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Technical Specification

Universal Mobile Telecommunications System (UMTS);
Telecommunication Management;
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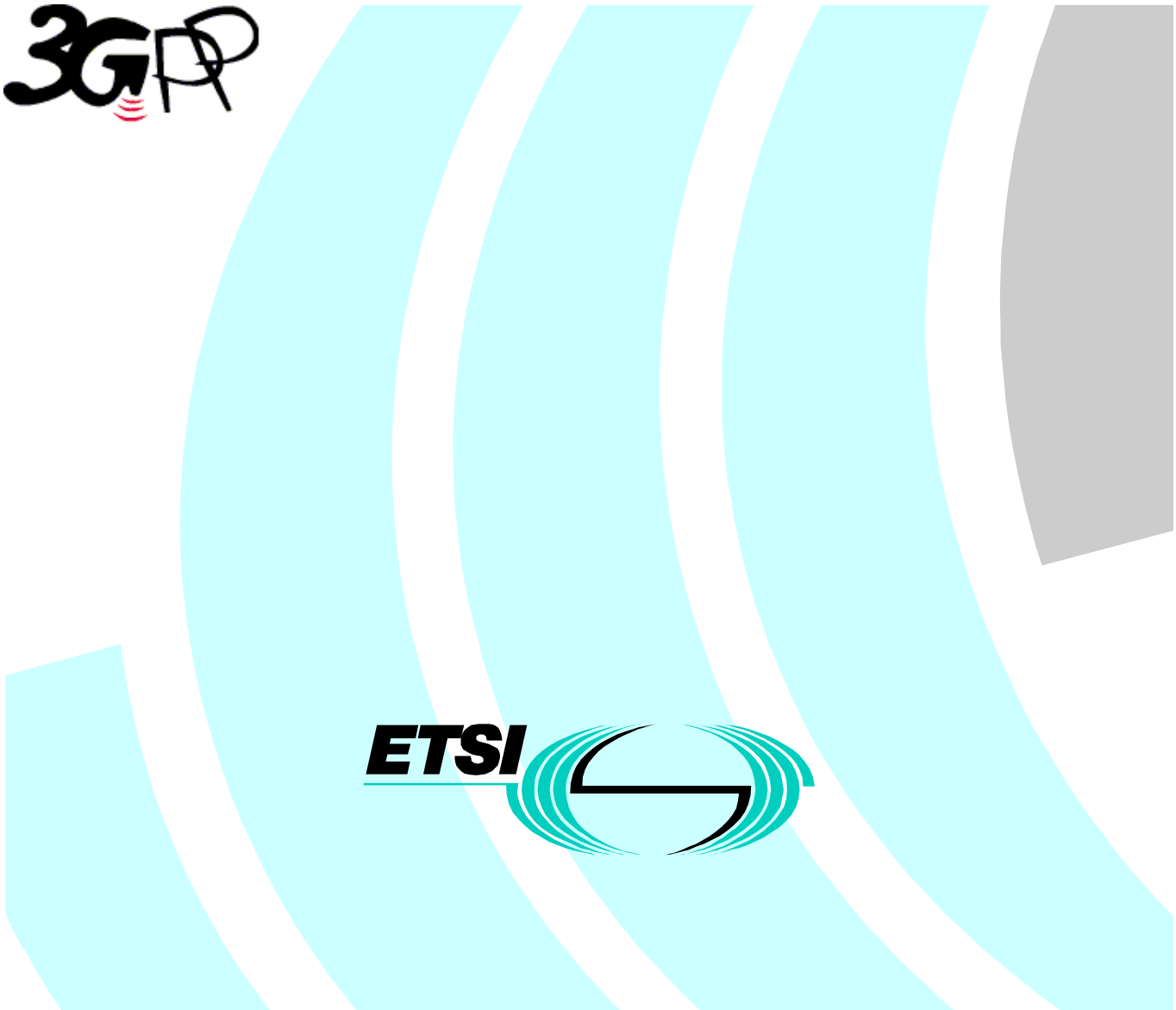
UTRAN network resources IRP: CMIP solution set
(3GPP TS 32.644 version 4.0.0 Release 4)



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Contents

Foreword

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

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Introduction

Due to the growing number of specifications to model new services and Resource Models for Configuration Management (CM), as well as the expected growth in size of each of them from 3GPP Release 4 onwards, a new structure of the specifications is already needed in Release 4. This structure is needed for several reasons, but mainly to enable more independent development and release for each part, as well as a simpler document identification and version handling. Another benefit would be that it becomes easier for bodies outside 3GPP, such as the ITU-T, to refer to telecom management specifications from 3GPP. The new structure of the specifications does not lose any information or functionality supported by the Release 1999. The restructuring also includes defining new IRPs for the Network Resource Model (NRM) parts of R99 Basic CM IRP (Generic, Core Network and UTRAN NRM). These IRPs are named “Network Resources IRP”.

