Source: SA5 (Telecom Management)

Title: 6 Rel-5 CR 32.652/3/4/5, 32.615/645: Inclusion of External BSS Function in GERAN/UTRAN

Document for: Approval

Agenda Item: 7.5.3

Doc-1st-Level	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Doc-2nd-Level	Workitem
SP-030418	32.652	015	-	Rel-5	Inclusion of External BSS Function in GERAN NRM - Alignment with 32.632	F	5.1.0	S5-037029	OAM-NIM
SP-030418	32.653	006	-	Rel-5	Inclusion of External BSS Function in GERAN CORBA solution set - Alignment with 32.652	F	5.1.0	S5-037030	OAM-NIM
SP-030418	32.654	007	-	Rel-5	Inclusion of ExternalBssFunction - Alignment with 32.652	F	5.1.0	S5-037032	OAM-NIM
SP-030418	32.655	004	-	Rel-5	Inclusion of External BSS Function in GERAN XML Schema - Alignment with 32.652	F	5.1.0	S5-037031	OAM-NIM
SP-030418	32.615	010	-	Rel-5	Inclusion of External BSS Function in GERAN XML Schema - Alignment with 32.652/655	F	5.1.0	S5-036947	OAM-NIM
SP-030418	32.645	005	-	Rel-5	Inclusion of External BSS Function in GERAN XML Schema – impacts on 32.645 (UTRAN XML Schema) - Alignment with 32.652/655	F	5.1.0	S5-036946	OAM-NIM

3GPP TSG-SA5 (Telecom Management) **S5-036947**
Meeting #35, Sophia Antipolis, France, 1 – 5 September 2003

CR-Form-v7

CHANGE REQUEST

⌘ **32.615** **CR** **010** ⌘**rev** **-** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Inclusion of External BSS Function in GERAN XML Schema - Alignment with 32.652/655
Source:	⌘	SA5 (tapinder.pal@t-mobile.de, frederic.bonneau@nortelnetworks.com)
Work item code:	⌘	OAM-NIM
Date:	⌘	05/09/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

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)
Rel-6 (Release 6)

Reason for change:	⌘	GERAN XML schema namespace URI is referenced by Bulk CM configuration data file base XML schema.
Summary of change:	⌘	• Evolution of the version part of Bulk CM configuration data file base XML schema namespace URI definition • Correction of references to GERAN XML schema namespace URI • Correction of references to UTRAN XML schema namespace URI
Consequences if not approved:	⌘	Bulk CM configuration data file base XML schema would not reference the correct GERAN XML schema.

Clauses affected:	⌘	Annex A

Other specs affected:	⌘	Y	N		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	Child CR of 32.655CR004. The XML schema file "configData.xsd" reflects the changes from this CR (only).

Change in Annex A

Annex A (normative): Configuration data file base XML schema (file name "configData.xsd")

The following XML schema configData.xsd is the base schema for configuration data XML files:

```
<?xml version="1.0" encoding="UTF-8"?>

<!--
  3GPP TS 32.615 Bulk CM IRP
  Configuration data file base XML schema
  configData.xsd
-->

<schema
  targetNamespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32615-5~~1~~20.zip#configData"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-510.zip#genericNrm"
  xmlns:cn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32635-510.zip#coreNrm"
  xmlns:un=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-5~~1~~20.zip#utranNrm"
  xmlns:gn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-5~~1~~20.zip#geranNrm"
>

  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-510.zip#genericNrm"
  />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32635-510.zip#coreNrm"
  />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-5~~1~~20.zip#utranNrm"
  />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-5~~1~~20.zip#geranNrm"
  />

  <!-- Configuration data file root XML element -->

  <element name="bulkCmConfigDataFile">
    <complexType>
      <sequence>
        <element name="fileHeader">
          <complexType>
            <attribute name="fileFormatVersion" type="string" use="required"/>
            <attribute name="senderName" type="string" use="optional"/>
            <attribute name="vendorName" type="string" use="optional"/>
          </complexType>
```

```
        </element>
        <element name="configData" maxOccurs="unbounded">
          <complexType>
            <choice>
              <element ref="xn:SubNetwork"/>
              <element ref="xn:MeContext"/>
              <element ref="xn:ManagedElement"/>
            </choice>
            <attribute name="dnPrefix" type="string" use="optional"/>
          </complexType>
        </element>
        <element name="fileFooter">
          <complexType>
            <attribute name="dateTime" type="dateTime" use="required"/>
          </complexType>
        </element>
      </sequence>
    </complexType>
  </element>

</schema>
```

End of Change in Annex A

Annex E (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
Dec 2001	S_14	SP-010645	001	--	Addition of MCC and MNC attributes to GSM cell related MOCs in Bulk CM XML file format	4.0.0	4.1.0
Mar 2002	S_15	SP-020032	002	--	Alignment of XML file definitions with W3C, and modifications to allow use of commercially available XML processing tools	4.1.0	4.2.0
Jun 2002	S_16	SP-020298	003	--	New structure of specifications for the definition of Bulk CM IRP XML file formats	4.2.0	5.0.0
Sep 2002	--	--	--	--	Cosmetics by Rapporteur/MCC	5.0.0	5.0.1
Jun 2003	S_20	SP-030284	006	--	Correction of Bulk CM session log file XML element "log" declaration	5.0.1	5.1.0
Jun 2003	S_20	SP-030287	007	--	Correction of Bulk CM configuration data file XML schema namespace URIs	5.0.1	5.1.0
Jun 2003	S_20	SP-030288	008	--	Generic NRM XML schema dependencies removal	5.0.1	5.1.0

3GPP TSG-SA5 (Telecom Management) **S5-036946**
Meeting #35, Sophia Antipolis, France, 1 – 5 September 2003

CR-Form-v7

CHANGE REQUEST

⌘ **32.645** CR **005** ⌘rev **-** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Inclusion of External BSS Function in GERAN XML Schema – impacts on 32.645 (UTRAN XML Schema) - Alignment with 32.652/655
Source:	⌘	SA5 (tapinder.pal@t-mobile.de , frederic.bonneau@nortelnetworks.com)
Work item code:	⌘	OAM-NIM
Date:	⌘	05/09/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

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F *(correction)*
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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)
Rel-6 (Release 6)

Reason for change:	⌘	GERAN XML schema namespace URI is referenced by UTRAN XML schema.
Summary of change:	⌘	• Evolution of the version part of UTRAN XML schema namespace URI definition • Correction of references to GERAN XML schema namespace URI • Correction of references to UTRAN XML schema namespace URI
Consequences if not approved:	⌘	UTRAN XML schema would not reference the correct GERAN XML schema.

Clauses affected:	⌘	Annex A

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments:	⌘	Child CR of 32.655CR004. The XML schema file "utranNrm.xsd" reflects the changes from this CR (only).

