



**Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Evolved Universal Terrestrial
Radio Access Network (E-UTRAN)
Network Resource Model (NRM)
Integration Reference Point (IRP);
Solution Set (SS) definitions
(3GPP TS 28.659 version 13.0.0 Release 13)**



Reference

RTS/TSGS-0528659vd00

Keywords

LTE,UMTS

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:
<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at
<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:
<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2016.
All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE™** are Trade Marks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.
GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

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

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under <http://webapp.etsi.org/key/queryform.asp>.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Contents

Intellectual Property Rights	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	5
Introduction	5
1 Scope	6
2 References	6
3 Definitions and abbreviations.....	7
3.1 Definitions	7
3.2 Abbreviations	7
4 Solution Set Definitions	8
Annex A (normative): CORBA Solution Set	9
A.0 General	9
A.1 Architectural features	9
A.1.1 Syntax for Distinguished Names	9
A.1.2 Rules for NRM extensions	9
A.1.2.1 Allowed extensions.....	9
A.1.2.2 Extensions not allowed	9
A.2 Mapping	10
A.2.1 General mapping	10
A.2.2 Information Object Class (IOC) mapping	10
A.2.2.1 IOC ENBFunction	10
A.2.2.2 IOC EUTranGenericCell.....	11
A.2.2.3 IOC ExternalEUTranGenericCell	12
A.2.2.4 IOC EUTranCellFDD	12
A.2.2.5 IOC ExternalEUTranCellFDD.....	12
A.2.2.6 IOC EUTranRelation	13
A.2.2.7 IOC Link_ENB_ENB.....	14
A.2.2.8 IOC Cdma2000Relation	14
A.2.2.9 IOC ExternalENBFunction.....	14
A.2.2.10 IOC EUTranCellTDD	14
A.2.2.11 IOC ExternalEUTranCellTDD.....	14
A.2.2.12 IOC MCEFunction	14
A.2.2.13 IOC MBSFNArea	15
A.2.2.14 IOC RNFunction.....	15
A.2.2.15 IOC DeNBCapability.....	15
A.2.2.16 IOC ExternalRNFunction	15
A.2.2.17 IOC QciDscpMapping.....	15
A.2.2.18 IOC CellOutageCompensationInformation	16
A.2.2.19 IOC EUTranCellNMCentralizedSON.....	17
A.3 Solution Set definitions	20
A.3.1 IDL definition structure.....	20
A.3.2 IDL specification "EUTranNetworkResourcesNRMDefs.idl"	20
Annex B (normative): XML Definitions	40
B.0 General	40
B.1 Architectural features	40

B.1.1	Syntax for Distinguished Names	40
B.2	Mapping	40
B.2.1	General mapping	40
B.2.2	Information Object Class (IOC) mapping	40
B.3	Solution Set definitions	40
B.3.1	XML definition structure.....	40
B.3.2	Graphical Representation	41
B.3.3	XML schema "eutranNrm.xsd"	41
Annex C (informative): Change history		75
History		76

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; as identified below:

- TS 28.657 Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements
- TS 28.658 Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)
- TS 28.659 Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions**

1 Scope

The present document is part of an Integration Reference Point (IRP) named E-UTRAN Network Resource Model (NRM) IRP, through which an `IRPAgent` can communicate configuration management information to one or several `IRPManagers` concerning E-UTRAN resources. The E-UTRAN 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 Solution Sets for the E-UTRAN NRM IRP.

This Solution Set specification is related to 3GPP TS 28.658 V12. 2.X [4].

2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TS 21.905: 'Vocabulary for 3GPP Specifications'.
- [2] 3GPP TS 32.153: 'Telecommunication management; Integration Reference Point (IRP) technology specific templates, rules and guidelines'.
- [3] 3GPP TS 32.600: "Telecommunication management; Configuration Management (CM); Concept and high-level requirements".
- [4] 3GPP TS 28.658: "Telecommunications management; Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP): Information Service (IS)".
- [5] 3GPP TS 32.300: "Telecommunication management; Configuration Management (CM); Name convention for Managed Objects".
- [6] 3GPP TS 32.606: "Telecommunication management; Configuration Management (CM); Basic CM Integration Reference Point (IRP); Solution Set (SS) definitions".
- [7] 3GPP TS 32.616: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Solution Set (SS) definitions".
- [8] 3GPP TS 28.623: 'Generic network resources Integration Reference Point (IRP); Solution Set (SS) definition'.
- [9] W3C REC-xml11-20060816: "Extensible Markup Language (XML) 1.1 (Second Edition)".
- [10] W3C XML Schema Definition Language (XSD) 1.1 Part 1: Structures.
- [11] W3C XML Schema Definition Language (XSD) 1.1 Part 2: Datatypes.
- [12] W3C REC-xml-names-20060816: "Namespaces in XML 1.1 (Second Edition)".