

January xx, 2014

Mr. Julius Knapp

Chief, Office of Engineering and Technology

Federal Communications Commission

445 Twelfth Street, S.W.

Washington, D.C. 20554 USA

Ref: ET Docket No. 13-49, in particular Section III.B.4, ¶101

Dear Mr. Knapp:

The purpose of this letter is to give OET a brief summary of activities in IEEE 802.11 that are addressing the issues raised in the sections in the NPRM referenced above. ET Docket No. 13-49, Section III.B.4, ¶101 (p.32) states that:

101. Finally, what measures should be taken to protect non-radar systems that operate in the U-NII-2B and U-NII-4 bands and what is the cost implication for manufacturers, vendors and consumers? We seek comment on what types of sharing technology or techniques could be used to protect non-radar systems, such as the DSRCS which includes both road side units (RSU-fixed) and on board units (OBUmobile) operating under a primary allocation. For example, U-NII signal detection technologies used for DFS may not be able to detect signals from incumbents other than radar systems. Could U-NII devices detect signals from both DSRC fixed and mobile stations? We seek comments on evolving technologies that may help to detect non-radar signals and to protect those operations from harmful interference.

In August of 2013, the Regulatory Standing Committee of IEEE 802.11 created a “tiger team” to bring together interested participants from the WLAN and DSRC industries to exchange technical ideas and explore possible solutions to the band sharing as proposed in this NPRM. This group is called the DSRC Coexistence Tiger Team and operates under the auspices of the IEEE 802.11 working group; conference calls are conducted weekly, and documents and emails are openly available to the public on the IEEE document servers.[[1]](#footnote-1) As stated in a recent presentation to the Tiger Team, the objective of the group is to “**Create a document that describes and quantifies possible coexistence mechanisms between DSRC and extensions of the 802.11 base standard into the proposed UNII-4 band, if the FCC allows such band sharing in a future R&O.”[[2]](#footnote-2)**

The proposed work items for the group (as stated in the same presentation) are:

* Review of ITS/DSRC field trials
* Review of work to date on coexistence
* Presentations on use cases
* Presentation of possible coexistence approaches
* Modeling/simulation of possible coexistence approaches
* Testing, field trials, and presentation of results from proposed prototype approaches

Since the creation of the Tiger Team, which has broad participation from WLAN developers, automotive OEMs and suppliers, state and federal DoT, academic, and other public/private stakeholders, the group has engaged in extensive discussions about the status and performance of DSRC systems, requirements for band sharing, and some preliminary proposals for sharing techniques. Various entities have volunteered to undertake simulation and modelling of these proposals as well as field trials of prototypes as they are developed. It is the hope of the participants in the Tiger Team that stakeholders can reach some level of consensus about one or more techniques being viable for protecting DSRC systems from harmful interference, as stated in the NPRM. Modelling and simulation efforts are underway, and there is the expectation that more coexistence methods may be proposed in the coming months that would also be incorporated into the models. We do not anticipate that simulation results will be available any sooner that mid-2014; it is unclear when prototypes would be available for field testing of these approaches, but it is unlikely any prototypes would be available until the latter part of 2014, at the earliest.

This industry activity has produced a robust debate that will continue through 2014 and beyond, and we believe it can and will yield valuable and credible technical information that OET and FCC can use to craft policies that will be effective and will have broad industry support. The IEEE 802.11 DSRC Coexistence Tiger Team will continue to update OET on the progress of the work of the group as mature and vetted results are available, and would appreciate any feedback that you would like to provide about our activities.

Respectfully Submitted,

James L. Lansford, Ph.D.

Chair, IEEE 802.11 DSRC Coexistence Tiger Team

1. Documents are available on the IEEE document server called “Mentor.” The 802.11Regulatory Standing Committee documents can be found at <https://mentor.ieee.org/802.11/documents?is_dcn=DCN%2C%20Title%2C%20Author%20or%20Affiliation&is_group=0reg> Email archives for the IEEE 802.11 Regulatory Standing Committee can be found at <http://www.ieee802.org/11/email/stds-802-11-reg/> [↑](#footnote-ref-1)
2. “Agenda for DSRC Coexistence Tiger Team Call 13 Dec 2013, ”<https://mentor.ieee.org/802.11/dcn/13/11-13-1526-00-0reg-agenda-for-dsrc-coexistence-tiger-team-call-13-dec-2013.ppt>, Jim Lansford (CSR) [↑](#footnote-ref-2)