Technical Specification Group Services and System Aspects   **TSGS#18(02)0749**
Meeting #18, New Orleans, USA, 9-12 December 2002

Source:	**SA5 (Telecom Management)**
Title:	**4 Rel-5 CRs 32.604/634/644/654 (CMIP SSs of Basic CM IRP/CN NRM/UTRAN NRM/GERAN NRM) : Alignment with 32.6x2**
Document for:	**Approval**
Agenda Item:	**7.5.3**

Doc-1st-	Spec	CR	R	Phase	Subject	Cat	Version	Doc-2nd-	Workitem
SP-020749	32.604	004	-	Rel-5	Alignment of the CMIP SS with the Rel-5 version of the IS in 32.602	F	4.2.0	S5-027011	OAM-NIM
SP-020749	32.634	002	-	Rel-5	Alignment of the CMIP SS with the Rel-5 version of the IS in 32.632	F	4.1.1	S5-027012	OAM-NIM
SP-020749	32.644	007	-	Rel-5	Alignment of the CMIP SS with the Rel-5 version of the IS in 32.642	F	4.1.1	S5-027013	OAM-NIM
SP-020749	32.654	003	-	Rel-5	Alignment of the CMIP SS with the Rel-5 version of the IS in 32.652	F	4.1.0	S5-027014	OAM-NIM

3GPP TSG-SA5 (Telecom Management) **S5-027011**
Meeting #32, Vienna, Austria, 18-22 November 2002

CR-Form-v7

CHANGE REQUEST

⌘	**32.604** CR **004**	⌘**rev**	**-**	⌘	Current version:	**4.2.0**	⌘

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

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

Title:	⌘	Alignment of the CMIP SS with the Rel-5 version of the IS in 32.602

Source:	⌘	SA5

Work item code:	⌘	OAM-NIM		**Date:** ⌘	22/11/2002

Category:	⌘	**F**			**Release:** ⌘	Rel-5

Use one of the following categories:
F (correction)
A (corresponds to a correction in an earlier release)
B (addition of feature),
C (functional modification of feature)
D (editorial modification)
Detailed explanations of the above categories can
be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	The Rel-5 Basic CM IRP CMIP SS needs to be aligned with the Rel-5 Basic CM IRP IS.

Summary of change:	⌘	• Removal of CM notifications (transferred to Rel-5 new Kernel CM IRP) • Addition of active Basic CM feature • Addition of reference to the related IS TS • Editorial modifications

Consequences if not approved:	⌘	The Rel-5 Basic CM IRP CMIP SS is not aligned with the Rel-5 Basic CM IRP IS.

Clauses affected:	⌘	Foreword, 1, 2, 3, 4, 5, 6

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

Other comments:	⌘	

Foreword

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

The present document is 32.604 of the 32.600-series covering the 3rd Generation Partnership Project: Technical Specification Group Services and System Aspects, as identified below:

32.601:   "Configuration Management; Basic Configuration Management IRP: Requirements";

32.602:   "Configuration Management; Basic Configuration Management IRP: Information Service";

32.603:   "Configuration Management; Basic Configuration Management IRP: CORBA Solution Set";

32.604:   "Configuration Management; Basic Configuration Management IRP: CMIP Solution Set".

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

where:

x   the first digit:

1   presented to TSG for information;

2   presented to TSG for approval;

3   or greater indicates TSG approved document under change control.

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

A third generation telecommunication network is composed of a multitude of different network elements (NE). For a successful operation of the network the operator must be provided with mechnisms allowing him to manage the network. These management activities can be grouped into several areas: configuration management, fault management, performance management, and accounting management and security management.

The present document is part of a set of technical specifications defining the telecommunication management (TM) of 3G systems. The TM principles are described in 3GPP TS 32.101 [1]. The TM architecture is described in 3GPP TS 32.102 [2]. The other specifications define the interface (ITf-N) between the managing system (manager), which is in general the network manager (NM) and the managed system (agent), which is either an element manager (EM) or the managed NE itself. The Itf-N is composed of a number of integration reference points (IRPs) defining the information in the agent that is visible for the manager, the operations that the manager may perform on this information and the notifications that are sent from the agent to the manager. One of these IRPs is the Basic Configuration Management IRP.

Each IRP is specified by four TS, the requirements part, the information service (IS) part, the CORBA solution set (SS) and the CMIP solution set (SS).

1 Scope

The present document specifies the Common Management Information Protocol (CMIP) Solution Set (SS) for the Basic CM Integration Reference Point (IRP): Information Service defined in 3GPP TS 32.602 [4]. In detail:

- Clause 4 provides the basic concept of the CMIP SS and the mapping between the IOCs, operations and notifications defined in 3GPP TS 32.602 (Basic Configuration Management IRP: Information Service) [6] to the corresponding CMIP SS equivalents.

- Clause 5 contains the GDMO definitions for the Basic Configuration Management IRP over the CMIPinterfaces,

- Clause 6 contains the ASN.1 definitions supporting the GDMO definitions provided in clause 5.

This Solution Set specification is related to 3GPP TS 32.602 V5.0.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 32.101: "3G Telecom Management principles and high level requirements".

[2]   3GPP TS 32.102: "3G Telecom Management architecture".

[3]   3GPP TS 32.304: "Telecommunication Management; Notification Management; Part 4: Notification Integration Reference Point; CMIP Solution Set".

[4]   3GPP TS 32.312: "Telecommunication Management; Configuration Management: Generic Integration Reference Point; Information Service".

[5]   3GPP TS 32.600: "3G Configuration Management (CM): Concept and High-level Requirements".

[6]   3GPP TS 32.602: "Telecommunication Management; Configuration Management: Basic CM Integration Reference Point; Information Service".

[7]   ITU-T Recommendation X.710 (1991): "Common Management Information Service Definition for CCITT Applications".

[8]   ITU-T Recommendation X.721 (02/92): "Information Technology - Open Systems Interconnection – Structure of Management Information: Definition of Management Information".

[9]   ITU-T Recommendation X.730 (01/92): "Information Technology - Open Systems Interconnection – Systems Management: Object Management Function".

[10]   ITU-T Recommendation X.733 (02/92): "Information Technology - Open Systems Interconnection - Alarm Reporting Function".

[11]   ITU-T Recommendation M.3100 (07/95): "Maintenance Telecommunications Management Network – Generic Network Information Model".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 32.101 [1], 3GPP TS 32.102 [2] and 3GPP TS 32.600 [5] apply.

3.2 Abbreviations

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

ASN.1	Abstract Syntax Notation 1
CMIP	Common Management Information Protocol
DN	Distinguished Name
GDMO	Guidelines for the Definition of Managed Objects
IOC	Information Object Class
IRP	Integration Reference Point
IS	Information Service
ISO	International Standards Organization
ITU-T	International Telecommunication Union, Telecommunication Sector
MIB	Management Information Base
NE	Network Element
NRM	Network Resource Model
TMN	Telecommunications Management Network
SS	Solution Set

4 Basic aspects

4.1 CMIP specific aspects

This clause describes some technical details specific to CMIP technology, which are not easy to be handled in the related GDMO definitions.

4.1.1 About Associations

In the GDMO definitions, except the containment relations, all associations among different object classes and object instances are modelled with dedicated pointers of the concerned objects, i.e. various relation role attributes. These pointers are normal object attributes and don't require any special treatment. The service operation *getMoAttributes* defined in 3GPP TS 32.602 [6] and mapped on M-GET in this CMIP solution set is applied for managers to retrieve the values of these association pointers and the notification *attributeValueChange* is applied for agents to report any change of the values of these association pointers.

4.1.2 About getContainment

In the GDMO definition the containment relations of the Managed Object Classes and those of the managed object instances are described by the name bindings. The service operation *getContainment* is defined in 3GPP TS 32.602 [6] to enable managers to retrieve the management information about the containment tree of the local MIB of an agent. This service operation is mapped to CMISE *M-GET* in this CMIP solution set. The information about the containment relation of a local MIB consists of all MOIs abstracted from the output parameter *AttributeList* of a *M-GET* operation.

### 4.1.3	About getMoAttributes

The service operation *getMoAttributes* defined in the Basic CM IRP IS (3GPP TS 32.602 [6]) provides the basic functionality required to retrieve managed objects and their attributes, which is a subset of the functionality provided by the corresponding CMISE service operation *M-GET. getMoAttributes* is mapped to *M-GET* in this standard. This doesn't mean any limitation for using *M-GET*. Users of this standard are encouraged to use the whole functionality provided by *M-Get*, especially the input parameter "Attribute Identifier List" (see ITU-T X.710 [7]).

### 4.1.4	About cancelOperation

The service operation *cancelOperation* defined in the Basic CM IRP IS (3GPP TS 32.602 [6]) provides the basic functionality required to cancel an on-going getContainment or getMoAttributes operation, which is a subset of the functionality provided by the corresponding CMISE service operation *M-CANCEL-GET. cancelOperation* is mapped to *M-CANCEL-GET* in this standard. This doesn't mean any limitation for using *M-Cancel*. Users of this standard are encouraged to use the whole functionality provided by *M-CANCEL-GET*.

### 4.1.5	About createMoOperation

The service operation *createMoOperation* defined in the Basic CM IRP IS (3GPP TS 32.602 [6]) provides the basic functionality to create a Managed Object instance within the MIB. This operation creates only one Managed Object instance and is a subset of the functionality provided by the corresponding CMISE service operation *M-CREATE* (see ITU-T X.710 [7]). *createMoOperation* is mapped to *M-CREATE* in this standard.

### 4.1.6	About deleteMoOperation

The service operation *deleteMoOperation* defined in the Basic CM IRP IS (3GPP TS 32.602 [6]) provides the basic functionality to delete one or more Managed Object instances within the MIB and is a subset of the functionality provided by the corresponding CMISE service operation *M-DELETE* (see ITU-T X.710 [7]). *deleteMoOperation* is mapped to *M-DELETE* in this standard.

### 4.1.7	About setMoAttributeOperation

The service operation *setMoAttributes* defined in the Basic CM IRP IS (3GPP TS 32.602 [6]) provides the basic functionality required to modify management information (Managed Object attribute values) in the MIB. Attributes of one or several Managed Objects may be modified – based on the containment hierarchy. This operation is a subset of the functionality provided by the corresponding CMISE service operation *M-SET* (see ITU-T X.710 [7]). *getMoAttributes* is mapped to *M-GET* in this standard.

## 4.2	Mapping

The semantics of the Basic CM IRP IS is defined in 3GPP TS 32.602 [6]. The definitions of the management services and management information defined there are 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 Basic CM IRP.

### 4.2.1	Mapping of Information Object Classes

Table 1 maps the IOCs defined in 3GPP TS 32.602 Basic Configuration Management IRP: Information Service [6] onto the corresponding managed object classes (MOCs) defined in this CMIP Solution Set. The MOCs are qualified either as mandatory (M) or optional (O).

Table 1: Mapping of IOCs

IS IOC	CMIP SS MOC	Qualifier
basicCmIRP	basicCmIRP	M

4.2.2 Mapping of Operations

Table 2 and Table 3 map the operations defined in TS 32.602 (Basic Configuration Management IRP: Information Service) [6] and TS 32.312 (Generic IRP Management: Information Service) [4] onto the equivalent Actions/Services of the CMIP Solution Set. The CMIP Actions/Services are qualified as Mandatory (M) or Optional (O).

Table 2: Mapping of operations of the Basic Configuration Management IRP: IS

IS Interface	IS Operation	GDMO Action or CMISE of CMIP SS	Qualifier
PassiveCmOperations#1	getMoAttributes	M-GET(CMISE)	M
PassiveCmOperations#2	getContainment	M-GET(CMISE)	O
BasicCmOperations	cancelOperation	M-CANCEL-GET(CMISE)	O
ActiveCmOperations	createMo	M-CREATE (CMISE)	O
	deleteMo	M-DELETE (CMISE)	O
	setMoAttribute	M-SET (CMISE)	O

Table 3: Mapping of operations inherited from the Generic IRP Management: IS

IS Interface	IS Operation	GDMO Action or CMISE of CMIP SS	Qualifier
GenericIRPVersionOperations	getIRPVersion	getBasicCmIRPVersion	M
GenericIRPProfileOperations	getOperationProfile	getBasicCmIRPOperationProfile	O
	getNotificationProfile	getBasicCmIRPNotificationProfile	O

4.2.3 Mapping of Operation Parameters

The tables in the following subclauses show the parameters of each operation defined in the Information Service described in 3GPP TS 32.602 [6] and their equivalences in the CMIP Solution Set.

4.2.3.1 Parameter Mapping of the Operation *getMoAttributes*

Table 4: Parameter mapping of the operation *getMoAttributes*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
invokeIdentifierIn	IN	M-GET Req/Ind parameter 'Invoke identifier'	M
baseObjectInstance	IN	M-GET Req/Ind parameter 'Base object instance'	M
scope	IN	M-GET Req/Ind parameter 'Scope'	M
filter	IN	M-GET Req/Ind parameter 'Filter'	M
attributeListIn	IN	M-GET Req/Ind 'Attribute identifier list'	M
invokeIdentifierOut	OUT	M-GET Rsp/Conf parameter 'Invoke identifier', if this is the last M-GET response during a Get procedure. M-GET Rsp/Conf parameter 'Linked identifier', if this is not the last M-GET response during a Get procedure.	M
managedObjectClass	OUT	M-GET Rsp/Conf parameter 'Managed object class'	M
managedObjectInstance	OUT	M-GET Rsp/Conf parameter 'Managed object instance'	M
attributeListOut	OUT	M-GET Rsp/Conf parameter 'Attribute list'	M
status	OUT	M-GET Rsp/Conf parameter 'Errors'	M

4.2.3.2 Parameter Mapping of the Operation *getContainment*

Table 5: Parameter mapping of the operation *getContainment*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
invokeIdentifierIn	IN	M-GET Req/Ind parameter 'Invoke identifier'	M
baseObjectInstance	IN	M-GET Req/Ind parameter 'Base object instance'	M
scope	IN	M-GET Req/Ind parameter 'Scope'	O
invokeIdentifierOut	OUT	M-GET Rsp/Conf parameter 'Invoke identifier', if this is the last M-GET response during a Get procedure. M-GET Rsp/Conf parameter 'Linked identifier', if this is not the last M-GET response during a Get procedure.	M
containment	OUT	M-GET Rsp/Conf parameter 'Managed object class'	M
		M-GET Rsp/Conf parameter 'Managed object instance'	M
		M-GET Rsp/Conf parameter 'Attribute list'	M
status	OUT	M-GET Rsp/Conf parameter 'Errors'	M

4.2.3.3 Parameter Mapping of the Operation *cancelOperation*

Table 5: Parameter mapping of the operation *cancelOperation*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
invokeIdentifierIn	IN	M-CANCEL-GET Req/Ind parameter 'Get invoke identifier'	M
status	OUT	M-CANCEL-GET Rsp/Conf parameter 'Errors'	M

4.2.3.4 Parameter Mapping of the Operation *createMo*

Table 6: Parameter mapping of the operation *createMo*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
managedObjectClass	IN	M-CREATE Req/Ind parameter 'Managed object class'	M
managedObjectInstance	IN	M-CREATE Req/Ind parameter 'Managed object instance'	M
referenceObjectInstance	IN	M-CREATE Req/Ind parameter 'Reference object instance'	O
attributeListIn	IN	M-CREATE Req/Ind parameter 'Attribute list'	M
attributeListOut	OUT	M-CREATE Rsp/Conf parameter 'Attribute list'	M
status	OUT	M-CREATE Rsp/Conf parameter 'Errors'	M

### 4.2.3.5	Parameter Mapping of the Operation *deleteMo*

Table 7: Parameter mapping of the operation *deleteMo*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
baseObjectInstance	IN	M-DELETE Req/Ind parameter 'Base object instance'	M
scope	IN	M-DELETE Req/Ind parameter 'Scope'	M
filter	IN	M-DELETE Req/Ind parameter 'Filter'	M
deletionList	OUT	M-DELETE Rsp/Conf parameter 'Managed object class'	M
		M-DELETE Rsp/Conf parameter 'Managed object instance'	M
status	OUT	M-DELETE Rsp/Conf parameter 'Errors'	M

### 4.2.3.6	Parameter Mapping of the Operation *setMoAttribute*

Table 8: Parameter mapping of the operation *setMoAttribute*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
baseObjectInstance	IN	M-SET Req/Ind parameter 'Base object instance'	M
scope	IN	M-SET Req/Ind parameter 'Scope'	M
filter	IN	M-SET Req/Ind parameter 'Filter'	M
modificationList	IN	M-SET Req/Ind parameter 'Modification list'	M
modificationListOut	OUT	M-SET Rsp/Conf parameter 'Attribute list'	M
status	OUT	M-SET Rsp/Conf parameter 'Errors'	M

### 4.2.3.7	Parameter Mapping of the Operation *getBasicCmIRPVersion*

Table 9: Parameter mapping of the operation *getBasicCmIRPVersion*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
versionNumberSet	OUT	versionNumberSet	M
status	OUT	status	M

### 4.2.3.8	Parameter Mapping of the Operation *getBasicCmIRPOperationProfile*

Table 10: Parameter mapping of the operation *getBasicCmIRPOperationProfile*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
irpVersion	IN	irpVersion	M
operationNameProfile	OUT	operationNameProfile	M
operationParameterProfile	OUT	operationParameterProfile	M
status	OUT	status	M

### 4.2.3.9	Parameter Mapping of the Operation *getBasicCmIRPNotificationProfile*

Table 11: Parameter mapping of the operation *getBasicCmIRPNotificationProfile*

IS Parameter	IN/OUT	CMIP SS Equivalent	Qualifier
irpVersion	IN	irpVersion	M
notificationNameProfile	OUT	notificationNameProfile	M
notificationParameterProfile	OUT	notificationParameterProfile	M
status	OUT	status	M

5 GDMO Definitions

5.1 Information Object Classes

5.1.1 basicCmIRP

basicCmIRP **MANAGED OBJECT CLASS**
    DERIVED FROM
        "Rec. X.721 | ISO/IEC 10165-2 : 1992":top;
    CHARACTERIZED BY
        basicCmIRPIdPackage,
        basicCmIRPVersionPackage;
    CONDITIONAL PACKAGES
        basicCmIRPProfilePackage **PRESENT IF** "an instance supports it";
REGISTERED AS { ts32-604ObjectClass 1};

5.2 Packages

5.2.1 basicCmIRPIdPackage

basicCmIRPIdPackage **PACKAGE**
    BEHAVIOUR
        basicCmIRPIdPackageBehaviour;
    ATTRIBUTES
        basicCmIRPId;
    REGISTERED AS { ts32-604Package 1};

basicCmIRPIdPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "An instance of the IOC basicCm*IRP* is identified by the value of the attribute basicCm*IRPId*.";

5.2.2 basicCmIRPVersionPackage

basicCmIRPVersionPackage **PACKAGE**
    BEHAVIOUR
        basicCmIRPVersionPackageBehaviour;
    ATTRIBUTES
        supportedBasicCmIRPVersions   GET;
    ACTIONS
        getBasicCmIRPVersion;
REGISTERED AS { ts32-604Package 2};

basicCmIRPVersionPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "This package has been defined to allow the IRPManager to get information about the Basic Configuration Management IRP versions supported by the IRPAgent.

        The attribute *supportedBasicCmIRPVersions* indicates all versions of the Basic Configuration Management IRP currently supported by the IRPAgent.

        The action *getBasicCmIRPVersion* is invoked by the IRPManager to get information about the Basic Configuration Management IRP versions supported by the IRPAgent.";

5.2.3 basicCmIRPProfilePackage

basicCmIRPProfilePackage **PACKAGE**
    BEHAVIOUR
        basicCmIRPProfilePackageBehaviour;
    ACTIONS
        getBasicCmIRPOperationProfile,

getBasicCmIRPNotificationProfile;
REGISTERED AS { ts32-604Package 3};

basicCmIRPProfilePackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "This package has been defined to allow the IRPManager to get detailed information about the profile of the Basic Configuration Management IRP.

        The action *getBasicCmIRPOperationProfile* is invoked by the IRPManager to get detailed information about the operations supported by the Basic Configuration Management IRP.

        The action *getBasicCmIRPNotificationProfile* is invoked by the IRPManager to get detailed information about the notifications supported by the Basic Configuration Management IRP.";

5.3 Actions

5.3.1 getBasicCmIRPVersion (M)

getBasicCmIRPVersion **ACTION**
    BEHAVIOUR
        getBasicCmIRPVersionBehaviour;
    MODE
        CONFIRMED;
    WITH REPLY SYNTAX
        TS32-604TypeModule.GetBasicCmIRPVersionReply;
REGISTERED AS { ts32-604Action 1};

getBasicCmIRPVersionBehaviour **BEHAVIOUR**
    DEFINED AS
        "The IRPManager invokes this action to get information about the Basic Configuration Management IRP versions supported by the Agent. The 'Action information' field contains no data. The 'Action reply' is composed of the following data:

- *versionNumbersList*
- *status*

        The parameter *versionNumbersList* defines a list of Basic Configuration Management IRP versions supported by the Agent. A list containing no element, i.e. a NULL list, means that the concerned Agent doesn't support any version of the Basic Configuration Management IRP. The parameter *status* contains the results of the IRPManager action. Possible values: noError (0), error (the value indicates the reason of the error).";

5.3.2 getBasicCmIRPNotificationProfile (O)

getBasicCmIRPNotificationProfile **ACTION**
    BEHAVIOUR
        getBasicCmIRPNotificationProfileBehaviour;
    MODE
        CONFIRMED;
    WITH INFORMATION SYNTAX
        TS32-604TypeModule.IRPVersionNumber;
    WITH REPLY SYNTAX
        TS32-604TypeModule.GetBasicCmIRPNotificationProfileReply;
REGISTERED AS { ts32-604Action 2};

getBasicCmIRPNotificationProfileBehaviour **BEHAVIOUR**
    DEFINED AS
        "A IRPManager invokes this action to enquiry about the notification profile (supported notifications and supported parameters) for this specific Basic Configuration Management IRP version.

        The 'Action information' contains the following data:

- *irpVersionNumber*

        This mandatory parameter identifies the Basic Configuration Managemnt IRP version.

