Title:	LS reply on Interpretations of assumptions in chapter 16 of 3GPP TS 23.402 V11.6.0 (2013-03) on the behaviour of a Trusted WLAN Access Network
Response to:	LS (omniran-13-0024-01-ecsg) on Interpretations of assumptions in chapter 16 of 3GPP TS 23.402 V11.6.0 (2013-03) on the behaviour of a Trusted WLAN Access Network from IEEE OmniRAN Study Group
Release:	Rel-11
Work Item:	S2a Mobility based On GTP and WLAN access to EPC

Source:	3GPP TSG SA2
To:	IEEE OmniRAN Study Group
Cc:	-

Contact Person:
 Name: **Ivano Guardini**
 Tel. Number: **+39 011 2285424**
 E-mail Address: **ivano.guardini@telecomitalia.it**

Attachments: -

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1. Overall Description:

SA2 would like to thank IEEE OmniRAN Study Group for the LS in S2-133145/omniran-13-0024-01-ecsg and the information given.

SA2 would like to provide the following answers to IEEE OmniRAN questions.

Question 1:

TS 23.402 V11.6.0, Chapter 16.1.2 High Level Functions:

- *A Trusted WLAN Access Gateway (TWAG). This function terminates S2a. It also acts as the default router for the UE on its access link, and as a DHCP server for the UE. When the TWAN provides access to EPC for an UE, it forwards packets between the UE-TWAG point-to-point link and the S2a tunnel for that UE. The association in the TWAN between UE-TWAG point-to-point link and S2a tunnel is based on the UE MAC address.*

This statement defines that the default router resides in the TWAG, however packet forwarding between UE and EPC is performed on the base of the UE MAC address, which indicates L2 forwarding behavior, not routing based on IP addresses.

Furthermore we wonder whether there is need to locate the default router for the Non-Seamless WLAN Offload case inside the TWAG. To our understanding the default router for NSWO may reside either in the WLAN Access Network or in the TWAG when point-to-point connectivity between UE and TWAG is provided for access to the EPC.

SA2 answer:

Different implementations are possible for the location of the default router for NSWO, and this is not defined in 3GPP specifications.

SA2 would like to confirm that user plane packet forwarding between the UE and the core network through the TWAG is based on mapping the UE-TWAG point-to-point link and the S2a tunnel for that UE. This does not preclude however the TWAG acting as default router for the UE and provide, e.g., stateless IPv6 address allocation mechanisms to the UE.

Question 2:

TS 23.402 V11.6.0, Chapter 16.1.2 High Level Functions:

- *A Trusted WLAN AAA Proxy (TWAP). This function terminates STa. It relays the AAA information between the WLAN Access Network and the 3GPP AAA Server or Proxy in case of roaming. It establishes the binding of UE subscription data (including IMSI) with UE MAC address on the WLAN Access Network. If L2 attach…*

We wonder about the reasons to request to perform the binding between the UE subscription data and the UE MAC address in the TWAP. To our understanding this can preferably happen by the AAA client in the WLAN AP inside the WLAN Access Network.

SA2 answer:

Since the TWAP terminates STa, the TWAP by definition acts as the entity performing the binding in order to enable inter-AP mobility between APs served by the same TWAP. Performing the binding in the WLAN AP would require mechanisms for context relocation when the UE moves between WLAN APs that are served by the same TWAP.

Question 3:

TS 23.402 V11.6.0, 16.2.1 Initial Attach in WLAN on GTP S2a, Step 2:

- *The TWAN may provide to the 3GPP AAA server via STa the SSID selected by the UE to access the TWAN and an indication whether it supports S2a, non-seamless offload, or both. The HSS/AAA may indicate via STa whether access to EPC via S2a or the use of NSWO or both are allowed for this subscriber. The HSS/AAA decision to allow EPC access or NSWO or both could be based on information elements such as subscriber profile, access network, and/or SSID selected.*

We wonder how the TWAN would decide when both, EPC access and NSWO, are supported by the TWAN, and the HSS/AAA server indicates that both, EPC access and NSWO, are allowed for the subscriber.

SA2 answer:

This is left to implementation and determined, e.g., by the operator that deploys the TWAN. 3GPP SA2 sees no need to define how the selection is performed in this case.

2. Actions:

To IEEE OmniRAN Study Group.

ACTION: IEEE OmniRAN Study Group is kindly requested to take the above information into account.

3. Date of Next TSG-SA WG2 Meetings:

TSG-SA WG2 Meeting #100   11th – 15th November 2013   San Francisco, US

TSG-SA WG2 Meeting #101   20th – 24th January 2014   Taipei, Taiwan