

June 3, 2015

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, NW
Washington, DC 20554

Re: In response to FCC Public Notice DA 15-516

Dear Ms. Dortch:

FCC Public Notice DA 15-516 poses the following question:

What is the status of coordination between 3GPP and the IEEE 802.11 on LTE-U and LAA, and what is the process for coming to agreement on appropriate sharing characteristics to ensure coexistence with the IEEE 802.11 family of standards?

IEEE 802 responds to this question as follows:

There has been no coordination between IEEE 802 and any standards body associated with LTE-U, because LTE-U was not developed by a standards body. It is the understanding of IEEE 802 that LTE-U is a proprietary solution that implements a duty cycle approach to medium sharing that does not use appropriate sharing mechanisms to ensure coexistence with IEEE 802.11 family of standards.

With respect to LAA, it is the understanding of IEEE 802 that the only process “for coming to agreement on appropriate sharing characteristics to ensure coexistence with the IEEE 802.11 family of standards” is to work within the 3GPP organization. It is the understanding of IEEE 802 that 3GPP member companies will agree on sharing mechanisms and a definition of “fairness” without requiring agreement from stakeholders outside of 3GPP membership.

There has been no coordination between 3GPP and IEEE 802 on LAA. However, IEEE 802 has had the following communications with 3GPP related to LAA:

The following presentations have been made:

- Steve Shellhammer (Qualcomm), IEEE 802.19 Working Group chair, presented 19-14/0080r2 “Coexistence Lessons Learned” to the 3GPP RAN Plenary in December 2014
- Dino Flore (Qualcomm), RAN chair, presented 19-15/0008r0 “3GPP and Unlicensed Spectrum” to IEEE 802.19 at the IEEE 802 January-2015 session
- Havish Koorapaty (Ericsson), LAA-LTE TR rapporteur, presented 19-15/0042r0 “Study on Licensed-Assisted Access to Unlicensed Spectrum” to IEEE 802.19 at the May-2015 IEEE 802 session

IEEE 802 initiated the exchange of written liaisons as follows:

1. IEEE 802 LMSC to 3GPP RAN, RP-140536, “Areas of Mutual Interest to 802 LMSC and 3GPP”
2. IEEE 802 LMSC to 3GPP RAN: RP-150024, “Liaison Statement Regarding Coexistence of Licensed Assisted Access (LAA) and IEEE 802”
 - 3GPP RAN to IEEE 802: RP-150454, “Response on Liaison Statement Regarding Coexistence of Licensed Assisted Access (LAA) and IEEE 802”

3. IEEE 802 LMSC to 3GPP RAN and RAN1: R1-151155, “Liaison Statement Regarding Clarification of LBT Categories” and “Liaison Statement Regarding LAA/802.11 Coexistence”
 - 3GPP RAN1 to IEEE 802 LMSC: R1-152182, Response LS on Clarification of LBT Categories
 - 3GPP RAN1 to IEEE 802 LMSC: R1R1-152183, Response LS on LAA-802.11 Coexistence

In liaison (2) above, IEEE 802 recommended that

- An agreement between 3GPP and IEEE 802 is needed on what fairness means in a range of realistic usage scenarios
- 3GPP should include steps in their development and review process for LAA that require the views of important stakeholders, such as IEEE 802 participants, to be fully considered

IEEE 802 has not received a response from 3GPP RAN to the above recommendations. It is noted that 3GPP RAN has not had a meeting since receiving these recommendations.

Although the exchange of written liaisons has proved useful, responses received are not always as complete as desired, and often lead to more questions. IEEE 802 believes that 3GPP should engage with the relevant stakeholders, such as IEEE 802, in a joint forum such as a workshop, or series of workshops, to facilitate understanding of the potential spectrum sharing issues for the IEEE 802.11 family of standards and LAA, and come to agreement on appropriate sharing characteristics to ensure fair coexistence.

Thank you for consideration of this information. If there are any questions, please contact me.

Regards,

By: _____/ss/_____.

Paul Nikolich

IEEE 802 LAN/MAN Standards Committee Chairman

em: p.nikolich@ieee.org

cc: Julius Knapp via email