

# 3GPP TS 32.620-4 V2.0.0 (2001-06)

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*Technical Specification*

**3rd Generation Partnership Project;  
Technical Specification Group Services and System Aspects;  
3G Configuration Management:  
Generic Network Resources IRP: CMIP Solution Set;  
(Release 4)**

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Keywords

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## Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

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## Introduction

Due to the growing number of specifications to model new services and Resource Models for Configuration Management (CM), as well as the expected growth in size of each of them from 3GPP Release 4 onwards, a new structure of the specifications is already needed in Release 4. This structure is needed for several reasons, but mainly to enable more independent development and release for each part, as well as a simpler document identification and version handling. Another benefit would be that it becomes easier for bodies outside 3GPP, such as the ITU-T, to refer to telecom management specifications from 3GPP. The new structure of the specifications does not lose any information or functionality supported by the Release 1999. The restructuring also includes defining new IRPs for the Network Resource Model (NRM) parts of R99 Basic CM IRP (Generic, Core Network and UTRAN NRM). These IRPs are named "Network Resources IRP".

Further, the Notification IRP (in Release 1999: 32.106-1 to -4) and the Name convention for Managed Objects (in Release 1999: 32.106-8) have been moved to a separate number series used for specifications common between several management areas (e.g. CM, FM, PM).

Finally, in addition to the restructuring mentioned above, the need to define some new functionality and IRPs for CM compared to Release 1999, has also been identified. Firstly, a new Bulk CM IRP, and secondly an a GERAN Network Resources IRP, have been created. Thirdly, the Generic, UTRAN and GERAN Network Resources IRPs have been extended with support for GSM-UMTS Inter-system handover (ISH), and the 32.600 (Concept and High-level Requirements) has been modified to cover the high-level Bulk CM and ISH requirements.

Table: Mapping between Release '99 and the new specification numbering scheme

R99 Old no.	Old (R99) specification title	Rel-4 spec. no. with Bulk CM /ISH	Rel-4 specification title with Bulk CM/ ISH
32.106-1	3G Configuration Management: Concept and Requirements	32.600	<b>3G Configuration Management: Concept and High-level Requirements</b>
32.106-1	<Notification IRP requirements from 32.106-1 and 32.106-2>	32.301-1	<b>Notification IRP: Requirements</b>
32.106-2	Notification IRP: IS	32.301-2	Notification IRP: Information Service
32.106-3	Notification IRP: CORBA SS	32.301-3	Notification IRP: CORBA SS
32.106-4	Notification IRP: CMIP SS	32.301-4	Notification IRP: CMIP SS
32.106-8	Name convention for Managed Objects	32.300	<b>Name Convention for Managed Objects</b>
-	-	32.602-1	<b>Bulk CM IRP: Requirements</b>
-	-	32.602-2	Bulk CM IRP: Information Service
-	-	32.602-3	Bulk CM IRP: CORBA SS
-	-	32.602-4	Bulk CM IRP: CMIP SS
-	-	32.602-5	Bulk CM IRP: XML file format definition
32.106-1	<Basic CM IRP Generic NRM requirements from 32.106-1 and 32.106-5>	32.620-1	<b>Generic Network Resources IRP: Requirements</b>
32.106-5	Basic CM IRP IM (Generic NRM part)	32.620-2	Generic Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (Generic NRM related part)	32.620-3	Generic Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (Generic NRM related part)	32.620-4	Generic Network Resources IRP: CMIP SS
32.106-1	<Basic CM IRP UTRAN NRM requirements from 32.106-1 and 32.106-5>	32.622-1	<b>UTRAN Network Resources IRP: Requirements</b>
32.106-5	Basic CM IRP IM (UTRAN NRM part)	32.622-2	UTRAN Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (UTRAN NRM related part)	32.622-3	UTRAN Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (UTRAN NRM related part)	32.622-4	UTRAN Network Resources IRP: CMIP SS
-	-	32.623-1	<b>GERAN Network Resources IRP: Requirements</b>
-	-	32.623-2	GERAN Network Resources IRP: NRM
-	-	32.623-3	GERAN Network Resources IRP: CORBA SS
-	-	32.623-4	GERAN Network Resources IRP: CMIP SS

The present document is 3GPP TS 32.620-4: Generic Network Resource IRP: CMIP Solution Set.