        The 'Action reply' is composed of the following data:

- *notificationNameProfile*
- *notificationParameterProfile*

- *status*

The parameter *notificationNameProfile* contains a list of notification names, i.e. a NULL list means that the Basic Configuration Management IRP doesn't support any notification. The parameter *notificationParameterProfile* contains a set of elements, each element corresponds to a notification name and is composed by a set of parameter names. The parameter *status* contains the results of this action. Possible values: noError (0), error (the value indicates the reason of the error).";

5.3.3　getBasicCmIRPOperationProfile (O)

getBasicCmIRPOperationProfile **ACTION**
   BEHAVIOUR
     getBasicCmIRPOperationProfileBehaviour;
   MODE
     CONFIRMED;
   WITH INFORMATION SYNTAX
     TS32-604TypeModule.IRPVersionNumber;
   WITH REPLY SYNTAX
     TS32-604TypeModule.GetBasicCmIRPOperationProfileReply;
REGISTERED AS { ts32-604Action 3};

getBasicCmIRPOperationProfileBehaviour **BEHAVIOUR**
DEFINED AS
   "A IRPManager invokes this action to enquiry about the operation profile (supported operations and supported parameters) for this specific Basic Configuration Management IRP version.

   The 'Action information' contains the following data:

- *irpVersionNumber*

This mandatory parameter identifies the Basic Configuration Management IRP version.

   The 'Action reply' is composed of the following data:

- *operationNameProfile*
- *operationParameterProfile*
- *status*

The parameter *operationNameProfile* contains a list of operation names. The parameter *operationParameterProfile* contains a set of elements, each element corresponds to an operation name and is composed by a set of parameter names. The parameter *status* contains the results of this action. Possible values: noError (0), error (the value indicates the reason of the error).";

5.4　Attributes

5.4.1　basicCmIRPId

basicCmIRPId **ATTRIBUTE**
   WITH ATTRIBUTE SYNTAX
     TS32-604TypeModule.GeneralObjectId;
   MATCHES FOR EQUALITY;
   BEHAVIOUR
     basicCmIRPIdBehaviour;
REGISTERED AS { ts32-604Attribute 1};

basicCmIRPIdBehaviour **BEHAVIOUR**
   DEFINED AS
     "This attribute names an instance of the IOC *basicCmIRP*.";

5.4.2　supportedBasicCmIRPVersions

supportedBasicCmIRPVersions **ATTRIBUTE**
   WITH ATTRIBUTE SYNTAX
     TS32-604TypeModule.SupportedBasicCmIRPVersions;
   MATCHES FOR EQUALITY;
   BEHAVIOUR
     supportedBasicCmIRPVersionsBehaviour;
REGISTERED AS { ts32-604Attribute 2};

supportedBasicCmIRPVersionsBehaviour **BEHAVIOUR**
    DEFINED AS
        "This attribute provides the information concerning the Basic Configuration Management IRP versions currently supported by the Agent.";

## 5.5	Parameters

6 ASN.1 Definitions

```
TS32-604TypeModule {ccitt (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Operation-
Maintenance (3) ts32-604 (604) informationModel (0) asn1Module (2) version1 (1)}


DEFINITIONS IMPLICIT TAGS ::=
BEGIN


--EXPORTS everything
--IMPORTS nothing


-- 3GPP TS 32.604 related Object Identifiers


baseNodeUMTS            OBJECT IDENTIFIER ::= {itu-t(0) identified-organization(4) etsi(0)
                                              mobileDomain(0) umts-Operation-Maintenance(3)}
ts32-604                OBJECT IDENTIFIER ::= { baseNodeUMTS ts32-604                 (604)}
ts32-604InfoModel       OBJECT IDENTIFIER ::= { ts32-604 informationModel            (  0)}
ts32-604ObjectClass     OBJECT IDENTIFIER ::= { ts32-604InfoModel managedObjectClass (  3)}
ts32-604Package         OBJECT IDENTIFIER ::= { ts32-604InfoModel package            (  4)}
ts32-604Parameter       OBJECT IDENTIFIER ::= { ts32-604InfoModel parameter          (  5)}
ts32-604NameBinding     OBJECT IDENTIFIER ::= { ts32-604InfoModel nameBinding        (  6)}
ts32-604Attribute       OBJECT IDENTIFIER ::= { ts32-604InfoModel attribute          (  7)}
ts32-604Action          OBJECT IDENTIFIER ::= { ts32-604InfoModel action             (  9)}
ts32-604Notification    OBJECT IDENTIFIER ::= { ts32-604InfoModel notification       ( 10)}


-- Start of 3GPP SA5 own definitions

ErrorCauses ::= ENUMERATED
{
noError (0),                  -- operation / notification successfully performed
unspecifiedErrorReason (255)  -- operation failed, specific error unknown
}

GetBasicCmIRPVersionReply ::= SEQUENCE
{
versionNumberList             SupportedBasicCmIRPVersions,
status                        ErrorCauses
}

GetBasicCmIRPNotificationProfileReply ::= SEQUENCE
{
notificationNameProfile       NotificationList,
notificationParameterProfile  ParameterListOfList,
status                        ErrorCauses
}

GetBasicCmIRPOperationProfileReply ::= SEQUENCE
{
operationNameProfile          OperationList,
operationParameterProfile     ParameterListOfList,
status                        ErrorCauses
}

GeneralObjectId ::= INTEGER

SupportedBasicCmIRPVersions ::= SET OF IRPVersionNumber

IRPVersionNumber ::= GraphicString

NotificationList ::= SET OF NotificationName

NotificationName ::= GraphicString

OperationList ::= SET OF OperationName

OperationName ::= GraphicString

ParameterListOfList ::= SET OF ParameterList
```

```
ParameterList ::= SET OF ParameterName

ParameterName ::= GraphicString


END    -- of TS32-604TypeModule
```

```
ParameterName ::= GraphicString
```

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
Sep 2001	S_13	SP-010478	001	--	Correction due to TS renumbering	4.0.0	4.1.0
Sep 2001	S_13	SP-010476	002	--	Correction of invokeIdentifier usage	4.0.0	4.1.0
Dec 2001	S_14	SP-010643	003		Alignment with ITU-T Rec. X.710 (CMISE) 1997	4.1.0	4.2.0

3GPP TSG-SA5 (Telecom Management)　　　　　　　　　　　　**S5-027014**
Meeting #32, Vienna, Austria, 18-22 November 2002

CR-Form-v7

CHANGE REQUEST

| ⌘ | **32.654** CR **003** | ⌘**rev** | **-** | ⌘ | Current version: | **4.1.0** | ⌘ |

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

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

| *Title:* | ⌘ | Alignment of the CMIP SS with the Rel-5 version of the IS in 32.652 |

| *Source:* | ⌘ | SA5 |

| *Work item code:*⌘ | OAM-NIM | | *Date:* ⌘ | 22/11/2002 |

| *Category:* | ⌘ | **F** | | *Release:* ⌘ | Rel-5 |

Use one of the following categories:
　　F *(correction)*
　　A *(corresponds to a correction in an earlier release)*
　　B *(addition of feature),*
　　C *(functional modification of feature)*
　　D *(editorial modification)*
Detailed explanations of the above categories can
be found in 3GPP TR 21.900.

Use one of the following releases:
　　2　　　*(GSM Phase 2)*
　　R96　*(Release 1996)*
　　R97　*(Release 1997)*
　　R98　*(Release 1998)*
　　R99　*(Release 1999)*
　　Rel-4　*(Release 4)*
　　Rel-5　*(Release 5)*
　　Rel-6　*(Release 6)*

| *Reason for change:* | ⌘ | The CMIP Solution Set for Rel-5 (32.654) needs to be changed to align it with the enhanced model for the GERAN Network Resources IRP: NRM (32.652). |

| *Summary of change:*⌘ | The additional features of 32.652 are mapped to the CMIP SS. |

| *Consequences if not approved:* | ⌘ | The Rel-5 CMIP SS is not aligned with the Rel-5 GERAN Network Resources IRP: NRM (32.642). |

| *Clauses affected:* | ⌘ | Foreword and sections 1, 2, 3, 4, 5 and 6. |

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

| *Other comments:* | ⌘ | |

Introduction

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 GERAN Network Resource Integration Reference Point (IRP): Network Resource Model defined in 3GPP TS 32.652. 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 32.652 V5.0.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 32.101: "3G Telecom Management principles and high level requirements".

[2]   3GPP TS 32.102: "3G Telecom Management architecture".

[3]   3GPP TS 32.304: "Telecommunication Management; Notification Management;
Part 4: Notification Integration Reference Point; CMIP Solution Set".

[4]   3GPP TS 32.652: "Telecommunication Management; Configuration Management: GERAN
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".

[10]   GSM 12.20 (06/1996): "Digital cellular communication system (Phase 2); Base Station System
                (BSS) Management Information"

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 32.652
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
GERAN	GSM-EDGE Radio Access Network
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
UTRAN	UMTS Terrestrial Radio Access Network

4   Basic aspects

4.1   Architectural Aspects

A technology independent GERAN network resource model is defined in 3GPP TS 32.652 [4] for 3G networks. This
document provides an implementation of this GERAN network resource model by using CMIP technology.

4.2   Mapping

The semantic of the GERAN Network Resource Model is defined in 3GPP TS 32.652. 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 GERAN Network Resource IRP.

4.2.1   Mapping of Information Object Classes

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

Table 1: Mapping of MOCs

IS IOC	CMIP SS MOC
BssFunction	bssFunction
BtsSiteMgr	btsSiteMgr
GsmCell	gsmCell
GsmRelation	gsmRelation
ExternalGsmCell	externalGsmCell

4.2.2   Mapping of Information Object Class Attributes

This chapter depicts the mapping of the attributes defined in 3GPP TS 32.652 [4] on the corresponding attributes of the CMIP Solution Set.

4.2.2.1   Attribute Mapping of the IOC *BssFunction*

Table 2: Attribute mapping of the IOC *BssFunction*

IS Attribute	CMIP SS Attribute	Qualifier
bssFunctionId	bssFunctionId	M
userLabel	userLabel (ITU-T M.3100 [9])	M

4.2.2.2   Attribute Mapping of the IOC *BtsSiteMgr*

Table 3: Attribute mapping of the IOC *BtsSiteMgr*

IS Attribute	CMIP SS Attribute	Qualifier
btsSiteMgrId	btsSiteMgrId	M
userLabel	userLabel (ITU-T M.3100 [9])	M
latitude	latitude	O
longitude	longitude	O

4.2.2.3 Attribute Mapping of the IOC *GsmCell*

Table 4: Attribute mapping of the IOC *GsmCell*

IS Attribute	CMIP SS Attribute	Qualifier
gsmCellId	gsmCellId	M
userLabel	userLabel (ITU-T M.3100 [9])	M
cellIdentity		
lac	cellGlobalIdentity (GSM 12.20 [10])	M
mcc		
mnc		
cellAllocation	cellAllocation (GSM 12.20 [10])	M
ncc	bsIdentityCode.ncc (GSM 12.20 [10])	M
bcc	bsIdentityCode.bcc (GSM 12.20 [10])	M
rac	rac (3GPP TS32.644 V5.0.x)	O
racc	racc	O
tsc	tsc (GSM 12.20 [10])	M
rxLevAccessMin	rxLevAccessMin (GSM 12.20 [10])	M
msTxPwrMaxCCH	msTxPwrMaxCCH (GSM 12.20 [10])	M
hoppingSequenceNumber	hoppingSequenceNumber (GSM 12.20 [10])	M
plmnPermitted	plmnPermitted (GSM 12.20 [10])	M

4.2.2.4 Attribute Mapping of the IOC *GsmRelation*

Table 5: Attribute mapping of the IOC *GsmRelation*

IS Attribute	CMIP SS Attribute	Qualifier
gsmRelationId	gsmRelationId	M
relationType	relationType (3GPP TS32.644 V5.0.x)	M
adjacentCell	adjacentCell (3GPP TS32.644 V5.0.x)	M
bcchFrequency	bcchFrequency (GSM 12.20 [10])	O
ncc	bsIdentityCode.ncc (GSM 12.20 [10])	O
bcc	bsIdentityCode.bcc (GSM 12.20 [10])	O
lac	lac (3GPP TS32.644 V.5.0.x)	O

4.2.2.5 Attribute Mapping of the IOC *ExternalGsmRelation*

Table 6: Attribute mapping of the IOC *ExternalGsmRelation*

IS Attribute	CMIP SS Attribute	Qualifier
externalGsmCellId	externalGsmCellId	M
userLabel	userLabel (ITU-T M.3100 [9])	M
cellIdentity		
lac	cellGlobalIdentity (GSM 12.20 [10])	M
mcc		
mnc		
bcchFrequency	bcchFrequency (GSM 12.20 [10])	M
ncc	bsIdentityCode.ncc (GSM 12.20 [10])	M
bcc	bsIdentityCode.bcc (GSM 12.20 [10])	M
rac	rac (3GPP TS32.644 V5.0.x)	O
racc	racc	O

5 GDMO Definitions

5.1 Managed Object Classes

5.1.1 bssFunction

bssFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
        "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
        bssFunctionBasicPackage;
REGISTERED AS {ts32-654ObjectClass 1};

5.1.2 btsSiteMgr

btsSiteMgr **MANAGED OBJECT CLASS**
    DERIVED FROM
        "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
        btsSiteMgrBasicPackage;
    CONDITIONAL PACKAGES
        "3GPP TS 32.674 Release 5": operationalStateAttributePackage **PRESENT IF**
            "Instances of this MOC support operationalState attribute.",
        btsSiteMgrGeoPositionPackage **PRESENT IF**
            "the attributes defined in this package are supported by an instance of this class.";
REGISTERED AS {ts32-654ObjectClass 2};

5.1.3 gsmCell

gsmCell **MANAGED OBJECT CLASS**
    DERIVED FROM
        "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
        gsmCellBasicPackage,
        gsmCellMandatoryPackage;
    CONDITIONAL PACKAGES
        gsmCellOptionalPackage **PRESENT IF**
            "the attributes defined in this package are supported by an instance of this class.";
REGISTERED AS {ts32-654ObjectClass 3};

5.1.4 externalGsmCell

externalGsmCell **MANAGED OBJECT CLASS**
    DERIVED FROM
        "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
        externalGsmCellBasicPackage,
        externalGsmCellMandatoryPackage;
    CONDITIONAL PACKAGES
        gsmCellOptionalPackage **PRESENT IF**
            "the attributes defined in this package are supported by an instance of this class.";
REGISTERED AS {ts32-654ObjectClass 4};

5.1.5 gsmRelation

gsmRelation **MANAGED OBJECT CLASS**
    DERIVED FROM
        "Recommendation X.721: 1992":top;
    CHARACTERIZED BY
        gsmRelationBasicPackage;

CONDITIONAL PACKAGES
gsmRelationOptionalPackage **PRESENT IF**
"the attributes defined in this package are supported by an instance of this class.",
"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.";
REGISTERED AS {ts32-654ObjectClass 5};

5.2　　　Packages

5.2.1　　　bssFunctionBasicPackage

bssFunctionBasicPackage **PACKAGE**
　　BEHAVIOUR
　　　　bssFunctionBasicPackageBehaviour;
　　ATTRIBUTES
　　　　bssFunctionId　　GET;
REGISTERED AS {ts32-654Package 1};

bssFunctionBasicPackageBehaviour **BEHAVIOUR**
　　DEFINED AS
　　　　"The Managed Object Class bssFunction represents BSS functionality. For more information about the BSS, see GSM 03.02";

5.2.2　　　btsSiteMgrBasicPackage

btsSiteMgrBasicPackage **PACKAGE**
　　BEHAVIOUR
　　　　btsSiteMgrBasicPackageBehaviour;
　　ATTRIBUTES
　　　　btsSiteMgrId　　GET;
REGISTERED AS {ts32-654Package 2};

btsSiteMgrBasicPackageBehaviour **BEHAVIOUR**
　　DEFINED AS
　　　　"The 'BtsSiteMgr' managed object contains site specific information for a BTS site.";

5.2.3　　　btsSiteMgrGeoPositionPackage

btsSiteMgrGeoPositionPackage **PACKAGE**
　　BEHAVIOUR
　　　　btsSiteMgrGeoPositionPackageBehaviour;
　　ATTRIBUTES
　　　　longitude　　　　GET-REPLACE,
　　　　latitude　　　　GET-REPLACE;
REGISTERED AS {ts32-654Package 3};

btsSiteMgrGeoPositionPackageBehaviour **BEHAVIOUR**
　　DEFINED AS
　　　　"This package contains the attributes describing the geographic position of a BTS site.";

5.2.4　　　gsmCellBasicPackage

gsmCellBasicPackage **PACKAGE**
　　BEHAVIOUR
　　　　gsmCellBasicPackageBehaviour;
　　ATTRIBUTES

```
    GsmCellId        GET;
REGISTERED AS {ts32-654Package 4};
```

gsmCellBasicPackageBehaviour **BEHAVIOUR**
   DEFINED AS
      "The managed object class gsmCell represents the GSM radio cell.";

5.2.5 gsmCellMandatoryPackage

```
gsmCellMandatoryPackage PACKAGE
    BEHAVIOUR
        gsmCellMandatoryPackageBehaviour;
    ATTRIBUTES
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": cellAllocation              GET-REPLACE,
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": bsIdentityCode              GET-REPLACE,
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": cellGlobalIdentity          GET-REPLACE,
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": tsc                         GET-REPLACE,
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": rxLevAccessMin              GET-REPLACE,
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": msTxPwrMaxCCH               GET-REPLACE,
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": hoppingSequenceNumber       GET-REPLACE,
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": plmnPermitted               GET-REPLACE;
REGISTERED AS {ts32-654Package 5};
```

gsmCellMandatoryPackageBehaviour **BEHAVIOUR**
DEFINED AS
      "This package contains the elementary mandatory attributes of a gsmCell.";

5.2.6 gsmCellOptionalPackage

```
gsmCellOptionalPackage PACKAGE
    BEHAVIOUR
        gsmCellOptionalPackageBehaviour;
    ATTRIBUTES
        "3GPP TS 32.644 Release 5": rac        GET-REPLACE,
        racc                                    GET-REPLACE;
REGISTERED AS {ts32-654Package 6};
```

gsmCellOptionalPackageBehaviour **BEHAVIOUR**
DEFINED AS
      "This package contains the optional GPRS attributes of a gsmCell.";

5.2.7 externalGsmCellBasicPackage

```
externalGsmCellBasicPackage PACKAGE
    BEHAVIOUR
        externalGsmCellBasicPackageBehaviour;
    ATTRIBUTES
        externalGsmCellId        GET;
REGISTERED AS {ts32-654Package 7};
```

externalGsmCellBasicPackageBehaviour **BEHAVIOUR**
DEFINED AS
      "This Managed Object Class represents a radio cell controlled by another IRPAgent. It a necesssary attribute for
      inter-system handover. This MOC is a subreplication of a MOC in another NEM.";

5.2.8 externalGsmCellMandatoryPackage

```
externalGsmCellMandatoryPackage PACKAGE
    BEHAVIOUR
        externalGsmCellMandatoryPackageBehaviour;
```

ATTRIBUTES
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": bsIdentityCode   GET-REPLACE,
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": cellGlobalIdentity   GET-REPLACE,
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": bcchFrequency   GET-REPLACE;
REGISTERED AS {ts32-654Package 8};

externalGsmCellMandatoryPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "This package contains the elementary mandatory attributes of a externalGsmCell.";

5.2.9   gsmRelationBasicPackage

gsmRelationBasicPackage **PACKAGE**
    BEHAVIOUR
        gsmRelationBasicPackageBehaviour;
    ATTRIBUTES
        gsmRelationId   GET,
        "3GPP TS 32.644 Release 5": relationType   GET-REPLACE,
        "3GPP TS 32.644 Release 5": adjacentCell   GET-REPLACE;
REGISTERED AS {ts32-654Package 9};

gsmRelationBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'GsmRelation' managed object contains radio network related parameters for the relation to the 'GsmCell'
        or 'ExternalGsmCell' managed object. Note: In handover relation terms, the cell containing the GSM Relation
        object is the source cell for the handover. The cell referred to in the GSM relation object is the target cell for the
        handover. This defines a one-way handover relation where the direction is from source cell to target cell.";

5.2.10   gsmRelationOptionalPackage

gsmRelationOptionalPackage **PACKAGE**
    BEHAVIOUR
        gsmRelationOptionalPackageBehaviour;
    ATTRIBUTES
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": bsIdentityCode   GET-REPLACE,
        "3GPP TS 32.644 Release 5": lac   GET-REPLACE,
        "ETS 300 622: JUNE 1996 (GSM 12.20 VERSION 4.2.1)": bcchFrequency   GET-REPLACE;
REGISTERED AS {ts32-654Package 10};

gsmRelationOptionalPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "This package contains the optional attributes of a gsmRelation.";

5.3   Attributes

5.3.1   bssFunctionId

bssFunctionId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-654TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        bssFunctionIdBehaviour;
REGISTERED AS {ts32-654Attribute 1};

bssFunctionIdBehaviour **BEHAVIOUR**
    DEFINED AS
        "This attribute identifies a bssFunction object.";

5.3.2 btsSiteMgrId

btsSiteMgrId **ATTRIBUTE**
   WITH ATTRIBUTE SYNTAX
      TS32-654TypeModule.GeneralObjectId;
   MATCHES FOR EQUALITY;
   BEHAVIOUR
      btsSiteMgrIdBehaviour;
REGISTERED AS {ts32-654Attribute 2};

btsSiteMgrIdBehaviour **BEHAVIOUR**
   DEFINED AS
      "This attribute identifies a btsSiteMgr object.";

5.3.3 longitude

longitude **ATTRIBUTE**
   WITH ATTRIBUTE SYNTAX
      TS32-654TypeModule.Longitude;
   MATCHES FOR EQUALITY;
   BEHAVIOUR
      longitudeBehaviour;
REGISTERED AS {ts32-654Attribute 3};

longitudeBehaviour **BEHAVIOUR**
   DEFINED AS
      "Used for geographical positioning of the sitemanager.";

5.3.4 latitude

latitude **ATTRIBUTE**
   WITH ATTRIBUTE SYNTAX
      TS32-654TypeModule.Latitude;
   MATCHES FOR EQUALITY;
   BEHAVIOUR
      latitudeBehaviour;
REGISTERED AS {ts32-654Attribute 4};

latitudeBehaviour **BEHAVIOUR**
   DEFINED AS
      "Used for geographical positioning of the sitemanager.";

