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Solution Set (SS) definitions
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#### Introduction

The present document is part of a TS-family covering the 3<sup>rd</sup> 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 V12. 2.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.
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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
- [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/	utranCellIubLink	GenericNetworkResourcesIRPSystem::
utranCell-IubLink		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/	nodeBFunctionIubLink	GenericNetworkResourcesIRPSystem::
nodeBFunction-IubLink		AttributeTypes::MOReference

#### A.2.2.4 IOC lubLink

#### Mapping from NRM IOC lubLink attributes and associations to SS equivalent MOC lubLink attributes

IS Attributes	SS Attributes	SS Type
AssociatedWith/	iubLinkUtranCell	GenericNetworkResourcesIRPSystem::
iubLink-UtranCell		AttributeTypes::MOReferenceSet
ConnectedTo/	iubLinkNodeBFunction	GenericNetworkResourcesIRPSystem::
iubLink-NodeBFunction		AttributeTypes::MOReference
AssociatedWith1/	<pre>iubLinkATMChannelTerminat ionPoint</pre>	GenericNetworkResourcesIRPSystem::
iubLink- ATMChannelTerminationPoint		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

IS Attributes	SS Attributes	SS Type
readSFNIndicator	readSFNIndicator	Boolean
restrictionStateIndicator	restrictionStateIndicator	GenericNRMAttributeTypes::
		restrictionStateEnumType
dpcModeChangeSupportIndicator	dpcModeChangeSupportIndicator	GenericNRMAttributeTypes::
		dpcModeChangeSupportEnumType
snaInformation	snaInformation	GenericNRMAttributeTypes::
		snaInformationType

#### A.2.2.6 Void

#### A.2.2.7 IOC ExternalRncFunction

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

IS Attributes	SS Attributes	SS Type
mcc	mcc	long
mnc	mnc	long
rncId	rncId	long
controlledCellList	controlledCellList	GenericNetworkResourcesIRPSystem:: AttributeTypes::MOReferenceSet

NOTE: For all support qualifiers with the value 'O', see attribute constraints in TS 28.652 [4].

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].

### A.2.2.8 UtranCellFDD

#### Mapping from NRM IOC UtranCellFDD attributes and associations to SS equivalent MOC UtranCellFDD attributes

IS Attributes	SS Attributes	SS Type
uarfcnUl	uarfcnUl	short
uarfcnDl	uarfcnDl	short
primaryScramblingCode	primaryScramblingCode	short
primaryCpichPower	primaryCpichPower	float
primarySchPower	primarySchPower	float
secondarySchPower	secondarySchPower	float
bchPower	bchPower	float
aichPower	aichPower	float
qqualMin	qqualMin	float
cellCapabilityContainerFDD	cellCapabilityContainerFDD	FDDNetworkResourceMAttributeTypes::
		CellCapabilityContainerFDDType
txDiversityIndicator	txDiversityIndicator	FDDNetworkResourceMAttributeTypes::
		txDiversityIndicatorEnumType
temporaryOffset1	temporaryOffset1	short
temporaryOffset2	temporaryOffset2	short
sttdSupportIndicator	sttdSupportIndicator	FDDNetworkResourceMAttributeTypes::
		sttdSupportEnumType
closedLoopModelSupportIndicator	closedLoopModelSupportIndicator	FDDNetworkResourceMAttributeTypes::
		closedLoopMode1EnumType
NOTE: For all support qualifiers with the	ralue 'CO' see attribute constraints in TS 28.652 [	4].

#### A.2.2.9 UtranCellTDD

#### Mapping from NRM IOC UtranCellTDD attributes and associations to SS equivalent MOC UtranCellTDD attributes

IS Attributes	SS Attributes	SS Type
uarfcn	uarfcn	short
cellParameterId	cellParameterId	long
primaryCcpchPower	primaryCcpchPower	float
cellCapabilityContainerTDD	cellCapabilityContainerTDD	TDDNetworkResourceMAttributeTypes:: cellCapabilityContainerTDDType
sctdIndicator	sctdIndicator	TDDNetworkResourceMAttributeTypes::sctdSupportEnumType
dpchConstantValue	dpchConstantValue	long
NOTE: For all support qualifiers with	he value 'CO' see attribute constraints in	TS 28.652 [4].

#### A.2.2.10 UtranCellTDDLcr

#### Mapping from NRM IOC UtranCellTDDLcr attributes and associations to SS equivalent MOC UtranCellTDDLcr attributes

IS Attributes	SS Attributes	SS Type
uarfcnLCRList	uarfcnLCRList	TDDNRMAttributeTypes:: UarfcnLCRListConfigStructType
dwPchPower	dwPchPower	float
fpachPower	fpachPower	float
tstdIndicator	tstdIndicator	TDDNRMAttributeTypes:: tstdIndicatorEnumType
timeSlotLCRList	timeSlotLCRList	TDDNRMAttributeTypes::
		TimeSlotListConfigStructType
NOTE: For all support qualifiers with the value 'CO' see attribute constraints in TS 28.652 [4].		

### A.2.2.11 UtranCellTDDHcr

#### Mapping from NRM IOC UtranCellTDDHcr attributes and associations to SS equivalent MOC UtranCellTDDHcr attributes

IS Attributes	SS Attributes	SS Type
schPower	schPower	float
temporaryOffset1	temporaryOffset1	short
syncCase	syncCase	short
timeSlotForSch	timeSlotForSch	short
schTimeSlot	schTimeSlot	short
timeSlotHCRList	timeSlotHCRList	TDDNRMAttributeTypes:: TimeSlotListConfigStructType
	I .	I .

NOTE: For all support qualifiers with the value 'CO' see attribute constraints in TS 28.652 [4].

#### A.2.2.12 ExternalUtranCellFDD

#### Mapping from NRM IOC ExternalUtranCellFDD attributes and associations to SS equivalent MOC ExternalUtranCellFDD attributes

IS Attributes	SS Attributes	SS Type
uarfcnUl	uarfcnUl	short
uarfcnDl	uarfcnDl	short
primaryScramblingCode	primaryScramblingCode	short
primaryCpichPower	primaryCpichPower	float
qqualMin	qqualMin	long
cellCapabilityContainerFDD	cellCapabilityContainerFDD	FDDNetworkResourceMAttributeTypes::
		CellCapabilityContainerFDDType

txDiversityIndicator	txDiversityIndicator	FDDNetworkResourceMAttributeTypes::
		txDiversityIndicatorEnumType
temporaryOffset1	temporaryOffset1	short
temporaryOffset2	temporaryOffset2	short
sttdSupportIndicator	sttdSupportIndicator	FDDNetworkResourceMAttributeTypes::sttdSupportEnumType

NOTE: For all support qualifiers with the value 'CO' see attribute constraints in TS 28.652 [4].

#### A.2.2.13 ExternalUtranCellTDD

#### Mapping from NRM IOC ExternalUtranCelITDD attributes and associations to SS equivalent MOC ExternalUtranCelITDD attributes

SS Attributes	SS Type
uarfcn	short
cellParameterId	long
primaryCcpchPower	float
cellCapabilityContainerTDD	TDDNetworkResourceMAttributeTypes::
	CellCapabilityContainerFDDType
sctdIndicator	TDDNetworkResourceMAttributeTypes:: sctdSupportEnumType
dpchConstantValue	long
	uarfcn cellParameterId primaryCcpchPower cellCapabilityContainerTDD

NOTE: For all support qualifiers with the value 'CO' see attribute constraints in TS 28.652 [4].

#### A.2.2.14 ExternalUtranCellTDDHcr

#### Mapping from NRM IOC ExternalUtranCellTDDHcr attributes and associations to SS equivalent MOC ExternalUtranCellTDDHcr attributes

IS Attributes	SS Attributes	SS Type
temporaryOffset1	temporaryOffset1	short
syncCase	syncCase	short
timeSlotForSch	timeSlotForSch	short
schTimeSlot	schTimeSlot	short
timeSlotHCRList	timeSlotHCRList	TDDNRMAttributeTypes:: TimeSlotListConfigStructType

NOTE: For all support qualifiers with the value 'CO' see attribute constraints in TS 28.652 [4].

#### A.2.2.15 ExternalUtranCellTDDLcr

#### Mapping from NRM IOC ExternalUtranCellTDDLcr attributes and associations to SS equivalent MOC ExternalUtranCellTDDLcr attributes

IS Attributes	SS Attributes	SS Type	
tstdIndicator	tstdIndicator	TDDNRMAttributeTypes:: tstdIndicatorEnumType	
timeSlotLCRList	timeSlotLCRList	TDDNRMAttributeTypes::	
		TimeSlotListConfigStructType	
NOTE: For all support qualifiers with the value 'CO' see attribute constraints in TS 28.652 [4].			

#### A.2.2.16 IOC UtranRelation

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

IS Attributes	SS Attributes	SS Type
		string
adjacentCell	adjacentCell	string

#### A.2.2.17 IOC EP\_IuCS

# Mapping from NRM IOC EP\_luCS attributes and associations to SS equivalent MOC EP\_luCS attributes

IS Attributes	SS Attributes	SS Type
connMscNumber	connMscNumber	unsigned short
NOTE: For all support qualifiers with the	: For all support qualifiers with the value 'CO' see attribute constraints in TS 28.652 [4].	

#### A.2.2.18 IOC EP\_luPS

# Mapping from NRM IOC EP\_luPS attributes and associations to SS equivalent MOC EP\_luPS attributes

IS Attributes	SS Attributes	SS Type
connSgsnNumber	connSgsnNumber	unsigned short
NOTE: For all support qualifiers with the value 'CO' see attribute constraints in TS 28.652 [4].		28.652 [4].

## A.2.2.19 IOC EP\_lur

#### Mapping from NRM IOC EP\_lur attributes and associations to SS equivalent MOC EP\_lur attributes

IS Attributes	SS Attributes	SS Type
connectedRncId	connectedRncId	unsigned short
NOTE: For all support qualifiers with the value 'CO' see attribute constraints in TS 28.652 [4].		