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# 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 32.620-2. 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.

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# 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 32.101: "3G Telecom Management principles and high level requirements".
- [2] 3GPP TS 32.102: "3G Telecom Management architecture".
- [3] 3GPP TS 32.301-4: "Telecommunication Management; Notification Management; Part 4: Notification Integration Reference Point; CMIP Solution Set".
- [4] 3GPP TS 32.620-2: "Telecommunication Management; Configuration Management: Generic Network Resource Integration Reference Point: Network Resource Model".
- [5] ITU-T Recommendation X.710 (1991): "Common Management Information Service Definition for CCITT Applications".
- [6] ITU-T Recommendation X.721 (02/92): "Information Technology - Open Systems Interconnection – Structure of Management Information: Definition of Management Information".
- [7] ITU-T Recommendation X.730 (01/92): "Information Technology - Open Systems Interconnection – Systems Management: Object Management Function".
- [8] ITU-T Recommendation X.733 (02/92): "Information Technology - Open Systems Interconnection - Alarm Reporting Function".
- [9] ITU-T Recommendation M.3100 (07/95): "Maintenance Telecommunications Management Network – Generic Network Information Model".

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# 3 Definitions, symbols and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 32.600 and 3GPP TS 32.620-2 apply.

## 3.2 Abbreviations

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

CMIP	Common Management Information Protocol
DN	Distinguished Name
GDMO	Guidelines for the Definition of Managed Objects
IDL	Interface Definition Language
IEC	International Electro-technical Commission
ISO	International Standards Organization
ITU-T	International Telecommunication Union, Telecommunication Sector
MIB	Management Information Base
MIM	Management Information Model
MIT	Management Information Tree (or Naming Tree)
MOC	Managed Object Class
MOI	Managed Object Instance
NE	Network Element
NR	Network Resource
NRM	Network Resource Model
TMN	Telecommunications Management Network

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## 4 Basic aspects

### 4.1 Explanation

A technology independent generic network resource model is defined in 3GPP TS 32.620-2 for 3G networks. This document provides an implementation of this generic network resource model by using CMIP technology.

### 4.2 Allowed Alarms of MOCs

Table 1 defines the allowed alarms of each MOCs for this CMIP Solution Set. The MOCs, which do not appear in table 1, may not issue any alarm except the alarms that are defined allowed for its parent MOC(s).

**Table 1: Allowed alarms of MOCs**

MOCs	Legal Alarms
SubNetwork	EnvironmentalAlarm
ManagedElement	environmentalAlarm equipmentAlarm communicationsAlarm processingErrorAlarm
ManagementNode	environmentalAlarm equipmentAlarm communicationsAlarm processingErrorAlarm
ManagedFunction	communicationsAlarm processingErrorAlarm QualityofServiceAlarm
IRPAgent	communicationsAlarm processingErrorAlarm
AlarmIRP	alarmListRebuiltAlarm



## 4.3 Mapping

The semantic of the Generic Network Resource Model is defined in 3GPP TS 32.620-2. 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 of MOCs

Table 2 maps the managed object classes defined in the Generic Network Resource Model onto the equivalent MOCs of the CMIP Solution Set.