Change in Annex A

Annex A (normative): Configuration data file NRM-specific XML schema (file name "utranNrm.xsd")

The following XML schema utranNrm.xsd is the NRM-specific schema for the UTRAN Network Resources IRP NRM defined in 3GPP TS 32.642 [1]:

```
<?xml version="1.0" encoding="UTF-8"?>

<!--
  3GPP TS 32.645 UTRAN Network Resources IRP
  Bulk CM Configuration data file NRM-specific XML schema
  utranNrm.xsd
-->

<schema
  targetNamespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-5~~1~~20.zip#utranNrm"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-510.zip#genericNrm"
  xmlns:un=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-5~~1~~20.zip#utranNrm"
  xmlns:gn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-5~~1~~20.zip#geranNrm"
>

  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-510.zip#genericNrm"
  />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-5~~1~~20.zip#geranNrm"
  />

  <!-- UTRAN Network Resources IRP NRM attribute related XML simple 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="uarfcnDl">
    <union>
      <simpleType>
        <restriction base="integer">
```

```
        <minInclusive value="9662"/>
        <maxInclusive value="9938"/>
      </restriction>
    </simpleType>
    <simpleType>
      <restriction base="integer">
        <minInclusive value="10562"/>
        <maxInclusive value="10838"/>
      </restriction>
    </simpleType>
  </union>
</simpleType>

<simpleType name="uarfcnUl">
  <union>
    <simpleType>
      <restriction base="integer">
        <minInclusive value="9262"/>
        <maxInclusive value="9538"/>
      </restriction>
    </simpleType>
    <simpleType>
      <restriction base="integer">
        <minInclusive value="9612"/>
        <maxInclusive value="9888"/>
      </restriction>
    </simpleType>
  </union>
</simpleType>

<simpleType name="primaryScramblingCode">
  <restriction base="integer">
    <minInclusive value="0"/>
    <maxInclusive value="511"/>
  </restriction>
</simpleType>

<simpleType name="primaryCpichTxPower">
  <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="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>

  <simpleType name="ura">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="65535"/>
    </restriction>
  </simpleType>

  <!-- UTRAN Network Resources IRP NRM class associated XML elements -->

  <element
    name="RncFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
```

```
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="mcc" minOccurs="0"/>
                <element name="mnc" minOccurs="0"/>
                <element name="rncId" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="un:UtranCell"/>
            <element ref="un:IubLink"/>
            <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>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="nodeBFunctionIubLink" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="UtranCell">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="cId" type="un:cId" minOccurs="0"/>
                <element
                  name="localCellId"
                  type="un:localCellId"
                  minOccurs="0"
                />
                <element
                  name="uarfcnUl"
                  type="un:uarfcnDl"
```

```
                  minOccurs="0"
                />
                <element
                  name="uarfcnDl"
                  type="un:uarfcnUl"
                  minOccurs="0"
                />
                <element
                  name="primaryScramblingCode"
                  type="un:primaryScramblingCode"
                  minOccurs="0"
                />
                <element
                  name="primaryCpichTxPower"
                  type="un:primaryCpichTxPower"
                  minOccurs="0"
                />
                <element
                  name="maximumTransmissionPower"
                  type="un:maximumTransmissionPower"
                  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="lac" type="un:lac" minOccurs="0"/>
                <element name="rac" type="un:rac" minOccurs="0"/>
                <element name="sac" type="un:sac" minOccurs="0"/>
                <element name="ura" type="un:ura" minOccurs="0"/>
                <element name="utranCellIubLink" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="un:UtranRelation"/>
            <element ref="gn:GsmRelation"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="IubLink">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
```

```
                <element name="userLabel" minOccurs="0"/>
                <element name="iubLinkUtranCell" minOccurs="0"/>
                <element name="iubLinkNodeBFunction" minOccurs="0"/>
              </all>
            </complexType>
          </element>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="UtranRelation">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="adjacentCell" minOccurs="0"/>
                <element
                  name="uarfcnUl"
                  type="un:uarfcnUl"
                  minOccurs="0"
                />
                <element
                  name="uarfcnDl"
                  type="un:uarfcnUl"
                  minOccurs="0"
                />
                <element
                  name="primaryScramblingCode"
                  type="un:primaryScramblingCode"
                  minOccurs="0"
                />
                <element
                  name="primaryCpichTxPower"
                  type="un:primaryCpichTxPower"
                  minOccurs="0"
                />
                <element name="lac" type="un:lac" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="ExternalUtranCell"
  substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
```

```
              <complexType>
                <all>
                  <element name="userLabel" minOccurs="0"/>
                  <element name="cId" type="un:cId" minOccurs="0"/>
                  <element name="mcc" minOccurs="0"/>
                  <element name="mnc" minOccurs="0"/>
                  <element name="rncId" minOccurs="0"/>
                  <element
                    name="uarfcnUl"
                    type="un:uarfcnUl"
                    minOccurs="0"
                  />
                  <element
                    name="uarfcnDl"
                    type="un:uarfcnDl"
                    minOccurs="0"
                  />
                  <element
                    name="primaryScramblingCode"
                    type="un:primaryScramblingCode"
                    minOccurs="0"
                  />
                  <element
                    name="primaryCpichTxPower"
                    type="un:primaryCpichTxPower"
                    minOccurs="0"
                  />
                  <element name="lac" type="un:lac" minOccurs="0"/>
                  <element name="rac" type="un:rac" minOccurs="0"/>
                </all>
              </complexType>
            </element>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

</schema>
```

End of Change in Annex A

Annex B (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Jun 2002	S_16	SP-020298	--	--	Submitted to TSG SA #16 for Information	1.0.0	
Sep 2002	S_17	SP-020462	--	--	Submitted to TSG SA #17 for Approval	2.0.0	5.0.0
Jun 2003	S_20	SP-030283	001	--	Deletion of UTRAN attribute relationType in XML Schema	5.0.0	5.1.0
Jun 2003	S_20	SP-030287	002	--	Correction of UTRAN NRM XML schema namespace URIs	5.0.0	5.1.0
Jun 2003	S_20	SP-030288	003	--	Generic NRM XML schema dependencies removal	5.0.0	5.1.0
Jun 2003	S_20	SP-030285	004	--	Remove UTRAN NRM XML schema duplicate MOC attribute XML declarations	5.0.0	5.1.0

3GPP TSG-SA5 (Telecom Management) **S5-037029**
Meeting #35, Sophia Antipolis, France, 1 – 5 September 2003

CR-Form-v7

CHANGE REQUEST

⌘ **32.652** CR **015** ⌘rev **-** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Inclusion of External BSS Function in GERAN NRM - Alignment with 32.632
Source:	⌘	SA5 (tapinder.pal@t-mobile.de)
Work item code:	⌘	OAM-NIM
Date:	⌘	05/09/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

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)
Rel-6 (Release 6)

Reason for change:	⌘	The IOC ExternalBssFunction is referenced in the Core Network NRM (32.632) but is missing in the GERAN NRM (32.652).
Summary of change:	⌘	IOC ExternalBssFunction has been added to the GERAN NRM.
Consequences if not approved:	⌘	The Core Network (32.632) and GERAN NRMs (32.652) will not be aligned.

Clauses affected:	⌘	

Other specs affected:	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
	X		O&M Specifications	32.653, 32.654, 32.655

Other comments:	⌘	Children CRs for the CORBA, CMIP, XML solution sets (32.653, 32.654, 32.655) in S5-037030/1/2.

Change in Clause 6

6 IRP Information Model

6.1 Information entities imported and local labels

None.

