

SHRP 2 Safety Data Update

The SHRP 2 “Phase 1” Safety Data program officially opened for business at the end of March 2015. The program has now been in business for just over one year, which makes this a good time to consider how the Naturalistic Driving data are being used and by whom.

InDepth Data Use Licenses

Data Use Licenses (DULs) are the mechanism by which researchers are able to obtain access to the SHRP 2 naturalistic driving study data. There are four types of data use licenses, which range from export of summarized data available on the InSight web site to approval to use Personally Identifying Information inside a Secure Data Enclave. Most DULs involve the Export of Non-Personally Identifying Information where researchers are granted a license to use non-PII original data at their own location. The number of DULs being processed has tended to remain stable over the past year, with a notable uptick in the past two months.

Research topics being examined using the data run the gamut, including but not limited to:

- Data analysis tools and methods.
- Driver distraction, fatigue, impairment, and medical conditions.
- Seat belt use.
- Speeding and speed limits.
- Aggressive driving and road rage.
- Roadway lighting.
- Impact of weather conditions.
- Younger and older drivers.
- Roadway geometrics.
- Pedestrian/vehicle conflicts.
- Work zones.
- Intelligent/automated vehicles and active safety systems.
- Fuel economy and emissions (e.g. drive cycles).
- Applying data mining techniques to the data.

As of March 1, 2016, 105 DULs were either active or completed. An additional 21 were pending. (These figures only include “prime” DULs and not any addenda processed later, for instance to add variables to a research study.) About 72 percent of DULs are held by domestic universities and university transportation centers. Another 18 percent are held by private firms, including motor vehicle manufacturers, insurance companies, and private research firms. The remaining ten percent are held by public health organizations, Federal laboratories, Federal government agencies, and overseas universities.

InSight Web Site Use

There are now well over 1700 registered users using the InSight web portal. (InSight may be found at <https://insight.shrp2nds.us/home/index>.) Use of this web site has grown throughout the first year of operation and functionality has been continually added to the web site. A major addition in early 2016

was the creation of a “training dataset” which includes video and data tables structured in the same manner as actual Naturalistic Driving Study (NDS) data but that do not contain personally identifying information because the ‘subjects’ are employees of the database operator who waived this restriction. Therefore the training dataset can be downloaded by registered users to provide information about the video and data tables found in the NDS database.

Now that a year of usage statistics are have been reported, it is interesting to note which data elements are viewed most often. For the first quarter of 2016, the six most viewed data items were:

1. Event detail tables (information about driving events including crashes, near crashes, and normal/baseline driving).
2. Trip summary tables.
3. Summarized driver demographic data.
4. Post-crash interview data.
5. Vehicles by model year.
6. Summary data on driver medical conditions and medication data.

Top page hits for InSight during the first quarter of calendar year 2016 indicate the following web pages are used the most often by registered users and qualified researchers:

1. InSight data custom queries. Such queries allow web site users to explore relationships between variables in the database.
2. Forward videos (the view outside to the front of the instrumented vehicles).
3. Naturalistic driving study background information and information about the database and data elements.
4. The InSight home page/landing page.

In the above list, items 1 and 2 are only available to registered users who have taken and passed human research subjects training on-line thereby becoming qualified users. (There are nearly 800 qualified users at this point.) Items 3 and 4 are available to all 1700-plus registered users, regardless of whether they are qualified researchers or not.