5.3.5 gsmCellId

gsmCellId **ATTRIBUTE**
   WITH ATTRIBUTE SYNTAX
      TS32-654TypeModule.GeneralObjectId;
   MATCHES FOR EQUALITY;
   BEHAVIOUR
      gsmCellIdBehaviour;
REGISTERED AS {ts32-654Attribute 5};

gsmCellIdBehaviour **BEHAVIOUR**
   DEFINED AS
      "Cell Identity (Ref GSM 03.03).";

5.3.6 racc

racc **ATTRIBUTE**
   WITH ATTRIBUTE SYNTAX

```
    TS32-654TypeModule.Racc;
MATCHES FOR EQUALITY;
BEHAVIOUR
    raccBehaviour;
REGISTERED AS {ts32-654Attribute 7};

raccBehaviour BEHAVIOUR
    DEFINED AS
        "Routing Area Colour Code, RACC.";
```

5.3.7   gsmRelationId

```
gsmRelationId ATTRIBUTE
    WITH ATTRIBUTE SYNTAX
        TS32-654TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        gsmRelationIdBehaviour;
REGISTERED AS {ts32-654Attribute 8};

gsmRelationIdBehaviour BEHAVIOUR
    DEFINED AS
        "This attribute identifies a gsmRelation object.";
```

5.3.8   externalGsmCellId

```
externalGsmCellId ATTRIBUTE
    WITH ATTRIBUTE SYNTAX
        TS32-654TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        externalGsmCellIdBehaviour;
REGISTERED AS {ts32-654Attribute 9};

externalGsmCellIdBehaviour BEHAVIOUR
    DEFINED AS
        "This attribute identifies a externalGsmCell object.";
```

5.4   Name Binding

5.4.1   bssFunction - managedElement

```
bssFunction-managedElement NAME BINDING
    SUBORDINATE OBJECT CLASS
        bssFunction;
    NAMED BY SUPERIOR OBJECT CLASS
        "3GPP TS 32.624 Release 5": managedElement;
    WITH ATTRIBUTE
        bssFunctionId;
    BEHAVIOUR
        bssFunction-managedElementBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-654NameBinding 1};

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

5.4.2   btsSiteMgr - bssFunction

btsSiteMgr-bssFunction **NAME BINDING**
    SUBORDINATE OBJECT CLASS
        btsSiteMgr;
    NAMED BY SUPERIOR OBJECT CLASS
        bssFunction;
    WITH ATTRIBUTE
        btsSiteMgrId;
    BEHAVIOUR
        btsSiteMgr-bssFunctionBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-654NameBinding 2};

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

5.4.3   gsmCell - btsSiteMgr

gsmCell-btsSiteMgr **NAME BINDING**
    SUBORDINATE OBJECT CLASS
        gsmCell;
    NAMED BY SUPERIOR OBJECT CLASS
        btsSiteMgr;
    WITH ATTRIBUTE
        gsmCellId;
    BEHAVIOUR
        gsmCell-btsSiteMgrBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-654NameBinding 3};

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

5.4.4   gsmRelation - gsmCell

gsmRelation-gsmCell **NAME BINDING**
    SUBORDINATE OBJECT CLASS
        gsmRelation;
    NAMED BY SUPERIOR OBJECT CLASS
        gsmCell;
    WITH ATTRIBUTE
        gsmRelationId;
    BEHAVIOUR
        gsmRelation-gsmCellBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-654NameBinding 4};

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

5.4.5　externalGsmCell - subNetwork

externalGsmCell-subNetwork **NAME BINDING**
    SUBORDINATE OBJECT CLASS
        externalGsmCell;
    NAMED BY SUPERIOR OBJECT CLASS
        "3GPP TS 32.624 Release 5": subNetwork;
    WITH ATTRIBUTE
        externalGsmCellId;
    BEHAVIOUR
        externalGsmCell-subNetworkBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-654NameBinding 5};

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

6 ASN.1 Definitions

```
TS32-654TypeModule {ccitt (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Operation-Maintenance (3) ts-32-654 (654) informationModel (0) asn1Module (2) version1 (1)}


DEFINITIONS IMPLICIT TAGS ::=
BEGIN

--EXPORTS everything

IMPORTS

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

Rac
    FROM TS32-644TypeModule {ccitt (0) identified-organization (4) etsi (0) mobileDomain (0)
    umts-Operation-Maintenance (3) ts-32-644 (644) informationModel (0) asn1Module (2)
    version1 (1)};


-- 3GPP TS 32.654 related Object Identifiers

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

ts32-654               OBJECT IDENTIFIER ::= { baseNodeUMTS ts32-654                (654)}
ts32-654InfoModel      OBJECT IDENTIFIER ::= { ts32-654 informationModel           (  0)}

ts32-654ObjectClass    OBJECT IDENTIFIER ::= { ts32-654InfoModel managedObjectClass (  3)}
ts32-654Package        OBJECT IDENTIFIER ::= { ts32-654InfoModel package           (  4)}
ts32-654Parameter      OBJECT IDENTIFIER ::= { ts32-654InfoModel parameter         (  5)}
ts32-654NameBinding    OBJECT IDENTIFIER ::= { ts32-654InfoModel nameBinding       (  6)}
ts32-654Attribute      OBJECT IDENTIFIER ::= { ts32-654InfoModel attribute         (  7)}
ts32-654Action         OBJECT IDENTIFIER ::= { ts32-654InfoModel action           (  9)}
ts32-654Notification   OBJECT IDENTIFIER ::= { ts32-654InfoModel notification      ( 10)}


-- Start of 3GPP SA5 own definitions

Longitude ::= INTEGER

Latitude ::= INTEGER

Racc ::= INTEGER

END     -- of TS32-654TypeModule
```

3GPP TSG-SA5 (Telecom Management)   **S5-027013**
Meeting #32, Vienna, Austria, 18-22 November 2002

CR-Form-v7

CHANGE REQUEST

| ⌘ | **32.644** CR **007** | ⌘**rev** | **-** | ⌘ | Current version: | **4.1.1** | ⌘ |

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

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

Title: ⌘	Alignment of the CMIP SS with the Rel-5 version of the IS in 32.642	
Source: ⌘	SA5	
Work item code: ⌘	OAM-NIM	**Date:** ⌘ 22/11/2002
Category: ⌘ **F**		**Release:** ⌘ Rel-5

Use one of the following categories:
F (correction)
A (corresponds to a correction in an earlier release)
B (addition of feature),
C (functional modification of feature)
D (editorial modification)
Detailed explanations of the above categories can
be found in 3GPP TR 21.900.

Use one of the following releases:
2   (GSM Phase 2)
R96   (Release 1996)
R97   (Release 1997)
R98   (Release 1998)
R99   (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘	The CMIP Solution Set for Rel-5 (32.644) needs to be changed to align it with the enhanced model for the UTRAN Network Resources IRP: NRM (32.642).
Summary of change: ⌘	The additional features of 32.632 are mapped to the CMIP SS.
Consequences if not approved: ⌘	The Rel-5 CMIP SS is not aligned with the Rel-5 UTRAN Network Resources IRP: NRM (32.642).

Clauses affected: ⌘	Foreword and sections 1, 2, 3, 4, 5 and 6.

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

Other comments: ⌘	

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:

Version x.y.z

where:

x   the first digit:

1   presented to TSG for information;

2   presented to TSG for approval;

3   or greater indicates TSG approved document under change control.

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 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 UTRAN Network Resource Integration Reference Point (IRP): Network Resource Model defined in 3GPP TS 32.642.

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 32.642 V5.0.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 32.101: "3G Telecom Management principles and high level requirements".

[2]   3GPP TS 32.102: "3G Telecom Management architecture".

[3]   3GPP TS 32.304: "Telecommunication Management; Notification Management; Part 4: Notification Integration Reference Point; CMIP Solution Set".

[4]   3GPP TS 32.642: "Telecommunication Management; Configuration Management: UTRAN 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".

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 32.642 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
UTRAN	UMTS Terrestrial Radio Access Network

4   Basic aspects

4.1   Architectural Aspects

A technology independent UTRAN network resource model is defined in 3GPP TS 32.642 for 3G networks. This document provides an implementation of this UTRAN network resource model by using CMIP technology.

4.2   Mapping

The semantic of the UTRAN Network Resource Model is defined in 3GPP TS 32.642. The specification of the information object classes defined there is independent of any implementation technology and protocol.
This sub-clause maps these technology and protocol independent definitions onto the equivalencies of the CMIP Solution Set of the UTRAN Network Resource IRP.

4.2.1   Mapping of Information Object Classes

Table 1 maps the information object classes defined in the UTRAN Network Resource Model onto the equivalent MOCs of the CMIP Solution Set.

Table 1: Mapping of IOCs

IS IOC	CMIP SS MOC
RncFunction	rncFunction
NodeBFunction	nodeBFunction
UtranCell	utranCell
IubLink	iubLink
UtranRelation	utranRelation
ExternalUtranCell	externalUtranCell

4.2.2   Mapping of Information Object Class Attributes

This chapter depicts the mapping of the attributes defined in 3GPP TS 32.642 [4] on the corresponding attributes of the CMIP Solution Set.

4.2.2.1   Attribute Mapping of the IOC *RncFunction*

Table 2: Attribute mapping of the IOC *RncFunction*

IS Attribute	CMIP SS Attribute	Qualifier
rncFunctionId	rncFunctionId	M
userLabel	userLabel (ITU-T M.3100 [9])	M
mcc	mcc	M
mnc	mnc	M
rncId	rncId	M

4.2.2.2   Attribute Mapping of the IOC *NodeBFunction*

Table 3: Attribute mapping of the IOC *NodeBFunction*

IS Attribute	CMIP SS Attribute	Qualifier
nodeBFunctionId	nodeBFunctionId	M
userLabel	userLabel (ITU-T M.3100 [9])	M
nodeBFunction-IubLink	NodeBFunction2iubLink	M

4.2.2.3 Attribute Mapping of the IOC *UtranCell*

Table 4: Attribute mapping of the IOC *UtranCell*

IS Attribute	CMIP SS Attribute	Qualifier
utranCellId	utranCellId	M
userLabel	userLabel (ITU-T M.3100 [9])	M
cId	cId	M
localCellId	localCellId	M
uarfcnDl	uarfcnDl	M
uarfcnUl	uarfcnUl	M
primaryScramblingCode	primaryScramblingCode	M
primaryCpichPower	primaryCpichPower	M
maximumTransmissionPower	maximumTransmissionPower	M
primarySchPower	primarySchPower	M
secondarySchPower	secondarySchPower	M
bchPower	bchPower	M
lac	lac	M
rac	rac	M
sac	sac	M
ura	ura	M
utranCell-IubLink	utranCell2iubLink	M
operationalState	operationalState	O

4.2.2.4 Attribute Mapping of the IOC *IubLink*

Table 5: Attribute mapping of the IOC *IubLink*

IS Attribute	CMIP SS Attribute	Qualifier
iubLinkId	iubLinkId	M
userLabel	userLabel (ITU-T M.3100 [9])	M
iubLink-UtranCell	iubLink2utranCell	M
iubLink-NodeBFunction	iubLink2nodeBFunction	M

4.2.2.5 Attribute Mapping of the IOC *UtranRelation*

Table 6: Attribute mapping of the IOC *UtranRelation*

IS Attribute	CMIP SS Attribute	Qualifier
utranRelationId	utranRelationId	M
relationType	relationType	M
adjacentCell	adjacentCell	M
uarfcnUl	uarfcnUl	O
uarfcnDl	uarfcnDl	O
primaryScramblingCode	primaryScramblingCode	O
primaryCpichPower	primaryCpichPower	O
lac	lac	O

4.2.2.6 Attribute Mapping of the IOC *ExternalUtranCell*

Table 7: Attribute mapping of the IOC *ExternalUtranCell*

IS Attribute	CMIP SS Attribute	Qualifier
externalUtranCellId	externalUtranCellId	M
userLabel	userLabel	M
cId	cId	M
mcc	mcc	M
mnc	mnc	M
rncId	rncId	M
uarfcnUl	uarfcnUl	M
uarfcnDl	uarfcnDl	M
primaryScramblingCode	primaryScramblingCode	M
primaryCpichPower	primaryCpichPower	M
lac	lac	M
rac	rac	M

5 GDMO Definitions

5.1 Managed Object Classes

5.1.1 rncFunction

rncFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
        "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
        rncFunctionBasicPackage,
        rncFunctionHandoverPackage;
REGISTERED AS {ts32-644ObjectClass 1};

5.1.2 utranCell

utranCell **MANAGED OBJECT CLASS**
    DERIVED FROM
        "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
        utranCellBasicPackage,
        utranCellHandoverPackage,
        utranCellAssociationPackage;
    CONDITIONAL PACKAGES
        "3GPP TS 32.674 Release 5": operationalStateAttributePackage **PRESENT IF**
            "Instances of this MOC support operationalState attribute.";
REGISTERED AS {ts32-644ObjectClass 2};

5.1.3 utranRelation

utranRelation **MANAGED OBJECT CLASS**
    DERIVED FROM
        "Recommendation X.721: 1992":top;
    CHARACTERIZED BY
        utranRelationBasicPackage,
        utranRelationAssociationPackage;
    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.";
REGISTERED AS {ts32-644ObjectClass 3};

5.1.4 externalUtranCell

externalUtranCell **MANAGED OBJECT CLASS**
    DERIVED FROM
        "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
        externalUtranCellPackage;
REGISTERED AS {ts32-644ObjectClass 4};

5.1.5 iubLink

iubLink **MANAGED OBJECT CLASS**
    DERIVED FROM
        "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
        iubLinkBasicPackage,
        iubLinkAssociationPackage;
REGISTERED AS {ts32-644ObjectClass 5};

5.1.6 nodeBFunction

nodeBFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
        "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
        nodeBFunctionBasicPackage,
        nodeBFunctionAssociationPackage;
REGISTERED AS {ts32-644ObjectClass 6};

5.2 Packages

5.2.1 rncFunctionHandoverPackage

rncFunctionHandoverPackage **PACKAGE**
    BEHAVIOUR
        rncFunctionHandoverPackageBehaviour;
    ATTRIBUTES
        mcc   GET-REPLACE,
        mnc   GET-REPLACE,
        rncId   GET-REPLACE;
REGISTERED AS {ts32-644Package 1};

rncFunctionHandoverPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "This package contains all new attributes defined for UTRAN handover management. These attributes are introduced in R4.";

5.2.2 utranCellHandoverPackage

utranCellHandoverPackage **PACKAGE**
    BEHAVIOUR
        utranCellHandoverPackageBehaviour;
    ATTRIBUTES
        cId   GET-REPLACE,
        localCellId   GET-REPLACE,
        uarfcnUl   GET-REPLACE,
        uarfcnDl   GET-REPLACE,

```
    primaryScramblingCode        GET-REPLACE,
    primaryCpichPower            GET-REPLACE,
    maximumTransmissionPower     GET-REPLACE,
    primarySchPower              GET-REPLACE,
    secondarySchPower            GET-REPLACE,
    bchPower                     GET-REPLACE,
    lac                          GET-REPLACE,
    rac                          GET-REPLACE,
    sac                          GET-REPLACE,
    ura                          GET-REPLACE;
```
REGISTERED AS {ts32-644Package 2};

utranCellHandoverPackageBehaviour **BEHAVIOUR**
    DEFINED AS
       "This package contains all new attributes defined for UTRAN handover management. These attributes are introduced in R4.";

5.2.3　　utranRelationBasicPackage

utranRelationBasicPackage **PACKAGE**
    BEHAVIOUR
       utranRelationBasicPackageBehaviour;
    ATTRIBUTES
```
    utranRelationId              GET,
    relationType                 GET-REPLACE,
    uarfcnUl                     GET,
    uarfcnDl                     GET,
    primaryScramblingCode        GET,
    primaryCpichPower            GET,
    lac                          GET;
```
REGISTERED AS {ts32-644Package 3};

utranRelationBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
       "The 'UtranRelation' managed object contains radio network related parameters for the relation to the 'UtranCell' or 'ExternalUtranCell' managed object. Note: In handover relation terms, the cell containing the UTRAN Relation object is the source cell for the handover. The cell referred to in the UTRAN relation object is the target cell for the handover. This defines a one-way handover relation where the direction is from source cell to target cell.";

5.2.4　　utranRelationAssociationPackage

utranRelationAssociationPackage **PACKAGE**
    BEHAVIOUR
       utranRelationAssociationPackageBehaviour;
    ATTRIBUTES
```
    adjacentCell                 GET-REPLACE;
```
REGISTERED AS {ts32-644Package 4};

utranRelationAssociationPackageBehaviour **BEHAVIOUR**
    DEFINED AS
       "This package contains all attributes implementing associations related to an utranRelation";

5.2.5　　externalUtranCellPackage

externalUtranCellPackage **PACKAGE**
    BEHAVIOUR
       externalUtranCellPackageBehaviour;
    ATTRIBUTES
```
    externalUtranCellId          GET,
    cId                          GET-REPLACE,
    mcc                          GET-REPLACE,
```

```
    mnc                      GET-REPLACE,
    rncId                    GET-REPLACE,
    uarfcnUl                 GET-REPLACE,
    uarfcnDl                 GET-REPLACE,
    primaryScramblingCode    GET-REPLACE,
    primaryCpichPower        GET-REPLACE,
    lac                      GET-REPLACE,
    rac                      GET-REPLACE;
REGISTERED AS {ts32-644Package 5};
```

externalUtranCellPackageBehaviour **BEHAVIOUR**
    DEFINED AS
      "This Managed Object Class represents a radio cell controlled by another IRPAgent. It a necessary attribute for inter-system handover. This MOC is a subreplication of a MOC in another NEM.";

5.2.6 rncFunctionBasicPackage

```
rncFunctionBasicPackage PACKAGE
    BEHAVIOUR
        rncFunctionBasicPackageBehaviour;
    ATTRIBUTES
        rncFunctionId          GET;
REGISTERED AS {ts32-644Package 6};
```

rncFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
      "The MOC rncFunction represents UMTS RNC function.";

5.2.7 utranCellBasicPackage

```
utranCellBasicPackage PACKAGE
    BEHAVIOUR
        utranCellBasicPackageBehaviour;
    ATTRIBUTES
        utranCellId GET;
REGISTERED AS {ts32-644Package 7};
```

utranCellBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
      "This managed object class represents the radio cell controlled by a RNC.";

5.2.8 utranCellAssociationPackage

```
utranCellAssociationPackage PACKAGE
    BEHAVIOUR
        utranCellAssociationPackageBehaviour;
    ATTRIBUTES
        utranCell2iubLink     GET;
REGISTERED AS {ts32-644Package 8};
```

utranCellAssociationPackageBehaviour **BEHAVIOUR**
    DEFINED AS
      "This package contains the pointer attributes that implement associations related to utranCell.";

5.2.9 iubLinkBasicPackage

```
iubLinkBasicPackage PACKAGE
    BEHAVIOUR
        iubLinkBasicPackageBehaviour;
    ATTRIBUTES
```

```
        iubLinkId GET;
REGISTERED AS {ts32-644Package 9};


iubLinkBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "This managed object class models the Iub Link between a Node-B and a RNC.";
```

5.2.10　iubLinkAssociation

```
iubLinkAssociationPackage PACKAGE
    BEHAVIOUR
        iubLinkAssociationPackageBehaviour;
    ATTRIBUTES
        iubLink2nodeBFunction      GET,
        iubLink2utranCell          GET;
REGISTERED AS {ts32-644Package 10};


iubLinkAssociationPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The attribute 'iubLink2NodeBFunction' points to the nodeBFunction instance which this iubLink instance
        connects to. The attribute 'iubLink2utranCell' points to a list of utranCell instances which attach to the
        nodeBFunction this iubLink connects to.";
```

5.2.11　nodeBFunctionBasicPackage

```
nodeBFunctionBasicPackage PACKAGE
    BEHAVIOUR
        nodeBFunctionBasicPackageBehaviour;
    ATTRIBUTES
        nodeBFunctionId        GET;
REGISTERED AS {ts32-644Package 11};


nodeBFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "This managed object class represents the NodeB functionality.";
```

5.2.12　nodeBFunctionAssociationPackage

```
nodeBFunctionAssociationPackage PACKAGE
    BEHAVIOUR
        nodeBFunctionAssociationPackageBehaviour;
    ATTRIBUTES
        nodeB2iubLink    GET;
REGISTERED AS {ts32-644Package 12};


nodeBFunctionAssociationPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The attribute 'nodeB2iubLink' points to the iubLink instance which connects to this nodeBFunction instance
        directly.";
```

5.3　Attributes

5.3.1　mcc

