

# ETSI TS 132 654 V4.2.0 (2003-06)

---

*Technical Specification*

**Digital cellular telecommunications system (Phase 2+);  
Telecommunication management;  
Configuration Management (CM);  
GERAN network resources Integration Reference Point (IRP):  
Common Management Information Protocol (CMIP)  
solution set  
(3GPP TS 32.654 version 4.2.0 Release 4)**

---



---

Reference

RTS/TSGS-0532654v420

---

Keywords

GSM

**ETSI**

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

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

Siret N° 348 623 562 00017 - NAF 742 C  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88

---

**Important notice**

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, send your comment to:

[editor@etsi.org](mailto:editor@etsi.org)

---

**Copyright Notification**

No part may be reproduced except as authorized by written permission.  
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2003.  
All rights reserved.

DECT™, PLUGTESTS™ and UMTS™ are Trade Marks of ETSI registered for the benefit of its Members.  
TIPHON™ and the TIPHON logo are Trade Marks currently being registered by ETSI for the benefit of its Members.  
3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

---

## Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://webapp.etsi.org/IPR/home.asp>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

---

## Foreword

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

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

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under <http://webapp.etsi.org/key/queryform.asp>.

# Contents

Intellectual Property Rights .....	2
Foreword.....	2
Foreword.....	5
Introduction .....	5
1 Scope .....	7
2 References .....	7
3 Definitions, symbols and abbreviations .....	8
3.1 Definitions .....	8
3.2 Abbreviations .....	8
4 Basic aspects .....	8
4.1 Explanation.....	8
4.2 Mapping .....	8
4.2.1 Mapping of MOCs.....	8
4.2.2 Mapping of Attributes.....	9
5 GDMO Definitions.....	10
5.1 Managed Object Classes .....	10
5.1.1 bssFunction .....	10
5.1.2 btsSiteMgr.....	10
5.1.3 gsmCell.....	10
5.1.4 externalGsmCell .....	10
5.1.5 gsmRelation .....	11
5.2 Packages .....	11
5.2.1 bssFunctionBasicPackage.....	11
5.2.2 btsSiteMgrBasicPackage .....	11
5.2.3 btsSiteMgrGeoPositionPackage.....	12
5.2.4 gsmCellBasicPackage .....	12
5.2.5 gsmCellMandatoryPackage .....	12
5.2.6 gsmCellOptionalPackage .....	13
5.2.7 externalGsmCellBasicPackage .....	13
5.2.8 externalGsmCellMandatoryPackage.....	13
5.2.9 gsmRelationBasicPackage .....	14
5.2.10 gsmRelationOptionalPackage .....	14
5.3 Attributes .....	14
5.3.1 bssFunctionId.....	14
5.3.2 btsSiteMgrId .....	15
5.3.3 longitude .....	15
5.3.4 latitude .....	15
5.3.5 gsmCellId.....	16
5.3.6 racc.....	16
5.3.7 gsmRelationId.....	16
5.3.8 externalGsmCellId .....	16
5.4 Name Binding .....	17
5.4.1 bssFunction - managedElement .....	17
5.4.2 btsSiteMgr - bssFunction .....	17
5.4.3 gsmCell - btsSiteMgr.....	17
5.4.4 gsmRelation - gsmCell.....	18
5.4.5 externalGsmCell - subNetwork.....	18
5.4.6 vsDataContainer - bssFunction .....	19
5.4.7 vsDataContainer - btsSiteMgr.....	19
5.4.8 vsDataContainer - gsmCell .....	20
5.4.9 vsDataContainer - gsmRelation .....	20

