TSGS#28(05)0296

Source: SA5 (Telecom Management)

Title: CR 32623-5 Generic network resources IRP CORBA SS / Bulk CM XML - CR 32635 Core network resources IRP Bulk CM XML

Document for: Approval

Agenda Item: 7.5.3

Doc-1st-Level	Spec__#_	CR__#	R	Phase	Subject	Cat	Ver-Cur	Doc-2nd-Level	Workitem
SP-050296	32.623	0016	-	Rel-6	Correction of IDL syntax error in GenericNetworkResourcesNRMDefs.idl	F	6.4.0	S5-058349	OAM-NIM
SP-050296	32.624	0022	-	Rel-6	Add Link Object Class to CMIP Solution Set - Align with IS in TS 43.622	F	6.1.0	S5-058422	OAM-NIM
SP-050296	32.625	0019	-	Rel-6	Remove the xxxIRPs from the Schema - Align with the IS in TS 32.622	F	6.4.0	S5-058357	OAM-NIM
SP-050296	32.625	0020	-	Rel-6	Correction of inappropriate XML type for a list of Distinguished Names	F	6.4.0	S5-058440	OAM-NIM
SP-050296	32.635	0014	-	Rel-6	Correction of XML definitions for IOCs MscServerFunction and SgsnFunction	F	6.2.0	S5-058350	OAM-NIM

CR-Form-v7.1

CHANGE REQUEST

⌘ **32.623** **CR** **0016** ⌘**rev** **-** ⌘ Current version: **6.4.0** ⌘

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

Title:	⌘	Correction of IDL syntax error in GenericNetworkResourcesNRMDefs.idl
Source:	⌘	**SA5** (Nortel – Suzèle Lariven – lariven@nortel.com)
Work item code:	⌘	OAM-NIM
Date:	⌘	13/05/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

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:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	IDL syntax error correction in GenericNetworkResourcesNRMDefs.idl
Summary of change:	⌘	• Correction of IDL enumeration LinkType declaration • Alignments with TS 32.150 Style Guide for CORBA SS IDL • Editorial corrections
Consequences if not approved:	⌘	IDL GenericNetworkResourcesNRMDefs.idl would fail compilation.

Clauses affected:	⌘	A.1, B.1

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

Other comments: ⌘

Change in Annex Clause A.1

A.1 IDL specification (file name "GenericNetworkResourcesIRPSystem.idl")

```
//File: GenericNetworkResourcesIRPSystem.idl
#ifndef _GENERIC_NETWORK_RESOURCES_IRP_SYSTEM_IDL_
#define _GENERIC_NETWORK_RESOURCES_IRP_SYSTEM_IDL_

// This statement must appear after all include statements
#pragma prefix "3gppsa5.org"


module GenericNetworkResourcesIRPSystem
{
   /**
    * The format of Distinguished Name (DN) is specified in "Name Convention
    * for Managed Objects (3GPP TS 32.300 [5])".
    */
   typedef string DN;


   /**
    *  This module adds datatype definitions for types
    *  used in the NRM which are not basic datatypes defined
    *  already in CORBA.
    */
   module AttributeTypes
   {
      /**
       * An MO reference refers to an MO instance.
       * "otherMO" contains the distinguished name of the referred MO.
       * A conceptual "null" reference (meaning no MO is referenced)
       * is represented as an empty string ("").
       *
       */
      struct MOReference
      {
         DN otherMO;
      };

      /**
       * MOReferenceSet represents a set of MO references.
       * This type is used to hold 0..n MO references.
       * A referred MO is not allowed to be repeated (therefore
       * it is denoted as a "Set")
       */
      typedef sequence<MOReference> MOReferenceSet;


      /**
       *  A set of strings.
       */
      typedef sequence<string> StringSet;

      /**
       *  A set of long.
       */
      typedef sequence<long> LongSet;
   };

};

#endif // _GENERIC_NETWORK_RESOURCES_IRP_SYSTEM_IDL_
```

End of Change in Annex Clause A.1

Change in Annex Clause B.1

B.1 IDL specification (file name "GenericNetworkResourcesNRMDefs.idl")

```
//File: GenericNetworkResourcesNRMDefs.idl
#ifndef _GENERIC_NETWORK_RESOURCES_NRM_DEFS_IDL_
#define _GENERIC_NETWORK_RESOURCES_NRM_DEFS_IDL_

// This statement must appear after all include statements
#pragma prefix "3gppsa5.org"

/**
 * This module defines constants for each MO class name and
 * the attribute names for each defined MO class.
 */
module GenericNetworkResourcesNRMDefs
{
      /**
       *  Definitions for MO class Top
       */
      interface Top
      {
         // Attribute Names
         //
         const string CLASS = "Top";
      };

      /**
       *  Definitions for MO class SubNetwork
       */
      interface SubNetwork : Top
      {
         const string CLASS = "SubNetwork";

         // Attribute Names
         //
         const string subNetworkId = "subNetworkId";
         const string dnPrefix = "dnPrefix";
         const string userLabel = "userLabel";
         const string userDefinedNetworkType = "userDefinedNetworkType";
         const string setOfMcc = "setOfMcc";
      };

      /**
       *  Definitions for MO class ManagedElement
       */
      interface ManagedElement : Top
      {
         const string CLASS = "ManagedElement";

         // Attribute Names
         //
         const string managedElementId = "managedElementId";
         const string dnPrefix = "dnPrefix";
         const string managedElementType = "managedElementType";
         const string userLabel = "userLabel";
         const string vendorName = "vendorName";
         const string userDefinedState ="userDefinedState";
         const string locationName ="locationName";

         const string managedBy = "managedBy";

         const string swVersion = "swVersion";

      };


      /**
       *  Definitions for MO class MeContext
       */
      interface MeContext : Top
      {
         const string CLASS = "MeContext";

         // Attribute Names
```

```
      //
      const string meContextId = "meContextId";
      const string dnPrefix = "dnPrefix";
   };

   /**
    *  Definitions for MO class ManagementNode
    */
   interface ManagementNode : Top
   {
      const string CLASS = "ManagementNode";

      // Attribute Names
      //
      const string managementNodeId = "managementNodeId";
      const string userLabel = "userLabel";
      const string vendorName = "vendorName";
      const string userDefinedState = "userDefinedState";
      const string locationName = "locationName";
      const string managedElements = "managedElements";

      const string swVersion = "swVersion";
   };


   /**
    *  Definitions for abstract MO class ManagedFunction
    *
    */
   interface ManagedFunction : Top
   {
      const string CLASS = "ManagedFunction";

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


   /**
    *  Definitions for MO class IRPAgent
    */
   interface IRPAgent : Top
   {
      const string CLASS = "IRPAgent";

      // Attribute Names
      //
      const string irpAgentId = "irpAgentId";
      const string systemDN = "systemDN";
   };

   /**
    *  Definitions for abstract MO class Link
    *  This inherits from ManagedFunction
    *  The attributes aEnd and zEnd are populated with the DNs
    *  of the entities associated via the link class.
    *  The aEnd takes the DN of the 1st entity in alphabetical order,
    *  the zEnd takes the 2nd entity in alphabetical order of the class
    *  names.
    */
   interface Link : ManagedFunction
   {
      const string CLASS = "Link";

      // Attribute Names
      //
      const string linkId = "linkId";
      const string aEnd = "aEnd";
      const string zEnd = "zEnd";
      const string linkType = "linkType";
      const string protocolName = "protocolName";
      const string protocolVersion = "protocolVersion";
   };

   /**
    *  Definitions for MO class VsDataContainer
    */
   interface VsDataContainer : Top
   {
      const string CLASS = "VsDataContainer";
```

```
            // Attribute Names
            //
            const string vsDataContainerId = "vsDataContainerId";
            const string vsDataType = "vsDataType";
            const string vsData = "vsData";
            const string vsDataFormatVersion = "vsDataFormatVersion";
        };

        /**
         *  This module adds datatypes definitions for the Link Class
         *  These attributes are not the basic datatypes already defined
         */
        module LinkAttributeTypes
        {
            enum LinkType
            {
               SignallingSIGNALLING,
               BearerBEARER,
               OAM&POAM_AND_P',
               OtherOTHER
            };

            typedef sequence <LinkType> LinkTypeType;
        };

};

#endif // _GENERIC_NETWORK_RESOURCES_NRM_DEFS_IDL_
```

End of Change in Annex Clause B.1
End of Document

Annex C (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Jun 2004	S_24	SP-040251	011	--	Correction of legal values for managedElementType attribute	6.1.0	6.2.0
Sep 2004	S_25	SP-040567	013	--	Correction in Rules for NRM extensions - Align with 32.622 (Generic NRM IS)	6.2.0	6.3.0
Sep 2004	S_25	SP-040581	014	--	Add Inheritance in CORBA IDL	6.2.0	6.3.0
Mar 2005	S_27	SP-050046	015	--	Add Link to generic NRM CORBA SS	6.3.0	6.4.0

CR-Form-v7.1

CHANGE REQUEST

⌘ **32.635** CR **0014** ⌘rev **-** ⌘ Current version: **6.2.0** ⌘

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

Title:	⌘	Correction of XML definitions for IOCs MscServerFunction and SgsnFunction
Source:	⌘	**SA5** (Nortel – Suzèle Lariven – lariven@nortel.com)
Work item code:	⌘	OAM-NIM
Date:	⌘	13/05/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

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R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*
Rel-7 *(Release 7)*

Reason for change:	⌘	Correction of XML definitions for IOCs MscServerFunction and SgsnFunction
Summary of change:	⌘	• Correction of XML definitions for IOCs MscServerFunction and SgsnFunction • Editorial corrections
Consequences if not approved:	⌘	XML definitions for IOCs MscServerFunction and SgsnFunction would remain incorrect.

