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August 25, 2016

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW Room TWA325
Washington, DC 20554

Re: Public Notice, Report No. 3048, dated July 25, 2016 (Rules Sec. 95.1501 et seq.)

Dear Ms. Dortch,

On behalf of Peloton Technology, I appreciate the opportunity to comment on the following petition by Public Knowledge And Open Institute at New America:

Petition for Rulemaking and Technology Request for Emergency Stay of Operation of Dedicated Short-Range Communications Service in the 5.850-5.925 GHz Band (5.9 GHz Band), dated June 28, 2016.

The Use of DSRC in Driver-Assistive Truck Platooning

Peloton has developed and plans to commercialize in 2017 a Driver-Assistive Truck Platooning (DATP) system that integrates active safety systems, vehicle-to-vehicle communications, cybersecurity systems and proprietary vehicle control algorithms to improve the safety and efficiency of tractor-trailers. In DATP, braking and acceleration of two semi-trailers and their active safety systems are linked electronically, allowing the trucks to form close-formation platoons that operate within continuously monitored safety parameters. The System transmits a variety of safety-critical messages over multiple DSRC channels. For example, to enable *cooperative braking*, which eliminates delays of human perception and reaction time that account for over 100ft of stopping distance at highway speeds, the System enables and requires that following trucks receive information on lead-truck braking initiation within approximately 10 milliseconds.

Clear, low-latency V2V DSRC is key to enabling current DATP capabilities. Anticipated enhancements of DATP systems such as lanekeeping controls and enhanced situational awareness tools for drivers of DATP-equipped trucks are likely to increase demand for bandwidth for safety-critical DSRC messaging significantly, even as other types of DSRC transmissions such as basic safety messages (BSM) for passenger vehicles and other V2X solutions become more prevalent in the vehicle operating environment.

For the implementation of Peloton's DATP product, all communication will be strongly encrypted and mutually authenticated, using the best leading edge practices. DSRC communications are highly secure and play a central role in ensuring the Peloton DATP design is safe and highly robust to any cybersecurity attacks.

While strict privacy rules (such as randomization of IDs) are required in the SAE J2945/1 standard, privacy in the sense of personal data is neither expected nor required by DATP users. Peloton customers will “opt in” to a commercial platform protecting sensitive information to the highest industry standards.

We view the security claims of the petition as highly inaccurate and unfounded. We would like to highlight the following points in support of our position:

- The petition incorrectly asserts that DSRC does not contain security rules. Peloton appreciates the work done by the IEEE 1609 working group experts over many years. The technology is now ready for deployment, and Peloton is using the DSRC security features defined in the IEEE 1609 standards.
- The petition uses a report (the referenced Intel report) unrelated to DSRC in an attempt to mislead the commission regarding DSRC security. Issues regarding a vehicle’s operating system are orthogonal to DSRC, and the FCC would be compelled to ban all forms of wireless communication to vehicles if the petition were taken seriously.
- NHTSA’s regulatory authority should not be a consideration in an FCC action. Furthermore, privacy has already been investigated and addressed by leading experts in the field, and the corresponding anonymity features are required in the SAE J2945/1 standard, which was developed to support NHTSA’s rulemaking decision.
- The vehicle-privacy concern expands well beyond electronic interfaces. The FCC would not consider mandating removal of license plates from vehicles, and it should not be taking similar action by attempting to block a regulatory action by the agency that is lawfully authorized to regulate automobiles. Furthermore, the IEEE is independent from NHTSA and has a long history of producing secure network standards, including DSRC, which is one of the most secure wireless interfaces ever developed.