6 ASN.1 Definitions .....21

**Annex A (informative): Change history .....23**

History .....24

---

## Foreword

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

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

---

## Introduction

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	<b>3G Configuration Management: Concept and High-level Requirements</b>
32.106-1	<Notification IRP requirements from 32.106-1 and 32.106-2>	32.301	<b>Notification IRP: Requirements</b>
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	<b>Name Convention for Managed Objects</b>
32.106-1	<Basic CM IRP IS requirements from 32.106-1 and 32.106-5>	32.601	<b>Basic CM IRP: Requirements</b>
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	<b>Name Convention for Managed Objects</b>
-	-	32.611	<b>Bulk CM IRP: Requirements</b>
-	-	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	<b>Generic Network Resources IRP: Requirements</b>
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	<b>Core Network Resources IRP: Requirements</b>
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	<b>UTRAN Network Resources IRP: Requirements</b>
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	<b>GERAN Network Resources IRP: Requirements</b>
		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 GERAN Network Resource Integration Reference Point (IRP): Network Resource Model defined in 3GPP TS 32.652. 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: "Telecommunication management; Principles and high level requirements".
- [2] 3GPP TS 32.102: "Telecommunication management; Architecture".
- [3] 3GPP TS 32.304: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Common Management Information Protocol (CMIP) solution set".
- [4] 3GPP TS 32.652: "Telecommunication management; Configuration Management (CM); GERAN network resources Integration Reference Point (IRP): Network Resource Model (NRM)".
- [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 32.652 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
GERAN	GSM-EDGE Radio Access Network
IDL	Interface Definition Language
IEC	International Electro-technical Commission
ISO	International Standards Organization
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	Universal Terrestrial Radio Access Network

---

## 4 Basic aspects

### 4.1 Explanation

A technology independent GERAN network resource model is defined in 3GPP TS 32.652 for 3G networks. This document provides an implementation of this GERAN network resource model by using CMIP technology.

### 4.2 Mapping

The semantic of the GERAN Network Resource Model is defined in 3GPP TS 32.652. 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 GERAN Network Resource IRP.

#### 4.2.1 Mapping of MOCs

The following table maps the information object classes defined in the GERAN Network Resource Model onto the equivalent MOCs of the CMIP Solution Set.

Table 4.1: Mapping of MOCs

Information Objects of the Generic GERAN IRP NRM	MOCs of this CMIP SS
BssFunction	bssFunction
BtsSiteMgr	btsSiteMgr
GsmCell	gsmCell
GsmRelation	gsmRelation
ExternalGsmCell	externalGsmCell

## 4.2.2 Mapping of Attributes

Table 4.2: Mapping of Attributes

Attribute defined in 3GPP TS 32.652	Attribute defined in this CMIP SS
bssFunctionId	bssFunctionId
btsSiteMgrId	btsSiteMgrId
latitude	latitude
longitude	longitude
gsmCellId	gsmCellId
cellIdentity	cellGlobalIdentity (GSM 12.20 : 6.1996)
lac	
mcc	
mnc	
cellAllocation	cellAllocation (GSM 12.20 : 6.1996)
ncc	bsIdentityCode.ncc (GSM 12.20 : 6.1996)
bcc	bsIdentityCode.bcc (GSM 12.20 : 6.1996)
lac	lac (3GPP TS32.644: 5.2001) only for the MOC gsmRelation
rac	rac (3GPP TS32.644: 5.2001)
racc	racc
tsc	tsc (GSM 12.20 : 6.1996)
rxLevAccessMin	rxLevAccessMin (GSM 12.20 : 6.1996)
msTxPwrMaxCCH	msTxPwrMaxCCH (GSM 12.20 : 6.1996)
hoppingSequenceNumber	hoppingSequenceNumber (GSM 12.20 : 6.1996)
plmnPermitted	plmnPermitted (GSM 12.20 : 6.1996)
gsmRelationId	gsmRelationId
adjacentCell	adjacentCell (3GPP TS32.644: 5.2001)
bcchFrequency	bcchFrequency (GSM 12.20 : 6.1996)
externalGsmCellId	externalGsmCellId

---

## 5 GDMO Definitions

### 5.1 Managed Object Classes

#### 5.1.1 bssFunction

**bssFunction** MANAGED OBJECT CLASS

DERIVED FROM “3GPP TS 32.624 Release 4”: managedFunction;

CHARACTERIZED BY

bssFunctionBasicPackage;

REGISTERED AS {ts32-654ObjectClass 1};

#### 5.1.2 btsSiteMgr

**btsSiteMgr** MANAGED OBJECT CLASS

DERIVED FROM “3GPP TS 32.624 Release 4”: managedFunction;

CHARACTERIZED BY

btsSiteMgrBasicPackage;

CONDITIONAL PACKAGES

btsSiteMgrGeoPositionPackage PRESENT IF

"the attributes defined in this package are supported by an instance of this class.";

REGISTERED AS {ts32-654ObjectClass 2};

#### 5.1.3 gsmCell

**gsmCell** MANAGED OBJECT CLASS

DERIVED FROM “3GPP TS 32.624 Release 4”: managedFunction;

CHARACTERIZED BY

gsmCellBasicPackage,

gsmCellMandatoryPackage,

CONDITIONAL PACKAGES

gsmCellOptionalPackage PRESENT IF

"the attributes defined in this package are supported by an instance of this class.";