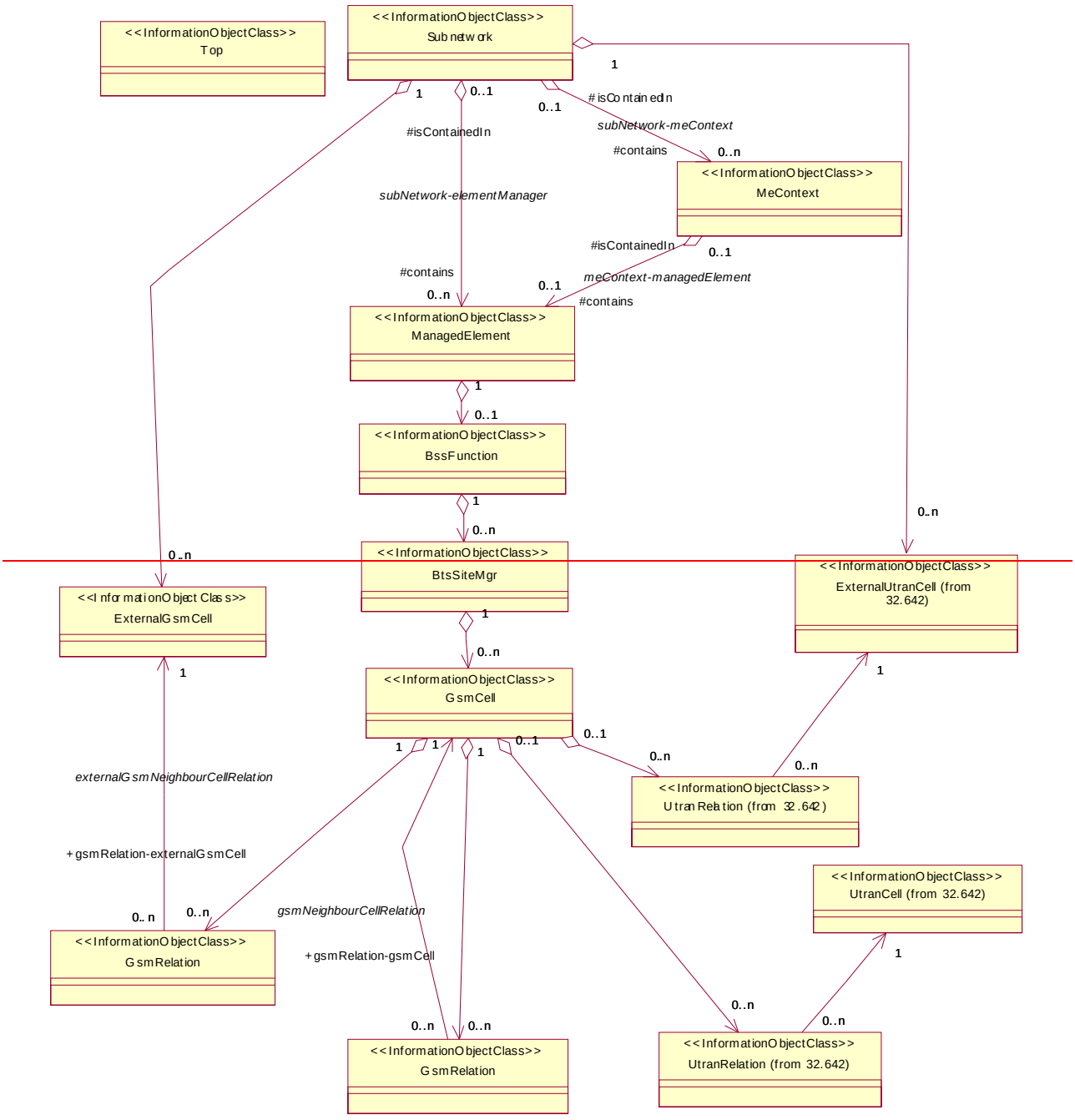
6.2 Class diagram

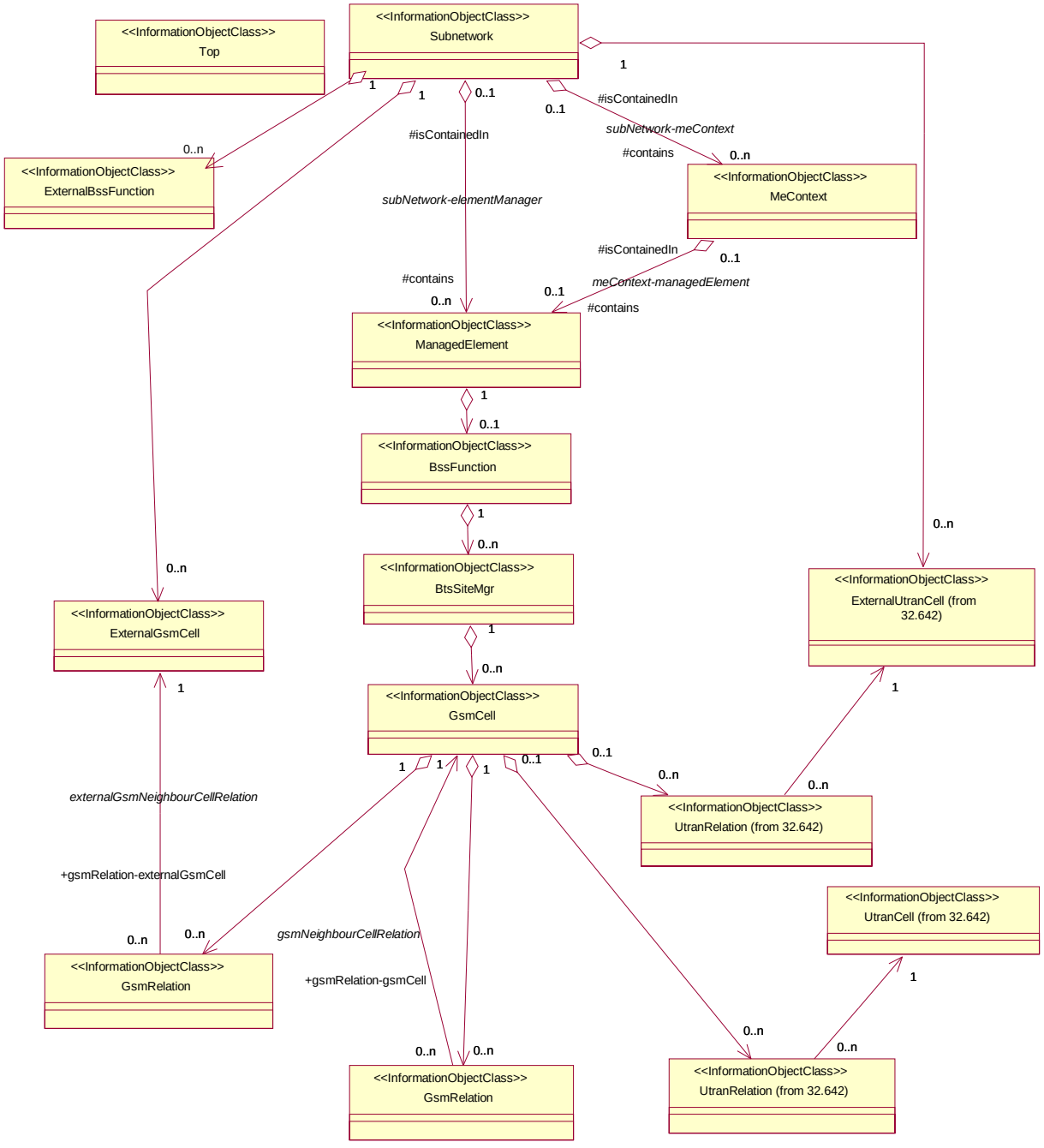
6.2.1 Attributes and relationships

This sub-clause depicts the set of IOCs that encapsulate information relevant for this service. This sub-clause provides the overview of all information object classes in UML. Subsequent sub-clauses provides more detailed specification of various aspects of these information object classes.

Figure 6.1 show the containment/naming hierarchy and the associations of the GERAN NRM.

NOTE: The name-containment relations between IOCs are in the diagram(s) below indicated by UML "Aggregation by reference" ("hollow diamonds").


