Source: **SA5 (Telecom Management)**

Title: **CR 32715 Configuration Management (CM) Transport Network (TN) NRM IRP**

Document for: **Approval**

Agenda Item: **7.5.3**

Doc-1st-Level	Spec	CR	R	Phase	Subject	Ca	VerCr	Doc-2nd-Level	Workitem
SP-050052	32.715	001	--	Rel-6	"Unbounded" is not a valid value for "maxInclusive" for type Integer - Correction of XML schema	F	6.0.0	S5-047054	OAM-NIM

CR-Form-v7

CHANGE REQUEST

⌘   **32.715 CR 001**   ⌘**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: ⌘	"Unbounded" is not a valid value for "maxInclusive" for type Integer - Correction of XML schema

Source: ⌘	**SA5** (Ericsson john.power@ericsson.com)

Work item code: ⌘	OAM-NIM	***Date:*** ⌘	28/01/2005

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

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: ⌘	The XML schema will not validate in some parsers. Editorial errors exist. Schema location URL is incorrect. XML does not match the NRM IS. Optional attributes are not modelled according to the existing Bulk CM pattern.

Summary of change: ⌘	According to the XML language specification integers cannot be "unbounded", this is not a "fundamental facet" for type "integer". This prevents validation of the schema in some but not all tools. See http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/ - dt-bounded and http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/#app-fundamental-facets for more details. This CR removes the "maxInclusive=unbounded" for type Integer. Update the IS references. Correct the Schema location URL. Remove VsDataContainer from TransportNetworkInterface. Simplify the modelling of optional attributes.

Consequences if not approved: ⌘	Transport XML is not usable. Specification is unclear. Location of schema will be incorrect. XML will not be aligned with NRM. Optional attributes in Tranport network will be modelled differently from other NRMs.

Clauses affected: ⌘	Scope, Clause 4, Annex A, Annex B

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

Other comments: ⌘	

1 Scope

The present document provides the NRM-specific part related to 3GPP TS 32.712 [1] Transport Network (TN) interface NRM IRP IS of the XML file format definition for the 3GPP TS 32.612 [2] Bulk Configuration Management IRP IS.

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.~~642~~ 712 (V6.~~1~~0.X).

End of Change in Scope

Change in Clause 4

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 ~~utranNrm~~transportNrm.xsd for the ~~UTRAN~~ Transport interface Network Resources IRP NRM defined in 3GPP TS 32.712 [1].

XML schema ~~utranNrm~~transportNrm.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].

End of Change in Clause 4

Change in Clause Annex A

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

The following XML schema transportNrm.xsd is the NRM-specific schema for the Transport Network Interface IRP NRM defined in 3GPP TS 32.712 [1]:

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

<!--
  3GPP TS 32.715 Transport Network Interface NRM IRP
  Bulk CM Configuration data file NRM-specific XML schema
  transportNrm.xsd
-->
```

```
<schema
  targetNamespace=
"http://www.3gpp.org/ftp/specs/archive/32_series/32.715#transportNrm"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn=
"http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm"
  xmlns:tn=
"http://www.3gpp.org/ftp/specs/archive/32_series/32.715#transportNrm"
>

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

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

  <simpleType name="transportNetworkType">
    <restriction base="string">
      <enumeration value="ATM"/>
      <enumeration value="IP"/>
    </restriction>
  </simpleType>

  <simpleType name="serviceCategoryIn">
    <restriction base="string">
      <enumeration value="CBR"/>
      <enumeration value="RT-VBR"/>
      <enumeration value="NRT-VBR"/>
      <enumeration value="ABR"/>
      <enumeration value="UBR"/>
      <enumeration value="GFR"/>
    </restriction>
  </simpleType>

  <simpleType name="serviceCategoryEg">
    <restriction base="string">
      <enumeration value="CBR"/>
      <enumeration value="RT-VBR"/>
      <enumeration value="NRT-VBR"/>
      <enumeration value="ABR"/>
      <enumeration value="UBR"/>
      <enumeration value="GFR"/>
    </restriction>
  </simpleType>

  <simpleType name="usedAAL">
    <restriction base="string">
      <enumeration value="Null"/>
      <enumeration value="AAL1"/>
      <enumeration value="AAL2"/>
      <enumeration value="AAL3"/>
      <enumeration value="AAL4"/>
      <enumeration value="AAL5"/>
    </restriction>
  </simpleType>