Further, the Notification IRP (in Release 1999: 32.106-1 to -4) and the Name convention for Managed Objects (in Release 1999: 32.106-8) have been moved to a separate number series used for specifications common between several management areas (e.g. CM, FM, PM).

Finally, in addition to the restructuring mentioned above, the need to define some new functionality and IRPs for CM compared to Release 1999, has also been identified. Firstly, a new Bulk CM IRP, and secondly an a GERAN Network Resources IRP, have been created. Thirdly, the Generic, UTRAN and GERAN Network Resources IRPs have been extended with support for GSM-UMTS Inter-system handover (ISH), and the 32.600 (Concept and High-level Requirements) has been modified to cover the high-level Bulk CM and ISH requirements.

Table: Mapping between Release '99 and the new specification numbering scheme

R99 Old no.	Old (R99) specification title	Rel-4 New no.	New (Rel-4) specification title
32.106-1	3G Configuration Management: Concept and Requirements	32.600	**3G Configuration Management**: **Concept and High-level Requirements**
32.106-1	<Notification IRP requirements from 32.106-1 and 32.106-2>	32.301	**Notification IRP**: Requirements
32.106-2	Notification IRP: IS	32.302	Notification IRP: Information Service
32.106-3	Notification IRP: CORBA SS	32.303	Notification IRP: CORBA SS
32.106-4	Notification IRP: CMIP SS	32.304	Notification IRP: CMIP SS
32.106-8	Name convention for Managed Objects	32.300	**Name Convention for Managed Objects**
32.106-1	<Basic CM IRP IS requirements from 32.106-1 and 32.106-5>	32.601	**Basic CM IRP**: Requirements
32.106-5	Basic CM IRP IM (Intro & IS part)	32.602	Basic CM IRP: Information Service
32.106-6	Basic CM IRP CORBA SS (IS related part)	32.603	Basic CM IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (IS related part)	32.604	Basic CM IRP: CMIP SS
32.106-8	Name convention for Managed Objects	32.300	**Name Convention for Managed Objects**
-	-	32.611	**Bulk CM IRP**: Requirements
-	-	32.612	Bulk CM IRP: Information Service
-	-	32.613	Bulk CM IRP: CORBA SS
-	-	32.614	Bulk CM IRP: CMIP SS
		32.615	Bulk CM IRP: XML file format definition
32.106-1	<Basic CM IRP Generic NRM requirements from 32.106-1 and 32.106-5>	32.621	**Generic Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (Generic NRM part)	32.622	Generic Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (Generic NRM related part)	32.623	Generic Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (Generic NRM related part)	32.624	Generic Network Resources IRP: CMIP SS
32.106-1	<Basic CM IRP CN NRM requirements from 32.106-1 and 32.106-5>	32.631	**Core Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (CN NRM part)	32.632	Core Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (CN NRM related part)	32.633	Core Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (CN NRM related part)	32.634	Core Network Resources IRP: CMIP SS
32.106-1	<Basic CM IRP UTRAN NRM requirements from 32.106-1 and 32.106-5>	32.641	**UTRAN Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (UTRAN NRM part)	32.642	UTRAN Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (UTRAN NRM related part)	32.643	UTRAN Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (UTRAN NRM related part)	32.644	UTRAN Network Resources IRP: CMIP SS
		32.651	**GERAN Network Resources IRP**: Requirements
		32.652	GERAN Network Resources IRP: NRM
		32.653	GERAN Network Resources IRP: CORBA SS
		32.654	GERAN Network Resources IRP: CMIP SS

1 Scope

The present document specifies the Common Management Information Protocol (CMIP) Solution Set (SS) for the UTRAN Network Resource Integration Reference Point (IRP): Network Resource Model defined in 3GPP TS 32.642. In detail:

- Clause 4 contains an introduction to some concepts that are the base for some specific aspects of the CMIP interfaces.
- Clause 5 contains the GDMO definitions for the Alarm Management over the CMIP interfaces
- Clause 6 contains the ASN.1 definitions supporting the GDMO definitions provided in clause 5.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document.*

[1] 3GPP TS 32.101: "3G Telecom Management principles and high level requirements".

[2] 3GPP TS 32.102: "3G Telecom Management architecture".

[3] 3GPP TS 32.304: "Telecommunication Management; Notification Management; Part 4: Notification Integration Reference Point; CMIP Solution Set".

[4] 3GPP TS 32.642: "Telecommunication Management; Configuration Management: UTRAN Network Resource Integration Reference Point: Network Resource Model".

