Design with your eyes on the road

Chris Warner, Executive Editor

The other day, I received a press release from a company that announced plans to apply its technology to the automotive space. The memo cited research from Strategic Analytics which predicts a 10 percent compound annual growth rate in the market for the next five years.

Such a prediction not only has the attention of electronic component vendors, but it also has caught the attention of Washington. In mid-February, the National Highway Traffic Safety Administration (NHTSA), concerned over increasingly connected systems and their effects on a driver's ability to focus on the road, announced voluntary guidelines aimed at automakers to curb drivers' distractions from entertainment, communications, and navigation systems. The recommendations (http://www.nhtsa.gov/staticfiles/rulemaking/pdf/Distraction_NPFG-0216201... [1]) include "the disabling of…in-vehicle electronic devices while driving." This includes such visual-manual tasks as text messaging, internet browsing, social media browsing, GPS destination entry by address, and 10-digit phone dialing. According to the NHTSA's announcement, the recommendations are intended to "offer real-world guidance to automakers to help them develop electronic devices that provide features consumers want – without disrupting a driver's attention or sacrificing safety."

While the involvement of federal agencies in automotive electronics is sure to raise the eyebrows of those of us who are wary of nanny legislation (not to mention the efficacy, imperfections, and unintended consequences of such laws), automakers must take the initiative and honor the recommendations as best as possible.

If there's one thing the Internet constantly reminds us, it's that technology usually outpaces lawmakers badly (see privacy and piracy). For instance, federal and state regulators haven't come to grips with portable electronics in the car ever since 2G came along – currently only nine states ban hand-helds by drivers. By extension, such a lack of political will indicates that any legislation imposed on connected systems will not move quickly. And since the demand of connected electronics in

automobiles continues to grow, designers have an obligation to design any infotainment or assistance features with an eye toward keeping the driver's attention on the road, regardless of, if, and when real legislation comes about.

Automakers have the advantage of physics (after all, a driver won't be holding a handset) to engineer safety connected features directly and elegantly into the automotive console. My car is far from new, but I still consider the controls for my radio and CD player integrated into my steering wheel to be its best design feature. Wheel-mounted controls are one solution to better engineer infotainment features into the car. Things like better,
brighter, and more intuitive displays plus voice-activated controls should not only be part of the mix, but they should be continually refined and upgraded with safety as the goal.

At the very least, such solutions can honor the spirit of these recommendations and foster safety by, as the NHTSA suggests, "reducing complexity, task length, manual inputs, and off-road glances" to ensure drivers' eyes stay on the road.

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