3GPP TS 32.783 V9.0.0 (2010-04)

Technical Specification

**3rd Generation Partnership Project;
Technical Specification Group Services and System Aspects;
Telecommunication management;
Home enhanced Node B (HeNB) Subsystem (HeNS);
Network Resource Model (NRM);
Integration Reference Point (IRP);
Common Object Request Broker Architecture (CORBA)
Solution Set (SS)
(Release 9)**

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Contents

Foreword

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

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

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

32.781:   Telecommunication management; Home enhanced Node B Subsystem (HeNS) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements

32.782:   Telecommunication management; Home enhanced Node B Subsystem (HeNS) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)

32.783:   Telecommunication management; Home enhanced Node B Subsystem (HeNS) Network Resource Model (NRM) Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)

32.785:   Telecommunication management; Home enhanced Node B Subsystem (HeNS) Network Resource Model (NRM) Integration Reference Point (IRP); Bulk CM eXtensible Markup Language (XML) file format definition

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.

CM actions may be requested as part of an implementation programme (e.g. additions and deletions), as part of an optimisation programme (e.g. modifications), and to maintain the overall Quality of Service (QoS). The CM actions are initiated either as single actions on single NEs of the 3G network, or as part of a complex procedure involving actions on many resources/objects in one or several NEs.

1 Scope

The present document is part of an Integration Reference Point (IRP) named HeNS Network Resource Model (NRM) IRP, through which an `IRPAgent` can communicate configuration management information to one or several `IRPManagers` concerning HeNS resources. The HeNS NRM IRP comprises a set of specifications defining Requirements, a protocol neutral Information Service and one or more Solution Set(s).

The present document specifies the HeNS Network Resources IRP: CORBA Solution Set, which defines the mapping of the IRP information model (see TS 32.782 [2]) to the protocol specific details necessary for implementation of this IRP in a CORBA/IDL environment.

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 TR 21.905: "Vocabulary for 3GPP Specifications".

[2]   3GPP TS 32.782: "Telecommunication management; Home enhanced Node B Subsystem (HeNS) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

3.2 Abbreviations

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

CORBA	Common Object Request Broker Architecture
DN	Distinguished Name
IS	Information Service
IDL	Interface Definition Language
IRP	Integration Reference Point
MO	Managed Object
MOC	Managed Object Class
NRM	Network Resource Model
OMG	Object Management Group
SS	Solution Set
HeNS	Home enhanced Node B Subsystem

4 Architectural features

The overall architectural feature of HeNS Network Resources IRP is specified in 3GPP TS 32.782 [2].
This clause specifies features that are specific to the CORBA SS.

5 Mapping

5.1 General mappings

Attributes modelling associations as defined in the NRM (here also called "reference attributes") are in this SS mapped to attributes.
The names of the reference attributes in the NRM are mapped to the corresponding attribute names in the MOC.
When the cardinality for an association is 0..1 or 1..1 the data type for the reference attribute is defined as an MOReference. The value of an MO reference contains the distinguished name of the associated MO.
When the cardinality for an association allows more than one referred MO, the reference attribute will be of type MOReferenceSet, which contains a sequence of MO references.

5.2 Information Object Class (IOC) mapping

This SS supports reference attributes for relations other than containment relations between objects. Reference attributes are therefore introduced in each MOC where needed.

5.2.1 IOC HeNBGWFunction

NRM Attributes of IOC HeNBGWFunction in TS 32.782 [2]	SS Attributes	SS Type	Support Qualifier	Read	Write
id	henbgwFunctionId	string	M	M	-
henbgwId	henbgwId	long	M	M	-
userLabel	userLabel	string	M	M	M
ipConfigInfo	ipConfigInfo	string	M	M	-
maxNbrHeNBRegistered	maxNbrHeNBRegistered	Integer	M	M	-
maxPacketCapability	maxPacketCapability	integer	M	M	-

5.2.2 IOC HeNBProfile

NRM Attributes of IOC HeNBProfile in TS 32.782 [2]	SS Attributes	SS Type	Support Qualifier	Read	Write
id	henbProfileId	string	M	M	-
userLabel	userLabel	string	M	M	M
configuration	configuration	string	M	M	-
criterion	criterion	string	O	M	-

5.2.3 IOC HeMSFunction

NRM Attributes of IOC HeMSFunction in TS 32.782 [2]	SS Attributes	SS Type	Support Qualifier	Read	Write
userLabel	userLabel	string	M	M	M

Annex A (normative):
IDL specifications

```
//File: HensNetworkResourcesNRMDefs.idl
#ifndef _HENSNETWORKRESOURCESNRMDEFS_IDL_
#define _HENSNETWORKRESOURCESNRMDEFS_IDL_
#include "GenericNetworkResourcesNRMDefs.idl"
#pragma prefix "3gppsa5.org"
/**
 * This module defines constants for each MO class name and
 * the attribute names for each defined MO class.
 */
module HensNetworkResourcesNRMDefs
{


     /**
      *  Definitions for MO class HeNBGWFunction
      */
     interface HeNBGWFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
     {
        const string CLASS = "HeNBGWFunction";
        // Attribute Names
        //
        const string henbgwFunctionId = "henbgwFunctionId";
        const string henbgwId = "henbgwId";
        const string ipConfigInfo = "ipConfigInfo";
        const string maxNbrHeNBRegistered = "maxNbrHeNBRegistered";
        const string maxPacketCapability = "maxPacketCapability";
     };

     /**
      *  Definitions for MO class HeNBProfile
      */
     interface HeNBProfile : GenericNetworkResourcesNRMDefs::ManagedFunction
     {
        const string CLASS= "HeNBProfile";
        // Attribute Names
        //
        const string henbProfileId = "henbProfileId";
        const string configuration = "configuration";
        const string criterion = "criterion";

     };


     /**
      *  Definitions for MO class HeMSFunction
      */
     interface HeMSFunction : GenericNetworkResourcesNRMDefs::ManagedFunction
     {
        const string CLASS= "HeMSFunction";
        // Attribute Names
        //
     };
};

#endif //_HENSETWORKRESOURCESNRMDEFS_IDL_
```

Annex B (informative):
Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Mar 2010	SA#47	SP-100064	--	--	Presentation to SA for information and approval	--	1.0.0
Apr 2010	SA#47	--	--	--	Publication fo SA approved version	1.0.0	9.0.0