[5] ITU-T Recommendation X.710 (1991): "Common Management Information Service Definition for CCITT Applications".

[6] ITU-T Recommendation X.721 (02/92): "Information Technology - Open Systems Interconnection – Structure of Management Information: Definition of Management Information".

[7] ITU-T Recommendation X.730 (01/92): "Information Technology - Open Systems Interconnection – Systems Management: Object Management Function".

[8] ITU-T Recommendation X.733 (02/92): "Information Technology - Open Systems Interconnection - Alarm Reporting Function".

[9] ITU-T Recommendation M.3100 (07/95): "Maintenance Telecommunications Management Network – Generic Network Information Model".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 32.600 and 3GPP TS 32.642 apply.

3.2 Abbreviations

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

CMIP	Common Management Information Protocol
DN	Distinguished Name
GDMO	Guidelines for the Definition of Managed Objects
IDL	Interface Definition Language
IEC	International Electro-technical Commission
ISO	International Standards Organization
ITU-T	International Telecommunication Union, Telecommunication Sector
MIB	Management Information Base
MIM	Management Information Model
MIT	Management Information Tree (or Naming Tree)
MOC	Managed Object Class
MOI	Managed Object Instance
NE	Network Element
NR	Network Resource
NRM	Network Resource Model
TMN	Telecommunications Management Network
UTRAN	UMTS Terrestrial Radio Access Network

4 Basic aspects

4.1 Explanation

A technology independent UTRAN network resource model is defined in 3GPP TS 32.642 for 3G networks. This document provides an implementation of this UTRAN network resource model by using CMIP technology.

4.2 Mapping

The semantic of the UTRAN Network Resource Model is defined in 3GPP TS 32.642. The specification of the information object classes defined there is independent of any implementation technology and protocol.
This subclause maps these technology and protocol independent definitions onto the equivalencies of the CMIP Solution Set of the UTRAN Network Resource IRP.

4.2.1 Mapping of MOCs

Table 2 maps the information object classes defined in the UTRAN Network Resource Model onto the equivalent MOCs of the CMIP Solution Set.

Table 1: Mapping of MOCs

Information Objects of the Generic UTAN IRP NRM	MOCs of this CMIP SS
RncFunction	rncFunction
UtranCell	utranCell
IubLink	iubLink (3GPP TS 32.106-7: 6.2001)
NodeBFunction	nodeBFunction (3GPP TS 32.106-7: 6.2001)
UtranRelation	utranRelation
ExternalUtranCell	externalUtranCell

4.2.2 Mapping of Attributes

Table 2: Mapping of Attributes

Attribute defined in 3GPP TS 32.642	Attribute defined in this CMIP SS
rncFunctionId	rncFunctionId (3GPP TS 32.106-7: 6.2001)
userLabel	userLabel (3GPP TS 32.106-7: 6.2001)
nodeBFunctionId	nodeBFunctionId (3GPP TS 32.106-7: 6.2001)
nodeBFunction-IubLink	nodeBiubLinkLink (3GPP TS 32.106-7: 6.2001)
utranCellId	utranCellId (3GPP TS 32.106-7: 6.2001)
utranCell-IubLink	utranCelliubLinkLink (3GPP TS 32.106-7: 6.2001)
iubLinkId	iubLinkId (3GPP TS 32.106-7: 6.2001)
iubLink-UtranCell	iubLinkUtranCellLink (3GPP TS 32.106-7: 6.2001)
iubLink-NodeBFunction	iubLinkNodeBFunctionLink (3GPP TS 32.106-7: 6.2001)
mcc	mcc
mnc	mnc
rncId	rncId
cId	cId
localCellId	localCellId
uarfcnUl	uarfcnUl
uarfcnDl	uarfcnDl
primaryScramblingCode	primaryScramblingCode
primaryCpichPower	primaryCpichPower
maximumTransmissionPower	maximumTransmissionPower
primarySchPower	primarySchPower
secondarySchPower	secondarySchPower
bchPower	bchPower
lac	lac
rac	rac
sac	sac
ura	ura
utranRelationId	utranRelationId
relationType	relationType
adjacentCell	adjacentCell
uarfcnUl	uarfcnUl
uarfcnDl	uarfcnDl
primaryScramblingCode	primaryScramblingCode
primaryCpichPower	primaryCpichPower
externalUtranCellId	externalUtranCellId

5 GDMO Definitions

5.1.1 rncFunction

rncFunction MANAGED OBJECT CLASS
  DERIVED FROM "3GPP TS 32.620-4: 6.2001": managedFunction;
  CHARACTERIZED BY
    "3GPP TS 32.620-4: 6.2001": rncFunctionBasicPackage,
    rncFunctionHandoverPackage;
REGISTERED AS {ts32-622ObjectClass 1};

