DEPARTMENT OF TRANSPORTATION

Office of the Secretary


Notice of Request for Comments: V2X Communications

AGENCY: Office of the Secretary, Department of Transportation (DOT).

ACTION: Notice of request for comment.

SUMMARY: Over the past several years, the Department of Transportation and its operating administrations have engaged in numerous activities related to connected vehicles, including vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I), and vehicle-to-pedestrian (V2P) communications, collectively referred to as “V2X” communications. Recently, there have been developments in core aspects of the communication technologies that could be associated with V2X. This notice requests comment on how these developments impact both V2X in general and the Department’s role in encouraging the integration of V2X.

DATES: You should submit your comments within 30 days after the date of publication in the Federal Register. See the SUPPLEMENTARY INFORMATION section on “Public Participation,” below, for more information about written comments.

ADDRESSES: Comments should refer to the docket number above and be submitted by one of the following methods:

• Federal Rulemaking Portal: http://www.regulations.gov. Follow the online instructions for submitting comments.

• Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12–140, Washington, DC 20590–0001.

• Hand Delivery: 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12–140, Washington, DC, between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal Holidays.

Instructions: For detailed instructions on submitting comments and additional information on the rulemaking process, see the Public Participation heading of the SUPPLEMENTARY INFORMATION section of this document. Note that all comments received will be posted without change to http://www.regulations.gov, including any personal information provided.

Privacy Act: Except as provided below, all comments received into the docket will be made public in their entirety. The comments will be searchable by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You should not include information in your comment that you do not want to be made public. You may review DOT’s complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477–78) or at https://www.transportation.gov/privacy.

For access to the docket to read background documents or comments received, go to http://www.regulations.gov or to the street address listed above. Follow the online instructions for accessing the dockets.

FOR FURTHER INFORMATION CONTACT: Please contact us at automation@dot.gov or Sujeesh Kurup (202–366–9953) for policy issues or Timothy Mullins (202–366–9038) for legal issues.

SUPPLEMENTARY INFORMATION: Over the past several years, the Department of Transportation (Department or DOT) and its operating administrations have engaged in numerous activities related to connected vehicles, which generally encompass vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I), and vehicle-to-pedestrian (V2P) communications, collectively known as “V2X.” These activities are based on the Department’s view that V2X technologies have the potential for significant safety and mobility benefits, both on their own and as complementary technologies when combined with in-vehicle sensors supporting the integration of automated vehicles and other innovative applications such as platooning.

The agency’s connected vehicle activities have primarily centered on utilizing Dedicated Short-Range Communications (DSRC), which is consistent with the longstanding and current Federal Communications Commission (FCC) allocation of the 5.9 GHz radiofrequency band, as discussed below. Most prominently, the National Highway Traffic Safety Administration (NHTSA), an operating administration of DOT, issued a notice of proposed rulemaking (NPRM) to mandate V2V communications for new light-duty vehicles and to standardize the format and performance requirements of V2V messages. The NPRM identified DSRC as the primary communication medium, but also included provisions for other mediums if they could meet certain “performance and interoperability requirements, which are based on the capabilities of today’s DSRC-based V2V communications.” In addition to the NHTSA NPRM, the Department, State and local governments, and industry are taking many other actions in developing and deploying V2X technologies. For example, General Motors recently announced that it will be expanding DSRC-based V2X deployment on future Cadillac vehicles, following-up the first U.S. production V2X deployment in the 2017 Cadillac CTS, and Toyota announced it would begin offering DSRC-based V2V technology on selected models beginning in 2021.

There has also been considerable progress by State and local governments in deploying V2X technology, in addition to DOT-funded deployment programs, such as the Ann Arbor Connected Vehicle Environment, Connected Vehicle Pilots Program, and the Advanced Transportation and Congestion Management Technologies Development Program. All told, the Department understands that by the end of 2018, there will be more than 18,000 vehicles deployed worldwide. The DSRC-based V2X communications devices and more than 1,000 infrastructure V2X devices installed at intersections and along roadways in 25 States. Significant work has also been done on the development of the “Security Credential Management System” (SCMS) for V2X communications, both by the Department and industry partners (specifically, the Crash Avoidance Metrics Partnership, LLC (CAMP)), and other private sector organizations.

