



SHRP2 Implementation Advisory
Committee - June 25, 2014

SHRP2 Safety Focus Area Update

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U.S. Department of Transportation
Federal Highway Administration



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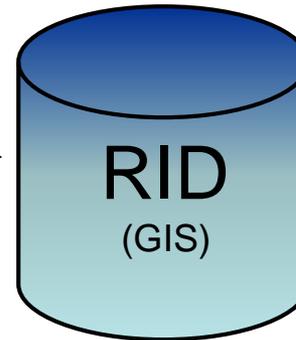
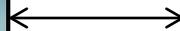
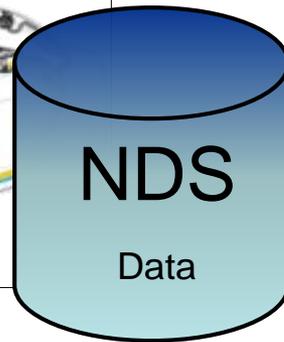
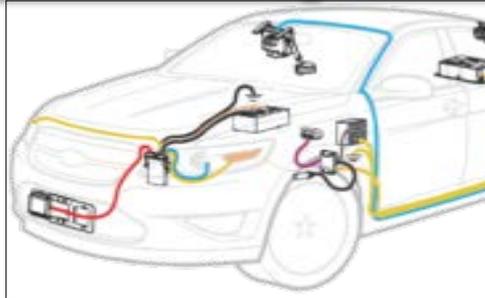


Today's Briefing



- Quick Refresher on the Safety Data Bases
- Safety Training and Analysis Center (STAC)
- Safety Task Force Activities
- Solicitation for Implementation Assistance
- Long-Term Plan for maintaining and operating the NDS and RID Databases

SHRP 2 Naturalistic Driving Study & Roadway Information Databases



Data from **3,147 volunteer drivers and their vehicles** in six sites using passenger cars, vans, SUVs, pickups

New data collected
12,500 centerline miles
consistent across six sites
Acquired data (DOTs, others) on
200,000 centerline miles with
varying conditions - roadway,
weather, traffic ..

Safety Training and Analysis Center (STAC)

Why establish a STAC at FHWA's Turner-Fairbank Highway Research Center?

To accelerate and proliferate use of the data... to improve safety.



FHWA Turner-Fairbank Highway Research Center (TFHRC)

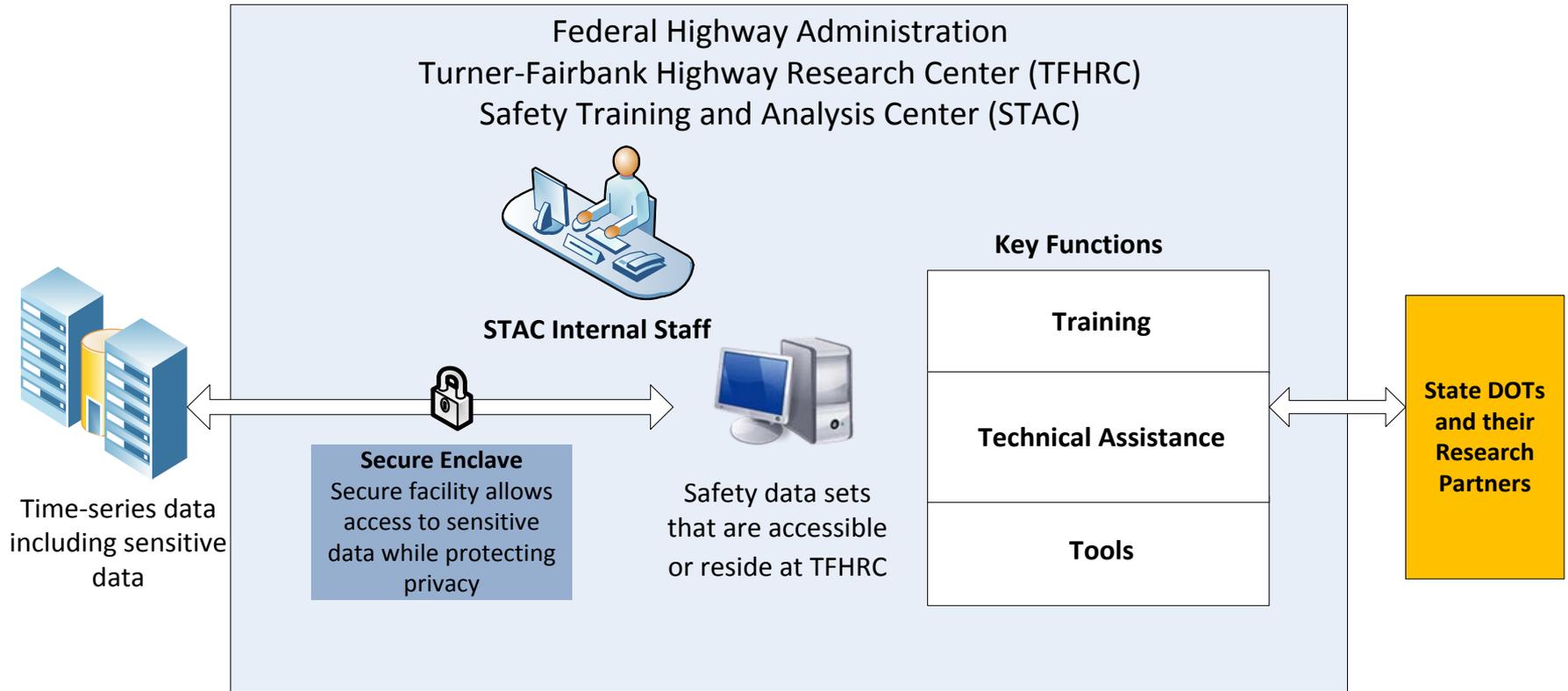
Safety Training and Analysis Center (STAC)