5.1.2 utranCell

utranCell MANAGED OBJECT CLASS
  DERIVED FROM "3GPP TS 32.620-4: 6.2001": managedFunction;
  CHARACTERIZED BY
    utranCellBasicPackage,

utranCellHandoverPackage,
utranCellIubLinkAssociationPackage;
REGISTERED AS {ts32-622ObjectClass 2};

5.1.3 utranRelation

utranRelation MANAGED OBJECT CLASS
DERIVED FROM "Recommendation X.721: 1992":top;
CHARACTERIZED BY
utranRelationBasicPackage,
utranRelationAssociationPackage;
CONDITIONAL PACKAGES
"Recommendation M.3100: 1995":createDeleteNotificationsPackage PRESENT IF
"the objectCreation and the objectDeletion defined in Recommendation
X.721 are supported by an instance of this class.",
"Recommendation M.3100: 1995":attributeValueChangeNotificationPackage PRESENT IF
"the attributeValueChange notifications defined in Recommendation X.721
are supported by an instance of this class.",
REGISTERED AS {ts32-622ObjectClass 3};

5.1.4 externalUtranCell

externalUtranCell MANAGED OBJECT CLASS
DERIVED FROM "3GPP TS 32.620-4: 6.2001": managedFunction;
CHARACTERIZED BY
externalUtranCellPackage;
REGISTERED AS {ts32-622ObjectClass 4};

5.2 Packages

5.2.1 rncFunctionHandoverPackage

rncFunctionHandoverPackage PACKAGE
BEHAVIOUR
rncFunctionHandoverPackageBehaviour;
ATTRIBUTES
mcc GET-SET,
mnc GET-SET,
rncId GET-SET,;
REGISTERED AS {ts32-622Package 1};

rncFunctionHandoverPackageBehaviour BEHAVIOUR
DEFINED AS
"This package contains all new attributes defined for UTRAN handover management. These attributes are introduced in R4."

5.2.2 utranCellHandoverPackage

utranCellHandoverPackage PACKAGE
  BEHAVIOUR
    utranCellHandoverPackageBehaviour;
  ATTRIBUTES
    cId GET-SET,
    localCellId GET-SET,
    uarfcnUl GET-SET,
    uarfcnDl GET-SET,
    primaryScramblingCode GET-SET,
    primaryCpichPower GET-SET,
    maximumTransmissionPower GET-SET,
    primarySchPower GET-SET,
    secondarySchPower GET-SET,
    bchPower GET-SET,
    lac GET-SET,
    rac GET-SET,
    sac GET-SET,
    ura GET-SET;
REGISTERED AS {ts32-622Package 2};

utranCellHandoverPackageBehaviour BEHAVIOUR
  DEFINED AS
    "This package contains all new attributes defined for UTRAN handover management. These attributes are introduced in R4."

5.2.3 utranRelationBasicPackage

utranRelationBasicPackage PACKAGE
  BEHAVIOUR
    utranRelationBasicPackageBehaviour;
  ATTRIBUTES
    utranRelationId GET,
    relationType GET-SET,
    uarfcnUl GET,
    uarfcnDl GET,
    primaryScramblingCode GET,
    primaryCpichPower GET,
    lac GET;
REGISTERED AS {ts32-622Package 3};

utranRelationBasicPackageBehaviour BEHAVIOUR
  DEFINED AS
    " The 'UtranRelation' managed object contains radio network related parameters for the relation to the 'UtranCell' or 'ExternalUtranCell' managed object. Note: In handover relation terms, the cell containing the UTRAN Relation object is the source cell for the handover. The cell referred to in the UTRAN

relation object is the target cell for the handover. This defines a one-way handover relation where the direction is *from* source cell *to* target cell.";

5.2.4 utranRelationAssociationPackage

utranRelationAssociationPackage PACKAGE
  BEHAVIOUR
    utranRelationAssociationPackageBehaviour;
  ATTRIBUTES
    adjacentCell GET-SET;
REGISTERED AS {ts32-622Package 4};

utranRelationAssociationPackageBehaviour BEHAVIOUR
  DEFINED AS
    "This package contains all attributes implementing associations related to an utranRelation";