```
mcc ATTRIBUTE
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.MobileCountryCode;
    MATCHES FOR EQUALITY;
```

    BEHAVIOUR
       mccBehaviour;
REGISTERED AS {ts32-644Attribute 1};

mccBehaviour **BEHAVIOUR**
    DEFINED AS
       "Mobile Country Code, MCC. It is a part of the PLMN Id (Ref. 3 GPP TS 23.003).";

5.3.2   mnc

mnc **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
       TS32-644TypeModule.MobileNetworkCode;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
       mncBehaviour;
REGISTERED AS {ts32-644Attribute 2};

mncBehaviour **BEHAVIOUR**
    DEFINED AS
       "Mobile Network Code, MNC. It is a part of the PLMN Id (Ref. 3 GPP TS 23.003).";

5.3.3   rncId

rncId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
       TS32-644TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
       rncIdBehaviour;
REGISTERED AS {ts32-644Attribute 3};

rncIdBehaviour **BEHAVIOUR**
    DEFINED AS
       "Unique RNC ID (Ref. 3 GPP TS 23.003).";

5.3.4   cId

cId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
       TS32-644TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
       cIdBehaviour;
REGISTERED AS {ts32-644Attribute 4};

cIdBehaviour **BEHAVIOUR**
    DEFINED AS
       "cId is the identifier of a cell in one RNC (Ref. 3 GPP TS 25.401).";

5.3.5   localCellId

localCellId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
       TS32-644TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
       localCellIdBehaviour;
REGISTERED AS {ts32-644Attribute 5};

localCellIdBehaviour **BEHAVIOUR**
    DEFINED AS
        "Local Cell id is used to uniquely identify the set of resources defined in a Node B to support a cell (as defined by a Cid Ref. 3 GPP TS 25.401). It must be unique in Node B at a minimum, but may be unique in UTRAN. It can be used to tie the cell in the RNC to a specific set of resources in the Node B.";

5.3.6   uarfcnUl

uarfcnUl **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.UarfcnUl;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        uarfcnUlBehaviour;
REGISTERED AS {ts32-644Attribute 6};

uarfcnUlBehaviour **BEHAVIOUR**
    DEFINED AS
        "The UL UTRA absolute Radio Frequency Channel number, UARFCN (Ref. 3 GPP TS 25.433).";

5.3.7   uarfcnDl

uarfcnDl **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.UarfcnDl;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        uarfcnDlBehaviour;
REGISTERED AS {ts32-644Attribute 7};

uarfcnDlBehaviour **BEHAVIOUR**
    DEFINED AS
        "The DL UTRA absolute Radio Frequency Channel number, UARFCN (Ref. 3 GPP TS 25.433).";

5.3.8   primaryScramblingCode

primaryScramblingCode **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.PrimaryScramblingCode;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        primaryScramblingCodeBehaviour;
REGISTERED AS {ts32-644Attribute 8};

primaryScramblingCodeBehaviour **BEHAVIOUR**
    DEFINED AS
        "The primary DL scrambling code used by the cell (Ref. 3 GPP TS 25.433).";

5.3.9   primaryCpichPower

primaryCpichPower **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.PrimaryCpichPower;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        primaryCpichPowerBehaviour;
REGISTERED AS {ts32-644Attribute 9};

primaryCpichPowerBehaviour **BEHAVIOUR**
    DEFINED AS

"The power of the primary CPICH channel in the cell (Ref. 3 GPP TS 25.433).";

5.3.10   maximumTransmissionPower

maximumTransmissionPower **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.MaximumTransmissionPower;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        maximumTransmissionPowerBehaviour;
REGISTERED AS {ts32-644Attribute 10};

maximumTransmissionPowerBehaviour **BEHAVIOUR**
    DEFINED AS
        "The maximum transmission power of a cell, DL Power (Ref. 3 GPP TS 25.433).";

5.3.11   primarySchPower

primarySchPower **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.PrimarySchPower;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        primarySchPowerBehaviour;
REGISTERED AS {ts32-644Attribute 11};

primarySchPowerBehaviour **BEHAVIOUR**
    DEFINED AS
        "The power of the primary synchronisation channel in the cell, DL Power (Ref. 3 GPP TS 25.433).";

5.3.12   secondarySchPower

secondarySchPower **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.SecondarySchPower;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        secondarySchPowerBehaviour;
REGISTERED AS {ts32-644Attribute 12};

secondarySchPowerBehaviour **BEHAVIOUR**
    DEFINED AS
        "The power of the secondary synchronisation channel in the cell, DL Power (Ref. 3 GPP TS 25.433).";

5.3.13   bchPower

bchPower **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.BchPower;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        bchPowerBehaviour;
REGISTERED AS {ts32-644Attribute 13};

bchPowerBehaviour **BEHAVIOUR**
    DEFINED AS
        "The power of the broadcast channel in the cell (Ref. 3 GPP TS 25.433).";

5.3.14　lac

```
lac ATTRIBUTE
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.LocationAreaCode;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        lacBehaviour;
REGISTERED AS {ts32-644Attribute 14};

lacBehaviour BEHAVIOUR
    DEFINED AS
        "Location Area Code, LAC (Ref. 3 GPP TS 23.003)";
```

5.3.15　rac

```
rac ATTRIBUTE
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.Rac;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        racBehaviour;
REGISTERED AS {ts32-644Attribute 15};

racBehaviour BEHAVIOUR
    DEFINED AS
        "Routing Area Code, RAC (Ref. 3 GPP TS 23.003)";
```

5.3.16　sac

```
sac ATTRIBUTE
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.Sac;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        sacBehaviour;
REGISTERED AS {ts32-644Attribute 16};

sacBehaviour BEHAVIOUR
    DEFINED AS
        "Service Area Code, RAC (Ref. 3 GPP TS 23.003)";
```

5.3.17　ura

```
ura ATTRIBUTE
    WITH ATTRIBUTE SYNTAX
        TS32-644TypeModule.Ura;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        uraBehaviour;
REGISTERED AS {ts32-644Attribute 17};

uraBehaviour BEHAVIOUR
    DEFINED AS
        "UTRAN Registration Area, URA (Ref. 3 GPP TS 25.423)";
```

5.3.18　utranRelationId

```
utranRelationId ATTRIBUTE
    WITH ATTRIBUTE SYNTAX
```

```
    TS32-644TypeModule.GeneralObjectId;
```
MATCHES FOR EQUALITY;
BEHAVIOUR
```
    utranRelationIdBehaviour;
```
REGISTERED AS {ts32-644Attribute 18};

utranRelationIdBehaviour BEHAVIOUR
DEFINED AS
```
    "This attribute identifies an utranRelation object.";
```

5.3.19　relationType

relationType **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
```
    TS32-644TypeModule.RelationType;
```
MATCHES FOR EQUALITY;
BEHAVIOUR
```
    relationTypeBehaviour;
```
REGISTERED AS {ts32-644Attribute 19};

relationTypeBehaviour **BEHAVIOUR**
DEFINED AS
```
    "Type of relation: e.g. Intersystem relation, intrafrequency intrasystem relation, interfrequency intrasystem
    relation.";
```

5.3.20　adjacentCell

adjacentCell **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
```
    TS32-644TypeModule.GeneralObjectPointer;
```
MATCHES FOR EQUALITY;
BEHAVIOUR
```
    adjacentCellBehaviour;
```
REGISTERED AS {ts32-644Attribute 20};

adjacentCellBehaviour **BEHAVIOUR**
DEFINED AS
```
    "Pointer to UTRAN cell or external UTRAN cell. Distinguished name of the corresponding object.";
```

5.3.21　externalUtranCellId

externalUtranCellId **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
```
    TS32-644TypeModule.GeneralObjectId;
```
MATCHES FOR EQUALITY;
BEHAVIOUR
```
    adjacentCellBehaviour;
```
REGISTERED AS {ts32-644Attribute 21};

externalUtranCellIdBehaviour **BEHAVIOUR**
DEFINED AS
```
    "This attribute identifies an externalUtranCell object.";
```

5.3.22　rncFunctionId

rncFunctionId **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
```
    TS32-644TypeModule.GeneralObjectId;
```
MATCHES FOR EQUALITY;
BEHAVIOUR

    rncFunctionIdBehaviour;
REGISTERED AS {ts32-644Attribute 22};

rncFunctionIdBehaviour **BEHAVIOUR**
  DEFINED AS
    "This attribute names an instance of the 'rncFunction' object class.";

5.3.23 utranCellId

utranCellId **ATTRIBUTE**
  WITH ATTRIBUTE SYNTAX
    TS32-644TypeModule.GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    utranCellIdBehaviour;
REGISTERED AS {ts32-644Attribute 23};

utranCellIdBehaviour **BEHAVIOUR**
  DEFINED AS
    "This attribute names an instance of the 'utranCell' object class.";

5.3.24 utranCell2iubLink

utranCell2iubLink **ATTRIBUTE**
  WITH ATTRIBUTE SYNTAX
    TS32-644TypeModule.GeneralObjectPointer;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    utranCell2iubLinkBehaviour;
REGISTERED AS {ts32-644Attribute 24};

utranCell2iubLinkBehaviour **BEHAVIOUR**
  DEFINED AS
    "This attribute points to the iubLink instance connecting to this utranCell. ";

5.3.25 iubLinkId

iubLinkId **ATTRIBUTE**
  WITH ATTRIBUTE SYNTAX TS32-644TypeModule.GeneralObjectId;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    iubLinkIdBehaviour;
REGISTERED AS {ts32-644Attribute 25};

iubLinkIdBehaviour **BEHAVIOUR**
  DEFINED AS
    "This attribute names an instance of the 'iubLink' object class.";

5.3.26 iubLink2nodeBFunction

iubLink2nodeBFunction **ATTRIBUTE**
  WITH ATTRIBUTE SYNTAX
    TS32-644TypeModule.GeneralObjectPointer;
  MATCHES FOR EQUALITY;
  BEHAVIOUR
    iubLink2nodeBFunctionBehaviour;
REGISTERED AS {ts32-644Attribute 26};

iubLink2nodeBFunctionBehaviour **BEHAVIOUR**
  DEFINED AS

"This attribute points to the nodeBFunction instance which this iubLink instance connects directly to.";

5.3.27   iubLink2utranCell

iubLink2utranCell **ATTRIBUTE**
   WITH ATTRIBUTE SYNTAX
     TS32-644TypeModule.GeneralObjectPointerList;
   MATCHES FOR EQUALITY;
   BEHAVIOUR
     iubLink2utranCellBehaviour;
REGISTERED AS {ts32-644Attribute 27};

iubLink2utranCellBehaviour **BEHAVIOUR**
   DEFINED AS
     "This attribute points from an iubLink instance to a list of utranCell instance";

5.3.28   nodeBFunctionId

nodeBFunctionId **ATTRIBUTE**
   WITH ATTRIBUTE SYNTAX
     TS32-644TypeModule.GeneralObjectId;
   MATCHES FOR EQUALITY;
   BEHAVIOUR
     nodeBFunctionIdBehaviour;
REGISTERED AS {ts32-644Attribute 28};

nodeBFunctionIdBehaviour **BEHAVIOUR**
   DEFINED AS
     "This attribute names an instance of the 'nodeBFunction' object class.";

5.3.29   nodeBFunction2iubLink

nodeBFunction2iubLink **ATTRIBUTE**
   WITH ATTRIBUTE SYNTAX
     TS32-644TypeModule.GeneralObjectPointer;
   MATCHES FOR EQUALITY;
   BEHAVIOUR
     nodeBFunction2iubLinkBehaviour;
REGISTERED AS {ts32-644Attribute 29};

nodeBFunction2iubLinkBehaviour **BEHAVIOUR**
   DEFINED AS
     "This attribute points to the IubLink instance which connects to the related nodeBFunction instance directly.";

5.4   Name Binding

5.4.1   rncFunction - managedElement

rncFunction-managedElement **NAME BINDING**
   SUBORDINATE OBJECT CLASS
     rncFunction;
   NAMED BY SUPERIOR OBJECT CLASS
     "3GPP TS 32.624 Release 5": managedElement;
   WITH ATTRIBUTE
     rncFunctionId;
   BEHAVIOUR
     rncFunction-managedElementBehaviour;
   CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE ONLY-IF-NO-CONTAINED-OBJECTS;

REGISTERED AS {ts32-644NameBinding 1};

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

5.4.2   nodeBFunction - managedElement

nodeBFunction-managedElement **NAME BINDING**
    SUBORDINATE OBJECT CLASS
        nodeBFunction;
    NAMED BY SUPERIOR OBJECT CLASS
        "3GPP TS 32.624 Release 5": managedElement;
    WITH ATTRIBUTE
        nodeBFunctionId;
    BEHAVIOUR
        nodeBFunction-managedElementBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-644NameBinding 2};

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

5.4.3   utranCell - rncFunction

utranCell-rncFunction **NAME BINDING**
    SUBORDINATE OBJECT CLASS
        utranCell;
    NAMED BY SUPERIOR OBJECT CLASS
        rncFunction;
    WITH ATTRIBUTE
        utranCellId;
    BEHAVIOUR
        utranCell-rncFunctionBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-644NameBinding 3};

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

5.4.4   utranRelation - utranCell

utranRelation-utranCell **NAME BINDING**
    SUBORDINATE OBJECT CLASS
        utranRelation;
    NAMED BY SUPERIOR OBJECT CLASS
        utranCell;
    WITH ATTRIBUTE
        utranRelationId;
    BEHAVIOUR
        utranRelation-utranCellBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-644NameBinding 4};

utranRelation-utranCellBehaviour **BEHAVIOUR**
    DEFINED AS

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

5.4.5 externalUtranCell - subNetwork

externalUtranCell-subNetwork **NAME BINDING**
    SUBORDINATE OBJECT CLASS
        externalUtranCell;
    NAMED BY SUPERIOR OBJECT CLASS
        "3GPP TS 32.624 Release 5": subNetwork;
    WITH ATTRIBUTE
        externalUtranCellId;
    BEHAVIOUR
        externalUtranCell-subNetworkBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-644NameBinding 5};

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

5.4.6

5.4.10 iubLink - rncFunction

iubLink-rncFunction **NAME BINDING**
    SUBORDINATE OBJECT CLASS
        iubLink;
    NAMED BY SUPERIOR OBJECT CLASS
        rncFunction;
    WITH ATTRIBUTE
        iubLinkId;
    BEHAVIOUR
        iubLink-rncFunctionBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-644NameBinding 10};

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

5.4.10 gsmRelation - utranCell

gsmRelation-utranCell **NAME BINDING**
    SUBORDINATE OBJECT CLASS
        "3GPP TS 32.654 Release 5": gsmRelation;
    NAMED BY SUPERIOR OBJECT CLASS
        utranCell;
    WITH ATTRIBUTE
        "3GPP TS 32.654 Release 5": gsmRelationId;
    BEHAVIOUR
        gsmRelation-utranCellBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-644NameBinding 11};

gsmRelation-utranCellBehaviour **BEHAVIOUR**

DEFINED AS

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

6 ASN.1 Definitions

```
TS32-644TypeModule {ccitt (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Operation-
Maintenance (3) ts32-644 (644) informationModel (0) asn1Module (2) version1 (1)}


DEFINITIONS IMPLICIT TAGS ::=
BEGIN

--EXPORTS everything

IMPORTS

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

MobileCountryCode, MobileNetworkCode, LocationAreaCode
    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 32.644 related Object Identifiers

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

ts32-644               OBJECT IDENTIFIER ::= { baseNodeUMTS ts32-644              (644)}
ts32-644InfoModel      OBJECT IDENTIFIER ::= { ts32-644 informationModel          (  0)}

ts32-644ObjectClass    OBJECT IDENTIFIER ::= { ts32-644InfoModel managedObjectClass  ( 3)}
ts32-644Package        OBJECT IDENTIFIER ::= { ts32-644InfoModel package          ( 4)}
ts32-644Parameter      OBJECT IDENTIFIER ::= { ts32-644InfoModel parameter        ( 5)}
ts32-644NameBinding    OBJECT IDENTIFIER ::= { ts32-644InfoModel nameBinding      ( 6)}
ts32-644Attribute      OBJECT IDENTIFIER ::= { ts32-644InfoModel attribute        ( 7)}
ts32-644Action         OBJECT IDENTIFIER ::= { ts32-644InfoModel action          ( 9)}
ts32-644Notification   OBJECT IDENTIFIER ::= { ts32-644InfoModel notification     ( 10)}


-- Start of 3GPP SA5 own definitions

UarfcnUl ::= INTEGER

UarfcnDl ::= INTEGER

PrimaryScramblingCode ::= INTEGER

PrimaryCpichPower ::= INTEGER

MaximumTransmissionPower ::= INTEGER

PrimarySchPower ::= INTEGER

SecondarySchPower ::= INTEGER

BchPower ::= INTEGER

Lac ::= INTEGER

Rac ::= INTEGER

Sac ::= INTEGER

Ura ::= INTEGER

RelationType ::= ENUMERATED
{
interSystem (1),
intraFrequencyIntraSystem (2),
interFrequencyIntraSystem (3)
}
```