Clauses affected:	⌘	Annex A, annex B

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

Other comments: ⌘

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/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="mncList" 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" minOccurs="0"/>
                  <element name="mscServerFunctionExternalGsmCell" minOccurs="0"/>
                  <element name="mscServerFunctionCsMgwFunction" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              ~~<element name="mscServerFunctionGsmCell"/>~~
              ~~<element name="mscServerFunctionExternalGsmCell"/>~~
              ~~<element name="mscServerFunctionCsMgwFunction"/>~~
              <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>
                <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"/>
                <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" minOccurs="0"/>
                <element name="sgsnFunctionExternalGsmCell" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
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            <element name="sgsnFunctionExternalGsmCell"/>
            <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"/>
          </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"
>
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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
  name="ScfFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
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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 name="IucsLink">
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    <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">
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    <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">
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    <complexContent>
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        <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>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

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

<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>
          <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>


<element
  name="CsMgwFunction"
```

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

  <element
    name="ScscfFunction"
    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="PcscfFunction"
    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="IcscfFunction"
    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="SlfFunction"
    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="BgcfFunction"
    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="MrfcFunction"
    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="MrfpFunction"
  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="AsFunction"
  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="MgcfFunction"
  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>
```

End of Change in Annex A

Change in 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/32.635/schema/32635-~~620~~630-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**
Jun 2002	S_16	SP-020298	--	--	Submitted to TSG SA #16 for Information	1.0.0	
Sep 2002	S_17	SP-020461	--	--	Submitted to TSG SA #17 for Approval	2.0.0	5.0.0
Jun 2003	S_20	SP-030287	001	--	Correction of Core NRM XML schema namespace URIs	5.0.0	5.1.0
Jun 2003	S_20	SP-030288	002	--	Generic NRM XML schema dependencies removal	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	S_23	SP-040131	003	--	Add the capability to contain instances of VsDataContainer to some MOs - Align with the IS 32.632	5.1.1	5.2.0
Jun 2004	S_24	SP-040259	004	--	Removal of XML schema URI dependencies	5.2.0	5.3.0
Jun 2004	S_24	SP-040258	005	--	Correction of the annex related to XML schema electronic files publication	5.2.0	5.3.0
Sep 2004	S_25	SP-040583	006	--	Add missing elements in the Core Network XML file format definition	5.3.0	5.4.0
Sep 2004	S_25	SP-040582	007	--	Correction of modelling of Media GateWay (MGW)	5.3.0	5.4.0
Sep 2004	S_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	S_26	SP-040809	008	--	Add new IMS Entities	6.0.0	6.1.0
Mar 2005	S_27	SP-050047	010	--	Align with 32.632, regarding the IS template and UML repertoire	6.1.0	6.2.0
Mar 2005	S_27	SP-050047	013	--	Correction to SgsnFunction XML, correct IS reference and Editorial corrections	6.1.0	6.2.0

CR-Form-v7.1

CHANGE REQUEST

⌘ **32.625** **CR** **0019** ⌘**rev** **-** ⌘ Current version: **6.4.0** ⌘

*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:	⌘	Remove the xxxIRPs from the Schema - Align with the IS in TS 32.622
Source:	⌘	**SA5** (john.power@ericsson.com)
Work item code:	⌘	OAM-NIM
Date:	⌘	13/05/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

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:
Ph2 *(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)*
Rel-7 *(Release 7)*

Reason for change:	⌘	The Generic NRM IRP IS and SS does not contain the xxxIRPs, but the XML schema does
Summary of change:	⌘	Remove the definition of the xxxIRPs from the XML Schema. Removal of Rel-5 text.
Consequences if not approved:	⌘	Reader of specification will wrongly assume that xxxIRPs are available over Bulk CM interface. Schema will not be aligned with the IS.

Clauses affected:	⌘	Annex A, Annex B

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

Other comments:	⌘	This CR is based on S5-058087, for which the contents was technically agreed in SA5#41bis. This update is using the latest approved version of the specification from SA#27.

Change in Clause 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/archive/32_series/32.625#genericNrm"
  elementFormDefault="qualified"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:xn="http://www.3gpp.org/ftp/specs/archive/32_series/32.625#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>


<simpleType name="DN">
   <restriction base="string">
      <maxLength value="400"/>
   </restriction>
</simpleType>

<simpleType name="DNList">
   <list itemType="xn:DN"/>
</simpleType>

<simpleType name="LinkTypeList">
   <list itemType="xn:LinkType"/>
</simpleType>

<simpleType name="LinkType">
   <restriction base="string">
      <enumeration value="Signaling"/>
      <enumeration value="Bearer"/>
      <enumeration value="OAMAndP"/>
      <enumeration value="Other"/>
   </restriction>
</simpleType>

  <!-- 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"/>
            <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>
      <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>
  </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
  -->

  <complexType name="vsData"/>
  <element name="vsData" type="xn:vsData"/>

  <!--
    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>
```

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/32.625/schema/32625-~~640~~650-XMLSchema.zip

End of Change in Clause Annex B
End of Document

Annex C (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Dec 2004	S_26	SP-040808	013	--	Correct attribute for the managementScope association - Align with IS in 32.622	6.2.0	6.3.0
Mar 2005	S_27	SP-050046	014	--	Add genericNRM.xsd for new IMS Links	6.3.0	6.4.0
Mar 2005	S_27	SP-050046	016	--	Error corrections to genericNRM.xsd	6.3.0	6.4.0

Tdoc ⌘S5-058422

CR-Form-v7.1

CHANGE REQUEST

⌘ **32.624** **CR** **0022** ⌘**rev** **-** ⌘ Current version: **6.1.0** ⌘

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

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

Title:	⌘	Add Link Object Class to CMIP Solution Set - Align with IS in TS 43.622
Source:	⌘	SA5 (olaf.pollakowski@siemens.com)
Work item code:	⌘	OAM-NIM
Date:	⌘	13/05/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

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:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	TS 32.622 defines the IOC Link. This IOC is not yet mapped in the CMIP SS.
Summary of change:	⌘	Introduction of MOC *link* and its supporting definitions
Consequences if not approved:	⌘	CMIP Solution Set not aligned with Information Service

Clauses affected:	⌘	1, 4, 5, 6, Annex A, Annex B

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

⌘

Other comments: ⌘

Change in Clause 1

1 Scope

The present document specifies the Common Management Information Protocol (CMIP) Solution Set (SS) for the Generic Network Resource Integration Reference Point (IRP): Network Resource Model defined in 3GPP TS 32.622 [4].

In detail:

- Clause 4 contains an introduction to some concepts that are the base for some specific aspects of the CMIP interfaces.
- Clause 5 contains the GDMO definitions for the Alarm Management over the CMIP interfaces
- Clause 6 contains the ASN.1 definitions supporting the GDMO definitions provided in clause 5.

This Solution Set specification is related to 3GPP TS 32.622 V6.4~~3~~.X [4].

End of Change in Clause 1

Change in Clause 4, 5, 6, Annex A, Annex B

4 Basic aspects

4.1 Explanation

A technology independent generic Network Resource Model (NRM) is defined in 3GPP TS 32.622 [4] for 3G networks. The present document provides an implementation of this generic NRM by using CMIP technology.

4.2 Allowed Alarms of MOCs

Void.

4.3 Mapping

The semantic of the Generic NRM is defined in 3GPP TS 32.622 [4]. The specification of the information object classes defined there is independent of any implementation technology and protocol.
This subclause maps these technology and protocol independent definitions onto the equivalencies of the CMIP Solution Set of the Generic Network Resource IRP.

4.3.1 Mapping from IOCs to MOCs

The following table maps the Information Object Classes defined in the Generic NRM onto the equivalent MOCs of the CMIP Solution Set.

Table : Mapping of MOCs

IS IOC	CMIP SS MOC
ManagedElement	managedElement
SubNetwork	subNetworkR60
IRPAgent	irpAgent
ManagedFunction	managedFunction
ManagementNode	managementNode
MeContext	meContext
GenericIRP	genericIRP
VsDataContainer	no equivalence
Top	top (ITU-T Rec. X.721 [6])
Link	link

4.3.2 Mapping of Attributes

This clause depicts the mapping of the attributes defined in 3GPP TS 32.622 [4] on the corresponding attributes of the CMIP Solution Set.

4.3.2.1 Attribute Mapping of the IOC *IRPAgent*

IS Attribute	CMIP SS Attribute	Support Qualifier	Read Qualifier	Read Qualifier
iRPAgentId	irpAgentId	M	M	--
systemDN	This IS parameter is not used in the CMIP SS.	--	--	--

4.3.2.2 Attribute Mapping of the IOC *ManagedElement*

IS Attribute	CMIP SS Attribute	Support Qualifier	Read Qualifier	Write Qualifier
managedElementId	managedElementId	M	M	--
dnPrefix	systemTitle (ITU-T Rec. X.721 [6])	M	M	--
managedElementType	managedElementType	M	M	--
userLabel	userLabel (ITU-T Rec. M.3100 [9])	M	M	M
vendorName	vendorName (ITU-T Rec. M.3100 [9])	M	M	--
userDefinedState	userDefinedState	M	M	M
locationName	locationName (ITU-T Rec. M.3100 [9])	M	M	--
swVersion	swVersion	M	M	--
managedBy	meManagedBy	M	M	--

4.3.2.3 Attribute Mapping of the IOC *ManagedFunction*

IS Attribute	CMIP SS Attribute	Support Qualifier	Read Qualifier	Write Qualifier
userLabel	userLabel (ITU-T Rec. M.3100 [9])	M	M	M

4.3.2.4 Attribute Mapping of the IOC *ManagementNode*

IS Attribute	CMIP SS Attribute	Support Qualifier	Read Qualifier	Write Qualifier
managementNodeId	managementNodeId	M	M	--
userLabel	userLabel (ITU-T Rec. M.3100 [9])	M	M	M
vendorName	vendorName (ITU-T Rec. M.3100 [9])	M	M	--
userDefinedState	userDefinedState	M	M	M
locationName	locationName (ITU-T Rec. M.3100 [9])	M	M	--
swVersion	swVersion	M	M	--
managedElements	mnManagesList	M	M	--

4.3.2.5 Attribute Mapping of the IOC *MeContext*

IS Attribute	CMIP SS Attribute	Support Qualifier	Read Qualifier	Write Qualifier
meContextId	meContextId	M	M	--
dnPrefix	systemTitle (ITU-T Rec. X.721 [6])	M	M	--

4.3.2.6 Attribute Mapping of the IOC *SubNetwork*

IS Attribute	CMIP SS Attribute	Support Qualifier	Read Qualifier	Write Qualifier
subNetworkId	subNetworkId	M	M	--
dnPrefix	systemTitle (ITU-T Rec. X.721 [6])	M	M	--
userLabel	userLabel (ITU-T Rec. M.3100 [9])	M	M	M
userDefinedNetworkType	userDefinedNetworkType	M	M	--
setOfMcc	setOfMcc	M	M	--

4.3.2.7 Attribute ~~m~~Mapping of the IOC ~~g~~*GenericIRP*

IS Attribute	CMIP SS Attribute	Support Qualifier	Read Qualifier	Write Qualifier
iRPId	irpId	M	M	--

4.3.2.8 Attribute Mapping of the IOC *Link*

IS Attribute	CMIP SS Attribute	Support Qualifier	Read Qualifier	Write Qualifier
linkId	linkId	M	M	--
userLabel	userLabel (ITU-T Rec. M.3100 [9])	M	M	M
aEnd	aEnd	M	M	--
zEnd	zEnd	M	M	--
linkType	linkType	O	M	--
protocolName	protocolName	O	M	--
protocolVersion	protocolVersion	O	M	--

4.3.3 Mapping of Name Containments

IS Name Containment	CMIP SS Name Binding
managedElement - meContext	managedElement-meContext
managedElement - subNetwork	managedElement-subNetworkR60
meContext - subNetwork	meContext-subNetworkR60
irpAgent - subNetwork	irpAgent-subNetworkR60
irpAgent - managementNode	irpAgent-managementNode
irpAgent - managedElement	irpAgent-managedElement
subNetwork - subNetwork	subNetworkR60-subNetworkR60-R54
genericIRP - irpAgent	genericIRP-irpAgent
link - subNetwork	link-subNetworkR60

-- 5 GDMO Definitions

