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Technical Specification

Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
Telecommunication management;
Configuration Management (CM);
Generic network resources: Integration Reference Point (IRP):
Common Management Information Protocol (CMIP)
Solution Set (SS)
(3GPP TS 32.624 version 6.2.0 Release 6)

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Foreword

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Contents

Foreword

This Technical Specification has been produced by the 3rd 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:

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- x the first digit:
  - 1 presented to TSG for information;
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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.

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; Configuration Management (CM), as identified below:

32.621: "Generic network resources Integration Reference Point (IRP): Requirements".

32.622: "Generic network resources Integration Reference Point (IRP): Network Resource Model (NRM)".

32.623: "Generic network resources Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)";

32.624: "Generic network resources: Integration Reference Point (IRP): Common Management Information Protocol (CMIP) Solution Set (SS)".

32.625: "Generic network resources Integration Reference Point (IRP): Bulk CM eXtensible Markup Language (XML) file format definition".

The interface Itf-N, defined in 3GPP TS 32.102 [2], is built up by a number of Integration Reference Points (IRPs) and a related Name Convention, which realise the functional capabilities over this interface. The basic structure of the IRPs is defined in 3GPP TS 32.101 [1] and 3GPP TS 32.102 [2].

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.X [4].

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: "Telecommunication management; Principles and high level requirements".

[2] 3GPP TS 32.102: "Telecommunication management; Architecture".

[3] Void.

[4] 3GPP TS 32.622: "Telecommunication management; Configuration Management (CM); Generic network resources Integration Reference Point (IRP): Network Resource Model (NRM)".

[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".

[10] 3GPP TS 32.600: "Telecommunication management; Configuration Management (CM); Concept and high-level requirements".

[11] Void.

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 [10] and 3GPP TS 32.622 [4] 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

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 Mapping of the IOC *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

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.

-- 5.1.11 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.";

-- 5.2.21 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.";

-- 5.4.3 meContext - subNetwork

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-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-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.";

-- 5.4.12 notificationControl - irpAgent

Void.

-- 5.4.13 alarmControl - irpAgent

Void.

-- 5.4.14 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

GeneralObjectId ::= INTEGER

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

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	--

Annex B (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Jun 2001	SA_12	SP-010283	--	--	Approved at TSG SA #12 and placed under Change Control	2.0.0	4.0.0
Sep 2001	SA_13	SP-010478	0001	--	Correction due to TS renumbering	4.0.0	4.1.0
Sep 2001	SA_13	SP-010479	0002	--	Change the attribute “systemTitle” from mandatory to optional	4.0.0	4.1.0
Dec 2001	SA_14	SP-010648	0003	--	Change to Read/Write the attribute “userDefinedState” in MOC “ManagementNode”	4.1.0	4.2.0
Mar 2002	SA_15	SP-020021	0004	--	Removal of redundant GDMO/ASN.1 Code	4.2.0	4.3.0
Mar 2002	SA_15	SP-020021	0005	--	Making ‘elementType’ consistent	4.2.0	4.3.0
Mar 2002	SA_15	SP-020021	0006	--	Change the attribute "userLabel" from Read-Only to Read-Write	4.2.0	4.3.0
Jun 2002	SA_16	SP-020300	0007	--	Making 32.624 (CMIP SS) consistent with 32.622 (IS) and 32.623 (CORBA SS)	4.3.0	4.4.0
Jun 2002	SA_16	SP-020300	0008	--	Align with 32.622 (IS) by changing "userDefinedState" from read-only to read-write	4.3.0	4.4.0
Sep 2002	SA_17	SP-020488	0009	--	Upgrade the NRM CMIP Solution Set to Rel-5	4.4.0	5.0.0
Sep 2003	SA_21	SP-030417	0011	--	Rel-4/5 alignment of OIDs of some attributes and name bindings	5.0.0	5.1.0
Dec 2003	SA_22	SP-030642	0012	--	Remove notifications from MOC managedFunction - Align with 32.622 (IS)	5.1.0	5.2.0
Mar 2004	SA_23	SP-040130	0013	--	Correction of OIDs and alignment of notification support with the IS 32.622	5.2.0	5.3.0
Jun 2004	SA_24	SP-040252	0014	--	Add missing mappings for the attributes of the managementScope association – Align with the IS 32.622	5.3.0	5.4.0
Jun 2004	SA_24	SP-040250	0017	--	Add missing capability for instances of a subclassed MOC subNetwork to contain itself – Align with the IS 32.622	5.3.0	5.4.0
Jun 2004	SA_24	SP-040251	0018	--	Correction of legal values for managedElementType attribute	5.3.0	5.4.0
Jun 2004	SA_24	SP-040253	0015	--	Add the attribute SetOfMcc to the MOC SubNetwork -Align with IS 32.622	5.4.0	6.0.0
Dec 2004	SA_26	SP-040808	0020	--	Add missing definition of attribute meContextId	6.0.0	6.1.0
Dec 2004	SA_26	SP-040808	0021	--	Add definitions for genericIRP	6.0.0	6.1.0
Jun 2005	SA_28	SP-050296	0022	--	Add Link Object Class to CMIP Solution Set - Align with IS in TS 43.622	6.1.0	6.2.0

History

Document history		
V6.1.0	December 2004	Publication
V6.2.0	June 2005	Publication