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**3rd Generation Partnership Project;
Technical Specification Group Services and System Aspects;
Telecommunication management;
Core Network (CN) and non-3GPP access
interworking system Network Resource Model (NRM)
Integration Reference Point (IRP);
Requirements
(Release 12)**

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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 28.601: **"Telecommunication management; Core Network (CN) and non-3GPP access interworking system Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".**

TS 28.602: "Telecommunication management; Core Network (CN) and non-3GPP access interworking system Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

TS 28.606: "Telecommunication management; Core Network (CN) 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 Interworking WLAN (IWLAN). According to the structure of IWLAN defined in 3GPP TS 23.234 [6], the present document is focusing on the definition of NRM IRP requirements on the 3GPP part (e.g. WAG, PDG, 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 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 23.234: "3GPP system to Wireless Local Area Network (WLAN) interworking; System description".

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 [2].

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
IRP	Integration Reference Point
IOC	Information Object Class
NRM	Network Resource Model
WAG	WLAN Access Gateway
PDG	Packet Data Gateway
TTG	Tunnel Terminating Gateway

4 Concepts and background

The architecture of interworking between the 3GPP system and WLAN is defined in 3GPP TS 23.234 [6]. According to the architecture, some new network elements or functions are introduced to support the interworking:

- 3GPP AAA server (proxy/server) - see clauses 6.2.2 and 6.2.3 of [6].

- WLAN Access Gateway (WAG) - see clauses 6.2.5 of [6].

- Packet Data Gateway (PDG) - see clauses 6.2.6 of [6].

- Tunnel Terminating Gateway (TTG) - see Annex F.5 of [6].

Based on the above characteristics, the present document defines the requirements for the 3GPP/WLAN interworking Network Resource Model (NRM) Integration Reference Point (IRP).

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-CN_WLAN-CON-001
The NRM defined by this IRP shall contain WAG specific IOCs and related definitions.

REQ-CN_WLAN-CON-002
The NRM defined by this IRP shall contain PDG specific IOCs and related definitions.

REQ-CN_WLAN-CON-003
The NRM defined by this IRP shall contain 3GPP AAA specific IOCs and related definitions.

Editor's note: The requirements for the new introduced interfaces in CN and WLAN interworking system are FFS.

Annex A (informative):
Change history

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				Add 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				Presented for information	0.1.1	1.0.0
Sep 2013	-	-	-	-	MCC clean-up	1.0.0	1.0.1