**Table 2: Mapping of MOCs**

Managed Objects of the Generic NR IRP NRM	MOCs of this CMIP SS
ManagedElement	managedElement
SubNetwork	subNetwork
IRPAgent	irpAgent (3GPP TS 32.106-7 : 6.2001)
ManagedFunction	managedFunction (3GPP TS 32.106-7 : 6.2001)
ManagementNode	managementNode (3GPP TS 32.106-7 : 6.2001)
MeContext	meContext (3GPP TS 32.106-7 : 6.2001)
BasicCmIRP	bcmControl (3GPP TS 32.106-7 : 6.2001)
VsDataContainer	vsDataContainer
BulkCmIRP	bulkCmControl

### 4.3.2 Mapping of Attributes

**Table 11: Mapping of Attributes**

Attribute defined in 3GPP TS 32.620-2	Attribute defined in this CMIP SS
dnPrefix	systemTitle (ITU-T Recommendation X.721: 1992)
managedElementId	managedElementId (3GPP TS 32.106-7 : 6.200)
subNetworkId	subNetworkId (3GPP TS 32.106-7 : 6.200)
irpAgentId	irpAgentId (3GPP TS 32.106-7 : 6.2001)
locationName	locationName (Recommendation M.3100: 1995)
managedBy	meManagedBy (3GPP TS 32.106-7 : 6.2001)
managedElementType	managedElementType
managementNodeId	managementNodeId (3GPP TS 32.106-7 : 6.2001)
manages	mnManagesList (3GPP TS 32.106-7 : 6.2001)
meContextId	meContextId (3GPP TS 32.106-7 : 6.2001)
systemDN	not needed
userDefinedState	userDefinedState (3GPP TS 32.106-7 : 6.2001)
userLabel	userLabel (Recommendation M.3100: 1995)
vendorName	vendorName (Recommendation M.3100: 1995)
VsDataContainerId	vsDataContainerId
VsDataType	vsDataType
VsData	vsData
vsDataFormatVersion	vsDataFormatVersion
BulkCmIrpId	bulkCmControlId
IrpVersion	irpVersion
userDefinedNetworkType	userDefinedNetworkType
SwVersion	swVersion

---

## 5 GDMO Definitions

### 5.1 Managed Object Classes

#### 5.1.1 subNetwork

##### **subNetwork** MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

subNetworkBasicPackage;

CONDITIONAL PACKAGES

"Recommendation M.3100: 1995":attributeValueChangeNotificationPackage PRESENT IF  
"the attributeValueChange notifications defined in Recommendation X.721  
are supported by an instance of this class.",

"Recommendation M.3100: 1995":environmentalAlarmPackage PRESENT IF  
"the environmentalAlarm notifications defined in Recommendation X.721  
are supported by an instance of this class.";

REGISTERED AS {ts32-620ObjectClass 1};

#### 5.1.2 managedElement

##### **managedElement** MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

managedElementBasicPackage,

managedElementAssociationPackage;

CONDITIONAL PACKAGES

"Recommendation M.3100: 1995":createDeleteNotificationsPackage PRESENT IF  
"the objectCreation and the objectDeletion defined in Recommendation  
X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":attributeValueChangeNotificationPackage PRESENT IF  
"the attributeValueChange notifications defined in Recommendation X.721  
are supported by an instance of this class.",

"Recommendation M.3100: 1995":processingErrorAlarmPackage PRESENT IF  
"the processingErrorAlarm notifications defined in Recommendation X.721  
are supported by an instance of this class.",

"Recommendation M.3100: 1995":environmentalAlarmPackage PRESENT IF  
"the environmentalAlarm notifications defined in Recommendation X.721  
are supported by an instance of this class.",

"3GPP TS 32.106-7: 6.2001":communicationsAlarmPackage PRESENT IF  
"the communicationsAlarm notifications defined in Recommendation X.721  
are supported by an instance of this class.",

"3GPP TS 32.106-7: 6.2001":equipmentAlarmPackage PRESENT IF  
"the equipmentAlarm notifications defined in Recommendation X.721  
are supported by an instance of this class.";

REGISTERED AS {ts32-620ObjectClass 2};

### 5.1.3 managementNode

#### **managementNode** MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

managementNodeBasicPackage,

"3GPP TS 32.106-7: 6.2001":managementNodeAssociationPackage;

