TSG-SA WG 1 (Services) meeting #16   **S1-021186**
Victoria, Canada, 13-17th May 2002   **Agenda Item: 10.3**

Title:	Reply to the LS on WLAN Interworking
Source:	SA1
To:	SA2, SA3
Cc:	
Response to:	LS (S1-020673 (S2-020850)) on WLAN Interworking

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Attachments: S1-020673 (S2-020850)

1. Overall Description:

Introduction

SA1 thanks SA2 for their attention on the topic of 3GPP system-WLAN interworking. We have considered the liaison statement S2-020850 requesting clarification concerning the "*role and trust model considered (i.e. who owns and operates the WLAN access network and what is the trust relationship between the WLAN operator and the PLMN(s) involved in providing the service).* This also included a request for clarification of "*the impact of environments on the scenarios identified by SA1*".

This document summarises our views on these concerns.

Ownership

Ownership of the WLAN access network to be interworked with a 3GPP network may be one or more of the following general classes –

(1) The WLAN owner is a 3GPP system operator.

(2) The WLAN owner is a public network operator who is not a 3GPP system operator. This may include, for example, fixed network operators, operators of mobile networks other than 3GPP systems or public WLAN operators.

(3) The WLAN owner is an entity providing WLAN access in a local area (i.e. building manager/owner or airport authority) but who is otherwise not a public network operator. In this class it may be considered that a primary purpose of the WLAN operations is to provide local services and internet access as well as WLAN interworking.

(4) The WLAN owner is a business entity that may be providing a WLAN for its internal use that also wishes to allow interconnection, and possibly visitor use, for some or all of their WLANs. The entity may have more than one WLAN in operation in a location of which some may be interworked to 3GPP systems and some may not be interworked. In this class it may be considered that the primary purpose of the WLAN operations is for its own business and WLAN interworking is a secondary consideration.

This is not intended to be a restrictive list, but rather, illustrative of possibilities. There are many other possible combinations.

Operations

For 3GPP system subscribers, the operation of the interworked WLAN for creating charging records should follow the same principles as for other networks interworked with 3GPP systems. The end responsibility for billing, for example, should be with the subscriber's home operator. To assist billing, the home operator should receive charging records associated with WLAN usage.

Internetworking Trust

3GPP systems interworking with WLANs should consider the possibility of security weaknesses within the WLAN. The level of trust for physical communications and signalling in the network may be affected by the security of the servers, their operating software and the procedures used in the interworked WLAN. The level of trust of communication between the WLAN and the 3GPP system may be considered to have three levels -

(1) The WLAN may be completely untrusted by the UE and the 3GPP system.

(2) The WLAN contains elements that may be trusted by the UE and the 3GPP system. For example, the WLAN may include trusted servers that look after aspects of security and authentication interworking with the 3GPP systems (e.g. 802.1x, 802.11i). However, other elements of the network may be untrusted.

(3) All of the elements of the WLAN may be fully trusted by the UE and the 3GPP system.

Mutual authentication between the UE and the WLAN/3GPP System should be used to assure the needed level of trust by both entities for interworking and access to services. In the case of an untrusted interworked network, this may limit the charging possibilities as, for example, some messages may be spurious. For a network with trusted servers and authenticated messages, the charging records may be considered trusted.

2. Actions:

To SA2 and SA3 group.

ACTION: We kindly ask SA2 group and SA3 group to provide feedback on this understanding.

3. Date of Next SA1 Meetings:

SA1 SWGs	8 – 12 Jul 02	Roma	Italy
SA1#17	12 – 16 Aug 02	Durango	North America

3GPP TSG-SA WG2 meeting #23   **Tdoc S2-020850**
Sophia-Antipolis, France, 18th – 22nd February 2002

Title:	**LS on WLAN Interworking**

Source:	**SA2**
To:	**SA1**
Cc:	
Response to:	**S2-020792 (S1-020636)**

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Attachments: None

SA2 would like to thank SA1 for their LS in S1-020636. SA2 acknowledges the fact that there is a need for studying architecture aspects for realising Interworking between WLAN and 3GPP systems. In that regard SA2 will complement the ongoing feasibility study with architecture definition.

Actions

SA2 would also like to provide some feedback on TR 22.934.

SA2 has identified some issues that may impact architecture work and SA2 would like to receive further clarifications on these points :

- What is the role and trust model considered i.e. who owns and operates the WLAN access network and what is the trust relationship between the WLAN operator and the PLMN(s) involved in providing the service.

- What is the impact of environments on the scenarios identified by SA1.

In addition SA2 considers that architectural part of the feasibility study needs to be evaluated as the realisation of some scenarios may preclude realisation of more advanced scenarios.

Dates of Next SA2 Meetings:

SA2#24   22-26 April 2002 Madrid, Spain
SA2#25   24-28 June 2002 Naantali, Finland