In addition, there have been developments in core aspects of the communication technologies needed for V2X, which have raised questions about how the Department can best ensure that the safety and mobility benefits of connected vehicles are achieved without interfering with the rapid technological innovations occurring in both the automotive and telecommunications industries.

First, there has been progress in both Cellular-V2X (C–V2X) and “5G” communications, both of which may, or may not, offer both advantages and disadvantages over DSRC. C–V2X is based on the LTE (4G) “release 14”...
of the Commission’s rules governing the operation of Unlicensed National Information Infrastructure (U–NII) devices in the 5 GHz band. This NPRM sought public comment on whether the 5.9 GHz band allocated for DSRC might be shared with unlicensed devices—and principally Wi-Fi devices. On June 7, 2016, FCC issued a “Refresh of the Record” for this NPRM asking for additional input as well as prototype devices that would support testing of sharing concepts. To assess the feasibility of certain sharing concepts, the Department collaborated with FCC and the National Telecommunications and Information Administration (NTIA) in developing a three-phase spectrum sharing test plan, which remains ongoing. In addition to these activities, there is the related question of whether the existing spectrum framework, focused upon DSRC, should be revised to allow alternative technologies, including those discussed above, to use the relevant spectrum band for transportation purposes.

In light of these developments, the Department is interested in learning more about recent developments in V2X technologies. In particular, the Department wants to hear from stakeholders, and the public generally, whether focusing on DSRC as the primary means of V2V communications is consistent with recent technological developments, as well as with the Department’s general desire to remain technologically neutral and avoid interfering with the many innovations in transportation and telecommunication technologies. If technological developments support the use of alternatives to DSRC, the Department would also need to know how to ensure that these alternative technologies are interoperable with each other and DSRC.

We believe the below questions may help guide commenters, but commentators are also free to provide their views on the general issues surrounding V2X communications. To the extent possible, please provide data, technical information, or other evidence to support your comments.

1. Please provide information on what existing or future technologies could be used for V2X communications, including, but not limited to, DSRC, LTE–C–V2X and 5G New Radio. What are the advantages and disadvantages of each technology? What is the timeframe for deployment of technologies not yet in production? Please provide data supporting your position.

2. Of the V2X communications technologies previously discussed, at present only DSRC is permitted to be used in the 5.9 GHz spectrum band for transportation applications. If that allocation were to be changed to allow any communication technology for transportation applications, could DSRC and other technologies (e.g., C–V2X, 5G or any future technology) operate in the same spectrum band or even the same channel without interference? Why or why not? If there are any technical challenges to achieving this goal, what are they and how can they be overcome?

3. To what extent is it technically feasible for multiple V2X communications technologies and protocols to be interoperable with one another? Why or why not? Can this be done in a way that meets the performance requirements for safety of life applications, as they were discussed in the V2V NPRM? What additional equipment would be needed to achieve interoperability or changes in standards and specifications? What is the projected cost of any necessary changes? How soon can these changes and equipment prototypes be available for testing?

4. To what extent is it technically feasible for different generations of the same V2X communications technologies and protocols to be interoperable with one another? Why or why not? Can this be done in a way that meets the performance requirements for safety of life applications? What additional equipment or changes in standards and specifications would be needed to achieve interoperability? What is the projected cost of any necessary changes?

5. Even if they are interoperable across different technologies and generations of the same technology, would there be advantages if a single communications protocol were to be used for V2X safety communications? What about other V2X safety applications, such as those involving V2I and V2P communications?

6. How would the development of alternative communication technologies affect other V2I and V2P communications, such as those supporting mobility or environmental applications? Do these applications have the same or different interoperability issues as V2V safety communications? Do different V2X applications (e.g., platooning) have different communication needs, particularly latency?

7. Do different communication technologies present different issues concerning physical security (i.e., how to integrate alternative communication technologies into vehicle systems), message security (i.e., SCMS design or other approaches), or other issues such as cybersecurity or privacy? Would these concerns be affected if multiple but still interoperable communication technologies are used rather than one? How could communication technologies (DSRC, C–V2X, 5G or other technology) be leveraged to

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7 Partnerships Project (3GPP) 5 and is being explored by chip manufacturers. Also DSRC might be shared with unlicensed services and applications, the FCC sought public comment on whether the 5.9 GHz band allocated for DSRC might be shared with unlicensed devices—and principally Wi-Fi devices. On June 7, 2016, FCC issued a “Refresh of the Record” for this NPRM asking for additional input as well as prototype devices that would support testing of sharing concepts. To assess the feasibility of certain sharing concepts, the Department collaborated with FCC and the National Telecommunications and Information Administration (NTIA) in developing a three-phase spectrum sharing test plan, which remains ongoing.

