Technical Specification Group Services and System Aspects **TSGS#13(01)0477**

Meeting #13, Beijing, China, 24-27 September 2001

Source: **SA5**

Title: **Rel-4 CR32.652 & 32.654 on Adding mcc and mnc in the object model of GERAN (NRM)**

Document for: **Approval**

Agenda Item: **7.5.3**

Doc-1st-Level	Doc-2nd-Level	Spec	CR	Rev	Phase	Subject	Cat	Version Current	Version-New	Workitem
SP-010477	S5-010578	32.652	001		Rel-4	Addition of mcc and mnc in the object model of GERAN	F	4.0.0	4.1.0	OAM-CM
SP-010477	S5-010579	32.654	002		Rel-4	Addition of mcc and mnc in the object model of GERAN	F	4.0.0	4.1.0	OAM-CM

CR-Form-v4

CHANGE REQUEST

⌘ **32.652** **CR** **001** ⌘ ev **-** ⌘ Current version: **4.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network ☐

Title:	⌘	Addition of mcc and mnc in the object model of GERAN
Source:	⌘	SA5
Work item code:	⌘	OAM-CM
Date:	⌘	07/09/2001
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	mcc and mnc are required to identify a GSM cell. These two attributes are currently missing in the GERAN NRM
Summary of change:	⌘	adding the attributes of mcc and mnc into the MOCs GsmCell and ExternalGsmCell.
Consequences if not approved:	⌘	Cannot identify GSM Cell.

Clauses affected:	⌘	6.3.3 and 5.3.5		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications **X** O&M Specifications	⌘	32.653 (GERAN Network Resources IRP: CORBA Solution Set); CR not available yet, 32.654 (GERAN Network Resources IRP: CMIP Solution Set),
Other comments:	⌘	Only if this "Parent" CR is approved, the "Child" CR32.654-001_S5-010579 can also be approved.		

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

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6.3.3 MOC GsmCell

This managed object class represents the GSM radio cell. The applicability of instantiation of this class is depending on the ME type. It may only be instantiated under ME of type BSC.

Table 6: Attributes of GsmCell

Name	Qualifier	Description
gsmCellId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ-WRITE, M	A user friendly (and user assigned) name of the associated object.
cellIdentity	READ-WRITE,M	Cell Identity (Ref GSM 03.03)
cellAllocation	READ-WRITE,M	This attribute defines the set of radio frequencies allocated and available to a cell, the first element sets the BCCH frequency, Ref GSM 12.20
ncc	READ-WRITE,M	Network Colour Code, NCC (part of BSIC). Ref GSM 04.08
bcc	READ-WRITE,M	Base station colour code, BCC (part of BSIC). Ref GSM 04.08
lac	READ-WRITE,M	Location Area Code, LAC . (Ref GSM 04.08)
mcc	READ-WRITE,M	Mobile Country Code (Ref GSM 04.08)
mnc	READ-WRITE,M	Mobile Network Code (Ref GSM 04.08)
rac	READ-WRITE,O	Routing Area Code, RAC. See Note for the optional condition.
racc	READ-WRITE,O	Routing Area Colour Code, RACC. See Note for the optional condition.
tsc	READ-WRITE,M	Training Sequence Code, an attribute of the class channel in GSM 12.20
rxLevAccessMin	READ-WRITE,M	Minimum Access Level, rxLevAccessMin is an attribute of the class bts in GSM 12.20. Attribute description reference GSM 05.08 (RXLEV_ACCESS_MIN)
msTxPwrMaxCCH	READ-WRITE,M	Maximum Transmission Power for a Mobile Station on a CCH, mSTxPwrMaxCCH is an attribute of the class bts in GSM 12.20. Attribute description reference GSM 05.08 (MS_TXPWR_MAX_CCH)
hoppingSequenceNumber	READ-WRITE,M	HoppingSequenceNumber is an attribute of the class frequencyHoppingSystem (GSM 12.20). Attribute description reference GSM 05.02
plmnPermitted	READ-WRITE,M	Network Colour Code Permitted, plmnPermitted which is an attribute of the class bts in GSM 12.20. Attribute description reference GSM 05.08 (NCC_PERMITTED)

Note: This attribute shall be included if the cell is a GPRS cell.

Table 7: Notifications of GsmCell

Name	Qualifier	Notes
notifyAckStateChanged	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAttributeValueChange	O	
notifyChangedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyClearedAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyNewAlarm	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyObjectCreation	O	
notifyObjectDeletion	O	

.....

