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TECHNICAL SPECIFICATION

Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Evolved Packet Core (EPC) and non-3GPP access
interworking system Network Resource Model (NRM)
Integration Reference Point (IRP);
Requirements
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Contents

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 28.611: "Evolved Packet Core (EPC) and non-3GPP access interworking system Network Resource Model (NRM) Integration Reference Point (IRP); Requirements"

TS 28.612: "Evolved Packet Core (EPC) and non-3GPP access interworking system Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)"

TS 28.616: "Evolved Packet Core (EPC) and non-3GPP access interworking system Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions"

1 Scope

The present document describes the Network Resource Model (NRM) Integration Reference Point (IRP) requirements for the EPC and WLAN interworking system according to the structure defined in 3GPP TS 23.402 [8] (e.g. ePDG, 3GPP AAA, etc).

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 32.600: "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] Void

[7] 3GPP TS 23.401: "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".

[8] 3GPP TS 23.402: "Architecture enhancements for non-3GPP accesses".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [1] and the following apply.
A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

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].

3.2 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].

AAA	Access, Authentication and Authorisation
ePDG	evolved Packet Data Gateway
IRP	Integration Reference Point
IOC	Information Object Class
NRM	Network Resource Model

4 Concepts and background

The architectures of enhancement for non-3GPP access (i.e. WLAN) to 3GPP system are defined in
3GPP TS 23.402 [8].
In TS 23.402, three kinds of architectures are defined, using S2a, S2b and S2c interface separately.
The architectures of S2a and S2c don't introduce new network elements in 3GPP system,
while the architecture S2b introduces a new network element to support the interworking:

- evolved Packet Data Gateway (ePDG) (clause 4.3.4 of 3GPP TS 23.402 [8]).

The above interworking related network element should be managed by the 3GPP OAM, and the corresponding NRM IRP needs to be defined.

Based on the above characteristics, this specification defines the evolved 3GPP interworking WLAN 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].

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

REQ-EPC_WLAN-CON-001
The Network Resource Model defined by this IRP shall contain ePDG specific IOCs and related definitions.
This requirement should be satisfied when the S2b architecture is implemented.

REQ-EPC_WLAN-CON-002
The Network Resource Model defined by this IRP shall contain 3GPP AAA specific IOCs and related definitions.

Annex A (informative):
Change history

Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
Oct 2011	SA5-79		--	--	Initial version for TS skeleton	---	0.0.1
Feb 2012	SA5-81				Added NRM IRP requirements	0.0.1	0.1.0
Aug 2013					Revise the document title and release information	0.1.0	0.1.1
Sep 2013	SA-61	SP-130448			Presented for information	0.1.1	1.0.0
Sep 2013	-	-			MCC clean-up	1.0.0	1.0.1
Nov 2013					Remove editor notes	1.0.1	1.1.1
Dec 2013	SA-62	SP-130633			Presented for approval	1.1.1	2.0.0
Dec 2013					Version after approval	2.0.0	12.0.0
Sep 2014	SA-65	SP-140560	004	-	Remove unused reference	12.0.0	12.1.0
Dec 2014	SA-66	SP-140798	005	1	Remove feature support statement	12.1.0	12.2.0
2016-01	-	-	-	-	Update to Rel-13 version (MCC)	12.2.0	13.0.0
2017-03	SA#75	-	-	-	Promotion to Release 14 without technical change	13.0.0	14.0.0
2018-12	-	-	-	-	Update to Rel-15 version (MCC)	14.0.0	15.0.0
2020-07	-	-	-	-	Update to Rel-16 version (MCC)	15.0.0	16.0.0
2022-03	-	-	-	-	Update to Rel-17 version (MCC)	16.0.0	**17.0.0**

History

Document history		
V17.0.0	April 2022	Publication