



# The Road to Connected Cars Runs Through Washington



*Stephen L. Goodman  
Butzel Long  
Washington, DC*

# Federal Entities that could Impact Connected Car Development

---

- DoT
- NHTSA
- FHWA
- FMCSA
- FCC
- DoC
- NTIA
- [*And I am not counting DoD/DARPA*]
- DHS
- FTC
- NTSB
- DoS
- EPA
- White House
- Congress



U.S. Department  
of Transportation



# How These Federal Entities Can Affect Connected Cars

---

- **Department of Transportation (DoT)** – sets policy for automated vehicles and light trucks; Most recently released Automated Vehicle Policy Statement on September 20, 2016
- **National Highway Traffic Safety Administration (NHTSA)** – sets Federal Motor Vehicle Safety Standards; most recently proposed mandating DSRC

# How These Federal Entities Can Affect Connected Cars

---

- **Federal Communications Commission (FCC)** – spectrum for V2V and V2I, and for radars; possibly privacy
- **Department of Commerce (DoC) and the National Telecommunications and Information Administration (NTIA)** – spectrum for V2V and V2I (and the National Institute for Standards and Technology (NIST) for cybersecurity)
- **Department of State** – international spectrum allocations. WRC-15 put on the agenda for WRC-19 the issue of a globally harmonized allocation for V2V and V2I

# How These Other Federal Entities Can Affect Connected Cars

---

- **Department of Homeland Security (DHS)** – cybersecurity
- **Federal Trade Commission (FTC)** – privacy and cybersecurity (jointly holding a workshop with NHTSA on these issues at the end of June)
- **Federal Highway Administration (FHWA)** – standards for infrastructure; funding
- **National Transportation Safety Board (NTSB)** – recommendations for requiring safety technology to be deployed in cars

# How These Other Federal Entities Can Affect Connected Cars

---

- **Environmental Protection Agency** (EPA) – regulation of greenhouse gases/mileage requirements
- **FMCSA** – oversight of safety for trucks and buses
- **Congress** – oversight of agencies; control of the purse strings; legislation
- **White House** – influences Executive Agencies

# It Gets Even More Complicated

---

- The States also have a role to play
  - Legislation/regulation: traditional role of states in regulating drivers, but the federal government can effectuate policies with “carrots and sticks” and/or preemption
  - To date a handful of states, including Michigan and California, have enacted laws/regulations to allow on-road testing of autonomous vehicles
  - Litigation/liability
  - Funding of infrastructure

# DSRC/V2V Communications as a Case Study

- History of DSRC – ITSA Petition for Rulemaking in May, 1997, FCC issued an NPRM in June, 1998, and spectrum was allocated by the FCC in an order in October, 1999
- More recent developments – Docket 13-49 – in 2013 in connection with re-allocating other spectrum in the 5 GHz band for unlicensed use, the FCC found that the DSRC spectrum is very lightly used, and so proposed sharing of the DSRC band with unlicensed services – such as WiFi, and also things like UAVs
- Very complicated proceeding, pitting wireless interests – manufacturers and service providers such as Cisco, Qualcomm, Google, Microsoft, cable companies and cellular carriers -- against the automobile industry and public safety advocates

# DSRC/V2V Communications as a Case Study

- Competing wireless industry proposals -- Cisco vs Qualcomm: rather than sharing the entire 75 MHz allocated to DSRC on a detect-and-avoid basis, as Cisco proposed, Qualcomm's proposal would move safety-of-life DSRC uses —such as crash-avoidance technology—to the upper 30 MHz of the 5.9 GHz band, walling them off from any interference. The lower 45 MHz of the band would be opened up to sharing – referred to as the re-channelization approach.
- More recently, two “public interest” entities filed a Petition for Rulemaking to stay deployment of DSRC until the FCC can adopt rules to address privacy and cybersecurity for connected cars, and to adopt the Qualcomm re-channelization plan. They exhibited a lack of knowledge of the industry, but there was no shortage of rhetoric:

"This is the sort of 'car zombie apocalypse' that the auto industry is simply not equipped to prevent or address, and it would be enabled and streamlined by the deployment, as currently proposed, of DSRC." (Petition at p. 5)

# DSRC/V2V Communications as a Case Study

- Rare Bi-partisan effort in the Senate – letter from Senators Thune, Booker and Rubio to the heads of DoT, FCC and DoC – and their response reflects a consensus: “Each of our agencies shares your commitment to finding the best method to develop, successfully test, and deploy advanced automotive safety systems while working to meet existing and future spectrum demands. ... The DOT test plan's stated overarching goal is to assure ‘safe, reliable, and on demand access to 5850-5925 MHz spectrum for DSRC operation.’”
- Next steps to evaluate sharing between DSRC and WiFi:
  - FCC will take the lead on extensive testing, based on the DoT Test Plan: Phase I – testing at FCC Labs in Columbia, MD; Phase II based on Section 6 of the DoT test plan at a DoT facility; Phase III will be based on Sections 4, 5 and 9 of the DoT test plan, and will occur at a “suitable facility”. The FCC has only recently begun the Phase I testing process, and has not yet selected the “suitable facility” for Phase III testing
  - These three agencies acknowledged that they will need to complete all three phases before being able to conclude that sharing with WiFi in the 5.9 GHz band is safe.

# DSRC/V2V Communications as a Case Study

---

- In December 2016, NHTSA issued an NPRM to establish a new FMVSS that would require automobile manufacturers to incorporate vehicle-to-vehicle (V2V) communications capabilities into all new light vehicles  
([https://www.nhtsa.gov/About-NHTSA/Press-Releases/nhtsa\\_v2v\\_proposed\\_rule\\_12132016](https://www.nhtsa.gov/About-NHTSA/Press-Releases/nhtsa_v2v_proposed_rule_12132016)).
- The comment period closed on April 12<sup>th</sup>, and 447 sets of comments were filed (of varying detail and quality).

# DSRC/V2V Communications as a Case Study

---

- The NHTSA NPRM also proposed standardized Basic Safety Messages (BSM) communicated between vehicles to ensure interoperability. NHTSA does not propose initially to mandate or specify particular applications using the V2V communications (such as Intersection Movement Assist (IMA) and Left Turn Assist (LTA)), but would allow the industry to develop and deploy particular safety applications.
- The NHTSA NPRM also recognizes that privacy and cybersecurity must be "baked into" the systems to ensure that consumers will want the technology, and that it will not be abused by bad actors.

# DSRC/V2V Communications as a Case Study

---

- So we have a situation where the FCC is contemplating reduction in DSRC/V2V spectrum (under the Qualcomm re-channelization proposal) at the same time as NHTSA has proposed mandating that all light vehicles deploy DSRC/V2V capabilities as a FMVSS
- No clear path for resolving potential conflicts between an Executive Agency (NHTSA) and an Independent Agency (FCC) – White House cannot “referee”, and Congress moves slowly, if at all.