CONDITIONAL PACKAGES

"Recommendation M.3100: 1995":createDeleteNotificationsPackage PRESENT IF

"the objectCreation and the objectDeletion defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":attributeValueChangeNotificationPackage PRESENT IF

"the attributeValueChange notifications defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":processingErrorAlarmPackage PRESENT IF

"the processingErrorAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

"Recommendation M.3100: 1995":environmentalAlarmPackage PRESENT IF

"the environmentalAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

"3GPP TS 32.106-7: 6.2001":communicationsAlarmPackage PRESENT IF

"the communicationsAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.",

"3GPP TS 32.106-7: 6.2001":equipmentAlarmPackage PRESENT IF

"the equipmentAlarm notifications defined in Recommendation X.721 are supported by an instance of this class.";

REGISTERED AS {ts32-620ObjectClass 3};

### 5.1.4 vsDataContainer

#### **vsDataContainer** MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

vsDataContainerBasicPackage;

REGISTERED AS {ts32-620ObjectClass 4};

### 5.1.5 bulkCmControl

#### **bulkCmControl** MANAGED OBJECT CLASS

DERIVED FROM "Recommendation X.721: 1992":top;

CHARACTERIZED BY

bulkCmControlBasicPackage,

bulkCmControlActionPackage,

bulkCmControlNotificationPackage;

REGISTERED AS {ts32-620ObjectClass 5};

## 5.2 Packages

### 5.2.1 subNetworkBasicPackage

#### **subNetworkBasicPackage** PACKAGE

##### BEHAVIOUR

subNetworkBasicPackageBehaviour;

##### ATTRIBUTES

subNetworkId GET,

"Recommendation X.721: 1992": systemTitle GET,

"Recommendation M.3100: 1995" : userLabel GET-REPLACE,

userDefinedNetworkType GET;

REGISTERED AS {ts32-620Package 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

"3GPP TS 32.106-7: 6.2001": managedElementId GET,

managedElementType GET,

"3GPP TS 32.106-7: 6.2001": userDefinedState GET-REPLACE,

"Recommendation X.721: 1992" : systemTitle GET,

"Recommendation M.3100: 1995" : userLabel GET-REPLACE,

"Recommendation M.3100: 1995" : vendorName GET,

"Recommendation M.3100: 1995" : locationName GET,

swVersion GET;

REGISTERED AS {ts32-620Package 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

“3GPP TS 32.106-7: 6.2001”: meManagedBy GET;

REGISTERED AS {ts32-620Package 3};

#### **managedElementAssociationPackageBehaviour** BEHAVIOUR

##### DEFINED AS

"The attribute 'meManagedBy' points to the g3ManagementNode instance which manages this g3ManagedElement instance. It implements the attribute *managedBy* of MOC G3ManagedElement defined in TS32.106-5.";

### 5.2.4 vsDataContainerBasicPackage

#### **vsDataContainerBasicPackage** PACKAGE

##### BEHAVIOUR

vsDataContainerBasicPackageBehaviour;

##### ATTRIBUTES

vsDataContainerId GET,

vsDataType GET,

vsData GET-REPLACE,

vsDataFormatVersion GET;

REGISTERED AS {ts32-620Package 4};

#### **vsDataContainerBasicPackagBehaviour** BEHAVIOUR

##### DEFINED AS

"The 'VsDataContainer' managed object is a container for vendor specific data. The number of instances of the 'VsDataContainer' can differ from vendor to vendor. This MOC shall only be used by the Bulk CM IRP for the UTRAN and GERAN object models.";

### 5.2.5 bulkCmControlBasicPackage

#### **bulkCmControlBasicPackage** PACKAGE

##### BEHAVIOUR

bulkCmControlBasicPackageBehaviour;

##### ATTRIBUTES

bulkCmControlId GET,

irpVersion GET;

REGISTERED AS {ts32-620Package 5};

#### **bulkCmControlBasicPackagBehaviour** BEHAVIOUR

##### DEFINED AS

"This Managed Object Class represents the Bulk CM IRP capability associated with each IRPAgent. Restriction in Rel-4: Number of instances = 0..1.";

