
As reported in our previous correspondence with the Commission, the IEEE 802.11 Working Group (WG) is now developing an IEEE Next Generation V2X (Vehicle-to-everything) (NGV) amendment with the IEEE P802.11bd project. The IEEE P802.11bd amendment is intended to provide a seamless evolution path from DSRC in the 5.9 GHz DSRC band. Any consideration of the rules governing use of the 5.9 GHz band must recognize the societal value of allowing DSRC and NGV to operate together in the ITS band.

2 Recommendation for a conformance requirement and citation for DSRC and future generations of DSRC

2.1 Background

IEEE 802 provided Comments on the 5.9 GHz NPRM.² We repeat here for convenience our recommendation regarding citation of IEEE 802.11 documents:

In Paragraphs 21, 23, 37 and 39 of PART 2 of NPRM [3] there are references to the “IEEE 802.11p-2010 standard”. We respectfully request that the reference not be made to the superseded IEEE Std 802.11p-2010 standard, but instead to the current IEEE Std 802.11-2016. In addition, we suggest not incorporating the entire standard, but only the relevant RF performance aspects that are applicable. A reference to IEEE Std 802.11-2016 Annex D would be appropriate to cover radio regulations for “IEEE 802.11p-2010”. This suggested change will cover the necessary technical aspects of the IEEE Std 802.11p-2010 radio, as well as be inclusive of the IEEE P802.11bd radio design and potential future backwards compatible IEEE 802.11-based ITS radio designs.

IEEE 802.11 Working Group has a long history of innovation and we expect the same principles of backwards compatibility and same-channel coexistence can be applied in the 5.9 GHz ITS band starting with IEEE Std 802.11p-2010 and continuing with IEEE P802.11bd and future amendments as technology evolves.

2.2 IEEE 802 text recommendation

Our goal in this letter is to provide the Commission with a specific text recommendation for use in Parts 90 and 95 of the 5.9 GHz rules. We provide three recommendations in this section.

We note that the NPRM proposes the following for Part 90:

§ 90.379 Technical standards for Roadside Units

(a) DSRC Roadside Units (RSUs) operating in the 5895-5905 MHz band must comply with the technical standard Institute of Electrical and Electronics Engineers (IEEE) 802.11p-2010.

...

(c) The standards required in this section are incorporated by reference ...

(1) 802.11p-2010, IEEE Standard for Information technology – Local and metropolitan area networks – Specific requirements – Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment 6: Wireless Access in Vehicular Environments (2010). ...

² Comments of IEEE 802, In the Matter of Use of the 5.850-5.925 GHz Band, ET-Docket 19-138, March 3, 2020

First Recommendation:

IEEE 802 recommends that this portion of the § 90.379 rule be written as:

§ 90.379 Technical standards for Roadside Units

(a) DSRC Roadside Units (RSUs) operating in the 5895-5905 MHz band must comply with the technical standard Institute of Electrical and Electronics Engineers (IEEE) Std. 802.11™-2016, specifically with respect to “dot11OCBAActivated = True” and Clause D.2 “Radio performance specifications”, and its revisions and 5.9 GHz ITS band amendment(s).

...

(c) The standards required in this section are incorporated by reference ...

(1) IEEE Std 802.11™-2016, IEEE Standard for Information technology– Local and metropolitan area networks – Specific requirements – Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications (2016).

The changed text in part (a) is from “Std 802.11™-2016” to the end of the sentence. The changed text in part (c) is the substitution of the IEEE 802.11-2016 document and the omission of “Amendment 6: Wireless Access in Vehicular Environments (2010).”

Second Recommendation

Similarly, IEEE 802 recommends that the relevant portion of § 95.3189 be worded using the language above, substituting “On-Board Unit (OBU)” for “Roadside Units (RSUs)”.

Third Recommendation

Finally, we recommend that references to “IEEE 802.11p-2010” in the following clauses be changed to “IEEE Std. 802.11™-2016”:

- § 90.375 (c) License areas, communication zones, and registrations [footnote 1],
- § 90.379 (a) Technical standards for Roadside Units
- § 95.3179 (b) Unwanted emissions limits

3 Conclusion:

IEEE 802 thanks the Commission for providing an opportunity to provide this *ex parte* letter with our recommendations for specific text in the revised 5.9 GHz rules. The recommendations we provide avoid citation of superseded IEEE standards, are narrowly focused to the relevant portion of the IEEE Std. 802.11-2016 standard, and are structured to facilitate backward compatible revisions and enhancements of the DSRC service, which are under preparation in the IEEE P802.11bd amendment, without requiring future revisions to the Commission’s rules. IEEE 802 respectfully requests that these recommendations be considered by the Commission during the final rule making process.

Regards,

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