation error and change name of retAntennaList	F	6.2.0	6.3.0
Mar 2005	SA_27	SP-050048	0021	--	Align with SA2"s 23.221, for allowing only CS CN in a PLMN	A	6.3.0	6.4.0
Mar 2005	SA_27	SP-050048	0022	--	Add missing definition of IOC ExternalRncFunction	F	6.3.0	6.4.0
Mar 2005	SA_27	SP-050048	0023	--	Corrections to UTRAN NRM CORBA Solutions set mapping errors	F	6.3.0	6.4.0
Jun 2005	SA_28	SP-050297	0024	--	Corrections to UTRAN CORBA SS for implementation	F	6.4.0	6.5.0
Sep 2005	SA_29	SP-050461	0025	--	Add attributes for RET antennas systems - Align with TR 32.804 & RAN specs	F	6.5.0	6.6.0
Sep 2006	SA_33	SP-060537	0027	--	Correct the IOC AntennaFunction data types of latitude and longitude from "short" to "long" to avoid overflow	F	6.6.0	6.7.0

History

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