## 5.2.6 bulkCmControlActionPackage

### **bulkCmControlActionPackage** PACKAGE

#### BEHAVIOUR

bulkCmControlActionPackageBehaviour;

#### ACTIONS

“3GPP TS 32.602-4: 6.2001”: startSession,

“3GPP TS 32.602-4: 6.2001”: endSession,

“3GPP TS 32.602-4: 6.2001”: upload,

“3GPP TS 32.602-4: 6.2001”: download,

“3GPP TS 32.602-4: 6.2001”: activate,

“3GPP TS 32.602-4: 6.2001”: fallback,

“3GPP TS 32.602-4: 6.2001”: abortSessionOperation,

“3GPP TS 32.602-4: 6.2001”: getSessionIds,

“3GPP TS 32.602-4: 6.2001”: getSessionStatus,

“3GPP TS 32.602-4: 6.2001”: getSessionLog,

“3GPP TS 32.602-4: 6.2001”: getBulkCmVersion;

REGISTERED AS {ts32-620Package 6};

### **bulkCmControlActionPackagBehaviour** BEHAVIOUR

#### DEFINED AS

"This package specifies all actions a bulkCmControl shall provide.";

## 5.2.7 bulkCmControlNotificationPackage

### **bulkCmControlNotificaionPackage** PACKAGE

#### BEHAVIOUR

bulkCmControlNotificationPackageBehaviour;

#### NOTIFICATIONS

“3GPP TS 32.602-4: 6.2001”: sessionStateChanged,

“3GPP TS 32.602-4: 6.2001”: getSessionLogEnded;

REGISTERED AS {ts32-620Package 7};

### **bulkCmControlBasicPackageBehaviour** BEHAVIOUR

#### DEFINED AS

"This package specifies all notifications a bulkCmControl shall provide.";

## 5.2.8 managementNodeBasicPackage

### **managedFunctionBasicPackage** PACKAGE

#### BEHAVIOUR

managementFunctionBasicPackageBehaviour;

#### ATTRIBUTES

"Recommendation M.3100: 1995" : userLabel GET-REPLACE,

swVersion: GET;  
REGISTERED AS {ts32-620Package 8};

## 5.3 Attributes

### 5.3.1 managedElementType

**managedElementType** ATTRIBUTE  
WITH ATTRIBUTE SYNTAX TS32-620TypeModule .ManagedElementType;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
managedElementTypeBehaviour;  
REGISTERED AS {ts32-620Attribute 1};

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

### 5.3.2 subNetworkId

**subNetworkId** ATTRIBUTE  
WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule.GeneralObjectId;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
subNetworkIdBehaviour;  
REGISTERED AS {ts32-620Attribute 2};

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

### 5.3.2 vsDataContainerId

**vsDataContainerId** ATTRIBUTE  
WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule.GeneralObjectId;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
vsDataContainerIdBehaviour;  
REGISTERED AS {ts32-620Attribute 2};

**vsDataContainerIdBehaviour** BEHAVIOUR  
DEFINED AS  
"This attribute identifies a vsDataContainer instance.";

### 5.3.3 vsDataType

**vsDataType** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-620TypeModule.VsDataType;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
vsDataTypeBehaviour;  
REGISTERED AS {ts32-620Attribute 3};

**vsDataTypeBehaviour** BEHAVIOUR

DEFINED AS

"Type of vendor specific data contained by this instance, e.g. relation specific algorithm parameters, cell specific parameters for power control or re-selection or a timer. The type itself is also vendor specific.";

### 5.3.4 vsData

**vsData** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-620TypeModule.VsData;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
vsDataBehaviour;  
REGISTERED AS {ts32-620Attribute 4};

**vsDataBehaviour** BEHAVIOUR

DEFINED AS

"Vendor specific attributes of the type vsDataType. The attribute definitions including constraints (value ranges, data types, etc.) are specified in a vendor specific data format file.";

