Source: **SA5 (Telecom Management)**

Title: **6 Rel-5 CR 32.615/25/35/45/55 & Rel-6 32.625 Addition of the capability to contain instances of VsDataContainer to some MOs - Alignment with the ISs 32.6x2**

Document for: **Decision**

Agenda Item: **7.5.3**

Doc-1st-Level	Spec	CR	R	Phase	Subject	Cat	Versi.	Doc-2nd-Lev	Workitem
SP-040131	32.625	004	-	Rel-5	Add the capability to contain instances of VsDataContainer to some MOs - Align with the IS 32.622	F	5.1.2	S5-048182	OAM-NIM
SP-040131	32.625	005	-	Rel-6	Add the capability to contain instances of VsDataContainer to some MOs - Align with IS 32.622	A	6.0.0	S5-048183	OAM-NIM
SP-040131	32.635	003	-	Rel-5	Add the capability to contain instances of VsDataContainer to some MOs - Align with the IS 32.632	F	5.1.1	S5-048165	OAM-NIM
SP-040131	32.645	007	-	Rel-5	Add the capability to contain instances of VsDataContainer to some MOs - Align with the IS 32.642	F	5.3.0	S5-048184	OAM-NIM
SP-040131	32.655	006	-	Rel-5	Add the capability to contain instances of VsDataContainer to some MOs - Align with the IS 32.652	F	5.3.0	S5-048185	OAM-NIM
SP-040131	32.615	013	-	Rel-5	Add the capability to contain instances of VsDataContainer to some MOs - Align with the IS 32.612	F	5.3.0	S5-048187	OAM-NIM

CR-Form-v7

CHANGE REQUEST

⌘   **32.615 CR 013**   ⌘**rev**   **-**   ⌘ Current version: **5.3.0**   ⌘

*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 **X**   Core Network **X**

Title: ⌘	Add the capability to contain instances of *VsDataContainer* to some MOs - Align with the IS 32.612
Source: ⌘	SA5 (olaf.pollakowski@siemens.com)

Work item code:⌘	OAM-NIM	***Date:*** ⌘	27/02/2004

Category: ⌘ **F**	***Release:*** ⌘ Rel-5

Use <u>one</u> 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 <u>one</u> 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: ⌘	New versions of 32.625/35/45/55 will be created based on CRs submitted jointly with this CR for SA#23 approval. The namespace URIs in 32.615 have to point to these latest TS-versions.
Summary of change:⌘	Update the namespace URIs so that they point to the latest version of 32.625/35/45/55.
Consequences if ***not approved:*** ⌘	The namespace URIs would not point to the latest versions of 32.625/35/45/55.

Clauses affected: ⌘	4, 5, Annex A, C, D

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

Other comments: ⌘	Child to Rel-5 CRs 32.625/35/45/55 in S5-048182, S5-048165, S5-048184/5

4 Structure and content of configuration data XML files

The present clause defines the file format of configuration data XML files exchanged between an IRPManager and an IRPAgent as part of `upload` and `download` operations of the Bulk CM IRP IS (see [1]).

Upload and download configuration data XML files share a common file format defined by the XML schema in Annex A and by the following subclauses.

Additionally, vendor-specific XML schemas shall be provided to enable configuration data XML files to carry vendor-specific data (see subclause 4.5).

The use of XML schemas enables to ensure configuration data XML files have the proper structure and to some extent the proper content, and in particular to ensure:

- for a given NRM instance, it is properly named/positioned with regard to the global NRM naming tree;

- for a given NRM instance, only attributes of the corresponding NRM class are present;

- for a given NRM attribute, its value is of the proper type.

Location of the XML schemas used for configuration data XML files is outside the scope of this document.

4.1 Global structure

The content of a configuration data XML file is the succession of:

- the standard XML declaration with specification of the version of XML and of the character encoding being used (see [2]);

- a `bulkCmConfigDataFile` XML element; this is the root XML element of configuration data XML files.

The definition of the allowed character encoding(s) is outside the scope of this document.

As defined by the following extract of XML schema `configData.xsd` (see Annex A):

```
  <element name="bulkCmConfigDataFile">
    <complexType>
      <sequence>
        <element name="fileHeader">
[…]
        </element>
        <element name="configData" maxOccurs="unbounded">
[…]
        </element>
        <element name="fileFooter">
[…]
        </element>
      </sequence>
    </complexType>
  </element>
```

the XML content of a `bulkCmConfigDataFile` XML element is the succession of:

- a `fileHeader` XML element (see subclause 4.2);

- one or several `configData` XML elements (see subclause 4.3);

- a `fileFooter` XML element (see subclause 4.2).

XML elements `fileHeader` and `fileFooter` are empty XML elements (see subclause 4.2).

The `bulkCmConfigDataFile` XML element shall also have all the XML attribute specifications that declare the XML namespaces (see [6]) used in the XML file.

The following XML namespaces are potentially used in configuration data XML files:

- the default XML namespace is associated with the configuration data files base XML schema `configData.xsd` (see Annex A);

- for each NRM-specific XML schema, a specific XML namespace prefix is defined for the associated XML namespace (see subclause 4.3A.1);

- XML namespaces prefixes starting with `vs`, e.g. `vsRHO11`, are reserved for the XML namespaces associated with the vendor-specific XML schemas (see clause 4.5).

Each `configData` XML element (see subclause 4.3) carries:

- NRM instances with or without their NRM attribute values in a NRM naming tree organized structure together with `modifier` XML attribute specification (see subclause 4.4);

- possibly vendor-specific data (see subclause 4.5).

A `configData` XML element can carry an entire tree of NRM instances with their NRM attribute values and the related vendor-specific data or any subset of it.

The following is an example of a configuration data XML file, without presentation of the XML attribute specifications and XML content of `fileHeader`, `configData` and `fileFooter` XML elements (replaced by […]; see subclauses 4.2, 4.3, 4.4 and 4.5):

```
<?xml version="1.0" encoding="UTF-8"?>
<bulkCmConfigDataFile
  xmlns=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32615-540.zip#configData"
[…]
>
  <fileHeader […]/>
  <configData […]>
[…]
  </configData>
  <configData […]>
[…]
  </configData>
  <fileFooter […]/>
</bulkCmConfigDataFile>
```

4.2 XML elements `fileHeader` and `fileFooter`

4.2.1 XML element `fileHeader`

As defined by the following extract of XML schema `configData.xsd` (see Annex A):

```
<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>
```

a `fileHeader` XML element:

- has the following XML attribute specifications:

- a `fileFormatVersion` XML attribute specification; this attribute specification carries the abridged number and version of this 3GPP document (see below); this identifies the version of the file format used for assembling the XML file;

- a conditional `senderName` XML attribute specification; this attribute specification shall be present only in XML files generated by the IRPAgent; it carries the DN of the IRPAgent that assembled the XML file, i.e. the value of the `systemDN` NRM attribute of the `IRPAgent` NRM instance (see [8]);

- a conditional `vendorName` XML attribute specification; this attribute specification shall be present only in XML files generated by the IRPAgent; it carries the name of the vendor of the IRPAgent that assembled the XML file;

- and has an empty XML content.

The abridged number and version of a 3GPP document is constructed from its version specific full reference "3GPP […] (yyyy-mm)" by:

- removing the leading "3GPP TS";

- removing everything including and after the version third digit, representing editorial only changes, together with its preceding dot character;

- from the resulting string, removing leading and trailing white space, replacing every multi character white space by a single space character and changing the case of all characters to uppercase.

