IEEE P802.11
Wireless LANs

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| Summary of 3GPP LSs to 802.11 |
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Abstract

This document provides a summary of the liaison statements (LSs) send by 3GPP to 802.11. This summary was created to provide some perspective as to what 3GPP has requested from 802.11 over the years of 2003-2017.

# Liaison Statements Received from 3GPP:

IEEE 802.11-03/755r0: LS on 802.11i / WPA and RADIUS to Diameter co-existence analysis and recommendations for WLAN interworking.

From: 3GPP TSG SA2 (S2-032727)

The LS asks that IEEE/WNG to: “… take the analysis and recommendations about RADIUS – Diameter co-existence into consideration in their work with WLAN 3G interworking.”

IEEE 802.11-05/0922r0: Location information for WLAN terminals to handle IMS Emergency Calls

From 3GPP SA2 (S2-052418)

The LS asks IEEE 802.11 to: “… take information provided in the liaison into consideration while working on support for VoIP emergency calls. In addition, 3GPP requests IEEE 802.11 task groups to keep 3GPP informed about the status of the related work.”

IEEE 802.11-06/0061r0: LS reply on IEEE 802.11u Interworking with External Networks Requirements Document

From 3GPP SA2 (S2-053034)

The LS asks IEEE 802.11 to: “… inform SA2 about solution proposals for above requirements [for IEEE 802.11u Interworking with External Networks], as well as the final solutions. 3GPP SA2 will need to review and possibly make changes to 3GPP SA2 specifications in order to interwork with the new 802.11 mechanisms.”

IEEE 802.11-06/0062r0: Reply LS Request for comments on IEEE 802.11u Requirements Document from the IEEE 802.11 Task Group u.

From 3GPP SA3 (S3-050845)

The LS provides SA3’s feedback on the IEEE 802.11u Requirements, providing a SA3 proposal or comment for each of the requirements.

IEEE 802.11-06/0556r0: Liaison from 3GPP SA3 to IEEE 802.11u

From SA3 (S3-060335)

The LS continues the discussion of the two previous LS from SA2 and SA3 (11-06/0061r0 and 11-06/0062r0), providing clarification on the conflicting statements made by SA2 and SA3 regarding potential security threats due to multiple connections. Provides SA3 feedback on MAC address anonymity and request the 802.11 keep SA3 informed of 802.11 progress on MAC address anonyminity.

IEEE 802.11-06/1722r0: LS on requirement on MAC Address Anonymity

From SA3 (S3-060806)

The LS continues the discussion on the MAC address anonymity, stating that SA3 does not think there is sufficient urgency for a face to face meeting and that SA3 will provide the information about usage of identifiers (MAC address) in LET when it is ready in SA3. SA3 also thanked 802.11u for the information about link layer encryption indicator and hopes to receive the details.

IEEE 802.11-07/0295r0: LS response on Update statement regarding IEEE 802.11u (Interworking with External Networks)

From SA2 (S2-070603)

The LS requests 802.11 to provide: “… more detailed information about potential overlaps in standardization activities between IEEE 802.11u and 3GPP SA2. Additionally SA2 would like to ask IEEE 802.11u to suggest potential dates for the proposed teleconference.”

IEEE 802.11-07/0584r0: Reply LS on “Impact of IEEE 802.11 work on TS23.234 and other 3GPP specifications under the control of 3GPP SA3 and CT1”

From SA2 (S2-072053)

The LS proposes a time for a teleconference to discuss the proposed IEEE issues and Network Discovery and Selection within 3GPP’s System Architecture Evolution (SAE).

IEEE 802.11-07/2302r0: LS on Access Point secure identity

From SA1 (S1-0701123)

The LS requests that 802.11u consider the requirements in TR22.812 for non-3GPP access network selection and also asks about the suitability of HESSID to satisfy the requirements.

IEEE 802.11-07/2964r0: LS on Network Discovery & Selection

From SA1 (S1-071914)

To SA2 and 802.11u

The LS request that 802.11u inform SA1 on work related to the “Generic Advertisement Services”.

IEEE 802.11-08/0136r0: Liaison Change Request from 3GPP SA1 to IEEE 802.11

From SA1 (S1-071913)

This LS is a 3GPP Change Request, which provides: Enhancements to Access network discovery and steering of access.

IEEE 802.11-08/0585r0: Reply LS on request for recommendations (on IEEE 802.11u approach)

From SA2 (S2-084040)

To CT1, provided to IEEE 802.11u for information.

This LS request that CT1 provide IEEE 802.11u their recommendations on “Interworking with External Networks”

IEEE 802.11-09/0204r0: LS on ANDSF Management Object

From CT1 (C1-085530)

This LS provides references and information about the “Access Network Discovery and Selection Function (ANDSF)” specifications and related architecture. Asking IEEE 802.11 to evaluate the information and notify CT1 about corresponding activities in 802.11 which need to be referred to or aligned with.

IEEE 802.11-09/0724r0: WLAN related information in ANDSF MO and ANID for WLAN access

From CT1 (C1-093159)

This LS is a response to 802.11 suggested changes to CT1 specification TS 24.312, regarding HESSID, changing “WiFi” to WLAN, and specifying frequency bands for WLAN. The LS responds that use of HESSID and frequency bands are not something CT1 can specify and that OMA would need to make these changes. Regarding changing “WiFi” to WLAN CT1 can do this but informs 802.11 that other WLAN technologies beside 802.11 might be included if this term is used. Lastly, CT1 asks about the Access Network Identity (ANID) and the possibility of its inclusion in 802.11 specifications.

