



# CLIENT ALERT

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## AUTONOMOUS VEHICLES

### THE CURRENT STATE OF AUTONOMOUS AND CONNECTED VEHICLES.

by Richard A. Wilhelm

#### *Addendum re: Continued Availability of 5.9 GHz Bandwidth for DSRC*

*The Alert on this topic pointed out that the FCC's current policy supporting the implementation and expansion of 5G wireless could jeopardize the continuing availability of the 5.9 GHz bandwidth for V2V and V2I communications using DSRC. It also indicated that, to date, only Cadillac and Toyota had announced their intention to begin voluntarily installing DSRC units on their vehicles.*

*On May 10, 2018, the FCC published a letter, signed by two of its commissioners, sent to Toyota CEO James Lentz that addressed Toyota's announcement regarding DSRC installation. The substance of the letter was both cynical and cautionary.*

*First, the Commissioners chided Toyota, and indirectly the entire industry, about its progress in adopting DSRC technology stating "[i]t is refreshing to learn, after nearly two decades since the Commission allocated spectrum for this purpose, that DSRC may move out of the conceptual and testing phases and on to the road." They then went on to suggest that Toyota may want to reconsider making an investment in the technology. They expressed a commitment to deploying "automotive safety-of-life applications" while at the same time satisfying the future demand for unlicensed (Wi-Fi, 5G) spectrum, but suggested that the results from the ongoing evaluation of sharing protocols (Wi-Fi and DSRC) and, the potential availability of newer (unproven) cellular 5G technology could spell the end of DSRC. The agency's caution about making an investment in DSRC does not bode well for the continued viability of DSRC.*

All manner of news reports about autonomous vehicle (AV) and connected vehicle technologies have become ubiquitous. Reports about Silicon Valley upstarts Uber, Tesla and Waymo draw particular attention, some favorable (Waymo - millions of miles of on-road experience), some not (Tesla and Uber - accidents). The amount of detailed information can result in overload. It can also obscure the big picture of the current landscape for implementation of these technologies. What is the prospect that those technologies will be available to the public anytime soon so that their benefits can be realized? The answer appears to be that the landscape varies depending on the technology and your level of optimism.

#### **Federal Guidance on Autonomous Vehicles.**

The AV industry is currently, or not, operating under Guidance issued by NHTSA, for the safe development of AV technologies. The Guidance is an interim stand-in for autonomous vehicle safety standards that have yet to be written. It "encourages" the industry to publish, before testing

and deployment of their technologies, safety assessment reports or letters that describe how they considered 12 safety elements during the design and development of their products. Compliance with the Guidance is voluntary. In fact, when NHTSA issued its most recent Guidance ("A Vision for Safety"), it expressly considered these reports to be promotional materials for AV manufacturers to "showcase their approach to safety." NHTSA also expressed that the intended audience for the reports was States and consumers, not NHTSA. To date, two companies, GM and Waymo, have published safety assessments. Both contain detailed explanations of their respective intensive development processes. Nonetheless, they are only descriptions of their processes accompanied by conclusions about performance.

Clearly, the existence of "voluntary" guidance will facilitate the development and deployment of AV technologies. Being voluntary, it creates no barriers and it obviates an immediate need for developing AV safety standards. Also, NHTSA is in the process of identifying other barriers it can help remove. NHTSA has essentially stepped out of industry's way.

#### **Proposed AV Start Legislation.**

The House and Senate have proposed similar legislation to get AV technologies on the road sooner rather than later. Addressing the lack of existing AV standards, the Senate version essentially codifies the requirements of the NHTSA Guidance. It requires the submission of the reports but prohibits NHTSA from "conditioning" testing or sale of AVs on "a review" of the contents of the reports by NHTSA.

Addressing the current statutory prohibition of selling vehicles that don't comply with FMVSS (which many AVs do not), it increases the number of exemptions that NHTSA can issue to permit the sale of non-compliant AVs (that manufacturers can demonstrate are at least as safe as vehicles that do comply) from 2500 to up to 100,000.

Addressing regulatory barriers to AV development and deployment, it proposes to clean up existing regulations that AVs cannot comply with as written to accommodate AVs and it establishes a road map for developing new safety standards for AV technologies.

This legislation has stalled in the senate over concerns that the technology has yet to be proven safe and reliable and that the legislation does not do enough to protect vehicle owners or the public. The legislation had stalled before the most recent reports of fatalities associated with AV technologies. These incidents will reinforce the concern of opponents of the legislation. Whether and how quickly the current version of the legislation becomes law is an open question. So too is whether the legislation will be changed, and if so, how.

