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Docket Management Facility (M-30)
US Department of Transportation
1200 New Jersey Avenue SE
Room W12-140
Washington, DC 20590-0001

Attention: Docket No. NHTSA-2016-0126 – V2V Communication Mandate

Dear Sir/Madam:

I have reviewed the National Highway Traffic Safety Administration (NHTSA) Notice of Proposed Rulemaking (NPRM), "Federal Motor Vehicle Safety Standards (FMVSS) – V2V Communications" published in the Federal Registered on January 12, 2017. NHTSA proposes to create a new FMVSS, No. 150, to mandate vehicle-to-vehicle communications (V2V) for all new light vehicles and to standardize the message and format of V2V transmissions.

I strongly oppose this new rule and wish to offer comments on:

1. Authority
2. Safety/Cybersecurity/Future New Crimes
3. Health implications/Opt Out
4. Costs/Conflicts of Interests
5. Privacy

Summary
The NHTSA should not mandate this V2V technology as it provides no safety value to the consumer as proposed, creates more risks in terms of health, privacy and security and will cost far too much than is currently being admitted to in this NPRM. Instead the NHTSA should work with industry on "if equipped" regulations. If the NHTSA does go forward with the V2V mandate then an opt out (turn off the radio option) should be established as well as regulations on the placement of the radios/antennas.

1. **Authority**

The NHSTA, by choosing a "mandate" of V2V radios versus "if equipped" rules, oversteps its statutory authority and proposes to "make the market" for autonomous cars[1] and sacrifices public safety to do so.

Both industry and government are comparing this proposed "revolutionary" technology to the change over of transportation from the horse and buggy to cars at the turn of the last century. They fail to point out that the last change was made through true public acceptance – citizens saw value and freely bought vehicles, versus this change where the government is proposing to mandate, leaving no customer choice. The rule actually admits that a government mandate[2] is the only viable way to achieve public acceptance. Mandates are not public acceptance, they are just mandates – no freedom of choice.

The NHTSA is using sick, perverted, circular logic to circumvent the controls that were put in place to restrict its authority (Safety Act) to safety. The rule clearly shows that the NHTSA knows it has no statutory authority to mandate autonomous cars[3], as well as, states that the technology provides no "potential" safety benefits unless all cars are connected and transmitting[4]. V2V devices also provide no "potential" safety benefits unless combined with applications, of which NHTSA is purposely not proposing to mandate in this rule.[5]

NHSTA is circumventing the rules. Let me give you an analogy. An entity sets project spending limit authority for each department at $50K. All projects above $50K require additional approval. A department has a proposed project costing $100K. The department circumvents its spending authority by breaking the project into two pieces, each at $50K and does not seek additional approval. The department circumvented internal controls.

The NHSTA wants to implement autonomous "safety" features that rely solely on ALL cars having the technology in order to work properly. That decision exceeds its authority. The

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[1] NPRM - Executive Summary - "In the longer-term, the agency believes that this fusion of V2V and vehicle-resident technologies will advance the further development of vehicle automation systems, including the potential for truly self-driving vehicles."

[2] NPRM – Executive Summary – "Without government action, these challenges could prevent this promising safety technology from achieving sufficiently widespread use throughout the vehicle fleet to achieve these benefits"

[3] VI,B,1 -"NHTSA can regulate how aftermarket devices function, but it cannot require manufacturers or drivers to add them to used vehicles."

[4] IV, B, 6 – "Moreover, unlike for most of the prior technologies in which NHTSA allowed drivers the option of changing or disabling the functionality of a required safety system, allowing V2V communications to be disabled would affect the safety of more drivers than just the driver who turned off their own V2V device. A cooperative system like V2V protects you by making you more "visible" to other drivers and by letting you know when they pose imminent risks to you. A driver who disables V2V on their vehicle makes their vehicle less visible to other drivers, potentially affecting their own relative safety risk and the safety risk to those around them. The safety benefits from a cooperative system could be undermined by allowing drivers to opt out. If there is no safety benefit from opting out, and doing so would undermine safety benefits both for the driver who opts out and for drivers around them, opting out may not be justified."

