ETSI TS 128 662 V15.3.0 (2020-01)

Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Generic Radio Access Network (RAN)
Network Resource Model (NRM)
Integration Reference Point (IRP);
Information Service (IS)
(3GPP TS 28.662 version 15.3.0 Release 15)

Reference

RTS/TSGS-0528662vf30

Keywords

LTE,UMTS

ETSI

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Sous-Préfecture de Grasse (06) N° 7803/88

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Contents

Foreword

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

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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:

28.661: Generic Radio Access Network (RAN) Network Resource Model (NRM); Integration Reference Point (IRP); Requirements;

28.662: Generic Radio Access Network (RAN) Network Resource Model (NRM); Integration Reference Point (IRP); Information Service (IS);

28.663: Generic Radio Access Network (RAN) Network Resource Model (NRM); Integration Reference Point (IRP); Solution Set (SS) definitions.

1 Scope

The present document specifies the Generic Radio Access Network (RAN) network resource model (NRM) that can be communicated between an IRPAgent and an IRPManager for telecommunication network management purposes, including management of converged networks.

This document specifies the semantics and behaviour of information object class attributes and relations visible across the reference point in a protocol and technology neutral way. It does not define their syntax and encoding.

In order to access the information defined by this NRM, an Interface IRP such as the "Basic CM IRP" is needed (3GPP TS 32.602 [5]). However, which Interface IRP is applicable is outside the scope of the present document.

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 32.101: "Telecommunication management; Principles and high level requirements".

[3] 3GPP TS 32.102: "Telecommunication management; Architecture".

[4] 3GPP TS 32.150: "Telecommunication management; Integration Reference Point (IRP) Concept and definitions".

[5] 3GPP TS 32.602: "Telecommunication management; Configuration Management (CM); Basic CM Integration Reference Point (IRP) ; Information Service (IS)".

[6] Void.

[7] 3GPP TS 36.104: "Evolved Universal Terrestrial Radio Access (E_UTRA); Base Station (BS) radio transmission and reception".

[8] Void.

[9] Void.

[10] 3GPP TS 28.661: "Telecommunication management; Generic Radio Access Network (RAN) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".

[11] 3GPP TS 32.111-2: "Telecommunication management; Fault Management; Part 2: Alarm Integration Reference Point (IRP): Information Service (IS)".

[12] 3GPP TS 28.652: "Telecommunication management; Universal Terrestrial Radio Access Network (UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS) ".

[13] 3GPP TS 28.658: "Telecommunication management; Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

[14] 3GPP TS 28.655:"Telecommunication management; GSM/EDGE Radio Access Network (GERAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

[15] 3GPP TS 28.622: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

[16] 3GPP TS 32.302: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Information Service (IS)".

[17] 3GPP TS 32.662: "Telecommunication management; Configuration Management (CM); Kernel CM Information Service (IS)".

[18] 3GPP TS 25.106: "Technical Specification Group Radio Access Network; UTRA repeater radio transmission and reception".

[19] 3GPP TS 45.005: "Radio transmission and reception".

[20] 3GPP TS 45.010: "Radio subsystem synchronization".

[21] 3GPP TS 25.104: "Base Station (BS) radio transmission and reception (FDD)".

[22] 3GPP TS 25.105: "Base Station (BS) radio transmission and reception (TDD)".

[23] 3GPP TS 38.104: "NR; Base Station (BS) radio transmission and reception".

[24] 3GPP TS 28.541: "NR and NG-RAN Network Resource Model (NRM) stage 2 and stage 3".

[25] 3GPP TS 28.652: "UTRAN Network Resource Model (NRM) Integration Reference Point (IRP): Information Service (IS)".

[26] 3GPP TS 37.466: "Iuant Interface: Application Part".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the definitions given in TR 21.905 [1], TS 32.150 [4], TS 32.101 [2], TS 32.102 [3] and the following apply. The definitions defined in the present document take precedence over those, if any, in TS 32.150 [4], TS 32.101 [2], TS 32.102 [3] and TR 21.905 [1], in that order.

Network Resource Model (NRM): See definition in TS 28.622 [15].

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

CM Configuration Management
DN Distinguished Name
IOC Information Object Class
RDN Relative Distinguished Name
SS Solution Set

4 Model

4.1 Imported information entities and local labels

Label reference	Local label
3GPP TS 28.622 [15], IOC, `ManagedFunction`	`ManagedFunction`
3GPP TS 28.652 [12], IOC, `UtranGenericCell`	`UtranGenericCell`
3GPP TS 28.658 [13], IOC, `EUtranGenericCell`	`EUtranGenericCell`
3GPP TS 28.655 [14], IOC, `GSMCell`	`GSMCell`
3GPP TS 28.541 [24], IOC, `NRSectorCarrier`	`NRSectorCarrier`
3GPP TS 28.541 [24], IOC, `NRCellDU`	`NRCellDU`
3GPP TS 28.658 [13], IOC, `ENBFunction`	`ENBFunction`
3GPP TS 28.652 [25], IOC, `NodeBFunction`	`NodeBFunction`
3GPP TS 28.655 [14], IOC, `BssFunction`	`BssFunction`

4.2 Class diagrams

4.2.1 Relationships

This subclause depicts the set of classes (e.g. IOCs) that encapsulates the information relevant for this IRP. This subclause provides the overview of the relationships of relevant classes in UML. Subsequent subclauses provide more detailed specification of various aspects of these classes.

