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Feasibility study on 3GPP system
to Wireless Local Area Network (WLAN) interworking
(3GPP TR 22.934 version 13.0.0 Release 13)**



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Contents

Intellectual Property Rights	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	5
Introduction	5
1 Scope	6
2 References	6
3 Definitions, symbols and abbreviations	7
3.1 Definitions	7
3.2 Symbols.....	8
3.3 Abbreviations	8
4 Background	8
4.1 WLAN technologies.....	8
4.2 Interworking model	9
4.3 Deployment and usage	9
4.3.1 Network Coverage Areas and user states.....	10
4.4 Environments	11
4.5 User access to services	12
4.6 Target user experience.....	12
4.7 Terminal aspects.....	14
5 Main concepts	14
5.1 Interworking scenarios	14
5.2 Ownership, operation, and trust.....	17
5.2.1 Ownership.....	17
5.2.2 Operations.....	18
5.2.3 Internetworking trust.....	18
5.3 Service capability interworking.....	19
6 Service Requirements.....	19
6.1 General Requirements	19
6.2 Interworking Scenario 1	20
6.3 Interworking Scenario 2	20
6.3.1 Service aspects.....	20
6.3.1.1 Network Selection.....	20
6.3.1.2 System recognition.....	20
6.3.2 Access control.....	20
6.3.2.1 Authentication	21
6.3.3 Security	21
6.3.4 Roaming aspects	21
6.3.5 Terminal aspects	22
6.3.5.1 General	22
6.3.5.2 Accessing UICC data	22
6.3.6 Naming and addressing.....	22
6.3.7 Charging and billing	22
6.3.7.1 Online charging support.....	22
6.3.7.2 Offline charging support	22
6.4 Interworking scenario 3.....	23
6.4.1 Service aspects.....	23
6.4.1.1 IMS service aspects.....	23
6.4.1.2 LCS service capability interworking.....	23
6.4.2 Service access control.....	23
6.4.3 Security aspects	23

6.4.4	QoS aspects.....	24
6.4.5	Roaming aspects	24
6.5	Interworking scenario 4.....	24
6.5.1	Service aspects.....	24
6.5.2	Service continuity cases.....	24
6.5.3	Charging and network management	25
6.5.4	Security.....	25
6.5.5	Performance requirements	25
6.5.5.1	Change of QoS	25
6.5.5.2	Requirements on multiple services	25
6.6	Interworking scenario 5.....	25
6.7	Interworking scenario 6.....	25
7	Summary and conclusion	25
7.1	Impact on Specifications	26
7.2	Phasing of the work.....	26
7.3	Conclusion.....	27
Annex A:	Impacted Specifications.....	28
Annex B:	Change history	31
History		32

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Introduction

This document studies the feasibility of interworking between 3GPP systems and Wireless Local Area Networks (WLANs). For the purpose of this document the term 3GPP - WLAN interworking refers to the utilisation of resources and access to services within the 3GPP system by the WLAN UE and user respectively. The intent of 3GPP - WLAN Interworking is to extend 3GPP services and functionality to the WLAN access environment. Thus the WLAN effectively becomes a complementary radio access technology to the 3GPP system.

The WLAN provides access to services located in WLANs and/or networks behind the WLAN. In 3GPP - WLAN interworking, 3GPP system functionalities can reside behind the WLAN or in parallel to the WLAN. In the case of 3GPP system functionalities located behind WLAN, the interworking between 3GPP system and WLAN may include:

- Enabling usage of 3GPP system functionalities between mobile terminals and 3GPP systems via the WLAN (e.g. providing SIP calls)
- Utilising 3GPP system functionalities to complement the functionalities available in the WLAN (e.g. providing charging means, authentication, authorization, and accounting functions)

In a case when the WLAN is seen as a parallel system to the 3GPP system, the interworking between the systems may include

- Creation of mechanisms for selecting and switching between the WLAN and 3GPP systems

Enabling any of these interworking cases may result in modifications or additions in 3GPP systems, in WLANs or both.

1 Scope

This document studies the feasibility of interworking between 3GPP systems and Wireless Local Area Networks (WLANs). This document identifies and describes:

- Scenarios for 3GPP - WLAN Interworking
- 3GPP - WLAN interworking service requirements
- Guidelines for standardisation of 3GPP-WLAN interworking

The document includes a number of different scenarios of 3GPP-WLAN interworking ranging from common billing to the provision of services seamlessly between the WLAN and the 3GPP system. In addition, 3GPP-WLAN interworking feasibility study includes the analysis of a number of environments where both the 3GPP system and WLAN may be deployed. Finally, this report outlines some of the different WLAN technologies that may be interworked with 3GPP systems.

It is beyond the scope of 3GPP to develop new system functionalities for WLANs that are not interworking with any 3GPP system functionality.

2 References

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- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 21.133: "Security Threats and Requirements"
- [3] 3GPP TS 22.001: "Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN)".
- [4] 3GPP TS 22.004: "General on supplementary services".
- [5] 3GPP TS 22.057: "Mobile Execution Environment (MExE); Service description; Stage 1".
- [6] 3GPP TS 22.060: " General Packet Radio Service (GPRS); Service description; Stage 1".
- [7] 3GPP TS 22.071: " Location Services (LCS); Service description, Stage 1".
- [8] 3GPP TS 22.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL); Service definition - Stage 1".
- [9] 3GPP TS 22.101: "Service principles".
- [10] 3GPP TS 22.105 'Services and Service Capabilities'
- [11] Open Mobile Alliance (OMA): OMA-RD-Parlay_Service_Access-V1_0-20100427-A
- [12] 3GPP TS 22.129: "Handover Requirements between UTRAN and GERAN or other Radio Systems"
- [13] 3GPP TS 22.140: "Multimedia messaging service; Stage 1".