[5] "NHTSA has concluded that V2V communication technology combined with V2V-based safety applications can provide significant safety benefits and potentially help drivers avoid thousands of crashes per year. We believe that by leading with a mandate for V2V communication technology, NHTSA will be able to foster industry development and deployment of new, beneficial safety applications."

authority for such a significant change lies with the people through their elected representatives (legislation). So NHSTA issues a rule that will inevitably CREATE a PROBLEM, which will inevitably INVOKE a REACTION, which it will inevitably bring about a pre-planned SOLUTION.

> PROBLEM: This vision of cars talking & automatically reacting to each other can only produce "potential" safety benefits if all cars participate. A hybrid of some cars talking and some not, will make the roads more dangerous when drivers rely on car manufacturers applications that can't see all vehicles and can't possibly work effectively. More crashes will occur.
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> REACTION: Customers, as well as the insurance industry, involved with these crashes will become frustrated and call for a solution. NHSTA will determine that cars not communicating are causing the problem & there will be a cry for Congress to do something to reduce these crashes.
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> SOLUTION: NHSTA will recommend Congress enact laws to require aftermarket devices in all cars to stop the crashes caused by this rule. Congress will pass a law requiring after market devices in all cars. No car will be allowed on the road unless it is "connected". The birth of the autonomous car.

Suggestion – The NHTSA should not mandate V2V but revert to its "if equipped" alternative that is within its authority and will allow for development of standards. The NHSTA should prepare a recommendation report to Congress and request legislation on the connected car, including full cost estimates. That way a true public debate can take place and this important change can be fully vetted and analyzed by all affected through the proper channel – the legislative process. If the people all agree then the transition to connected autonomous vehicles can proceed in a more efficient, cost effective manner with openness and transparency.

2. **Safety/Cybersecurity/Future New Crimes**

NHTSA actions should always result in improved safety. This rule fails to do so on two accounts. The first is that "potential" safety goals cannot be achieved until all cars are connected and this rule does not achieve that. This rule creates more accidents than it prevents. This was discussed in "Authority" above and will not be belabored again.

The second account is that this rule is based on the premise that software driven technology will make better decisions than humans and avoid crashes that occur today. This is a false premise. Technology trades one type of decision error (e.g.- poor judgment on the humans part) for another error (software/hardware errors and cybercrime) and may also create new types of future crimes on our roads.

Todays crashes that you are trying to avoid are due to primarily three factors – 1) poor judgments 2) distractions in the car and 3) weather related.

This rule and the applications it promotes will lead to more distractions through alerts that can be "false positives" or may just scare the driver as they pop up out of nowhere. Elderly and inexperienced drivers may have difficulty distinguishing between real and false warnings and cause more accidents. Red light cameras were put in as an attempt to reduce crashes by stopping red light runners, but studies show they are actually increasing crashes of a different kind (rear end crashes).

Experience has shown that computer systems cannot be fully secured. Hackers have been able to get into very sophisticated governmental and banking systems for decades and there still is no relief in sight to stop this. Wireless systems are even less secure. This NHSTA rule is exposing every new vehicle to unnecessary risks without ANY stated real safety benefits only promises of some unsubstantiated "potential" benefits.

Hardware failures, blue screens, software glitches, software errors, software viruses, bots, worms, malware, ransomware, Trojan horses, and the list goes on. All of these risks will be put upon every new car owner due to a few car drivers who lack poor judgment in performing left hand turns or handling intersections. Is this a good trade-off? One major hack has the potential to negatively affect more drivers in one single day than the poor judgment of all the drivers in the US in a year.

Let me give you a recent example of bizarre software issues. I entered my 93 yr. old father's house 3 months ago to find him watching the NFL game on Sunday. The TV was broadcasting the game in Spanish but the commercials in English. I asked him what channel he was watching & he said CBS. He said it had been going on all year and only for the Sunday game; all other shows come through in English. I tried to find a setting on his TV thinking he might have inadvertently changed something. I found nothing. I called a neighbor and asked them to turn the game on, and they said they were getting it in English. I then called Frontier. They had to "reset his box" and after they did, everything was ok. I asked what caused this problem and they did not know.

