

SHRP 2 Safety Data, Update 5

June 1, 2015

This is the fifth in a series of updates about Phase 1 of the implementation of the SHRP 2 Safety Data by TRB in collaboration with its partners, Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the National Highway Traffic Safety Administration (NHTSA). As was noted in the first of these updates, “Phase 1” is governed by a Safety Data Oversight Committee (SDOC). “Phase 1” is an experimental program designed to make the safety data as widely available as possible to qualified researchers and to gather information needed to lay the foundation for use of the data beyond the first four to five years.

This edition of the update focuses on the InSight web portal, which can now be accessed by registered users and utilized to view summary data and documentation from the SHRP 2 Naturalistic Driving Study. This edition also provides a pre-announcement of a TRB student paper competition that is being developed to encourage use of the NDS data and InSight by undergraduate and graduate students.

Introducing the InSight Web Portal

The Strategic Highway Research Program 2 (SHRP 2) funded research on a variety of next generation highway, vehicle, and driver issues. The SHRP 2 Safety track funded the SHRP 2 Naturalistic Driving Study which collected continuous driving data from more than 3,000 volunteer drivers for months or even years of time. Data include sensitive PII data such as face video and GPS traces including home, work, and school locations. In addition, the data are considered human subjects data and must be protected in accordance with federal law. On the other hand, the data need to be made widely available to researchers in order to maximize the financial and personal investment made by the sponsors and the participants.

The InSight data viewer website (<http://insight.shrp2nds.us>) was developed with two purposes in mind and balances these competing interests:

- To allow researchers to learn about the study and the types of data available for use via data use licenses.

- To allow researchers to query the data to see how much data might be available to answer their particular research questions.

The website displays only de-identified data and uses an authentication process to ensure that all researchers requesting to view the data are familiar with the ethical concerns associated with human subjects data.

A variety of functions are available to users on InSight, including:

- Driver Descriptions and Assessments. Summary graphs and detailed records of driver assessments are provided addressing driver demographic background, physical, psychological, and medical condition.
- Custom Query Capability. Users can build custom queries to search for records matching criteria that span multiple datasets.
- Summary of Continuous Naturalistic Driving Data Collected. Graphs and detailed records describe data collection progress and characteristics of trips collected during the study.
- Naturalistic Driving Study Background Information. Users are able to access an overview of the SHRP 2 Naturalistic Driving Study project, data collection procedures, data dictionaries, and sample data.
- Vehicle Descriptions. Summary graphs and detailed records describe the types of vehicles involved in the study.
- Access to SHRP 2 NDS Forums. Users can join a community of SHRP 2 NDS Forum members to discuss available data, website functionality, and related topics.

Once on the web site, users can establish an account. This provides basic access. Users who would like to gain additional functionality and feature access can choose to take on-line human research subjects training and, upon passing a quiz and providing an electronic certificate, become a qualified researcher. This training typically takes about one hour.

Who Is Using Insight?

About one thousand users have registered to use the InSight web portal to date. The great majority of registered InSight users—about 80 percent as of May 2015—are from United States Internet domains. This may reflect the fact that all the data viewable via the web portal were collected at six sites in around the US. However, there is also a considerable international contingent of InSight users. Around 10 percent of all users are from European countries. The remaining 10 percent of users are from the rest of the world, with the lion’s share coming from China, Canada, Japan, and Australia.

Over half of the current InSight users come from academia—university faculty, staff, and graduate and undergraduate students. Another twenty percent are staff from Federal, state or local governments. Other significant groups of InSight users are from Internet domains associated with non-profit organizations, motor vehicle and subsystem manufacturers, and automobile insurance companies.

Announcing the SHRP 2 InSight Student Paper Competition

TRB will be sponsoring a Student Paper Competition to give undergraduate and graduate students an opportunity to promote the use of InSight by students and to develop innovative ideas for using the data from the SHRP2 naturalistic driving study (SHRP2 NDS). Participating students will propose a research project concept, which may then be selected by a panel of experts to go on to conduct real analysis with the NDS InSight-data and produce a research paper. Potential prizes to be awarded include participation in a poster session at the 2016 TRB Annual Meeting in Washington DC, a presentation in front of a panel of highway safety experts, and inclusion of winning final research papers in a TRB publication. Official competition details and terms will be released during the summer of 2015.