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Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Universal Terrestrial Radio Access Network (UTRAN)
Network Resource Model (NRM)
Integration Reference Point (IRP);
Solution Set (SS) definitions
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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:

28.651: "UTRAN Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".

28.652: "UTRAN Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

28.653: "UTRAN Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definition".

1 Scope

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

This Solution Set specification is related to 3GPP TS 28.652 V14.0.X [4].

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.
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[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 28.652: "Telecommunication management; Universal Terrestrial Radio Access Network (UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

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

[6] 3GPP TS 32.306: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP); Solution Set (SS) definitions".

[7] 3GPP TS 32.616: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Solution Set (SS) definitions".

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

[9] Void

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

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

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

[13] 3GPP TS 28.623: “Generic Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definition”.

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 28.652 [4].

XML file: See definition of [13].

XML document: See definition of [13].

XML declaration: See definition of [13].

XML element: See definition of [13].

empty XML element: See definition of [13].

XML content (of an XML element): See definition of [13].

XML start-tag: See definition of [13].

XML end-tag: See definition of [13].

XML empty-element tag: See definition of [13].

XML attribute specification: See definition of [13].

DTD: See definition of [13].

XML schema: See definition of [13].

XML namespace: See definition of [13].

XML complex type: See definition of [13].

XML element type: See definition of [13].

3.2 Abbreviations

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

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

4 Solution Set Definitions

This specification defines the following 3GPP UTRAN NRM IRP Solution Set Definitions:

- 3GPP UTRAN NRM IRP CORBA SS (Annex A)
- 3GPP UTRAN NRM IRP XML Definitions (Annex B)

Annex A (normative): CORBA Solution Set

A.0 Introduction

This annex contains the CORBA Solution Set for the IRP whose semantics is specified in UTRAN NRM IRP: Information Service (TS 28.652 [4]).

A.1 Architectural features

A.1.0 General

The overall architectural feature of UTRAN Network Resources IRP is specified in 3GPP TS 28.652 [4]. This clause specifies features that are specific to the CORBA SS.

A.1.1 Syntax for Distinguished Names

See clause A.1.1 of [13].

A.1.2 Rules for NRM extensions

See clause A.1.2 of [13].

A.2 Mapping

A.2.1 General mapping

See clause A.1.2.1 of [13].

A.2.2 Information Object Class (IOC) mapping

A.2.2.1 IOC RncFunction

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

IS Attributes	SS Attributes	SS Type
mcc	mcc	long
mnc	mnc	long
rncId	rncId	long
siptoSupported	siptoSupported	short
tceIDMappingInfoList	tceIDMappingInfoList	GenericNRMAttributeTypes:: TceIDMappingInfoListType
sharNetTceMappingInfoList	sharNetTceMappingInfoList	genericEUTRANNRMAttributeTypes:: SharNetTceMappingInfo

A.2.2.2 IOC UtranGenericCell

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

IS Attributes	SS Attributes	SS Type
cId	cId	long
localCellId	localCellId	long
relatedAntennaList	relatedAntennaList	GenericNetworkResourcesIRPSystem:: AttributeTypes::MOReferenceSet
maximumTransmissionPower	maximumTransmissionPower	short
lac	lac	long
pichPower	pichPower	float
pchPower	pchPower	float
fachPower	fachPower	float
rac	rac	long
sac	sac	long
uraList	uraList	GenericNetworkResourcesIRPSystem:: AttributeTypes::LongSet
associatedWith/ utranCell-IubLink	utranCellIubLink	GenericNetworkResourcesIRPSystem:: AttributeTypes::MOReference
cellMode	cellMode	GenericNRMAttributeTypes:: CellModeEnumType
operationalState	operationalState	StateManagementIRPOptConstDefs:: OperationalStateTypeOpt
hsFlag	hsFlag	short
hsEnable	hsEnable	short
numOfHspdschs	numOfHspdschs	short
numOfHsscchs	numOfHsscchs	short
frameOffset	frameOffset	short
cellIndividualOffset	cellIndividualOffset	float
hcsPrio	hcsPrio	short
maximumAllowedUlTxPower	maximumAllowedUlTxPower	short
snaInformation	snaInformation	GenericNRMAttributeTypes:: snaInformationType
qrxlevMin	qrxlevMin	short
deltaQrxlevmin	deltaQrxlevmin	short
qhcs	qhcs	short
penaltyTime	penaltyTime	short
referenceTimeDifferenceToCell	referenceTimeDifferenceToCell	short
readSFNIndicator	readSFNIndicator	Boolean
restrictionStateIndicator	restrictionStateIndicator	GenericNRMAttributeTypes:: restrictionStateEnumType
dpcModeChangeSupportIndicator	dpcModeChangeSupportIndicator	GenericNRMAttributeTypes:: dpcModeChangeSupportEnumType
relatedTmaList	relatedTmaList	GenericNetworkResourceIRPSystem::AttributeTypes:: MOReferenceSet
relatedSectorEquipment	relatedSectorEquipment	GenericNetworkResourceIRPSystem::AttributeTypes:: MOReference
nsPlmnIdList	nsPlmnIdList	GenericNRMAttributeTypes::NsPlmnIdListType

