

ETSI TS 132 635 V9.0.0 (2010-01)

Technical Specification

**Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Configuration Management (CM);
Core network resources Integration Reference Point (IRP);
Bulk CM eXtensible Markup Language (XML) file format definition
(3GPP TS 32.635 version 9.0.0 Release 9)**



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Foreword

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Introduction

The present document is part of a TS-family covering the 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; as identified below:

- 32.631: "Configuration Management (CM); Core network resources Integration Reference Point (IRP); Requirements".
- 32.632: "Configuration Management (CM); Core network resources Integration Reference Point (IRP); Network Resource Model (NRM)".
- 32.633: "Configuration Management (CM); Core network resources Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)".
- 32.635: "Configuration Management (CM); Core network resources Integration Reference Point (IRP); Bulk CM eXtensible Markup Language (XML) file format definition".**

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 V9.0.X.

2 References

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

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

- [1] 3GPP TS 32.632: "Telecommunication management; Configuration Management (CM); Core network resources Integration Reference Point (IRP); Network Resource Model (NRM)".
- [2] 3GPP TS 32.612: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Information Service (IS)".
- [3] 3GPP TS 32.615: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); eXtensible Markup Language (XML) file format definition".
- [4] W3C REC-xml-20001006: "Extensible Markup Language (XML) 1.0 (Second Edition)".
- [5] W3C REC-xmllschema-0-20010502: "XML Schema Part 0: Primer".
- [6] W3C REC-xmllschema-1-20010502: "XML Schema Part 1: Structures".
- [7] W3C REC-xmllschema-2-20010502: "XML Schema Part 2: Datatypes".
- [8] W3C REC-xml-names-19990114: "Namespaces in XML".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

XML file: file containing an XML document

XML document: composed of the succession of an optional XML declaration followed by a root XML element

NOTE: See [4]; in the scope of the present document.

XML declaration: it specifies the version of XML being used

NOTE: See [4].

XML element: has a type, is identified by a name, may have a set of XML attribute specifications and is either composed of the succession of an XML start-tag followed by the XML content of the XML element followed by an XML end-tag, or composed simply of an XML empty-element tag; each XML element may contain other XML elements

NOTE: See [4].

empty XML element: having an empty XML content; an empty XML element still possibly has a set of XML attribute specifications; an empty XML element is either composed of the succession of an XML start-tag directly followed by an XML end-tag, or composed simply of an XML empty-element tag

NOTE: See [4].

XML content (of an XML element): empty if the XML element is simply composed of an XML empty-element tag; otherwise the part, possibly empty, of the XML element between its XML start-tag and its XML end-tag

XML start-tag: the beginning of a non-empty XML element is marked by an XML start-tag containing the name and the set of XML attribute specifications of the XML element

NOTE: See [4].

XML end-tag: the end of a non-empty XML element is marked by an XML end-tag containing the name of the XML element

NOTE: See [4].

XML empty-element tag: an empty XML element is composed simply of an empty-element tag containing the name and the set of XML attribute specifications of the XML element

NOTE: See [4].

XML attribute specification: has a name and a value

DTD: defines structure and content constraints to be respected by an XML document to be valid with regard to this DTD

NOTE: See [4].

XML schema: more powerful than a DTD, an XML schema defines structure and content constraints to be respected by an XML document to conform with this XML schema; through the use of XML namespaces several XML schemas can be used together by a single XML document; an XML schema is itself also an XML document that shall conform with the XML schema for XML schemas

NOTE: See [5], [6] and [7].

XML namespace: enables qualifying element and attribute names used in XML documents by associating them with namespaces identified by different XML schemas

NOTE: See [8], in the scope of the present document.

XML complex type: defined in an XML schema; cannot be directly used in an XML document; can be the concrete type or the derivation base type for an XML element type or for another XML complex type; ultimately defines constraints for an XML element on its XML attribute specifications and/or its XML content

NOTE: See [5], [6] and [7].

XML element type: declared by an XML schema; can be directly used in an XML document; as the concrete type of an XML element, directly or indirectly defines constraints on its XML attribute specifications and/or its XML content; can also be the concrete type or the derivation base type for another XML element type

NOTE: See [5], [6] and [7].