# A.3 Solution Set definitions

### A.3.1 IDL definition structure

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

### A.3.2 IDL specification "UtranNetworkResourcesNRMDefs.idl"

```
//File:UtranNetworkResourcesNRMDefs.idl
#ifndef _UTRANNETWORKRESOURCESNRMDEFS_IDL_
#define _UTRANNETWORKRESOURCESNRMDEFS_IDL_
#include "GenericNetworkResourcesNRMDefs.idl"
#pragma prefix "3gppsa5.org"
\mbox{\scriptsize \star} 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 mcc= "mcc";
         const string mnc= "mnc";
         const string rncId= "rncId";
         const string siptoSupported= "siptoSupported";
         const string tceIDMappingInfoList= "tceIDMappingInfoList";
         const string sharNetTceMappingInfoList= "sharNetTceMappingInfoList";
      };
       * Definitions for MO class UtranGenericCell
      interface UtranGenericCell: GenericNetworkResourcesNRMDefs::ManagedFunction
         const string CLASS = "UtranGenericCell";
         // Attribute Names
         const string utranCellIubLink = "utranCellIubLink";
         const string cId= "cId";
         const string localCellId= "localCellId";
         const string maximumTransmissionPower= "maximumTransmissionPower";
         const string relatedAntennaList= "relatedAntennaList";
         const string primarySchPower= "primarySchPower";
         const string secondarySchPower= "secondarySchPower";
         const string bchPower= "bchPower";
         const string fpachPower= "fpachPower";
         const string pichPower= "pichPower";
         const string pchPower= "pchPower";
         const string fachPower= "fachPower";
         const string cellMode = "cellMode";
         const string lac= "lac";
         const string rac= "rac";
         const string sac= "sac";
         const string uraList= "uraList";
         const string operationalState = "operationalState";
         const string relatedTmaList = "relatedTmaList";
         const string hsFlag = "hsFlag";
         const string hsEnable = "hsEnable";
         const string numOfHspdschs = "numOfHspdschs";
         const string numOfHsscchs = "numOfHsscchs";
         const string snaInformation = "snaInformation";
         const string frameOffset = "frameOffset";
         const string cellIndividualOffset = "cellIndividualOffset";
         const string hcsPrio = "hcsPrio";
         const string maximumAllowedUlTxPower = "maximumAllowedUlTxPower";
         const string qrxlevMin = "qrxlevMin";
         const string deltaQrxlevmin = "deltaQrxlevmin";
         const string qhcs = "qhcs";
         const string penaltyTime = "penaltyTime";
         const string referenceTimeDifferenceToCell = "referenceTimeDifferenceToCell";
         const string readSFNIndicator = "readSFNIndicator";
         const string restrictionStateIndicator = "restrictionStateIndicator";
         const string dpcModeChangeSupportIndicator = "dpcModeChangeSupportIndicator";
         const stringnsPlmnIdList = "nsPlmnIdList";
         const string relatedSectorEquipment = "relatedSectorEquipment";
```

```
};
* Definitions for MO class NodeBFunction
interface NodeBFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
   const string CLASS = "NodeBFunction";
   // Attribute Names
  const string nodeBFunctionIubLink = "nodeBFunctionIubLink";
 * Definitions for MO class IubLink
interface IubLink : GenericNetworkResourcesNRMDefs::ManagedFunction
   const string CLASS = "IubLink";
  // Attribute Names
   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 id = "id";
   const string adjacentCell = "adjacentCell";
* Definitions for MO class ExternalUtranGenericCell
interface ExternalUtranGenericCell : GenericNetworkResourcesNRMDefs::ManagedFunction
   const string CLASS = "ExternalUtranGenericCell";
   // Attribute Names
   //
   const string cId= "cId";
   const string mcc= "mcc";
   const string mnc= "mnc";
   const string rncId= "rncId";
   const string cellMode = "cellMode";
   const string uarfcn= "uarfcn";
   const string cellParameterId= "cellParameterId";
   const string lac= "lac";
   const string rac= "rac";
   const string controllingRnc = "controllingRnc";
   const string hsFlag = "hsFlag";
   const string frameOffset = "frameOffset";
   const string cellIndividualOffset = "cellIndividualOffset";
   const string hcsPrio = "hcsPrio";
   const string maximumAllowedUlTxPower = "maximumAllowedUlTxPower";
   const string qrxlevMin = "qrxlevMin";
   const string deltaQrxlevmin = "deltaQrxlevmin";
   const string qhcs = "qhcs";
   const string penaltyTime = "penaltyTime";
   const string referenceTimeDifferenceToCell = "referenceTimeDifferenceToCell";
   const string readSFNIndicator = "readSFNIndicator";
   const string restrictionStateIndicator = "restrictionStateIndicator";
   const string dpcModeChangeSupportIndicator = "dpcModeChangeSupportIndicator";
};
 * Definitions for MO class ExternalRncFunction
* /
interface ExternalRncFunction :
  GenericNetworkResourcesNRMDefs::ManagedFunction
   const string CLASS = "ExternalRncFunction";
```

```
// Attribute Names
  11
  const string mcc = "mcc";
  const string mnc = "mnc";
  const string rncId = "rncId";
  const string controlledCellList = "controlledCellList";
* Definitions for MO class UtranCellFDD
interface UtranCellFDD : UtranGenericCell
  const string CLASS = "UtranCellFDD";
  // Attribute Names
  //
  const string uarfcnUl = "uarfcnUl";
const string uarfcnDl = "uarfcnDl";
  const string primaryScramblingCode = "primaryScramblingCode";
  const string primaryCpichPower = "primaryCpichPower";
  const string primarySchPower = "primarySchPower";
  const string secondarySchPower = "secondarySchPower";
  const string bchPower = "bchPower";
  const string aichPower = "aichPower";
  const string qqualMin = "qqualMin";
  const string cellCapabilityContainerFDD = "cellCapabilityContainerFDD";
  const string txDiversityIndicator = "txDiversityIndicator";
  const string temporaryOffset1 = "temporaryOffset1";
  const string temporaryOffset2 = "temporaryOffset2";
  const string sttdSupportIndicator = "sttdSupportIndicator";
  const string closedLoopModelSupportIndicator = "closedLoopModelSupportIndicator";
};
* Definitions for MO class UtranCellTDD
interface UtranCellTDD : UtranGenericCell
  const string CLASS = "UtranCellTDD";
   // Attribute Names
  const string uarfcn = "uarfcn";
  const string cellParameterId = "cellParameterId";
  const string primaryCcpchPower = "primaryCcpchPower";
  const string cellCapabilityContainerTDD = "cellCapabilityContainerTDD";
  const string sctdIndicator = "sctdIndicator";
  const string dpchConstantValue = "dpchConstantValue";
};
* Definitions for MO class UtranCellTDDLcr
interface UtranCellTDDLcr : UtranCellTDD
  const string CLASS = "UtranCellTDDLcr";
  // Attribute Names
  //
  const string uarfcnLCRList = "uarfcnLCRList";
  const string fpachPower = "fpachPower";
  const string dwPchPower = "dwPchPower";
  const string tstdIndicator = "tstdIndicator";
  const string timeSlotLCRList = "timeSlotLCRList";
};
* Definitions for MO class UtranCellTDDHcr
interface UtranCellTDDHcr : UtranCellTDD
  const string CLASS = "UtranCellTDDHcr";
  // Attribute Names
  //
  const string schPower = "schPower";
  const string temporaryOffset1 = "temporaryOffset1";
  const string syncCase = "syncCase";
  const string timeSlotForSch = "timeSlotForSch";
  const string schTimeSlot = "schTimeSlot";
  const string timeSlotHCRList = "timeSlotHCRList";
};
```

```
* Definitions for MO class ExternalUtranCellFDD
      interface ExternalUtranCellFDD : ExternalUtranGenericCell
         const string CLASS = "ExternalUtranCellFDD";
         // Attribute Names
        11
         const string uarfcnUl = "uarfcnUl";
         const string uarfcnDl = "uarfcnDl";
        const string primaryScramblingCode = "primaryScramblingCode";
         const string primaryCpichPower = "primaryCpichPower";
         const string qqualMin = "qqualMin";
         const string cellCapabilityContainerFDD = "cellCapabilityContainerFDD";
         const string txDiversityIndicator = "txDiversityIndicator";
         const string temporaryOffset1 = "temporaryOffset1";
         const string temporaryOffset2 = "temporaryOffset2";
         const string sttdSupportIndicator = "sttdSupportIndicator";
         const string closedLoopModelSupportIndicator = "closedLoopModelSupportIndicator";
      };
       * Definitions for MO class ExternalUtranCellTDD
      * /
      interface ExternalUtranCellTDD : ExternalUtranGenericCell
      {
         const string CLASS = "ExternalUtranCellTDD";
         // Attribute Names
        const string uarfcn = "uarfcn";
        const string cellParameterId = "cellParameterId";
         const string primaryCcpchPower = "primaryCcpchPower";
         const string cellCapabilityContainerTDD = "cellCapabilityContainerTDD";
         const string sctdIndicator = "sctdIndicator";
        const string dpchConstantValue = "dpchConstantValue";
      };
      * Definitions for MO class ExternalUtranCellTDDHcr
      * /
      interface ExternalUtranCellTDDHcr : ExternalUtranCellTDD
         const string CLASS = "ExternalUtranCellTDDHcr";
         // Attribute Names
         //
         const string temporaryOffset1 = "temporaryOffset1";
         const string syncCase = "syncCase";
        const string timeSlotForSch = "timeSlotForSch";
         const string schTimeSlot = "schTimeSlot";
        const string timeSlotHCRList = "timeSlotHCRList";
      };
      * Definitions for MO class ExternalUtranCellTDDLcr
      interface ExternalUtranCellTDDLcr : ExternalUtranCellTDD
      {
         const string CLASS = "ExternalUtranCellTDDLcr";
         // Attribute Names
         const string tstdIndicator = "tstdIndicator";
        const string timeSlotLCRList = "timeSlotLCRList";
     };
       * Definitions for MO class EP_IuCS
      interface EP_IuCS : GenericNetworkResourcesNRMDefs::EP_RP
         const string CLASS = "EP_IuCS";
         // Attribute Name
         const string connMscNumber = "connMscNumber";
/**
       * Definitions for MO class EP_IuPS
      interface EP_IuPS : GenericNetworkResourcesNRMDefs::EP_RP
```

```
const string CLASS = "EP_IuPS";
         // Attribute Name
         //
         const string connSgsnNumber= "connSgsnNumber";
/**
       * Definitions for MO class EP_Iur
       interface EP_Iur : GenericNetworkResourcesNRMDefs::EP_RP
         const string CLASS = "EP_Iur";
         // Attribute Name
         11
         const string connectedRncId= "connectedRncId";
};
    * 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
      enum RestrictionStateEnumType
       cellReservedForOperatorUse,
       cellAccessible
      };
      enum DpcModeChangeEnumType
       dpcModeChange_supported,
       {\tt dpcModeChange\_not\_supported}
      };
      typedef long SNAC;
      struct snaInformationType
       long mcc;
       long mnc;
       sequence<SNAC> snaList;
      };
    struct TceIDMappingInfo
    short tceID;
    string tceIPAddr;
    };
   typedef sequence<TceIDMappingInfo> TceIDMappingInfoListType;
    structNs PlmnIdType
        short mcc;
        short mnc;
    const short NS_ PLMNID_LIST_LENGTH = 5;
    typedef sequence<NsPlmnIdType>NsPlmnIdListType;
};
      struct SharNetTceMappingInfo
      long PLMNId;
      short tceID;
      string tceIPAddr;
      typedef sequence<SharNetTceMappingInfo> SharNetTceMappingInfoListType;
};
```

```
* This module adds datatype definitions for FDD mode attributes
   ^{\star} used in the NRM which are not the basic datatypes already defined
   * in CORBA.
   * /
  module FDDNRMAttributeTypes
      enum SttdSupportEnumType
      active,
      inactive
      };
      enum txDiversityIndicatorEnumType
      none.
       primaryCpichBroadcastFrom2Antennas,
       sttdAppliedToPrimaryCCPCH,
       \verb|tstdAppliedToPrimarySchAndSecondarySch| \\
      enum ClosedLoopMode1EnumType
      closedLoopModel_supported,
       closedLoopModel_not_supported
      typedef octet CellCapabilityContainerFDDBit;
      //CellCapabilityContainerFDDBits:
      const unsigned long Flexible_Hard_Split_Support_Indicator = 0;
      const unsigned long Delayed_Activation_Support_Indicator = 1;
      const unsigned long HS_DSCH_Support_Indicator = 2;
       const unsigned long DSCH_Support_Indicator = 3;
       const unsigned long F_DPCH_Support_Indicator = 4;
      const unsigned long E_DCH_Support_Indicator = 5;
      const unsigned long E_DCH_TTI2ms_Support_Indicator = 6;
      const unsigned long E_DCH_2sf2and2sf4_and_all_inferior_SFs_Support_Indicator = 7;
       const unsigned long E_DCH_2sf2_and_all_inferior_SFs_Support_Indicator = 8;
       const unsigned long E_DCH_2sf4_and_all_inferior_SFs_Support_Indicator = 9;
      const unsigned long E_DCH_sf4_and_all_inferior_SFs_Support_Indicator = 10;
      const unsigned long E_DCH_sf8_and_all_inferior_SFs_Support_Indicator = 11;
       const unsigned long E_DCH_HARQ_IR_Combining_Support_Indicator = 12;
      const unsigned long E_DCH_HARQ_Chase_Combining_Support_Indicator = 13;
      typedef sequence <CellCapabilityContainerFDDBit> CellCapabilityContainerFDDType;
   };
    * This module adds datatype definitions for TDD mode attributes
    ^{\star} used in the NRM which are not the basic datatypes already defined
   * in CORBA.
   module TDDNRMAttributeTypes
      enum ActivityStatusType
       active,
      inactive
      };
      typedef ActivityStatusType TstdIndicatorEnumType;
                                                            typedef ActivityStatusType
SctdSupportEnumType;
      typedef ActivityStatusType TimeSlotStatusType;
      typedef octet CellCapabilityContainerTDDBit;
      const unsigned long Delayed_Activation_Support_Indicator = 0;
      const unsigned long HS_DSCH_Support_Indicator = 1;
      const unsigned long DSCH_Support_Indicator = 2;
      typedef sequence <CellCapabilityContainerTDDBit> CellCapabilityContainerTDDType;
      enum TimeSlotDirectionType
      {
         TIT.
        DL
      struct TimeSlotConfigStructType
         short timeSlotId;
         TimeSlotDirectionType timeSlotDirection;
```

```
TimeSlotStatusType timeSlotStatus;
};
typedef sequence<TimeSlotConfigStructType> TimeSlotListConfigStructType;

struct UarfcnLCRConfigStructType
{
    short uarfcn;
    TimeSlotListConfigStructType timeSlotLCRList;
};
typedef sequence<UarfcnLCRConfigStructType> UarfcnLCRListConfigStructType;
};
#endif //_UTRANNETWORKRESOURCESNRMDEFS_IDL_
```

