IEEE P802.11  
Wireless LANs

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| Liaison response to 3GPP R2-141855 | | | | |
| Date: 2014-05-12 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
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Abstract

Reply to the liaison from 3GPP RAN R2-141855. Also see 11-14-0519r0.

The 3rd Generation Partnership Project (3GPP) submitted a letter to the IEEE 802.11 Working Group (WG). The letter is documented in 11-14-0519r0. This document contains recommended response text drafted by members of the IEEE 802.11 Task Group mc.

# Summary of the letter from 3GPP

According to the letter the 3GPP Working Group RAN2 developed a letter to the IEEE 802.11 Working Group during the 3GPP TSG-RAN2 Meeting #85bis. The letter reports that “3GPP TSG-RAN WG2 (RAN2) is developing a mechanism for inter-working between 3GPP RATs [Radio Access Technologies] (UMTS and LTE) and WLAN.” To allow for efficient inter-working of IEEE 802.11 WLAN and 3GPP’s radio technologies, the 3GPP WG RAN2 intends to develop mechanisms that provide access network selection and traffic routing. The proposed 3GPP mechanism allows a device to steer traffic from one radio technology to another based on signal strength measurements and other, additional parameters. In their letter, the 3GPP WG RAN2 asks about the applicability of certain measurement functionality in the IEEE Std 802.11. The questions are as follows.

* Question 1: Does IEEE 802.11 WG consider WLAN RCPI a suitable metric of WLAN signal strength such that it can be compared to thresholds as in the above described mechanism?
* Question 2: Does IEEE 802.11 WG consider WLAN RSNI a suitable metric of WLAN signal quality such that it can be compared to thresholds as in the above described mechanism?
* Question 3: Does IEEE 802.11 WG consider any other WLAN signal metric more suitable for the above described mechanism?

# Summary of this reply letter

IEEE 802.11 Task Group mc developed this reply letter for approval by the IEEE 802.11 Working Group. The letter confirms that the measurement values in question are considered suitable for the envisaged use case.

To: Mattias.a.bergstrom@ericsson.com

Subject: Liaison on WLAN signal measurements for WLAN/3GPP Radio interworking

Date: 2014-05-12

Dear Mattias,

Thank you very much for your letter that we received on 2014-04-14. In your letter you asked the IEEE 802.11 Working Group the following three questions:

1. Does IEEE 802.11 WG consider WLAN RCPI a suitable metric of WLAN signal strength such that it can be compared to thresholds as in the above described mechanism?
2. Does IEEE 802.11 WG consider WLAN RSNI a suitable metric of WLAN signal quality such that it can be compared to thresholds as in the above described mechanism?
3. Does IEEE 802.11 WG consider any other WLAN signal metric more suitable for the above described mechanism?

We answer your questions as follows.

* Regarding Question 1: We consider the RCPI value defined IEEE 802.11™-2012 sufficient for the purpose of access network selection and traffic routing as described in your letter.
* Regarding Question 2: We consider the RSNI value defined IEEE 802.11™-2012 sufficient for the purpose of access network selection and traffic routing as described in your letter.
* Regarding Question 3: IEEE Standard 802.11™-2012 define additional values that you might deem helpful for the envisaged usage scenario. The channel load and noise histogram provide channel usage statistics, which can be helpful to identify busy channels.

Please note that RCPI has an accuracy requirement of ±5 dB. There is no explicit accuracy requirement for RSNI, but RSNI is calculated as RCPI minus ANPI which both has accuracy requirements of ±5 dB, and hence RSNI has an implicit accuracy requirement of ±5 dB.

Sincerely,

Adrian Stephens  
IEEE 802.11 Working Group Chair

**References:**