Texas A&M Transportation Institute

For release: April 23, 2013
For more information: Bernie Fette, 979-845-2623 (office); 979-777-7532 (cell)
Samantha Atchison, 979-845-7576 (office); 979-595-4755 (cell)

Voice-to-text apps offer no driving safety benefit; as with manual texting, reaction times double

Texting drivers may believe they're being more careful when they use the voice-to-text method, but new research findings suggest that those applications offer no real safety advantage over manual texting.

The study was sponsored by the Southwest Region University Transportation Center and conducted by the Texas A&M Transportation Institute. SWUTC is a part of the University Transportation Centers Program, which is a federally-funded program administered by the U.S. Department of Transportation's Research and Innovative Technology Administration.

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 TTI 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.

Major findings from the study included:

- 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 weren't 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.
- For most tasks, manual texting required slightly less time than the voice-to-text method, but driver performance was roughly the same with both.

Texas A&M Transportation Institute

- 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.

Christine Yager, a TTI Associate Transportation Researcher who managed the study, says 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."

The study's results are being published during National Distracted Driving Awareness Month. Numerous agencies, including the Texas Department of Transportation (TxDOT) are sponsoring public awareness campaigns to highlight the dangers of driving distractions, particularly those associated with cell phone use.

Another TTI study now underway is examining the motivations and attitudes of distracted drivers. Results from the focus groups and a 3,000-driver survey are expected in late summer, and will include a look at which demographic groups are most affected by the distracted driving issue.

The Texas A&M Transportation Institute is a member of the Texas A&M University System.

######