<<InformationObjectClass>>
Top
<<InformationObjectClass>>
Subnetwork
<<InformationObjectClass>>
MeContext
<<InformationObjectClass>>
ManagedElement
<<InformationObjectClass>>
BssFunction
<<InformationObjectClass>>
BtsSiteMgr
<<InformationObjectClass>>
ExternalGsmCell
<<InformationObjectClass>>
ExternalUtranCell (from 32.642)
<<InformationObjectClass>>
GsmCell
<<InformationObjectClass>>
UtranRelation (from 32.642)
<<InformationObjectClass>>
UtranCell (from 32.642)
<<InformationObjectClass>>
GsmRelation
<<InformationObjectClass>>
GsmRelation
<<InformationObjectClass>>
UtranRelation (from 32.642)
#isContainedIn
subNetwork-meContext
#contains
subNetwork-elementManager
meContext-managedElement
externalGsmNeighbourCellRelation
+gsmRelation-externalGsmCell
gsmNeighbourCellRelation
+gsmRelation-gsmCell
1
0..1
0..n



NOTE 1: ManagedElement may be contained in either a SubNetwork or an MeContext instance, or have no parent instance at all. See also [16].

NOTE 2: The listed cardinality numbers represent transient as well as steady-state numbers, and reflect all managed object creation and deletion scenarios.

NOTE 3: The relation between UtranRelation and UtranCell is optional. It may be present if both the UtranCell and the GsmCell are managed by the same management node.

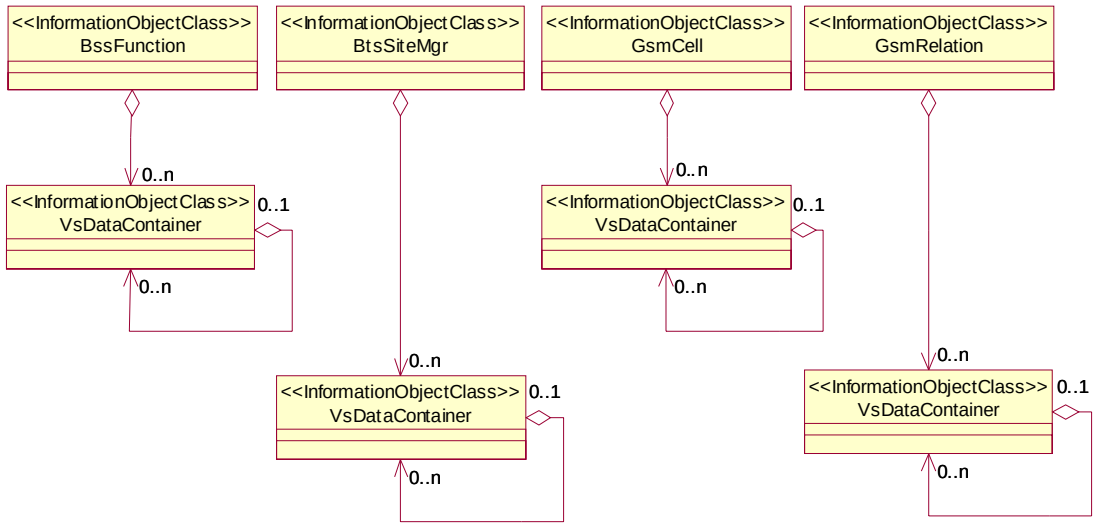
NOTE 4: The GsmRelation and UtranRelation can be contained under IOCs defined in other NRMs.

NOTE 5: The ExternalBssFunction is used in the Core Network NRM

Figure 6.1: GERAN NRM Containment/Naming and Association diagram

Each Managed Object is identified with a Distinguished Name (DN) according to 3GPP TS 32.300 [13] that expresses its containment hierarchy. As an example, the DN of an IOC representing a cell could have a format like:

SubNetwork=Sweden,MeContext=MEC-Gbg-1,ManagedElement=RNC-Gbg-1, BssFunction=BSS1.



NOTE 1: The listed cardinality numbers represent transient as well as steady-state numbers, and reflect all managed object creation and deletion scenarios.

NOTE 2: Each instance of the vsDataContainer shall only be contained under one MOC. The vsDataContainer can be contained under MOCs defined in other NRMs.

Figure 6.2: GERAN NRM Containment/Naming and Association diagram

The vsDataContainer is only used for the Bulk CM IRP.

6.2.2 Inheritance

This sub-clause depicts the inheritance relationships that exists between IOCs.

Figure 6.3 shows the inheritance hierarchy for the GERAN NRM.

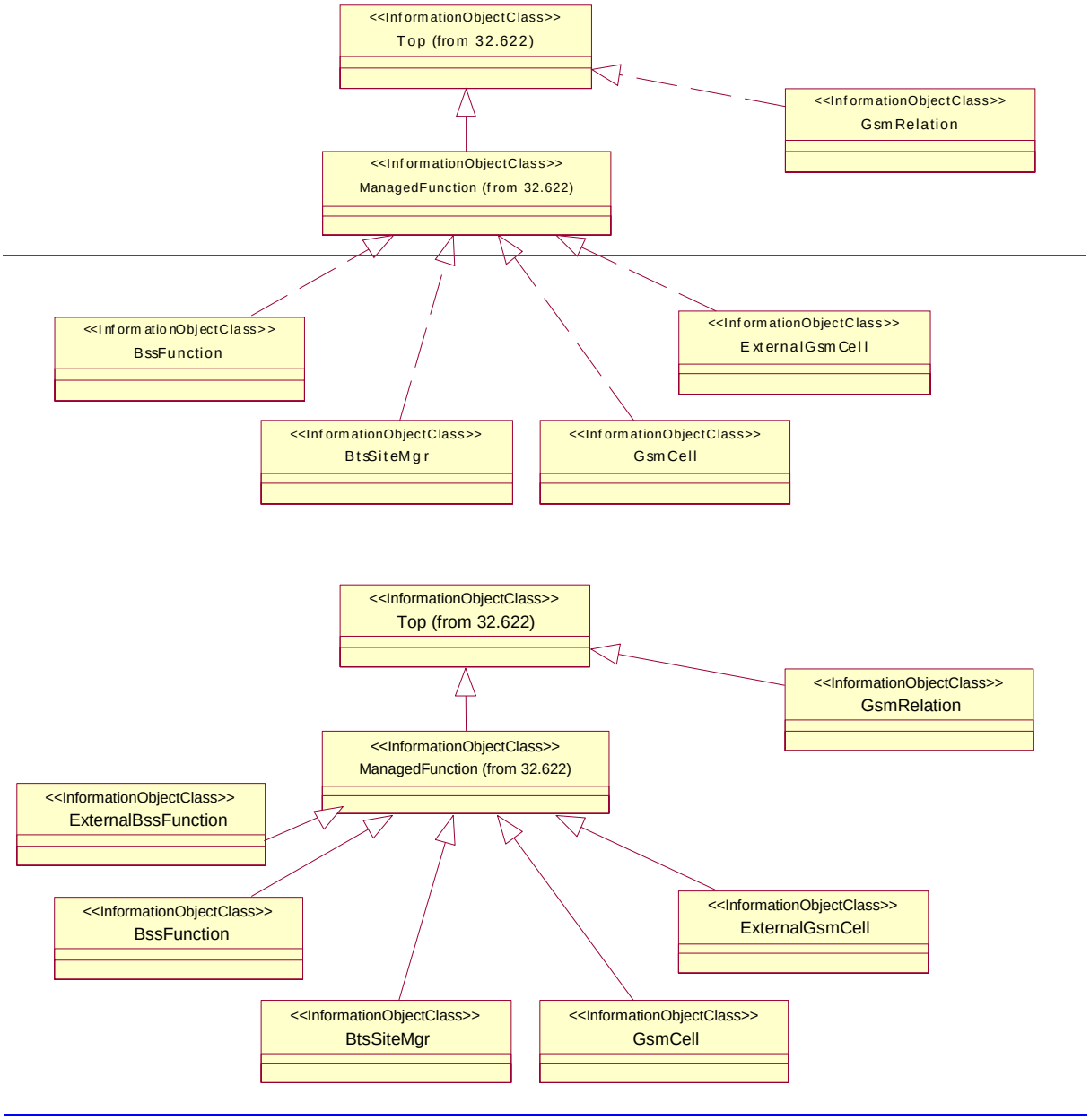


Figure 6.3: GERAN NRM Inheritance Hierarchy

6.3 Information object classes definition

6.3.1 BssFunction

6.3.1.1 Definition

This IOC represents BSS functionality. For more information about the BSS, see GSM 03.02 [16].