REGISTERED AS {ts32-654ObjectClass 3};

#### 5.1.4 externalGsmCell

**externalGsmCell** MANAGED OBJECT CLASS

DERIVED FROM “3GPP TS 32.624 Release 4”: managedFunction;

CHARACTERIZED BY

externalGsmCellBasicPackage,

externalGsmCellMandatoryPackage;

CONDITIONAL PACKAGES

gsmCellOptionalPackage PRESENT IF

"the attributes defined in this package are supported by an instance of this class.";

REGISTERED AS {ts32-654ObjectClass 4};

## 5.1.5 gsmRelation

### **gsmRelation** MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

gsmRelationBasicPackage;

CONDITIONAL PACKAGES

gsmRelationOptionalPackage PRESENT IF

"the attributes defined in this package are supported by an instance of this class.";

"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 {ts32-654ObjectClass 5};

## 5.2 Packages

### 5.2.1 bssFunctionBasicPackage

#### **bssFunctionBasicPackage** PACKAGE

BEHAVIOUR

bssFunctionBasicPackageBehaviour;

ATTRIBUTES

bssFunctionId GET;

REGISTERED AS {ts32-654Package 1};

#### **bssFunctionBasicPackageBehaviour** BEHAVIOUR

DEFINED AS

"The Managed Object Class bssFunction represents BSS functionality. For more information about the BSS, see GSM 03.02";

### 5.2.2 btsSiteMgrBasicPackage

#### **btsSiteMgrBasicPackage** PACKAGE

BEHAVIOUR

btsSiteMgrBasicPackageBehaviour;

ATTRIBUTES

btsSiteMgrId GET;

REGISTERED AS {ts32-654Package 2};

#### **btsSiteMgrBasicPackageBehaviour** BEHAVIOUR

DEFINED AS

"The 'BtsSiteMgr' managed object contains site specific information for a BTS site.";

### 5.2.3 btsSiteMgrGeoPositionPackage

**btsSiteMgrGeoPositionPackage** PACKAGE

BEHAVIOUR

btsSiteMgrGeoPositionPackageBehaviour;

ATTRIBUTES

longitude GET-REPLACE,

latitude GET-REPLACE;

REGISTERED AS {ts32-654Package 3};

**btsSiteMgrGeoPositionPackageBehaviour** BEHAVIOUR

DEFINED AS

"This package contains the attributes describing the geographic position of a BTS site.";

### 5.2.4 gsmCellBasicPackage

**gsmCellBasicPackage** PACKAGE

BEHAVIOUR

gsmCellBasicPackageBehaviour;

ATTRIBUTES

gsmCellId GET;

REGISTERED AS {ts32-654Package 4};

**gsmCellBasicPackageBehaviour** BEHAVIOUR

DEFINED AS

"The managed object class gsmCell represents the GSM radio cell.";

### 5.2.5 gsmCellMandatoryPackage

**gsmCellMandatoryPackage** PACKAGE

BEHAVIOUR

gsmCellMandatoryPackageBehaviour;

ATTRIBUTES

"ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": cellAllocation GET-REPLACE,

"ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": bsIdentityCode GET-REPLACE,

"ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": cellGlobalIdentity GET-REPLACE,

"ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": tsc GET-REPLACE,

"ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": rxLevAccessMin GET-REPLACE,

"ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": msTxPwrMaxCCH GET-REPLACE,

"ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": hoppingSequenceNumber GET-REPLACE,

“ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)”: plmnPermitted GET-REPLACE;  
REGISTERED AS {ts32-654Package 5};

#### **gsmCellMandatoryPackageBehaviour** BEHAVIOUR

DEFINED AS

"This package contains the elementary mandatory attributes of a gsmCell.";

### 5.2.6 gsmCellOptionalPackage

#### **gsmCellOptionalPackage** PACKAGE

BEHAVIOUR

gsmCellOptionalPackageBehaviour;

ATTRIBUTES

“3GPP TS 32.644: 6.2001”: rac GET-REPLACE,  
racc GET-REPLACE;

REGISTERED AS {ts32-654Package 6};

#### **gsmCellOptionalPackageBehaviour** BEHAVIOUR

DEFINED AS

"This package contains the optional GPRS attributes of a gsmCell.";

### 5.2.7 externalGsmCellBasicPackage

#### **externalGsmCellBasicPackage** PACKAGE

BEHAVIOUR

externalGsmCellBasicPackageBehaviour;

ATTRIBUTES

externalGsmCellId GET;