5.2.5 externalUtranCellPackage

externalUtranCellPackage PACKAGE
  BEHAVIOUR
    externalUtranCellPackageBehaviour;
  ATTRIBUTES
    externalUtranCellId GET,
    "3GPP TS 32.106-7: 6.2001": userLabel GET-REPLACE,
    mcc GET-SET,
    mnc GET-SET,
    rncId GET-SET,
    uarfcnUl GET-SET,
    uarfcnDl GET-SET,
    primaryScramblingCode GET-SET,
    primaryCpichPower GET-SET,
    lac GET-SET,
    rac GET-SET;
REGISTERED AS {ts32-622Package 5};

externalUtranCellPackageBehaviour BEHAVIOUR
  DEFINED AS
    " This Managed Object Class represents a radio cell controlled by another IRPAgent. It a necesssary attribute for inter-system handover. This MOC is a subreplication of a MOC in another NEM.";

5.3 Attributes

5.3.1 mcc

mcc ATTRIBUTE

```
  WITH ATTRIBUTE SYNTAX    GSM1220TypeModule.MobileCountryCode;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    mccBehaviour;
REGISTERED AS {ts32-622Attribute 1};

mccBehaviour BEHAVIOUR
  DEFINED AS
    " Mobile Country Code, MCC. It is a part of the PLMN Id (Ref. 3 GPP TS 23.003).”
```

5.3.2 mnc

```
mnc ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    GSM1220TypeModule.NetworkCode;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    mncBehaviour;
REGISTERED AS {ts32-622Attribute 2};

mncBehaviour BEHAVIOUR
  DEFINED AS
    " Mobile Network Code, MNC. It is a part of the PLMN Id (Ref. 3 GPP TS 23.003).”
```

5.3.3 rncId

```
rncId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-622TypeModule.RncId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    rncIdBehaviour;
REGISTERED AS {ts32-622Attribute 3};

rncIdBehaviour BEHAVIOUR
  DEFINED AS
    " Unique RNC ID (Ref. 3 GPP TS 23.003)."
```

5.3.4 cId

```
cId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX    TS32-622TypeModule.CId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    cIdBehaviour;
REGISTERED AS {ts32-622Attribute 4};

rncIdBehaviour BEHAVIOUR
```

DEFINED AS
" cId is the identifier of a cell in one RNC (Ref. 3 GPP TS 25.401)."

5.3.5 localCellId

localCellId ATTRIBUTE
WITH ATTRIBUTE SYNTAX TS32-622TypeModule. LocalCellId;
MATCHES FOR EQUALITY;
BEHAVIOUR
localCellIdBehaviour;
REGISTERED AS {ts32-622Attribute 5};

localCellIdBehaviour BEHAVIOUR
DEFINED AS
" Local Cell id is used to uniquely identify the set of resources defined in a Node B to support a cell (as defined by a Cid Ref. 3 GPP TS 25.401). It must be unique in Node B at a minimum, but may be unique in UTRAN. It can be used to tie the cell in the RNC to a specific set of resources in the Node B."

5.3.6 uarfcnUl

uarfcnUl ATTRIBUTE
WITH ATTRIBUTE SYNTAX TS32-622TypeModule.UarfcnUl;
MATCHES FOR EQUALITY;
BEHAVIOUR
uarfcnUlBehaviour;
REGISTERED AS {ts32-622Attribute 6};

uarfcnUlBehaviour BEHAVIOUR
DEFINED AS
" The UL UTRA absolute Radio Frequency Channel number, UARFCN (Ref. 3 GPP TS 25.433)."

5.3.7 uarfcnDl

uarfcnDl ATTRIBUTE
WITH ATTRIBUTE SYNTAX TS32-622TypeModule.UarfcnDl;
MATCHES FOR EQUALITY;
BEHAVIOUR
uarfcnDlBehaviour;
REGISTERED AS {ts32-622Attribute 7};

uarfcnDlBehaviour BEHAVIOUR
DEFINED AS
" The DL UTRA absolute Radio Frequency Channel number, UARFCN (Ref. 3 GPP TS 25.433)."

5.3.8 primaryScramblingCode

primaryScramblingCode ATTRIBUTE

```
  WITH ATTRIBUTE SYNTAX    TS32-622TypeModule.PrimaryScramblingCode;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    primaryScramblingCodeBehaviour;
REGISTERED AS {ts32-622Attribute 8};
```

primaryScramblingCodeBehaviour BEHAVIOUR
  DEFINED AS
    " The primary DL scrambling code used by the cell (Ref. 3 GPP TS 25.433).”

5.3.9 primaryCpichPower

primaryCpichPower ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-622TypeModule.PrimaryCpichPower;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    primaryCpichPowerBehaviour;
REGISTERED AS {ts32-622Attribute 9};

primaryCpichPowerBehaviour BEHAVIOUR
  DEFINED AS
    " The power of the primary CPICH channel in the cell (Ref. 3 GPP TS 25.433).”