3.2 Abbreviations

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

| | |
|-------|--|
| CM | Configuration Management |
| DTD | Document Type Definition |
| EDGE | Enhanced Data for GSM Evolution |
| GERAN | GSM/EDGE Radio Access Network |
| GSM | Global System for Mobile communication |
| IRP | Integration Reference Point |
| IS | Information Service |
| MGW | Media GateWay |
| NRM | Network Resource Model |
| UMTS | Universal Mobile Telecommunications System |
| UTRAN | Universal Terrestrial Radio Access Network |
| XML | eXtensible Markup Language |

4 Structure and content of configuration data XML files

The overall description of the file format of configuration data XML files is provided by 3GPP TS 32.615 [3].

Annex A of the present document defines the NRM-specific XML schema `coreNrm.xsd` for the Core Network Resources IRP NRM defined in 3GPP TS 32.632 [1].

XML schema `coreNrm.xsd` explicitly declares NRM-specific XML element types for the related NRM.

The definition of those NRM-specific XML element types complies with the generic mapping rules defined in 3GPP TS 32.615 [3].

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/archive/32_series/32.635#coreNrm"
  elementFormDefault="qualified"
  attributeFormDefault="unqualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn="http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm"
  xmlns:cn="http://www.3gpp.org/ftp/specs/archive/32_series/32.635#coreNrm"
>

  <import namespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm"/>

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

  <element
    name="MscServerFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" minOccurs="0"/>
                  <element name="mccList" minOccurs="0"/>
                  <element name="mnccList" minOccurs="0"/>
                  <element name="lacList" minOccurs="0"/>
                  <element name="sacList" minOccurs="0"/>
                  <element name="gcaList" minOccurs="0"/>
                  <element name="mscId" minOccurs="0"/>
                  <element name="mscServerFunctionGsmCell" type="xn:dnList" minOccurs="0"/>
                  <element name="mscServerFunctionExternalGsmCell" type="xn:dnList" minOccurs="0"/>
                  <element name="mscServerFunctionCsMgwFunction" type="xn:dnList" minOccurs="0"/>
                </all>
              </complexType>
            </element>
          </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>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>
</schema>
```

```

        </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>

```

```

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

<element
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    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
<complexType>
<complexContent>
    <extension base="xn:NrmClass">
        <sequence>
            <element name="attributes" minOccurs="0">
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                    <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
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    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>
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                <complexType>
                    <all>
                        <element name="userLabel" minOccurs="0"/>
                        <element name="mccList" minOccurs="0"/>
                        <element name="mncList" minOccurs="0"/>
                        <element name="lacList" minOccurs="0"/>
                        <element name="racList" minOccurs="0"/>
                        <element name="sacList" minOccurs="0"/>
                        <element name="sgsnId" minOccurs="0"/>
                        <element name="sgsnFunctionGsmCell" type="xn:dnList" minOccurs="0"/>
                        <element name="sgsnFunctionExternalGsmCell" type="xn:dnList" minOccurs="0"/>
                    </all>
                </complexType>
            </element>
        </sequence>
        <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="cn:GbLink"/>
            <element ref="cn:IupsLink"/>
            <element ref="xn:VsDataContainer"/>
        </choice>
    </extension>
</complexContent>
</complexType>
</element>

```

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

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

<element
  name="SmlcFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
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    <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"
>
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    <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>
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                <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="IucsLink">
<complexType>
<complexContent>
    <extension base="xn:NrmClass">
        <sequence>
            <element name="attributes" minOccurs="0">
                <complexType>
                    <all>
                        <element name="userLabel" minOccurs="0"/>
                        <element name="connectedRnc" minOccurs="0"/>
                        <element name="connectedBss" minOccurs="0"/>
                    </all>
                </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
                <element ref="xn:VsDataContainer"/>
            </choice>
        </sequence>
    </extension>
</complexContent>
</complexType>
</element>

<element name="IupsLink">
<complexType>
<complexContent>
    <extension base="xn:NrmClass">
        <sequence>
            <element name="attributes" minOccurs="0">
                <complexType>
                    <all>
                        <element name="userLabel" minOccurs="0"/>
                        <element name="connectedRnc" minOccurs="0"/>
                        <element name="connectedBss" minOccurs="0"/>
                    </all>
                </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
                <element ref="xn:VsDataContainer"/>
            </choice>
        </sequence>
    </extension>
</complexContent>
</complexType>
</element>

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