NOTE 1: For all support qualifiers with the value “O”, see attribute constraints in TS28.652 [4].
NOTE 2: For all support qualifiers with the value “CO” see attribute constraints in TS 28.652 [4].
NOTE 3: For all support qualifiers with the value “CM” see attribute constraints in TS 28.652 [4].

A.2.2.3 IOC NodeBFunction

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

IS Attributes	SS Attributes	SS Type
connectedTo/ nodeBFunction-IubLink	nodeBFunctionIubLink	GenericNetworkResourcesIRPSystem:: AttributeTypes::MOReference

A.2.2.4 IOC IubLink

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

IS Attributes	SS Attributes	SS Type
AssociatedWith/ iubLink-UtranCell	iubLinkUtranCell	GenericNetworkResourcesIRPSystem:: AttributeTypes::MOReferenceSet
ConnectedTo/ iubLink-NodeBFunction	iubLinkNodeBFunction	GenericNetworkResourcesIRPSystem:: AttributeTypes::MOReference
AssociatedWith1/ iubLink-ATMChannelTerminationPoint	iubLinkATMChannelTermination Point	GenericNetworkResourcesIRPSystem:: AttributeTypes::MOReference

A.2.2.5 IOC ExternalUtranGenericCell

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

IS Attributes	SS Attributes	SS Type
cId	cId	long
mcc	mcc	short
mnc	mnc	short
rncId	rncId	long
cellMode	cellMode	GenericNRMAttributeTypes:: CellModeEnumType
lac	lac	long
rac	rac	long
controllingRnc	controllingRnc	GenericNetworkResourcesIRPSystem:: AttributeTypes::MOReference
hsFlag	hsFlag	short
frameOffset	frameOffset	short
cellIndividualOffset	cellIndividualOffset	long
hcsPrio	hcsPrio	short
maximumAllowedUlTxPower	maximumAllowedUlTxPower	short
qrxlevMin	qrxlevMin	short
deltaQrxlevmin	deltaQrxlevmin	short
Qhcs	qhcs	short
penaltyTime	penaltyTime	short
referenceTimeDifferenceToCell	referenceTimeDifferenceToCell	short
readSFNIndicator	readSFNIndicator	Boolean
restrictionStateIndicator	restrictionStateIndicator	GenericNRMAttributeTypes:: restrictionStateEnumType
dpcModeChangeSupportIndicator	dpcModeChangeSupportIndicator	GenericNRMAttributeTypes:: dpcModeChangeSupportEnumType
snaInformation	snaInformation	GenericNRMAttributeTypes:: snaInformationType
NOTE 1: For all support qualifiers with the value "O", see attribute constraints in TS 28.652 [4]. NOTE 2: For all support qualifiers with the value "CO" see attribute constraints in TS 28.652 [4]. NOTE 3: For all support qualifiers with the value "CM" see attribute constraints in TS 28.652 [4].		