The following is an example of a `fileHeader` XML element:

```
<fileHeader
  fileFormatVersion="32.615 V4.0"
  senderName="DC=a1.companyNN.com,SubNetwork=1,IRPAgent=1"
  vendorName="Company NN"
/>
```

4.2.2 XML element `fileFooter`

As defined by the following extract of XML schema `configData.xsd` (see Annex A):

```
<element name="fileFooter">
  <complexType>
    <attribute name="dateTime" type="dateTime" use="required"/>
  </complexType>
</element>
```

a `fileFooter` XML element:

- has a `dateTime` XML attribute specification; this attribute specification carries the date and time the XML file was assembled;

- and has an empty XML content.

The following is an example of a `fileFooter` XML element:

```
<fileFooter dateTime="2001-05-07T12:00:00+02:00"/>
```

4.3 XML element `configData`

As defined by the following extract of XML schema `configData.xsd` (see Annex A):

```
<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>
```

a `configData` XML element:

- has an optional `dnPrefix` XML attribute specification; this attribute specification carries the DN Prefix information as defined in Annex C of 3GPP TS 32.300 [7];

- and its XML content is an instance of the specific type of XML element (see below) corresponding to one of the NRM classes SubNetwork, MeContext or ManagedElement (see [8]); depending on the System Context of the IRP (see [1]) the used NRM class shall be:

  - in case of System Context A, only SubNetwork NRM class, or;

  - in case of System Context B, only MeContext or ManagedElement NRM class.

This instance of SubNetwork/MeContext/ManagedElement NRM class corresponding specific XML element type is the starting point for a `configData` XML element to possibly contain several NRM instances in a NRM naming tree organized structure (see subclause 4.3A.2).

The following is an example of a `configData` XML element:

```
  <configData dnPrefix="DC=a1.companyNN.com">
    <xn:SubNetwork [...]>
[...]
    </xn:SubNetwork>
  </configData>
```

4.3A   NRM-specific XML elements

NRM-specific XML element types are generically defined under the mapping rules defined in subclause 4.3A.2.

NRM-specific XML element types are explicitly declared by NRM-specific XML schemas as defined in subclause 4.3A.1.

4.3A.1   NRM-specific XML schemas

NRM-specific XML schemas are defined in the NRM-specific parts (see clause 1) of the XML file format definition for the Bulk Configuration Management IRP IS [1].

NRM-specific XML schemas with definition of corresponding XML namespace prefixes (see subclause 4.1) are listed by the following table:

Table 2: NRM-specific XML schemas, corresponding 3GPP TSs and XML namespace prefixes

NRM	XML schema	3GPP TS no.	XML namespace prefix
Generic Network Resources	genericNrm.xsd	32.625 [11]	xn
Core Network Resources	coreNrm.xsd	32.635 [12]	cn
UTRAN Network Resources	utranNrm.xsd	32.645 [13]	un
GERAN Network Resources	geranNrm.xsd	32.655 [14]	gn

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

Additionally, XML schema `genericNrm.xsd` (see [11]) also provides global XML declarations and definitions for the support of:

- NRM-specific XML element type declaration;

- vendor-specific XML element type declaration (see subclause 4.5).

4.3A.2   Generic mapping rules

NRM-specific XML element types are generically defined under the following mapping rules:

- to each NRM class corresponds a specific type of XML element having the following characteristics:

    - its name is the name of the NRM class;

    - it derives by extension (see [3], [4] and [5]) the `NrmClass` XML complex type defined in the XML schema `genericNrm.xsd` (see [11]);

    - it has the following XML attribute specifications, inherited from `NrmClass` XML complex type:

        - an `id` XML attribute specification; this attribute specification carries the attribute value part of the RDN of the NRM instance carried by the XML element, i.e. the value of the naming attribute of this NRM instance;

        - an optional `modifier` XML attribute specification (see subclause 4.4);

    - and its XML content is the succession of:

        - an optional `attributes` XML element whose XML content is the succession of:

            - zero or more specific XML elements (see below) corresponding to attributes of the NRM class, each occurring not more than once;

        - zero or more similar specific XML elements corresponding to direct subordinate NRM classes of the NRM class to which the current XML element corresponds;

- to each NRM attribute of each NRM class, except for the following NRM attributes:

    - the naming NRM attribute of each NRM class, whose value is already carried by the `id` XML attribute specification of the specific XML element corresponding to the NRM class;

    - the conditional `dnPrefix` NRM attribute of `SubNetwork`, `MeContext` and `ManagedElement` NRM classes (see [8]), whose value is already carried by the `dnPrefix` XML attribute specification of the `configData` XML element;

    corresponds a specific type of XML element having the following characteristics:

    - its name is constructed from the name of the NRM attribute by removing any contained dash character;

    - and it has an XML content; this XML content carries the value of the NRM attribute.

For example for the `SubNetwork` NRM class (see [8]), the corresponding extract of XML schema `genericNrm.xsd` (see [11]) is the following:

```
<element name="SubNetwork">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="userDefinedNetworkType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:SubNetwork"/>
            <element ref="xn:ManagedElement"/>
            <element ref="xn:MeContext"/>
            <element ref="xn:ManagementNode"/>
```

```
            <element ref="xn:IRPAgent"/>
            <element ref="xn:SubNetworkOptionallyContainedNrmClass"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>
```

supported by the following extract of XML schema `genericNrm.xsd` (see [11]):

```
<complexType name="NrmClass">
  <attribute name="id" type="string" use="required"/>
  <attribute name="modifier" use="optional">
[…]
  </attribute>
</complexType>
```

Exceptions to the generic mapping rules for the definition of NRM-specific XML element types are listed by the following table:

Table 3: Generic mapping rule exceptions

NRM classes / attributes	NRM 3GPP TS no.	Exception description references
vsData attribute of VsDataContainer class	32.622 [8]	subclause 4.5 of the present document and annex A of 3GPP TS 32.625 [11]

The following is an example of a `configData` XML element with regard to NRM-specific XML elements (in **bold**) in a configuration data XML file:

```
<?xml version="1.0" encoding="UTF-8"?>
<bulkCmConfigDataFile
  xmlns=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32615-540.zip#configData"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-520.zip#genericNrm"
[…]
>
[…]
  <configData dnPrefix="DC=a1.companyNN.com">
    <xn:SubNetwork id="1">
      <xn:attributes>
        <xn:userLabel>Paris SN1</xn:userLabel>
        <xn:userDefinedNetworkType>UMTS</xn:userDefinedNetworkType>
      </xn:attributes>
      <xn:ManagementNode id="1">
        <xn:attributes>
          <xn:userLabel>Paris MN1</xn:userLabel>
          <xn:vendorName>Company NN</xn:vendorName>
          <xn:userDefinedState>commercial</xn:userDefinedState>
          <xn:locationName>Montparnasse</xn:locationName>
        </xn:attributes>
      </xn:ManagementNode>
      <xn:ManagedElement id="1">
        <xn:attributes>
          <xn:managedElementType>RNC</xn:managedElementType>
          <xn:userLabel>Paris RN1</xn:userLabel>
          <xn:vendorName>Company NN</xn:vendorName>
          <xn:userDefinedState>commercial</xn:userDefinedState>
          <xn:locationName>Champ de Mars</xn:locationName>
        </xn:attributes>
      </xn:ManagedElement>
```

```
        <xn:ManagedElement id="2">
          <xn:attributes>
            <xn:managedElementType>RNC</xn:managedElementType>
            <xn:userLabel>Paris RN2</xn:userLabel>
            <xn:vendorName>Company NN</xn:vendorName>
            <xn:userDefinedState>commercial</xn:userDefinedState>
            <xn:locationName>Concorde</xn:locationName>
          </xn:attributes>
        </xn:ManagedElement>
      </xn:SubNetwork>
    </configData>
[...]
</bulkCmConfigDataFile>
```

4.4 XML attribute specification `modifier`

As defined by the following extract of XML schema `genericNrm.xsd` (see [11]):

```
<attribute name="modifier" use="optional">
  <simpleType>
    <restriction base="string">
      <enumeration value="create"/>
      <enumeration value="delete"/>
      <enumeration value="update"/>
    </restriction>
  </simpleType>
</attribute>
```

the value of the optional `modifier` XML attribute specification of the specific XML elements corresponding to the classes of the NRM is one of the following: `create`, `delete`, or `update`.