```
END -- of TS32-644TypeModule
```

3GPP TSG-SA5 (Telecom Management) **S5-027012**
Meeting #32, Vienna, Austria, 18-22 November 2002

CHANGE REQUEST

⌘	**32.634** CR **002**	⌘rev	**-**	⌘	Current version:	**4.1.1**	⌘

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

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

Title:	⌘	Alignment of the CMIP SS with the Rel-5 version of the IS in 32.632
Source:	⌘	SA5
Work item code: ⌘	OAM-NIM	**Date:** ⌘ 22/11/2002
Category:	⌘ **F**	**Release:** ⌘ Rel-5

Use <u>one</u> of the following categories:
  F (correction)
  A (corresponds to a correction in an earlier release)
  B (addition of feature),
  C (functional modification of feature)
  D (editorial modification)
Detailed explanations of the above categories can
be found in 3GPP TR 21.900.

Use <u>one</u> of the following releases:
  2   (GSM Phase 2)
  R96   (Release 1996)
  R97   (Release 1997)
  R98   (Release 1998)
  R99   (Release 1999)
  Rel-4   (Release 4)
  Rel-5   (Release 5)
  Rel-6   (Release 6)

Reason for change:	⌘	The CMIP Solution Set for Rel-5 (32.634) needs to be changed to align it with the enhanced Rel-5 model for the Core Network Resources IRP: NRM (32.632).
Summary of change: ⌘		The additional features of 32.632 are mapped to the CMIP SS.
Consequences if not approved:	⌘	The Rel-5 CMIP SS is not aligned with the Rel-5 Core Network Resources IRP: NRM (32.632).

Clauses affected:	⌘	Foreword and sections 1, 2, 3, 4, 5 and 6.

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

Other comments:	⌘	

Foreword

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

The present document is 32.634 of the 32.630-series covering the 3rd Generation Partnership Project Technical Specification Group Services and System Aspects, as identified below:

32.631: "3G Configuration Management; Core Network Resources IRP: Requirements";

32.632: "3G Configuration Management; Core Network Resources IRP: Network Resource Model";

32.633: "3G Configuration Management: Core Network Resources IRP: CORBA Solution Set";

32.634: "3G Configuration Management: CN Network Resources IRP: CMIP Solution Set".

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

where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

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

A third generation telecommunication network is composed of a multitude of different network elements (NE). For a successful operation of the network the operator must be provided with mechnisms allowing him to manage the network. These management activities can be grouped into several areas: configuration management, fault management, performance management, and accounting management and security management.

The present document is part of a set of technical specifications defining the telecommunication management (TM) of 3G systems. The TM principles are described in 3GPP TS 32.101 [1]. The TM architecture is described in 3GPP TS 32.102 [2]. The other specifications define the interface (ITf-N) between the managing system (manager), which is in general the network manager (NM) and the managed system (agent), which is either an element manager (EM) or the managed NE itself. The Itf-N is composed of a number of integration reference points (IRPs) defining the information in the agent that is visible for the manager, the operations that the manager may perform on this information and the notifications that are sent from the agent to the manager. One of these IRPs is the Core Network Resources IRP.

Each IRP is specified by four TS, the requirements part, the information service (IS) part, the CORBA solution set (SS) and the CMIP solution set (SS).

Configuration Management (CM), in general, provides the operator with the ability to assure correct and effective operation of the 3G network as it evolves. CM actions have the objective to control and monitor the actual configuration on the Network Elements (NEs) and Network Resources (NRs), and they may be initiated by the operator or by functions in the Operations Systems (OSs) or NEs.

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 Models (Generic, Core Network and UTRAN NRM).

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

The following table shows an overview of the mapping between the old Release 1999 and new Release 4 CM specification structure.

Table: Mapping between Release '99 and the new Rel-4 specifications

R99 Old no.	Old (R99) specification title	Rel-4 New no.	New (Rel-4) specification title
32.106-1	3G Configuration Management: Concept and Requirements	32.600	**3G Configuration Management: Concept and High-level Requirements**
32.106-1	<Notification IRP requirements from 32.106-1 and 32.106-2>	32.301	**Notification IRP**: Requirements
32.106-2	Notification IRP: IS	32.302	Notification IRP: Information Service
32.106-3	Notification IRP: CORBA SS	32.303	Notification IRP: CORBA SS
32.106-4	Notification IRP: CMIP SS	32.304	Notification IRP: CMIP SS
32.106-8	Name convention for Managed Objects	32.300	**Name Convention for Managed Objects**
32.106-1	<Basic CM IRP IS requirements from 32.106-1 and 32.106-5>	32.601	**Basic CM IRP**: Requirements
32.106-5	Basic CM IRP IM (Intro & IS part)	32.602	Basic CM IRP: Information Service
32.106-6	Basic CM IRP CORBA SS (IS related part)	32.603	Basic CM IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (IS related part)	32.604	Basic CM IRP: CMIP SS
32.106-8	Name convention for Managed Objects	32.300	**Name Convention for Managed Objects**
-	-	32.611	**Bulk CM IRP**: Requirements
-	-	32.612	Bulk CM IRP: Information Service
-	-	32.613	Bulk CM IRP: CORBA SS
-	-	32.614	Bulk CM IRP: CMIP SS
		32.615	Bulk CM IRP: XML file format definition
32.106-1	<Basic CM IRP Generic NRM requirements from 32.106-1 and 32.106-5>	32.621	**Generic Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (Generic NRM part)	32.622	Generic Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (Generic NRM related part)	32.623	Generic Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (Generic NRM related part)	32.624	Generic Network Resources IRP: CMIP SS
32.106-1	<Basic CM IRP CN NRM requirements from 32.106-1 and 32.106-5>	32.631	**Core Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (CN NRM part)	32.632	Core Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (CN NRM related part)	32.633	Core Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (CN NRM related part)	32.634	Core Network Resources IRP: CMIP SS
32.106-1	<Basic CM IRP UTRAN NRM requirements from 32.106-1 and 32.106-5>	32.641	**UTRAN Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (UTRAN NRM part)	32.642	UTRAN Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (UTRAN NRM related part)	32.643	UTRAN Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (UTRAN NRM related part)	32.644	UTRAN Network Resources IRP: CMIP SS
		32.651	**GERAN Network Resources IRP**: Requirements
		32.652	GERAN Network Resources IRP: NRM
		32.653	GERAN Network Resources IRP: CORBA SS
		32.654	GERAN Network Resources IRP: CMIP SS

1 Scope

The present document specifies the Common Management Information Protocol (CMIP) Solution Set (SS) for the CN Network Resource Integration Reference Point (IRP): Network Resource Model defined in 3GPP TS 32.632. 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 specifiation is related to 3GPP TS 32.632 V5.0.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 32.101: "3G Telecom Management principles and high level requirements".

[2]   3GPP TS 32.102: "3G Telecom Management architecture".

[3]   3GPP TS 32.304: "Telecommunication Management; Notification Management; Part 4: Notification Integration Reference Point; CMIP Solution Set".

[4]   3GPP TS 32.632: "Telecommunication Management; Configuration Management: CN 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".

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 32.632 apply.

3.2 Abbreviations

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

ASN.1   Abstract Syntax Notation 1
CMIP   Common Management Information Protocol
DN   Distinguished Name
GDMO   Guidelines for the Definition of Managed Objects
GERAN   GERAN Terrestrial Radio Access Network
IOC   Information Object Class
IRP   Integration Reference Point
IS   Information Service
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
SS   Solution Set
TMN   Telecommunications Management Network
UTRAN   UMTS Terrestrial Radio Access Network

4 Basic aspects

4.1 Architectural AspectsExplanation

A technology independent CN network resource model is defined in 3GPP TS 32.632 for 3G networks. This document provides an implementation of this CN network resource model by using CMIP technology.

4.2 Mapping

The semantic of the CN Network Resource Model is defined in 3GPP TS 32.632. 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 UTRAN Network Resource IRP.

4.2.1 Mapping of MOCInformation Object Classes

Table 2 maps the information object classes defined in the CN Network Resource Model onto the equivalent MOCIOCs of the CMIP Solution Set.

Table 1: Mapping of ~~MOC~~IOCs

~~Managed Objects of the CN NR IRP NRM~~ IS IOC	~~MOCs of this~~ CMIP SS MOC
AucFunction	aucFunction
ALink	aLink
IucsLink	iucsLink
IupsLink	iupsLink
IubcLink	iubcLink
BgFunction	bgFunction
EirFunction	eirFunction
GbLink	gbLink
GgsnFunction	ggsnFunction
GmscFunction	gmscFunction
HlrFunction	hlrFunction
MscServerFunction	mscServerFunction
GmscServerFunction	gmscServerFunction
SgsnFunction	sgsnFunction
SmsGmscFunction	smsGmscFunction
SmsIwmscFunction	smsIwmscFunction
VlrFunction	vlrFunction
SmlcFunction	smlcFunction
GmlcFunction	gmlcFunction
ScfFunction	scfFunction
SrfFunction	srfFunction
CbcFunction	cbcFunction
Cg~~e~~fFunction	cqfFunction
CsMgwFunction	csMgwFunction
MgwFunction	mgwFunction
GmscFunction	gmscFunction
IwfFunction	iwfFunction
MnpSrfFunction	mnpSrfFunction
NpdbFunction	npdbFunction
RSgwFunction	rSgwFunction
SsfFunction	ssfFunction
BsFunction	bsFunction

4.2.2   Mapping of Information Object Class Attributes

Table 2: Mapping of Attributes

Attribute defined in 3GPP TS 32.632	Attribute defined in this CMIP SS
UserLabel	userLabel (ITU-T M.3100 1995)
aucFunctionId	aucFunctionId
bgFunctionId	bgFunctionId
eirFunctionId	eirFunctionId
ggsnFunctionId	ggsnFunctionId
gmscFunctionId	gmscFunctionId
hlrFunctionId	hlrFunctionId
mscFunctionId	mscFunctionId
vlrFunctionId	vlrFunctionId
sgsnFunctionId	sgsnFunctionId
smsGmscFunctionId	smsGmscFunctionId
smsIwmscFunctionId	smsIwmscFunctionId
smlcFunctionId	smlcFunctionId
gmlcFunctionId	gmlcFunctionId
scfFunctionId	scfFunctionId
srfFunctionId	srfFunctionId
cbcFunctionId	cbcFunctionId
cqfFunctionId	cqfFunctionId
mgwFunctionId	mgwFunctionId
gmscFunctionId	gmscFunctionId
iwfFunctionId	iwfFunctionId
mnpSrfFunctionId	mnpSrfFunctionId
npdbFunctionId	npdbFunctionId
rSgwFunctionId	rSgwFunctionId
ssfFunctionId	ssfFunctionId
bsFunctionId	bsFunctionId

4.2.2.1   Attribute Mapping of the IOC *MscServerFunction*

Table 2: Attribute mapping of the IOC *MscServerFunction*

IS Attribute	CMIP SS Attributes	Qualifier
mscServerFunctionId	mscServerFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M
mccList	mccList	Read-Write, M
mncList	mncList	Read-Write, M
lacList	lacList	Read-Write, M
sacList	sacList	Read-Write, M
uraList	uraList	Read-Write, M
gcaList	gcaList	Read-Write, M
mscId	mscId	Read-Write, M
mscServerFunction-GSMcell	mscServerFunction-GSMcell	Read-Only, M
mscServerFunction-ExternalGSMcell	mscServerFunction-ExternalGSMcell	Read-Only, M
mscServerFunction-CsMgwFunction	mscServerFunction-CsMgwFunction	Read-Only, M

4.2.2.2   Attribute Mapping of the IOC *HlrFunction*

Table 3: Attribute mapping of the IOC *HlrFunction*

IS Attribute	CMIP SS Attribute	Qualifier
hlrFunctionId	hlrFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.3   Attribute Mapping of the IOC *VlrFunction*

Table 4: Attribute mapping of the IOC *VlrFunction*

IS Attribute	CMIP SS Attribute	Qualifier
vlrFunctionId	vlrFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.4   Attribute Mapping of the IOC *AucFunction*

Table 5: Attribute mapping of the IOC *AucFunction*

IS Attribute	CMIP SS Attribute	Qualifier
aucFunctionId	aucFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.5   Attribute Mapping of the IOC *EirFunction*

Table 6: Attribute mapping of the IOC *EirFunction*

IS Attribute	CMIP SS Attribute	Qualifier
eirFunctionId	eirFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.6   Attribute Mapping of the IOC *SmsIwmscFunction*

Table 7: Attribute mapping of the IOC *SmsIwmscFunction*

IS Attribute	CMIP SS Attribute	Qualifier
smsIwmscFunctionId	smsIwmscFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.7   Attribute Mapping of the IOC *SmsGmscFunction*

Table 8: Attribute mapping of the IOC *SmsGmscFunction*

IS Attribute	CMIP SS Attribute	Qualifier
smsGmscFunctionId	smsGmscFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.8 Attribute Mapping of the IOC *SgsnFunction*

Table 9: Attribute mapping of the IOC *SgsnFunction*

IS Attribute	CMIP SS Attribute	Qualifier
sgsnFunctionId	sgsnFunctionId	Read-Only, M
UserLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M
mccList	mccList	Read-Write, M
mncList	mncList	Read-Write, M
lacList	lacList	Read-Write, M
racList	racList	Read-Write, M
sacList	sacList	Read-Write, M
sgsnId	sgsnId	Read-Write, M
sgsnFunction-GSMCell	sgsnFunction-GSMCell	Read-Only, M
sgsnFunction-ExternalGSMCell	sgsnFunction-ExternalGSMCell	Read-Only, M

4.2.2.9 Attribute Mapping of the IOC *GgsnFunction*

Table 10 Attribute mapping of the IOC *GgsnFunction*

IS Attribute	CMIP SS Attribute	Qualifier
ggsnFunctionId	ggsnFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.10 Attribute Mapping of the IOC *BgFunction*

Table 11 Attribute mapping of the IOC *BgFunction*

IS Attribute	CMIP SS Attribute	Qualifier
bgFunctionId	bgFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.11 Attribute Mapping of the IOC *GmscFunction*

Table 12: Attribute mapping of the IOC *GmscFunction*

IS Attribute	CMIP SS Attribute	Qualifier
gmscFunctionId	gmscFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.12 Attribute Mapping of the IOC *SmlcFunction*

Table 13: Attribute mapping of the IOC *SmlcFunction*

IS Attribute	CMIP SS Attribute	Qualifier
smlcFunctionId	smlcFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.13 Attribute Mapping of the IOC *GmlcFunction*

Table 14: Attribute mapping of the IOC *GmlcFunction*

IS Attribute	CMIP SS Attribute	Qualifier
gmlcFunctionId	gmlcFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.14 Attribute Mapping of the IOC *ScfFunction*

Table 15: Attribute mapping of the IOC *ScfFunction*

IS Attribute	CMIP SS Attribute	Qualifier
scfFunctionId	scfFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.15 Attribute Mapping of the IOC *SrfFunction*

Table 16: Attribute mapping of the IOC *SrfFunction*

IS Attribute	CMIP SS Attribute	Qualifier
srfFunctionId	srfFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.16 Attribute Mapping of the IOC *CbcFunction*

Table 17: Attribute mapping of the IOC *CbcFunction*

IS Attribute	CMIP SS Attribute	Qualifier
cbcFunctionId	cbcFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.17 Attribute Mapping of the IOC *CgfFunction*

Table 18: Attribute mapping of the IOC *CgfFunction*

IS Attribute	CMIP SS Attribute	Qualifier
cgfFunctionId	cgfFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.18 Attribute Mapping of the IOC *MgwFunction*

Table 19: Attribute mapping of the IOC *MgwFunction*

IS Attribute	CMIP SS Attribute	Qualifier
mgwFunctionId	mgwFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.19 Attribute Mapping of the IOC *GmscServerFunction*

Table 20: Attribute mapping of the IOC *GmscServerFunction*

IS Attribute	CMIP SS Attribute	Qualifier
gmscServerFunctionId	gmscServerFunctionId	Read-Only, M
userLabel	userLabel(ITU-T M.3100 1995)	Read-Write, M

4.2.2.20 Attribute Mapping of the IOC *IwfFunction*

Table 21: Attribute mapping of the IOC *IwfFunction*

IS Attribute	CMIP SS Attribute	Qualifier
iwfFunctionId	iwfFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.21 Attribute Mapping of the IOC *MnpSrfFunction*

Table 22: Attribute mapping of the IOC *MnpSrfFunction*

IS Attribute	CMIP SS Attribute	Qualifier
mnpSrfFunctionId	mnpSrfFunctionId	Read-Only, M
userLabel	userLabel(ITU-T M.3100 1995)	Read-Write, M

4.2.2.22 Attribute Mapping of the IOC *NpdbFunction*

Table 23: Attribute mapping of the IOC *NpdbFunction*

IS Attribute	CMIP SS Attribute	Qualifier
npdbFunctionId	npdbFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.23 Attribute Mapping of the IOC *SgwFunction*

Table 24: Attribute mapping of the IOC *SgwFunction*

IS Attribute	CMIP SS Attribute	Qualifier
sgwFunctionId	sgwFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.24 Attribute Mapping of the IOC *SsfFunction*

Table 25: Attribute mapping of the IOC *SsfFunction*

IS Attribute	CMIP SS Attribute	Qualifier
ssfFunctionId	ssfFunctionId	Read-Only, M
userLabel	UserLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.25 Attribute Mapping of the IOC *BsFunction*

Table 26: Attribute mapping of the IOC *BsFunction*

IS Attribute	CMIP SS Attribute	Qualifier
bsFunctionId	bsFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M

4.2.2.26 Attribute Mapping of the IOC *IucsLink*

Table 27: Attribute mapping of the IOC *IucsLink*

IS Attribute	CMIP SS Attribute	Qualifier
iucsLinkId	iucsLinkId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M
connectedRnc	connectedRnc	Read-Only, M
connectedBss	connectedBss	Read-Only, M

4.2.2.27 Attribute Mapping of the IOC *IupsLink*

Table 28: Attribute mapping of the IOC *IupsLink*

IS Attribute	CMIP SS Attribute	Qualifier
iupsLinkId	iupsLinkId	Read-Only, M
userLabel	userLabel(ITU-T M.3100 1995)	Read-Write, M
connectedRnc	connectedRnc	Read-Only, O
connectedBss	connectedBss	Read-Only, O

4.2.2.28 Attribute Mapping of the IOC *IubcLink*

Table 29: Attribute mapping of the IOC *IubcLink*

IS Attribute	CMIP SS Attribute	Qualifier
iubcLinkId	iubcLinkId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M
connectedRnc	connectedRnc	Read-Only, M

4.2.2.29 Attribute Mapping of the IOC *ALink*

Table 30: Attribute mapping of the IOC IOC *ALink*

IS Attribute	CMIP SS Attribute	Qualifier
aLinkId	aLinkId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M
connectedBss	connectedBss	Read-Only, M

4.2.2.30 Attribute Mapping of the IOC *GbLink*

Table 31: Attribute mapping of the IOC *GbLink*

IS Attribute	CMIP SS Attribute	Qualifier
gbLinkId	gbLinkId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M
connectedBss	connectedBss	Read-Only, M

4.2.2.31 Attribute Mapping of the IOC *CsMgwFunction*

Table 32: Attribute mapping of the IOC *CsMgwFunction*

IS Attribute	CMIP SS Attribute	Qualifier
csMgwFunctionId	CsmgwFunctionId	Read-Only, M
userLabel	userLabel (ITU-T M.3100 1995)	Read-Write, M
csMgwFunction- mscServerFunction	csMgwFunction- mscServerFunction	Read-Only, M
csMgwFunction- iucsLink	csMgwFunction- iucsLink	Read-Only, M
csMgwFunction- ALink	csMgwFunction- ALink	Read-Only, M

5   GDMO Definitions

5.1   Information~~Managed~~ Object Classes

5.1.1   smlcFunction

```
smlcFunction MANAGED OBJECT CLASS
    DERIVED FROM
        "3GPP TS 32.624 Release 45": managedFunction;
    CHARACTERIZED BY
        smlcFunctionBasicPackage; PACKAGE
    BEHAVIOUR
smlcFunctionBasicPackageBehaviour;
    ATTRIBUTES
        smlcFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 1};
```

~~**smlcFunctionBasicPackageBehaviour** BEHAVIOUR~~

~~DEFINED AS~~

~~" This Managed Object Class represents SMLC functionality. For more information about the SMLC, see 3GPP TS 23.002";~~

5.1.2   gmlcFunction

```
gmlcFunction MANAGED OBJECT CLASS
    DERIVED FROM
        "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
        gmlcFunctionBasicPackage; PACKAGE
    BEHAVIOUR
gmlcFunctionBasicPackageBehaviour;
```

```
    ATTRIBUTES
        gmlcFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 2};

gmlcFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        " This Managed Object Class represents GMLC functionality. For more information about the GMLC, see
3GPP TS 23.002";
```

5.1.3 scfFunction

```
scfFunction MANAGED OBJECT CLASS
    DERIVED FROM
            "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
            scfFunctionBasicPackage; PACKAGE
    BEHAVIOUR
scfFunctionBasicPackageBehaviour;
    ATTRIBUTES
scfFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 3};

scfFunctionBasicPackageBehaviour BEHAVIOUR

    DEFINED AS

        " This Managed Object Class represents SCF functionality. For more information about the SCF, see
3GPP TS 23.002";
```

5.1.4 srfFunction

```
srfFunction MANAGED OBJECT CLASS
    DERIVED FROM
            "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
            scfFunctionBasicPackage; PACKAGE
    BEHAVIOUR
srfFunctionBasicPackageBehaviour;
    ATTRIBUTES

srfFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 4};

srfFunctionBasicPackageBehaviour BEHAVIOUR

    DEFINED AS

        " This Managed Object Class represents SRF functionality. For more information about the SRF, see
3GPP TS 23.002";
```

5.1.5 cbcFunction

```
cbcFunction MANAGED OBJECT CLASS
    DERIVED FROM
            "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
            cbcFunctionBasicPackage; PACKAGE
    BEHAVIOUR cbcFunctionBasicPackageBehaviour;
        ATTRIBUTES
        cbcFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 5};

cbcFunctionBasicPackageBehaviour BEHAVIOUR

    DEFINED AS
```

" This Managed Object Class represents SBC functionality. For more information about the SBC, see 3GPP TS 23.002";

5.1.6 cgfFunction

cgfFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
      "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
      cgfFunctionBasicPackage; PACKAGE
    BEHAVIOUR cgfFunctionBasicPackageBehaviour;
        ATTRIBUTES
    cgfFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 6};

cgfFunctionBasicPackageBehaviour BEHAVIOUR

    DEFINED AS

    " This Managed Object Class represents CGF functionality. For more information about the CGF, see 3GPP TS 23.002";

5.1.7 mgwFunction

mgwFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
      "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
      mgwFunctionBasicPackage; PACKAGE
    BEHAVIOUR mgwFunctionBasicPackageBehaviour;
        ATTRIBUTES
    mgwFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 7};

mgwFunctionBasicPackageBehaviour BEHAVIOUR

    DEFINED AS

    " This Managed Object Class represents MGW functionality. For more information about the MGW, see 3GPP TS 23.002";

5.1.8 gmscFunction

gmscFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
      "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
  gmscFunctionBasicPackage; PACKAGE
    BEHAVIOUR gmscFunctionBasicPackageBehaviour;
        ATTRIBUTES
    gmscFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 8};

gmscFunctionBasicPackageBehaviour BEHAVIOUR

    DEFINED AS

    " This Managed Object Class represents gmsc functionality. For more information about the gmsc, see 3GPP TS 23.002";

5.1.9 iwfFunction

iwfFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
      "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY

iwfFunctionBasicPackage; PACKAGE
BEHAVIOUR iwfFunctionBasicPackageBehaviour;
ATTRIBUTES
iwfFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 9};

iwfFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

" This Managed Object Class represents IWF functionality. For more information about the IWF, see 3GPP TS 23.002";

5.1.10 mnpSrfFunction

mnpSrfFunction **MANAGED OBJECT CLASS**
DERIVED FROM
"3GPP TS 32.624 Release 4 5": managedFunction;
CHARACTERIZED BY
mnpSrfFunctionBasicPackage; PACKAGE
BEHAVIOUR mnpSrfFunctionBasicPackageBehaviour;
ATTRIBUTES
mnpSrfFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 10};

mnpSrfFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

" This Managed Object Class represents MNPSRF functionality. For more information about the MNPSRF, see 3GPP TS 23.002";

5.1.11 npdbFunction

npdbFunction **MANAGED OBJECT CLASS**
DERIVED FROM
"3GPP TS 32.624 Release 4 5": managedFunction;
CHARACTERIZED BY
nmpdbFunctionBasicPackage; PACKAGE
BEHAVIOUR npdbFunctionBasicPackageBehaviour;
ATTRIBUTES
npdbFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 11};

npdbFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

" This Managed Object Class represents NPDB functionality. For more information about the NPDB, see 3GPP TS 23.002";

5.1.12 rSgwFunction

rSgwFunction **MANAGED OBJECT CLASS**
DERIVED FROM
"3GPP TS 32.624 Release 4 5": managedFunction;
CHARACTERIZED BY
rSgwFunctionBasicPackage; PACKAGE
BEHAVIOUR rSgwFunctionBasicPackageBehaviour;
ATTRIBUTES
rSgwFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 12};

rSgwFunctionBasicPackageBehaviour BEHAVIOUR

DEFINED AS

" This Managed Object Class represents R-SGW functionality. For more information about the R-SGW, see 3GPP TS 23.002";

5.1.13   ssfFunction

ssfFunction **MANAGED OBJECT CLASS**
        —**DERIVED FROM**
            ——"3GPP TS 32.624 Release 4 5": managedFunction;
        —**CHARACTERIZED BY**
            ——ssfFunctionBasicPackage; PACKAGE
        BEHAVIOUR ssfFunctionBasicPackageBehaviour;
            ATTRIBUTES
        ssfFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 13};

ssfFunctionBasicPackageBehaviour BEHAVIOUR

    DEFINED AS

    " This Managed Object Class represents SSF functionality. For more information about the SSF, see 3GPP TS 23.002";

5.1.14   bsFunction

bsFunction **MANAGED OBJECT CLASS**
        —**DERIVED FROM**
            ——"3GPP TS 32.624 Release 4 5": managedFunction;
        —**CHARACTERIZED BY**
            ——bsFunctionBasicPackage; PACKAGE
        BEHAVIOUR bsFunctionBasicPackageBehaviour;
            ATTRIBUTES
        bsFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 14};

bsFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
    " This Managed Object Class represents BS functionality. For more information about the BS, see 3GPP TS 23.002";

5.1.15   aucFunction

aucFunction **MANAGED OBJECT CLASS**
        —**DERIVED FROM**
            ——"3GPP TS 32.624 Release 4 5": managedFunction;
        —**CHARACTERIZED BY**
            ——aucFunctionBasicPackage; PACKAGE
        BEHAVIOUR   aucFunctionBasicPackageBehaviour;
        ATTRIBUTES
            aucFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 15};

aucFunctionBasicPackageBehaviour BEHAVIOUR
            DEFINED AS
            "An instance of MOC represents the logical function of an AUC";

5.1.16   bgFunction

bgFunction **MANAGED OBJECT CLASS**
        —**DERIVED FROM**
            ——"3GPP TS 32.624 Release 4 5": managedFunction;
        —**CHARACTERIZED BY**
            ——bgFunctionBasicPackage; PACKAGE
        BEHAVIOUR
            bgFunctionBasicPackageBehaviour;
        ATTRIBUTES

bgFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 16};

bgFunctionBasicPackageBehaviour BEHAVIOUR
        DEFINED AS
            "An instance of MOC represents the logical function of an BG";

5.1.17   eirFunction

eirFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
            "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
            eirFunctionBasicPackage; PACKAGE
    BEHAVIOUR
    eirFunctionBasicPackageBehaviour;
    ATTRIBUTES
    eirFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 17};

eirFunctionBasicPackageBehaviour BEHAVIOUR
        DEFINED AS
    "An instance of MOC represents the logical function of an EIR";

5.1.18   ggsnFunction

ggsnFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
            "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
            ggsnFunctionBasicPackage; PACKAGE
    BEHAVIOUR
    ggsnFunctionBasicPackageBehaviour;
    ATTRIBUTES
    ggsnFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 18};

ggsnFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
    "An instance of MOC represents the logical function of an GGSN";;

5.1.19   hlrFunction

hlrFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
            "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
            hlrFunctionBasicPackage; PACKAGE
    BEHAVIOUR
    hlrFunctionBasicPackageBehaviour;
    ATTRIBUTES
    hlrFunctionId GET;;;
REGISTERED AS {ts32-634ObjectClass 19};

hlrFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
    "An instance of MOC represents the logical function of a HLR";;

5.1.20   mscServerFunction

mscFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
            "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
            mscServerFunctionBasicPackage,

```
        mscServerFunctionAssociationPackage; PACKAGE
        BEHAVIOUR
        mscFunctionBasicPackageBehaviour;
            ATTRIBUTES
        mscFunctionId GET;;;
```
REGISTERED AS {ts32-634ObjectClass 20~~1~~};

```
mscFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
    "An instance of MOC represents the logical function of a MSC";;
```

5.1.21   sgsnFunction