  <simpleType name="virtualPathId">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="unbounded"/>
    </restriction>
  </simpleType>

  <simpleType name="virtualChannelId">
    <restriction base="integer">
      <minInclusive value="0"/>
      <maxInclusive value="unbounded"/>
    </restriction>
  </simpleType>

  <complexType name="physicalPortIdList">
    <sequence>
      <element name="physicalPortId" type="string" minOccurs="1" maxOccurs="unbounded">
      </element>
    </sequence>
  </complexType>
```

```xml
    <simpleType name="peakCellRateIn">
      <restriction base="integer">
        <minInclusive value="1"/>
        <maxInclusive value="unbounded"/>
      </restriction>
    </simpleType>

    <simpleType name="peakCellRateEg">
      <restriction base="integer">
        <minInclusive value="1"/>
        <maxInclusive value="unbounded"/>
      </restriction>
    </simpleType>

    <simpleType name="sustainableCellRateIn">
      <union>
      <simpleType>
        <restriction base="integer">
         <minInclusive value="1"/>
         <maxInclusive value="unbounded"/>
        </restriction>
      </simpleType>
      <simpleType>
        <restriction base="string">
         <enumeration value="null"/>
        </restriction>
      </simpleType>
      </union>
    </simpleType>

    <simpleType name="sustainableCellRateEg">
      <union>
      <simpleType>
        <restriction base="integer">
         <minInclusive value="1"/>
         <maxInclusive value="unbounded"/>
        </restriction>
      </simpleType>
      <simpleType>
        <restriction base="string">
         <enumeration value="null"/>
        </restriction>
      </simpleType>
      </union>
    </simpleType>

    <simpleType name="maximumBurstSizeIn">
      <union>
      <simpleType>
        <restriction base="integer">
         <minInclusive value="1"/>
         <maxInclusive value="unbounded"/>
        </restriction>
      </simpleType>
      <simpleType>
        <restriction base="string">
         <enumeration value="null"/>
        </restriction>
      </simpleType>
      </union>
    </simpleType>

    <simpleType name="maximumBurstSizeEg">
      <union>
      <simpleType>
        <restriction base="integer">
         <minInclusive value="1"/>
         <maxInclusive value="unbounded"/>
        </restriction>
      </simpleType>
      <simpleType>
        <restriction base="string">
         <enumeration value="null"/>
        </restriction>
      </simpleType>
      </union>
    </simpleType>
```

```xml
    <simpleType name="minimumCellRateIn">
      <union>
      <simpleType>
       <restriction base="integer">
        <minInclusive value="1"/>
         <maxInclusive value="unbounded"/>
        </restriction>
       </simpleType>
       <simpleType>
       <restriction base="string">
        <enumeration value="null"/>
       </restriction>
      </simpleType>
      </union>
    </simpleType>

    <simpleType name="minimumCellRateEg">
      <union>
      <simpleType>
       <restriction base="integer">
        <minInclusive value="1"/>
        <maxInclusive value="unbounded"/>
       </restriction>
      </simpleType>
      <simpleType>
       <restriction base="string">
        <enumeration value="null"/>
       </restriction>
      </simpleType>
      </union>
    </simpleType>

    <simpleType name="minimumDesiredCellRateIn">
      <union>
      <simpleType>
       <restriction base="integer">
        <minInclusive value="1"/>
         <maxInclusive value="unbounded"/>
       </restriction>
      </simpleType>
      <simpleType>
       <restriction base="string">
        <enumeration value="null"/>
       </restriction>
      </simpleType>
      </union>
    </simpleType>

    <simpleType name="minimumDesiredCellRateEg">
      <union>
      <simpleType>
       <restriction base="integer">
        <minInclusive value="1"/>
         <maxInclusive value="unbounded"/>
       </restriction>
      </simpleType>
      <simpleType>
       <restriction base="string">
        <enumeration value="null"/>
       </restriction>
      </simpleType>
      </union>
    </simpleType>