The semantic carried by a `modifier` XML attribute specification applies only to the NRM instance corresponding to the containing XML element and not to any explicit or implicit subordinate NRM instances of this NRM instance.

The following rules apply for the `modifier` XML attribute specification:

-   in upload XML configuration files, no `modifier` XML attribute specification should be present; on the contrary those are to be considered as meaningless and shall be ignored;

-   in download XML configuration files:

    -   if an XML element carrying an NRM instance has a `modifier` XML attribute specification of value `create`, then all directly or indirectly contained XML element carrying NRM instances, if any, shall also have a `modifier` XML attribute specification of value `create`;

    -   if an XML element carrying an NRM instance has a `modifier` XML attribute specification of value `delete`, then all directly or indirectly contained XML element carrying NRM instances, if any, shall also have a `modifier` XML attribute specification of value `delete`;

    -   if an XML element carrying an NRM instance has a `modifier` XML attribute specification of value `update`, then all directly contained XML element carrying NRM instances, if any, may also have a `modifier` XML attribute specification, this one being of either value `create`, `delete`, or `update`;

    -   if an XML element carrying an NRM instance has no `modifier` XML attribute specification or a `modifier` XML attribute specification of value `delete`, then it shall not directly contain an `attributes` XML element.

A tree of XML elements corresponding to a tree of NRM instances with all XML elements having a `modifier` XML attribute specification of value `create` is considered to be in accordance with the following rule from Bulk CM IRP IS 3GPP TS 32.612 [1]:

"When part or a whole NRM subtree is to be created, in the configuration data file the IRPManager shall first action the create action of parents MO instances before actioning the create of any child MO instances contained in the NRM subtree i.e. create actions on MO instances shall be specified in recursive manner following the NRM hierarchy subtree from the highest MO instances to the lowest MO instances the IRPManager requires to be created."

In such a tree of NRM instances, the XML element carrying a given NRM instance does not accurately appear before XML elements carrying subordinate NRM instances. The latter XML elements rather appear as the last part of the XML content of the former XML element.

Nevertheless, XML parsing of such a tree of NRM instances can still enable the above Bulk CM IRP IS rule to be fully respected. Example of an XML parsing enabling such compliance is one effectively actioning the creation of each NRM instance when having parsed the XML start-tag of the XML element carrying the NRM instance and, if any, the contained `attributes` XML element.

A tree of XML elements corresponding to a tree of NRM instances with all XML elements having a `modifier` XML attribute specification of value `delete` is considered to be in accordance with the following rule from Bulk CM IRP IS 3GPP TS 32.612 [1]:

"When part or whole NRM subtree is to be deleted, in the configuration data file the IRPManager shall first action delete of all associated child instances contained in the NRM subtree before actioning delete of MO parents instances i.e. delete actions on MO instances shall be specified in a recursive manner following the NRM hierarchy subtree from the lowest MO instances to the highest MO instances the IRPManager requires to be deleted."

In such a tree of NRM instances, the XML elements carrying subordinate NRM instances do not appear before the XML element carrying the parent NRM instance. The former XML elements rather appear as the XML content of the latter XML element.

Nevertheless, XML parsing of such a tree of NRM instances can still enable the above Bulk CM IRP IS rule to be fully respected. Example of an XML parsing enabling such compliance is one effectively actioning the delete of each NRM instance when parsing the XML end-tag of the XML element carrying the NRM instance.

The following are examples of legal `configData` XML element with regard to `modifier` XML attribute specification (in **bold**) in configuration data XML files:

- example 1:

```
<?xml version="1.0" encoding="UTF-8"?>
<bulkCmConfigDataFile
  xmlns=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32615-540.zip#configData"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-520.zip#genericNrm"
[…]
>
[…]
  <configData dnPrefix="DC=a1.companyNN.com">
    <xn:SubNetwork id="1" modifier="create">
      <xn:attributes>
        <xn:userLabel>Paris SN1</xn:userLabel>
        <xn:userDefinedNetworkType>UMTS</xn:userDefinedNetworkType>
      </xn:attributes>
      <xn:ManagementNode id="1" modifier="create">
        <xn:attributes>
          <xn:userLabel>Paris MN1</xn:userLabel>
[…]
          <xn:locationName>Montparnasse</xn:locationName>
        </xn:attributes>
      </xn:ManagementNode>
      <xn:ManagedElement id="1" modifier="create">
        <xn:attributes>
          <xn:managedElementType>RNC</xn:managedElementType>
[…]
```

```
            <xn:locationName>Champ de Mars</xn:locationName>
          </xn:attributes>
        </xn:ManagedElement>
        <xn:ManagedElement id="2" modifier="create">
          <xn:attributes>
            <xn:managedElementType>RNC</xn:managedElementType>
[...]
            <xn:locationName>Concorde</xn:locationName>
          </xn:attributes>
        </xn:ManagedElement>
      </xn:SubNetwork>
    </configData>
[...]
</bulkCmConfigDataFile>
```

- example 2:

```
<?xml version="1.0" encoding="UTF-8"?>
<bulkCmConfigDataFile
   xmlns=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32615-540.zip#configData"
   xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-520.zip#genericNrm"
[...]
>
[...]
   <configData dnPrefix="DC=a1.companyNN.com">
     <xn:SubNetwork id="1">
       <xn:ManagedElement id="1" modifier="create">
         <xn:attributes>
           <xn:managedElementType>RNC</xn:managedElementType>
[...]
           <xn:locationName>Champ de Mars</xn:locationName>
         </xn:attributes>
       </xn:ManagedElement>
       <xn:ManagedElement id="2" modifier="create">
         <xn:attributes>
           <xn:managedElementType>RNC</xn:managedElementType>
[...]
           <xn:locationName>Concorde</xn:locationName>
         </xn:attributes>
       </xn:ManagedElement>
     </xn:SubNetwork>
   </configData>
[...]
</bulkCmConfigDataFile>
```