```
sgsnFunction MANAGED OBJECT CLASS
    DERIVED FROM
        "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
        sgsnFunctionBasicPackage,
        sgsnFunctionAssociationPackage; PACKAGE
        BEHAVIOUR
        sgsnFunctionBasicPackageBehaviour;
            ATTRIBUTES
        sgsnFunctionId GET;;;
```
REGISTERED AS {ts32-634ObjectClass 21~~2~~};

```
sgsnFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
    "An instance of MOC represents the logical function of an SGSN";;
```

5.1.22   smsGmscFunction

```
smsGmscFunction MANAGED OBJECT CLASS
    DERIVED FROM
        "3GPP TS 32.624 Release 4 5":  managedFunction;
    CHARACTERIZED BY
        smsGmscFunctionBasicPackage; PACKAGE
        BEHAVIOUR
        smsGmscFunctionBasicPackageBehaviour;
            ATTRIBUTES
        smsGmscFunctionId GET;;;
```
REGISTERED AS {ts32-634ObjectClass 22~~3~~};

```
smsGmscFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
    "An instance of MOC represents the logical function of an smsGMSC";;
```

5.1.23   smsIwmscFunction

```
smsIwmscFunction MANAGED OBJECT CLASS
    DERIVED FROM
        "3GPP TS 32.624 Release 4 5": managedFunction;
    CHARACTERIZED BY
        smsIwmscFunctionBasicPackage; PACKAGE
        BEHAVIOUR
        smsIwmscFunctionBasicPackageBehaviour;
            ATTRIBUTES
        smsIwmscFunctionId GET;;;
```
REGISTERED AS {ts32-634ObjectClass 23~~4~~};

```
smsIwmscFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
    "An instance of MOC represents the logical function of an smsIWMSC";;
```

5.1.24 vlrFunction

vlrFunction **MANAGED OBJECT CLASS**
    DERIVED FROM
            "3GPP TS 32.624 Release ~~4~~ 5": ~~managedFunction;~~
    CHARACTERIZED BY
            vlrFunctionBasicPackage; ~~PACKAGE~~
    ~~BEHAVIOUR~~
    ~~vlrFunctionBasicPackageBehaviour;~~
        ~~ATTRIBUTES~~
    ~~vlrFunctionId GET;;;~~
REGISTERED AS {ts32-634ObjectClass 2~~4~~5};

~~vlrFunctionBasicPackageBehaviour BEHAVIOUR~~
    ~~DEFINED AS~~
        ~~"An instance of MOC represents the logical function of a VLR";;~~

5.1.25 gbLink

gbLink **MANAGED OBJECT CLASS**
    DERIVED FROM
            "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
            gbLinkBasicPackage,
            gbLinkAssociationPackage;
REGISTERED AS {ts32-634ObjectClass 25};

5.1.26 aLink

aLink **MANAGED OBJECT CLASS**
    DERIVED FROM
            "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
            aLinkBasicPackage,
            aLinkAssociationPackage;
REGISTERED AS {ts32-634ObjectClass 26};

5.1.27 iucsLink

iucsLink **MANAGED OBJECT CLASS**
    DERIVED FROM
            "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
            iucsLinkBasicPackage,
            iucsLinkAssociationPackage;
REGISTERED AS {ts32-634ObjectClass 27};

5.1.28 iupsLink

iupsLink **MANAGED OBJECT CLASS**
    DERIVED FROM
            "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
            iupsLinkBasicPackage,
            iupsLinkAssociationPackage;
REGISTERED AS {ts32-634ObjectClass 28};

5.1.29 iubcLink

iubcLink **MANAGED OBJECT CLASS**
    DERIVED FROM
            "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY

```
        iubcLinkBasicPackage,
        iubcLinkAssociationPackage;
REGISTERED AS {ts32-634ObjectClass 29};
```

5.1.30   csMgwFunction

```
csMgwFunction MANAGED OBJECT CLASS
    DERIVED FROM
        "3GPP TS 32.624 Release 5": managedFunction;
    CHARACTERIZED BY
        csMgwFunctionBasicPackage,
        csMgwFunctionAssociationPackage;
REGISTERED AS {ts32-634ObjectClass 30};
```

5.1.31   GmscServerFunction

```
gmscServerFunction MANAGED OBJECT CLASS
    DERIVED FROM
        "3GPP TS 32.624 Release 5":  managedFunction;
    CHARACTERIZED BY
        gmscServerFunctionBasicPackage;
REGISTERED AS {ts32-634ObjectClass 31};
```

5.2 Packages

5.2.1   smlcFunctionBasicPackage

```
smlcFunctionBasicPackage PACKAGE
    BEHAVIOUR
        smlcFunctionBasicPackageBehaviour;
    ATTRIBUTES
        smlcFunctionId  GET;
REGISTERED AS {ts32-634Package 1};

smlcFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'SmlcFunction' Information Object represents the SMLC functionality. For more information about the
        SMLC, see 3GPP TS 23.002";
```

5.2.2   gmlcFunctionBasicPackage

```
gmlcFunctionBasicPackage PACKAGE
    BEHAVIOUR
        gmlcFunctionBasicPackageBehaviour;
    ATTRIBUTES
        gmlcFunctionId  GET;
REGISTERED AS {ts32-634Package 2};

gmlcFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'GmlcFunction' Information Object represents the GMLC functionality. For more information about the
        GMLC, see 3GPP TS 23.002";
```

5.2.3   scfFunctionBasicPackage

```
scfFunctionBasicPackage PACKAGE
    BEHAVIOUR
        scfFunctionBasicPackageBehaviour;
    ATTRIBUTES
        scfFunctionId  GET;
```

REGISTERED AS {ts32-634Package 3};

scfFunctionBasicPackageBehaviour **BEHAVIOUR**
        DEFINED AS
            "The 'ScfFunction' Information Object represents the SCF functionality. For more information about the SCF, see 3GPP TS 23.002";

5.2.4   srfFunctionBasicPackage

srfFunctionBasicPackage **PACKAGE**
        BEHAVIOUR
            srfFunctionBasicPackageBehaviour;
        ATTRIBUTES
            srfFunctionId GET;
REGISTERED AS {ts32-634Package 4};

srfFunctionBasicPackageBehaviour **BEHAVIOUR**
        DEFINED AS
            "The 'SrfFunction' Information Object represents the SRF functionality. For more information about the SRF, see 3GPP TS 23.002";

5.2.5   cbcFunctionBasicPackage

cbcFunctionBasicPackage **PACKAGE**
        BEHAVIOUR
            cbcFunctionBasicPackageBehaviour;
        ATTRIBUTES
            cbcFunctionId GET;
REGISTERED AS {ts32-634Package 5};

cbcFunctionBasicPackageBehaviour **BEHAVIOUR**
        DEFINED AS
            "The 'CbcFunction' Information Object represents the SBC functionality. For more information about the SBC, see 3GPP TS 23.002";

5.2.6   cgfFunctionBasicPackage

cgfFunctionBasicPackage **PACKAGE**
        BEHAVIOUR
            cgfFunctionBasicPackageBehaviour;
        ATTRIBUTES
            cgfFunctionId GET;
REGISTERED AS {ts32-634Package 6};

cgfFunctionBasicPackageBehaviour **BEHAVIOUR**
        DEFINED AS
            "The 'CgfFunction' Information Object represents the CGF functionality. For more information about the CGF, see 3GPP TS 23.002";

5.2.7   mgwFunctionBasicPackage

mgwFunctionBasicPackage **PACKAGE**
        BEHAVIOUR
            mgwFunctionBasicPackageBehaviour;
        ATTRIBUTES
            mgwFunctionId GET;
REGISTERED AS {ts32-634Package 7};

mgwFunctionBasicPackageBehaviour **BEHAVIOUR**
        DEFINED AS

"The 'MgwFunction' Information Object represents the MGW functionality. For more information about the
MGW, see 3GPP TS 23.002";

5.2.8   gmscFunctionBasicPackage

gmscFunctionBasicPackage **PACKAGE**
    BEHAVIOUR
        gmscFunctionBasicPackageBehaviour;
    ATTRIBUTES
        gmscFunctionId GET;
REGISTERED AS {ts32-634Package 8};

gmscFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'GmscFunction' Information Object represents the GMSC functionality. For more information about the
        GMSC, see 3GPP TS 23.002";

5.2.9   iwfFunctionBasicPackage

iwfFunctionBasicPackage **PACKAGE**
    BEHAVIOUR
        iwfFunctionBasicPackageBehaviour;
    ATTRIBUTES
        iwfFunctionId GET;
REGISTERED AS {ts32-634Package 9};

iwfFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'IwfFunction' Information Object represents the IWF functionality. For more information about the IWF,
        see 3GPP TS 23.002";

5.2.10   mnpSrfFunctionBasicPackage

mnpSrfFunctionBasicPackage **PACKAGE**
    BEHAVIOUR
        mnpSrfFunctionBasicPackageBehaviour;
    ATTRIBUTES
        mnpSrfFunctionId GET;
REGISTERED AS {ts32-634Package 10};

mnpSrfFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'MnpSrfFunction' Information Object represents the MNPSRF functionality. For more information about
        the MNPSRF, see 3GPP TS 23.002";

5.2.11   npdbFunctionBasicPackage

npdbFunctionBasicPackage **PACKAGE**
    BEHAVIOUR
        npdbFunctionBasicPackageBehaviour;
    ATTRIBUTES
        npdbFunctionId GET;
REGISTERED AS {ts32-634Package 11};

npdbFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'NpdbFunction' Information Object represents the NPDB functionality. For more information about the
        NPDB, see 3GPP TS 23.002";

5.2.12 rSgwFunctionBasicPackage

```
rSgwFunctionBasicPackage PACKAGE
    BEHAVIOUR
        rSgwFunctionBasicPackageBehaviour;
    ATTRIBUTES
        rSgwFunctionId GET;
REGISTERED AS {ts32-634Package 12};

rSgwFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'RSgwFunction' Information Object represents the R-SGW functionality. For more information about the
        R-SGW, see 3GPP TS 23.002";
```

5.2.13 ssfFunctionBasicPackage

```
ssfFunctionBasicPackage PACKAGE
    BEHAVIOUR
        ssfFunctionBasicPackageBehaviour;
    ATTRIBUTES
        ssfFunctionId GET;
REGISTERED AS {ts32-634Package 13};

ssfFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'SsfFunction' Information Object represents the SSF functionality. For more information about the SSF,
        see 3GPP TS 23.002";
```

5.2.14 bsFunctionBasicPackage

```
bsFunctionBasicPackage PACKAGE
    BEHAVIOUR
        bsFunctionBasicPackageBehaviour;
    ATTRIBUTES
        bsFunctionId GET;
REGISTERED AS {ts32-634Package 14};

bsFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'BsFunction' Information Object represents the BS functionality. For more information about the BS, see
        3GPP TS 23.002";
```

5.2.15 aucFunctionBasicPackage

```
aucFunctionBasicPackage PACKAGE
    BEHAVIOUR
        aucFunctionBasicPackageBehaviour;
    ATTRIBUTES
        aucFunctionId GET;
REGISTERED AS {ts32-634Package 15};

aucFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'aucFunction' Information Object represents the AUC functionality. For more information about the AUC,
        see 3GPP TS 23.002";
```

5.2.16 bgFunctionBasicPackage

```
bgFunctionBasicPackage PACKAGE
    BEHAVIOUR
```

```
        bgFunctionBasicPackageBehaviour;
    ATTRIBUTES
        bgFunctionId GET;
REGISTERED AS {ts32-634Package 16};
```

bgFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'bgFunction' Information Object represents the BG functionality. For more information about the BG, see 3GPP TS 23.002";

5.2.17 eirFunctionBasicPackage

```
eirFunctionBasicPackage PACKAGE
    BEHAVIOUR
        eirFunctionBasicPackageBehaviour;
    ATTRIBUTES
    eirFunctionId GET;
REGISTERED AS {ts32-634Package 17};
```

eirFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'EirFunction' Information Object represents the EIR functionality. For more information about the EIR, see 3GPP TS 23.002";

5.2.18 ggsnFunctionBasicPackage

```
ggsnFunctionBasicPackage PACKAGE
    BEHAVIOUR
        ggsnFunctionBasicPackageBehaviour;
    ATTRIBUTES
        ggsnFunctionId GET;
REGISTERED AS {ts32-634Package 18};
```

ggsnFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'GGSNFunction' Information Object represents the GGSN functionality. For more information about the GGSN, see 3GPP TS 23.002";

5.2.19 hlrFunctionBasicPackage

```
hlrFunctionBasicPackage PACKAGE
    BEHAVIOUR
        hlrFunctionBasicPackageBehaviour;
    ATTRIBUTES
        hlrFunctionId GET;
REGISTERED AS {ts32-634Package 19};
```

hlrFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'HLRFunction' Information Object represents the HLR functionality. For more information about the HLR, see 3GPP TS 23.002";

5.2.20 mscServerFunctionBasicPackage

```
mscServerFunctionBasicPackage PACKAGE
    BEHAVIOUR
        mscServerFunctionBasicPackageBehaviour;
    ATTRIBUTES
    mscServerFunctionId     GET,
    mccList                 GET-REPLACE,
    mncList                 GET-REPLACE,
```

```
    lacList              GET-REPLACE,
    sacList              GET-REPLACE,
    uraList              GET-REPLACE,
    gcaList              GET-REPLACE,
    mscId                GET-REPLACE;
REGISTERED AS {ts32-634Package 20};

mscServerFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'MSCServerFunction' Information Object represents the MSCServer functionality. For more information
        about the MSCServer, see 3GPP TS 23.002";
```

5.2.21   mscServerFunctionAssociationPackage

```
mscServerFunctionAssociationPackage PACKAGE
    BEHAVIOUR
        mscServerFunctionAssociationPackageBehaviour;
    ATTRIBUTES
        mscServerFunction-GSMcell          GET,
        mscServerFunction-ExternalGSMcell  GET,
        mscServerFunction-CsMgwFunction    GET;
REGISTERED AS {ts32-634Package 21};

mscServerFunctionAssociationPackageBehaviour BEHAVIOUR
    DEFINED AS
        "This Package contains the attributes of an 'MscServerFunction' information object in relation with associations
        to GsmCell, ExternalGsmCell and CsMgwFunction information objects";
```

5.2.22   sgsnFunctionBasicPackage

```
sgsnFunctionBasicPackage PACKAGE
    BEHAVIOUR
        sgsnFunctionBasicPackageBehaviour;
    ATTRIBUTES
        sgsnFunctionId    GET,
        mccList           GET-REPLACE,
        mncList           GET-REPLACE,
        lacList           GET-REPLACE,
        racList           GET-REPLACE,
        sgsnId            GET-REPLACE,
        mscId             GET-REPLACE;
REGISTERED AS {ts32-634Package 22};

sgsnFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'sgsnFunction' Information Object represents the SGSN functionality. For more information about the
        SGSN, see 3GPP TS 23.002";
```

5.2.23   sgsnFunctionAssociattionPackage

```
sgsnFunctionAssociationPackage PACKAGE
    BEHAVIOUR
        sgsnFunctionAssociationPackageBehaviour;
    ATTRIBUTES
        sgsnFunction-GSMcell            GET,
        sgsnFunction-ExternalGSMcell    GET;
REGISTERED AS {ts32-634Package 23};

sgsnFunctionAssociationPackageBehaviour BEHAVIOUR
    DEFINED AS
        "This Package contains the attributes of an 'SGSNFunction' information object in relation with associations to
        GsmCell and ExternalGsmCell information objects.";
```

5.2.24 smsGmscFunctionBasicPackage

smsGmscFunctionBasicPackage **PACKAGE**
    BEHAVIOUR
        smsGmscFunctionBasicPackageBehaviour;
    ATTRIBUTES
        smsGmscFunctionId GET;
REGISTERED AS {ts32-634Package 24};

smsGmscFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'smsGmscFunction' Information Object represents the SMS-GMSC functionality. For more information
        about the SMS-GMSC, see 3GPP TS 23.002";

5.2.25 smsIwmscFunctionBasicPackage

smsIwmscFunctionBasicPackage **PACKAGE**
    BEHAVIOUR
        smsIwmscFunctionBasicPackageBehaviour;
    ATTRIBUTES
        smsIwmscFunctionId GET;
REGISTERED AS {ts32-634Package 25};

smsIwmscFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'smsIwmscFunction' Information Object represents the SmsIwMSC functionality. For more information
        about the SmsIwMsc, see 3GPP TS 23.002";

5.2.26 vlrFunctionBasicPackage

vlrFunctionBasicPackage **PACKAGE**
    BEHAVIOUR
        vlrFunctionBasicPackageBehaviour;
    ATTRIBUTES
        vlrFunctionId GET;
REGISTERED AS {ts32-634Package 26};

vlrFunctionBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'vlrFunction' Information Object represents the VLR functionality. For more information about the VLR,
        see 3GPP TS 23.002";

5.2.27 gbLinkBasicPackage

gbLinkBasicPackage **PACKAGE**
    BEHAVIOUR
        gbLinkBasicPackageBehaviour;
    ATTRIBUTES
        gbLinkId GET;
REGISTERED AS {ts32-634Package 27};

gbLinkBasicPackageBehaviour **BEHAVIOUR**
    DEFINED AS
        "The 'gbLink' Information Object represents the Gb link functionality. For more information about the Gb link,
        see 3GPP TS 23.002";

5.2.28   gbLinkAssociationPackage

```
gbLinkAssociationPackage PACKAGE
    BEHAVIOUR
        gbLinkAssociationPackageBehaviour;
    ATTRIBUTES
        connectedBss  GET;
REGISTERED AS {ts32-634Package 28};

gbLinkAssociationPackageBehaviour BEHAVIOUR
    DEFINED AS
        "This Package contains the attributes of an 'gbLink' information object in relation with associations to
        BssFunction or ExternalBssFunction objects";
```

5.2.29   aLinkBasicPackage

```
aLinkBasicPackage PACKAGE
    BEHAVIOUR
        aLinkBasicPackageBehaviour;
    ATTRIBUTES
        aLinkId  GET;
REGISTERED AS {ts32-634Package 29};

aLinkBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'aLink' Information Object represents the A link functionality. For more information about the A link, see
        3GPP TS 23.002";
```

5.2.30   aLinkAssociationPackage

```
aLinkAssociationPackage PACKAGE
    BEHAVIOUR
        aLinkAssociationPackageBehaviour;
    ATTRIBUTES
        connectedBss  GET;
REGISTERED AS {ts32-634Package 30};

aLinkAssociationPackageBehaviour BEHAVIOUR
    DEFINED AS
        "This Package contains the attributes of an 'aLink' information object in relation with associations to
        BssFunction or ExternalBssFunction objects";
```

5.2.31   iucsLinkBasicPackage

```
iucsLinkBasicPackage PACKAGE
    BEHAVIOUR
        iucsLinkBasicPackageBehaviour;
    ATTRIBUTES
        iucsLinkId GET;
REGISTERED AS {ts32-634Package 31};

iucsLinkBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'iucsLink' Information Object represents the Iu-cs link functionality. For more information about the Iu-cs
        link, see 3GPP TS 23.002";
```

5.2.32   iucsLinkAssociationPackage

```
iucsLinkAssociationPackage PACKAGE
    BEHAVIOUR
```

```
        iucsLinkAssociationPackageBehaviour;
    ATTRIBUTES
    connectedRnc  GET,
    connectedBss  GET;
REGISTERED AS {ts32-634Package 32};

iucsLinkAssociationPackageBehaviour BEHAVIOUR
    DEFINED AS
        "This Package contains the attributes of an 'iucsLink' information object in relation with associations to
        Bss/RncFunction or ExternalBss/RncFunction objects";
```

5.2.33   iupsLinkBasicPackage

```
iupsLinkBasicPackage PACKAGE
    BEHAVIOUR
        iupsLinkBasicPackageBehaviour;
    ATTRIBUTES
        iupsLinkId  GET;
REGISTERED AS {ts32-634Package 33};

iupsLinkBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'iupsLink' Information Object represents the Iu-ps link functionality. For more information about the Iu-ps
        link, see 3GPP TS 23.002";
```

5.2.34   iupsLinkAssociationPackage

```
iupsLinkAssociationPackage PACKAGE
    BEHAVIOUR
        iupsLinkAssociationPackageBehaviour;
    ATTRIBUTES
        connectedRnc  GET,
        connectedBss  GET;
REGISTERED AS {ts32-634Package 34};

iupsLinkAssociationPackageBehaviour BEHAVIOUR
    DEFINED AS
        "This Package contains the attributes of an 'iupsLink' information object in relation with associations to
        Bss/RncFunction or ExternalBss/RncFunction objects";
```

5.2.35   iubcLinkBasicPackage

```
iubcLinkBasicPackage PACKAGE
    BEHAVIOUR
        iubcLinkBasicPackageBehaviour;
    ATTRIBUTES
        iubcLinkId  GET;
REGISTERED AS {ts32-634Package 35};

iubcLinkBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'iubcLink' Information Object represents the Iu-bc link functionality. For more information about the Iu-bc
        link, see 3GPP TS 23.002";
```

5.2.36   iubcLinkAssociationPackage

```
iubcLinkAssociationPackage PACKAGE
    BEHAVIOUR
        iubcLinkAssociationPackageBehaviour;
    ATTRIBUTES
```

```
        connectedRnc GET;
REGISTERED AS {ts32-634Package 36};


iubcLinkAssociationPackageBehaviour BEHAVIOUR
    DEFINED AS
        "This Package contains the attributes of an 'iubcLink' information object in relation with associations to
        RncFunction or ExternalRncFunction objects";
```

5.2.37 csMgwFunctionBasicPackage

```
csMgwFunctionBasicPackage PACKAGE
    BEHAVIOUR
        csMgwFunctionBasicPackageBehaviour;
    ATTRIBUTES
        csMgwFunctionId GET;
REGISTERED AS {ts32-634Package 37};


csMgwFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'csMgwFunction' Information Object represents the CS-MGW functionality. For more information about
        the CS-MGW, see 3GPP TS 23.002";
```

5.2.38 csMgwFunctionAssociationPackage

```
csMgwFunctionAssociationPackage PACKAGE
    BEHAVIOUR
        csMgwFunctionAssociationPackageBehaviour;
    ATTRIBUTES
        csMgwFunction-MscServerFunction    GET,
        csMgwFunction-IucsLink             GET,
        csMgwFunction-Alink                GET;
REGISTERED AS {ts32-634Package 38};


csMgwFunctionAssociationPackageBehaviour BEHAVIOUR
    DEFINED AS
        "This Package contains the attributes of an 'csMgwFunction' information object in relation with associations to
        mscServerFunction, iucsLink or aLink objects";
```

5.2.39 gmscServerFunctionBasicPackage