6.3.1.2 Attributes

Table 6.1: Attributes of BssFunction

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
bssFunctionId	+	M	M	-
userLabel	+	M	M	M

Table 6.2: Notifications of `BssFunction`

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	
notifyComments	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAlarmListRebuilt	See Alarm IRP (3GPP TS 32.111-2 [11])	

6.3.2 BtsSiteMgr

6.3.2.1 Definition

The "BtsSiteMgr" IOC contains site specific information for a BTS site.

6.3.2.2 Attributes

Table 6.3a: Attributes of BtsSiteMgr

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
btsSiteMgrId	+	M	M	-
userLabel	+	M	M	M
latitude	+	O	M	M
longitude	+	O	M	M

Table 6.3b: Additional attributes of BtsSiteMgr for the support of the State Management IRP

Attribute Name	Support Qualifier	READ	WRITE
operationalState	O	M	—
NOTE: No state propagation shall be implied.			

Table 6.4: Notifications of `BtsSiteMgr`

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	
notifyComments	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAlarmListRebuilt	See Alarm IRP (3GPP TS 32.111-2 [11])	

6.3.3 GsmCell

6.3.3.1 Definition

This IOC 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.

6.3.3.2 Attributes

Table 6.5: Attributes of GsmCell

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
gsmCellId	+	M	M	-
userLabel	+	M	M	M
cellIdentity	+	M	M	M
cellAllocation	+	M	M	M
ncc	+	M	M	M
bcc	+	M	M	M
lac	+	M	M	M
mcc	+	M	M	M
mnc	+	M	M	M
rac	+	O	M	M
racc	+	O	M	M
tsc	+	M	M	M
rxLevAccessMin	+	M	M	M
msTxPwrMaxCCH	+	M	M	M
hoppingSequenceNumber	+	M	M	M
plmnPermitted	+	M	M	M

Table 6.6: 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	
notifyComments	See Alarm IRP (3GPP TS 32.111-2 [11])	
notifyAlarmListRebuilt	See Alarm IRP (3GPP TS 32.111-2 [11])	

6.3.3.3 Attribute constraints

The optionally attributes rac and racc shall be included if the cell is a GPRS cell. Otherwise they shall not be included.

6.3.4 GsmRelation

6.3.4.1 Definition

The "GsmRelation" IOC 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.

6.3.4.2 Attributes

Table 6.7: Attributes of GsmRelation

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
gsmRelationId	+	M	M	-
adjacentCell	+	M	M	M
bcchFrequency	+	O	M	-
ncc	+	O	M	-
bcc	+	O	M	-
lac	+	O	M	-

Table 6.8: Notifications of `GsmRelation`

Name	Qualifier	Notes
notifyAttributeValueChange	O	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.4.3 Attribute constraints

The optionally attributes bcchFrequency, ncc, bcc and lac shall be included if the EM does not guarantee consistency between the cell definition and what is broadcasted on system information. Otherwise they shall not be included.

6.3.5 ExternalGsmCell

6.3.5.1 Definition

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

6.3.5.2 Attributes

Table 6.9: Attributes of ExternalGsmCell

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
externalGsmCellId	+	M	M	-
userLabel	+	M	M	M
cellIdentity	+	M	M	M
bcchFrequency	+	M	M	M
ncc	+	M	M	M
bcc	+	M	M	M
lac	+	M	M	M
mcc	+	M	M	M
mnc	+	M	M	M
rac	+	O	M	M
racc	+	O	M	M

Table 6.10: Notifications of `ExternalGsmCell`

Name	Qualifier	Notes
notifyAttributeValueChange	O	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.5.3 Attribute constraints

The optionally attributes rac and racc shall be included if the cell is a GPRS cell. Otherwise they shall not be included.

6.3.6 ExternalBssFunction

6.3.6.1 Definition

This IOC represents a BssFunction controlled by another IRPAgent. It contains a subset of the attributes of related IOCs controlled by another IRPAgent. To maintain the consistency between the attribute values of these two IOCs is outside the scope of this document.

6.3.6.2 Attributes

Table 6.11: Attributes of ExternalBssFunction

Attribute name	Visibility	Support Qualifier	Read Qualifier	Write Qualifier
externalBssFunctionId	+	M	M	-
userLabel	+	M	M	M

Table 6.12: Notifications of `ExternalBssFunction`

Name	Qualifier	Notes
notifyAttributeValueChange	O	
notifyObjectCreation	O	
notifyObjectDeletion	O	

6.3.6.3 Attribute constraints

None.

6.4 Information relationships definition

6.4.1 ExternalGsmNeighbourCellRelation (M)

6.4.1.1 Definition

This represents a unidirectional relation from GsmRelation to the ExternalGsmCell. The role of the relation shall be mapped to a reference attribute, named adjacentCell, of the IOC.

6.4.1.2 Roles

Table 6.11: Roles of the relation ExternalGsmNeighbourCellRelation

Name	Definition
gsmRelation-externalGsmNeighbourCell	This role (when present) represents GsmRelation capability to identify one ExternalGsmCell. When this role is present, the GsmRelation.adjacentCell shall contain one ExternalGsmNeighbourCell DN.

6.4.1.3 Constraints

This role (for a particular GsmRelation) shall be present if the GsmNeighbourCellRelation of this particular GsmRelation is absent. This role shall be absent if the GsmNeighbourCellRelation of this particular GsmRelation is present.

6.4.2 GsmNeighbourCellRelation (M)

6.4.2.1 Definition

This represents the unidirectional relation from the GsmRelation to GsmCell. The role of the relation shall be mapped to a reference attribute, named adjacentCell, of the IOC.

6.4.2.2 Roles

Table 6.12: Roles of the relation GsmNeighbourCellRelation

Name	Definition
gsmRelation-gsmNeighbourCell	This role (when present) represents GsmRelation capability to identify one GsmCell. When this role is present, the GsmRelation.adjacentCell shall contain one GsmCell DN.

6.4.2.3 Constraints

This role (for a particular GsmRelation) shall be present if the ExternalGsmNeighbourCellRelation of this particular GsmRelation is absent. This role shall be absent if the ExternalGsmNeighbourCellRelation of this particular GsmRelation is present.

6.5 Information attributes definition

6.5.1 Definition and legal values

The table below defines the attributes that are present in several information object classes of the present document.