- example 3:

```
<?xml version="1.0" encoding="UTF-8"?>
<bulkCmConfigDataFile
   xmlns=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32615-540.zip#configData"
   xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-520.zip#genericNrm"
[...]
>
[...]
   <configData dnPrefix="DC=a1.companyNN.com">
     <xn:SubNetwork id="1" modifier="delete">
       <xn:ManagementNode id="1" modifier="delete">
       </xn:ManagementNode>
       <xn:ManagedElement id="1" modifier="delete">
```

```
          </xn:ManagedElement>
          <xn:ManagedElement id="2" modifier="delete">
          </xn:ManagedElement>
        </xn:SubNetwork>
      </configData>
  [...]
  </bulkCmConfigDataFile>

    -   example 4:

  <?xml version="1.0" encoding="UTF-8"?>
  <bulkCmConfigDataFile
    xmlns=
  "http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32615-5430.zip#configData"
    xmlns:xn=
  "http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-5210.zip#genericNrm"
  [...]
  >
  [...]
      <configData dnPrefix="DC=a1.companyNN.com">
        <xn:SubNetwork id="1">
          <xn:ManagedElement id="1" modifier="delete">
          </xn:ManagedElement>
          <xn:ManagedElement id="2" modifier="delete">
          </xn:ManagedElement>
        </xn:SubNetwork>
      </configData>
  [...]
  </bulkCmConfigDataFile>

    -   example 5:

  <?xml version="1.0" encoding="UTF-8"?>
  <bulkCmConfigDataFile
    xmlns=
  "http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32615-5430.zip#configData"
    xmlns:xn=
  "http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-5210.zip#genericNrm"
    xmlns:un=
  "http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-5430.zip#utranNrm"
  [...]
  >
  [...]
      <configData dnPrefix="DC=a1.companyNN.com">
        <xn:SubNetwork id="1" modifier="update">
          <xn:attributes>
            <xn:userLabel>Paris SN1</xn:userLabel>
          </xn:attributes>
          <xn:ManagementNode id="1" modifier="update">
            <xn:attributes>
              <xn:userLabel>Paris MN1</xn:userLabel>
            </xn:attributes>
          </xn:ManagementNode>
          <xn:ManagedElement id="1" modifier="delete">
            <un:RncFunction id="1" modifier="delete">
            </un:RncFunction>
          </xn:ManagedElement>
          <xn:ManagedElement id="2" modifier="create">
            <xn:attributes>
              <xn:managedElementType>RNC</xn:managedElementType>
  [...]
              <xn:locationName>Concorde</xn:locationName>
            </xn:attributes>
```

```
        <un:RncFunction id="2" modifier="create">
          <un:attributes>
            <un:userLabel>Paris RF2</un:userLabel>
[...]
            <un:rncId>2</un:rncId>
          </un:attributes>
        </un:RncFunction>
      </xn:ManagedElement>
      <xn:ManagedElement id="3">
        <un:RncFunction id="3" modifier="update">
          <un:attributes>
            <un:userLabel>Paris RF3</un:userLabel>
          </un:attributes>
        </un:RncFunction>
      </xn:ManagedElement>
    </xn:SubNetwork>
  </configData>
[...]
</bulkCmConfigDataFile>
```

4.5   XML elements `VsDataContainer`, `vsData` and `vsDataFormatVersion`

As all XML element types corresponding to NRM classes (see subclause 4.3A.2), the `VsDataContainer` XML element type, explicitly declared in 3GPP TS 32.625 [11], corresponds to the `VsDataContainer` NRM class defined in 3GPP TS 32.622 [8].

Contained in an `attributes` XML element type, itself contained in a `VsDataContainer` XML element, as all XML element types corresponding to NRM attributes (see subclause 4.3A.2), the `vsData` and `vsDataFormatVersion` XML element types, explicitly declared in 3GPP TS 32.625 [11], correspond to the `vsData` and `vsDataFormatVersion` NRM attributes defined in 3GPP TS 32.622 [8].

As an exception to the generic mapping rules for the definition of NRM-specific XML element types (see subclause 4.3A.2), the `vsData` XML element type has an empty XML content.

Each vendor-specific XML schema shall declare one ore more vendor-specific XML element types that:

- have a name starting with `vsData`, e.g. `vsDataRHO`;

- derive by extension (see [3], [4] and [5]) the `vsData` XML element type declared by the XML schema `genericNrm.xsd` (see [11]);

- are designated as members of the substitution group (see [3], [4] and [5]) headed by the `vsData` XML element type.

Beyond the above statement, the definition of vendor-specific XML schemas is outside the scope of this document.

The XML content of those vendor-specific XML elements carry vendor-specific data.

The XML content of the `vsDataFormatVersion` XML element shall be the filename, without the ".xsd" file extension and without any path specification, of the vendor-specific XML schema used for the related `VsDataContainer` XML element.

See Annex C for an example of a vendor-specific XML schema.

The following is an example of a vendor-specific XML element (in **bold**) deriving and extending the `vsData` XML element in a configuration data XML file:

```
<?xml version="1.0" encoding="UTF-8"?>
<bulkCmConfigDataFile
  xmlns=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32615-540.zip#configData"
```

```
   xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-5210.zip#genericNrm"
   xmlns:un=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-5430.zip#utranNrm"
   xmlns:vsRHO11="http://www.companyNN.com/xmlschemas/NNRncHandOver.1.1"
[...]
>
[...]
   <configData dnPrefix="DC=a1.companyNN.com">
     <xn:SubNetwork id="1">
       <xn:ManagedElement id="1">
         <un:RncFunction id="1">
           <xn:VsDataContainer id="1">
             <xn:attributes>
               <xn:vsDataType>RncHandOver</xn:vsDataType>
               <xn:vsDataFormatVersion>NNRncHandOver.1.1</xn:vsDataFormatVersion>
               <vsRHO11:vsDataRHO>
                 <vsRHO11:abcMin>12</vsRHO11:abcMin>
                 <vsRHO11:abcMax>34</vsRHO11:abcMax>
               </vsRHO11:vsDataRHO>
             </xn:attributes>
           </xn:VsDataContainer>
         </un:RncFunction>
       </xn:ManagedElement>
     </xn:SubNetwork>
   </configData>
[...]
</bulkCmConfigDataFile>
```

5 Structure and content of session log XML files

The present clause defines the file format of session log XML files exchanged between an IRPManager and an IRPAgent as part of `getSessionLog` operation of the Bulk CM IRP IS (see [1]).

This file format is defined by the XML schema in Annex D and by the following subclauses.

The use of an XML schema enables to ensure session log XML files have the proper structure and to some extent the proper content.

Location of the XML schemas used for session log XML files is outside the scope of this document.

5.1 Global structure

The content of a session log XML file is the succession of:

- the standard XML declaration with specification of the version of XML and of the character encoding being used (see [2]);

- a `bulkCmSessionLogFile` XML element; this is the root XML element of session log XML files.

The definition of the allowed character encoding(s) is outside the scope of this document.

As defined by the following extract of XML schema `sessionLog.xsd` (see Annex D):

```
   <element name "bulkCmSessionLogFile">
     <complexType>
       <sequence>
         <element name="fileHeader">
[...]
         </element>
         <element name="activity" maxOccurs="unbounded">
```

```
[…]
        </element>
        <element name="fileFooter">
[…]
        </element>
      </sequence>
    </complexType>
  </element>
```

the XML content of a `bulkCmSessionLogFile` XML element is the succession of:

- a `fileHeader` XML element (see subclause 5.2);

- one or several `activity` XML elements (see subclause 5.3);

- a `fileFooter` XML element (see subclause 5.2).

XML elements `fileHeader` and `fileFooter` are empty XML elements (see subclause 5.2).

The `bulkCmSessionLogFile` XML element shall also have all the XML attribute specifications that declare the XML namespaces (see [6]) used in the XML file.

Only the default XML namespace is used in session log XML files. It is associated with the session log file XML schema `sessionLog.xsd` (see Annex D).

The following is an example of a session log XML file, without presentation of the XML attribute specifications and XML content of `fileHeader`, `activity` and `fileFooter` XML elements (replaced by […]; see subclauses 5.2 and 5.3):

```
<?xml version="1.0" encoding="UTF-8"?>
<bulkCmSessionLogFile
  xmlns=
"http://www.3gpp.org/ftp/specs/latest/rel-54/32_series/32615-
5430.zip#sessionLog"
[…]
>
  <fileHeader […]/>
  <activity […]>
[…]
  </activity>
  <activity […]>
[…]
  </activity>
  <fileFooter […]/>
</bulkCmSessionLogFile>
```

5.2   XML elements `fileHeader` and `fileFooter`

The XML elements `fileHeader` and `fileFooter` for session log XML files have the same definition, structure and content as the XML elements `fileHeader` and `fileFooter` for configuration data XML files (see subclause 4.2).