```
--Please do not remove the "–" in front of the headline numbering, as it is the CMIP code
--for a comment. This way the whole chapter can be put directly into a compiler.
```

-- 5.1 -Managed Object Classes

-- 5.1.1 —subNetwork

```
subNetwork MANAGED OBJECT CLASS
   DERIVED FROM
      "Recommendation X.721: 1992":top;
   CHARACTERIZED BY
      subNetworkBasicPackage,
      "3GPP TS 32.111-4 Release 5": x721AlarmNotificationsPackage;
   CONDITIONAL PACKAGES
      rootOptionalPackage
         PRESENT IF
            "An instance of subNetwork is the accessing root of a MIB.",
      "Rec. M.3100: 1995":createDeleteNotificationsPackage
         PRESENT IF
            "the objectCreation and the objectDeletion notifications defined in
             ITU-T Rec. X.721 are supported by an instance of this class.",
      "Rec. M.3100: 1995":attributeValueChangeNotificationPackage
         PRESENT IF
            "the attributeValueChange notification defined in ITU-T Rec. X.721
             is supported by an instance of this class.";
REGISTERED AS {ts32-624ObjectClass 1};
subNetworkR60 MANAGED OBJECT CLASS
   DERIVED FROM
      "Recommendation X.721: 1992":top;
   CHARACTERIZED BY
      subNetworkBasicPackage,
      "3GPP TS 32.111-4 Release 5": x721AlarmNotificationsPackage;
   CONDITIONAL PACKAGES
      rootOptionalPackage
         PRESENT IF
            "An instance of subNetworkR60 is the accessing root of a MIB.",
      subNetworkSetOfMccPackage
         PRESENT IF
            "the attribute setOfMcc is supported by an instance of this class.",
      "Rec. M.3100: 1995":createDeleteNotificationsPackage
         PRESENT IF
            "the objectCreation and the objectDeletion notifications defined in
             ITU-T Rec. X.721 are supported by an instance of this class.",
      "Rec. M.3100: 1995":attributeValueChangeNotificationPackage
         PRESENT IF
            "the attributeValueChange notification defined in ITU-T Rec. X.721
             is supported by an instance of this class.";
REGISTERED AS {ts32-624ObjectClass 10};
```

-- 5.1.2 —managedElement

```
managedElement MANAGED OBJECT CLASS
   DERIVED FROM
      "Recommendation X.721: 1992":top;
   CHARACTERIZED BY
      managedElementBasicPackage,
      managedElementAssociationPackage,
      "3GPP TS 32.111-4 Release 5": x721AlarmNotificationsPackage;
   CONDITIONAL PACKAGES
      rootOptionalPackage
          PRESENT IF
             "An instance of managedElement is the accessing root of a MIB.",
      "Rec. M.3100: 1995":createDeleteNotificationsPackage
          PRESENT IF
             "the objectCreation and the objectDeletion notifications defined in
              ITU-T Rec. X.721 are supported by an instance of this class.",
      "Rec. M.3100: 1995":attributeValueChangeNotificationPackage
          PRESENT IF
```

```
            "the attributeValueChange notification defined in ITU-T Rec. X.721
             is supported by an instance of this class.";
REGISTERED AS {ts32-624ObjectClass 2};
```

-- 5.1.3 managementNode

```
managementNode MANAGED OBJECT CLASS
   DERIVED FROM
      "Recommendation X.721: 1992":top;
   CHARACTERIZED BY
      managementNodeBasicPackage,
      managementNodeAssociationPackage,
      "3GPP TS 32.111-4 Release 5": x721AlarmNotificationsPackage;
   CONDITIONAL PACKAGES
      "Rec. M.3100: 1995":createDeleteNotificationsPackage
          PRESENT IF
             "the objectCreation and the objectDeletion notifications defined in
              ITU-T Rec. X.721 are supported by an instance of this class.",
      "Rec. M.3100: 1995":attributeValueChangeNotificationPackage
          PRESENT IF
             "the attributeValueChange notification defined in ITU-T Rec. X.721
              is supported by an instance of this class.";
REGISTERED AS {ts32-624ObjectClass 3};
```

-- 5.1.4 vsDataContainer

Void

-- 5.1.5 bulkCmControl

Void

-- 5.1.6 irpAgent

```
irpAgent MANAGED OBJECT CLASS
   DERIVED FROM
      "Recommendation X.721: 1992":top;
   CHARACTERIZED BY
      irpAgentBasicPackage,
      "3GPP TS 32.111-4 Release 5": x721AlarmNotificationsPackage;
   CONDITIONAL PACKAGES
      "Rec. M.3100: 1995":createDeleteNotificationsPackage
          PRESENT IF
             "the objectCreation and the objectDeletion notifications defined in
              ITU-T Rec. X.721 are supported by an instance of this class.",
      "Rec. M.3100: 1995":attributeValueChangeNotificationPackage
          PRESENT IF
             "the attributeValueChange notification defined in ITU-T Rec. X.721
              is supported by an instance of this class.";
REGISTERED AS {ts32-624ObjectClass 6};
```

-- 5.1.7 managedFunction

```
managedFunction MANAGED OBJECT CLASS
   DERIVED FROM
      "Recommendation X.721: 1992":top;
   CHARACTERIZED BY
      managedFunctionBasicPackage;
REGISTERED AS {ts32-624ObjectClass 7};
```

-- 5.1.8 meContext

```
meContext MANAGED OBJECT CLASS
   DERIVED FROM
      "Recommendation X.721: 1992":top;
   CHARACTERIZED BY
```

```
      meContextBasicPackage,
      "3GPP TS 32.111-4 Release 5": x721AlarmNotificationsPackage;
   CONDITIONAL PACKAGES
      rootOptionalPackage
          PRESENT IF
             "An instance of meContext is the accessing root of a MIB.",
      "Rec. M.3100: 1995":createDeleteNotificationsPackage
          PRESENT IF
             "the objectCreation and the objectDeletion notifications defined in
              ITU-T Rec. X.721 are supported by an instance of this class.",
      "Rec. M.3100: 1995":attributeValueChangeNotificationPackage
          PRESENT IF
             "the attributeValueChange notification defined in ITU-T Rec. X.721
              is supported by an instance of this class.";
REGISTERED AS {ts32-624ObjectClass 8};
```

-- 5.1.9 bcmControl

Void.

~~-- 5.1.10subNetworkR60~~

