Voice-To-Text Apps Offer No Driving Safety Benefit

A study released by the Southwest Region University Transportation Center reveals that while texting drivers may feel they are being safer by using talk-to-text apps, research findings suggest that those applications offer no real safety advantage over manual texting.

The study is the first of its kind as it is based on the performance of 43 research participants driving an actual vehicle on a closed course. Other research efforts have evaluated manual versus voice-activated tasks using devices installed in a vehicle, but the analysis is the first to compare voice-to-text and manual texting on a handheld device in an actual driving environment.

Drivers first navigated the course without any use of cell phones. Each driver then traveled the course three more times performing a series of texting exercises – once using each of two voice-to-text applications (Siri® for the iPhone and Vlingo® for Android) and once texting manually. Researchers then measured the time it took each driver to complete the tasks and also noted how long it took for the drivers to respond to a light which came on at random intervals during the exercises. Some of the study findings include:

- Driver response times were significantly delayed no matter which texting method was used. In each case, drivers took about twice as long to react as they did when they were not texting. With slower reaction times, drivers are less able to take action in response to sudden roadway hazards, such as a swerving vehicle or a pedestrian in the street.

- The amount of time that drivers spent looking at the roadway ahead was significantly less when they were texting, no matter which texting method was used.

- Drivers felt less safe when they were texting, but felt safer when using a voice-to-text application than when texting manually, even though driving performance suffered equally with both methods.

- For most tasks, manual texting required slightly less time than the voice-to-text method, but driver performance was roughly the same with both.

The study results indicate that the voice-to-text applications tested in this study did not help keep the driver’s eyes on the roadway more frequently than texting manually. The driver response times were approximately two times slower and eye gazes to the forward roadway significantly decreased compared to the baseline, regardless of the texting method used. The author noted that additional study would examine the motivations and attitudes of distracted drivers.
Christine Yager, a Texas A&M Transportation Institute Associate Transportation Researcher who managed the study, stated that the findings offer new insight, but only a part of the knowledge that’s needed to improve roadway safety. “Understanding the distracted driving issue is an evolving process, and this study is but one step in that process,” she says. “We believe it’s a useful step, and we’re eager to see what other studies may find.”