5.3   XML element `activity`

As defined by the following extract of XML schema `sessionLog.xsd` (see Annex D):

```
        <element name="activity" maxOccurs="unbounded">
          <complexType>
            <sequence>
              <element name="log" maxOccurs="unbounded">
[…]
```

```
            </element>
          </sequence>
          <attribute name="dateTime" type="dateTime" use="required"/>
          <attribute name="type" use="required">
            <simpleType>
              <restriction base="string">
                <enumeration value="upload"/>
                <enumeration value="download"/>
                <enumeration value="validate"/>
                <enumeration value="preactivate"/>
                <enumeration value="activate"/>
                <enumeration value="fallback"/>
              </restriction>
            </simpleType>
          </attribute>
        </complexType>
      </element>
```

an `activity` XML element:

- has the following XML attribute specifications:

   - a `dateTime` XML attribute specification; this attribute specification carries the date and time the Bulk CM activity was started;

   - a `type` XML attribute specification; this attribute specification carries the type of the Bulk CM activity triggered by the IRPManager, `upload`, `download`, `validate`, `preactivate`, `activate` or `fallback`;

- and its XML content is the succession of one or several `log` XML elements.

As defined by the following extract of XML schema `sessionLog.xsd` (see Annex D):

```
            <element name="log" maxOccurs="unbounded">
              <complexType>
                <simpleContent>
                  <extension base="string">
                    <attribute name="time" type="time" use="required"/>
                    <attribute name="type" use="required">
                      <simpleType>
                        <restriction base="string">
                          <enumeration value="informative"/>
                          <enumeration value="error"/>
                        </restriction>
                      </simpleType>
                    </attribute>
                    <attribute name="dn" type="string" use="optional"/>
                    <attribute name="modifier" use="optional">
                      <simpleType>
                        <restriction base="string">
                          <enumeration value="create"/>
                          <enumeration value="delete"/>
                          <enumeration value="update"/>
                        </restriction>
                      </simpleType>
                    </attribute>
                  </extension>
                </simpleContent>
              </complexType>
            </element>
```

a `log` XML element:

- has the following XML attribute specifications:

- a `time` XML attribute specification; this attribute specification carries the time the logged Bulk CM internal event occurred;

- a `type` XML attribute specification; this attribute specification carries the type of the logged Bulk CM internal event, being either `informative` or `error`;

- an optional `dn` XML attribute specification; this attribute specification carries the DN of the NRM instance associated with the logged Bulk CM internal event, if any;

- an optional `modifier` XML attribute specification; this attribute specification carries the value of the `modifier` (see subclause 4.4) associated with the NRM instance, if any;

- and it has an XML content; this XML content carries the description of the logged Bulk CM internal event.

The following is an example of an `activity` XML element (in **bold**) in a session log XML file:

```
<?xml version="1.0" encoding="UTF-8"?>
<bulkCmSessionLogFile
  xmlns=
"http://www.3gpp.org/ftp/specs/latest/rel-54/32_series/32615-
5430.zip#sessionLog"
[…]
>
[…]
  <activity dateTime="2001-05-07T12:00:00+02:00" type="download">
    <log time="12:00:01+02:00" type="informative">
      Download requested with:
        downloadDataFileReference="ftp://a1.companyNN.com/data/upld123.xml"
    </log>
    <log time="12:00:02+02:00" type="error"
      dn="DC=a1.companyNN.com,SubNetwork=1"
      modifier="update"
    >
      No such instance
    </log>
  </activity>
[…]
</bulkCmSessionLogFile>
```

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/32615-540.zip#configData"

  elementFormDefault="qualified"

  xmlns="http://www.w3.org/2001/XMLSchema"

  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-520.zip#genericNrm"

  xmlns:cn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32635-520.zip#coreNrm"

  xmlns:un=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-540.zip#utranNrm"

  xmlns:gn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-540.zip#geranNrm"
  >

  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-520.zip#genericNrm"
    />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32635-520.zip#coreNrm"
    />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-540.zip#utranNrm"
    />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-540.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>
```

Annex B (normative):
Configuration data file NRM specific XML schemas

Void.

Annex C (informative):
Configuration data file vendor-specific XML schema example

The following XML schema is an example of vendor-specific schema for configuration data XML files:

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

<!--
  Configuration data file vendor-specific XML schema example
  NNRncHandOver.1.1.xsd
-->

<schema
  targetNamespace="http://www.companyNN.com/xmlschemas/NNRncHandOver.1.1"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-520.zip#genericNrm"
>

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

  <!-- RncHandOver version 1.1 company NN vendor-specific data -->

  <element name="vsDataRHO" substitutionGroup="xn:vsData">
    <complexType>
      <complexContent>
        <extension base="xn:vsData">
          <all>
            <element name="abcMin" minOccurs="0"/>
            <element name="abcMax" minOccurs="0"/>
          </all>
        </extension>
      </complexContent>
    </complexType>
  </element>

</schema>
```

Annex D (normative):
Session log file XML schema
(file name "`sessionLog.xsd`")

The following XML schema `sessionLog.xsd` is the schema for session log XML files:

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

<!--
  3GPP TS 32.615 Bulk CM IRP
  Session log file XML schema
  sessionLog.xsd
-->

<schema
  targetNamespace=
"http://www.3gpp.org/ftp/specs/latest/rel-54/32_series/32615-
5430.zip#sessionLog"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
>

  <!-- Session log file root XML element -->

  <element name="bulkCmSessionLogFile">
    <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="activity" maxOccurs="unbounded">
          <complexType>
            <sequence>
              <element name="log" maxOccurs="unbounded">
                <complexType>
                  <simpleContent>
                    <extension base="string">
                      <attribute name="time" type="time" use="required"/>
                      <attribute name="type" use="required">
                        <simpleType>
                          <restriction base="string">
                            <enumeration value="informative"/>
                            <enumeration value="error"/>
                          </restriction>
                        </simpleType>
                      </attribute>
                      <attribute name="dn" type="string" use="optional"/>
                      <attribute name="modifier" use="optional">
                        <simpleType>
                          <restriction base="string">
                            <enumeration value="create"/>
                            <enumeration value="delete"/>
                            <enumeration value="update"/>
                          </restriction>
                        </simpleType>
```

```
            </attribute>
          </extension>
        </simpleContent>
      </complexType>
    </element>
  </sequence>
  <attribute name="dateTime" type="dateTime" use="required"/>
  <attribute name="type" use="required">
    <simpleType>
      <restriction base="string">
        <enumeration value="upload"/>
        <enumeration value="download"/>
        <enumeration value="validate"/>
        <enumeration value="preactivate"/>
        <enumeration value="activate"/>
        <enumeration value="fallback"/>
      </restriction>
    </simpleType>
  </attribute>
</complexType>
</element>
<element name="fileFooter">
  <complexType>
    <attribute name="dateTime" type="dateTime" use="required"/>
  </complexType>
</element>
</sequence>
</complexType>
</element>