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

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

```
                    <element name="userLabel" minOccurs="0"/>
                    <element
                      name="transportNetworkType"
                      type="tn:transportNetworkType"
                      minOccurs="0"
                    />
                  </all>
                </complexType>
              </element>
              <choice minOccurs="0" maxOccurs="unbounded">
                <element ref="tn:ATMPathTerminationPoint"/>
                <element ref="tn:ATMChannelTerminationPoint"/>
                <element ref="xn:VsDataContainer"/>
              </choice>
            </sequence>
          </extension>
        </complexContent>
      </complexType>
    </element>

    <element name="ATMChannelTerminationPoint">
      <complexType>
        <complexContent>
          <extension base="xn:NrmClass">
            <sequence>
              <element name="attributes" minOccurs="0">
                <complexType>
                  <all>
                    <element name="usageChannel" type="string" minOccurs="0"/>
                    <element
                      name="virtualPathId"
                      type="tn:virtualPathId"
                      minOccurs="0"
                    />
                    <element
                      name="virtualChannelId"
                      type="tn:virtualChannelId"
                      minOccurs="0"
                    />
                    <element
                      name="physicalPortId"
                      type="tn:physicalPortIdListstring"
                      minOccurs="0"
                    />
                    <element name="physicalInterfaceType" type="string" minOccurs="0"/>
                    <element
                      name="serviceCategoryIn"
                      type="tn:serviceCategoryIn"
                      minOccurs="0"
                    />
                    <element
                      name="serviceCategoryEg"
                      type="tn:serviceCategoryEg"
                      minOccurs="0"
                    />
                    <element
                      name="usedAAL"
                      type="tn:usedAAL"
                      minOccurs="0"
                    />
                    <element
                      name="peakCellRateIn"
                      type="tn:peakCellRateIn"
                      minOccurs="0"
                    />
                    <element
                      name="peakCellRateEg"
                      type="tn:peakCellRateEg"
                      minOccurs="0"
                    />
                    <element
                      name="sustainableCellRateIn"
                      type="tn:sustainableCellRateIn"
                      minOccurs="0"
                    />
                    <element
                      name="sustainableCellRateEg"
                      type="tn:sustainableCellRateEg"
```

```
                minOccurs="0"
              />
              <element
                name="maximumBurstSizeIn"
                type="tn:maximumBurstSizeIn"
                minOccurs="0"
              />
              <element
                name="maximumBurstSizeEg"
                type="tn:maximumBurstSizeEg"
                minOccurs="0"
              />
              <element
                name="minimumDesiredCellRateIn"
                type="tn:minimumDesiredCellRateIn"
                minOccurs="0"
              />
              <element
                name="minimumDesiredCellRateEg"
                type="tn:minimumDesiredCellRateEg"
                minOccurs="0"
              />
              <element
                name="minimumCellRateIn"
                type="tn:minimumCellRateIn"
                minOccurs="0"
              />
              <element
                name="minimumCellRateEg"
                type="tn:minimumCellRateEg"
                minOccurs="0"
              />
              <element name="aTMChannelTerminationPointATMPathTerminationPoint" minOccurs="0"/>
              <element name="aTMChannelTerminationPointIubLink" minOccurs="0"/>
            </all>
          </complexType>
        </element>
        <choice>
          <element ref="xn:VsDataContainer" minOccurs="0" maxOccurs="unbounded"/>
        </choice>
      </sequence>
    </extension>
  </complexContent>
  </complexType>
</element>

<element name="ATMPathTerminationPoint">
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element
                  name="virtualPathId"
                  type="tn:virtualPathId"
                  minOccurs="0"
                />
                <element
                  name="physicalPortIdList"
                  type="tn:physicalPortIdList"
                  minOccurs="0"
                />
                <element
                  name="peakCellRateIn"
                  type="tn:peakCellRateIn"
                  minOccurs="0"
                />
                <element
                  name="peakCellRateEg"
                  type="tn:peakCellRateEg"
                  minOccurs="0"
                />
                <element name="aTMPathTerminationPointATMChannelTerminationPoint" minOccurs="0"/>
              </all>
            </complexType>
          </element>
```

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

</schema>
```

End of Change in Clause Annex A

Change in Clause Annex B

Annex B (informative): XML schema electronic files

The electronic files corresponding to the normative XML schemas defined in the present document are available in native form in the following archive:

http://www.3gpp.org/ftp/specs/archive/32_series/32.715/schema/32.715-~~600~~610-XMLSchema.zip

End of Change in Annex B
End of Document

Annex C (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Sep 2004	S_25	SP-040599	--	--	Submitted to TSG SA#25 for Approval	1.0.0	6.0.0