5.3.10 maximumTransmissionPower

maximumTransmissionPower ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-622TypeModule.MaximumTransmissionPower;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    maximumTransmissionPowerBehaviour;
REGISTERED AS {ts32-622Attribute 10};

maximumTransmissionPowerBehaviour BEHAVIOUR
  DEFINED AS
    " The maximum transmission power of a cell, DL Power (Ref. 3 GPP TS 25.433).”

5.3.11 primarySchPower

primarySchPower ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-622TypeModule.PrimarySchPower;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    primarySchPowerBehaviour;
REGISTERED AS {ts32-622Attribute 11};

primarySchPowerBehaviour BEHAVIOUR
  DEFINED AS

" The power of the primary synchronisation channel in the cell, DL Power (Ref. 3 GPP TS 25.433)."

5.3.12 secondarySchPower

secondarySchPower ATTRIBUTE
WITH ATTRIBUTE SYNTAX TS32-622TypeModule.SecondarySchPower;
MATCHES FOR EQUALITY;
BEHAVIOUR
secondarySchPowerBehaviour;
REGISTERED AS {ts32-622Attribute 12};

secondarySchPowerBehaviour BEHAVIOUR
DEFINED AS
" The power of the secondary synchronisation channel in the cell, DL Power (Ref. 3 GPP TS 25.433)."

5.3.13 bchPower

bchPower ATTRIBUTE
WITH ATTRIBUTE SYNTAX TS32-622TypeModule.BchPower;
MATCHES FOR EQUALITY;
BEHAVIOUR
bchPowerBehaviour;
REGISTERED AS {ts32-622Attribute 13};

bchPowerBehaviour BEHAVIOUR
DEFINED AS
" The power of the broadcast channel in the cell (Ref. 3 GPP TS 25.433)."

5.3.14 lac

lac ATTRIBUTE
WITH ATTRIBUTE SYNTAX GSM1220TypeModule.LocationAreaCode;
MATCHES FOR EQUALITY;
BEHAVIOUR
lacBehaviour;
REGISTERED AS {ts32-622Attribute 14};

lacBehaviour BEHAVIOUR
DEFINED AS
" Location Area Code, LAC (Ref. 3 GPP TS 23.003)"

5.3.15 rac

rac ATTRIBUTE
WITH ATTRIBUTE SYNTAX TS32-622TypeModule.Rac;
MATCHES FOR EQUALITY;
BEHAVIOUR

racBehaviour;
REGISTERED AS {ts32-622Attribute 15};

racBehaviour BEHAVIOUR
DEFINED AS
" Routing Area Code, RAC (Ref. 3 GPP TS 23.003)";

5.3.16 sac

sac ATTRIBUTE
WITH ATTRIBUTE SYNTAX TS32-622TypeModule.Sac;
MATCHES FOR EQUALITY;
BEHAVIOUR
sacBehaviour;
REGISTERED AS {ts32-622Attribute 16};

sacBehaviour BEHAVIOUR
DEFINED AS
" Service Area Code, RAC (Ref. 3 GPP TS 23.003)";

5.3.17 ura

ura ATTRIBUTE
WITH ATTRIBUTE SYNTAX TS32-622TypeModule.Ura;
MATCHES FOR EQUALITY;
BEHAVIOUR
uraBehaviour;
REGISTERED AS {ts32-622Attribute 17};

uraBehaviour BEHAVIOUR
DEFINED AS
" UTRAN Registration Area, URA (Ref. 3 GPP TS 25.423)";

5.3.18 utranRelationId

utranRelationId ATTRIBUTE
WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule.GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
utranRelationIdBehaviour;
REGISTERED AS {ts32-622Attribute 18};

utranRelationIdBehaviour BEHAVIOUR
DEFINED AS
"This attribute identifies an utranRelation object.";

5.3.19 relationType

relationType ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-622TypeModule.RelationType;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    relationTypeBehaviour;
REGISTERED AS {ts32-622Attribute 19};

relationTypeBehaviour BEHAVIOUR
  DEFINED AS
    " Type of relation: e.g. Intersystem relation, intrafrequency intrasystem relation, interfrequency intrasystem relation.”

5.3.20 adjacentCell

adjacentCell ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule.GeneralObjectPointer;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    adjacentCellBehaviour;
REGISTERED AS {ts32-622Attribute 20};

adjacentCellBehaviour BEHAVIOUR
  DEFINED AS
    "Pointer to UTRAN cell or external UTRAN cell. Distinguished name of the corresponding object.”

5.3.21 externalUtranCellId

externalUtranCellId ATTRIBUTE
  WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule.GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    adjacentCellBehaviour;
REGISTERED AS {ts32-622Attribute 21};

externalUtranCellIdBehaviour BEHAVIOUR
  DEFINED AS
    "This attribute identifies an externalUtranCell object.”