IEEE 802.11-11/0369r0: Liaison to 3GPP CT and SA

From 802.11

To CT and SA

This LS informs CT and SA that 802.11u has completed and has been published and hence references to it should be updated in the CT and SA specifications.

IEEE 802.11-12/01149r1: WLAN Standardization in 3GPP
A Tutorial

Provided by Zu Qiang (Ericsson), Stephen Rayment (Ericsson), and Shabnam Sultana (Ericsson)

This submission provides a tutorial on WLAN standardization in 3GPP, covering: Interworking, Network Selection and Discovery, Security, Mobility, and Policy and charging control.

IEEE 802.11-14/0519r0: LS on WLAN signal measurements for WLAN/3GPP Radio interworking

From RAN2 (R2-141855)

This LS request information from 802.11 related to work that RAN2 is doing to support WLAN 3GPP Interworking. Specifically related to the use of several metrics: RCPI, RSNI and their use to provide a measure of signal strength and signal quality.

IEEE 802.11-14/1282r0: Reply LS on Areas of Mutual Interest to 802 LMSC and 3GPP

From RAN (RP-141712)

This LS updates the IEEE 802 LMSC on the progress of the ongoing RAN work on the use of unlicensed spectrum with LTE, Licensed-Assisted Access (LAA) and proves the Study Item work plan.

IEEE 802.11-14/1411r0: LS on TS 24.234 maintenance and generic container specification reference

From CT1 (C1-144147)

This LS updates IEEE 802.11 that the location of the definition of the generic container used as a payload in the 3GPP Cellular Network ANQP-element is being moved from TS 24.234 to TS 24.302.

IEEE 802.11-15/1263r0: Liaison from 3GPP RAN4 on Measurement and RSSI

This document contains two LSs from RAN4 (R4-156870 and R4-156886)

R4-156870 requests that 802.11 provide feedback on the L1 measurement period of 5 seconds for RSSI measurement.

R4-156886 requests that 802.11 provide feedback of if it is feasible to measure RSSI on other frames e.g. Probe Response.

IEEE 802.11-15/1376r1: Update on 3GPP RAN3 Multi-RAT joint coordination

A tutorial

Provided by Filip Mestanov (Ericsson)

This document provides an update on 3GPP RAN3 Multi-RAT joint coordination for E-UTRAN and WLAN using Xw layer 1, Xw signalling transport, XwAP, Xw interface user plane protocol.

IEEE 802.11-16/0005r0: Reply LS on LAA coexistence tests

To Wi-Fi Alliance, Copied to IEEE 802 LMSC

From RAN (RP-152234)

This LS thanks Wi-Fi Alliance for providing an LS on LAA coexistence tests, and provides RAN4’s agreed plan for the definition of LAA coexistent testing.

IEEE 802.11-16/0351r1: Liaison from 3GPP on LWA and LWIP

From 3GPP, Richard Burbidge (Intel) RAN2 Chair

This LS provides a tutorial on LTE-WLAN Aggregation (LWA) and LTE WLAN Radio Level Integration with IPsec Tunnel (LWIP)

IEEE 802.11-16/0449r0: 3GPP activities on 5G and relationship with non-3GPP technologies

From 3GPP, Richard Burbidge (Intel) RAN2 Chair, Philippe Reininger (Huawei) RAN3 Chair

This LS provides a tutorial on 3GPP activities on 5G and its relationship with non-3GPP technologies.

IEEE 802.11-16/0548r0: LS on enhanced LTE-WLAN Aggregation (eLWA)

From RAN2 (R2-163148)

This LS informs 802.11 that RAN2 is working on eLWA and request that 802.11 provides information on radio measurements and measurement requirements in the 60 GHz frequency band, and also provide information of on if different metrics are used in the 60 GHz band, then are used in the < 6 GHz bands.

IEEE 802.11-16/0772r0: LS on WLAN RSSI Measurement Accuracy Test

From RAN4 (R4-164767)

This LS asks 802.11 and/or Wi-Fi Alliance to specify WLAN RSSI measurement accuracy test.

IEEE 802.11-16/11338r0: LS on WLAN RTT Measurement Requirements for Positioning

From RAN4 (R4-169579)

This LS asks 802.11 and/or Wi-Fi Alliance to provide recommended performance figures for WLAN round trip time (RTT) measurements.

IEEE 802.11-16/1343r1: Response LS to IEEE 802.11 regarding LAA

From RAN1 (R1-1611031)

This LS thanks the IEEE 802.11 LMSC for their LS on LAA and states that it is being discussed and that a response will be provided when the discussion is concluded.

IEEE 802.11-16/1384r0: LS on Estimated WLAN Throughput

From RAN2 (R2-167306)

This LS asks 802.11 to provide feedback on whether there are any accuracy requirements for “Estimated Throughput” and what the variation is across different implementations, and the feasibility of calculating by either STA or AP. RAN2 also asks if it is feasible for IEEE to define such requirements and to suggest other metrics that may be useful for LWA operation.

**References:**