```
subNetworkR60 MANAGED OBJECT CLASS
   DERIVED FROM
      "Recommendation X.721: 1992":top;
   CHARACTERIZED BY
      subNetworkBasicPackage,
      "3GPP TS 32.111-4 Release 5": x721AlarmNotificationsPackage;
   CONDITIONAL PACKAGES
      rootOptionalPackage
          PRESENT IF
             "An instance of subNetworkR60 is the accessing root of a MIB.",
      subNetworkSetOfMccPackage
          PRESENT IF
             "the attribute setOfMcc is supported by an instance of this class.",
      "Rec. M.3100: 1995":createDeleteNotificationsPackage
          PRESENT IF
             "the objectCreation and the objectDeletion notifications defined in
              ITU-T Rec. X.721 are supported by an instance of this class.",
      "Rec. M.3100: 1995":attributeValueChangeNotificationPackage
          PRESENT IF
             "the attributeValueChange notification defined in ITU-T Rec. X.721
              is supported by an instance of this class.";
REGISTERED AS {ts32-624ObjectClass 10};
```

-- 5.1.11 genericIRP

```
genericIRP MANAGED OBJECT CLASS
   DERIVED FROM
      "Rec. X.721 | ISO/IEC 10165-2 : 1992":top;
   CHARACTERIZED BY
      irpIdPackage;
   REGISTERED AS {ts32-624ObjectClass 110600};
-- This object class is only defined for inheritance purposes. It shall not be instantiated.
```

-- 5.1.12 link

```
link MANAGED OBJECT CLASS
   DERIVED FROM
      managedFunction;
   CHARACTERIZED BY
      linkBasicPackage,
      "3GPP TS 32.111-4 Release 5": x721AlarmNotificationsPackage;
   CONDITIONAL PACKAGES
      linkOptionalPackage
          PRESENT IF
             "an instance supports it.",
      "Rec. M.3100: 1995":createDeleteNotificationsPackage
          PRESENT IF
             "the objectCreation and the objectDeletion notifications defined in
```

```
            ITU-T Rec. X.721 are supported by an instance of this class.",
      "Rec. M.3100: 1995":attributeValueChangeNotificationPackage
          PRESENT IF
             "the attributeValueChange notification defined in ITU-T Rec. X.721
            is supported by an instance of this class.";
REGISTERED AS {ts32-624ObjectClass 120620};
```

-- 5.2 Packages

-- 5.2.1 subNetworkBasicPackage

```
subNetworkBasicPackage PACKAGE
   BEHAVIOUR
      subNetworkBasicPackageBehaviour;
   ATTRIBUTES
      subNetworkId                                GET,
      "Recommendation M.3100: 1995" : userLabel   GET-REPLACE,
      userDefinedNetworkType                      GET;
REGISTERED AS {ts32-624Package 1};

subNetworkBasicPackageBehaviour BEHAVIOUR
DEFINED AS
   "This managed object class represents collections of interconnected
   telecommunications and management objects (logical or physical) capable of
   exchanging information. A network may be nested within another (larger) network,
   thereby forming a containment relationship.";
```

-- 5.2.2 managedElementBasicPackage

```
managedElementBasicPackage PACKAGE
   BEHAVIOUR
      managedElementBasicPackageBehaviour;
   ATTRIBUTES
      managedElementId                              GET,
      managedElementType                            GET,
      "Recommendation M.3100: 1995" : userLabel     GET-REPLACE,
      "Recommendation M.3100: 1995" : vendorName    GET,
      userDefinedState                              GET-REPLACE,
      "Recommendation M.3100: 1995" : locationName  GET,
      swVersion                                     GET;
REGISTERED AS {ts32-624Package 2};

managedElementBasicPackageBehaviour BEHAVIOUR
   DEFINED AS
      "This managed object class represents telecommunications equipment within the
      telecommunications network that performs managed element functions, i.e.
      provides support and/or service to the subscriber. A managed element
      communicates with a manager (directly or indirectly) over one or more standard
      interfaces for the purpose of being monitored and/or controlled. A managed
      element contains equipment that may or may not be geographically distributed. A
      Managed Element is often referred to as a 'node' or a 'network element'.";
```

-- 5.2.3 managedElementAssociationPackage

```
managedElementAssociationPackage PACKAGE
   BEHAVIOUR
      managedElementAssociationPackageBehaviour;
   ATTRIBUTES
      meManagedBy   GET;
REGISTERED AS {ts32-624Package 3};

managedElementAssociationPackageBehaviour BEHAVIOUR
   DEFINED AS
      "The attribute 'meManagedBy' points to the managmentNode instance which
      manages this managedElement instance. It implements the attribute managedBy
      of MOC ManagedElement defined in TS32.622.";
```

-- 5.2.4 vsDataContainerBasicPackage

Void.

-- 5.2.5 bulkCmControlBasicPackage

Void.

-- 5.2.6 bulkCmControlActionPackage

Void

-- 5.2.7 bulkCmControlNotificationPackage

Void.

-- 5.2.8 managementNodeBasicPackage

```
managementNodeBasicPackage PACKAGE
   BEHAVIOUR
      managementNodeBasicPackageBehaviour;
   ATTRIBUTES
      managementNodeId                              GET,
      "Recommendation M.3100: 1995" : userLabel     GET-REPLACE,
      "Recommendation M.3100: 1995" : vendorName    GET,
      userDefinedState                              GET-REPLACE,
      "Recommendation M.3100: 1995" : locationName  GET,
      swVersion                                     GET;
REGISTERED AS {ts32-624Package 8};

managementNodeBasicPackageBehaviour BEHAVIOUR
   DEFINED AS
      "This managed object class represents a telecommunications management system (EM
      or NM) within the TMN, that manages a number of Managed Elements. The management
      system communicates with the MEs directly or indirectly over one or more
      standard interfaces for the purpose of monitoring and/or controlling these MEs.";
```

-- 5.2.9 managementNodeAssociationPackage

```
managementNodeAssociationPackage PACKAGE
   BEHAVIOUR
      managementNodeAssociationPackageBehaviour;
   ATTRIBUTES
      mnManagesList   GET;
REGISTERED AS {ts32-624Package 9};

managementNodeAssociationPackageBehaviour BEHAVIOUR
   DEFINED AS
      "The attribute 'mnManagesList' points to all managedElement instances which
      this managementNode instance manages. It implements the attribute manages of
      MOC ManagementNode defined in TS32.622.";
```

-- 5.2.10 irpAgentBasicPackage

```
irpAgentBasicPackage PACKAGE
   BEHAVIOUR
      irpAgentBasicPackageBehaviour;
   ATTRIBUTES
      irpAgentId   GET;
REGISTERED AS {ts32-624Package 10};

irpAgentBasicPackageBehaviour BEHAVIOUR
   DEFINED AS
      "The instance of this MOC represents the behavior of an IRP Agent
```

```
    ——which implements one or more IRPs";
```

-- 5.2.11 managedFunctionBasicPackage

```
managedFunctionBasicPackage PACKAGE
   BEHAVIOUR
      managedFunctionBasicPackageBehaviour;
   ATTRIBUTES
      "Recommendation M.3100: 1995" : userLabel   GET-REPLACE;
REGISTERED AS {ts32-624Package 11};

managedFunctionBasicPackageBehaviour BEHAVIOUR
DEFINED AS
   ——"This Managed Object class corresponds to the class gsmManagedFunction defined
    —in GSM 12.20 0 and is provided for sub-classing only. It provides the attributes
    —that are common to functional MO classes. Note that a managed element may
    —contain several managed functions. The ManagedFunction may be extended in the
    —future if more common characteristics to functional objects are identified.";
```

-- 5.2.12 meContextBasicPackage

```
meContextBasicPackage PACKAGE
   BEHAVIOUR
      meContextBasicPackageBehaviour;
   ATTRIBUTES
      meContextId   GET;
REGISTERED AS {ts32-624Package 12};

meContextBasicPackageBehaviour BEHAVIOUR
DEFINED AS
   ——"This managed object class represents the Managed Element from the network
    —perspective. It can be used to hold surveillance status information, and also
    —planning status information for the case when the managed element is part of a
    —planned configuration in a management system, before it has been taken into
    —service. It can also support unambiguous naming in all cases, also for scenarios
    —when the Managed Elements have been pre-configured where some of them may have
    —equal names (to avoid necessary administration to make all of them globally
    —unique at creation/installation time). Thus, by means of globally unique names
    —for the MEContext instances, and by using these in the DN, the DNs for all MEs
    —(and MOIs contained in them) can be assured to be globally unique, even in such
    —a scenario as described above.";
```

-- 5.2.13 bcmControlBasicPackage

Void.

-- 5.2.14 bcmIRPVersionPackage

Void.

-- 5.2.15 communicationsAlarmPackage

Void.

-- 5.2.16 equipmentAlarmPackage

Void.

-- 5.2.17 qualityOfServiceAlarmPackage

Void.

-- 5.2.18 rootOptionalPackage

```
rootOptionalPackage PACKAGE
   BEHAVIOUR
      rootOptionalPackageBehaviour;
   ATTRIBUTES
      "Recommendation X.721: 1992" : systemTitle   GET;
REGISTERED AS {ts32-624Package 18};

rootOptionalPackageBehaviour BEHAVIOUR
DEFINED AS
   "This package shall be present in an instance of meContext or managedElement when it is
    the accessing point (root) of a MIB.";
```

-- 5.2.19 subNetworkSetOfMccPackage