Table 6.13: Attributes

Attribute Name	Definition	Legal Values
adjacentCell	Pointer to GSM cell or external GSM cell. Distinguished Name of the corresponding object.	
bcc	IOCs **GsmCell** and **ExternalGsmCell**: Base station colour code, BCC (part of BSIC). Ref 3GPP TS 44.018 [4]. IOC **GsmRelation**: Base station colour code, BCC (part of BSIC. Ref 3GPP TS 44.018 [4]) for another GSM cell or the external GSM cell, that is broadcast in System Information in the Cell.	
bcchFrequency	IOC **ExternalGsmCell**: This attribute contains the absolute radio frequency channel number of the BCCH channel of the GSM cell. IOC **GsmRelation**: This attribute contains the absolute radio frequency channel number of the BCCH channel of another GSM cell or the external GSM cell, that is broadcast in System Information in the Cell.	
bssFunctionId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
btsSiteMgrId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
cellAllocation	This attribute defines the set of radio frequencies allocated and available to a cell, the first element sets the BCCH frequency, Ref 3GPP TS 44.018 [4].	
cellIdentity	Cell Identity (Ref 3GPP TS 24.008 [3]).	
externalBssFunctionId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
externalGsmCellId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
gsmCellId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
gsmRelationId	An attribute whose "name+value" can be used as an RDN when naming an instance of the object class. This RDN uniquely identifies the object instance within the scope of its containing (parent) object instance.	
hoppingSequenceNumber	HoppingSequenceNumber. Attribute description reference 3GPP TS 45.002 [6] (HSN)	
lac	IOCs **GsmCell** and **ExternalGsmCell**: Location Area Code, LAC . Ref 3GPP TS 24.008 [3]. IOC **GsmRelation**: Location Area Code, LAC (Ref 3GPP TS 24.008 [3]) for another GSM cell or the external GSM cell, that is broadcast in System Information in the Cell.	
latitude	Used for geographical positioning of the sitemanager	
longitude	Used for geographical positioning of the sitemanager	
mcc	Mobile Country Code, MCC (part of the PLMN Id, Ref. 3GPP TS 23.003 [8]).	
mnc	Mobile Network Code, MNC (part of the PLMN Id, Ref. 3GPP TS 23.003 [8]).	
msTxPwrMaxCCH	Maximum Transmission Power for a Mobile Station on a CCH. Attribute description Ref 3GPP TS 45.008 [5] (MS_TXPWR_MAX_CCH)	
ncc	IOCs **GsmCell** and **ExternalGsmCell**: Network Colour Code, NCC (part of BSIC). Ref 3GPP TS 44.018 [4]. IOC **GsmRelation**: Network Colour Code, NCC (part of BSIC. Ref 3GPP TS 44.018 [4]) for another GSM cell or the external GSM cell, that is broadcast in System Information in the Cell.	
plmnPermitted	Network Colour Code Permitted. Attribute description reference 3GPP TS 45.008 [5] (NCC_PERMITTED)	
rac	Routing Area Code, RAC. Ref 3GPP TS 44.018 [4].	
racc	Routing Area Colour Code, RACC. Ref 3GPP TS 44.018 [4].	
rxLevAccessMin	Minimum Access Level. Attribute description Ref 3GPP TS 45.008 [5] (RXLEV_ACCESS_MIN)	
tsc	Training Sequence Code, an attribute of the class channel in Ref 3GPP TS 44.018 [4]	
userLabel	IOC **BssFunction**: A user-friendly (and user assigned) name of the associated object. Inherited from ManagedFunction. **Other IOCs**: A user-friendly (and user assigned) name of the associated object.	

6.5.2 Constraints

None.

6.6 Particular information configurations

Not applicable.

End of Change in Clause 6

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-010477	001	--	Addition of mcc and mnc in the object model of GERAN	4.0.0	4.1.0
Dec 2001	S_14	SP-010650	002	--	Correction of references	4.1.0	4.2.0
Jun 2002	S_16	SP-020305	003	--	Addition of the attributes mcc and mnc in the object model of GERAN	4.2.0	4.3.0
Jun 2002	S_16	SP-020305	004	--	Correction of attribute descriptions in the Managed Object Class (MOC) GsmRelation of 32.652 (GERAN network resources IRP: NRM)	4.2.0	4.3.0
Jun 2002	S_16	SP-020304	005	--	Correction of supported IRP in system context	4.2.0	4.3.0
Sep 2002	S_17	SP-020494	006	--	UML corrections	4.3.0	4.4.0
Sep 2002	S_17	SP-020496	007	--	Add State Management	4.4.0	5.0.0
Dec 2002	--	--	--	--	Cosmetics	5.0.0	5.0.1
Jun 2003	S_20	SP-030282	010	--	Include notification tables	5.0.1	5.1.0
Jun 2003	S_20	SP-030282	012	--	Correction of UML diagram vsDataContainer Containment/Naming and Association in GERAN NRM	5.0.1	5.1.0
Jun 2003	S_20	SP-030283	014	--	Deletion of GERAN attribute relationType	5.0.1	5.1.0

CR-Form-v7

CHANGE REQUEST

⌘ **32.653** **CR** **006** ⌘**rev** **-** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Inclusion of External BSS Function in GERAN CORBA solution set - Alignment with 32.652
Source:	⌘	SA5 (tapinder.pal@t-mobile.de)
Work item code:	⌘	OAM-NIM
Date:	⌘	05/09/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The IOC ExternalBssFunction is missing in the GERAN CORBA Solution Set.
Summary of change:	⌘	IOC ExternalBssFunction has been added to the GERAN CORBA Solution Set.
Consequences if not approved:	⌘	The CORBA Solution Set and GERAN NRM will not be aligned.

Clauses affected:	⌘	

Other specs affected: ⌘

Y	N	
	X	Other core specifications
	X	Test specifications
	X	O&M Specifications

⌘

Other comments: ⌘ Child of 32.652CR015.

Change in Clause 5

5.2.6 IOC ExternalBssFunction

Table 5.6: Mapping from NRM IOC ExternalBssFunction attributes to SS equivalent MOC ExternalBssFunction attributes

NRM Attributes of IOC ExternalBssFunction in TS 32.652 [4]	SS Attributes	SS Type	Support Qualifier	Read	Write
externalBssFunctionId	externalBssFunctionId	string	M	M	-
userLabel	userLabel	string	M	M	M

End of Change in Clause 5

Change in Annex A

Annex A (normative): CORBA IDL, NRM Definitions

```
#ifndef GeranNetworkResourcesNRMDefs_idl
#define GeranNetworkResourcesNRMDefs_idl

#pragma prefix "3gppsa5.org"

/**
 * This module defines constants for each MO class name and
 * the attribute names for each defined MO class.
 */
module GeranNetworkResourcesNRMDefs
{


      /**
       *  Definitions for MO class BssFunction
       */
      interface BssFunction
      {
         const string CLASS = "BssFunction";

         // Attribute Names
         //
         const string bssFunctionId = "bssFunctionId";
         const string userLabel = "userLabel";
};


      /**
       *  Definitions for MO class BtsSiteMgr
       */
      interface BtsSiteMgr
      {
         const string CLASS = "BtsSiteMgr";

         // Attribute Names
         //
         const string btsSiteMgrId = "btsSiteMgrId";
         const string userLabel = "userLabel";
         const string latitude = "latitude";
         const string longitude = "longitude";
};


      /**
       *  Definitions for MO class GsmCell
       */
      interface GsmCell
      {
         const string CLASS = "GsmCell";

         // Attribute Names
         //
         const string gsmCellId = "gsmCellId";
         const string userLabel = "userLabel";
         const string cellIdentity = "cellIdentity";
         const string cellAllocation = "cellAllocation";
         const string ncc = "ncc";
```

```
      const string bcc = "bcc";
      const string lac = "lac";
      const string mcc = "mcc";
      const string mnc = "mnc";
      const string rac = "rac";
      const string racc = "racc";
      const string tsc = "tsc";
      const string rxLevAccessMin = "rxLevAccessMin";
      const string msTxPwrMaxCCH = "msTxPwrMaxCCH";
      const string hoppingSequenceNumber = "hoppingSequenceNumber";
      const string plmnPermitted = "plmnPermitted";

};


    /**
     *  Definitions for MO class GsmRelation
     */
    interface GsmRelation
    {
      const string CLASS = "GsmRelation";

      // Attribute Names
      //
      const string gsmRelationId = "gsmRelationId";
      const string adjacentCell = "adjacentCell";
      const string bcchFrequency = "bcchFrequency";
      const string ncc = "ncc";
      const string bcc = "bcc";
      const string lac = "lac";

};


    /**
     *  Definitions for MO class ExternalGsmCell
     */
    interface ExternalGsmCell
    {
      const string CLASS = "ExternalGsmCell";

      // Attribute Names
      //
      const string externalGsmCellId = "externalGsmCellId";
      const string userLabel = "userLabel";
      const string cellIdentity = "cellIdentity";
      const string bcchFrequency = "bcchFrequency";
      const string ncc = "ncc";
      const string bcc = "bcc";
      const string lac = "lac";
      const string mcc = "mcc";
      const string mnc = "mnc";
      const string rac = "rac";
      const string racc = "racc";

};


    /**
     *  Definitions for MO class ExternalBssFunction
     */
    interface ExternalBssFunction
    {
```

```
        const string CLASS = "ExternalBssFunction";

        // Attribute Names
        //
        const string externalBssFunctionId = "externalBssFunctionId";
        const string userLabel = "userLabel";

};

};

#endif
```