REGISTERED AS {ts32-654Package 7};

#### **externalGsmCellBasicPackageBehaviour** BEHAVIOUR

DEFINED AS

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

### 5.2.8 externalGsmCellMandatoryPackage

#### **externalGsmCellMandatoryPackage** PACKAGE

BEHAVIOUR

externalGsmCellMandatoryPackageBehaviour;

ATTRIBUTES

“ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)”: bsIdentityCode GET-REPLACE,  
“ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)”: cellGlobalIdentity GET-REPLACE,  
“ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)”: bcchFrequency GET-REPLACE;

REGISTERED AS {ts32-654Package 8};

### **externalGsmCellMandatoryPackageBehaviour** BEHAVIOUR

DEFINED AS

"This package contains the elementary mandatory attributes of a externalGsmCell.";

## 5.2.9 gsmRelationBasicPackage

### **gsmRelationBasicPackage** PACKAGE

BEHAVIOUR

gsmRelationBasicPackageBehaviour;

ATTRIBUTES

gsmRelationId GET,

"3GPP TS 32.644 Release 4": adjacentCell GET-REPLACE;

REGISTERED AS {ts32-654Package 9};

### **gsmRelationBasicPackageBehaviour** BEHAVIOUR

DEFINED AS

"The 'GsmRelation' managed object contains radio network related parameters for the relation to the 'GsmCell' or 'ExternalGsmCell' managed object. Note: In handover relation terms, the cell containing the GSM Relation object is the source cell for the handover. The cell referred to in the GSM 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.";

## 5.2.10 gsmRelationOptionalPackage

### **gsmRelationOptionalPackage** PACKAGE

BEHAVIOUR

gsmRelationOptionalPackageBehaviour;

ATTRIBUTES

"ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": bsIdentityCode GET-REPLACE,

"3GPP TS 32.644: 6.2001": lac GET-REPLACE,

"ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": bcchFrequency GET-REPLACE;

REGISTERED AS {ts32-654Package 10};

### **gsmRelationOptionalPackageBehaviour** BEHAVIOUR

DEFINED AS

"This package contains the optional attributes of a gsmRelation.";

## 5.3 Attributes

### 5.3.1 bssFunctionId

#### **bssFunctionId** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-654TypeModule.GeneralObjectId;

MATCHES FOR EQUALITY;  
BEHAVIOUR  
    bssFunctionIdBehaviour;  
REGISTERED AS {ts32-654Attribute 1};

#### **bssFunctionIdBehaviour** BEHAVIOUR

DEFINED AS  
    "This attribute identifies a bssFunction object."

### 5.3.2 btsSiteMgrId

#### **btsSiteMgrId** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-654TypeModule.GeneralObjectId;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
    btsSiteMgrIdBehaviour;  
REGISTERED AS {ts32-654Attribute 2};

#### **btsSiteMgrIdBehaviour** BEHAVIOUR

DEFINED AS  
    "This attribute identifies a btsSiteMgr object."

### 5.3.3 longitude

#### **longitude** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-654TypeModule.Longitude;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
    longitudeBehaviour;  
REGISTERED AS {ts32-654Attribute 3};

#### **longitudeBehaviour** BEHAVIOUR

DEFINED AS  
    " Used for geographical positioning of the sitemanager.";

### 5.3.4 latitude

#### **latitude** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-654TypeModule.Latitude;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
    latitudeBehaviour;  
REGISTERED AS {ts32-654Attribute 4};

#### **latitudeBehaviour** BEHAVIOUR

DEFINED AS  
    " Used for geographical positioning of the sitemanager.";



### 5.3.5 gsmCellId

#### **gsmCellId** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-654TypeModule.GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

gsmCellIdBehaviour;

REGISTERED AS {ts32-654Attribute 5};

#### **gsmCellIdBehaviour** BEHAVIOUR

DEFINED AS

" Cell Identity (Ref GSM 03.03).";

### 5.3.6 racc

#### **racc** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-654TypeModule.Racc;

MATCHES FOR EQUALITY;

BEHAVIOUR

raccBehaviour;

REGISTERED AS {ts32-654Attribute 7};

#### **raccBehaviour** BEHAVIOUR

DEFINED AS

" Routing Area Colour Code, RACC.";

### 5.3.7 gsmRelationId

#### **gsmRelationId** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-654TypeModule.GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

gsmRelationIdBehaviour;

REGISTERED AS {ts32-654Attribute 8};