```

```

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

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

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

<element
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  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
<complexType>
<complexContent>
<extension base="xn:NrmClass">
  <sequence>
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      <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="cn:IubcLink"/>
        <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="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>
      </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>

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

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    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
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<complexContent>
    <extension base="xn:NrmClass">
        <sequence>
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                <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
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    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
<complexType>
<complexContent>
    <extension base="xn:NrmClass">
        <sequence>
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                <complexType>
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                        <element name="userLabel" minOccurs="0"/>
                        <element name="csMgwFunctionMscServerFunction" minOccurs="0"/>
                        <element name="csMgwFunctionIucsLink" type="xn:dnList" minOccurs="0"/>
                        <element name="csMgwFunctionALink" type="xn:dnList" minOccurs="0"/>
                    </all>
                </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
                <element ref="xn:VsDataContainer"/>
            </choice>
        </sequence>
    </extension>
</complexContent>
</complexType>
</element>
<element
    name="BmScFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
<complexType>
<complexContent>
    <extension base="xn:NrmClass">
        <sequence>
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                <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="Link_BmSc_Ggsn" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
<complexType>
<complexContent>
    <extension base="xn:NrmClass">
        <sequence>

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        <all>
            <element name="aEnd" type="xn:dn" minOccurs="0"/>
            <element name="linkType" type="xn:linkType" minOccurs="0"/>
            <element name="protocolName" type="string" minOccurs="0"/>
            <element name="protocolVersion" type="string" minOccurs="0"/>
            <element name="userLabel" type="string" minOccurs="0"/>
            <element name="zEnd" type="xn:dn" minOccurs="0"/>
        </all>
    </complexType>
</element>
<choice minOccurs="0" maxOccurs="unbounded">
    <element ref="xn:VsDataContainer"/>
</choice>
</sequence>
</extension>
</complexContent>
</complexType>
</element>

<element name="Link_Ggsn_Sgsn" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
    <complexType>
        <complexContent>
            <extension base="xn:NrmClass">
                <sequence>
                    <element name="attributes" minOccurs="0">
                        <complexType>
                            <all>
                                <element name="aEnd" type="xn:dn" minOccurs="0"/>
                                <element name="linkType" type="xn:linkType" minOccurs="0"/>
                                <element name="protocolName" type="string" minOccurs="0"/>
                                <element name="protocolVersion" type="string" minOccurs="0"/>
                                <element name="userLabel" type="string" minOccurs="0"/>
                                <element name="zEnd" type="xn:dn" minOccurs="0"/>
                            </all>
                        </complexType>
                    </element>
                    <choice minOccurs="0" maxOccurs="unbounded">
                        <element ref="xn:VsDataContainer"/>
                    </choice>
                </sequence>
                </extension>
            </complexContent>
        </complexType>
    </element>
</element>

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

</schema>