```
subNetworkSetOfMccPackage PACKAGE
   BEHAVIOUR
      subNetworkSetOfMccPackageBehaviour;
   ATTRIBUTES
      setOfMcc   GET;
REGISTERED AS {ts32-624Package 19};

subNetworkSetOfMccPackageBehaviour BEHAVIOUR
DEFINED AS
   "This package shall be present in an instance of subNetwork if the attribute setOfMcc may
    contain more than one value. Otherwise it is optional.";
```

-- 5.2.20 irpIdPackage

```
irpIdPackage PACKAGE
   BEHAVIOUR
      irpIdPackageBehaviour;
   ATTRIBUTES
      irpId GET;
   REGISTERED AS {ts32-624Package 200600};

irpIdPackageBehaviour BEHAVIOUR
DEFINED AS
   "An instance of the subclasses of MOC genericIRP is identified by the value of the attribute
    irpId.";
```

~~## -- 5.3.21irpId~~

```
irpId ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectId;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      irpIdBehaviour;
REGISTERED AS {ts32-624Attribute 210600};

irpIdBehaviour BEHAVIOUR
DEFINED AS
"This attribute names an instance of the subclasses of MOC genericIRP.";
```

-- 5.2.21 linkBasicPackage

```
linkBasicPackage PACKAGE
   BEHAVIOUR
      linkBasicPackageBehaviour;
   ATTRIBUTES
      linkId GET,
      aEnd   GET,
      zEnd   GET;
REGISTERED AS {ts32-624Package 210620};

linkBasicPackageBehaviour BEHAVIOUR
```

```
DEFINED AS
   "This package contains the not inherited mandatory attributes of object class link.";
```

-- 5.2.22 linkOptionalPackage

```
linkOptionalPackage PACKAGE
   BEHAVIOUR
      linkOptionalPackageBehaviour;
   ATTRIBUTES
      linkType          GET,
      protocolName      GET,
      protocolVersion   GET;
   REGISTERED AS {ts32-624Package 220620};

linkOptionalPackageBehaviour BEHAVIOUR
DEFINED AS
   "This package contains the not inherited optional attributes of object class link.";
```

-- 5.3 Attributes

-- 5.3.1 managedElementType

```
managedElementType ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.ManagedElementType;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      managedElementTypeBehaviour;
REGISTERED AS {ts32-624Attribute 1};

managedElementTypeBehaviour BEHAVIOUR
DEFINED AS
   "This attribute specifies which managed functions a managed element contains.";
```

-- 5.3.2 subNetworkId

```
subNetworkId ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectId;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      subNetworkIdBehaviour;
REGISTERED AS {ts32-624Attribute 2};

subNetworkIdBehaviour BEHAVIOUR
DEFINED AS
   "This attribute identifies a subNetwork instance.";
```

-- 5.3.3 VsDataContainerId

Void.

-- 5.3.4 vsDataType

Void.

-- 5.3.5 vsData

Void

-- 5.3.6 vsDataFormatVersion

Void.

-- 5.3.7 bulkCmControlId

Void.

-- 5.3.8 irpVersion

Void.

-- 5.3.9 userDefinedNetworkType

```
userDefinedNetworkType ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.UserDefinedNetworkType;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      userDefinedNetworkTypeBehaviour;
REGISTERED AS {ts32-624Attribute 8};

userDefinedNetworkTypeBehaviour BEHAVIOUR
DEFINED AS
   "Textual information regarding the type of network, e.g. UTRAN.";
```

-- 5.3.10 swVersion

```
swVersion ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.SwVersion;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      swVersionBehaviour;
REGISTERED AS {ts32-624Attribute 9};

swVersionBehaviour BEHAVIOUR
DEFINED AS
   "The software version of the managed element (this is used for determin which version of
    the vendor specific information that is valid for the managed element).";
```

-- 5.3.11 managedElementId

```
managedElementId ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectId;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      managedElementIdBehaviour;
REGISTERED AS {ts32-624Attribute 10};

managedElementIdBehaviour BEHAVIOUR
DEFINED AS
   "This attribute names an instance of the '3gManagedElement' object class.";
```

-- 5.3.12 userDefinedState

```
userDefinedState ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.UserDefinedState;
   MATCHES FOR
      EQUALITY;
```

```
   BEHAVIOUR
      userDefinedStateBehaviour;
REGISTERED AS {ts32-624Attribute 11};

userDefinedStateBehaviour BEHAVIOUR
DEFINED AS
   ----"This attribute specifies an operator defined state for operator specific usage.";
```

-- 5.3.13 meManagedBy

```
meManagedBy ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectPointer;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      meManagedByBehaviour;
REGISTERED AS {ts32-624Attribute 12};

meManagedByBehaviour BEHAVIOUR
DEFINED AS
   ----"This attribute points to the managementNode instance which manages the
    ---related 3gManagedElement instance.";
```

-- 5.3.14 managementNodeId

```
managementNodeId ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectId;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      managmentNodeIdBehaviour;
REGISTERED AS {ts32-624Attribute 13};

managmentNodeIdBehaviour BEHAVIOUR
DEFINED AS
   ----"This attribute names an instance of the 'managmentNode' object class.";
```

-- 5.3.15 mnManagesList

```
mnManagesList ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectPointerList;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      mnManagesListBehaviour;
REGISTERED AS {ts32-624Attribute 14};

mnManagesListBehaviour BEHAVIOUR
DEFINED AS
   ----"This attribute points to all ManagedElement instances which this
    ---ManagmentNode instance manages.";
```

-- 5.3.16 irpAgentId

```
irpAgentId ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectId;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      irpAgentIdBehaviour;
REGISTERED AS {ts32-624Attribute 15};

irpAgentIdBehaviour BEHAVIOUR
DEFINED AS
   ----"This attribute identifies an irpAgent instance.";
```

-- 5.3.17 supportedIRPs

Void.

-- 5.3.18 meContextId

```
meContextId ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectId;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      meContextIdBehaviour;
REGISTERED AS {ts32-624Attribute 17};

meContextIdBehaviour BEHAVIOUR
DEFINED AS
   ----"This attribute identifies an meContext instance.";
```

-- 5.3.19 bcmControlId

Void.

-- 5.3.20 setOfMcc

```
setOfMcc ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.SetOfMcc;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      setOfMccBehaviour;
REGISTERED AS {ts32-624Attribute 19};

setOfMccBehaviour BEHAVIOUR
DEFINED AS
   ----"This multi-valued attribute holds a list containing all the MCC values in subordinate object
    ----instances to this SubNetwork instance.";
```

-- 5.3.21 irpId

```
irpId ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectId;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      irpIdBehaviour;
REGISTERED AS {ts32-624Attribute 210600};

irpIdBehaviour BEHAVIOUR
DEFINED AS
   "This attribute names an instance of the subclasses of MOC genericIRP.";
```

-- 5.3.22 linkId

```
linkId ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectId;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      linkIdBehaviour;
REGISTERED AS {ts32-624Attribute 220620};

linkIdBehaviour BEHAVIOUR
DEFINED AS
```

```
   "This attribute names an instance of MOC link.";
```

-- 5.3.23 aEnd

```
aEnd ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectPointer;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      aEndBehaviour;
REGISTERED AS {ts32-624Attribute 230620};

aEndBehaviour BEHAVIOUR
DEFINED AS
   "This attribute specifies the Distinguished Name of the alphabetically first instance in the Link
    IOC to which this link/relation is modeled. Note that if the Link IOC names are the same
    (e.g., Link_Bgcf_Bgcf), no ordering can be implied.";
```

-- 5.3.24 zEnd

```
zEnd ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.GeneralObjectPointer;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      zEndBehaviour;
REGISTERED AS {ts32-624Attribute 240620};

zEndBehaviour BEHAVIOUR
DEFINED AS
   "This attribute specifies the Distinguished Name of the alphabetically second instance in the
    Link IOC to which this link/relation is modeled. Note that if the Link IOC names are the same
    (e.g., Link_Bgcf_Bgcf), no ordering can be implied.";
```

-- 5.3.25 linkType

```
linkType ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.LinkType;
   MATCHES FOR
      EQUALITY, SET-INTERSECTION;
   BEHAVIOUR
      linkTypeBehaviour;
REGISTERED AS {ts32-624Attribute 250620};

linkTypeBehaviour BEHAVIOUR
DEFINED AS
   "This attribute defines the type of the link.";
```

-- 5.3.26 protocolName

```
protocolName ATTRIBUTE
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.ProtocolName;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      protocolNameBehaviour;
REGISTERED AS {ts32-624Attribute 260620};

protocolNameBehaviour BEHAVIOUR
DEFINED AS
   "This attribute defines the name of the protocol used by the link.";
```

-- 5.3.27 protocolVersion

```
protocolVersion ATTRIBUTE
```

```
   WITH ATTRIBUTE SYNTAX
      TS32-624TypeModule.ProtocolVersion;
   MATCHES FOR
      EQUALITY;
   BEHAVIOUR
      protocolVersionBehaviour;
REGISTERED AS {ts32-624Attribute 270620};

protocolVersionBehaviour BEHAVIOUR
DEFINED AS
   "This attribute defines the version of the protocol used by the link.";
```

-- 5.4 Name Binding

-- 5.4.1 managedElement - meContext

```
managedElement-meContext NAME BINDING
   SUBORDINATE OBJECT CLASS
      managedElement;
   NAMED BY SUPERIOR OBJECT CLASS
      meContext;
   WITH ATTRIBUTE
      managedElementId;
   BEHAVIOUR
      managedElement-meContextBehaviour;
   CREATE
      WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE
      ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 1};

managedElement-meContextBehaviour BEHAVIOUR
DEFINED AS
   "The name binding represents a relationship in which a meContext contains and
   controls a managedElement. When automatic instance naming is used, the choice
   of name bindings left as a local matter.";
```

-- 5.4.2 managedElement - subNetwork