5.3 Name Binding

5.3.1 rncFunction - managedElement

rncFunction-managedElement NAME BINDING
  SUBORDINATE OBJECT CLASS “3GPP TS 32.106-7: 6.2001”: rncFunction;
  NAMED BY SUPERIOR OBJECT CLASS “3GPP TS 32.620-4: 5.2001”: managedElement;
  WITH ATTRIBUTE “3GPP TS 32.106-7: 6.2001”: rncFunctionId;
  BEHAVIOUR
    rncFunction-managedElementBehaviour;
  CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
  DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-622NameBinding 1};

rncFunction-managedElementBehaviour BEHAVIOUR
  DEFINED AS
    "The name binding represents a relationship in which a managedElement contains and
    controls a rncFunction. When automatic instance naming is used, the choice
    of name bindings is left as a local matter.";

5.3.2 nodeBFunction - managedElement

nodeBFunction-managedElement NAME BINDING
  SUBORDINATE OBJECT CLASS “3GPP TS 32.106-7: 6.2001”: nodeBFunction;
  NAMED BY SUPERIOR OBJECT CLASS “3GPP TS 32.620-4: 5.2001”: managedElement;
  WITH ATTRIBUTE “3GPP TS 32.106-7: 6.2001”: nodeBFunctionId;
  BEHAVIOUR
    nodeBFunction-managedElementBehaviour;
  CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
  DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-622NameBinding 2};

nodeBFunction-managedElementBehaviour BEHAVIOUR
  DEFINED AS
    "The name binding represents a relationship in which a managedElement contains and
    controls a nodeBFunction. When automatic instance naming is used, the choice
    of name bindings is left as a local matter.";

5.3.3 utranCell - rncFunction

utranCell-rncFunction NAME BINDING
  SUBORDINATE OBJECT CLASS utranCell;
  NAMED BY SUPERIOR OBJECT CLASS rncFunction;
  WITH ATTRIBUTE utranCellId;
  BEHAVIOUR
    utranCell-rncFunctionBahaviour;
  CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-622NameBinding 3};

utranCell-rncFunctionBehaviour BEHAVIOUR
DEFINED AS
"The name binding represents a relationship in which a rncFunction contains and controls an utranCell. When automatic instance naming is used, the choice of name bindings is left as a local matter.";

5.3.4 utranRelation - utranCell

utranRelation-utranCell NAME BINDING
SUBORDINATE OBJECT CLASS utranRelation;
NAMED BY SUPERIOR OBJECT CLASS utranCell;
WITH ATTRIBUTE utranRelationId;
BEHAVIOUR
utranRelation-utranCellBahaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-622NameBinding 4};

utranRelation-utranCellBehaviour BEHAVIOUR
DEFINED AS
"The name binding represents a relationship in which an utranCell contains and controls an utranRelation. When automatic instance naming is used, the choice of name bindings is left as a local matter.";

5.3.5 externalUtranCell - subNetwork

externalUtranCell-subNetwork NAME BINDING
SUBORDINATE OBJECT CLASS externalUtranCell;
NAMED BY SUPERIOR OBJECT CLASS “3GPP TS 32.620-4: 05.2001”: subNetwork;
WITH ATTRIBUTE externalUtranCellId;
BEHAVIOUR
externalUtranCell-subNetworkBahaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-622NameBinding 5};

externalUtranCell-subNetworkBehaviour BEHAVIOUR
DEFINED AS
"The name binding represents a relationship in which a subNetwork contains and controls an externalUtranCell. When automatic instance naming is used, the choice of name bindings is left as a local matter.";

5.3.6 vsDataContainer - rncFunction

vsDataContainer-rncFunction NAME BINDING
SUBORDINATE OBJECT CLASS “3GPP TS 32.620-4: 06.2001”: vsDataContainer:;
NAMED BY SUPERIOR OBJECT CLASS rncFunction;
WITH ATTRIBUTE vsDataContainerId;
BEHAVIOUR
vsDataContainer-rncFunctionBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-622NameBinding 6};

vsDataContainer-rncFunctionBehaviour BEHAVIOUR
DEFINED AS
"The name binding represents a relationship in which a rncFunction contains and
controls a vsDataContainer. When automatic instance naming is used, the choice
of name bindings is left as a local matter. This containment relation shall be used only with BulkCmIRP CMIP SS defined in 3GPP TS 32.602-4.";