Located in Silicon Valley, Peloton Technology was founded in 2011 and now employs a diverse team of more than 40 employees. Our work has benefited from broad support and analysis offered by industry, universities and government. Peloton’s investors include UPS, Lockheed Martin, Intel Capital, DENSO, Magna, Nokia, the Volvo Group and Castrol InnoVentures in addition to other private investors. Public, private and academic researchers have found that DATP is poised to provide economic benefits to the trucking industry as well as safety and sustainability benefits to society.¹ Importantly, *these benefits will be realized immediately and consistently upon early adoption of the technology and do not require a threshold market penetration.* A 2015 report published by the American Trucking Association provides more

¹ See, e.g., Bevly, David, et al. "Heavy truck cooperative adaptive cruise control: Evaluation, testing, and stakeholder engagement for near term deployment: Phase one final report." (2015). Sponsored by the Federal Highway Administration, research by Auburn University in partnership with Peloton, Peterbilt, Meritor WABCO and the American Transportation Research Institute found that “DATP takes advantage of increasing maturity of vehicle-vehicle (V2V) communications, widespread deployment of DSRC-based V2V connectivity expected over the next decade, to improve freight efficiency, fleet efficiency, safety, and highway mobility, plus reduce emissions.” At <http://trid.trb.org/view.aspx?id=1355694>.

information, describing the business case of DATP for the trucking industry, and predicting broadening commercial availability of DATP in the 2016-2018 timeframe.²

In preparation for commercialization, the Peloton System has been tested and demonstrated on public roads in California, Florida, Michigan, Nevada, Texas and Utah, while accruing more than 20,000 safe platooning miles traveled. Peloton and our deployment partners are in communication with state departments of transportation to arrange a multi-state demonstration of DATP within the next 12 months. We have already established plans for a trial in Texas with a major trucking fleet and are in discussion with a number of other major fleets to firm up plans for additional trials. We are working with a significant and growing number of states that have already authorized or are evaluating authorization of testing and fleet trials of on-highway DATP, because these states clearly understand the societal benefits of DATP. Several of the nation's largest fleets are expected to be the first users of DATP, adopting it initially for intra-fleet pairing of DATP-equipped trucks providing immediate V2V-enabled safety and efficiency benefits to these fleets.

Lastly, in addition to V2V, the Peloton System can use DSRC to connect trucks to infrastructure (V2I) for applications such as freight signal priority (FSP) which helps to control the flow of trucks as they maneuver safely and efficiently on arterial roads. The City of Columbus (Ohio), winner of the Smart City Challenge selected by the Department of Transportation in June 2016, plans to deploy DATP and FSP in tandem as part of its freight innovation strategy, with Peloton as a partner. Walmart has also expressed support for the the city's plans to deploy these connected-vehicle applications.³ A separate DATP-plus-FSP deployment project involving drayage trucks is planned around the Port of San Diego, with support from the California Energy Commission and industry partners. Several other Smart City Challenge finalist cities, with support from Peloton, Walmart and UPS, have included DATP-plus-FSP freight programs in strong proposals submitted to other USDOT funding programs to be awarded in 2016. This wide range of connected truck applications in diverse settings, which is moving into deployment now, depends on the availability of DSRC.

Peloton Technology is a leader in commercial deployment of DSRC technology via our implementation of DATP for the trucking industry. Development of DSRC standards, including those for security and privacy, has played an important role in system development and in gaining the trust of potential customers.

Peloton Technology sees the following impacts from granting this petition:

² ATA Technology Maintenance Council, "Automated driving and platooning: Issues and opportunities." (2015). At <http://atabusinesssolutions.com/Default.aspx?TabID=1415&productId=3095480>.

³ Letter from Elizabeth Freithem, Walmart Stores, Inc., to the Honorable Anthony Foxx, U.S. Secretary of Transportation, May 21, 2016.



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- To grant the petition would be to deny commercial and safety benefits of DSRC while having little or no impact on vehicle security. The commercial and safety applications of DSRC have benefited from hundreds of millions of dollars of public and private research; the technology is ready.
- Granting the petition would have significant negative impact on the burgeoning industries surrounding the vertical markets that DSRC enables, including Peloton.

Conclusion

Due to a strong and comprehensive set of supporting standards, DSRC is ready to support commercial products. Granting this petition would have a negative economic, environmental and social impact. The petition is without merit and should be denied.

Thank you for the opportunity offered by the Commission to comment on the petition.

Sincerely,

A handwritten signature in blue ink, appearing to read "S. Boyd", is written over a light blue circular stamp.

Steve Boyd
Co-Founder & VP External Affairs
Peloton Technology, Inc.