```
gmscServerFunctionBasicPackage PACKAGE
    BEHAVIOUR
        gmscServerFunctionBasicPackageBehaviour;
    ATTRIBUTES
        gmscServerFunctionId GET;
REGISTERED AS {ts32-634Package 39};


gmscServerFunctionBasicPackageBehaviour BEHAVIOUR
    DEFINED AS
        "The 'gmscServerFunction' Information Object represents the GMSCServer functionality. For more information
        about the GMSCServer, see 3GPP TS 23.002";
```

5.3 Attributes

5.3.1 smlcFunctionId

```
smlcFunctionId ATTRIBUTE
    WITH ATTRIBUTE SYNTAX
        TS32-634TypeModule.GeneralObjectId;
```

___─**MATCHES FOR EQUALITY**;
___─**BEHAVIOUR**
_____──smlcFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 1};

smlcFunctionIdBehaviour **BEHAVIOUR**
___─**DEFINED AS**
-___──"-This attribute identifies a smlcFunction instance.";

5.32.2   gmlcFunctionId

gmlcFunctionId **ATTRIBUTE**
___─**WITH ATTRIBUTE SYNTAX**
_____──TS32-634TypeModule.GeneralObjectId;
___─**MATCHES FOR EQUALITY**;
___─**BEHAVIOUR**
_____──gmlcFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 2};

gmlcFunctionIdBehaviour **BEHAVIOUR**
___─**DEFINED AS**
──"-This attribute identifies a gmlcFunction instance.";

5.32.3   scfFunctionId

scfFunctionId **ATTRIBUTE**
___─**WITH ATTRIBUTE SYNTAX**
_____──TS32-634TypeModule.GeneralObjectId;
___─**MATCHES FOR EQUALITY**;
___─**BEHAVIOUR**
_____──scfFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 3};

scfFunctionIdBehaviour **BEHAVIOUR**
___─**DEFINED AS**
──"-This attribute identifies a scfFunction instance.";

5.32.4   srfFunctionId

srfFunctionId **ATTRIBUTE**
___─**WITH ATTRIBUTE SYNTAX**
_____──TS32-634TypeModule.GeneralObjectId;
___─**MATCHES FOR EQUALITY**;
___─**BEHAVIOUR**
_____──srfFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 4};

srfFunctionIdBehaviour **BEHAVIOUR**
___─**DEFINED AS**
──"-This attribute identifies a srfFunction instance.";

5.32.5   cbcFunctionId

cbcFunctionId **ATTRIBUTE**
___─**WITH ATTRIBUTE SYNTAX**
_____──TS32-634TypeModule.GeneralObjectId;
___─**MATCHES FOR EQUALITY**;
___─**BEHAVIOUR**
_____──cbcFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 5};

cbcFunctionIdBehaviour **BEHAVIOUR**

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

5.3.6   cgfFunctionId

cgfFunctionId **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-634TypeModule.GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
cgfFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 6};

cgfFunctionIdBehaviour **BEHAVIOUR**
DEFINED AS
"-This attribute identifies a cgfFunction instance.";

5.3.7   mgwFunctionId

mgwFunctionId **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-634TypeModule.GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
mgwFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 7};

mgwFunctionIdBehaviour **BEHAVIOUR**
DEFINED AS
"-This attribute identifies a mgwFunction instance.";

5.3.8   gmscFunctionId

gmscFunctionId **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-634TypeModule.GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
gmscFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 8};

gmscFunctionIdBehaviour **BEHAVIOUR**
DEFINED AS
"-This attribute identifies a gmscFunction instance.";

5.3.9   iwfFunctionId

iwfFunctionId **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-634TypeModule.GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
iwfFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 9};

iwfFunctionIdBehaviour **BEHAVIOUR**
DEFINED AS
"-This attribute identifies a iwfFunction instance.";

5.3.10　mnpSrfFunctionId

mnpSrfFunctionId **ATTRIBUTE**
　　—**WITH ATTRIBUTE SYNTAX**
　　　　—TS32-634TypeModule.GeneralObjectId;
　　—**MATCHES FOR EQUALITY**;
　　—**BEHAVIOUR**
　　　　——mnpSrfFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 10};

mnpSrfFunctionIdBehaviour **BEHAVIOUR**
　　—**DEFINED AS**
　　　　—"-This attribute identifies a mnpSrfFunction instance.";

5.3.11　npdbFunctionId

npdbFunctionId **ATTRIBUTE**
　　—**WITH ATTRIBUTE SYNTAX**
　　　　—TS32-634TypeModule.GeneralObjectId;
　　—**MATCHES FOR EQUALITY**;
　　—**BEHAVIOUR**
　　　　——npdbFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 11};

npdbFunctionIdBehaviour **BEHAVIOUR**
　　—**DEFINED AS**
　　　　—"-This attribute identifies a npdbFunction instance.";

5.3.12　rSgwFunctionId

rSgwFunctionId **ATTRIBUTE**
　　—**WITH ATTRIBUTE SYNTAX**
　　　　—TS32-634TypeModule.GeneralObjectId;
　　—**MATCHES FOR EQUALITY**;
　　—**BEHAVIOUR**
　　　　——rSgwFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 12};

rSgwFunctionIdBehaviour **BEHAVIOUR**
　　—**DEFINED AS**
　　　　—"-This attribute identifies a rSgwFunction instance.";

5.3.13　ssfFunctionId

ssfFunctionId **ATTRIBUTE**
　　—**WITH ATTRIBUTE SYNTAX**
　　　　—TS32-634TypeModule.GeneralObjectId;
　　—**MATCHES FOR EQUALITY**;
　　—**BEHAVIOUR**
　　　　——ssfFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 13};

ssfFunctionIdBehaviour **BEHAVIOUR**
　　—**DEFINED AS**
　　　　—"-This attribute identifies a ssfFunction instance.";

5.3.14　bsFunctionId

bsFunctionId **ATTRIBUTE**
　　—**WITH ATTRIBUTE SYNTAX**
　　　　—TS32-634TypeModule.GeneralObjectId;
　　—**MATCHES FOR EQUALITY**;
　　—**BEHAVIOUR**

——bsFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 14};

bsFunctionIdBehaviour **BEHAVIOUR**
   —**DEFINED AS**
      ——"-This attribute identifies a bsFunction instance.";

5.32.15   aucFunctionId

aucFunctionId **ATTRIBUTE**
   —**WITH ATTRIBUTE SYNTAX**
      ——TS32-634TypeModule.GeneralObjectId;
   —**MATCHES FOR EQUALITY**;
   —**BEHAVIOUR**
      ——aucFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 15};

aucFunctionIdBehaviour **BEHAVIOUR**
   —**DEFINED AS**
      ——"-This attribute identifies a aucFunction instance.";

5.32.16   bgFunctionId

bgFunctionId **ATTRIBUTE**
   —**WITH ATTRIBUTE SYNTAX**
      ——TS32-634TypeModule.GeneralObjectId;
   —**MATCHES FOR EQUALITY**;
   —**BEHAVIOUR**
      ——bgFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 16};

bgFunctionIdBehaviour **BEHAVIOUR**
   —**DEFINED AS**
      ——"-This attribute identifies a bgFunction instance.";

5.32.17   eirFunctionId

eirFunctionId **ATTRIBUTE**
   —**WITH ATTRIBUTE SYNTAX**
      ——TS32-634TypeModule.GeneralObjectId;
   —**MATCHES FOR EQUALITY**;
   —**BEHAVIOUR**
      ——eirFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 17};

eirFunctionIdBehaviour **BEHAVIOUR**
   —**DEFINED AS**
      ——"-This attribute identifies a eirFunction instance.";

5.32.18   ggsnFunctionId

ggsnFunctionId **ATTRIBUTE**
   —**WITH ATTRIBUTE SYNTAX**
      ——TS32-634TypeModule.GeneralObjectId;
   —**MATCHES FOR EQUALITY**;
   —**BEHAVIOUR**
      ——ggsnFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 18};

ggsnFunctionIdBehaviour **BEHAVIOUR**
   —**DEFINED AS**

　　　——"-This attribute identifies a ggsnFunction instance.";

5.32.1920 hlrFunctionId

hlrFunctionId **ATTRIBUTE**
　　—WITH ATTRIBUTE SYNTAX
　　　　—TS32-634TypeModule.GeneralObjectId;
　　—**MATCHES FOR EQUALITY**;
　　—**BEHAVIOUR**
　　　　——hlrFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 1920};

hlrFunctionIdBehaviour **BEHAVIOUR**
　　—**DEFINED AS**
　　　——"-This attribute identifies a hlrFunction instance.";

5.32.201 mscServerFunctionId

mscServerFunctionId **ATTRIBUTE**
　　—**WITH ATTRIBUTE SYNTAX**
　　　　—TS32-634TypeModule.GeneralObjectId;
　　—**MATCHES FOR EQUALITY**;
　　—**BEHAVIOUR**
　　　　——mscServerFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 201};

mscServerFunctionIdBehaviour **BEHAVIOUR**
　　—**DEFINED AS**
　　　——"-This attribute identifies a mscServerFunction instance.";

5.32.212 vlrFunctionId

vlrFunctionId **ATTRIBUTE**
　　—**WITH ATTRIBUTE SYNTAX**
　　　　—TS32-634TypeModule.GeneralObjectId;
　　—**MATCHES FOR EQUALITY**;
　　—**BEHAVIOUR**
　　　　——vlrFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 212};

vlrFunctionIdBehaviour **BEHAVIOUR**
　　—**DEFINED AS**
　　　　——"-This attribute identifies a vlrFunction instance.";

5.32.223 sgsnFunctionId

sgsnFunctionId **ATTRIBUTE**
　　—**WITH ATTRIBUTE SYNTAX**
　　　　—TS32-634TypeModule.GeneralObjectId;

        —**MATCHES FOR EQUALITY**;
        —**BEHAVIOUR**
            ——sgsnFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 223};

sgsnFunctionIdBehaviour **BEHAVIOUR**
        —**DEFINED AS**
            ——"-This attribute identifies a sgsnFunction instance.";

5.32.243 smsGmscFunctionId

smsGmscFunctionId **ATTRIBUTE**
        —**WITH ATTRIBUTE SYNTAX**
            ——TS32-634TypeModule.GeneralObjectId;
        —**MATCHES FOR EQUALITY**;
        —**BEHAVIOUR**
            ——smsGmscFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 234};

smsGmscFunctionIdBehaviour **BEHAVIOUR**
        —**DEFINED AS**
            ——"-This attribute identifies a smsGmscFunction instance.";

5.32.245 smsIwmscFunctionId

smsIwmscFunctionId **ATTRIBUTE**
        —**WITH ATTRIBUTE SYNTAX**
            ——TS32-634TypeModule.GeneralObjectId;
        —**MATCHES FOR EQUALITY**;
        —**BEHAVIOUR**
            ——smsIwmscFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 245};

smsIwmscFunctionIdBehaviour **BEHAVIOUR**
        —**DEFINED AS**
            ——"-This attribute identifies a smsIwmscFunction instance.";

5.3.25   gbLinkId

gbLinkId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-634TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        gbLinkIdBehaviour;
REGISTERED AS {ts32-634Attribute 25};

gbLinkIdBehaviour **BEHAVIOUR**
    DEFINED AS
        "This attribute identifies a gbLink instance.";

5.3.26   aLinkId

aLinkId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-634TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        aLinkIdBehaviour;
REGISTERED AS {ts32-634Attribute 26};

aLinkIdBehaviour **BEHAVIOUR**
    DEFINED AS
        "This attribute identifies a aLink instance.";

5.3.27   iucsLinkId

iucsLinkId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-634TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        iucsLinkIdBehaviour;
REGISTERED AS {ts32-634Attribute 27};

iucsLinkIdBehaviour **BEHAVIOUR**
    DEFINED AS
        "This attribute identifies a iucsLink instance.";

5.3.28   iupsLinkId

iupsLinkId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-634TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        iupsLinkIdBehaviour;
REGISTERED AS {ts32-634Attribute 28};

iupsLinkIdBehaviour **BEHAVIOUR**
    DEFINED AS
        "This attribute identifies a iupsLink instance.";

5.3.29   iubcLinkId

iubcLinkId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-634TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        iubcLinkIdBehaviour;
REGISTERED AS {ts32-634Attribute 29};

iubcLinkIdBehaviour **BEHAVIOUR**
    DEFINED AS
        "This attribute identifies a iubcLink instance.";

5.3.30   csMgwFunctionId

csMgwFunctionId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-634TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        csMgwFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 30};

csMgwFunctionIdBehaviour **BEHAVIOUR**
    DEFINED AS
        "This attribute identifies a csMgwFunction instance.";

## 5.3.31	gmscServerFunctionId

gmscServerFunctionId **ATTRIBUTE**
	WITH ATTRIBUTE SYNTAX
		TS32-634TypeModule.GeneralObjectId;
	MATCHES FOR EQUALITY;
	BEHAVIOUR
		gmscServerFunctionIdBehaviour;
REGISTERED AS {ts32-634Attribute 31};

gmscServerFunctionIdBehaviour **BEHAVIOUR**
	DEFINED AS
		"This attribute identifies a gmscServerFunction instance.";

## 5.3.32	mccList

mccList **ATTRIBUTE**
	WITH ATTRIBUTE SYNTAX
		TS32-634TypeModule.MccList;
	MATCHES FOR EQUALITY;
	BEHAVIOUR
		mccListBehaviour;
REGISTERED AS {ts32-634Attribute 32};

mccListBehaviour **BEHAVIOUR**
	DEFINED AS
		"List of Mobile Country Codes, MCC. The MCC is part of the PLMN Id (Ref. 3 GPP TS 23.003).";

## 5.3.33	mncList

mncList **ATTRIBUTE**
	WITH ATTRIBUTE SYNTAX
		TS32-634TypeModule.MncList;
	MATCHES FOR EQUALITY;
	BEHAVIOUR
		mncListBehaviour;
REGISTERED AS {ts32-634Attribute 33};

mncListBehaviour **BEHAVIOUR**
	DEFINED AS
		"List of Mobile Network Code, MNC. The MNC is part of the PLMN Id (Ref. 3 GPP TS 23.003).";

## 5.3.34	lacList

lacList **ATTRIBUTE**
	WITH ATTRIBUTE SYNTAX
		TS32-634TypeModule.LacList;
	MATCHES FOR EQUALITY;
	BEHAVIOUR
		lacListBehaviour;
REGISTERED AS {ts32-634Attribute 34};

lacListBehaviour **BEHAVIOUR**
	DEFINED AS
		"List of Location Area Codes covered by SGSN (Ref. 3 GPP TS 23.003).";

## 5.3.35	sacList

sacList **ATTRIBUTE**
	WITH ATTRIBUTE SYNTAX

TS32-634TypeModule.SacList;
MATCHES FOR EQUALITY;
BEHAVIOUR
sacListBehaviour;
REGISTERED AS {ts32-634Attribute 35};

sacListBehaviour **BEHAVIOUR**
DEFINED AS
"List of Service Area Codes covered by SGSN (Ref. 3 GPP TS 23.003).";

5.3.36   uraList

uraList **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-634TypeModule.UraList;
MATCHES FOR EQUALITY;
BEHAVIOUR
uraListBehaviour;
REGISTERED AS {ts32-634Attribute 36};

uraListBehaviour **BEHAVIOUR**
DEFINED AS
"List of UTRAN Registration Areas covered by MSC (Ref. 3 GPP TS 23.003).";

5.3.37   gcaList

gcaList **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-634TypeModule.CgaList;
MATCHES FOR EQUALITY;
BEHAVIOUR
gcaListBehaviour;
REGISTERED AS {ts32-634Attribute 37};

gcaListBehaviour **BEHAVIOUR**
DEFINED AS
"List of Group Call Area (Ref. 3 GPP TS 23.003).";

5.3.38   mscId

mscId **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-634TypeModule. GeneralObjectId;
MATCHES FOR EQUALITY;
BEHAVIOUR
mscIdBehaviour;
REGISTERED AS {ts32-634Attribute 38};

mscIdBehaviour **BEHAVIOUR**
DEFINED AS
"Unique MSC ID (Ref. 3 GPP TS 23.002).";;

5.3.39   mscServerFunction-GSMcell

mscServerFunction-GSMcell **ATTRIBUTE**
WITH ATTRIBUTE SYNTAX
TS32-634TypeModule.GeneralObjectPointer;
MATCHES FOR EQUALITY;
BEHAVIOUR
mscServerFunction-GSMcellBehaviour;
REGISTERED AS {ts32-634Attribute 39};

mscServerFunction-GSMcellBehaviour **BEHAVIOUR**
    DEFINED AS
      "This value contains the DN of the related GSMcell instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this MscServerFunction is associated with to 0-* GSMcell.";

5.3.40   mscServerFunction-ExternalGSMcell

mscServerFunction-ExternalGSMcell **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
      TS32-634TypeModule.GeneralObjectPointer;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
      mscServerFunction-ExternalGSMcellBehaviour;
REGISTERED AS {ts32-634Attribute 40};

mscServerFunction-ExternalGSMcellBehaviour **BEHAVIOUR**
    DEFINED AS
      "This value contains the DN of the related ExternalGSMcell instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this MscServerFunction is associated with to 0-* ExternalGSMcell.";

5.3.41   mscServerFunction-CsMgwFunction

mscServerFunction-CsMgwFunction **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
      TS32-634TypeModule.GeneralObjectPointer;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
      mscServerFunction-CsMgwFunctionBehaviour;
REGISTERED AS {ts32-634Attribute 41};

mscServerFunction-CsMgwFunctionBehaviour **BEHAVIOUR**
    DEFINED AS
      "This value contains the DN of the related CsMgwFunction instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this MscServerFunction is associated with to 0-* CsMgwFunction." ;;

5.3.42   racList

racList **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
      TS32-634TypeModule.RacList;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
      racListBehaviour;
REGISTERED AS {ts32-634Attribute 42};

racListBehaviour **BEHAVIOUR**
    DEFINED AS
      "List of Routing Area Codes covered by SGSN (Ref. 3 GPP TS 23.003).";;

5.3.43   sgsnId

sgsnId **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
      TS32-634TypeModule.GeneralObjectId;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
      sgsnIdBehaviour;

REGISTERED AS {ts32-634Attribute 43};

sgsnIdBehaviour **BEHAVIOUR**
    DEFINED AS
      "Unique SGSN ID (Ref. 3 GPP TS 23.002).";

5.3.44　sgsnFunction-GSMcell

sgsnFunction-GSMcell **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
      TS32-634TypeModule.GeneralObjectPointer;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
      sgsnFunction-GSMcellBehaviour;
REGISTERED AS {ts32-634Attribute 44};

sgsnFunction-GSMcellBehaviour **BEHAVIOUR**
    DEFINED AS
      "This value contains the DN of the related GSMcell instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this SgsnFunction is associated with to 0-* GSMcell.";

5.3.45　sgsnFunction-ExternalGSMcell

sgsnFunction-ExternalGSMcell **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
      TS32-634TypeModule. GeneralObjectPointer;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
      sgsnFunction-ExternalGSMcellBehaviour;
REGISTERED AS {ts32-634Attribute 45};

sgsnFunction-ExternalGSMcellBehaviour **BEHAVIOUR**
    DEFINED AS
      "This value contains the DN of the related ExternalGSMcell instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this SgsnFunction is associated with to 0-* ExternalGSMcell.";

5.3.46　connectedBss

connectedBss **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
      TS32-634TypeModule.GeneralObjectPointer;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
      connectedBssBehaviour;
REGISTERED AS {ts32-634Attribute 46};

connectedBssBehaviour **BEHAVIOUR**
    DEFINED AS
      "This value contains the DN of the related BssFunction or ExternalBssFunction instance. This is a reference attribute modelling the role (of the association AssociatedWith) that link is connected to 0-1 BssFunction or 0-1 ExternalBssFunction.";

5.3.47　connectedRnc

connectedRnc **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
      TS32-634TypeModule.GeneralObjectPointer;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
      connectedRncBehaviour;

REGISTERED AS {ts32-634Attribute 47};

connectedRncBehaviour **BEHAVIOUR**
    DEFINED AS
        "This value contains the DN of the related RncFunction or ExternalRncFunction instance. This is a reference attribute modelling the role (of the association AssociatedWith) that link is connected to 0-1 RncFunction or 0-1 ExternalRncFunction.";

5.3.48   csMgwFunction-MscServerFunction

csMgwFunction-MscServerFunction **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-634TypeModule.GeneralObjectPointer;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        csMgwFunction-MscServerFunctionBehaviour;
REGISTERED AS {ts32-634Attribute 48};

csMgwFunction-MscServerFunctionBehaviour **BEHAVIOUR**
    DEFINED AS
        "This value contains the DN of the related mscServerFunction instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this csMgwFunction is associated with to 0-* mscServerFunction.";

5.3.49   csMgwFunction-IucsLink

csMgwFunction-IucsLink **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-634TypeModule.GeneralObjectPointer;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        csMgwFunction-IucsLinkBehaviour;
REGISTERED AS {ts32-634Attribute 49};

csMgwFunction-IucsLinkBehaviour **BEHAVIOUR**
    DEFINED AS
        "This value contains the DN of the related IucsLink instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this csMgwFunction is connected to 0-* IucsLink." ;;

5.3.50   csMgwFunction-ALink

csMgwFunction-ALink **ATTRIBUTE**
    WITH ATTRIBUTE SYNTAX
        TS32-634TypeModule.GeneralObjectPointer;
    MATCHES FOR EQUALITY;
    BEHAVIOUR
        csMgwFunction-AlinkBehaviour;
REGISTERED AS {ts32-634Attribute 50};

csMgwFunction-ALinkBehaviour **BEHAVIOUR**
    DEFINED AS
        "This value contains the DN of the related ALink instance. This is a reference attribute modelling the role (of the association AssociatedWith) that this csMgwFunction is connected to 0-* ALink." ;;

5.43 Name Binding

5.43.1 smlcFunction - managedElement

smlcFunction-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
smlcFunction;
NAMED BY SUPERIOR OBJECT CLASS
"3GPP TS 32.624 Release 4 5": managedElement;
WITH ATTRIBUTE
smlcFunctionId;
BEHAVIOUR
smlcFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 1};

smlcFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
"The name binding represents a relationship in which a managedElement contains and

controls a smlcFunction. When automatic instance naming is used, the choice

of name bindings is left as a local matter.";

5.43.2 gmlcFunction - managedElement

gmlcFunction-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
gmlcFunction;
NAMED BY SUPERIOR OBJECT CLASS
"3GPP TS 32.624 Release 4 5": managedElement;
WITH ATTRIBUTE
gmlcFunctionId;
BEHAVIOUR
gmlcFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 2};

gmlcFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
"The name binding represents a relationship in which a managedElement contains and

controls a gmlcFunction. When automatic instance naming is used, the choice

of name bindings is left as a local matter.";

5.43.3 scfFunction - managedElement

scfFunction-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
scfFunction;
NAMED BY SUPERIOR OBJECT CLASS
"3GPP TS 32.624 Release 4 5": managedElement;
WITH ATTRIBUTE
scfFunctionId;
BEHAVIOUR
scfFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 3};

scfFunction-managedElementBehaviour **BEHAVIOUR**
___─**DEFINED AS**
──────"The name binding represents a relationship in which a managedElement contains and

── controls a scfFunction. When automatic instance naming is used, the choice

── of name bindings is left as a local matter.";

5.4~~3~~.4   srfFunction - managedElement

srfFunction-managedElement **NAME BINDING**
___─**SUBORDINATE OBJECT CLASS**
──────-srfFunction;
___─**NAMED BY SUPERIOR OBJECT CLASS**
──────-"3GPP TS 32.624 Release ~~4~~ 5": managedElement;
___─**WITH ATTRIBUTE**
──────-srfFunctionId;
___─**BEHAVIOUR**─
────────srfFunction-managedElementBehaviour;
___─**CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
___─**DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 4};

srfFunction-managedElementBehaviour **BEHAVIOUR**
___─**DEFINED AS**
──────"The name binding represents a relationship in which a managedElement contains and

── controls a srfFunction. When automatic instance naming is used, the choice

── of name bindings is left as a local matter.";

5.4~~3~~.5   cbcFunction - managedElement

cbcFunction-managedElement **NAME BINDING**
___─**SUBORDINATE OBJECT CLASS**
──────-cbcFunction;
___─**NAMED BY SUPERIOR OBJECT CLASS**
──────-"3GPP TS 32.624 Release ~~4~~ 5": managedElement;
___─**WITH ATTRIBUTE**
──────-cbcFunctionId;
___─**BEHAVIOUR**─
────────cbcFunction-managedElementBehaviour;
___─**CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
___─**DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 5};

cbcFunction-managedElementBehaviour **BEHAVIOUR**
___─**DEFINED AS**
──────"The name binding represents a relationship in which a managedElement contains and

── controls a cbcFunction. When automatic instance naming is used, the choice

── of name bindings is left as a local matter.";

5.4~~3~~.6   cgfFunction - managedElement

cgfFunction-managedElement **NAME BINDING**
___─**SUBORDINATE OBJECT CLASS**
──────-cgfFunction;
___─**NAMED BY SUPERIOR OBJECT ~~CLASS~~ CLASS**
──────"3GPP TS 32.624 Release ~~4~~ 5": managedElement;
___─**WITH ATTRIBUTE**
──────-cgfFunctionId;

BEHAVIOUR
cgfFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 6};

cgfFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
"The name binding represents a relationship in which a managedElement contains and

controls a cgfFunction. When automatic instance naming is used, the choice

of name bindings is left as a local matter.";

5.4.7 mgwFunction - managedElement

mgwFunction-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
mgwFunction;
NAMED BY SUPERIOR OBJECT CLASS
"3GPP TS 32.624 Release 4 5": managedElement;
WITH ATTRIBUTE
mgwFunctionId;
BEHAVIOUR
mgwFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 7};

mgwFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
"The name binding represents a relationship in which a managedElement contains and

controls a mgwFunction. When automatic instance naming is used, the choice

of name bindings is left as a local matter.";

5.4.8 gmscFunction - managedElement

gmscFunction-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
gmscFunction;
NAMED BY SUPERIOR OBJECT CLASS
"3GPP TS 32.624 Release 4 5": managedElement;
WITH ATTRIBUTE
gmscFunctionId;
BEHAVIOUR
gmscFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 8};

gmscFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
"The name binding represents a relationship in which a managedElement contains and

controls a gmscFunction. When automatic instance naming is used, the choice

of name bindings is left as a local matter.";

5.4.9 iwfFunction - managedElement

iwfFunction-managedElement **NAME BINDING**

SUBORDINATE OBJECT CLASS
-iwfFunction;
NAMED BY SUPERIOR OBJECT CLASS
-"3GPP TS 32.624 Release ~~4~~ 5": managedElement;
WITH ATTRIBUTE
-iwfFunctionId;
BEHAVIOUR
——iwfFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 9};

iwfFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
——"The name binding represents a relationship in which a managedElement contains and

—— controls a iwfFunction. When automatic instance naming is used, the choice

—— of name bindings is left as a local matter.";

5.~~4~~3.10   mnpSrfFunction - managedElement

mnpSrfFunction-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
-mnpSrfFunction;
NAMED BY SUPERIOR OBJECT CLASS
-"3GPP TS 32.624 Release ~~4~~ 5": managedElement;
WITH ATTRIBUTE
-mnpSrfFunctionId;
BEHAVIOUR
——mnpSrfFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 10};

mnpSrfFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
——"The name binding represents a relationship in which a managedElement contains and

—— controls a mnpSrfFunction. When automatic instance naming is used, the choice

—— of name bindings is left as a local matter.";

5.~~4~~3.11   npdbFunction - managedElement

npdbFunction-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
-npdbFunction;
NAMED BY SUPERIOR OBJECT CLASS
-"3GPP TS 32.624 Release ~~4~~ 5": managedElement;
WITH ATTRIBUTE
-npdbFunctionId;
BEHAVIOUR
——npdbFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 11};

npdbFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
——"The name binding represents a relationship in which a managedElement contains and

—— controls a npdbFunction. When automatic instance naming is used, the choice

—— of name bindings is left as a local matter.";

5.4~~3~~.12   rSgwFunction - managedElement