STAC Initial Service Goals

- Provide training and technical assistance for State DOTs to expand their knowledge of the data and its potential uses
- Provide opportunities for graduate students, fellows, and post docs to gain experience working with the data
- Support U.S. DOT research agenda

Safety Training and Analysis Center (STAC)

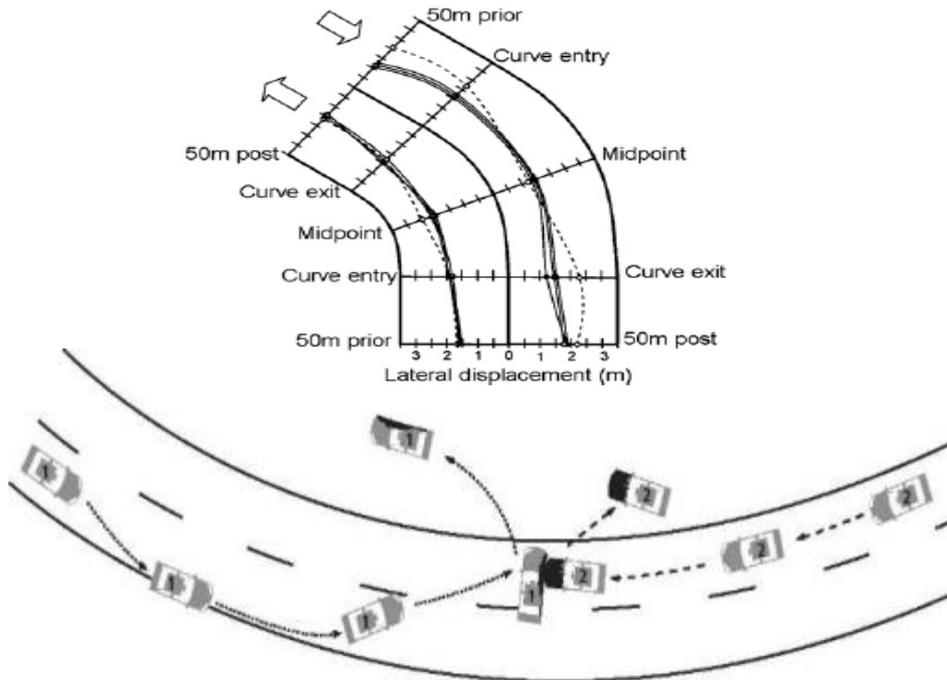


STAC Tool Development Projects

Active Projects – EAR Program

- Automated video decoding/data extraction
 - Carnegie Mellon University (2 projects)
 - SRI
 - University of Wisconsin - Madison
- Automated Identity Masking
 - SRI
 - Carnegie Mellon University
- Calibration and Algorithm evaluation
 - Oak Ridge National Laboratory (ORNL)

Implementation Assistance



Objectives of Implementation

- Demonstrate use of the SHRP2 Safety Data
- Increase states' understanding of its potential
- Identify countermeasures
- **Reduce crashes and save lives !**



Creation of the SHRP2 Safety Task Force

- Safety Task Force met in March 2014
 - Rudy Malfabon, Director, Nevada DOT, chair
 - Sandra Larson, Iowa DOT, vice chair
- Multi-disciplinary team across AASHTO Committee structure
- Proposed framework for implementation and identified several research priorities



IAP Approach for Safety



- FHWA, AASHTO are pursuing a phased approach to reduce risk and cost to states
- States accept responsibility to manage research, implement findings
- States encouraged to partner with researchers, particularly ones with IRB process
- States must deliver the authorized research
- If the concept phase is successful, in-depth research phase with a large data set may be authorized

Safety IAP Process

Phase I - Proof of Concept with a sample reduced data set ,
January – September 2015 timetable

Decision

Phase II full data set and in-depth research and analysis with countermeasure identification

Decision

Phase III – Deployment, to adopt, champion or implement countermeasure nationally

Possible Research Topics

SHRP2 Safety Task Force identified five possible research topics:

- **Driver Speed**: How do drivers change or adjust speed as they navigate various roadway and environmental conditions?
- **Roadway Features and Driver Performance**: How do certain roadway features influence driver performance or behavior?
- **Preceding Contributory Events**: What driver characteristics, behavior, or performance precede crashes and near-crash events?