5.3.7 vsDataContainer - nodeBFunction

vsDataContainer-nodeBFunction NAME BINDING
SUBORDINATE OBJECT CLASS “3GPP TS 32.620-4: 06.2001”: vsDataContainer:;
NAMED BY SUPERIOR OBJECT CLASS “3GPP TS 32.106-7: 06.2001”: nodeBFunction;
WITH ATTRIBUTE vsDataContainerId;
BEHAVIOUR
vsDataContainer-nodeBFunctionBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-622NameBinding 7};

vsDataContainer-nodeBFunctionBehaviour BEHAVIOUR
DEFINED AS
"The name binding represents a relationship in which a nodeBFunction contains and
controls a vsDataContainer. When automatic instance naming is used, the choice
of name bindings is left as a local matter. This containment relation shall be used only with BulkCmIRP CMIP SS defined in 3GPP TS 32.602-4.";

5.3.8 vsDataContainer - utranCell

vsDataContainer-utranCell NAME BINDING
SUBORDINATE OBJECT CLASS “3GPP TS 32.620-4: 06.2001”: vsDataContainer:;
NAMED BY SUPERIOR OBJECT CLASS utranCell;
WITH ATTRIBUTE vsDataContainerId;
BEHAVIOUR
vsDataContainer-utranCellBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-622NameBinding 8};

vsDataContainer-utranCellBehaviour BEHAVIOUR
DEFINED AS
"The name binding represents a relationship in which a utranCell contains and
controls a vsDataContainer. When automatic instance naming is used, the choice
of name bindings is left as a local matter. This containment relation shall be used only with BulkCmIRP CMIP SS defined in 3GPP TS 32.602-4.";

5.3.9 vsDataContainer - utranRelation

vsDataContainer-utranRelation NAME BINDING
SUBORDINATE OBJECT CLASS “3GPP TS 32.620-4: 06.2001”: vsDataContainer:;
NAMED BY SUPERIOR OBJECT CLASS utranRelation;
WITH ATTRIBUTE vsDataContainerId;
BEHAVIOUR
vsDataContainer-utranCellRelationBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-622NameBinding 9};

vsDataContainer-utranRelationBehaviour BEHAVIOUR
DEFINED AS
"The name binding represents a relationship in which a utranRelation contains and
controls a vsDataContainer. When automatic instance naming is used, the choice
of name bindings is left as a local matter. This containment relation shall be used only with BulkCmIRP CMIP SS defined in 3GPP TS 32.602-4.";

6 ASN.1 Definitions

```
TS32-622TypeModule {ccitt (0) identified-organization (4) etsi (0)
        mobileDomain (0) umts-Operation-Maintenance (3) ts-32-622 (622)
        informationModel (0) asn1Module (2) version1 (1)}



DEFINITIONS IMPLICIT TAGS ::=
BEGIN
--EXPORTS everything

--IMPORTS



-- 3GPP TS 32.622-4 related Object Identifiers

baseNodeUMTS  OBJECT IDENTIFIER ::= {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
                        umts-Operation-Maintenance(3)}
ts32-622      OBJECT IDENTIFIER ::= { baseNodeUMTS ts-32-622(622)}
ts32-622InfoModel     OBJECT IDENTIFIER ::= { ts32-622 informationModel(0)}

ts32-622ObjectClass   OBJECT IDENTIFIER ::= { ts32-622InfoModel managedObjectClass(3)}
ts32-622Package       OBJECT IDENTIFIER ::= { ts32-622InfoModel package(4)}
ts32-622Parameter     OBJECT IDENTIFIER ::= { ts32-622InfoModel parameter(5)}
ts32-622NameBinding   OBJECT IDENTIFIER ::= { ts32-622InfoModel nameBinding(6)}
ts32-622Attribute     OBJECT IDENTIFIER ::= { ts32-622InfoModel attribute(7)}
ts32-622Action        OBJECT IDENTIFIER ::= { ts32-622InfoModel action(9)}
ts32-622Notification  OBJECT IDENTIFIER ::= { ts32-622InfoModel notification(10)}



-- Start of 3GPP SA5 own definitions



RncId :: = Integer
CId ::= Integer
LocalCellId ::= Integer
UarfcnUl ::= Integer
UarfcnDl ::= Integer
PrimaryScramblingCode ::= Integer
PrimaryCpichPower ::= Integer
MaximumTransmissionPower ::= Integer
PrimarySchPower ::= Integer
```

```
SecondarySchPower ::= Integer
BchPower ::= Integer
Lac ::= Integer
Rac ::= Integer
Sac ::= Integer
Ura ::= Integer
RelationType ::= ENUMERATED
{
interSystem (1),
intraFrequencyIntraSystem (2),
interFrequencyIntraSystem (3)
}


END  -- of TS32-622TypeModule
```

Annex A (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Jun 2001	S_12	SP-010283	--	--	Approved at TSG SA #12 and placed under Change Control	2.0.0	4.0.0

History

Document history		
V4.0.0	June 2001	Publication