</schema>
```

End of Change in Chapter 4 & 5 & Annexes A, C, D

CR-Form-v7

CHANGE REQUEST

⌘	**32.625** CR **004**	⌘ **rev**	**-**	⌘	Current version:	**5.1.2**	⌘

*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 **X**   Core Network **X**

Title:	⌘	Add the capability to contain instances of *VsDataContainer* to some MOs - Align with the IS 32.622
Source:	⌘	SA5 (olaf.pollakowski@siemens.com)
Work item code: ⌘	OAM-NIM	**Date:** ⌘ 27/02/2004

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:	⌘	According to 32.622 the IOCs *SubNetwork*, *ManagedElement* and *ManagementNode* may contain instances of *VsDataContainer*. This is not reflected in 32.625.
Summary of change: ⌘	The capability to contain instances of *VsDataContainer* is added to the MOs *SubNetwork*, *ManagedElement* and *ManagementNode*.
Consequences if not approved:	⌘	32.625 is not consistent with 32.622.

Clauses affected:	⌘	1, Annex A

	Y	**N**		
Other specs affected: ⌘		**X**	Other core specifications ⌘	
		X	Test specifications	
	X		O&M Specifications	Rel-5 32.615

Other comments:	⌘	Rel-6 Mirror in S5-048183.
		Parent Rel-5 CR 32.615 in S5-048187.

Change in Clause 1

1 Scope

The present document provides the NRM-specific part related to the Generic 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 32.622 (V5.3~~1~~.X).

End of Change in Clause 1

Change in Annex A

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

The following XML schema `genericNrm.xsd` is the NRM-specific schema for the Generic Network Resources IRP NRM defined in 3GPP TS 32.622 [1]:

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

<!--
  3GPP TS 32.625 Generic Network Resources IRP
  Bulk CM Configuration data file NRM-specific XML schema
  genericNrm.xsd
-->

<schema
  targetNamespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-52+0.zip#genericNrm"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-52+0.zip#genericNrm"
>

  <!-- Base XML type for all NRM class associated XML elements -->

  <complexType name="NrmClass">
    <attribute name="id" type="string" use="required"/>
    <attribute name="modifier" use="optional">
      <simpleType>
        <restriction base="string">
          <enumeration value="create"/>
          <enumeration value="delete"/>
          <enumeration value="update"/>
        </restriction>
      </simpleType>
    </attribute>
  </complexType>
```

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

<element name="SubNetwork">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
                <element name="userDefinedNetworkType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:SubNetwork"/>
            <element ref="xn:ManagedElement"/>
            <element ref="xn:MeContext"/>
            <element ref="xn:ManagementNode"/>
            <element ref="xn:IRPAgent"/>
            <element ref="xn:SubNetworkOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="ManagedElement">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="managedElementType" minOccurs="0"/>
                <element name="userLabel" minOccurs="0"/>
                <element name="vendorName" minOccurs="0"/>
                <element name="userDefinedState" minOccurs="0"/>
                <element name="locationName" minOccurs="0"/>
                <element name="swVersion" minOccurs="0"/>
                <element name="managedBy" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:IRPAgent"/>
            <element ref="xn:ManagedElementOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element name="MeContext">
  <complexType>
    <ComplexContent>
```

```xml
              <extension base="xn:NrmClass">
                <sequence>
                  <element name="attributes" minOccurs="0">
                    <complexType>
                    </complexType>
                  </element>
                  <choice minOccurs="0" maxOccurs="unbounded">
                    <element ref="xn:ManagedElement"/>
                  </choice>
                </sequence>
              </extension>
            </complexContent>
          </complexType>
        </element>

        <element name="ManagementNode">
          <complexType>
            <complexContent>
              <extension base="xn:NrmClass">
                <sequence>
                  <element name="attributes" minOccurs="0">
                    <complexType>
                      <all>
                        <element name="userLabel" minOccurs="0"/>
                        <element name="vendorName" minOccurs="0"/>
                        <element name="userDefinedState" minOccurs="0"/>
                        <element name="locationName" minOccurs="0"/>
                        <element name="manages" minOccurs="0"/>
                        <element name="swVersion" minOccurs="0"/>
                      </all>
                    </complexType>
                  </element>
                  <choice minOccurs="0" maxOccurs="unbounded">
                    <element ref="xn:IRPAgent"/>
                    <element ref="xn:VsDataContainer"/>
                  </choice>
                </sequence>
              </extension>
            </complexContent>
          </complexType>
        </element>

        <element name="IRPAgent">
          <complexType>
            <complexContent>
              <extension base="xn:NrmClass">
                <sequence>
                  <element name="attributes" minOccurs="0">
                    <complexType>
                      <all>
                        <element name="systemDN" minOccurs="0"/>
                      </all>
                    </complexType>
                  </element>
                  <choice minOccurs="0" maxOccurs="unbounded">
                    <element ref="xn:NotificationIRP"/>
                    <element ref="xn:AlarmIRP"/>
                    <element ref="xn:BasicCmIRP"/>
                    <element ref="xn:BulkCmIRP"/>
                  </choice>
                </sequence>
              </extension>
            </complexContent>
```

```xml
        </complexType>
      </element>

      <element name="NotificationIRP">
        <complexType>
          <complexContent>
            <extension base="xn:NrmClass">
              <sequence>
                <element name="attributes" minOccurs="0">
                  <complexType>
                    <all>
                      <element name="irpVersion" minOccurs="0"/>
                    </all>
                  </complexType>
                </element>
              </sequence>
            </extension>
          </complexContent>
        </complexType>
      </element>

      <element name="AlarmIRP">
        <complexType>
          <complexContent>
            <extension base="xn:NrmClass">
              <sequence>
                <element name="attributes" minOccurs="0">
                  <complexType>
                    <all>
                      <element name="irpVersion" minOccurs="0"/>
                    </all>
                  </complexType>
                </element>
              </sequence>
            </extension>
          </complexContent>
        </complexType>
      </element>

      <element name="BasicCmIRP">
        <complexType>
          <complexContent>
            <extension base="xn:NrmClass">
              <sequence>
                <element name="attributes" minOccurs="0">
                  <complexType>
                    <all>
                      <element name="irpVersion" minOccurs="0"/>
                    </all>
                  </complexType>
                </element>
              </sequence>
            </extension>
          </complexContent>
        </complexType>
      </element>

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

```
              <complexType>
                <all>
                  <element name="irpVersion" minOccurs="0"/>
                </all>
              </complexType>
            </element>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
</element>

<element name="VsDataContainer">
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="vsDataType" minOccurs="0"/>
                  <element name="vsDataFormatVersion" minOccurs="0"/>
                  <element ref="xn:vsData" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
</element>

<!--
  VsDataContainer NRM class vsData attribute associated empty XML element
-->

<element name="vsData">
    <complexType/>
</element>

<!--
  Abstract head XML element for all XML elements associated to further
  NRM classes optionally contained under SubNetwork NRM class
-->

<element
  name="SubNetworkOptionallyContainedNrmClass"
  type="xn:NrmClass"
  abstract="true"
/>

<!--
  Abstract head XML element for all XML elements associated to further
  NRM classes optionally contained under ManagedElement NRM class
-->

<element
  name="ManagedElementOptionallyContainedNrmClass"
  type="xn:NrmClass"
  abstract="true"
```

```
        />

    </schema>
```

CR-Form-v7

CHANGE REQUEST

⌘   **32.625** CR **005**   ⌘**rev**   **-**   ⌘   Current version: **6.0.0**   ⌘

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

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

Title:	⌘	Add the capability to contain instances of *VsDataContainer* to some MOs - Align with IS 32.622
Source:	⌘	SA5 (olaf.pollakowski@siemens.com)
Work item code: ⌘	OAM-NIM	**Date:** ⌘ 27/02/2004

Category: ⌘   **A**   **Release:** ⌘   Rel-6

Use <u>one</u> of the following categories:	*Use <u>one</u> of the following releases:*
F *(correction)*	*2* *(GSM Phase 2)*
A *(corresponds to a correction in an earlier release)*	*R96* *(Release 1996)*
B *(addition of feature),*	*R97* *(Release 1997)*
C *(functional modification of feature)*	*R98* *(Release 1998)*
D *(editorial modification)*	*R99* *(Release 1999)*
Detailed explanations of the above categories can	*Rel-4* *(Release 4)*
be found in 3GPP TR 21.900.	*Rel-5* *(Release 5)*
	Rel-6 *(Release 6)*

Reason for change:	⌘	According to 32.622 the IOCs *SubNetwork*, *ManagedElement* and *ManagementNode* may contain instances of *VsDataContainer*. This is not reflected in 32.625.
Summary of change: ⌘		The capability to contain instances of *VsDataContainer* is added to the MOs *SubNetwork*, *ManagedElement* and *ManagementNode*.
Consequences if not approved:	⌘	32.625 is not consistent with 32.622.