```

Annex B (informative):
Void

Annex C (informative): Change history

| Change history | | | | | | | | |
|----------------|-------|-----------|------|-----|---|-----|-------|-------|
| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Cat | Old | New |
| Jun 2002 | SA_16 | SP-020298 | -- | -- | Submitted to TSG SA #16 for Information | -- | 1.0.0 | |
| Sep 2002 | SA_17 | SP-020461 | -- | -- | Submitted to TSG SA #17 for Approval | -- | 2.0.0 | 5.0.0 |
| Jun 2003 | SA_20 | SP-030287 | 0001 | -- | Correction of Core NRM XML schema namespace URIs | F | 5.0.0 | 5.1.0 |
| Jun 2003 | SA_20 | SP-030288 | 0002 | -- | Generic NRM XML schema dependencies removal | F | 5.0.0 | 5.1.0 |
| Oct 2003 | -- | -- | -- | -- | Attached to this TS the normative XML schema electronic files corresponding to June 2003 TS 32.635 | -- | 5.1.0 | 5.1.1 |
| Mar 2004 | SA_23 | SP-040131 | 0003 | -- | Add the capability to contain instances of VsDataContainer to some MOs - Align with the IS 32.632 | F | 5.1.1 | 5.2.0 |
| Jun 2004 | SA_24 | SP-040259 | 0004 | -- | Removal of XML schema URI dependencies | F | 5.2.0 | 5.3.0 |
| Jun 2004 | SA_24 | SP-040258 | 0005 | -- | Correction of the annex related to XML schema electronic files publication | F | 5.2.0 | 5.3.0 |
| Sep 2004 | SA_25 | SP-040583 | 0006 | -- | Add missing elements in the Core Network XML file format definition | F | 5.3.0 | 5.4.0 |
| Sep 2004 | SA_25 | SP-040582 | 0007 | -- | Correction of modelling of Media GateWay (MGW) | F | 5.3.0 | 5.4.0 |
| Sep 2004 | SA_25 | SP-040541 | -- | -- | Automatic upgrade to Rel- 6 (no CR) as per request in SP-040541 SA5_presentation_SA_25.ppt (slide 17) | -- | 5.4.0 | 6.0.0 |
| Dec 2004 | SA_26 | SP-040809 | 0008 | -- | Add new IMS Entities | B | 6.0.0 | 6.1.0 |
| Mar 2005 | SA_27 | SP-050047 | 0010 | -- | Align with 32.632, regarding the IS template and UML repertoire | A | 6.1.0 | 6.2.0 |
| Mar 2005 | SA_27 | SP-050047 | 0013 | -- | Correction to SgsnFunction XML, correct IS reference and Editorial corrections | A | 6.1.0 | 6.2.0 |
| Jun 2005 | SA_28 | SP-050296 | 0014 | -- | Correction of XML definitions for IOCs MscServerFunction and SgsnFunction | F | 6.2.0 | 6.3.0 |
| Jun 2006 | SA_32 | SP-060257 | 0015 | -- | Add missing Link entities- Align with 32.632 Information Service(IS). | F | 6.3.0 | 6.4.0 |
| Sep 2006 | SA_33 | SP-060611 | 0016 | -- | Add missing CscfFunction to CN NRM - Align with 32.632 | F | 6.4.0 | 6.5.0 |
| Sep 2006 | SA_33 | SP-060611 | 0017 | -- | Add missing link (Link_Scscf_Scscf) - Align with 32.632 | F | 6.4.0 | 6.5.0 |
| Sep 2006 | SA_33 | SP-060655 | 0018 | 1 | Correct the usage of dnList instead of string type for indicating multiple DN | F | 6.4.0 | 6.5.0 |
| Dec 2006 | SA_34 | SP-060712 | 0019 | -- | Correct the Link subclasses to model Mg and Mj reference points - Align with 32.632 | F | 6.5.0 | 6.6.0 |
| Dec 2006 | SA_34 | SP-060731 | 0020 | -- | Move IMS part to new IMS NRM (32.735) | C | 6.6.0 | 7.0.0 |
| Mar 2007 | SA_35 | SP-070047 | 0021 | -- | Removing IMS links from CN NRM | F | 7.0.0 | 7.1.0 |
| Jun 2007 | SA_36 | SP-070277 | 0022 | -- | Add the BmScFunction to the CN NRM - Needed for the TraceIRP - Align with 32.632 | B | 7.1.0 | 7.2.0 |
| Dec 2007 | SA_38 | SP-070730 | 0024 | 1 | R7 CR 32.635-720 Add Missing Containment | A | 7.2.0 | 7.3.0 |
| Jun 2008 | SA_40 | SP-080328 | 0025 | -- | Add definition of IOC CircuitEndPointSubgroup - Align with 32.632 and 32.407 | F | 7.3.0 | 7.4.0 |
| Dec 2008 | SA_42 | -- | -- | -- | Upgrade to Release 8 | -- | 7.4.0 | 8.0.0 |
| Dec 2009 | SA_46 | SP-090719 | 0026 | -- | Discontinue from Rel-9 onwards the XML schema extraction and storage | F | 8.0.0 | 9.0.0 |

History

| Document history | | |
|------------------|--------------|-------------|
| V9.0.0 | January 2010 | Publication |
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