#### **Proposed Federal Motor Vehicle Safety Standard 150 – Connected Vehicle Communications**

This proposed FMVSS would essentially require the phase-in of Dedicated Short Range Communication (DSRC) units into new

passenger vehicles. These communication devices will permit V2V and eventually V2I communications. In the V2V context, they would transmit a basic safety message containing information about the vehicle's speed, heading, brake status and the like to other vehicles. It would allow a vehicle that receives such messages to know about potential impacts with other vehicles before the vehicle's onboard sensors, cameras and LIDAR can see or detect the other vehicle. Once received, the vehicle can either warn the driver or, if autonomous, automatically take steps to avoid an impact thus enhancing the vehicle's autonomous capabilities. The industry has been developing and proving out these devices for 20 years. No other technology currently meets the performance requirements necessary for these communications.

NHTSA issued a Notice of Proposed Rulemaking for this standard in January 2017. Comments from stakeholders and the public were received through April. Thereafter, the proposal seemingly disappeared into the ether. A report surfaced in late October that the current administration had killed the proposal. On November 8, 2017, the DOT responded that a final decision had not yet been made and that the rule was still under consideration. If true then, it may not be now. The DOT's "Strategic Plan for FY 2108-2022" (February 2018) does contain one mention of "connected ..... vehicles," but, that specific reference is seemingly diluted but the DOT's later coining of a new acronym - "AV & RT" (Autonomous Vehicles and Related Technologies). Moreover, while the acronym "V2I" is defined in a list at the end of the Plan, it appears nowhere in the body of the Plan.

If the current administration shelves the standard, V2V and V2I communication will be delayed for some time. This technology is only effective if every vehicle has it. If only two out of every hundred vehicles has the technology, little or no safety benefit will be realized. That is why NHTSA wanted to mandate that all car companies begin installing the technology. Voluntary adoption of the technology would take too long to achieve any material benefit. To date only Cadillac and Toyota have indicated they will proceed with the technology.

Shelving the standard will also further delay the creation of the centralized security or message credentialing system (SCMS or security credentials management system) necessary to insure the authenticity and reliability of basic safety messages. Currently, the structure, financing and operation of the system has yet to be determined. Lack of a mandated phase-in further removes any urgency for proceeding with the development of the system.

Delaying adoption of this standard will also create even more uncertainty for the transportation departments, highway administrators, metropolitan planning organizations, regions and municipalities that have already begun planning for the infrastructure to support V2I communications. Those organizations are very committed to the deployment of V2I infrastructure as evidenced by a January 23, 2018 letter sent on behalf of a coalition of Infrastructure Owner Operators to DOT Secretary Chao and FCC Chairman Pai. However,

given that the funding for those infrastructure improvements would likely come from available federal funding for Intelligent Transportation Systems, the current administration may prefer further delay.

## Continued Availability of 5.9 GHz Bandwidth for DSRC

Almost 20 years ago, the FCC set aside the 5.9 GHz bandwidth exclusively for DSRC. That exclusivity has seemingly been under attack by the telecommunications industry ever since. It has pushed the FCC to reallocate the bandwidth exclusively for unlicensed devices, namely Wi-Fi services, claiming that the bandwidth is largely unused for DSRC. At a minimum, that industry wants to share the bandwidth with DSRC. The auto industry and others object to sharing unless it can be demonstrated that unlicensed device transmissions will not interfere with DSRC. The FCC has been studying sharing protocols since 2016. If the telecommunications industry prevails, there may be no bandwidth available for DSRC.

The FCC's current policy is the active support of the development of 5G wireless. It is freeing up or considering other bandwidths for 5G use. Unless enough other bandwidth can be made available for 5G, or a sharing protocol can be used without impairing DSRC, the FCC policy could spell trouble for DSRC.

## Conclusion

At present, it appears that autonomous technologies are being favored over connected vehicle technologies, likely due to the price tag for development of V2I infrastructure and the fact that the auto/technology companies foot the bill for the former. Any possible barriers to the deployment of AVs are being identified for removal. At the same time, connected vehicle technologies are in a state of flux.

*This client alert is published by Dickinson Wright PLLC to inform our clients and friends of important developments in the field of autonomous vehicle law. The content is informational only and does not constitute legal or professional advice. We encourage you to consult a Dickinson Wright attorney if you have specific questions or concerns relating to any of the topics covered in here.*

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