Clauses affected:	⌘	Annex A

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

Other comments:	⌘	Rel-6 Mirror of S5-048182.

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

The following XML schema `genericNrm.xsd` is the NRM-specific schema for the Generic Network Resources IRP NRM defined in 3GPP TS 32.622 [1]:

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

<!--
  3GPP TS 32.625 Generic Network Resources IRP
  Bulk CM Configuration data file NRM-specific XML schema
  genericNrm.xsd
-->

<schema
  targetNamespace=
"http://www.3gpp.org/ftp/specs/latest/rel-6/32_series/32625-610.zip#genericNrm"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-6/32_series/32625-610.zip#genericNrm"
>

  <!-- Base XML type for all NRM class associated XML elements -->

  <complexType name="NrmClass">
    <attribute name="id" type="string" use="required"/>
    <attribute name="modifier" use="optional">
      <simpleType>
        <restriction base="string">
          <enumeration value="create"/>
          <enumeration value="delete"/>
          <enumeration value="update"/>
        </restriction>
      </simpleType>
    </attribute>
  </complexType>

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

  <element name="SubNetwork">
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" minOccurs="0"/>
                  <element name="userDefinedNetworkType" minOccurs="0"/>
                  <element name="setOfMcc" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="xn:SubNetwork"/>
```

```xml
              <element ref="xn:ManagedElement"/>
              <element ref="xn:MeContext"/>
              <element ref="xn:ManagementNode"/>
              <element ref="xn:IRPAgent"/>
              <element ref="xn:SubNetworkOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element name="ManagedElement">
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="managedElementType" minOccurs="0"/>
                  <element name="userLabel" minOccurs="0"/>
                  <element name="vendorName" minOccurs="0"/>
                  <element name="userDefinedState" minOccurs="0"/>
                  <element name="locationName" minOccurs="0"/>
                  <element name="swVersion" minOccurs="0"/>
                  <element name="managedBy" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="xn:IRPAgent"/>
              <element ref="xn:ManagedElementOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element name="MeContext">
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="xn:ManagedElement"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element name="ManagementNode">
    <complexType>
      <complexContent>
```

```xml
          <extension base="xn:NrmClass">
            <sequence>
              <element name="attributes" minOccurs="0">
                <complexType>
                  <all>
                    <element name="userLabel" minOccurs="0"/>
                    <element name="vendorName" minOccurs="0"/>
                    <element name="userDefinedState" minOccurs="0"/>
                    <element name="locationName" minOccurs="0"/>
                    <element name="manages" minOccurs="0"/>
                    <element name="swVersion" minOccurs="0"/>
                  </all>
                </complexType>
              </element>
              <choice minOccurs="0" maxOccurs="unbounded">
                <element ref="xn:IRPAgent"/>
                <element ref="xn:VsDataContainer"/>
              </choice>
            </sequence>
          </extension>
        </complexContent>
      </complexType>
    </element>

    <element name="IRPAgent">
      <complexType>
        <complexContent>
          <extension base="xn:NrmClass">
            <sequence>
              <element name="attributes" minOccurs="0">
                <complexType>
                  <all>
                    <element name="systemDN" minOccurs="0"/>
                  </all>
                </complexType>
              </element>
              <choice minOccurs="0" maxOccurs="unbounded">
                <element ref="xn:NotificationIRP"/>
                <element ref="xn:AlarmIRP"/>
                <element ref="xn:BasicCmIRP"/>
                <element ref="xn:BulkCmIRP"/>
              </choice>
            </sequence>
          </extension>
        </complexContent>
      </complexType>
    </element>

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

```xml
          </complexType>
        </element>

        <element name="AlarmIRP">
          <complexType>
            <complexContent>
              <extension base="xn:NrmClass">
                <sequence>
                  <element name="attributes" minOccurs="0">
                    <complexType>
                      <all>
                        <element name="irpVersion" minOccurs="0"/>
                      </all>
                    </complexType>
                  </element>
                </sequence>
              </extension>
            </complexContent>
          </complexType>
        </element>

        <element name="BasicCmIRP">
          <complexType>
            <complexContent>
              <extension base="xn:NrmClass">
                <sequence>
                  <element name="attributes" minOccurs="0">
                    <complexType>
                      <all>
                        <element name="irpVersion" minOccurs="0"/>
                      </all>
                    </complexType>
                  </element>
                </sequence>
              </extension>
            </complexContent>
          </complexType>
        </element>

        <element name="BulkCmIRP">
          <complexType>
            <complexContent>
              <extension base="xn:NrmClass">
                <sequence>
                  <element name="attributes" minOccurs="0">
                    <complexType>
                      <all>
                        <element name="irpVersion" minOccurs="0"/>
                      </all>
                    </complexType>
                  </element>
                </sequence>
              </extension>
            </complexContent>
          </complexType>
        </element>

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

```xml
                    <complexType>
                      <all>
                        <element name="vsDataType" minOccurs="0"/>
                        <element name="vsDataFormatVersion" minOccurs="0"/>
                        <element ref="xn:vsData" minOccurs="0"/>
                      </all>
                    </complexType>
                  </element>
                  <choice minOccurs="0" maxOccurs="unbounded">
                    <element ref="xn:VsDataContainer"/>
                  </choice>
                </sequence>
              </extension>
            </complexContent>
          </complexType>
        </element>

        <!--
          VsDataContainer NRM class vsData attribute associated empty XML element
        -->

        <element name="vsData">
          <complexType/>
        </element>

        <!--
          Abstract head XML element for all XML elements associated to further
          NRM classes optionally contained under SubNetwork NRM class
        -->

        <element
          name="SubNetworkOptionallyContainedNrmClass"
          type="xn:NrmClass"
          abstract="true"
        />

        <!--
          Abstract head XML element for all XML elements associated to further
          NRM classes optionally contained under ManagedElement NRM class
        -->

        <element
          name="ManagedElementOptionallyContainedNrmClass"
          type="xn:NrmClass"
          abstract="true"
        />

      </schema>
```

CR-Form-v7

CHANGE REQUEST

⌘   **32.635** CR **003**   ⌘**rev** **-** ⌘ Current version: **5.1.1** ⌘

*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 **X**

Title: ⌘	Add the capability to contain instances of *VsDataContainer* to some MOs - Align with the IS 32.632
Source: ⌘	SA5 (olaf.pollakowski@siemens.com)
Work item code:⌘	OAM-NIM ***Date:*** ⌘ 27/02/2004

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: ⌘	According to 32.632 all IOCs may contain instances of *VsDataContainer*. This is not reflected in 32.635.
Summary of change:⌘	The capability to contain instances of *VsDataContainer* is added to all MOs.
Consequences if not approved: ⌘	32.635 is not consistent with 332.632.

Clauses affected: ⌘	1, Annex A

	Y	N		
Other specs affected: ⌘		X	Other core specifications ⌘	
		X	Test specifications	
	X		O&M Specifications	Rel-5 32.615

Other comments: ⌘	Parent Rel-5 CR 32.615 in S5-048187.

1   Scope

The present document provides the NRM-specific part related to the Core 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 32.632 (V5.5~~0~~.X).

End of Change in Chapter 1

Change in Annex A

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

The following XML schema `coreNrm.xsd` is the NRM-specific schema for the Core Network Resources IRP NRM defined in 3GPP TS 32.632 [1]:

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

<!--
  3GPP TS 32.635 Core Network Resources IRP
  Bulk CM Configuration data file NRM-specific XML schema
  coreNrm.xsd
-->

<schema
  targetNamespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32635-52±0.zip#coreNrm"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-52±0.zip#genericNrm"
  xmlns:cn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32635-52±0.zip#coreNrm"
>

  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-52±0.zip#genericNrm"
  />

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

  <element
    name="MscFunction"
    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="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="HlrFunction"
  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="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="VlrFunction"
  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="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
```

```
          </complexContent>
        </complexType>
    </element>

    <element
      name="AucFunction"
      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="xn:VsDataContainer"/>
                </choice>
              </sequence>
            </extension>
          </complexContent>
        </complexType>
    </element>

    <element
      name="EirFunction"
      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="xn:VsDataContainer"/>
                </choice>
              </sequence>
            </extension>
          </complexContent>
        </complexType>
    </element>

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