Now imagine something like that happening to someone's car on the road. Do you see a potential for more problems? If we asked the public to submit these types of stories (when software and hardware stopped working properly) it would surpass the IRS tax code in volume of data. Is this an acceptable risk to force upon the driving public? Technology has its uses and place in society but it is not a GOD and should not be treated (worshipped) as one.

New Crimes. Once the criminals know that cars will not move forward if a person/object is in front of them they will stage new crimes knowing that the occupant has no recourse but to stay in place like a sitting duck. There must be an easy way for car owners to disable these "automatic" features and take full control of their vehicles in order to escape dangerous situations.

3. Health Implications/Opt Out

It was encouraging to see that NHTSA staff actually read and considered the many commenters remarks submitted during the ANPRM process on the health implications. It was sad to see no resolution to this issue in the NPRM.

Is electro-sensitivity real? Yes. Who says so? A lot of people and some countries, but I will give you one VERY credible source to ponder further. Please listen to this excerpt of a 2015 interview with Dr. Gro Harlem Brundtland. Who is she? She is the retired Prime Minister of Norway and Former General Director of the World Health Organization. (Credible, no?). What does she say? She says she is electro-sensitive, getting headaches when she holds a cell phone to her head. What does she say about the science? She says, "There is no doubt in the research on this. There are definitely negative aspects to the radiation that affects all humans." https://youtu.be/ISsQSwiWI2E

I am NOT electro-sensitive, as in experiencing current noticeable issues with wireless, but I know those who are and I have been researching this topic for about 4 years. I have NEVER encountered a set-up such as that which exists with these FCC emission guidelines. NEVER. From having an agency with no health expertise to be in charge of guidelines that affect health; coupled with known open controversies on what the guidelines do and do not protect from (thermal vs non-thermal; acute vs chronic long term exposure; children vs adult, etc); coupled with legislation that bars anyone else from touching it (Section 704 of the 1996 Telecommunication Act) ; coupled with the ability to saturate the environment with so much of it; coupled with allowing the industry to claim "Industry has not said once, once that cells phones are safe. The federal government has."[6] And absolving them from liability for their products; coupled with an important Docket that sits uncompleted (FCC Docket 13-84) with no requirement to timely complete before saturating the environment with more RF (5G).

This set up is clever, but it leads to absolute cruelty to those fellow citizens who are suffering from this exposure. By not providing an opt out, an ability to shut these radios off, it violates long held constitutional protections against cruel and unusual punishment. A good analogy would be setting a requirement that all school children must eat the cafeteria food and are not allowed to bring their own lunch. And then putting peanut butter sandwiches on the menu as the only item. What do the peanut allergy children do? And then you further rule that all children must eat lunch! Please ask your controllers, the central planners, why we have to be so cruel?

The excuse provided (see footnote 4) makes no sense. First, both sides of the health issue would agree that when it comes to EMR/EMF – distance is your friend. By being able to shut off the radios in their own cars, close proximity (within inches or a few feet) to these dangers are at least avoided. Not perfect, as other cars may or may not affect them, but better than sitting in front of the antenna. Second, as stated in the authority section above, used cars on the road will also not have radios. So the safety argument that they won't "be seen" and therefore harm other drivers is NOT VALID. You are planning to set up a system that has both seen and unseen cars. Those in used cars are also not seen and you are not concerned about them providing a safety hazard to the others. An opt out, allowing citizens the right to turn them off will provide a more accurate measurement of true "public acceptance".

[6] Dave Snowden, CTIA Vice President, https://youtu.be/s5yGTZq06zQ

In addition, the decision NOT to regulate the placement of these radios is a bad choice. These radios need to be placed the furthest from the drivers to ensure safety and their placement needs to be known to the car owner in order to avoid close proximity. Our cars often sit in driveways and are leaned up against by people for long periods of time, worked on by others, etc. Knowledge of where these radios are through signage and explicit warnings upfront in the manuals is necessary in order to avoid contact for long periods of time. Although it doesn't say, I am assuming such radios are "always on and transmitting", in order to identify their position on the roadways whether operational or not. This should be clarified.