End of Change in Annex A

Annex B (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
Dec 2001	S_14	SP-010651	001	--	Addition of MCC and MNC in the object model	4.0.0	4.1.0
Dec 2001	S_14	SP-010646	002	--	Change type "integer" to "long" in the GERAN Network Resources IRP: CORBA SS	4.0.0	4.1.0
Sep 2002	S_17	SP-020497	003	--	Upgrade to Rel-5	4.1.0	5.0.0
Dec 2002	--	--	--	--	Cosmetics	5.0.0	5.0.1
Jun 2003	S_20	SP-030283	005	--	Deletion of GERAN attribute relationType from CORBA SS	5.0.1	5.1.0

3GPP TSG-SA5 (Telecom Management) **S5-037032**
Meeting #35, Sophia, Antipolis, 1-5 September 2003

CR-Form-v7

CHANGE REQUEST

⌘ **32.654** **CR** **007** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Inclusion of ExternalBssFunction - Alignment with 32.652
Source:	⌘	SA5 (olaf.pollakowski@siemens.com)
Work item code:	⌘	OAM-NIM
Date:	⌘	05/09/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The IOC externalBssFunction is added to 32.652. This CR reflects this change in the CMIP SS.
Summary of change:	⌘	The mapping tables and GDMO definitions are extended to include the MOC externalBssFunction
Consequences if not approved:	⌘	The GERAN Network Resources IRP: CMIP SS and the GERAN Network Resources IRP: NRM are not aligned.

Clauses affected:	⌘	4, 5

Other specs affected:	⌘	Y	N		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘

Change in Clause 4

4 Basic aspects

4.1 Architectural Aspects

A technology independent GERAN network resource model is defined in 3GPP TS 32.652 [4] 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 [4]. 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 Information Object Classes

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

IS IOC	CMIP SS MOC
BssFunction	bssFunction
BtsSiteMgr	btsSiteMgr
GsmCell	gsmCell
GsmRelation	gsmRelation
ExternalGsmCell	externalGsmCell
ExternalBssFunction	externalBssFunction

4.2.2 Mapping of Information Object Class Attributes

This subclause depicts the mapping of the attributes defined in 3GPP TS 32.652 [4] on the corresponding attributes of the CMIP Solution Set.

4.2.2.1 Attribute Mapping of the IOC *BssFunction*

Table 4.2: Attribute mapping of the IOC *BssFunction*

IS Attribute	CMIP SS Attribute	Qualifier
bssFunctionId	bssFunctionId	M
userLabel	userLabel (ITU-T M.3100 [9])	M

4.2.2.2 Attribute Mapping of the IOC *BtsSiteMgr*

Table 4.3: Attribute mapping of the IOC *BtsSiteMgr*

IS Attribute	CMIP SS Attribute	Qualifier
btsSiteMgrId	btsSiteMgrId	M
userLabel	userLabel (ITU-T M.3100 [9])	M
latitude	latitude	O
longitude	longitude	O

4.2.2.3 Attribute Mapping of the IOC *GsmCell*

Table 4.4: Attribute mapping of the IOC *GsmCell*

IS Attribute	CMIP SS Attribute	Qualifier
gsmCellId	gsmCellId	M
userLabel	userLabel (ITU-T M.3100 [9])	M
cellIdentity	cellGlobalIdentity (GSM 12.20 [10])	M
lac		
mcc		
mnc		
cellAllocation	cellAllocation (GSM 12.20 [10])	M
ncc	bsIdentityCode.ncc (GSM 12.20 [10])	M
bcc	bsIdentityCode.bcc (GSM 12.20 [10])	M
rac	rac (3GPP TS32.644 V5.0.x)	O
racc	racc	O
tsc	tsc (GSM 12.20 [10])	M
rxLevAccessMin	rxLevAccessMin (GSM 12.20 [10])	M
msTxPwrMaxCCH	msTxPwrMaxCCH (GSM 12.20 [10])	M
hoppingSequenceNumber	hoppingSequenceNumber (GSM 12.20 [10])	M
plmnPermitted	plmnPermitted (GSM 12.20 [10])	M

4.2.2.4 Attribute Mapping of the IOC *GsmRelation*

Table 4.5: Attribute mapping of the IOC *GsmRelation*

IS Attribute	CMIP SS Attribute	Qualifier
gsmRelationId	gsmRelationId	M
adjacentCell	adjacentCell (3GPP TS32.644 V5.0.x)	M
bcchFrequency	bcchFrequency (GSM 12.20 [10])	O
ncc	bsIdentityCode.ncc (GSM 12.20 [10])	O
bcc	bsIdentityCode.bcc (GSM 12.20 [10])	O
lac	lac (3GPP TS32.644 V.5.0.x)	O

4.2.2.5 Attribute Mapping of the IOC *ExternalGsmCell*

Table 4.6: Attribute mapping of the IOC *ExternalGsmCell*

IS Attribute	CMIP SS Attribute	Qualifier
externalGsmCellId	externalGsmCellId	M
userLabel	userLabel (ITU-T M.3100 [9])	M
cellIdentity	cellGlobalIdentity (GSM 12.20 [10])	M
lac		
mcc		
mnc		
bcchFrequency	bcchFrequency (GSM 12.20 [10])	M
ncc	bsIdentityCode.ncc (GSM 12.20 [10])	M
bcc	bsIdentityCode.bcc (GSM 12.20 [10])	M
rac	rac (3GPP TS32.644 V5.0.x)	O
racc	racc	O

4.2.2.6 Attribute Mapping of the IOC *ExternalBssFunction*

Table 4.7: Attribute mapping of the IOC *ExternalBssFunction*

IS Attribute	CMIP SS Attribute	Qualifier
externalBssFunctionId	externalBssFunctionId	M
userLabel	userLabel (ITU-T M.3100 [9])	M

End of Change in Clause 4

Change in Clause 5

5 GDMO Definitions

5.1 Managed Object Classes

5.1.1 bssFunction

bssFunction **MANAGED OBJECT CLASS**
DERIVED FROM
"3GPP TS 32.624 Release 5": managedFunction;
CHARACTERIZED BY
bssFunctionBasicPackage;
REGISTERED AS {ts32-654ObjectClass 1};

5.1.2 btsSiteMgr

btsSiteMgr **MANAGED OBJECT CLASS**
DERIVED FROM
"3GPP TS 32.624 Release 5": managedFunction;
CHARACTERIZED BY
btsSiteMgrBasicPackage;
CONDITIONAL PACKAGES
"3GPP TS 32.674 Release 5": operationalStateAttributePackage **PRESENT IF**
"Instances of this MOC support operationalState attribute.",
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 5": 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 5": 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};