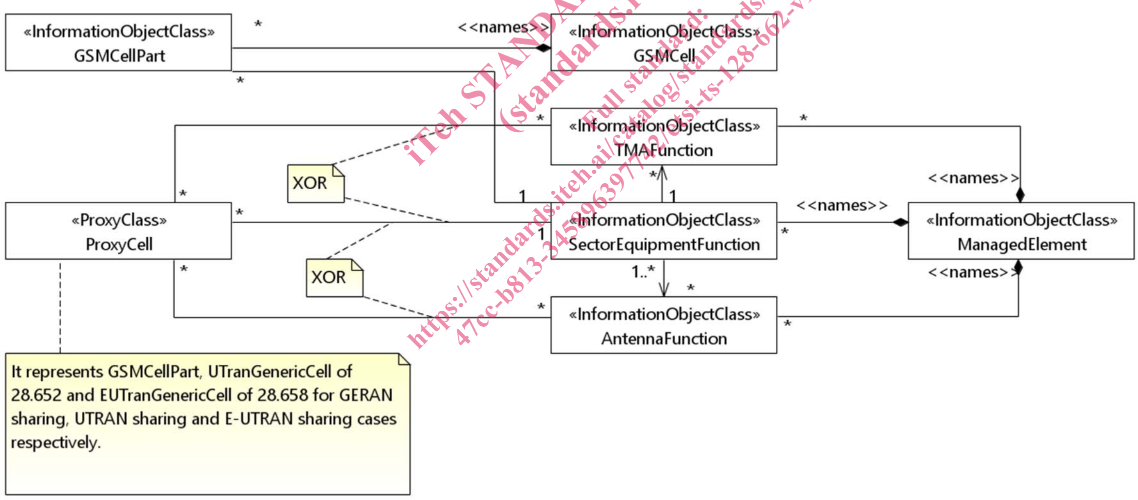
«InformationObjectClass»
GSMCellPart
<<names>>
«InformationObjectClass»
GSMCell
«InformationObjectClass»
TMAFunction
XOR
«ProxyClass»
ProxyCell
«InformationObjectClass»
SectorEquipmentFunction
<<names>>
«InformationObjectClass»
ManagedElement
XOR
«InformationObjectClass»
AntennaFunction
It represents GSMCellPart, UTranGenericCell of 28.652 and EUTranGenericCell of 28.658 for GERAN sharing, UTRAN sharing and E-UTRAN sharing cases respectively.

Figure 4.2.1.1: UTRAN/E-UTRAN/NR/GERAN sharing (1/2)

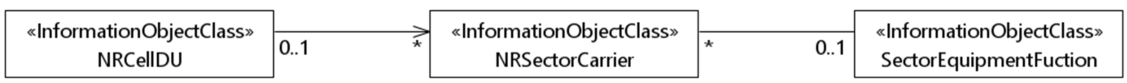

Figure 4.2.1.2: UTRAN/E-UTRAN/NR/GERAN sharing (2/2)

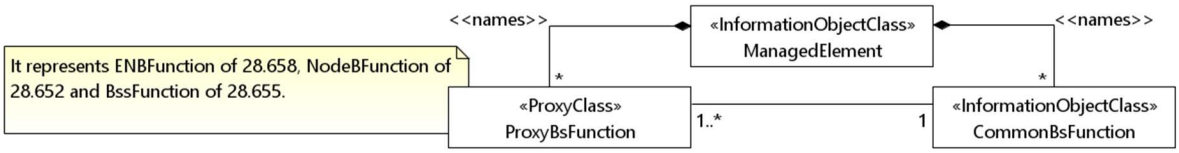

Figure 4.2.1.3: CommonBsFunction NRM fragment

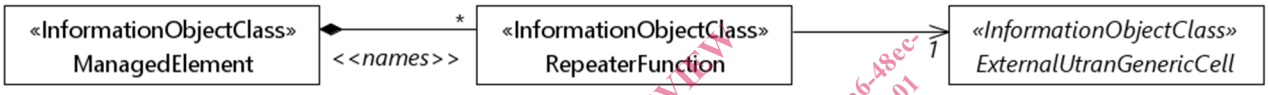

Figure 4.2.1.4: RepeaterFunction NRM fragment

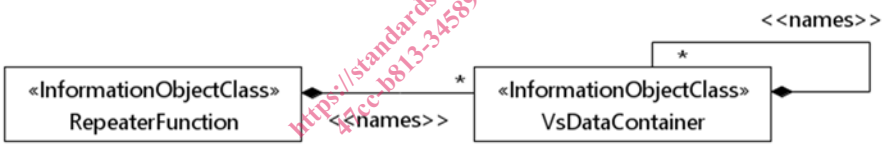

Figure 4.2.1.5: RepeaterFunction related VsDataContainer Containment/Naming and Association diagram

4.2.2 Inheritance

This subclause depicts the inheritance relationships.