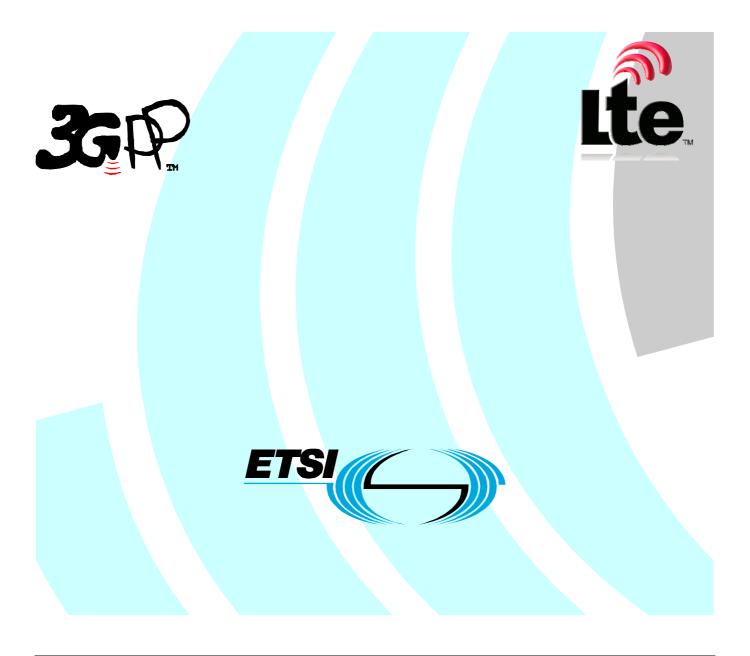# ETSI TS 132 735 V9.0.0 (2010-01)

Technical Specification

**Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
IP Multimedia Subsystem (IMS) Network Resource Model (NRM)
Integration Reference Point (IRP);
eXtensible Markup Language (XML) file format definition
(3GPP TS 32.735 version 9.0.0 Release 9)**

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Contents

Foreword

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Introduction

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

32.731:   IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements

32.732:   IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)

32.733:   IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)

32.735:   IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP); Bulk CM eXtensible Markup Language (XML) file format definition

1   Scope

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

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

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

This File Format Definition specification is related to 3GPP TS 32.732 V9.0.X.

2   References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1]   3GPP TS 32.732: "IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP): Information Service (IS)".

[2]   3GPP TS 32.612: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Information Service (IS)".

[3]   3GPP TS 32.615: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); eXtensible Markup Language (XML) file format definition".

[4]   W3C REC-xml-20001006: "Extensible Markup Language (XML) 1.0 (Second Edition)".

[5]   W3C REC-xmlschema-0-20010502: "XML Schema Part 0: Primer".

[6]   W3C REC-xmlschema-1-20010502: "XML Schema Part 1: Structures".

[7]   W3C REC-xmlschema-2-20010502: "XML Schema Part 2: Datatypes".

[8]   W3C REC-xml-names-19990114: "Namespaces in XML".

3   Definitions and abbreviations

3.1   Definitions

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

XML file: file containing an XML document

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

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

XML declaration: it specifies the version of XML being used

    NOTE: See [4].

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

> NOTE: See [4].

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

> NOTE: See [4].

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

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

> NOTE: See [4].

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

> NOTE: See [4].

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

> NOTE: See [4].

XML attribute specification: has a name and a value

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

> NOTE: See [4].

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

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

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

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

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

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

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

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

3.2 Abbreviations

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

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

4 Structure and content of configuration data XML files

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

Annex A of the present document defines the NRM-specific XML schema `imsNrm.xsd` for the IMS NRM IRP IS defined in 3GPP TS 32.732 [1].