6.3.5 MOC ExternalGsmCell

This Managed Object Class represents a radio cell controlled by another IRPAgent. This MOC has necesssary attributes for inter-system handover. It contains a subset of the attributes of related MOCs controlled by another IRPAgent. To maintain the consistency between the attribute values of these two MOCs is outside the scope of this document.

Table 10: Attributes of ExternalGsmCell

Name	Qualifier	Description
externalGsmCellId	READ-ONLY, M	An attribute whose 'name+value' can be used as an RDN when naming an instance of this object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.
userLabel	READ-WRITE, M	A user friendly (and user assigned) name of the associated object.
cellIdentity	READ-WRITE, M	Cell identity, (Ref GSM 03.03)
bcchFrequency	READ-WRITE, M	This attribute contains the absolute radio frequency channel number of the BCCH channel of the GSM cell.
ncc	READ-WRITE, M	Network Colour Code, NCC (part of BSIC. Ref GSM 04.08).
bcc	READ-WRITE, M	Base station colour code, BCC (part of BSIC. Ref GSM 04.08).
lac	READ-WRITE, M	Location Area Code, LAC (Ref GSM 04.08).
mcc	READ-WRITE, M	Mobile Country Code (Ref GSM 04.08).
mnc	READ-WRITE, M	Mobile Network Code (Ref GSM 04.08).
rac	READ-WRITE, O	Routing Area Code, RAC. See Note for the optional condition.
racc	READ-WRITE, O	Routing Area Colour Code, RACC. See Note for the optional condition.

Note: This attribute shall be included if the cell is a GPRS cell.

Table11: Notifications of ExternalGsmCell

Name	Qualifier	Notes
notifyAttributeValueChange	O	
notifyObjectCreation	O	
notifyObjectDeletion	O	

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3GPP TSG-SA5 (Telecom Management) **S5-010579**
Meeting #22, Paris, France, 3 – 7 September 2001 **S5C010368**

CR-Form-v4

CHANGE REQUEST

⌘ **32.654** **CR** **002** ⌘ ev **-** ⌘ Current version: **4.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network ☐

Title:	⌘	Addition of mcc and mnc in the object model of GERAN
Source:	⌘	SA5
Work item code:	⌘	OAM-CM
Date:	⌘	07/09/2001
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
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Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	mcc and mnc are required to identify a GSM cell. These two attributes are currently missing in the GERAN NRM
Summary of change:	⌘	adding the attributes of mcc and mnc into the MOCs gsmCell and externalGsmCell.
Consequences if not approved:	⌘	Cannot identify GSM Cell.

Clauses affected:	⌘	4.2.2, 5.2.5, 5.2.8, 5.3.6 and 6		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications **X** O&M Specifications	⌘	32.652 (GERAN Network Resources IRP: Network Resource Model)
Other comments:	⌘	This "Child" CR can only be approved after its "Parent" CR32.652-001_S5-010578		

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

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4.2.2 Mapping of Attributes

Table 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
relationType	relationType (3GPP TS32.644: 5.2001)
adjacentCell	adjacentCell (3GPP TS32.644: 5.2001)
bcchFrequency	bcchFrequency (GSM 12.20 : 6.1996)
externalGsmCellId	externalGsmCellId

……..

5.2.5 gsmCellMandatoryPackage

gsmCellMandatoryPackage PACKAGE
BEHAVIOUR
gsmCellMandatoryPackageBehaviour;
ATTRIBUTES
~~cellIdentity GET-REPLACE,~~
“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,
~~“3GPP TS 32.644: 6.2001”: lac 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.";

…….

5.2.8 externalGsmCellMandatoryPackage

externalGsmCellMandatoryPackage PACKAGE
BEHAVIOUR
externalGsmCellMandatoryPackageBehaviour;
ATTRIBUTES
~~cellIdentity GET-REPLACE,~~
“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)”: 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.";

…….

~~5.3.6cellIdentity~~

~~**cellIdentity** ATTRIBUTE~~
~~WITH ATTRIBUTE SYNTAX TS32-654TypeModule.CellIdentity;~~
~~MATCHES FOR EQUALITY;~~
~~BEHAVIOUR~~
~~cellIdentityBehaviour;~~
~~REGISTERED AS {ts32-654Attribute 6};~~

~~**cellIdentityBehaviour** BEHAVIOUR~~
~~DEFINED AS~~
~~" Location Area Code, LAC (Ref. 3 GPP TS 23.003)”;~~

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)}
CellIdentity
      FROM GSM1220TypeModule {ccitt (0) identified-organization (4) etsi (0) mobileDomain (0) gsm-
      Operation-Maintenance (3) gsm-12-20 (20) informationModel (0) asn1Module (2)
      asn1TypeModule (0)}


-- 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