### 5.3.5 vsDataFormatVersion

**vsDataFormatVersion** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-620TypeModule.VsDataFormatVersion;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
vsDataFormatVersionBehaviour;  
REGISTERED AS {ts32-620Attribute 5};

**vsDataFormatVersionBehaviour** BEHAVIOUR

DEFINED AS

"Name of the data format file, including version.";

### 5.3.6 bulkCmControlId

**bulkCmControlId** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-106-7TypeModule.GeneralObjectId;



MATCHES FOR EQUALITY;  
BEHAVIOUR  
    bulkCmControlIdBehaviour;  
REGISTERED AS {ts32-620Attribute 6};

**bulkCmControlIdBehaviour** BEHAVIOUR

DEFINED AS  
    "This attribute identifies a bulkCmControl instance.";

### 5.3.7 irpVersion

**irpVersion** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-620TypeModule.IrpVersion;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
    irpVersionBehaviour;  
REGISTERED AS {ts32-620Attribute 7};

**irpVersionBehaviour** BEHAVIOUR

DEFINED AS  
    "One or more Bulk CM IRP version entries.";

### 5.3.8 userDefinedNetworkType

**userDefinedNetworkType** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-620TypeModule.UserDefinedNetworkType;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
    userDefinedNetworkTypeBehaviour;  
REGISTERED AS {ts32-620Attribute 8};

**userDefinedNetworkTypeBehaviour** BEHAVIOUR

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

### 5.3.9 swVersion

**swVersion** ATTRIBUTE

WITH ATTRIBUTE SYNTAX TS32-620TypeModule.SwVersion;  
MATCHES FOR EQUALITY;  
BEHAVIOUR  
    swVersionBehaviour;  
REGISTERED AS {ts32-620Attribute 9};

**swVersionBehaviour** BEHAVIOUR

DEFINED AS

"The software version of the managed element (this is used for determining which version of the vendor specific information that is valid for the managed element).";

## 5.4 Name Binding

### 5.4.1 managedElement - meContext

#### **managedElement-meContext** NAME BINDING

SUBORDINATE OBJECT CLASS managedElement;

NAMED BY SUPERIOR OBJECT CLASS "3GPP TS 32.106-7: 6.2001": meContext;

WITH ATTRIBUTE managedElementId;

BEHAVIOUR

managedElement-meContextBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-620NameBinding 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-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 {ts32-620NameBinding 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 {ts32-620NameBinding 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.";

### 5.4.3 bulkCmControl - irpAgent

#### **bulkCmControl-irpAgent** NAME BINDING

SUBORDINATE OBJECT CLASS bulkCmControl;  
 NAMED BY SUPERIOR OBJECT CLASS "3GPP TS 32.106-7: 6.2001": irpAgent;  
 WITH ATTRIBUTE managedElementId;  
 BEHAVIOUR  
   bulkCmControl-irpAgentBehaviour;  
 CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;  
 DELETE ONLY-IF-NO-CONTAINED-OBJECTS;  
 REGISTERED AS {ts32-620NameBinding 3};

#### **bulkCmControl-irpAgentBehaviour** BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a irpAgent contains and controls a bulkCmControl. When automatic instance naming is used, the choice of name bindings left as a local matter.";

### 5.3.4 vsDataContainer - vsDataContainer

#### **vsDataContainer-vsDataContainer** NAME BINDING

SUBORDINATE OBJECT CLASS "3GPP TS 32.620-4: 06.2001": vsDataContainer;  
 NAMED BY SUPERIOR OBJECT CLASS "3GPP TS 32.620-4: 06.2001": vsDataContainer;  
 WITH ATTRIBUTE vsDataContainerId;  
 BEHAVIOUR  
   vsDataContainer-vsDataContainerBehaviour;  
 CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;  
 DELETE ONLY-IF-NO-CONTAINED-OBJECTS;  
 REGISTERED AS {ts32-620NameBinding 4};

