Testimony of

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Hearing on

Vehicle to Vehicle Communications and

Connected Roadways of the Future

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Mr. Chairman and distinguished members of the Subcommittee, it is my privilege to be a part of this hearing – thank you for the opportunity to testify today. My name is David St. Amant, and I am the Chief Operating Officer of Econolite Group, Inc., a nationwide company with headquarters in Southern California. I am also a recent past Board Chair of the Intelligent Transportation Society of America (ITS America) and a current member of ITS America's Leadership Circle.

For many years, Econolite has been committed to the development and advancement of future-forward initiatives like connected vehicle technologies and other leading-edge innovations to meet the needs of the transportation industry. We've been in the traffic management business since 1933 developing signalized intersection technology to meet the needs of municipalities throughout the nation. Specifically, during the last 10-plus years Econolite has focused much of its attention on helping shape industry standards and collaborating with leading technology partners to advance the U.S. Department of Transportation's Vehicle-to-Infrastructure (V2I) communication initiatives as developed for the Intelligent Transportation Systems Joint Program Office's Connected Vehicle Research Program. Econolite's goal has always focused on improving quality of life through

innovation in traffic management and the promise to increase roadway safety and improve mobility.

Using the most basic description, a manufacturers role in the V2I space is to provide traffic management systems designed to provide drivers with a timely and safe passage through an intersection, or a corridor of intersections. As we continue to see population growth and traffic congestion increase, we believe that augmentation of the current methods of detecting vehicles, motorcycles, bicycles and pedestrians needs to develop in order for us to save lives on our roadways and keep ahead of traffic demands. With Connected Vehicle technologies, we see a time when we will be able to detect *every* vehicle, motorcycle, bicycle or pedestrian at an intersection – and with that valuable information we will be able to help prevent crashes and move traffic much more efficiently and safely then with today's vehicle detection technologies.

The main difference between the way we detect traffic today, and how we will process information using Vehicle-to-Vehicle and Vehicle-to-Infrastructure data in the future, is that instead of detecting vehicles at a fixed point in the roadway–for the first time, the vehicle will send its location information in real-time and let us know where it is going, allow us to predict when it will get

there, enable signals to adjust their timing and warn approaching vehicles when necessary for preventing crashes, and determine by modality why it should get a green light, or *priority*. This new approach changes everything – our systems will be able to manage *ALL* traffic, not just a sampling of traffic. We'll know for example, the actual number of vehicles in the left-turn lane queue (not just an estimate), and provide a slightly longer green light to flush traffic through the intersection, thus avoiding long waits and start-and-stop traffic which causes traffic congestion, increased pollution and safety hazards. Or, we can provide priority to a system of transit buses to move efficiently through a roadway corridor during rush hour. And most importantly, we can reduce the number of vehicle and pedestrian crashes at intersections and help emergency vehicles reach the site of a crash faster and safer.

We believe in this technology so strongly that we are already building V2I communication into many of our new traffic signal controllers so that when vehicles are equipped with V2V and start communicating with each other, our infrastructure will be ready to talk back. We also believe the United States must remain an innovation leader and not fall behind countries like Japan that have already deployed V2I technology.

Traffic crashes claim nearly 33,000 lives each year, and over 2 million Americans are injured on our nation's roads. This technology has the potential to prevent or reduce the impact of up to 80 percent of unimpaired vehicle crashes, saving thousands of lives each year.

As we are implementing this revolutionary technology, we are also working to ensure that a connected vehicle and transportation network is designed to protect privacy and safeguard against cyber security threats. Efforts underway to create a Security Credential Management System (SCMS) for connected vehicles are critically important. From our perspective, a network of signalized intersections should be classified as critical infrastructure. For example, as the Connected Vehicle infrastructure is deployed, we need to ensure that vehicles requesting priority have the authority to do so – tying up the efficient operations of our nation's roadways can create a multitude of problems for the safety and mobility of our driving public. And, that the information that is exchanged between systems is focused on the task of safe and efficient mobility, without compromising individual privacy.

It is also critically important that the 5.9 GHz band of spectrum which was set aside for V2V and V2I communication is protected from harmful interference that could result if unlicensed devices are allowed to operate in the band

without rigorous, real-world testing to ensure that safety-critical critical signals aren't delayed.

Dedicated Short Range Communications (DSRC) in the 5.9 GHz band is the only technology currently available that provides the proven, high-speed, reliable communication necessary to support V2V and V2I crash avoidance systems at intersections and between vehicles. I applaud the commitment of those on this dais whose companies have come together to test whether spectrum sharing is possible in the 5.9 GHz band without putting the future of this life-saving technology at risk.

And I would also thank the U.S. DOT for their continuing efforts to advance the collaborative research and deployment of this game changing technology, and for working to ensure an interoperable communication platform that will allow these safety benefits to be realized across the nation's transportation network including cars, buses, trucks, pedestrians, bikes, traffic signals and aftermarket devices.

At Econolite, we are working with our colleagues across the ITS and broader transportation community to ensure that the development and adoption of Connected Vehicle safety and mobility applications is achieved responsibly. Implementation of such technology can only be effectively deployed when

special attention is given to ensuring the public's safety and privacy, when we eliminate the threat of cyber security, and when we passionately develop products, services and applications that will truly improve safety and enhance the driving experience, and ultimately, our quality of life.

We are working closely with ITS America, the U.S. DOT, American Association of State Highway and Transportation Officials, and Institute of Transportation Engineers to bring all stakeholders together through a V2I Deployment Coalition that will advance the deployment of this critical safety technology. If we are ever going to realize or get close to our goal of zero deaths on America's roads, this is our best opportunity.

Thank you again for holding a hearing on this critical topic, and I look forward to answering your questions.

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In Summary

Mr. Chairman and distinguished members of the Subcommittee, I thank you for your time today and would like to summarize here, the major points I hope were made in my testimony.

1. A manufacturers role in the V2I space is to provide traffic management systems designed to provide drivers with a timely and safe passage through an intersection, or a corridor of intersections

2. With Connected Vehicle technologies, we will be able to help prevent crashes and move traffic much more efficiently and safely then with today's vehicle detection technologies.

3. This technology has the potential to prevent or reduce the impact of up to 80 percent of unimpaired vehicle crashes, saving thousands of lives each year.

4. Efforts underway to create a Security Credential Management System (SCMS) for connected vehicles are critically important

5. It is also critically important that the 5.9 GHz band of spectrum which was set aside for V2V and V2I communication is protected from harmful interference that could result if unlicensed devices are allowed to operate in the band without rigorous, real-world testing to ensure that safety-critical critical signals aren't delayed.