```xml
                        <element name="userLabel" minOccurs="0"/>
                      </all>
                    </complexType>
                  </element>
                  <choice minOccurs="0" maxOccurs="unbounded">
                    <element ref="xn:VsDataContainer"/>
                  </choice>
                </sequence>
              </extension>
            </complexContent>
          </complexType>
        </element>

        <element
          name="SmsGmscFunction"
          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="xn:VsDataContainer"/>
                  </choice>
                </sequence>
              </extension>
            </complexContent>
          </complexType>
        </element>

        <element
          name="GmscFunction"
          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="xn:VsDataContainer"/>
                  </choice>
                </sequence>
              </extension>
            </complexContent>
          </complexType>
        </element>

        <element
          name="SgsnFunction"
```

```
          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="xn:VsDataContainer"/>
              </choice>
            </sequence>
          </extension>
        </complexContent>
      </complexType>
   </element>

   <element
      name="GgsnFunction"
      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="xn:VsDataContainer"/>
              </choice>
            </sequence>
          </extension>
        </complexContent>
      </complexType>
   </element>

   <element
      name="BgFunction"
      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="xn:VsDataContainer"/>
```

```xml
              </choice>
            </sequence>
          </extension>
        </complexContent>
      </complexType>
    </element>

    <element
      name="SmlcFunction"
      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="xn:VsDataContainer"/>
              </choice>
            </sequence>
          </extension>
        </complexContent>
      </complexType>
    </element>

    <element
      name="GmlcFunction"
      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="xn:VsDataContainer"/>
              </choice>
            </sequence>
          </extension>
        </complexContent>
      </complexType>
    </element>

    <element
      name="ScfFunction"
      substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
    >
      <complexType>
        <complexContent>
          <extension base="xn:NrmClass">
            <sequence>
```

```xml
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="SrfFunction"
  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="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="CbcFunction"
  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="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>
```

```
<element
  name="CgfFunction"
  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="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="MgwFunction"
  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="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

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

```xml
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="IwfFunction"
    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="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="MnpSrfFunction"
    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="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="NpdbFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
```

```xml
      <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="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="SgwFunction"
    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="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="SsfFunction"
    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="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
```

```
        </complexContent>
      </complexType>
  </element>

  <element
    name="BsFunction"
    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="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

</schema>
```

CR-Form-v7

CHANGE REQUEST

| ⌘ | **32.645** CR **007** | ⌘**rev** | **-** | ⌘ | Current version: | **5.3.0** | ⌘ |

*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 **X**   Core Network ☐

Title:	⌘	Add the capability to contain instances of *VsDataContainer* to some MOs - Align with the IS 32.642
Source:	⌘	SA5 (olaf.pollakowski@siemens.com)

Work item code: ⌘	OAM-NIM			**Date:** ⌘	27/02/2004

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:	⌘	According to 32.642 the IOCs *IubLink* and *ExternalUtranCell* may contain instances of *VsDataContainer*. This is not reflected in 32.645.
Summary of change: ⌘		The capability to contain instances of *VsDataContainer* is added to the MOs *IubLink* and *ExternalUtranCell*.
Consequences if not approved:	⌘	32.645 is not consistent with 32.642.

Clauses affected:	⌘	Annex A

	Y	N		
Other specs affected: ⌘		X	Other core specifications ⌘	
		X	Test specifications	
	X		O&M Specifications	Rel-5 32.615

Other comments:	⌘	Parent Rel-5 CR 32.615 in S5-048187.

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/32645-540.zip#utranNrm"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-520.zip#genericNrm"
  xmlns:un=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-540.zip#utranNrm"
  xmlns:gn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-540.zip#geranNrm"
>

  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-520.zip#genericNrm"
  />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-540.zip#geranNrm"
  />

  <!-- UTRAN Network Resources IRP NRM attribute related XML types -->

  <simpleType name="localCellId">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="268435455"/>
    </restriction>
  </simpleType>

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

  <simpleType name="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>
```

```xml
<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>

<complexType name="uraList">
  <sequence>
    <element name="ura" minOccurs="1" maxOccurs="8">
      <simpleType>
        <restriction base="integer">
          <minInclusive value="0"/>
          <maxInclusive value="65535"/>
        </restriction>
      </simpleType>
    </element>
  </sequence>
</complexType>

<!-- 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">
```

```xml
              <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="uraList" type="un:uraList" 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>
```

```xml
          </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>
                <choice minOccurs="0" maxOccurs="unbounded">
                  <element ref="xn:VsDataContainer"/>
                </choice>
              </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>
  <choice minOccurs="0" maxOccurs="unbounded">
    <element ref="xn:VsDataContainer"/>
  </choice>
</sequence>
          </extension>
        </complexContent>
      </complexType>
    </element>

  </schema>
```

CR-Form-v7

CHANGE REQUEST

⌘   **32.655** CR **006**   ⌘**rev**   **-**   ⌘   Current version: **5.3.0**   ⌘

*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 **X**   Core Network ☐

Title: ⌘	Add the capability to contain instances of *VsDataContainer* to some MOs - Align with the IS 32.652
Source: ⌘	SA5 (olaf.pollakowski@siemens.com)

Work item code:⌘	OAM-NIM	***Date:*** ⌘	27/02/2004

Category: ⌘   **F**   ***Release:*** ⌘   Rel-5

Use <u>one</u> 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 <u>one</u> 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: ⌘	According to 32.652 the IOC *ExternalGsmCell* may contain instances of *VsDataContainer*. This is not reflected in 32.655.
Summary of change:⌘	The capability to contain instances of *VsDataContainer* is added to the MO *ExternalGsmCell*.
Consequences if ⌘ ***not approved:***	32.655 is not consistent with 32.652.

Clauses affected: ⌘	Annex A

Other specs ⌘ ***affected:***	**Y**	**N**		⌘	
		X	Other core specifications ⌘		
		X	Test specifications		
	X		O&M Specifications		Rel-5 32.615

Other comments: ⌘	Parent Rel-5 CR 32.615 in S5-048187.

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/32655-5430.zip#geranNrm"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-5210.zip#genericNrm"
  xmlns:un=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-5430.zip#utranNrm"
  xmlns:gn=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32655-5430.zip#geranNrm"
  >

  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32625-5210.zip#genericNrm"
    />
  <import
    namespace=
"http://www.3gpp.org/ftp/specs/latest/rel-5/32_series/32645-5430.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>
```

```xml
          </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>
              <choice minOccurs="0" maxOccurs="unbounded">
                <element ref="xn:VsDataContainer"/>
              </choice>
            </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>
```