# Annex B (normative): XML Definitions

#### B.0 Introduction

This annex contains the XML Definitions for the UTRAN NRM IRP as it applies to Itf-N, in accordance with UTRAN NRM IRP IS definitions [4].

The XML file formats are based on XML [8], XML Schema [10] [11] and XML Namespace [12] standards.

#### B.1 Architectural features

#### B.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 Schema definitions.

## B.1.1 Syntax for Distinguished Names

The syntax of a Distinguished Name is defined in 3GPP TS 32.300 [5].

# B.2 Mapping

#### B.2.1 General mapping

An IOC maps to an XML element of the same name as the IOC's name in the IS. An IOC attribute maps to a subelement of the corresponding IOC's XML element, and the name of this sub-element is the same as the attribute's name in the IS.

# B.2.2 Information Object Class (IOC) mapping

The mapping is not present in the current version of this specification.

# B.3 Solution Set definitions

#### B.3.1 XML definition structure

The overall description of the file format of configuration data XML files is provided by 3GPP TS 32.616 [7].

Annex B.3.3 of the present document defines the NRM-specific XML schema utranNrm.xsd for the UTRAN Network Resources IRP NRM defined in 3GPP TS 28.652 [4].

XML schema utranNrm.xsd explicitly declares NRM-specific XML element types for the related NRM.

The definition of those NRM-specific XML element types complies with the generic mapping rules defined in 3GPP TS 32.616 [7].

## B.3.2 Graphical Representation

The graphical representation is not present in the current version of this specification.