```
managedElement-subNetworkR60 NAME BINDING
   SUBORDINATE OBJECT CLASS
      managedElement;
   NAMED BY SUPERIOR OBJECT CLASS
      subNetworkR60;
   WITH ATTRIBUTE
      managedElementId;
   BEHAVIOUR
      managedElement-subNetworkR60Behaviour;
   CREATE
      WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE
      ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 15};

managedElement-subNetworkR60Behaviour BEHAVIOUR
DEFINED AS
   "The name binding represents a relationship in which a subNetworkR60 contains and
    controls a managedElement. When automatic instance naming is used, the choice
    of name bindings left as a local matter.";

managedElement-subNetwork NAME BINDING
   SUBORDINATE OBJECT CLASS
      managedElement;
   NAMED BY SUPERIOR OBJECT CLASS
      subNetwork;
   WITH ATTRIBUTE
      managedElementId;
   BEHAVIOUR
      managedElement-subNetworkBehaviour;
   CREATE
      WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE
```

```
        ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 2};

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

-- 5.4.3 meContext - subNetwork

```
meContext-subNetwork NAME BINDING
    SUBORDINATE OBJECT CLASS
        meContext;
    NAMED BY SUPERIOR OBJECT CLASS
        subNetwork;
    WITH ATTRIBUTE
        meContextId;
    BEHAVIOUR
        meContext-subNetworkBehaviour;
    CREATE
        WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE
        ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 3};

meContext-subNetworkBehaviour BEHAVIOUR
DEFINED AS
        "The name binding represents a relationship in which a subNetwork contains and
        controls a meContext. When automatic instance naming is used, the choice
        of name bindings left as a local matter.";
meContext-subNetworkR60 NAME BINDING
    SUBORDINATE OBJECT CLASS
        meContext;
    NAMED BY SUPERIOR OBJECT CLASS
        subNetworkR60;
    WITH ATTRIBUTE
        meContextId;
    BEHAVIOUR
        meContext-subNetworkR60Behaviour;
    CREATE
        WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE
        ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 16};

meContext-subNetworkR60Behaviour BEHAVIOUR
DEFINED AS
    "The name binding represents a relationship in which a subNetworkR60 contains and
     controls a meContext. When automatic instance naming is used, the choice
     of name bindings left as a local matter.";
```

-- 5.4.4 bulkCmControl - irpAgent

Void.

-- 5.4.5 irpAgent - subNetwork

```
irpAgent-subNetwork NAME BINDING
    SUBORDINATE OBJECT CLASS
        irpAgent;
    NAMED BY SUPERIOR OBJECT CLASS
        subNetwork;
    WITH ATTRIBUTE
        irpAgentId;
    BEHAVIOUR
        irpAgent-subNetworkBehaviour;
    CREATE
        WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE
        ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 5};
```

```
irpAgent-subNetworkBehaviour BEHAVIOUR
DEFINED AS
      "The name binding represents a relationship in which a subNetwork contains and
      controls a irpAgent. When automatic instance naming is used, the choice of name
      bindings left as a local matter.";
irpAgent-subNetworkR60 NAME BINDING
   SUBORDINATE OBJECT CLASS
      irpAgent;
   NAMED BY SUPERIOR OBJECT CLASS
      subNetworkR60;
   WITH ATTRIBUTE
      irpAgentId;
   BEHAVIOUR
      irpAgent-subNetworkR60Behaviour;
   CREATE
      WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE
      ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 17};

irpAgent-subNetworkR60Behaviour BEHAVIOUR
DEFINED AS
   "The name binding represents a relationship in which a subNetworkR60 contains and
    controls a irpAgent. When automatic instance naming is used, the choice of name
    bindings left as a local matter.";
```

-- 5.4.6 irpAgent - managementNode

```
irpAgent-managementNode NAME BINDING
   SUBORDINATE OBJECT CLASS
      irpAgent;
   NAMED BY SUPERIOR OBJECT CLASS
      managementNode;
   WITH ATTRIBUTE
      irpAgentId;
   BEHAVIOUR
      irpAgent-managementNodeBehaviour;
   CREATE
      WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE
      ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 6};

irpAgent-managementNodeBehaviour BEHAVIOUR
DEFINED AS
      "The name binding represents a relationship in which a managedNode contains and
      controls a irpAgent. When automatic instance naming is used, the choice
      of name bindings left as a local matter.";
```

-- 5.4.7 managementNode - subNetwork

```
managementNode-subNetwork NAME BINDING
   SUBORDINATE OBJECT CLASS
      managementNode;
   NAMED BY SUPERIOR OBJECT CLASS
      subNetwork;
   WITH ATTRIBUTE
      managementNodeId;
   BEHAVIOUR
      managementNode-subNetworkBehaviour;
   CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 7};

managementNode-subNetworkBehaviour BEHAVIOUR
DEFINED AS
      "The name binding represents a relationship in which a subNetwork contains and
      controls a managementNode. When automatic instance naming is used, the choice
      of name bindings left as a local matter.";
managementNode-subNetworkR60 NAME BINDING
   SUBORDINATE OBJECT CLASS
      managementNode;
   NAMED BY SUPERIOR OBJECT CLASS
      subNetworkR60;
```

```
   WITH ATTRIBUTE
      managementNodeId;
   BEHAVIOUR
      managementNode-subNetworkR60Behaviour;
   CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 18};

managementNode-subNetworkR60Behaviour BEHAVIOUR
DEFINED AS
   "The name binding represents a relationship in which a subNetworkR60 contains and
    controls a managementNode. When automatic instance naming is used, the choice
    of name bindings left as a local matter.";
```

-- 5.4.8 irpAgent - managedElement

```
irpAgent-managedElement NAME BINDING
   SUBORDINATE OBJECT CLASS
      irpAgent;
   NAMED BY SUPERIOR OBJECT CLASS
      managedElement;
   WITH ATTRIBUTE
      irpAgentId;
   BEHAVIOUR
      irpAgent-managedElementBehaviour;
   CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 8};

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

-- 5.4.9 bcmControl - irpAgent

Void.

-- 5.4.10 vsDataContainer - vsDataContainer

Void.

-- 5.4.11 subNetwork - subNetwork

```
subNetworkR60-subNetworkR60-R54 NAME BINDING
   SUBORDINATE OBJECT CLASS
      subNetworkR60 AND SUBCLASSES;
   NAMED BY SUPERIOR OBJECT CLASS
      subNetworkR60 AND SUBCLASSES;
   WITH ATTRIBUTE
      subNetworkId;
   BEHAVIOUR
      subNetworkR60-subNetworkR60-R54Behaviour;
   CREATE
      WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE
      ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 19};

subNetworkR60-subNetworkR60-R54Behaviour BEHAVIOUR
DEFINED AS
   "The name binding represents a relationship in which a subNetworkR60 contains and controls
    another subNetworkR60. When automatic instance naming is used, the choice of name bindings
    is left as a local matter.";

subNetwork-subNetwork NAME BINDING
   SUBORDINATE OBJECT CLASS
      subNetwork;
   NAMED BY SUPERIOR OBJECT CLASS
```

~~subNetwork;~~
~~**WITH ATTRIBUTE**~~
~~subNetworkId;~~
~~**BEHAVIOUR**~~
~~subNetwork-subNetworkBehaviour;~~
~~**CREATE**~~
~~WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;~~
~~**DELETE**~~
~~ONLY-IF-NO-CONTAINED-OBJECTS;~~
~~**REGISTERED AS** {ts32-624NameBinding 11};~~

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

-- 5.4.12 notificationControl - irpAgent

Void.

-- 5.4.13 alarmControl - irpAgent

Void.

~~-- 5.4.14subNetwork – subNetwork – R54~~

~~subNetwork-subNetwork-R54 **NAME BINDING**~~
~~**SUBORDINATE OBJECT CLASS**~~
~~subNetwork AND SUBCLASSES;~~
~~**NAMED BY SUPERIOR OBJECT CLASS**~~
~~subNetwork AND SUBCLASSES;~~
~~**WITH ATTRIBUTE**~~
~~subNetworkId;~~
~~**BEHAVIOUR**~~
~~subNetwork-subNetwork-R54Behaviour;~~
~~**CREATE**~~
~~WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;~~
~~**DELETE**~~
~~ONLY-IF-NO-CONTAINED-OBJECTS;~~
~~**REGISTERED AS** {ts32-624NameBinding 14};~~

~~subNetwork-subNetwork-R54Behaviour **BEHAVIOUR**~~
~~**DEFINED AS**~~
~~"The name binding represents a relationship in which a subNetwork contains and controls another subNetwork. When automatic instance naming is used, the choice of name bindings is left as a local matter.";~~

~~-- 5.4.14subNetwork – subNetwork – R54~~

~~subNetwork-subNetwork-R54 **NAME BINDING**~~
~~**SUBORDINATE OBJECT CLASS**~~
~~subNetwork AND SUBCLASSES;~~
~~**NAMED BY SUPERIOR OBJECT CLASS**~~
~~subNetwork AND SUBCLASSES;~~
~~**WITH ATTRIBUTE**~~
~~subNetworkId;~~
~~**BEHAVIOUR**~~
~~subNetwork-subNetwork-R54Behaviour;~~
~~**CREATE**~~
~~WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;~~
~~**DELETE**~~
~~ONLY-IF-NO-CONTAINED-OBJECTS;~~
~~**REGISTERED AS** {ts32-624NameBinding 14};~~

~~subNetwork-subNetwork-R54Behaviour **BEHAVIOUR**~~
~~**DEFINED AS**~~
~~"The name binding represents a relationship in which a subNetwork contains and controls another subNetwork. When automatic instance naming is used, the choice of name bindings is left as a local matter.";~~

-- 5.4.15managedElement – subNetworkR60