5.1.6 externalBssFunction

externalBssFunction **MANAGED OBJECT CLASS**
DERIVED FROM
"3GPP TS 32.624 Release 5": managedFunction;
CHARACTERIZED BY
externalBssFunctionBasicPackage;
REGISTERED AS {ts32-654ObjectClass 6};

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 Release 5": 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 necesssary 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 5": 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 Release 5": 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.";

5.2.11 ExternalBssFunctionBasicPackage

externalBssFunctionBasicPackage **PACKAGE**
BEHAVIOUR
externalBssFunctionBasicPackageBehaviour;
ATTRIBUTES
externalBssFunctionId GET;
REGISTERED AS {ts32-654Package 11};

externalBssFunctionBasicPackageBehaviour **BEHAVIOUR**
DEFINED AS
"The Managed Object Class externalBssFunction represents external BSS functionality. For more information about the BSS, see GSM 03.02";

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.";

5.3.9 externalBssFunctionId

externalBssFunctionId **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-654TypeModule.GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
externalBssFunctionIdBehaviour;
REGISTERED AS {ts32-654Attribute 10};

externalBssFunctionIdBehaviour **BEHAVIOUR**
DEFINED AS
"This attribute identifies an externalBssFunction 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 5": 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 5": 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.";

5.4.5 externalBssFunction - subNetwork

externalBssFunction-subNetwork **NAME BINDING**
SUBORDINATE OBJECT CLASS
externalBssFunction;
NAMED BY SUPERIOR OBJECT CLASS
"3GPP TS 32.624 Release 5": subNetwork;
WITH ATTRIBUTE
externalBssFunctiond;
BEHAVIOUR
externalBssFunction-subNetworkBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-654NameBinding 6};

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

End of Change in Clause 5

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
Dec 2002	S_18	SP-020749	003	--	Alignment of the CMIP SS with the Rel-5 version of the IS in 32.652	4.1.0	5.0.0
Jun 2003	S_20	SP-030283	005	--	Removal of relationType	5.0.0	5.1.0
Jun 2003	S_20	SP-030286	006	-	Alignment of object class names to externalGsmCell - Alignment with 32.624	5.0.0	5.1.0

End of Document

3GPP TSG-SA5 (Telecom Management) **S5-037031**
Meeting #35, Sophia Antipolis, France, 1 – 5 September 2003

CR-Form-v7

CHANGE REQUEST

⌘ **32.655** CR **004** ⌘rev **-** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Inclusion of External BSS Function in GERAN XML Schema - Alignment with 32.652
Source:	⌘	SA5 (tapinder.pal@t-mobile.de)
Work item code:	⌘	OAM-NIM
Date:	⌘	05/09/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

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)
Rel-6 (Release 6)

Reason for change:	⌘	The IOC ExternalBssFunction is missing in the GERAN XML schema.
Summary of change:	⌘	• IOC ExternalBssFunction has been added to the GERAN XML schema • Evolution of the version part of GERAN XML schema namespace URI definition • Correction of references to GERAN XML schema namespace URI • Correction of references to UTRAN XML schema namespace URI
Consequences if not approved:	⌘	The GERAN XML Schema and GERAN NRM will not be aligned.

Clauses affected:	⌘	Annex A			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
		X		O&M Specifications	Rel-5 32.615, 32.645
Other comments:	⌘	Child of 32.652CR015. Parent CR to the Children CRs 32.615/32.645 in S5-036947/S5-036946. The XML schema file "geranNrm.xsd" reflects the changes from this CR (only).			

Change in Clause 1

1 Scope

The present document provides the NRM-specific part related to the GERAN Network Resources IRP NRM [1] of the XML file format definition for the Bulk Configuration Management IRP IS [2].

The main part of this XML file format definition is provided by 3GPP TS 32.615 [3].

Bulk CM XML file formats are based on XML [4], XML Schema [5] [6] [7] and XML Namespace [8] standards.

This File Format Definition specification is related to 3GPP TS 32.652 (V5.2.X).

End of Change in Clause 1

Change in Annex A

Annex A (normative): Configuration data file NRM-specific XML schema (file name "geranNrm.xsd")

The following XML schema geranNrm.xsd is the NRM-specific schema for the GERAN Network Resources IRP NRM defined in 3GPP TS 32.652 [1]:

```
<?xml version="1.0" encoding="UTF-8"?>

<!--
  3GPP TS 32.655 GERAN Network Resources IRP
  Bulk CM Configuration data file NRM-specific XML schema
  geranNrm.xsd
-->

<schema
  targetNamespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-520.zip#geranNrm"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-510.zip#genericNrm"
  xmlns:un=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-520.zip#utranNrm"
  xmlns:gn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-520.zip#geranNrm"
>

  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-510.zip#genericNrm"
  />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-520.zip#utranNrm"
  />

  <!-- GERAN Network Resources IRP NRM class associated XML elements -->
```

```
<element
  name="BssFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="gn:BtsSiteMgr"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="BtsSiteMgr">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="latitude" minOccurs="0"/>
                <element name="longitude" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="gn:GsmCell"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="GsmCell">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="cellIdentity" minOccurs="0"/>
                <element name="cellAllocation" minOccurs="0"/>
                <element name="ncc" minOccurs="0"/>
                <element name="bcc" minOccurs="0"/>
                <element name="lac" minOccurs="0"/>
```

```
                <element name="mcc" minOccurs="0"/>
                <element name="mnc" minOccurs="0"/>
                <element name="rac" minOccurs="0"/>
                <element name="racc" minOccurs="0"/>
                <element name="tsc" minOccurs="0"/>
                <element name="rxLevAccessMin" minOccurs="0"/>
                <element name="msTxPwrMaxCCH" minOccurs="0"/>
                <element name="hoppingSequenceNumber" minOccurs="0"/>
                <element name="plmnPermitted" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="gn:GsmRelation"/>
            <element ref="un:UtranRelation"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="GsmRelation">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="adjacentCell" minOccurs="0"/>
                <element name="bcchFrequency" minOccurs="0"/>
                <element name="ncc" minOccurs="0"/>
                <element name="bcc" minOccurs="0"/>
                <element name="lac" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="ExternalGsmCell"
  substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="cellIdentity" minOccurs="0"/>
                <element name="bcchFrequency" minOccurs="0"/>
                <element name="ncc" minOccurs="0"/>
```

```
                  <element name="bcc" minOccurs="0"/>
                  <element name="lac" minOccurs="0"/>
                  <element name="mcc" minOccurs="0"/>
                  <element name="mnc" minOccurs="0"/>
                  <element name="rac" minOccurs="0"/>
                  <element name="racc" minOccurs="0"/>
                </all>
              </complexType>
            </element>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="ExternalBssFunction"
    substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" minOccurs="0"/>
                </all>
              </complexType>
            </element>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

</schema>
```

End of Change in Annex A

Annex B (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Jun 2002	S_16	SP-020298	--	--	Submitted to TSG SA #16 for Information	1.0.0	
Sep 2002	S_17	SP-020463	--	--	Submitted to TSG SA #17 for Approval	2.0.0	5.0.0
Jun 2003	S_20	SP-030283	001	--	Deletion of GERAN attribute relationType in XML Schema.	5.0.0	5.1.0
Jun 2003	S_20	SP-030287	002	--	Correction of GERAN NRM XML schema namespace URIs	5.0.0	5.1.0
Jun 2003	S_20	SP-030288	003	--	Generic NRM XML schema dependencies removal	5.0.0	5.1.0