#### **gsmRelationIdBehaviour** BEHAVIOUR

DEFINED AS

"This attribute identifies a gsmRelation object.";

### 5.3.8 externalGsmCellId

#### **externalGsmCellId** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-654TypeModule.GeneralObjectId;

MATCHES FOR EQUALITY;

BEHAVIOUR

externalGsmCellIdBehaviour;

REGISTERED AS {ts32-654Attribute 9};

**externalGsmCellIdBehaviour** BEHAVIOUR

DEFINED AS

"This attribute identifies a externalGsmCell object.";

## 5.4 Name Binding

### 5.4.1 bssFunction - managedElement

**bssFunction-managedElement** NAME BINDING

SUBORDINATE OBJECT CLASS bssFunction;

NAMED BY SUPERIOR OBJECT CLASS "3GPP TS 32.624 Release 4": managedElement;

WITH ATTRIBUTE bssFunctionId;

BEHAVIOUR

bssFunction-managedElementBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-654NameBinding 1};

**bssFunction-managedElementBehaviour** BEHAVIOUR

DEFINED AS

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

### 5.4.2 btsSiteMgr - bssFunction

**btsSiteMgr-bssFunction** NAME BINDING

SUBORDINATE OBJECT CLASS btsSiteMgr;

NAMED BY SUPERIOR OBJECT CLASS bssFunction;

WITH ATTRIBUTE btsSiteMgrId;

BEHAVIOUR

btsSiteMgr-bssFunctionBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-654NameBinding 2};

**btsSiteMgr-bssFunctionBehaviour** BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a bssFunction contains and controls a btsSiteMgr. When automatic instance naming is used, the choice of name bindings is left as a local matter.";

### 5.4.3 gsmCell - btsSiteMgr

**gsmCell-btsSiteMgr** NAME BINDING

SUBORDINATE OBJECT CLASS gsmCell;  
NAMED BY SUPERIOR OBJECT CLASS btsSiteMgr;  
WITH ATTRIBUTE gsmCellId;  
BEHAVIOUR  
    gsmCell-btsSiteMgrBehaviour;  
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;  
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;  
REGISTERED AS {ts32-654NameBinding 3};

#### **gsmCell-btsSiteMgrBehaviour** BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a btsSiteMgr contains and controls a gsmCell. When automatic instance naming is used, the choice of name bindings is left as a local matter.";

### 5.4.4 gsmRelation - gsmCell

#### **gsmRelation-gsmCell** NAME BINDING

SUBORDINATE OBJECT CLASS gsmRelation;  
NAMED BY SUPERIOR OBJECT CLASS gsmCell;  
WITH ATTRIBUTE gsmRelationId;  
BEHAVIOUR  
    gsmRelation-gsmCellBehaviour;  
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;  
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;  
REGISTERED AS {ts32-654NameBinding 4};

#### **gsmRelation-gsmCellBehaviour** BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a gsmCell contains and controls a gsmRelation. When automatic instance naming is used, the choice of name bindings is left as a local matter.";

### 5.4.5 externalGsmCell - subNetwork

#### **externalGsmCell-subNetwork** NAME BINDING

SUBORDINATE OBJECT CLASS externalGsmCell;  
NAMED BY SUPERIOR OBJECT CLASS "3GPP TS 32.624 Release 4": subNetwork;  
WITH ATTRIBUTE externalGsmCellId;  
BEHAVIOUR  
    externalGsmCell-subNetworkBehaviour;  
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;  
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;  
REGISTERED AS {ts32-654NameBinding 5};

**externalGsmCell-subNetworkBehaviour** BEHAVIOUR

DEFINED AS

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

**5.4.6 vsDataContainer - bssFunction****vsDataContainer-bssFunction** NAME BINDING

SUBORDINATE OBJECT CLASS "3GPP TS 32.624 Release 4": vsDataContainer::;

NAMED BY SUPERIOR OBJECT CLASS bssFunction;

WITH ATTRIBUTE vsDataContainerId;

BEHAVIOUR

vsDataContainer-bssFunctionBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-654NameBinding 6};

**vsDataContainer-bssFunctionBehaviour** BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a bssFunction 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 32.614.";

**5.4.7 vsDataContainer - btsSiteMgr****vsDataContainer-btsSiteMgr** NAME BINDING

SUBORDINATE OBJECT CLASS "3GPP TS 32.624 Release 4": vsDataContainer::;

NAMED BY SUPERIOR OBJECT CLASS btsSiteMgr;

WITH ATTRIBUTE vsDataContainerId;

