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## **Virginia Tech Transportation Institute awarded \$3 million over two years to plan national naturalistic driving study**

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BLACKSBURG, VA, July 23, 2007 – The National Academy of Sciences' (NAS) Strategic Highway Research Program 2 (SHRP 2) has awarded the Virginia Tech Transportation Institute (VTTI) \$3 million for the *Design of the In-Vehicle Driving Behavior and Crash Risk Study*, the first stage of a multi-phase project that will ultimately become the largest naturalistic driving study ever conducted. The VTTI team was chosen in a competitive process largely due to their experience.

The VTTI research team was chosen for this project largely due to its experience with the 100-Car Naturalistic Driving Study, completed in 2006 and widely recognized for its advanced technology and comprehensive database. Other key members of the VTTI research team include the University of Michigan Transportation Research Institute (UMTRI) and the Batelle Memorial Institute. There are also many volunteers from the transportation research field who will serve in an advisory capacity on the project.

For this phase, VTTI researchers will develop a research plan and technologies to be used in the full-scale data collection and analysis effort and will also conduct a small pilot study. Similar to the 100-Car Study, this study will collect naturalistic (real-world) driving data from drivers in their own vehicles.

"The 100-Car Study was a great first step in large-scale naturalistic research, but now it's time to conduct a more nationally representative study with a statistically significant number of crashes," said Charlie Klauer, co-principal investigator for the study. "With this new project, we'll have the opportunity to design a crash causation study where we will gain greater understanding of a wider variety of drivers, in more environments, with an improved data acquisition system."

VTTI's Data Acquisition System (DAS), first used for large-scale naturalistic research in the 100-Car Study, will be examined as part of this planning phase. Researchers hope to make several major improvements to the system including a hard drive that can store up to one year of driving data, remote system checks, the ability to be installed in any make and model of vehicle, and an installation process that takes less than two hours. The team also hopes to plan for a small fleet of vehicles that will have highly capable DASs, with features such as

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traffic-signal-state assessment, lateral proximity sensors, real-time eye tracking, and ambient temperature sensors.

“We estimate that this project will ultimately produce over 2.5 million hours of driving data, based on the numbers we saw from the pilot, the 100-Car Study,” said Tom Dingus, director of VTTI. “With a broader base of data from a wider range of the driving population in terms of age, vehicle type, and geographic location, we’ll be able to explore many heretofore unexamined transportation safety questions.”

After completion of this planning phase, VTTI will submit a proposal to conduct the data collection and reduction effort, and then to complete a variety of analysis projects. Current SHRP 2 estimates have the full-scale project completion date in 2011, with opportunities for many transportation research organizations to get involved. The final study will look at a minimum of 2,500 cars nationwide, with the possibility of up to 10,000 vehicles instrumented in different stages.

“This project is an enormous enterprise as well as a unique opportunity to collect data at a level of detail, accuracy and scope that was not possible before,” said Allen Biehler, Secretary of Transportation in Pennsylvania and Chair of the SHRP 2 Oversight Committee. “VTTI’s research team was found by the SHRP 2 Oversight Committee to have married the right experience with an advanced and well-designed approach to this study and represents the kind of collaboration among leaders in several fields that the Committee hopes will be a hallmark of the SHRP 2 research. This project has the potential to deepen the understanding of driving behaviors that both cause and avert crashes so that real advances in highway safety will result.”