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

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

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

The following XML schema `imsNrm.xsd` is the NRM-specific schema for the IMS NRM IRP IS defined in 3GPP TS 32.732 [1]:

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

<!--
  3GPP TS 32.735 IMS NRM IRP
  Bulk CM Configuration data file NRM-specific XML schema
  imsNrm.xsd
-->

<schema
  targetNamespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.735#imsNrm"
  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:im="http://www.3gpp.org/ftp/specs/archive/32_series/32.735#imsNrm"
>

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

  <!--IMS NRM IRP IS class associated XML elements -->

  <element
    name="AsFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:AsFunctionOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="CamelImSsfAsFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:AsFunctionOptionallyContainedNrmClass"/>
```

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

  <element
    name="OsaScsAsFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:AsFunctionOptionallyContainedNrmClass"/>
              <element ref="im:OsaScsAsFunctionOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="SipAsFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
    <complexType>
      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:AsFunctionOptionallyContainedNrmClass"/>
              <element ref="im:SipAsFunctionOptionallyContainedNrmClass"/>
              <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">
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                <all>
                  <element name="userLabel" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
```

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

<element
  name="CscfFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
  <complexType>
    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string" minOccurs="0"/>
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="im:CscfFunctionOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

<element
  name="IcscfFunction"
  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
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    <complexContent>
      <extension base="xn:NrmClass">
        <sequence>
          <element name="attributes" minOccurs="0">
            <complexType>
              <all>
                <element name="userLabel" type="string" minOccurs="0"/>
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
          </element>
          <choice minOccurs="0" maxOccurs="unbounded">
            <element ref="im:IcscfFunctionOptionallyContainedNrmClass"/>
            <element ref="xn:VsDataContainer"/>
          </choice>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
</element>

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  substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
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    <complexContent>
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        <sequence>
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                <element name="userLabel" type="string" minOccurs="0"/>
                <element name="linkList" type="xn:linkListType" minOccurs="0"/>
              </all>
            </complexType>
```

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

  <element
    name="MgcfFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
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      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
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                <all>
                  <element name="userLabel" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:MgcfFunctionOptionallyContainedNrmClass"/>
              <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" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:MrfcFunctionOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
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        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="MrfpFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
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      <complexContent>
        <extension base="xn:NrmClass">
          <sequence>
            <element name="attributes" minOccurs="0">
              <complexType>
                <all>
                  <element name="userLabel" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
```

```
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:MrfpFunctionOptionallyContainedNrmClass"/>
              <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" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:PcscfFunctionOptionallyContainedNrmClass"/>
              <element ref="xn:VsDataContainer"/>
            </choice>
          </sequence>
        </extension>
      </complexContent>
    </complexType>
  </element>

  <element
    name="ScscfFunction"
    substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
  >
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      <complexContent>
        <extension base="xn:NrmClass">
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              <complexType>
                <all>
                  <element name="userLabel" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
            </element>
            <choice minOccurs="0" maxOccurs="unbounded">
              <element ref="im:ScscfFunctionOptionallyContainedNrmClass"/>
              <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" type="string" minOccurs="0"/>
                  <element name="linkList" type="xn:linkListType" minOccurs="0"/>
                </all>
              </complexType>
```

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

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

<element name="Link_As_Slf" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
    <complexType>
        <complexContent>
            <extension base="xn:NrmClass">
                <sequence>
                    <element name="attributes" minOccurs="0">
                        <complexType>
                            <all>
                                <element name="aEnd" type="xn:dn" minOccurs="0"/>
                                <element name="linkType" type="xn:linkType" minOccurs="0"/>
                                <element name="protocolName" type="string" minOccurs="0"/>
                                <element name="protocolVersion" type="string" minOccurs="0"/>
```

```
                                    <element name="userLabel" type="string" minOccurs="0"/>
                                    <element name="zEnd" type="xn:dn" minOccurs="0"/>
                                </all>
                            </complexType>
                        </element>
                        <choice minOccurs="0" maxOccurs="unbounded">
                            <element ref="im:Link_As_SlfOptionallyContainedNrmClass"/>
                            <element ref="xn:VsDataContainer"/>
                        </choice>
                    </sequence>
                </extension>
            </complexContent>
        </complexType>
    </element>

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

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                                <element name="protocolName" type="string" minOccurs="0"/>
                                <element name="protocolVersion" type="string" minOccurs="0"/>
                                <element name="userLabel" type="string" minOccurs="0"/>
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                    </choice>
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<element name="Link_Scscf_Slf" substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
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</element>

