IEEE P802.11

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| Proposed Cover Letter to Cities Regarding Liaison Response to 3GPP on LAA Coexistence with 802.11 |
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Abstract

This document contains draft text for a possible cover letter to cities that have copied IEEE 802.11 in their letters to 3GPP, in which they expressed their concern regarding the impact LAA could have on their broadband deployments.

To: Cities

Subject: Update on Unlicensed LTE coexistence with Wi-Fi

Date: 2016-07-21

Dear Mayor Soglin,

The Institute of Electrical and Electronics Engineers (IEEE) 802 LAN/MAN Standards Committee (LMSC) thanks you for your recent letter to The Third Generation Partnership Project (3GPP) on the importance of 802.11 Wireless Local Area Networks (Wi-Fi) to the city’s wireless infrastructure investments. As you know, IEEE is the world’s largest technical professional organization dedicated to advancing technology for humanity. IEEE 802 has deep expertise in the development of a variety of technology standards, including 802.11, which is designed to use and share unlicensed spectrum. Your interest in Unlicensed LTE coexistence with Wi-Fi is both important and timely.

During any standards setting process, it is vitally important to understand and incorporate the perspective of existing technology users who will be impacted by standards under development. Your initiative to share your views, along with specific use cases important to your city, offers us, and 3GPP, with a valuable resource that we hope will inform and improve the technologies both organizations are standardizing, which will be deployed in your city.

As you point out in your letter, your city is a significant user of wireless technology, having made substantial investments to harness the speed, convenience and accessibility of Wi-Fi to benefit residents in a whole host of areas, from personal Internet connectivity to enhanced municipal services and public safety. As your letter stated, those benefits could be impaired by 3GPP standardized Unlicensed LTE known as License Assisted Access or LAA (and the non-standard LTE-U), if these technologies are not carefully designed and implemented to effectively coexist with current Wi-Fi networks and devices.

We have been actively working together with 3GPP RAN constructively towards an LAA standard that does not create harm or disrupt operation of Wi-Fi networks and devices, including those vital to your city and its residents. IEEE 802 has exchanged a series of Liaison letters with 3GPP to discuss areas of specific concern and to find ways to allay the concerns expressed by your city and others like it, as well as a wide range of other wireless technology stakeholders. Because of the importance of these issues and their impact on Wi-Fi for your city, IEEE 802 wants to provide you with our most recent Liaison Statement to 3GPP,[[1]](#footnote-1) and describe to you in general terms those areas where we believe progress has been made. As outlined in our Liaison, IEEE 802 believes that mutual understanding has been achieved on a number of issues, and consensus has been reached on others. However, there remain a number of significant areas of concern where agreement has not been reached, which may have a significant impact on the type of Wi-Fi deployments described in your letter to 3GPP.

IEEE 802 believes that interation with 3GPP regarding LAA development has generally been positive and constructive. This collaborative process has benefitted from the views of diverse stakeholders and has led to a technology which we believe will coexist better with other unlicensed LTE technologies not being developed by 3GPP, because among other reasons it adopts the “listen before talk” protocol that has helped Wi-Fi coexist effectively with other technologies in the unlicensed spectrum. However, we believe that the LAA specification continues to fall short in several areas, and 3GPP’s recent response Liaison Statement fails to adequately appreciate and address the concerns that we’ve posed in previous letters.

IEEE 802 shares your concerns that existing municipal Wi-Fi network use case may not have been sufficiently considered in the development of the current LAA specification. IEEE will continue to work with 3GPP to try to alleviate these concerns.

IEEE 802 does not believe that the 3GPP assumptions represented real world local area network deployments, and conflict with the data provided by CableLabs, and others to the Wi-Fi Alliance.[[2]](#footnote-3)

3GPP’s decision has led not only to concern about the impact of LAA on existing Wi-Fi deployments, but also may lead to Wi-Fi devices interrupting and impairing future LAA communications as well. The appropriate detection threshold is one of but several remaining concerns, which are all outlined in our Liaison statement back to 3GPP.

We are pleased with the level of collaboration and cooperation with 3GPP thus far, and we are hopeful that 3GPP will work to incorporate our feedback, and yours, into their specification.

The IEEE 802 LMSC encourage your city’s continued participation in the regulatory process and appreciate your effort to in assure that your infrastructure Wi-Fi deployments will not be significantly impacted by the deployment of LTE unlicensed technologies (e.g. LTE LAA). The IEEE 802 LMSC believes that there are technical and standardization based solutions which will ensure that Wi-Fi deployments will not be significantly impacted and that it is critical that these solutions be developed. You participation in this process helps to insure that robust solutions are developed.

Thank you again for your efforts to add your voice to this important process. Please let us know if you have any questions regarding the contents of this letter, or the more technical Liaison Statement that we provided to 3GPP

1. IEEE 802.19-16/0109r0; Add link for recent Liaison Statement [↑](#footnote-ref-1)
2. See presentations presented at the April 26, 2016 Wi-Fi Alliance Coexistence Workshop, which are located at: [https://](https://www.wi-fi.org/downloads-public/Wi-Fi_LTE-U_Test_Workshop_Presentations_201604.zip/30328)[www.wi-fi.org/downloads-public/Wi-Fi\_LTE-U\_Test\_Workshop\_Presentations\_201604.zip/30328](http://www.wi-fi.org/downloads-public/Wi-Fi_LTE-U_Test_Workshop_Presentations_201604.zip/30328) [↑](#footnote-ref-3)