#### B.3.3 XML schema "utranNrm.xsd"

```
<?xml version="1.1" encoding="UTF-8"?>
  3GPP TS 28.653 UTRAN NRM IRP
  Bulk CM Configuration data file NRM-specific XML schema
 utranNrm.xsd
<schema
  targetNamespace=
"http://www.3gpp.org/ftp/specs/archive/28_series/28.653#utranNrm"
 elementFormDefault="qualified"
 xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/archive/28_series/28.623#genericNrm"
 xmlns:un=
"http://www.3gpp.org/ftp/specs/archive/28_series/28.653#utranNrm"
 xmlns:gn=
"http://www.3gpp.org/ftp/specs/archive/28_series/28.656#geranNrm"
"http://www.3gpp.org/ftp/specs/archive/28_series/28.626#stateManagementIRP"
  <import</pre>
   namespace=
"http://www.3gpp.org/ftp/specs/archive/28_series/28.623#genericNrm"
  <import
   namespace=
"http://www.3gpp.org/ftp/specs/archive/28_series/28.656#geranNrm"
  />
  <import</pre>
   namespace=
"http://www.3gpp.org/ftp/specs/archive/28_series/28.626#stateManagementIRP"
  <!-- UTRAN Network Resources IRP NRM attribute related XML types -->
  <simpleType name="localCellId">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="268435455"/>
    </restriction>
  </simpleType>
  <simpleType name="cId">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="65535"/>
    </restriction>
  </simpleType>
  <simpleType name="uarfcnAnyMode">
    <restriction base="integer">
     <minInclusive value="0"/>
      <maxInclusive value="16383"/>
    </restriction>
  </simpleType>
  <simpleType name="primaryScramblingCode">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="511"/>
    </restriction>
  </simpleType>
  <simpleType name="primaryCpichPower">
```

```
<restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-10"/>
    <maxInclusive value="+50"/>
  </restriction>
</simpleType>
<simpleType name="maximumTransmissionPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="0"/>
    <maxInclusive value="50"/>
  </restriction>
</simpleType>
<simpleType name="primarySchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-35"/>
    <maxInclusive value="+15"/>
  </restriction>
</simpleType>
<simpleType name="secondarySchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-35"/>
    <maxInclusive value="+15"/>
  </restriction>
</simpleType>
<simpleType name="bchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-35"/>
    <maxInclusive value="+15"/>
  </restriction>
</simpleType>
<simpleType name="aichPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-22"/>
    <maxInclusive value="+5"/>
  </restriction>
</simpleType>
<simpleType name="fpachPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-150"/>
    <maxInclusive value="+400"/>
  </restriction>
</simpleType>
<simpleType name="pichPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-10"/>
    <maxInclusive value="+5"/>
  </restriction>
</simpleType>
<simpleType name="pchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-350"/>
    <maxInclusive value="+150"/>
  </restriction>
</simpleType>
<simpleType name="fachPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-350"/>
    <maxInclusive value="+150"/>
  </restriction>
</simpleType>
```

```
<simpleType name="lac">
  <union>
    <simpleType>
      <restriction base="integer">
        <minInclusive value="1"/>
        <maxInclusive value="65533"/>
      </restriction>
    </simpleType>
    <simpleType>
     <restriction base="integer">
        <minInclusive value="65535"/>
        <maxInclusive value="65535"/>
      </restriction>
    </simpleType>
  </union>
</simpleType>
<simpleType name="rac">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="255"/>
  </restriction>
</simpleType>
<simpleType name="sac">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="65535"/>
  </restriction>
</simpleType>
<complexType name="uraList">
  <sequence>
    <element name="ura" maxOccurs="8">
      <simpleType>
        <restriction base="integer">
          <minInclusive value="0"/>
          <maxInclusive value="65535"/>
        </restriction>
      </simpleType>
    </element>
  </sequence>
</complexType>
<simpleType name="cellMode">
  <restriction base="string">
    <enumeration value="FDDMode"/>
    <enumeration value="3-84McpsTDDMode"/>
    <enumeration value="1-28McpsTDDMode"/>
  </restriction>
</simpleType>
<simpleType name="cellParameterId">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="127"/>
  </restriction>
</simpleType>
<simpleType name="primaryCcpchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-15"/>
    <maxInclusive value="+40"/>
  </restriction>
</simpleType>
<simpleType name="dwPchPower">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-15"/>
    <maxInclusive value="+40"/>
  </restriction>
</simpleType>
<simpleType name="schPower">
  <restriction base="decimal">
```

```
<fractionDigits value="1"/>
    <minInclusive value="-35"/>
    <maxInclusive value="+15"/>
 </restriction>
</simpleType>
<complexType name="timeSlotLCRList">
 <sequence>
    <element name="timeSlot" maxOccurs="7">
      <complexType>
       <all>
          <element name="timeSlotId" minOccurs="1">
            <simpleType>
              <restriction base="integer">
                <minInclusive value="0"/>
                <maxInclusive value="6"/>
              </restriction>
            </simpleType>
          </element>
          <element name="timeSlotDirection" minOccurs="1">
            <simpleType>
              <restriction base="string">
                <enumeration value="UL"/>
                <enumeration value="DL"/>
              </restriction>
            </simpleType>
          </element>
          <element name="timeSlotStatus" minOccurs="1">
            <simpleType>
              <restriction base="string">
                <enumeration value="Active"/>
                <enumeration value="Not-Active"/>
              </restriction>
            </simpleType>
          </element>
        </all>
      </complexType>
    </element>
  </sequence>
</complexType>
<complexType name="timeSlotHCRList">
 <sequence>
    <element name="timeSlot" maxOccurs="15">
      <complexType>
        <all>
          <element name="timeSlotId" minOccurs="1">
            <simpleType>
              <restriction base="integer">
                <minInclusive value="0"/>
                <maxInclusive value="14"/>
              </restriction>
            </simpleType>
          </element>
          <element name="timeSlotDirection" minOccurs="1">
            <simpleType>
              <restriction base="string">
                <enumeration value="UL"/>
                <enumeration value="DL"/>
              </restriction>
            </simpleType>
          </element>
          <element name="timeSlotStatus" minOccurs="1">
            <simpleType>
              <restriction base="string">
                <enumeration value="Active"/>
                <enumeration value="Not-Active"/>
              </restriction>
            </simpleType>
          </element>
        </all>
      </complexType>
    </element>
  </sequence>
</complexType>
<simpleType name="restrictionStateIndicator">
 <restriction base="string">
```

```
<enumeration value="cellReservedForOperatorUse"/>
    <enumeration value="cellAccessible"/>
   </restriction>
</simpleType>
<simpleType name="dpcModeChangeSupport">
  <restriction base="string">
    <enumeration value="dpcModeChangeSupported"/>
    <enumeration value="dpcModeChangeNotSupported"/>
  </restriction>
</simpleType>
<simpleType name="sttdSupport">
  <restriction base="string">
    <enumeration value="active"/>
    <enumeration value="inactive"/>
   </restriction>
</simpleType>
<simpleType name="closedLoopMode1">
  <restriction base="string">
    <enumeration value="closedLoopMode1Supported"/>
    <enumeration value="closedLoopModelNotSupported"/>
</simpleType>
<simpleType name="frameOffset">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="255"/>
  </restriction>
</simpleType>
<simpleType name="cellIndividualOffset">
  <restriction base="decimal">
    <fractionDigits value="1"/>
    <minInclusive value="-10"/>
    <maxInclusive value="10"/>
  </restriction>
</simpleType>
<simpleType name="hcsPrio">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="7"/>
  </restriction>
</simpleType>
<simpleType name="maximumAllowedUlTxPower">
  <restriction base="integer">
    <minInclusive value="-50"/>
    <maxInclusive value="33"/>
  </restriction>
</simpleType>
<simpleType name="qrxlevMin">
  <restriction base="integer">
    <minInclusive value="-115"/>
    <maxInclusive value="-25"/>
  </restriction>
</simpleType>
<simpleType name="deltaQrxlevmin">
  <restriction base="integer">
    <minInclusive value="-4"/>
    <maxInclusive value="-2"/>
  </restriction>
</simpleType>
<simpleType name="qhcs">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="99"/>
  </restriction>
</simpleType>
<simpleType name="penaltyTime">
  <restriction base="integer">
```

```
<minInclusive value="0"/>
    <maxInclusive value="60"/>
  </restriction>
</simpleType>
<simpleType name="referenceTimeDifferenceToCell">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="38400"/>
   </restriction>
</simpleType>
<simpleType name="readSFNIndicator">
  <restriction base="string">
    <enumeration value="TRUE"/>
    <enumeration value="FALSE"/>
  </restriction>
</simpleType>
<complexType name="snaList">
  <sequence>
    <element name="snac" maxOccurs="65535">
      <simpleType>
        <restriction base="integer">
          <minInclusive value="1"/>
<maxInclusive value="65536"/>
        </restriction>
      </simpleType>
    </element>
  </sequence>
</complexType>
<complexType name="snaInformation">
  <sequence>
    <element name="mcc">
      <simpleType>
        <restriction base="integer">
          <minInclusive value="0"/>
          <maxInclusive value="999"/>
        </restriction>
      </simpleType>
    </element>
    <element name="mnc">
      <simpleType>
        <restriction base="integer">
          <enumeration value="0"/>
          <enumeration value="999"/>
        </restriction>
      </simpleType>
    </element>
    <element name="snaList" type="un:snaList"/>
  </sequence>
</complexType>
<simpleType name="qqualMin">
  <restriction base="integer">
    <minInclusive value="-24"/>
    <maxInclusive value="0"/>
  </restriction>
</simpleType>
<simpleType name="temporaryOffset1">
 <restriction base="integer">
    <minInclusive value="3"/>
    <maxInclusive value="21"/>
  </restriction>
</simpleType>
<simpleType name="temporaryOffset2">
  <restriction base="integer">
    <minInclusive value="2"/>
    <maxInclusive value="12"/>
  </restriction>
</simpleType>
<simpleType name="txDiversityIndicator">
  <restriction base="string">
```

```
<enumeration value="none"/>
    <enumeration value="PrimaryCpichBroadcastFrom2Antennas"/>
    <enumeration value="SttdAppliedToPrimaryCCPCH"/>
    <enumeration value="TstdAppliedToPrimarySchAndSecondarySch"/>
  </restriction>
</simpleType>
<complexType name="cellCapabilityContainerFDD">
  <complexContent>
    <extension base="xn:NrmClass">
      <sequence>
        <element name="attributes" minOccurs="0">
          <complexType>
            <all>
              <element name="Flexible_Hard_Split_Support_Indicator" minOccurs="0"/>
              <element name="Delayed_Activation_Support_Indicator" minOccurs="0"/>
              <element name="HS_DSCH_Support_Indicator" minOccurs="0"/>
              <element name="DSCH_Support_Indicator" minOccurs="0"/>
              <element name="F_DPCH_Support_Indicator" minOccurs="0"/>
              <element name="E_DCH_Support_Indicator" minOccurs="0"/>
              <element name="E_DCH_TTI2ms_Support_Indicator" minOccurs="0"/>
              <element name="E_DCH_2sf2_and_all_inferior_SFs_Support_Indicator" minOccurs="0"/>
              <element name="E_DCH_2sf4_and_all_inferior_SFs_Support_Indicator" minOccurs="0"/>
              <element name="E_DCH_sf4_and_all_inferior_SFs_Support_Indicator" minOccurs="0"/>
              <element name="E_DCH_sf8_and_all_inferior_SFs_Support_Indicator" minOccurs="0"/>
              <element name="E_DCH_HARQ_IR_Combining_Support_Indicator" minOccurs="0"/>
              <element name="E_DCH_HARQ_Chase_Combining_Support_Indicator" minOccurs="0"/>
            </all>
          </complexType>
        </element>
        <choice minOccurs="0" maxOccurs="unbounded">
          <element ref="xn:VsDataContainer"/>
        </choice>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<simpleType name="sctdIndicator">
 <restriction base="string">
    <enumeration value="active"/>
    <enumeration value="inactive"/>
  </restriction>
</simpleType>
<simpleType name="dpchConstantValue">
 <restriction base="integer">
   <minInclusive value="-10"/>
    <maxInclusive value="10"/>
  </restriction>
</simpleType>
<complexType name="cellCapabilityContainerTDD">
  <complexContent>
   <extension base="xn:NrmClass">
      <sequence>
        <element name="attributes" minOccurs="0">
          <complexType>
              <element name="Delayed_Activation_Support_Indicator" minOccurs="0"/>
              <element name="HS_DSCH_Support_Indicator" minOccurs="0"/>
              <element name="DSCH_Support_Indicator" minOccurs="0"/>
            </all>
          </complexType>
        </element>
        <choice minOccurs="0" maxOccurs="unbounded">
          <element ref="xn:VsDataContainer"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<simpleType name="tstdIndicator">
  <restriction base="string">
    <enumeration value="active"/>
    <enumeration value="inactive"/>
```

```
</restriction>
</simpleType>
<simpleType name="timeSlotForSch">
  <restriction base="integer">
   <minInclusive value="0"/>
    <maxInclusive value="14"/>
  </restriction>
</simpleType>
<simpleType name="schTimeSlot">
  <restriction base="integer">
   <minInclusive value="0"/>
    <maxInclusive value="6"/>
  </restriction>
</simpleType>
<simpleType name="syncCase">
  <restriction base="string">
   <enumeration value="SCH and PCCPCH allocated in a single TS"/>
    <enumeration value="SCH and PCCPCH allocated in two TS, TS#k and TS#k+8"/>
  </restriction>
</simpleType>
<simpleType name="hsFlag">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="1"/>
  </restriction>
</simpleType>
<simpleType name="hsEnable">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="1"/>
  </restriction>
</simpleType>
<simpleType name="numOfHspdschs">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="95"/>
  </restriction>
</simpleType>
<complexType name="NsPlmnId">
  <sequence>
    <element name="mcc" type="short"/>
    <element name="mnc" type="short"/>
  </sequence>
</complexType>
<complexType name="NsPlmnIdListType">
  <sequence>
    <element name="nsPLMNId" type="en: NsPlmnId" minOccurs="0" maxOccurs="5"/>
  </sequence>
</complexType>
<simpleType name="numOfHsscchs">
  <restriction base="integer">
    <minInclusive value="1"/>
    <maxInclusive value="32"/>
  </restriction>
</simpleType>
<simpleType name="eightOctets">
  <restriction base="hexBinary">
   <length value="8"/>
  </restriction>
</simpleType>
<complexType name="uarfcnLCRList">
  <sequence>
    <element name="uarfcnLCR" maxOccurs="11">
      <complexType>
          <element name="uarfcn" type="un:uarfcnAnyMode" minOccurs="1"/>
          <element name="timeSlotLCRList" type="un:timeSlotLCRList" minOccurs="0"/>
```

```
</all>
        </complexType>
      </element>
    </sequence>
  </complexType>
<simpleType name="siptoSupported">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="1"/>
    </restriction>
  </simpleType>
  <complexType name="TceIDMappingInfo">
    <sequence>
      <element name="tceID" type="short"/>
      <element name="tceIPAddr" type="string"/>
    </sequence>
  </complexType>
  <complexType name="TceIDMappingInfoList">
    <sequence>
      <element name="tceIDMappingInfo" type="en:TceIDMappingInfo" minOccurs="0"/>
    </sequence>
  </complexType>
  <complexType name="SharNetTceMappingInfo">
    <sequence>
      <element name="pLMNId" type="long"/>
      <element name="tceID" type="short"/>
      <element name="tceIPAddr" type="string"/>
    </sequence>
  </complexType>
  <complexType name="SharNetTceMappingInfo">
    <sequence>
      <element name="sharNetTceMappingInfo" type="un:SharNetTceMappingInfo" minOccurs="0"/>
  </complexType>
  <!-- UTRAN Network Resources IRP NRM class associated XML elements -->
   name="RncFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
             <element name="attributes" minOccurs="0">
               <complexType>
                 <all>
                   <element name="userLabel" type="string" minOccurs="0"/>
                   <element name="mcc" type="string" minOccurs="0"/>
<element name="mnc" type="string" minOccurs="0"/>
                   <element name="rncId" type="string" minOccurs="0"/>
                   <element name='siptoSupported' type= "un:siptoSupported">
                   <element name="tceIDMappingInfoList" type="un:TceIDMappingInfoList"</pre>
minOccurs="0"/>
                   <element name="sharNetTceMappingInfoList" type="un:SharNetTceMappingInfoList"</pre>
minOccurs="0"/>
                 </all>
               </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
               <element ref="un:UtranCellFDD"/>
              <element ref="un:UtranCellTDDLcr"/>
               <element ref="un:UtranCellTDDHcr"/>
              <element ref="un:IubLink"/>
               <element ref="un:RncFunctionOptionallyContainedNrmClass"/>
               <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>
  <element
```

```
name="NodeBFunction"
 substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
             <complexType>
                 <element name="userLabel" type="string" minOccurs="0"/>
                 <element name="nodeBFunctionIubLink" type="string" minOccurs="0"/>
               </all>
             </complexType>
           </element>
           <choice minOccurs="0" maxOccurs="unbounded">
             <element ref="un:NodeBFunctionOptionallyContainedNrmClass"/>
             <element ref="xn:VsDataContainer"/>
           </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>
<element name="UtranGenericCell" abstract="true">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
             <complexType>
               <all>
                 <element name="userLabel" type="string" minOccurs="0"/>
                 <element name="cId" type="un:cId" minOccurs="0"/>
                 <element name="localCellId" type="un:localCellId" minOccurs="0"/>
                 <element name="maximumTransmissionPower"</pre>
                          type="un:maximumTransmissionPower" minOccurs="0"/>
                 <element name="cellMode" type="un:cellMode" minOccurs="0"/>
                 <element name="pichPower" type="un:pichPower" minOccurs="0"/>
                 <element name="pchPower" type="un:pchPower" minOccurs="0"/>
                 <element name="fachPower" type="un:fachPower" minOccurs="0"/>
                 <element name="lac" type="un:lac" minOccurs="0"/>
<element name="rac" type="un:rac" minOccurs="0"/>
                 <element name="sac" type="un:sac" minOccurs="0"/>
                 <element name="uraList" type="un:uraList" minOccurs="0"/>
                 <element name="utranCellIubLink" type="xn:dn" minOccurs="0"/>
<element name="relatedAntennaList" type="xn:dnList" minOccurs="0"/>
                 <element name="relatedTmaList" type="xn:dnList" minOccurs="0"/>
                 <element name="operationalState"</pre>
                 type="sm:operationalStateType" minOccurs="0"/>
<element name="hsFlag" type="un:hsFlag" minOccurs="0"/>
                 <element name="hsEnable" type="un:hsEnable" minOccurs="0"/>
                 <element name="numOfHspdschs" type="un:numOfHspdschs" minOccurs="0"/>
                 <element name="numOfHsscchs" type="un:numOfHsscchs" minOccurs="0"/>
                 <element name="frameOffset" type="un:frameOffset" minOccurs="0"/>
                 <element name="cellIndividualOffset"</pre>
                          type="un:cellIndividualOffset" minOccurs="0"/>
                 <element name="hcsPrio" type="un:hcsPrio" minOccurs="0"/>
                 <element name="maximumAllowedUlTxPower"</pre>
                          type="un:maximumAllowedUlTxPower" minOccurs="0"/>
                 <element name="snaInformation" type="un:snaInformation" minOccurs="0"/>
                 <element name="qrxlevMin" type="un:qrxlevMin" minOccurs="0"/>
                 <element name="deltaQrxlevmin" type="un:deltaQrxlevmin" minOccurs="0"/>
                 <element name="qhcs" type="un:qhcs" minOccurs="0"/>
                 <element name="penaltyTime" type="un:penaltyTime" minOccurs="0"/>
                 <element name="referenceTimeDifferenceToCell"</pre>
                          type="un:referenceTimeDifferenceToCell" minOccurs="0"/>
                 <element name="readSFNIndicator" type="un:readSFNIndicator" minOccurs="0"/>
                 <element name="nsPlmnIdList" type="un: NsPlmnIdListType" minOccurs="0"/>
                 <element name="restrictionStateIndicator"</pre>
                          type="un:restrictionStateIndicator" minOccurs="0"/>
                 <element name="dpcModechangeSupportIndicator"</pre>
                          type="un:dpcModeChangeSupport" minOccurs="0"/>
                 <element name="relatedSectorEquipment" type="xn:dn" minOccurs="0"/>
               </all>
             </complexType>
           </element>
```

```
<choice minOccurs="0" maxOccurs="unbounded">
            <element ref="un:UtranRelation"/>
            <element ref="gn:GsmRelation"/>
            <element ref="un:UtranGenericCellOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>
<element name="UtranCellFDD">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
                 <!-- Inherited attributes from UtranGenericCell -->
                 <element name="userLabel" type="string" minOccurs="0"/>
                 <element name="cId" type="un:cId" minOccurs="0"/>
                 <element name="localCellId" type="un:localCellId" minOccurs="0"/>
                 <element name="maximumTransmissionPower"</pre>
                          type="un:maximumTransmissionPower" minOccurs="0"/>
                 <element name="cellMode" type="un:cellMode" minOccurs="0"/>
                 <element name="pichPower" type="un:pichPower" minOccurs="0"/>
                 <element name="pchPower" type="un:pchPower" minOccurs="0"/>
<element name="fachPower" type="un:fachPower" minOccurs="0"/>
                 <element name="lac" type="un:lac" minOccurs="0"/>
                 <element name="rac" type="un:rac" minOccurs="0"/>
<element name="sac" type="un:sac" minOccurs="0"/>
                 <element name="uraList" type="un:uraList" minOccurs="0"/>
                 <element name="utranCellIubLink" type="xn:dn" minOccurs="0"/>
                 <element name="relatedAntennaList" type="xn:dnList" minOccurs="0"/>
                 <element name="relatedTmaList" type="xn:dnList" minOccurs="0"/>
                 <element name="operationalState"</pre>
                          type="sm:operationalStateType" minOccurs="0"/>
                 <element name="hsFlag" type="un:hsFlag" minOccurs="0"/>
                 <element name="hsEnable" type="un:hsEnable" minOccurs="0"/>
                 <element name="numOfHspdschs" type="un:numOfHspdschs" minOccurs="0"/>
                 <element name="numOfHsscchs" type="un:numOfHsscchs" minOccurs="0"/>
                 <element name="frameOffset" type="un:frameOffset" minOccurs="0"/>
                 <element name="cellIndividualOffset"</pre>
                          type="un:cellIndividualOffset" minOccurs="0"/>
                 <element name="hcsPrio" type="un:hcsPrio" minOccurs="0"/>
                 <element name="maximumAllowedUlTxPower"</pre>
                          type="un:maximumAllowedUlTxPower" minOccurs="0"/>
                 <element name="snaInformation" type="un:snaInformation" minOccurs="0"/>
                 <element name="qrxlevMin" type="un:qrxlevMin" minOccurs="0"/>
                 <element name="deltaQrxlevmin" type="un:deltaQrxlevmin" minOccurs="0"/>
                 <element name="qhcs" type="un:qhcs" minOccurs="0"/>
                 <element name="penaltyTime" type="un:penaltyTime" minOccurs="0"/>
                 <element name="referenceTimeDifferenceToCell"</pre>
                          type="un:referenceTimeDifferenceToCell" minOccurs="0"/>
                 <element name="readSFNIndicator" type="un:readSFNIndicator" minOccurs="0"/>
                 <element name="nsPlmnIdList" type="un: NsPlmnIdListType" minOccurs="0"/>
                 <element name="restrictionStateIndicator"</pre>
                          type="un:restrictionStateIndicator" minOccurs="0"/>
                 <element name="dpcModechangeSupportIndicator"</pre>
                          type="un:dpcModeChangeSupport" minOccurs="0"/>
                 <element name="relatedSectorEquipment" type="xn:dn" minOccurs="0"/>
                 <!-- End of inherited attributes from UtranGenericCell -->
                 <element name="uarfcnUl" type="un:uarfcnAnyMode" minOccurs="0"/>
                 <element name="uarfcnDl" type="un:uarfcnAnyMode" minOccurs="0"/>
                 <element name="primaryScramblingCode" type="un:primaryScramblingCode"</pre>
                          minOccurs="0"/>
                 <element name="primaryCpichPower" type="un:primaryCpichPower" minOccurs="0"/>
                 <element name="primarySchPower" type="un:primarySchPower" minOccurs="0"/>
                 <element name="secondarySchPower" type="un:secondarySchPower" minOccurs="0"/>
                 <element name="bchPower" type="un:bchPower" minOccurs="0"/>
<element name="aichPower" type="un:aichPower" minOccurs="0"/>
                 <element name="qqualMin" type="un:qqualMin" minOccurs="0"/>
                 <element name="cellCapabilityContainerFDD" type="un:cellCapabilityContainerFDD"</pre>
                               minOccurs="0"/>
```

```
<element name="txDiversityIndicator" type="un:txDiversityIndicator"</pre>
                                 minOccurs="0"/>
                   <element name="temporaryOffset1" type="un:temporaryOffset1" minOccurs="0"/>
                   <element name="temporaryOffset2" type="un:temporaryOffset2" minOccurs="0"/>
                   <element name="sttdSupportIndicator" type="un:sttdSupport" minOccurs="0"/>
                   <element name="closedLoopModelSupportIndicator" type="un:closedLoopModel"</pre>
                            minOccurs="0"/>
                   </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="un:UtranRelation"/>
              <element ref="gn:GsmRelation"/>
              <element ref="un:UtranCellFDDOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>
<element name="UtranCellTDD" abstract="true">
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
            <element name="attributes" minOccurs="0">
              <complexType>
                 <all>
                   <!-- Inherited attributes from UtranGenericCell -->
                   <element name="userLabel" type="string" minOccurs="0"/>
<element name="cId" type="un:cId" minOccurs="0"/>
                   <element name="localCellId" type="un:localCellId" minOccurs="0"/>
                   <element name="maximumTransmissionPower"</pre>
                            type="un:maximumTransmissionPower" minOccurs="0"/>
                   <element name="cellMode" type="un:cellMode" minOccurs="0"/>
<element name="pichPower" type="un:pichPower" minOccurs="0"/>
                   <element name="pchPower" type="un:pchPower" minOccurs="0"/>
                   <element name="fachPower" type="un:fachPower" minOccurs="0"/>
                   <element name="lac" type="un:lac" minOccurs="0"/>
                   <element name="rac" type="un:rac" minOccurs="0"/>
<element name="sac" type="un:sac" minOccurs="0"/>
                   <element name="uraList" type="un:uraList" minOccurs="0"/>
                   <element name="utranCellIubLink" type="xn:dn" minOccurs="0"/>
                   <element name="relatedAntennaList" type="xn:dnList" minOccurs="0"/>
                   <element name="relatedTmaList" type="xn:dnList" minOccurs="0"/>
                   <element name="operationalState"</pre>
                            type="sm:operationalStateType" minOccurs="0"/>
                   <element name="hsFlag" type="un:hsFlag" minOccurs="0"/>
                   <element name="hsEnable" type="un:hsEnable" minOccurs="0"/>
                   <element name="numOfHspdschs" type="un:numOfHspdschs" minOccurs="0"/>
                   <element name="numOfHsscchs" type="un:numOfHsscchs" minOccurs="0"/>
                   <element name="frameOffset" type="un:frameOffset" minOccurs="0"/>
                   <element name="cellIndividualOffset"</pre>
                            type="un:cellIndividualOffset" minOccurs="0"/>
                   <element name="hcsPrio" type="un:hcsPrio" minOccurs="0"/>
                   <element name="maximumAllowedUlTxPower"</pre>
                            type="un:maximumAllowedUlTxPower" minOccurs="0"/>
                   <element name="snaInformation" type="un:snaInformation" minOccurs="0"/>
                   <element name="qrxlevMin" type="un:qrxlevMin" minOccurs="0"/>
                   <element name="deltaQrxlevmin" type="un:deltaQrxlevmin" minOccurs="0"/>
                   <element name="qhcs" type="un:qhcs" minOccurs="0"/>
                   <element name="penaltyTime" type="un:penaltyTime" minOccurs="0"/>
                   <element name="referenceTimeDifferenceToCell"</pre>
                            type="un:referenceTimeDifferenceToCell" minOccurs="0"/>
                   <element name="readSFNIndicator" type="un:readSFNIndicator" minOccurs="0"/>
                   <element name="nsPlmnIdList" type="un:NsPlmnIdListType" minOccurs="0"/>
                   <element name="restrictionStateIndicator"</pre>
                            type="un:restrictionStateIndicator" minOccurs="0"/>
                   <element name="dpcModechangeSupportIndicator"</pre>
                            type="un:dpcModeChangeSupport" minOccurs="0"/>
                   <element name="relatedSectorEquipment" type="xn:dn" minOccurs="0"/>
                  <!-- End of inherited attributes from UtranGenericCell -->
                   <element name="uarfcn" type="un:uarfcnAnyMode" minOccurs="0"/>
                   <element name="cellParameterId" type="un:cellParameterId" minOccurs="0"/>
```

```
<element name="primaryCcpchPower" type="un:primaryCcpchPower" minOccurs="0"/>
                   <element name="cellCapabilityContainerTDD" type="un:cellCapabilityContainerTDD"</pre>
                            minOccurs="0"/>
                   <element name="sctdIndicator" type="un:sctdIndicator" minOccurs="0"/>
                   <element name="dpchConstantValue" type="un:dpchConstantValue" minOccurs="0"/>
               </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
               <element ref="un:UtranRelation"/>
               <element ref="gn:GsmRelation"/>
               <element ref="un:UtranCellTDDOptionallyContainedNrmClass"/>
               <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>
<element name="UtranCellTDDLcr">
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
               <complexType>
                 <all>
                   <!-- Inherited attributes from UtranGenericCell via UtranCellTDD --> <element name="userLabel" type="string" minOccurs="0"/>
                   <element name="cId" type="un:cId" minOccurs="0"/>
                   <element name="localCellId" type="un:localCellId" minOccurs="0"/>
                   <element name="maximumTransmissionPower"</pre>
                   type="un:maximumTransmissionPower" minOccurs="0"/>
<element name="cellMode" type="un:cellMode" minOccurs="0"/>
                   <element name="pichPower" type="un:pichPower" minOccurs="0"/>
                   <element name="pchPower" type="un:pchPower" minOccurs="0"/>
<element name="fachPower" type="un:fachPower" minOccurs="0"/>
                   <element name="lac" type="un:lac" minOccurs="0"/>
                   <element name="rac" type="un:rac" minOccurs="0"/>
<element name="sac" type="un:sac" minOccurs="0"/>
                   <element name="uraList" type="un:uraList" minOccurs="0"/>
                   <element name="utranCellIubLink" type="xn:dn" minOccurs="0"/>
                   <element name="relatedAntennaList" type="xn:dnList" minOccurs="0"/>
                   <element name="relatedTmaList" type="xn:dnList" minOccurs="0"/>
                   <element name="operationalState"</pre>
                             type="sm:operationalStateType" minOccurs="0"/>
                   <element name="hsFlag" type="un:hsFlag" minOccurs="0"/>
                   <element name="hsEnable" type="un:hsEnable" minOccurs="0"/>
                   <element name="numOfHspdschs" type="un:numOfHspdschs" minOccurs="0"/>
                   <element name="numOfHsscchs" type="un:numOfHsscchs" minOccurs="0"/>
                   <element name="frameOffset" type="un:frameOffset" minOccurs="0"/>
                   <element name="cellIndividualOffset"</pre>
                            type="un:cellIndividualOffset" minOccurs="0"/>
                   <element name="hcsPrio" type="un:hcsPrio" minOccurs="0"/>
                   <element name="maximumAllowedUlTxPower"</pre>
                            type="un:maximumAllowedUlTxPower" minOccurs="0"/>
                   <element name="snaInformation" type="un:snaInformation" minOccurs="0"/>
                   <element name="qrxlevMin" type="un:qrxlevMin" minOccurs="0"/>
                   <element name="deltaQrxlevmin" type="un:deltaQrxlevmin" minOccurs="0"/>
                   <element name="qhcs" type="un:qhcs" min0ccurs="0"/>
                   <element name="penaltyTime" type="un:penaltyTime" minOccurs="0"/>
                   <element name="referenceTimeDifferenceToCell"</pre>
                             type="un:referenceTimeDifferenceToCell" minOccurs="0"/>
                   <element name="readSFNIndicator" type="un:readSFNIndicator" minOccurs="0"/>
                   <element name="nsPlmnIdList" type="un: NsPlmnIdListType" minOccurs="0"/>
                   <element name="restrictionStateIndicator"</pre>
                             type="un:restrictionStateIndicator" minOccurs="0"/>
                   <element name="dpcModechangeSupportIndicator"</pre>
                             type="un:dpcModeChangeSupport" minOccurs="0"/>
                   <element name="relatedSectorEquipment" type="xn:dn" minOccurs="0"/>
                   <!-- End of inherited attributes from UtranGenericCell via UtranCellTDD -->
                   <!-- Inherited attributes from UtranCellTDD -->
                   <element name="uarfcn" type="un:uarfcnAnyMode" minOccurs="0"/>
                   <element name="cellParameterId" type="un:cellParameterId" minOccurs="0"/>
                   <element name="primaryCcpchPower" type="un:primaryCcpchPower" minOccurs="0"/>
```

```
<element name="cellCapabilityContainerTDD" type="un:cellCapabilityContainerTDD"</pre>
                           minOccurs="0"/>
                  <element name="sctdIndicator" type="un:sctdIndicator" minOccurs="0"/>
                  <element name="dpchConstantValue" type="un:dpchConstantValue" minOccurs="0"/>
                  <!-- End of inherited attributes from UtranCellTDD -->
                  <element name="uarfcnLCRList" type="un:uarfcnLCRList" minOccurs="0"/>
                  <element name="fpachPower" type="un:fpachPower" minOccurs="0"/>
                  <element name="dwPchPower" type="un:dwPchPower" minOccurs="0"/>
                  <element name="tstdIndicator" type="un:tstdIndicator" minOccurs="0"/>
                  <element name="timeSlotLCRList" type="un:timeSlotLCRList" minOccurs="0"/>
                 </all>
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            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="un:UtranRelation"/>
              <element ref="gn:GsmRelation"/>
              <element ref="un:UtranCellTDDLcrOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
 </element>
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      <complexContent>
        <extension base="xn:NrmClass">
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                <all>
                  <!-- Inherited attributes from UtranGenericCell via UtranCellTDD -->
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                  <element name="cId" type="un:cId" minOccurs="0"/>
                  <element name="localCellId" type="un:localCellId" minOccurs="0"/>
                  <element name="maximumTransmissionPower"</pre>
                           type="un:maximumTransmissionPower" minOccurs="0"/>
                  <element name="cellMode" type="un:cellMode" minOccurs="0"/>
                  <element name="pichPower" type="un:pichPower" minOccurs="0"/>
                  <element name="pchPower" type="un:pchPower" minOccurs="0"/>
                  <element name="fachPower" type="un:fachPower" minOccurs="0"/>
                  <element name="lac" type="un:lac" minOccurs="0"/>
<element name="rac" type="un:rac" minOccurs="0"/>
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                  <element name="uraList" type="un:uraList" minOccurs="0"/>
                  <element name="utranCellIubLink" type="xn:dn" minOccurs="0"/>
                  <element name="relatedAntennaList" type="xn:dnList" minOccurs="0"/>
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                  <element name="operationalState"</pre>
                            type="sm:operationalStateType" minOccurs="0"/>
                  <element name="hsFlag" type="un:hsFlag" minOccurs="0"/>
                  <element name="hsEnable" type="un:hsEnable" minOccurs="0"/>
                  <element name="numOfHspdschs" type="un:numOfHspdschs" minOccurs="0"/>
                  <element name="numOfHsscchs" type="un:numOfHsscchs" minOccurs="0"/>
                  <element name="frameOffset" type="un:frameOffset" minOccurs="0"/>
                  <element name="cellIndividualOffset"</pre>
                           type="un:cellIndividualOffset" minOccurs="0"/>
                  <element name="hcsPrio" type="un:hcsPrio" minOccurs="0"/>
                  <element name="maximumAllowedUlTxPower"</pre>
                            type="un:maximumAllowedUlTxPower" minOccurs="0"/>
                  <element name="snaInformation" type="un:snaInformation" minOccurs="0"/>
                  <element name="qrxlevMin" type="un:qrxlevMin" minOccurs="0"/>
                  <element name="deltaQrxlevmin" type="un:deltaQrxlevmin" minOccurs="0"/>
                  <element name="qhcs" type="un:qhcs" minOccurs="0"/>
                  <element name="penaltyTime" type="un:penaltyTime" minOccurs="0"/>
                  <element name="referenceTimeDifferenceToCell"</pre>
                           type="un:referenceTimeDifferenceToCell" minOccurs="0"/>
                  <element name="readSFNIndicator" type="un:readSFNIndicator" minOccurs="0"/>
                  <element name="nsPlmnIdList" type="un: NsPlmnIdListType" minOccurs="0"/>
                  <element name="restrictionStateIndicator"</pre>
                            type="un:restrictionStateIndicator" minOccurs="0"/>
                  <element name="dpcModechangeSupportIndicator"</pre>
                  type="un:dpcModeChangeSupport" minOccurs="0"/>
<element name="relatedSectorEquipment" type="xn:dn" minOccurs="0"/>
```

