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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 12.0.0 Release 12)**



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## Foreword

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

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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.

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## 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>



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# History

<b>Document history</b>		
V12.0.0	October 2014	Publication