```
rSgwFunction-managedElement NAME BINDING
    SUBORDINATE OBJECT CLASS
        rSgwFunction;
    NAMED BY SUPERIOR OBJECT CLASS
        "3GPP TS 32.624 Release 4 5": managedElement;
    WITH ATTRIBUTE
        rSgwFunctionId;
    BEHAVIOUR
        rSgwFunction-managedElementBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 12};

rSgwFunction-managedElementBehaviour BEHAVIOUR
    DEFINED AS
        "The name binding represents a relationship in which a managedElement contains and

        controls a rSgwFunction. When automatic instance naming is used, the choice

        of name bindings is left as a local matter.";
```

5.4~~3~~.13   ssfFunction - managedElement

```
ssfFunction-managedElement NAME BINDING
    SUBORDINATE OBJECT CLASS
        ssfFunction;
    NAMED BY SUPERIOR OBJECT CLASS
        "3GPP TS 32.624 Release 4 5": managedElement;
    WITH ATTRIBUTE
        ssfFunctionId;
    BEHAVIOUR
        ssfFunction-managedElementBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 13};

ssfFunction-managedElementBehaviour BEHAVIOUR
    DEFINED AS
        "The name binding represents a relationship in which a managedElement contains and

        controls a ssfFunction. When automatic instance naming is used, the choice

        of name bindings is left as a local matter.";
```

5.4~~3~~.14   bsFunction - managedElement

```
bsFunction-managedElement NAME BINDING
    SUBORDINATE OBJECT CLASS
        bsFunction;
    NAMED BY SUPERIOR OBJECT CLASS
        "3GPP TS 32.624 Release 4 5": managedElement;
    WITH ATTRIBUTE
        bsFunctionId;
    BEHAVIOUR
        bsFunction-managedElementBehaviour;
    CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
    DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 14};

bsFunction-managedElementBehaviour BEHAVIOUR
    DEFINED AS
```

— "The name binding represents a relationship in which a managedElement contains and

— controls a bsFunction. When automatic instance naming is used, the choice

— of name bindings is left as a local matter.";

5.43.15 aucFunction - managedElement

aucFunction-managedElement **NAME BINDING**
— **SUBORDINATE OBJECT CLASS**
       -aucFunction;
— **NAMED BY SUPERIOR OBJECT CLASS**
       -"3GPP TS 32.624 Release 4 5": managedElement;
— **WITH ATTRIBUTE**
       -aucFunctionId;
— **BEHAVIOUR**—
          ——aucFunction-managedElementBehaviour;
— **CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
— **DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 15};

aucFunction-managedElementBehaviour **BEHAVIOUR**
— **DEFINED AS**
       ——"The name binding represents a relationship in which a managedElement contains and

       — controls a aucFunction. When automatic instance naming is used, the choice

       — of name bindings is left as a local matter.";

5.43.16 bgFunction - managedElement

bgFunction-managedElement **NAME BINDING**
— **SUBORDINATE OBJECT CLASS**
       -bgFunction;
— **NAMED BY SUPERIOR OBJECT CLASS**
       -"3GPP TS 32.624 Release 4 5": managedElement;
— **WITH ATTRIBUTE**
       -bgFunctionId;
— **BEHAVIOUR**—
          ——bgFunction-managedElementBehaviour;
— **CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
— **DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 16};

bgFunction-managedElementBehaviour **BEHAVIOUR**
— **DEFINED AS**
       ——"The name binding represents a relationship in which a managedElement contains and

       —controls a bgFunction. When automatic instance naming is used, the choice

       — of name bindings is left as a local matter.";

5.43.17 eirFunction - managedElement

eirFunction-managedElement **NAME BINDING**
— **SUBORDINATE OBJECT CLASS**
       -eirFunction;
— **NAMED BY SUPERIOR OBJECT CLASS**
       -"3GPP TS 32.624 Release 4 5": managedElement;
— **WITH ATTRIBUTE**

-eirFunctionId;
BEHAVIOUR
——eirFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 17};

eirFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
——"The name binding represents a relationship in which a managedElement contains and

—— controls a eirFunction. When automatic instance naming is used, the choice

—— of name bindings is left as a local matter.";

5.43.18   ggsnFunction - managedElement

ggsnFunction-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
-ggsnFunction;
NAMED BY SUPERIOR OBJECT CLASS
-"3GPP TS 32.624 Release 4 5": managedElement;
WITH ATTRIBUTE
-ggsnFunctionId;
BEHAVIOUR
——ggsnFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 18};

ggsnFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
——"The name binding represents a relationship in which a managedElement contains and

—— controls a ggsnFunction. When automatic instance naming is used, the choice

—— of name bindings is left as a local matter.";

5.3.19   gmscFunction - managedElement

gmscFunction-managedElement NAME BINDING
SUBORDINATE OBJECT CLASS gmscFunction;
NAMED BY SUPERIOR OBJECT CLASS "3GPP TS 32.624 Release 4": managedElement;
WITH ATTRIBUTE gmscFunctionId;
BEHAVIOUR
gmscFunction-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 19};

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

5.43.1920 hlrFunction - managedElement

hlrFunction-managedElement **NAME BINDING**
   —**SUBORDINATE OBJECT CLASS**
      -hlrFunction;
   —**NAMED BY SUPERIOR OBJECT CLASS**
      -"3GPP TS 32.624 Release 4 5": managedElement;
   —**WITH ATTRIBUTE**
      -hlrFunctionId;
   —**BEHAVIOUR**—
   ——hlrFunction-managedElementBehaviour;
   —**CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
   —**DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 1920};

hlrFunction-managedElementBehaviour **BEHAVIOUR**
   —**DEFINED AS**
     ——"The name binding represents a relationship in which a managedElement contains and

     — controls a hlrFunction. When automatic instance naming is used, the choice

     —— of name bindings is left as a local matter.";

5.43.201 mscServerFunction - managedElement

mscServerFunction-managedElement **NAME BINDING**
   —**SUBORDINATE OBJECT CLASS**
      -mscFunction;
   —**NAMED BY SUPERIOR OBJECT CLASS**
      -"3GPP TS 32.624 Release 4 5": managedElement;
   —**WITH ATTRIBUTE**
      -mscServerFunctionId;
   —**BEHAVIOUR**—
      ——mscServerFunction-managedElementBehaviour;
   —**CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
   —**DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 201};

mscServerFunction-managedElementBehaviour **BEHAVIOUR**
   —**DEFINED AS**
     ——"The name binding represents a relationship in which a managedElement contains and

     — controls a mscServerFunction. When automatic instance naming is used, the choice

     — of name bindings is left as a local matter.";

5.43.212 vlrFunction - managedElement

vlrFunction-managedElement **NAME BINDING**
   —**SUBORDINATE OBJECT CLASS**
      -vlrFunction;
   —**NAMED BY SUPERIOR OBJECT CLASS**
      -"3GPP TS 32.624 Release 4 5": managedElement;
   —**WITH ATTRIBUTE**
      -vlrFunctionId;
   —**BEHAVIOUR**—
      ——vlrFunction-managedElementBehaviour;
   —**CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
   —**DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 212};

vlrFunction-managedElementBehaviour **BEHAVIOUR**
   —**DEFINED AS**
     ——"The name binding represents a relationship in which a managedElement contains and

— controls a vlrFunction. When automatic instance naming is used, the choice

— of name bindings is left as a local matter.";

5.43.223 sgsnFunction - managedElement

sgsnFunction-managedElement **NAME BINDING**
  —**SUBORDINATE OBJECT CLASS**
    -sgsnFunction;
  —**NAMED BY SUPERIOR OBJECT CLASS**
    -"3GPP TS 32.624 Release 4 5": managedElement;
  —**WITH ATTRIBUTE**
    -sgsnFunctionId;
  —**BEHAVIOUR**—
    ——sgsnFunction-managedElementBehaviour;
  —**CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
  —**DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 223};

sgsnFunction-managedElementBehaviour **BEHAVIOUR**
  —**DEFINED AS**
    ——"The name binding represents a relationship in which a managedElement contains and

    — controls a sgsnFunction. When automatic instance naming is used, the choice

    — of name bindings is left as a local matter.";

5.43.234 smsGmscFunction - managedElement

smsGmscFunction-managedElement **NAME BINDING**
  —**SUBORDINATE OBJECT CLASS**
    -smsGmscFunction;
  —**NAMED BY SUPERIOR OBJECT CLASS**
    -"3GPP TS 32.624 Release 4 5": managedElement;
  —**WITH ATTRIBUTE**
    -smsGmscFunctionId;
  —**BEHAVIOUR**—
    ——smsGmscFunction-managedElementBehaviour;
  —**CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
  —**DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 234};

smsGmscFunction-managedElementBehaviour **BEHAVIOUR**
  —**DEFINED AS**
    ——"The name binding represents a relationship in which a managedElement contains and

    — controls a smsGmscFunction. When automatic instance naming is used, the choice

    — of name bindings is left as a local matter.";

5.43.245 smsIwmscFunction - managedElement

smsIwmscFunction-managedElement **NAME BINDING**
  —**SUBORDINATE OBJECT CLASS**
    -smsIwmscFunction;
  —**NAMED BY SUPERIOR OBJECT CLASS**
    -"3GPP TS 32.624 Release 4 5": managedElement;
  —**WITH ATTRIBUTE**
    -smsIwmscFunctionId;
  —**BEHAVIOUR**—
    ——smsIwmscFunction-managedElementBehaviour;
  —**CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
  —**DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;

REGISTERED AS {ts32-634NameBinding 245};

smsIwmscFunction-managedElementBehaviour **BEHAVIOUR**
DEFINED AS
"The name binding represents a relationship in which a managedElement contains and

controls a smsIwmscFunction. When automatic instance naming is used, the choice

of name bindings is left as a local matter.";

5.4.25   gbLink - managedElement

gbLink-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
gbLink;
NAMED BY SUPERIOR OBJECT CLASS
"3GPP TS 32.624 Release 5": managedElement;
WITH ATTRIBUTE
gbLinkId;
BEHAVIOUR
gbLink-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 25};

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

5.4.26   aLink - managedElement

aLink-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
aLink;
NAMED BY SUPERIOR OBJECT CLASS
"3GPP TS 32.624 Release 5": managedElement;
WITH ATTRIBUTE
aLinkId;
BEHAVIOUR
aLink-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 26};

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

5.4.27   iucsLink - managedElement

iucsLink-managedElement **NAME BINDING**
SUBORDINATE OBJECT CLASS
iucsLink;
NAMED BY SUPERIOR OBJECT CLASS
"3GPP TS 32.624 Release 5": managedElement;
WITH ATTRIBUTE
iucsLinkId;
BEHAVIOUR
iucsLink-managedElementBehaviour;
CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;

> **DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 27};

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

## 5.4.28	iupsLink - managedElement

iupsLink-managedElement **NAME BINDING**
> **SUBORDINATE OBJECT CLASS**
> > iupsLink;
> **NAMED BY SUPERIOR OBJECT CLASS**
> > "3GPP TS 32.624 Release 5": managedElement;
> **WITH ATTRIBUTE**
> > iupsLinkId;
> **BEHAVIOUR**
> > iupsLink-managedElementBehaviour;
> **CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
> **DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 28};

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

## 5.4.29	iubcLink - managedElement

iubcLink-managedElement **NAME BINDING**
> **SUBORDINATE OBJECT CLASS**
> > iubcLink;
> **NAMED BY SUPERIOR OBJECT CLASS**
> > "3GPP TS 32.624 Release 5": managedElement;
> **WITH ATTRIBUTE**
> > iubcLinkId;
> **BEHAVIOUR**
> > iubcLink-managedElementBehaviour;
> **CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
> **DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 29};

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

## 5.4.30	gmscServerFunction - managedElement

gmscServerFunction-managedElement **NAME BINDING**
> **SUBORDINATE OBJECT CLASS**
> > gmscServerFunction;
> **NAMED BY SUPERIOR OBJECT CLASS**
> > "3GPP TS 32.624 Release 5": managedElement;
> **WITH ATTRIBUTE**
> > gmscServerFunctionId;
> **BEHAVIOUR**
> > gmscServerFunction-managedElementBehaviour;
> **CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING**;
> **DELETE ONLY-IF-NO-CONTAINED-OBJECTS**;
REGISTERED AS {ts32-634NameBinding 30};

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

5.4.31 csMgwFunction - managedElement

csMgwFunction-managedElement **NAME BINDING**
   SUBORDINATE OBJECT CLASS
      csMgwFunction;
   NAMED BY SUPERIOR OBJECT CLASS
      "3GPP TS 32.624 Release 5": managedElement;
   WITH ATTRIBUTE
      csMgwFunctionId;
   BEHAVIOUR
      csMgwFunction-managedElementBehaviour;
   CREATE WITH-REFERENCE-OBJECT, WITH-AUTOMATIC-INSTANCE-NAMING;
   DELETE ONLY-IF-NO-CONTAINED-OBJECTS;
REGISTERED AS {ts32-634NameBinding 31};

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

6 ASN.1 Definitions

```
TS32-634TypeModule {ccitt (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Operation-
Maintenance (3) ts32-634 (634) informationModel (0) asn1Module (2) version1 (1)}

DEFINITIONS IMPLICIT TAGS ::=

BEGIN

--EXPORTS everything


IMPORTS

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

MobileCountryCode, MobileNetworkCode, LocationAreaCode
     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 32.634 related Object Identifiers

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

ts32-634               OBJECT IDENTIFIER ::= { baseNodeUMTS ts32-634               (634)}
ts32-634InfoModel      OBJECT IDENTIFIER ::= { ts32-634 informationModel           (  0)}

ts32-634ObjectClass    OBJECT IDENTIFIER ::= { ts32-634InfoModel managedObjectClass  (  3)}
ts32-634Package        OBJECT IDENTIFIER ::= { ts32-634InfoModel package             (  4)}
ts32-634Parameter      OBJECT IDENTIFIER ::= { ts32-634InfoModel parameter           (  5)}
ts32-634NameBinding    OBJECT IDENTIFIER ::= { ts32-634InfoModel nameBinding         (  6)}
ts32-634Attribute      OBJECT IDENTIFIER ::= { ts32-634InfoModel attribute           (  7)}
ts32-634Action         OBJECT IDENTIFIER ::= { ts32-634InfoModel action              (  9)}
ts32-634Notification   OBJECT IDENTIFIER ::= { ts32-634InfoModel notification        ( 10)}


-- Start of 3gPP SA5 own definitions

MccList ::= SET OF MobileCountryCode

MncList ::= SET OF MobileNetworkCode

LacList ::= SET OF LocationAreaCode

Ura ::= INTEGER

UraList ::= SET OF Ura

Rac ::= INTEGER

RacList ::= SET OF Rac

Sac ::= INTEGER

SacList ::= SET OF Sac

Cga ::= INTEGER

CgaList ::= SET OF Cga

END -- of TS32-634TypeModule
```

DEFINITIONS IMPLICIT TAGS ::=
BEGIN
-- EXPORTS everything

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

-- 3GPP TS 32.634 related Object Identifiers

baseNodeUMTS OBJECT IDENTIFIER ::= {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
                                    umts-Operation-Maintenance(3)}
ts32-634   OBJECT IDENTIFIER ::= { baseNodeUMTS ts32-634(634)}
ts32-634InfoModel   OBJECT IDENTIFIER ::= { ts32-634 informationModel(0)}

ts32-634ObjectClass OBJECT IDENTIFIER ::= { ts32-634InfoModel managedObjectClass(3)}
ts32-634Package   OBJECT IDENTIFIER ::= { ts32-634InfoModel package(4)}
ts32-634Parameter   OBJECT IDENTIFIER ::= { ts32-634InfoModel parameter(5)}
ts32-634NameBinding   OBJECT IDENTIFIER ::= { ts32-634InfoModel nameBinding(6)}
ts32-634Attribute   OBJECT IDENTIFIER ::= { ts32-634InfoModel attribute(7)}
ts32-634Action   OBJECT IDENTIFIER ::= { ts32-634InfoModel action(9)}
ts32-634Notification OBJECT IDENTIFIER ::= { ts32-634InfoModel notification(10)}

-- Start of 3gPP SA5 own definitions

END -- of TS32-634TypeModule

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
Sep 2001	S_13	SP-010478	001	--	Correction due to TS renumbering	4.0.0	4.1.0