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<!-- End of inherited attributes from UtranGenericCell via UtranCellTDD -->
                 <!-- Inherited attributes from UtranCellTDD -->
                 <element name="uarfcn" type="un:uarfcnAnyMode" minOccurs="0"/>
                 <element name="cellParameterId" type="un:cellParameterId" minOccurs="0"/>
                 <element name="primaryCcpchPower" type="un:primaryCcpchPower" minOccurs="0"/>
                 <element name="cellCapabilityContainerTDD" type="un:cellCapabilityContainerTDD"</pre>
                          minOccurs="0"/>
                 <element name="sctdIndicator" type="un:sctdIndicator" minOccurs="0"/>
                 <element name="dpchConstantValue" type="un:dpchConstantValue" minOccurs="0"/>
<!-- End of inherited attributes from UtranCellTDD -->
                 <element name="schPower" type="un:schPower" minOccurs="0"/>
                 <element name="temporaryOffset1" type="un:temporaryOffset1" minOccurs="0"/>
                 <element name="syncCase" type="un:syncCase" minOccurs="0"/>
                 <element name="timeSlotForSch" type="un:timeSlotForSch" minOccurs="0"/>
                 <element name="schTimeSlot" type="un:schTimeSlot" minOccurs="0"/>
                 <element name="timeSlotHCRList" type="un:timeSlotHCRList" minOccurs="0"/>
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            <element ref="gn:GsmRelation"/>
            <element ref="un:UtranCellTDDHcrOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
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<element name="iubLinkATMChannelTerminationPoint" type="xn:dn" minOccurs="0"/>
                 <element name="iubLinkNodeBFunction" type="xn:dn" minOccurs="0"/>
               </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="un:IubLinkOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </chaice>
        </sequence>
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  </complexType>
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    <complexContent>
      <extension base="xn:NrmClass">
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          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
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    <complexContent>
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<element name="mnc" type="string" minOccurs="0"/>
                 <element name="rncId" type="string" minOccurs="0"/>
                 <element name="cellMode" type="un:cellMode" minOccurs="0"/>
                 <element name="lac" type="un:lac" minOccurs="0"/>
                 <element name="rac" type="un:rac" minOccurs="0"/>
                 <element name="controllingRnc" type="xn:dn" minOccurs="0"/>
                 <element name="hsFlag" type="un:hsFlag" minOccurs="0"/>
                 <element name="frameOffset" type="un:frameOffset" minOccurs="0"/>
                 <element name="cellIndividualOffset" type="un:cellIndividualOffset"</pre>
                         minOccurs="0"/>
                 <element name="hcsPrio" type="un:hcsPrio" minOccurs="0"/>
                 <element name="maximumAllowedUlTxPower" type="un:maximumAllowedUlTxPower"</pre>
                          minOccurs="0"/>
                 <element name="snaInformation" type="un:snaInformation" minOccurs="0"/>
                 <element name="qrxlevMin" type="un:qrxlevMin" minOccurs="0"/>
                 <element name="deltaQrxlevmin" type="un:deltaQrxlevmin" minOccurs="0"/>
                 <element name="qhcs" type="un:qhcs" minOccurs="0"/>
                 <element name="penaltyTime" type="un:penaltyTime" minOccurs="0"/>
                 <element name="referenceTimeDifferenceToCell"</pre>
                          type="un:referenceTimeDifferenceToCell" minOccurs="0"/>
                 <element name="readSFNIndicator" type="un:readSFNIndicator" minOccurs="0"/>
                 <element name="restrictionStateIndicator" type="un:restrictionStateIndicator"</pre>
                         minOccurs="0"/>
                 <element name="dpcModeChangeSupportIndicator" type="un:dpcModeChangeSupport"</pre>
                          minOccurs="0"/>
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          <choice minOccurs="0" maxOccurs="unbounded">
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            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
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    </complexContent>
  </complexType>
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  <complexType>
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        <sequence>
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                 <element name="mcc" type="string" minOccurs="0"/>
<element name="mnc" type="string" minOccurs="0"/>
                 <element name="rncId" type="string" minOccurs="0"/>
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                 <element name="rac" type="un:rac" minOccurs="0"/>
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                 <element name="hsFlag" type="un:hsFlag" minOccurs="0"/>
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minOccurs="0"/>

