**Comments on Notice of Proposed Rulemaking**
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Docket No. NHTSA-2016-0126
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The National Highway Traffic Safety Administration's proposed rule to mandate vehicle-to-vehicle (V2V) communications for new light vehicles is expensive, risky, and likely to inhibit the development of superior technologies that can accomplish the same goals at a far lower cost. This mandate should be rejected in favor of programs that would encourage software and hardware companies to develop better V2V smartphone systems and encourage consumers to adopt those systems.

Many past auto safety mandates such as seat belts, air bags, and backup cameras involved ideas for which there were no other obvious alternatives on the horizon. While they may or may not have been cost-effective, they at least had the virtue of not forestalling new and better technologies. The V2V mandate doesn't have that virtue.

Instead, the V2V mandate is proposed at a time of rapidly evolving telecommunications and computing technologies. By locking America's transportation system into one technology, the mandate would inhibit if not outright prevent the development and implementation of new, superior technologies. Thus, one of the unstated costs of the proposed mandate is the cost of not using those newer technologies.

To make matters worse, the V2V mandate would be implemented very slowly as new cars are added to the nation's motor fleet. Unlike airbags, which protect the occupants of cars equipped with them regardless of whether other cars have them, the V2V system only works when other vehicles also are equipped with it. Thus, the proposed mandate has an estimated cost of at least $15 billion in its first five years (*Federal Register* page 3973) yet is projected to save just 23 to 31 lives in 2025 (p. 3992).

Moreover, projections of the safety benefits of the V2V mandate assume that no other system is implemented. Yet the first autonomous cars are expected to reach the market well before 2025, and are likely to be the dominant vehicles on the road by 2040, when the V2V mandate is projected to save 987 to 1,365 lives. Autonomous cars are likely to save far more lives, and are expected to function well even without a V2V mandate. Yet their presence is likely to reduce the benefits of a V2V mandate simply because many of the lives that NHTSA assumes would be lost without such a mandate will be saved by autonomous vehicles.

Autonomous vehicles will happen with or without a V2V mandate, but other technologies such as fifth generation smartphones can accomplish many of the same goals as V2V without a mandate, yet would probably be forestalled by a mandate. Such technologies can be implemented far faster than the V2V mandate. While the automobile fleet turns over at a rate of about 5 percent per year, more than three out of four Americans already own a smartphone and replace them at an average rate of at least 40 percent per year.

All of the basic communications and data processing functions that the V2V mandate proposes to be installed in light vehicles are already in smartphones. Thus, a safety program based on smartphones allows more rapid implementation without forcing consumers to pay for redundant technologies. In fact, V2V communications already exist thanks to smartphones and GPS devices, as traffic alert warnings on Google and Apple maps and Tom Tom and Garmin GPSs are based on V2V communications within those manufacturers' networks.

The NHTSA could hasten the implementation of smartphone-based V2V communications by giving developers incentives to write V2V apps. Consumers could be given incentives to use such apps by including benefits such as vehicle platooning, parking information, and superior alternative routings around congestion. Encouraging cross-platform and backwards compatibility of such apps would result in rapid market penetration. Such a system could produce greater safety benefits, faster than a V2V mandate, and at a far lower cost.

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