Possible Research Topics

continued...

- **Vulnerable Road Users**: How do drivers interact with vulnerable road users?
- **Intersections**: How is navigation performance at either rural or urban intersections influenced by roadway elements, driver characteristics or driver behaviors?
- **Other topics** as identified by state DOTs

Outreach in Support of Safety IAP

- **Two Webinars** hosted by FHWA
 - Explanation of data sets and the safety research topic suggestions
 - Details and specifics of accessing the NDS and RID data and the partnerships needed for the solicitation
- Three-hour, **web-based workshop** hosted by AASHTO to provide more details and answer questions (close to 100 participants)
- Revised **Safety Fact Sheet** and **Frequently Asked Questions** document
- Information available on **GoSHRP2** and **AASHTO SHRP2** and **TRB websites**; presentations at AASHTO Spring Meeting

Key Dates and Selection

- Applications: May 30th to June 27th
- Safety Task Force review of applications July 11th
- Selections: August 2014
- Expected Phase I start date: January 2015
- Phase I complete: September 2015



Long Term Database Stewardship



Key Recommendations from Committee on Long-Term Stewardship of SHRP2 Safety Data

- Recognize that conditions change and more preparation is needed for a long-term, 30-year stewardship of the data
- Take a phased approach:
 - Phase 1: Pilot effort to gain experience and test approaches to management, security, pricing, etc.
 - Make data available, provide user support, and develop information to guide future decisions
- Establish governing board of key stakeholders
- Concur with Volpe report supporting lead role for NRC/TRB during Phase 1

Key Recommendations of LTSC (*continued*)

- Use best practices in managing large, secure data sets
- Select one prime operator that maintains entire data set (NDS and RID)
- Engage other operators to provide multiple, remote access points and varied user support portfolios
- Define process for developing a business plan for long-term, sustainable funding
- Foster interactive and collaborative user community
- Develop and evaluate data use policies

Phase 1 Objectives



- Provide oversight and technical guidance for SHRP 2 Safety data implementation
- Promote conditions under which SHRP 2 Safety Data will be available to qualified users
- Gain experience and monitor performance and data to support decisions about implementation and oversight of the SHRP 2 data after the Phase 1 Program
- Support transition to Phase 2, as appropriate

Phase 1 Schedule and Funding



- Anticipated to begin on January 1, 2015, and last up to 5 years
- Cooperative agreement up to 6 years, for start up and wind down
- Initiation of Phase 1 pending execution of MOU and cooperative agreement
- \$25 million from SHRP 2 implementation funds

Safety Data Oversight Committee



- To be formed under new cooperative agreement
- Leaders from sponsors, user groups, IT mgt
- Responsible for:
 - Overall Phase 1 strategy, budget, work plans
 - Data sharing policy
 - Testing data access methods and institutional structures
 - Evaluation of data access methods
 - Identification of decisions regarding future phases
 - Coordination among partners, users, contractors
 - Seeking out and evaluating user markets

First Expert Task Group



- Formed under current cooperative agreement
- TCC/ETG hybrid
- Technical tasks in support of SDOC and staff, such as:
 - Draft statements of work/RFPs for contractor activities
 - Provide input on technical performance measures
 - Provide feedback on website, reduced datasets, tools, users
 - Provide input on emerging data sharing technologies
 - Identify likely changes in information and communications technologies that would impact Phase 1 and early Phase 2
 - Consider integration of “big data” streams from external sources
- First meeting scheduled for July 14

ETG Membership

Zongwei Tao, Chair	Chairman and CEO, Weris Inc.
Michael Franklin	Professor, Department of Computer Science, UC-Berkeley
Kelly Hardy	Program Manager for Safety, AASHTO
Emily Nodine	Technical Project Manager, US DOT, Volpe Center
Harlan Onsrud	Professor Spatial Information, University of Maine
Michael Pack	Director, Center for Advanced Transportation (CATT Lab), University of Maryland
Tim Schmidt	Senior Advisor, Turner Fairbank Highway Research Center, FHWA
Aleksandra Slavkovic	Associate Professor of Statistics, Penn State University
Dwayne Spradlin	Chief Executive Officer, Health Data Consortium
Carol Tan	Team Leader, Safety Management, FHWA
Wes Cerezo	Enterprise Architect, NHTSA

General Approach to Phase 1

- Full Service Center at Virginia Tech
 - House and manage the data
 - Manage website
 - Provide help desk function for website at no fee to user
 - Provide pre-project user assistance for full database at no fee to user (at least at beginning)
 - Provide funded-project-specific assistance for fee
 - Support FHWA Safety Training and Analysis Center (STAC)
- Separate contract for RID support
- Evaluation/expansion of data access through:
 - Experiences from STAC, IAP, NHTSA, others' use
 - Add access methods to full-service center's services
 - Competitive awards, incentives managed under ETG/SDOC for additional testing, data access methods, etc. (pending additional funding)

Questions

Implementation Assistance:

www.fhwa.dot.gov/goSHRP2;
<http://SHRP2.transportation.org>

For more information:

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