8 For information on what existing or future technologies could be used for V2X communications, including, but not limited to, DSRC, LTE–C–V2X and 5G New Radio. What are the advantages and disadvantages of each technology? What is the timeframe for deployment of technologies not yet in production? Please provide data supporting your position.

9 In light of these developments, the Department is interested in learning more about recent developments in V2X technologies. In particular, the Department wants to hear from stakeholders, and the public generally, whether focusing on DSRC as the primary means of V2V communications is consistent with recent technological developments, as well as with the Department’s general desire to remain technologically neutral and avoid interfering with the many innovations in transportation and telecommunication technologies. If technological developments support the use of alternatives to DSRC, the Department would also need to know how to ensure that these alternative technologies are interoperable with each other and DSRC.

10 We believe the below questions may help guide commenters, but commentators are also free to provide their views on the general issues surrounding V2X communications. To the extent possible, please provide data, technical information, or other evidence to support your comments.

11 Please provide information on what existing or future technologies could be used for V2X communications, including, but not limited to, DSRC, LTE–C–V2X and 5G New Radio. What are the advantages and disadvantages of each technology? What is the timeframe for deployment of technologies not yet in production? Please provide data supporting your position.

12 Of the V2X communications technologies previously discussed, at present only DSRC is permitted to be used in the 5.9 GHz spectrum band for transportation applications. If that allocation were to be changed to allow any communication technology for transportation applications, could DSRC and other technologies (e.g., C–V2X, 5G or any future technology) operate in the same spectrum band or even the same channel without interference? Why or why not? If there are any technical challenges to achieving this goal, what are they and how can they be overcome?
DEPARTMENT OF THE TREASURY

Agency Information Collection Activities: Submission for OMB Review; Comment Request; Application for Extension of Time for Payment of Tax Due to Undue Hardship

AGENCY: Departmental Offices, U.S. Department of the Treasury.

ACTION: Notice.

SUMMARY: The Department of the Treasury will submit the following information collection requests to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995, on or after the date of publication of this notice. The public is invited to submit comments on these requests.

DATES: Comments should be received on or before January 25, 2019 to be assured of consideration.

ADDRESSES: Send comments regarding the burden estimate, or any other aspect of the information collection, including suggestions for reducing the burden, to (1) Office of Information and Regulatory Affairs, Office of Management and Budget, Attention: Desk Officer for Treasury, New Executive Office Building, Room 10235, Washington, DC 20503, or email at OIRA Submission@OMB.EOP.gov and (2) Treasury PRA Clearance Officer, 1750 Pennsylvania Ave. NW, Suite 8100, Washington, DC 20220, or email at PRA@treasury.gov.

FOR FURTHER INFORMATION CONTACT: Copies of the submissions may be obtained from Jennifer Quintana by emailing PRA@treasury.gov, calling (202) 622–0489, or viewing the entire information collection request at www.reginfo.gov.

SUPPLEMENTARY INFORMATION:

Internal Revenue Service (IRS)

Title: Form 1127—Application for Extension of Time for Payment of Tax Due to Undue Hardship.

OMB Control Number: 1545–2131.

Type of Review: Extension without change of a currently approved collection.

Description: Under IRC 6161, individual taxpayers and business taxpayers are allowed to request an extension of time for payment of tax shown or required to be shown on a return or for a tax due on a notice of deficiency. In order to be granted this extension, they must file Form 1127, providing evidence of undue hardship, inability to borrow, and collateral to ensure payment of the tax.

Form: 1127.

Affected Public: Businesses or other for-profits, Individuals and Households.

Estimated Number of Respondents: 1,000.

Frequency of Response: On occasion.

Estimated Total Number of Annual Responses: 1,000.

Estimated Time per Response: 7.47 hours.

Estimated Total Annual Burden Hours: 7,470.

Authority: 44 U.S.C. 3501 et seq.

Dated: December 18, 2018.

Spencer W. Clark,
Treasury PRA Clearance Officer.

[FR Doc. 2018–27783 Filed 12–21–18; 8:45 am]

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