BEHAVIOUR

vsDataContainer-btsSiteMgrBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-654NameBinding 7};

**vsDataContainer-btsSiteMgrBehaviour** BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a btsSiteMgr 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 32.614.";

## 5.4.8 vsDataContainer - gsmCell

### **vsDataContainer-gsmCell** NAME BINDING

SUBORDINATE OBJECT CLASS "3GPP TS 32.624 Release 4": vsDataContainer;;  
NAMED BY SUPERIOR OBJECT CLASS gsmCell;  
WITH ATTRIBUTE vsDataContainerId;  
BEHAVIOUR  
vsDataContainer-gsmCellBehaviour;  
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;  
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;  
REGISTERED AS {ts32-654NameBinding 8};

### **vsDataContainer-gsmCellBehaviour** BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a gsmCell 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 32.614.";

## 5.4.9 vsDataContainer - gsmRelation

### **vsDataContainer-gsmRelation** NAME BINDING

SUBORDINATE OBJECT CLASS "3GPP TS 32.624 Release 4": vsDataContainer;;  
NAMED BY SUPERIOR OBJECT CLASS gsmRelation;  
WITH ATTRIBUTE vsDataContainerId;  
BEHAVIOUR  
vsDataContainer-gsmRelationBehaviour;  
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;  
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;  
REGISTERED AS {ts32-622NameBinding 9};

### **vsDataContainer-gsmRelationBehaviour** BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a gsmRelation 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 32.614.";

---

## 6 ASN.1 Definitions

```
TS32-654TypeModule {ccitt (0) identified-organization (4) etsi (0)
    mobileDomain (0) umts-Operation-Maintenance (3) ts-32-654 (654)
    informationModel (0) asn1Module (2) version1 (1)}
```

```
DEFINITIONS IMPLICIT TAGS ::=
```

```
BEGIN
```

```
--EXPORTS everything
```

```
IMPORTS
```

```
GeneralObjectId
```

```
    FROM TS32-624TypeModule {ccitt (0) identified-organization (4) etsi (0)
        mobileDomain (0) umts-Operation-Maintenance (3) ts32-624 (624)
        informationModel (0) asn1Module (2) version1 (1)}
```

```
Rcc FROM TS32-644TypeModule {ccitt (0) identified-organization (4) etsi (0)
    mobileDomain (0) umts-Operation-Maintenance (3) ts-32-644 (644)
    informationModel (0) asn1Module (2) version1 (1)}
```

```
-- 3GPP TS 32.654 related Object Identifiers
```

```
baseNodeUMTS OBJECT IDENTIFIER ::= {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
    umts-Operation-Maintenance(3)}
```

```
ts32-654 OBJECT IDENTIFIER ::= { baseNodeUMTS ts32-654(654)}
```

```
ts32-654InfoModel OBJECT IDENTIFIER ::= { ts32-654 informationModel(0)}
```

```
ts32-654ObjectClass OBJECT IDENTIFIER ::= { ts32-654InfoModel managedObjectClass(3)}
```

```
ts32-654Package OBJECT IDENTIFIER ::= { ts32-654InfoModel package(4)}
```

```
ts32-654Parameter OBJECT IDENTIFIER ::= { ts32-654InfoModel parameter(5)}
```

```
ts32-654NameBinding OBJECT IDENTIFIER ::= { ts32-654InfoModel nameBinding(6)}
```

```
ts32-654Attribute OBJECT IDENTIFIER ::= { ts32-654InfoModel attribute(7)}
```

```
ts32-654Action OBJECT IDENTIFIER ::= { ts32-654InfoModel action(9)}
```

```
ts32-654Notification OBJECT IDENTIFIER ::= { ts32-654InfoModel notification(10)}
```

```
-- Start of 3GPP SA5 own definitions
```

```
Longitude ::= INTEGER
```

```
Latitude ::= INTEGER
```

Racc ::= INTEGER

END -- of TS32-654TypeModule

---

## 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
Sep 2001	S_13	SP-010478	001	--	Correction due to TS renumbering	4.0.0	4.1.0
Sep 2001	S_13	SP-010477	002	--	Addition of mcc and mnc in the object model of GERAN	4.0.0	4.1.0
Jun 2003	S_20	SP-030283	004	-	Removal of relationType	4.1.0	4.2.0



---

## History

<b>Document history</b>		
V4.0.0	June 2001	Publication
V4.1.0	September 2001	Publication
V4.2.0	June 2003	Publication