

ETSI TS 128 674 V17.0.0 (2022-04)



**Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Home enhanced Node B (HeNB) Subsystem (HeNS)
Network Resource Model (NRM)
Integration Reference Point (IRP);
Requirements
(3GPP TS 28.674 version 17.0.0 Release 17)**



Reference

RTS/TSGS-0528674vh00

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 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

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 prevailing version of an ETSI deliverable is the one made publicly available in PDF format at www.etsi.org/deliver.

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

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>

If you find a security vulnerability in the present document, please report it through our
Coordinated Vulnerability Disclosure Program:

<https://www.etsi.org/standards/coordinated-vulnerability-disclosure>

Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

No representation or warranty is made that this deliverable is technically accurate or sufficient or conforms to any law and/or governmental rule and/or regulation and further, no representation or warranty is made of merchantability or fitness for any particular purpose or against infringement of intellectual property rights.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

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.

© ETSI 2022.
All rights reserved.

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are 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 Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, 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.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

Legal Notice

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. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 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
Legal Notice	2
Modal verbs terminology.....	2
Foreword.....	4
Introduction	4
1 Scope	5
2 References	5
3 Definitions, symbols and abbreviations	5
3.1 Definitions	5
3.1 Abbreviations	6
4 Concepts and background	7
5 Requirements.....	7
Annex A (informative): Change history	8
History	9

Foreword

This Technical Report 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:

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

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

28.676: Telecommunication management; Home enhanced Node B Subsystem (HeNS) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions

1 Scope

The document describes the requirements for Home eNodeB Subsystem (HeNS), which include Home eNodeB (HeNB) and Home eNodeB gateway (HeNB GW). The HeNS NRM IRP requirements are targeted on both HeNB and HeNB GW NRM.

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 25.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 32.101: "Telecommunication management; Principles and high level requirements".
- [3] 3GPP TS 32.102: "Telecommunication management; Architecture".
- [4] 3GPP TS 32.600: "Telecommunication management; Configuration Management (CM); Concept and high-level requirements".
- [5] 3GPP TS 32.150: "Telecommunication management; Integration Reference Point (IRP) Concept and definitions".
- [6] 3GPP TS 23.401: "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".
- [7] 3GPP TS 36.300: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRAN); Overall description; Stage 2".
- [8] 3GPP TS 32.107: "Telecommunication management; Fixed Mobile Convergence (FMC) Federated Network Information Model (FNIM)".
- [9] 3GPP TS 28.620: "Telecommunication management; Fixed Mobile Convergence (FMC) Federated Network Information Model (FNIM) Umbrella Information Model (UIM)".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

Integration Reference Point (IRP): See 3GPP TS 32.150 [5].

Information Service (IS): See 3GPP TS 32.150 [5].

Solution Set (SS): See 3GPP TS 32.150 [5].

IRP Solution Set: See 3GPP TS 32.101 [1].

3.1 Abbreviations

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

HeNB	Home eNodeB
GW	Gateway
HeNB	Home enhanced Node B
HeNS	Home enhanced Node B Subsystem
IRP	Integration Reference Point
IOC	Information Object Class
NRM	Network Resource Model

4 Concepts and background

HeNB Subsystem is defined in TS 23.401[6]. According to the definition, a HeNB Subsystem consists of a HeNB and optionally a HeNB GW. The HeNB Subsystem is connected by means of the standard S1 interface to the EPC (Evolved Packet Core), more specifically to the MME (Mobility Management Entity) by means of the S1-MME interface and to the Serving Gateway (S-GW) by means of the S1-U interface.

Detailed functions of HeNB and HeNB GW are described in TS 36.300 [7]. To be more specific, HeNB is a Customer Premise Equipment that offers the LTE-Uu Interface to the UE. And it could discover a suitable Serving HeNB GW over S1 interface. A HeNB GW can relay UE-associated S1 application part messages between the MME serving the UE and the HeNB serving the UE. It could terminate non-UE associated S1 application part procedures towards the HeNB and towards the MME and optionally terminate S1-U interface with the HeNB and with the S-GW.

Based on the above characteristics, this specification defines respective HeNS NRM IRP requirements.

5 Requirements

The following general and high-level requirements apply for the present IRP:

- a) IRP-related requirements in 3GPP TS 32.101 [2].
- b) IRP-related requirements in 3GPP TS 32.102 [3].
- c) IRP-related requirements in 3GPP TS 32.600 [4].

The NRM defined by this IRP:

- d) Shall support communications for telecommunication network management purposes, including management of converged networks.
- e) Is a member of the Federated Network Information Model (FNIM) [8] and its information is derived from FNIM Umbrella Information Model (UIM) [9]

In addition to the above, the following more specific requirements apply:

REQ-HeNS_GW-CON-001 The Network Resource Model defined by this IRP shall contain HeNB GW specific IOCs and related definitions..

REQ-HeNS_GW-CON-002 The Network Resource Model defined by this IRP shall provide support for enabling consistency between HeNB GW, HeNB and related EPC nodes.

Annex A (informative): Change history

Change history								
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Cat	Old	New
2014-06	SA#64	SP-140360	001	-	remove the feature support statements	F	11.0.0	11.1.0
2014-10	-	-	-	-	Update to Rel-12 version (MCC)		11.1.0	12.0.0
2016-01	-	-	-	-	Update to Rel-13 version (MCC)		12.0.0	13.0.0
2017-03	SA#75	-	-	-	Promotion to Release 14 without technical change		13.0.0	14.0.0

Change history								
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version	
2018-06						Update to Rel-15 version (MCC)	15.0.0	
2020-07	-	-	-	-	-	Update to Rel-16 version (MCC)	16.0.0	
2022-03	-	-	-	-	-	Update to Rel-17 version (MCC)	17.0.0	

History

Document history		
V17.0.0	April 2022	Publication