```
managedElement-subNetworkR60 NAME BINDING
    SUBORDINATE OBJECT CLASS
        managedElement;
    NAMED BY SUPERIOR OBJECT CLASS
        subNetworkR60;
    WITH ATTRIBUTE
        managedElementId;
    BEHAVIOUR
        managedElement-subNetworkR60Behaviour;
    CREATE
        WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE
        ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 15};

managedElement-subNetworkR60Behaviour BEHAVIOUR
DEFINED AS
        "The name binding represents a relationship in which a subNetworkR60 contains and
        controls a managedElement. When automatic instance naming is used, the choice
        of name bindings left as a local matter.";
```

-- 5.4.16meContext – subNetworkR60

```
meContext-subNetworkR60 NAME BINDING
    SUBORDINATE OBJECT CLASS
        meContext;
    NAMED BY SUPERIOR OBJECT CLASS
        subNetworkR60;
    WITH ATTRIBUTE
        meContextId;
    BEHAVIOUR
        meContext-subNetworkR60Behaviour;
    CREATE
        WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE
        ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 16};

meContext-subNetworkR60Behaviour BEHAVIOUR
DEFINED AS
        "The name binding represents a relationship in which a subNetworkR60 contains and
        controls a meContext. When automatic instance naming is used, the choice
        of name bindings left as a local matter.";
```

-- 5.4.17irpAgent – subNetworkR60

```
irpAgent-subNetworkR60 NAME BINDING
    SUBORDINATE OBJECT CLASS
        irpAgent;
    NAMED BY SUPERIOR OBJECT CLASS
        subNetworkR60;
    WITH ATTRIBUTE
        irpAgentId;
    BEHAVIOUR
        irpAgent-subNetworkR60Behaviour;
    CREATE
        WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE
        ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 17};

irpAgent-subNetworkR60Behaviour BEHAVIOUR
DEFINED AS
        "The name binding represents a relationship in which a subNetworkR60 contains and
        controls a irpAgent. When automatic instance naming is used, the choice of name
        bindings left as a local matter.";
```

-- 5.4.18managementNode – subNetworkR60

```
managementNode-subNetworkR60 NAME BINDING
   SUBORDINATE OBJECT CLASS
      managementNode;
   NAMED BY SUPERIOR OBJECT CLASS
      subNetworkR60;
   WITH ATTRIBUTE
      managementNodeId;
   BEHAVIOUR
      managementNode-subNetworkR60Behaviour;
   CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 18};

managementNode-subNetworkR60Behaviour BEHAVIOUR
DEFINED AS
      "The name binding represents a relationship in which a subNetworkR60 contains and
      controls a managementNode. When automatic instance naming is used, the choice
      of name bindings left as a local matter.";
```

-- 5.4.19subNetworkR60 – subNetworkR60 – R54

```
subNetworkR60-subNetworkR60-R54 NAME BINDING
   SUBORDINATE OBJECT CLASS
      subNetworkR60 AND SUBCLASSES;
   NAMED BY SUPERIOR OBJECT CLASS
      subNetworkR60 AND SUBCLASSES;
   WITH ATTRIBUTE
      subNetworkId;
   BEHAVIOUR
      subNetworkR60-subNetworkR60-R54Behaviour;
   CREATE
      WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE
      ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 19};

subNetworkR60-subNetworkR60-R54Behaviour BEHAVIOUR
DEFINED AS
"The name binding represents a relationship in which a subNetworkR60 contains and controls another
subNetworkR60. When automatic instance naming is used, the choice of name bindings is left as a
local matter.";
```

-- 5.4.1420 genericIRP – irpAgent

```
genericIRP-irpAgent NAME BINDING
   SUBORDINATE OBJECT CLASS
      genericIRP AND SUBCLASSES;
   NAMED BY SUPERIOR OBJECT CLASS
      "3GPP TS 32.624": irpAgent AND SUBCLASSES;
   WITH ATTRIBUTE
      irpId;
   BEHAVIOUR
      genericIRP-irpAgentBehaviour;
   CREATE
      WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE
      ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 200600};

genericIRP-irpAgentBehaviour BEHAVIOUR
DEFINED AS
   "The name binding represents a relationship in which an irpAgent contains a subclass of
   genericIRP. When automatic instance naming is used, the choice of name bindings is left
   as a local matter.";
```

-- 5.4.15 link – subNetworkR60

```
link-subNetworkR60 NAME BINDING
   SUBORDINATE OBJECT CLASS
```

```
      link;
   NAMED BY SUPERIOR OBJECT CLASS
      subNetworkR60;
   WITH ATTRIBUTE
      linkId;
   BEHAVIOUR
      link-subNetworkR60Behaviour;
   CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-624NameBinding 210620};

link-subNetworkR60Behaviour BEHAVIOUR
DEFINED AS
   "The name binding represents a relationship in which a subNetworkR60 contains and
    controls a link. When automatic instance naming is used, the choice
    of name bindings left as a local matter.";
```

6 ASN.1 Definitions

```
TS32-624TypeModule {ccitt(0) identified-organization(4) etsi(0) mobileDomain(0) umts-Operation-
Maintenance(3) ts32-624(624) informationModel(0) asn1Module(2) version1(1)}

DEFINITIONS IMPLICIT TAGS ::=
BEGIN

--EXPORTS everything

IMPORTS

ObjectInstance
   FROM CMIP-1 {joint-iso-ccitt ms(9) cmip(1) modules(0) protocol(3)}

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


-- 3GPP TS 32.624 related Object Identifiers

baseNodeUMTS           OBJECT IDENTIFIER ::= {itu-t(0) identified-organization(4)
                                              etsi(0) mobileDomain(0)
                                              umts-Operation-Maintenance(3)}

ts32-624               OBJECT IDENTIFIER ::= {baseNodeUMTS ts32-624(624)}
ts32-624InfoModel      OBJECT IDENTIFIER ::= {ts32-624 informationModel(0)}

ts32-624ObjectClass    OBJECT IDENTIFIER ::= {ts32-624InfoModel managedObjectClass(3)}
ts32-624Package        OBJECT IDENTIFIER ::= {ts32-624InfoModel package(4)}
ts32-624Parameter      OBJECT IDENTIFIER ::= {ts32-624InfoModel parameter(5)}
ts32-624NameBinding    OBJECT IDENTIFIER ::= {ts32-624InfoModel nameBinding(6)}
ts32-624Attribute      OBJECT IDENTIFIER ::= {ts32-624InfoModel attribute(7)}
ts32-624Action         OBJECT IDENTIFIER ::= {ts32-624InfoModel action(9)}
ts32-624Notification   OBJECT IDENTIFIER ::= {ts32-624InfoModel notification(10)}

-- Start of 3GPP SA5 own definitions

ManagedElementType::= GraphicString

GeneralObjectId ::= INTEGER

UserDefinedState ::= GraphicString

GeneralObjectPointer ::= ObjectInstance

GeneralObjectPointerList ::= SEQUENCE OF ObjectInstance

LinkType::= SET OF INTEGER {
                signalling (0),
                bearer     (1),
                oAMP       (2),
                other      (3)
                }