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substitutionGroup="xn:ManagedElementOptionallyContainedNrmClass"
>
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                                                        <element name="protocolVersion" type="string" minOccurs="0"/>
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                                <complexContent>
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                                        <sequence>
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                                                        <element name="protocolVersion" type="string" minOccurs="0"/>
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                    </extension>
                </complexContent>
            </complexType>
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substitutionGroup="xn:SubNetworkOptionallyContainedNrmClass">
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                                    <element name="zEnd" type="xn:dn" minOccurs="0"/>
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                        </choice>
                    </sequence>
                </extension>
            </complexContent>
        </complexType>
    </element>

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

```
            </complexType>
        </element>

        <element name="AsFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="SipAsFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="OsaScsAsFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="CamelImSsfAsFunctionOptionallyContainedNrmClass" type="xn:NrmClass"
abstract="true"/>
        <element name="BgcfFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="CscfFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="IcscfFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="ImsMgwFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="MgcfFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="MrfcFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="MrfpFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="PcscfFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="ScscfFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="SlfFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_As_CscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_As_ScscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_As_SlfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Bgcf_BgcfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Bgcf_CscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Bgcf_MgcfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Bgcf_ScscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Cscf_CscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Cscf_IcscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Cscf_MgcfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Cscf_MrfcOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Cscf_PcscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Cscf_ScscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Cscf_SlfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Icscf_SlfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_ImsMgw_MgcfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Mgcf_ScscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Mrfc_MrfpOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Mrfc_ScscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Scscf_ScscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Scscf_SlfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="HssFunctionOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Hss_ScscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Cscf_HssOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Hss_SipAsOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>
        <element name="Link_Hss_OsaScsAsOptionallyContainedNrmClass" type="xn:NrmClass"
abstract="true"/>
        <element name="Link_Hss_CamelImSsfAsOptionallyContainedNrmClass" type="xn:NrmClass"
abstract="true"/>
        <element name="Link_As_IcscfOptionallyContainedNrmClass" type="xn:NrmClass" abstract="true"/>

</schema>
```

Annex B (informative):
Void

Annex C (informative): Change history

Change history								
Date	TSG #	TSG Doc.	CR	R	Subject/Comment	Cat	Old	New
Sep 2006	SA_33	SP-060565	--	--	Submitted to TSG SA #33 for Information	--	--	1.0.0
Dec 2006	SA_34	SP-060752	--	--	Submitted to TSG SA#34 for Approval	--	2.0.0	7.0.0
Mar 2007	SA_35	SP-070047	0001	--	Add HssFunction to IMS NRM - XML	F	7.0.0	7.1.0
Jun 2007	SA_36	SP-070276	0002	--	Correct definitions of AsFunctions - Align with 23.002	F	7.1.0	7.2.0
Jun 2007	SA_36	SP-070276	0003	--	Add missing XSD optional containment	F	7.1.0	7.2.0
Jun 2007	SA_36	SP-070276	0004	--	Add missing XSD types - Align with 3GPP2	F	7.1.0	7.2.0
Jun 2007	SA_36	SP-070276	0005	--	Add missing Link_As_Icscf To IMS NRM - Align with 23.002	F	7.1.0	7.2.0
Sep 2007	SA_37	SP-070612	0006	--	Add missing link attributes to IMS NRM - Align with 3GPP2	F	7.2.0	7.3.0
Mar 2008	SP-39	SP-080058	0007	--	Add missing inherited attributes of CamelImSsfAsFunction and SipAsFunction - Align with 32.732 Information Service	F	7.3.0	7.4.0
Jun 2008	SP-40	SP-080329	0008	--	Add missing attribute and containment - Align with 32.732	F	7.4.0	7.5.0
Dec 2008	SA_42	--	--	--	Upgrade to Release 8		7.5.0	8.0.0
Dec 2009	SA_46	SP-090719	0009	--	Discontinue from Rel-9 onwards the XML schema extraction and storage		8.0.0	9.0.0

History

Document history		
V9.0.0	January 2010	Publication