

Remarks prepared for
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Human Factors for Vehicle Communications
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Good afternoon. It is a pleasure to welcome you to NHTSA's first Human Factors for Vehicle Communications Public Meeting. It is my hope that these meetings will foster the exchange of ideas and provide valuable information for the future of Human Factors for Vehicle Communications.

Secretary of Transportation LaHood has focused national attention on the dangers of Distracted Driving. But Distraction is not a new problem – it came into existence when the very first audiophile installed a radio into a vehicle back in the 1930s.

NHTSA has only been around since the 1960s, but we've been involved in distraction research for many years. Many of our activities have been focused on understanding the extent and nature of the distraction safety problem and applying appropriate measurement techniques to quantify the harmful effects of technology distractions on driving performance, in the hope of identifying potential countermeasures.

So why raise the profile of this safety issue now? 5474 people were killed in distraction-related crashes in 2009. Of those, 995 were cell phone-related crashes. A stroll through the CES show floor points to how quickly and exponentially this problem can escalate to create more and more distraction for the driver.

We launched our Distraction Plan last year, and outlined a comprehensive set of activities that will govern our approach. First and most importantly, we will continue to improve our understanding of the problem. We rely on sound science, careful engineering, and good data to regulate, and that will be the case as we deal with Distraction.

We will develop voluntary guidelines to help reduce the driver workload from in-vehicle systems. We will harness technology to keep drivers safe – for example, crash avoidance systems, distraction monitoring systems, and cell phone filter or blocking systems. We will continue to work on increasing public awareness to recognize the risks and consequences of distracted driving.

The development of guidelines is particularly important with the advent of new technologies: as I said before, there are potentially many more opportunities for distraction in the very near future.

Our initial focus is on developing guidelines for visual-manual interfaces and we aim to publish these guidelines this fall. From there, we will tackle guidelines for portable devices by 2013, and guidelines for voice interfaces by 2014.

The Alliance has published interface guidelines in the past, but we are facing a new world for portable devices. We look forward to working with the consumer electronics industry as well as many other stakeholders to develop these guidelines. Until these guidelines are in place, we are encouraging portable device manufacturers to use good human factors design principles in their products.

For example, manufacturers should consider a “car mode” for portable devices, such as smart phones, so that if these devices are brought into a vehicle, certain functions could be locked out – functions that are not safe to use while driving. Some devices already have this function. This mode could potentially simplify other tasks so that they are less risky. Research will help us establish what should and should not be part of the “car mode.”

Ultimately, it is up to the driver to make safe choices when getting behind the wheel of a vehicle. But manufacturers can help the driver by designing products with safety in mind.

At NHTSA, we see technology as a tool to increase safety, and systems such as forward collision warning and automatic braking systems, as well as lane departure warning, lane-keeping systems and others fulfill this role very effectively.

Safety is the driving factor in the Department's Vehicle Communications program. Vehicle Communication includes vehicle-to-vehicle (V2V), as well as vehicle-to-infrastructure (V2I) applications. We are extremely encouraged by the research, analysis of the safety data, and the ongoing human factors work that all point to V2V as the next major safety breakthrough. In fact, V2V safety applications could address 80 percent of vehicle crash scenarios involving non-impaired drivers .

The current data leads us to believe that we have the opportunity to apply ITS technology in ways that could significantly reduce the number of crashes, injuries and fatalities on our roadways. V2V work is one of the main focus areas of NHTSA's safety research program and it is being designed to supply the data necessary to enable an agency decision in the 2013 timeframe.

On a side note, I would add that the ITS research is a perfect example of the important collaboration and partnership between NHTSA and RITA that is critical to the Department if we are going to meet our safety goals.

The success of this program will ultimately rest on the human factors and how the driver interacts with the system: the interface. The interface must produce a quick and appropriate reaction from the driver, yet it cannot increase the potential for distraction.

Any new safety technology will be properly researched before it moves to implementation. The Vehicle Communication Safety Applications must be effective at improving safety while not causing unintended consequences. The non-safety applications must be implemented so as not to increase the driver's workload or distraction.

As we move forward, our parallel tracks will be 1) to conduct the research to ensure the technology is effective in reducing the number of crashes, and 2) conduct the necessary human factors research to ensure the end products minimize distraction.

We have already conducted a wealth of human factors research over the years on distraction that we discussed at our two Distracted Driving Summits. RITA, NHTSA and the other administrations within the Department of Transportation are executing a human factors research program around Vehicle Communication, which is what you'll hear about later today

The driver-vehicle interface guidelines for use by the industry for the development of new products will be an outcome of this human factors research. These driver-interface guidelines will ensure that applications are developed in the safest, non-distracting manner possible.

The guidelines will cover integrated, aftermarket, and portable devices. And they will apply to all users – in cars, trucks, and buses. They will cover all applications – be they for safety, mobility, or sustainability.

I wish you a very productive meeting and I thank you for participating.