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                          minOccurs="0"/>
                 <element name="snaInformation" type="un:snaInformation" minOccurs="0"/>
                 <element name="qrxlevMin" type="un:qrxlevMin" minOccurs="0"/>
                 <element name="deltaOrxlevmin" type="un:deltaOrxlevmin" minOccurs="0"/>
                 <element name="qhcs" type="un:qhcs" min0ccurs="0"/>
                 <element name="penaltyTime" type="un:penaltyTime" minOccurs="0"/>
                 <element name="referenceTimeDifferenceToCell"</pre>
                         type="un:referenceTimeDifferenceToCell" minOccurs="0"/>
                 <element name="readSFNIndicator" type="un:readSFNIndicator" minOccurs="0"/>
                 <element name="restrictionStateIndicator" type="un:restrictionStateIndicator"</pre>
                         minOccurs="0"/>
                 <element name="dpcModeChangeSupportIndicator" type="un:dpcModeChangeSupport"</pre>
                         minOccurs="0"/>
                 <!-- End of inherited attributes from ExternalUtranGenericCell -->
                 <element name="uarfcnUl" type="un:uarfcnAnyMode" minOccurs="0"/>
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                          minOccurs="0"/>
                 <element name="primaryCpichPower" type="un:primaryCpichPower" minOccurs="0"/>
                 <element name="aichPower" type="un:aichPower" minOccurs="0"/>
                 <element name="qqualMin" type="un:qqualMin" minOccurs="0"/>
                 <element name="cellCapabilityContainerFDD" type="un:cellCapabilityContainerFDD"</pre>
                         minOccurs="0"/>
                 <element name="txDiversityIndicator" type="un:txDiversityIndicator"</pre>
                         minOccurs="0"/>
                 <element name="temporaryOffset1" type="un:temporaryOffset1" minOccurs="0"/>
<element name="temporaryOffset2" type="un:temporaryOffset2" minOccurs="0"/>
                 <element name="sttdSupportIndicator" type="un:sttdSupport" minOccurs="0"/>
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                          minOccurs="0"/>
                 </all>
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          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
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            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
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    </complexContent>
  </complexType>
</element>
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            <complexType>
              <all>
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                 <element name="cId" type="un:cId" minOccurs="0"/>
<element name="mcc" type="string" minOccurs="0"/>
                 <element name="mnc" type="string" minOccurs="0"/>
                 <element name="rncId" type="string" minOccurs="0"/>
                 <element name="cellMode" type="un:cellMode" minOccurs="0"/>
                 <element name="lac" type="un:lac" minOccurs="0"/>
                 <element name="rac" type="un:rac" minOccurs="0"/>
                 <element name="controllingRnc" type="xn:dn" minOccurs="0"/>
                 <element name="hsFlag" type="un:hsFlag" minOccurs="0"/>
                 <element name="frameOffset" type="un:frameOffset" minOccurs="0"/>
                 <element name="cellIndividualOffset" type="un:cellIndividualOffset"</pre>
                          minOccurs="0"/>
                 <element name="hcsPrio" type="un:hcsPrio" minOccurs="0"/>
                 <element name="maximumAllowedUlTxPower" type="un:maximumAllowedUlTxPower"</pre>
                          minOccurs="0"/>
                 <element name="snaInformation" type="un:snaInformation" minOccurs="0"/>
                 <element name="qrxlevMin" type="un:qrxlevMin" minOccurs="0"/>
                 <element name="deltaQrxlevmin" type="un:deltaQrxlevmin" minOccurs="0"/>
```

