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**Universal Mobile Telecommunications System (UMTS);  
LTE;  
Telecommunication management;  
GSM/EDGE Radio Access Network (GERAN)  
Network Resource Model (NRM)  
Integration Reference Point (IRP);  
Requirements  
(3GPP TS 28.654 version 17.0.0 Release 17)**



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# Contents

Intellectual Property Rights .....	2
Legal Notice .....	2
Modal verbs terminology.....	2
Foreword.....	4
Introduction .....	4
1 Scope .....	5
2 References .....	5
3 Definitions and abbreviations.....	5
3.1 Definitions .....	5
3.2 Abbreviations .....	5
4 Requirements.....	6
<b>Annex A (informative): Change history .....</b>	<b>7</b>
History .....	8

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# Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> 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.

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# Introduction

The present document is part of a TS-family covering the 3<sup>rd</sup> Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; as identified below:

- 28.654: GSM/EDGE Radio Access Network (GERAN) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements**
- 28.655: GSM/EDGE Radio Access Network (GERAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)
- 28.656: GSM/EDGE Radio Access Network (GERAN) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions

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# 1 Scope

The present document defines, in addition to the requirements defined in [1], [2] and [3], the requirements for the present IRP: GERAN Network Resource Model (NRM) Integration Reference Point (IRP).

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## 2 References

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

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

- [1] 3GPP TS 32.101: "Telecommunication management; Principles and high level requirements".
- [2] 3GPP TS 32.102: "Telecommunication management; Architecture".
- [3] 3GPP TS 32.600: "Telecommunication management; Configuration Management (CM); Concept and high-level requirements".
- [4] 3GPP TS 32.107: "Telecommunication management; Fixed Mobile Convergence (FMC) Federated Network Information Model (FNIM)".
- [5] 3GPP TS 28.620: "Telecommunication management; Fixed Mobile Convergence (FMC) Federated Network Information Model (FNIM) Umbrella Information Model (UIM)".
- [6] 3GPP TS.28.622: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

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## 3 Definitions and abbreviations

### 3.1 Definitions

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

**IRP:** See 3GPP TS 32.101 [1].

**Network Resource Model (NRM):** See definition in TS 32.622 [6].

### 3.2 Abbreviations

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

GERAN	GSM/EDGE Radio Access Network
GSM	Global System for Mobile communication
IRP	Integration Reference Point
IS	Information Service (see [1])
NRM	Network Resource Model
UMTS	Universal Mobile Telecommunications System

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## 4 Requirements

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

- a) IRP-related requirements in 3GPP TS 32.101 [1].
- b) IRP-related requirements in 3GPP TS 32.102 [2].
- c) IRP-related requirements in 3GPP TS 32.600 [3].

The NRM defined by this IRP:

- a) Shall support communications for telecommunication network management purposes, including management of converged networks.
- b) Is a member of the Federated Network Information Model (FNIM) [4] and its information is derived from FNIM Umbrella Information Model (UIM) [5].

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

**REQ-GERAN\_NRM-CON-001:** The Network Resource Model defined by this IRP shall contain GERAN specific classes and related definitions, supporting the management of GERAN Network entities.

**REQ-GERAN\_NRM-CON-002:** The Network Resource Model defined by this IRP shall support management of UMTS-GSM Inter-system handover.

## Annex A (informative): Change history

Change history								
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Cat	Old	New
2014-06	SA#64	SP-140359	001	-	remove the feature support statements	F	11.0.0	11.1.0
2014-10	-	-	-	-	Update to Rel-12 version (MCC)		11.1.0	<b>12.0.0</b>
2016-01	-	-	-	-	Update to Rel-13 version (MCC)		12.0.0	<b>13.0.0</b>
2017-03	SA#75	-	-	-	Promotion to Release 14 without technical change		13.0.0	<b>14.0.0</b>

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



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# History

<b>Document history</b>		
V17.0.0	April 2022	Publication