4. C**ost estimates are misleading/Conflicts of Interests**

Since the real goal is autonomous vehicles and autonomous vehicles require much more than just radios to work properly with the environment, preparing the costs section just based on the cost of the radios and the LTA and IMA applications is fraudulent. The true costs, considering the Vehicle to Infrastructure (V2I) that is needed[7] could be in the trillions[8], and saddle Americans with significant costly ongoing maintenance. The only benefactor of this rule from a cost perspective is the technology industry.

Moving society to autonomous cars will put approximately 5 million people out of work in the transportation sector and the technology sector will not create that many jobs. This is not a decision to be made by unelected bureaucrats but by the people. The cost of their unemployment and possibly lifetime support payments need to be factored into the cost equation. In addition, many businesses such as truck stops and eateries depend on this industry for survival and such costs (lost revenue) should be factored into the estimate..

Embarking the nation on a connected autonomous vehicle policy path without an estimate of the true total cost is criminal and dishonest. The recent numerous appointments[9] to lucrative industry positions create enough doubts about whether this rule was formulated in an independent manner. This rule, mandating radios in all new cars, has benefits only to the autonomous car manufacturers and technology sector, which the policy leaders who started this rule now work for. An investigation, at a minimum is warranted into whether conflicts of interests played a role in this ludicrous rule.

5. **Privacy**

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[7] Federal Guidance Released for Vehicle-to-Infrastructure Communication, http://www.govtech.com/fs/transportation/Federal-Guidance-Released-Vehicle-to-Infrastructure-Communication.html

[8] Sept 2015 GAO report, Vehicle-to-Infrastructure Technologies Expected to Offer Benefits, but Deployment Challenges Exist, http://www.gao.gov/assets/680/672548.pdf

[9] Zoox autonomous vehicle start-up hires ex-NHTSA's Rosekind, http://www.reuters.com/article/us-autonomous-zoox-rosekind-idUSKBN1751VX, reports former top U.S. safety regulator Mark Rosekind was joining Zoox; General Motors Co hired NHTSA's chief counsel, Paul Hemmersbaugh; former NHTSA executive, Kevin Vincent, who was Hemmersbaugh's predecessor in 2015, was named director of Regulatory and Safety Affairs at Faraday Future

As stated in this rule, Part IV C 6, "As noted above, the introduction of V2V technology **creates new privacy risks that cannot be fully mitigated**. That said, in the agency's view, the V2V system is protected by sufficient security and privacy measures to mitigate unreasonable privacy risks." (emphasis added)

If you can't fully mitigate a risk, you shouldn't propose the rule. Period. Like the software security risks you create with this rule, the privacy risks are new too. The public, through consent, should make this decision of what constitutes "reasonable privacy risks". Mandates do not allow for proper consent and the public does not need another privacy policy that says accept this or you can't use this product. It may be fine for free products, but not for products we are paying tens of thousands of dollars for.

Conclusion:

It is quite obvious what is being put in motion with this rule. The central planners of this country have determined that they would like to move to autonomous cars in order to control mobility of the masses. It is part of a bigger plan.[10] To make such an announcement upfront and in the open would invoke public outrage (due to loss of freedoms and privacy as well as enormous financial costs), so they decided it is best to boil the frog slowly instead and accomplish the mission over a 20-year period using the Problem, Reaction, Solution method. Since the NHSTA has no authority to mandate aftermarket devices in used cars, they are willing to sacrifice current safety for the goals (means justifies the ends).

From Cash For Clunkers (removing used cars and parts from the system) to Ben's Journey[11] (mobility as a service), you may be very proud of yourselves at the DOT. But for me, all I can think of is two phrases – 1) There is a special place in hell for the people that participated in this fraud against Americans and 2) May God have mercy on your souls.

Best regards,

Marilynne Martin

[10] Welcome to 2030. I own nothing, have no privacy, and life has never been better, https://www.weforum.org/agenda/2016/11/shopping-i-can-t-really-remember-what-that-is/

[11] The Future of Mobility – Ben's journey, https://dupress.deloitte.com/dup-us-en/multimedia/videos/roadmap-for-future-of-urban-mobility.html