#### **vsDataContainer-vsDataContainerBehaviour** BEHAVIOUR

DEFINED AS

"The name binding represents a relationship in which a vsDataContainer contains and

controls another vsDataContainer. When automatic instance naming is used, the choice of name bindings is left as a local matter. This containment relation shall be used only with BulkCmIRP CMIP SS defined in 3GPP TS 32.602-4.";

#### 5.4.5 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 {ts32-620NameBinding 5};

##### **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.";

#### 5.4.6 irpAgent - managementNode

##### **irpAgent - managementNode** NAME BINDING

SUBORDINATE OBJECT CLASS "3GPP TS 32.106-7: 6.2001": irpAgent;  
NAMED BY SUPERIOR OBJECT CLASS managementNode;  
WITH ATTRIBUTE "3GPP TS 32.106-7: 6.2001": irpAgentId;

##### BEHAVIOUR

irpAgent-managementNodeBehaviour;

CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;  
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-620NameBinding 6};

##### **bulkCmControl-irpAgentBehaviour** 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 {ts32-620NameBinding 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.";

---

## 6 ASN.1 Definitions

```
TS32-620TypeModule {ccitt (0) identified-organization (4) etsi (0)
    mobileDomain (0) umts-Operation-Maintenance (3) ts-32-620 (620)
    informationModel (0) asn1Module (2) version1 (1)}
```

```
DEFINITIONS IMPLICIT TAGS ::=
```

```
BEGIN
```

```
--EXPORTS everything
```

```
--IMPORTS
```

```
-- 3GPP TS 32.620-4 related Object Identifiers
```

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

```
ts32-620 OBJECT IDENTIFIER ::= { baseNodeUMTS ts-32-620(620)}
```

```
ts32-620InfoModel OBJECT IDENTIFIER ::= { ts32-620 informationModel(0)}
```

```
ts32-620ObjectClass OBJECT IDENTIFIER ::= { ts32-620InfoModel managedObjectClass(3)}
```

```
ts32-620Package OBJECT IDENTIFIER ::= { ts32-620InfoModel package(4)}
```

```
ts32-620Parameter OBJECT IDENTIFIER ::= { ts32-620InfoModel parameter(5)}
```

```
ts32-620NameBinding OBJECT IDENTIFIER ::= { ts32-620InfoModel nameBinding(6)}
```

```
ts32-620Attribute OBJECT IDENTIFIER ::= { ts32-620InfoModel attribute(7)}
```

```
ts32-620Action OBJECT IDENTIFIER ::= { ts32-620InfoModel action(9)}
```

```
ts32-620Notification OBJECT IDENTIFIER ::= { ts32-620InfoModel notification(10)}
```

```
-- Start of 3GPP SA5 own definitions
```

```
ManagedElementType ::= SET OF ENUMERATED
```

```
{
```

```
rnc (1),
```

```
nodeB (2),
```

```
msc (3),
```

```
hLR (4),
```

```
vLR (5),
```

```
aUC (6),
```

```
eIR (7),
```

```
sms-IWNSC(8),
```

```
sms-GMSC (9),  
sGSN (10),  
gGSN (11),  
bG (12),  
gmsc (13),  
smc (14),  
gmlc (15),  
scf (16),  
srf (17),  
cbc (18),  
cgf (19),  
mgw (20),  
gmscServer (21),  
iwf (22),  
mnpSrf (23),  
npdb (24),  
rSgw (25),  
ssf (26),  
bs (27)  
}
```

VsDataType ::= GraphicString

VsData ::= GraphicString

VsDataFormatVersion ::= GraphicString

IrpVersion ::= GraphicString

UserDefinedNetworkType ::= GraphicString

SwVersion ::= GraphicString

END -- of TS32-620TypeModule

---

## Annex A (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
Jun 2001	S_12	SP-010283	--	--	Approved at TSG SA #12 and placed under Change Control	2.0.0	4.0.0