```
<element name="qhcs" type="un:qhcs" min0ccurs="0"/>
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                         type="un:referenceTimeDifferenceToCell" minOccurs="0"/>
                <element name="readSFNIndicator" type="un:readSFNIndicator" minOccurs="0"/>
                <element name="restrictionStateIndicator" type="un:restrictionStateIndicator"</pre>
                         minOccurs="0"/>
                <element name="dpcModeChangeSupportIndicator" type="un:dpcModeChangeSupport"</pre>
                         minOccurs="0"/>
                <!-- End of inherited attributes from ExternalUtranGenericCell -->
                <element name="uarfcn" type="un:uarfcnAnyMode" minOccurs="0"/>
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                         type="un:cellCapabilityContainerTDD" minOccurs="0"/>
                <element name="sctdIndicator" type="un:sctdIndicator" minOccurs="0"/>
                <element name="dpchConstantValue" type="un:dpchConstantValue" minOccurs="0"/>
              </all>
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          </element>
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            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
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  </complexType>
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                <element name="cId" type="un:cId" minOccurs="0"/>
                <element name="mcc" type="string" minOccurs="0"/>
                <element name="mnc" type="string" minOccurs="0"/>
                <element name="rncId" type="string" minOccurs="0"/>
                <element name="cellMode" type="un:cellMode" minOccurs="0"/>
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<element name="rac" type="un:rac" minOccurs="0"/>
                <element name="controllingRnc" type="xn:dn" minOccurs="0"/>
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                <element name="cellIndividualOffset" type="un:cellIndividualOffset"</pre>
                         minOccurs="0"/>
                <element name="hcsPrio" type="un:hcsPrio" minOccurs="0"/>
                <element name="maximumAllowedUlTxPower" type="un:maximumAllowedUlTxPower"</pre>
                         minOccurs="0"/>
                <element name="snaInformation" type="un:snaInformation" minOccurs="0"/>
                <element name="qrxlevMin" type="un:qrxlevMin" minOccurs="0"/>
                <element name="deltaQrxlevmin" type="un:deltaQrxlevmin" minOccurs="0"/>
                <element name="qhcs" type="un:qhcs" minOccurs="0"/>
                <element name="penaltyTime" type="un:penaltyTime" minOccurs="0"/>
                <element name="referenceTimeDifferenceToCell"</pre>
                         type="un:referenceTimeDifferenceToCell" minOccurs="0"/>
                <element name="readSFNIndicator" type="un:readSFNIndicator" minOccurs="0"/>
                <element name="restrictionStateIndicator" type="un:restrictionStateIndicator"</pre>
                         minOccurs="0"/>
                <element name="dpcModeChangeSupportIndicator" type="un:dpcModeChangeSupport"</pre>
                         minOccurs="0"/>
                <!-- End of inherited attributes from ExternalUtranGenericCell -->
                <!-- Inherited attributes from ExternalUtranCellTDD -->
                <element name="uarfcn" type="un:uarfcnAnyMode" minOccurs="0"/>
                <element name="cellParameterId" type="un:cellParameterId" minOccurs="0"/>
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```

```
<element name="cellCapabilityContainerTDD"</pre>
                         type="un:cellCapabilityContainerTDD" minOccurs="0"/>
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                <element name="dpchConstantValue" type="un:dpchConstantValue" minOccurs="0"/>
                <!-- End of inherited attributes from ExternalUtranCellTDD -->
                <element name="temporaryOffset1" type="un:temporaryOffset1" minOccurs="0"/>
                <element name="syncCase" type="un:syncCase" minOccurs="0"/>
                <element name="timeSlotForSch" type="un:timeSlotForSch" minOccurs="0"/>
                <element name="schTimeSlot" type="un:schTimeSlot" minOccurs="0"/>
                <element name="timeSlotHCRList" type="un:timeSlotHCRList" minOccurs="0"/>
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          </chaice>
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                <element name="mnc" type="string" minOccurs="0"/>
                <element name="rncId" type="string" minOccurs="0"/>
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                <element name="controllingRnc" type="xn:dn" minOccurs="0"/>
                <element name="hsFlag" type="un:hsFlag" minOccurs="0"/>
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                        minOccurs="0"/>
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                         minOccurs="0"/>
                <element name="snaInformation" type="un:snaInformation" minOccurs="0"/>
                <element name="qrxlevMin" type="un:qrxlevMin" minOccurs="0"/>
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                <element name="qhcs" type="un:qhcs" min0ccurs="0"/>
                <element name="penaltyTime" type="un:penaltyTime" minOccurs="0"/>
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                         type="un:referenceTimeDifferenceToCell" minOccurs="0"/>
                <element name="readSFNIndicator" type="un:readSFNIndicator" minOccurs="0"/>
                <element name="restrictionStateIndicator" type="un:restrictionStateIndicator"</pre>
                         minOccurs="0"/>
                <element name="dpcModeChangeSupportIndicator" type="un:dpcModeChangeSupport"</pre>
                         minOccurs="0"/>
                <!-- End of inherited attributes from ExternalUtranGenericCell -->
                <!-- Inherited attributes from ExternalUtranCellTDD -->
                <element name="uarfcn" type="un:uarfcnAnyMode" minOccurs="0"/>
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                <element name="cellCapabilityContainerTDD"</pre>
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                <element name="sctdIndicator" type="un:sctdIndicator" minOccurs="0"/>
                <element name="dpchConstantValue" type="un:dpchConstantValue" minOccurs="0"/>
                <!-- End of inherited attributes from ExternalUtranCellTDD -->
                <element name="tstdIndicator" type="un:tstdIndicator" minOccurs="0"/>
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```
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           </element>
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             <element ref="un:ExternalUtranCellFDD"/>
             <element ref="un:ExternalUtranCellTDDHcr"/>
             <element ref="un:ExternalUtranCellTDDLcr"/>
             <element ref="un:ExternalRncFunctionOptionallyContainedNrmClass"/>
             <element ref="xn:VsDataContainer"/>
           </choice>
         </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>
<element name="EP Jur">
  <complexType>
    <complexContent>
       <extension base="xn:NrmClass">
         <sequence>
           <element name="attributes" minOccurs="0">
             <complexType>
                 <element name="connectedRncId" type="string" minOccurs="0"/>
               </all>
             </complexType>
           </element>
         </sequence>
       </extension>
    </complexContent>
  </complexType>
</element>
<element name="RncFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
<element name="NodeBFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
<element name="UtranGenericCellOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
<element name="UtranCellFDDOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
<element name="UtranCellTDDOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
<element name="UtranCellTDDLcrOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
<element name="UtranCellTDDHcrOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
<element name="IubLinkOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
<element name="UtranRelationOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
\verb| < element name = "External Utran Generic Cell Optionally Contained Nrm Class"|
          type="xn:NrmClass" abstract="true"/>
<element name="ExternalUtranCellFDDOptionallyContainedNrmClass"</pre>
          type="xn:NrmClass" abstract="true"/>
<element name="ExternalUtranCellTDDOptionallyContainedNrmClass"</pre>
```