ManagedElementType::= GraphicString

ProtocolName ::= GraphicString

ProtocolVersion ::= GraphicString

SetOfMcc ::= SET OF MobileCountryCode

UserDefinedNetworkType ::= GraphicString

SwVersion ::= GraphicString

UserDefinedNetworkType ::= GraphicString

UserDefinedState ::= GraphicString

END -- of TS32-624TypeModule
```

Annex A (informative): List of assigned Object Identifiers

This annex provides a list with all object identifiers that have been assigned in TS 32.624 in Release 5 up to V5.4.0 and in Release 6 up to the latest version. These object identifiers shall not be assigned to new objects.

Basic Object Name	Name and OID of the current TS Version	Name and OIDs of previous TS Versions
Managed Object Classes		
subNetwork	Name: subNetworkR60 OID : ts32-624ObjectClass 10	Name: subNetwork OID : ts32-624ObjectClass 1
managedElement	Name: managedElement OID : ts32-624ObjectClass 2	--
managementNode	Name: managementNode OID : ts32-624ObjectClass 3	--
vsDataContainer	Name: vsDataContainer OID : ts32-624ObjectClass 4	--
bulkCmControl	Name: bulkCmControl OID : ts32-624ObjectClass 5	--
irpAgent	Name: irpAgent OID : ts32-624ObjectClass 6	--
managedFunction	Name: managedFunction OID : ts32-624ObjectClass 7	--
meContext	Name: meContext OID : ts32-624ObjectClass 8	--
genericIRP	Name: genericIRP OID : ts32-624ObjectClass 110600	--
link	Name: link OID : s32-624ObjectClass 120620	--
Packages		
subNetworkBasicPackage	Name: subNetworkBasicPackage OID : ts32-624Package 1	--
managedElementBasicPackage	Name: subNetworkBasicPackage OID : ts32-624Package 2	--
managedElementAssociationPackage	Name: managedElementAssociationPackage OID : ts32-624Package 3	--
vsDataContainerBasicPackage	--	Name: vsDataContainerBasicPackage OID : ts32-624Package 4
bulkCmControlBasicPackage	--	Name: bulkCmControlBasicPackage OID : ts32-624Package 5
bulkCmControlActionPackage	--	Name: bulkCmControlActionPackage OID : ts32-624Package 6
bulkCmControlNotificationPackage	--	Name: bulkCmControlNotificationPackage OID : ts32-624Package 7
managementNodeBasicPackage	Name: managementNodeBasicPackage OID : ts32-624Package 8	--
managementNodeAssociationPackage	Name: managementNodeAssociationPackage OID : ts32-624Package 9	--
irpAgentBasicPackage	Name: irpAgentBasicPackage OID : ts32-624Package 10	--
managedFunctionBasicPackage	Name: managedFunctionBasicPackage OID : ts32-624Package 11	--
meContextBasicPackage	Name: meContextBasicPackage OID : ts32-624Package 12	--
bcmControlBasicPackage	--	Name: bcmControlBasicPackage OID : ts32-624Package 13
bcmIRPVersionPackage	--	Name: bcmIRPVersionPackage OID : ts32-624Package 14
communicationsAlarmPackage	--	Name: communicationsAlarmPackage OID : ts32-624Package 15
equipmentAlarmPackage	--	Name: equipmentAlarmPackage OID : ts32-624Package 16
qualityOfServiceAlarmPackage	--	Name: qualityOfServiceAlarmPackage OID : ts32-624Package 17
rootOptionalPackage	Name: rootOptionalPackage OID : ts32-624Package 18	--
subNetworkSetOfMccPackage	Name: subNetworkSetOfMccPackage OID : ts32-624Package 19	--

irpIdPackage	Name: irpIdPackage OID : ts32-624Package 200600	--
linkBasicPackage	Name: linkBasicPackage OID : ts32-624Package 210620	--
linkOptionalPackage	Name: linkOptionalPackage OID : ts32-624Package 220620	--
Actions		
Notifications		
Attributes		
managedElementType	Name: managedElementType OID : ts32-624Attribute 1	--
subNetworkId	Name: subNetworkId OID : ts32-624Attribute 2	--
VsDataContainerId	--	Name: VsDataContainerId OID : : ts32-624Attribute 100
vsDataType	--	Name: vsDataType OID : ts32-624Attribute 3
vsData	--	Name: vsData OID : ts32-624Attribute 4
vsDataFormatVersion	--	Name: vsDataFormatVersion OID : ts32-624Attribute 5
bulkCmControlId	--	Name: bulkCmControlId OID : ts32-624Attribute 6
irpVersion	--	Name: irpVersion OID : ts32-624Attribute 7
userDefinedNetworkType	Name: userDefinedNetworkType OID : ts32-624Attribute 8	--
swVersion	Name: swVersion OID : ts32-624Attribute 9	--
managedElementId	Name: managedElementId OID : ts32-624Attribute 10	--
userDefinedState	Name: userDefinedState OID : ts32-624Attribute 11	--
meManagedBy	Name: meManagedBy OID : ts32-624Attribute 12	--
managementNodeId	Name: managementNodeId OID : ts32-624Attribute 13	--
mnManagesList	Name: mnManagesList OID : ts32-624Attribute 14	--
irpAgentId	Name: irpAgentId OID : ts32-624Attribute 15	--
supportedIRPs	--	Name: supportedIRPs OID : ts32-624Attribute 16
meContextId	Name: meContextId OID : ts32-624Attribute 17	--
bcmControlId	--	Name: bcmControlId OID : ts32-624Attribute 18
setOfMcc	Name: setOfMcc OID : ts32-624Attribute 19	--
irpId	Name: irpId OID : ts32-624Attribute 210600	--
linkId	Name: linkId OID : ts32-624Attribute 220620	--
aEnd	Name: aEnd OID : ts32-624Attribute 230620	--
zEnd	Name: zEnd OID : ts32-624Attribute 240620	--
linkType	Name: linkType OID : ts32-624Attribute 250620	--
protocolName	Name: protocolName OID : ts32-624Attribute 260620	--
protocolVersion	Name: protocolVersion OID : ts32-624Attribute 270620	--
Parameters		
Name Bindings		

managedElement-meContext	Name: managedElement-meContext OID : ts32-624NameBinding 1	--
managedElement-subNetwork	Name: managedElement-subNetworkR60 OID : ts32-624NameBinding 15	Name: managedElement-subNetwork OID : ts32-624NameBinding 2
meContext-subNetwork	Name: meContext-subNetworkR60 OID : ts32-624NameBinding 16	Name: meContext-subNetwork OID : ts32-624NameBinding 3
bulkCmControl - irpAgent	--	Name: bulkCmControl - irpAgent OID : ts32-624NameBinding 4
irpAgent - subNetwork	Name: irpAgent-subNetworkR60 OID : ts32-624NameBinding 17	Name: irpAgent - subNetwork OID : ts32-624NameBinding 5
irpAgent-managementNode	Name: irpAgent-managementNode OID : ts32-624NameBinding 6	--
managementNode-subNetwork	Name: managementNode-subNetworkR60 OID : ts32-624NameBinding 18	Name: managementNode-subNetwork OID : ts32-624NameBinding 7
irpAgent-managedElement	Name: irpAgent-managedElement OID : ts32-624NameBinding 8	--
bcmControl - irpAgent	--	Name: bcmControl - irpAgent OID : ts32-624NameBinding 9
vsDataContainer - vsDataContainer	--	Name: vsDataContainer - vsDataContainer OID : ts32-624NameBinding 10
subNetwork - subNetwork	Name: subNetworkR60-subNetworkR60-R54 OID : ts32-624NameBinding 19	Name: subNetwork - subNetwork OID : ts32-624NameBinding 11 Name: subNetwork-subNetwork-R54 OID : ts32-624NameBinding 14
notificationControl - irpAgent	--	Name: notificationControl - irpAgent OID : ts32-624NameBinding 12
alarmControl - irpAgent	--	Name: alarmControl - irpAgent OID : ts32-624NameBinding 13
genericIRP-irpAgent	Name: genericIRP-irpAgent OID : ts32-624NameBinding 200600	--
link-subNetworkR60	Name: link-subNetworkR60 OID : ts32-624NameBinding 210620	--

End of Change in Clause 4, 5, 6, Annex A, Annex B

Annex BA (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Jun 2004	S_24	SP-040251	018	--	Correction of legal values for managedElementType attribute	5.3.0	5.4.0
Jun 2004	S_24	SP-040253	015	--	Add the attribute SetOfMcc to the MOC SubNetwork -Align with IS 32.622	5.4.0	6.0.0
Dec 2004	S_26	SP-040808	020	--	Add missing definition of attribute meContextId	6.0.0	6.1.0
Dec 2004	S_26	SP-040808	021	--	Add definitions for genericIRP	6.0.0	6.1.0

CR-Form-v7.1

CHANGE REQUEST

⌘ **32.625** **CR** **0020** ⌘**rev** **-** ⌘ Current version: **6.4.0** ⌘

*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:	⌘	Correction of inappropriate XML type for a list of Distinguished Names
Source:	⌘	**SA5** (Nortel – Suzèle Lariven – lariven@nortel.com)
Work item code:	⌘	OAM-NIM
Date:	⌘	13/05/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

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:
Ph2 *(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)*
Rel-7 *(Release 7)*

Reason for change:	⌘	The XML type for a list of Distinguished Names is currently defined as an XML simple list type. Such an XML type uses whitespace as list item separator. Since Distinguished Names themselves can contain whitespace an XML complex type shall be used instead for defining the XML type for a list of Distinguished Names.
Summary of change:	⌘	• Replacement of use of an XML simple list type with use of an XML complex type for the XML type for a list of Distinguished Names • Other corrections
Consequences if not approved:	⌘	The XML type for a list of Distinguished Names would remain inappropriate.

Clauses affected:	⌘	Annex A, annex B

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

Other comments: ⌘

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/archive/32_series/32.625#genericNrm"
  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"
>

  <!-- 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 attribute related XML types -->

  <simpleType name="DNdn">
    <restriction base="string">
      <maxLength value="400"/>
    </restriction>
  </simpleType>

  <simpleTypecomplexType name="DNdnList">
    <list itemType="xn:DN"/>
    <sequence minOccurs="0" maxOccurs="unbounded">
      <element name="dn" type="xn:dn"/>
    </sequence>
  </simpleTypecomplexType>

  <simpleType name="LlinkTypeList">
    <list itemType="xn:LinkType"/>
</simpleType>

    <simpleType name="LinkType">
      <restriction base="string">
        <enumeration value="Signalling"/>
        <enumeration value="Bearer"/>
        <enumeration value="OAM_ANDnd_P"/>
        <enumeration value="Other"/>
      </restriction>
    </simpleType>
    </list>
  </simpleType>

  <!-- 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"/>
            <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>
      <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>
  </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
-->

<complexType name="vsData"/>
<element name="vsData" type="xn:vsData"/>

<!--
  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>
```

End of Change in Annex A

Change in 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/32.625/schema/32625-~~640~~650-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**
Dec 2004	S_26	SP-040808	013	--	Correct attribute for the managementScope association - Align with IS in 32.622	6.2.0	6.3.0
Mar 2005	S_27	SP-050046	014	--	Add genericNRM.xsd for new IMS Links	6.3.0	6.4.0
Mar 2005	S_27	SP-050046	016	--	Error corrections to genericNRM.xsd	6.3.0	6.4.0