</schema>

## Annex C (informative): Change history

FSG # SA#59	<b>TSG Doc.</b> SP-130057		Rev	Subject/Comment	Cat	Old	New
SA#59	SP-130057	001	1_				
				CR R11 28.653 Alignment with 28.652: Addition of missing Network Sharing support for MDT	F	11.0.0	11.1.0
				Addition of missing Table of Contents (MCC)		11.1.0	11.1.1
SA#61	SP-130433	002	1	UTRAN NRM SS Correction of wrong import references and name space identifiers	F	11.1.1	11.2.0
				Corrected Clause numbering for Change History Annex (MCC)		11.2.0	11.2.1
SA#64	SP-140332	003	1	upgrade XSD	F	11.2.1	11.3.0
	SP-140359	005	-	remove the feature support statements	F	•	
SA#65	SP-140558	006	-	correction of data type	F	11.3.0	11.4.0
	SP-140560	007	-	Update the link from Solution Set to Information Service due to the end of Release 12	С	11.4.0	12.0.0
SA#66	SP-140800	009	1	Add support for sharing of UTRAN	В	12.0.0	12.1.0
SA#70	SP-150691	010	-	Align id attribute definitions	A	12.1.0	12.2.0
SA#70				Upgrade to Release 13 (MCC)		12.2.0	13.0.0
5	A#64 A#65 A#66 A#70	A#64 SP-140332 SP-140359 A#65 SP-140558 SP-140560 A#66 SP-140800 A#70 SP-150691	A#64 SP-140332 003 SP-140359 005 A#65 SP-140558 006 SP-140560 007 A#66 SP-140800 009 A#70 SP-150691 010	A#64 SP-140332 003 1 SP-140359 005 - A#65 SP-140558 006 - SP-140560 007 - A#66 SP-140800 009 1 A#70 SP-150691 010 -	identifiers  Corrected Clause numbering for Change History Annex (MCC)  A#64 SP-140332 003 1 upgrade XSD  SP-140359 005 - remove the feature support statements  A#65 SP-140558 006 - correction of data type  SP-140560 007 - Update the link from Solution Set to Information Service due to the end of Release 12  A#66 SP-140800 009 1 Add support for sharing of UTRAN  A#70 SP-150691 010 - Align id attribute definitions	identifiers  Corrected Clause numbering for Change History Annex (MCC)  A#64 SP-140332 003 1 upgrade XSD F  SP-140359 005 - remove the feature support statements  F  A#65 SP-140558 006 - correction of data type  SP-140560 007 - Update the link from Solution Set to Information Service due to the end of Release 12  A#66 SP-140800 009 1 Add support for sharing of UTRAN  B  A#70 SP-150691 010 - Align id attribute definitions  A	identifiers

## History

Document history						
V13.0.0	January 2016	Publication				