What is Data Mod?

NHTSA’s effort to:

• Upgrade the National Automotive Sampling System (NASS)
• Modernize and consolidate related information technology systems

Goal: To affirm NHTSA's position as the leader in motor vehicle crash data collection and analysis, by collecting quality data to keep pace with emerging technology and evolving policy needs.
Current NASS/GES

**Purpose:** To monitor large scale trends in the characteristics of the nation’s crash experience.

- Probability-based design
- 60 sites in 26 states
- About 50,000 crashes sampled annually
- 100+ variables coded from police crash reports
- All vehicle types and crash severities
Purpose: To aid in the development and evaluation of passenger vehicle crashworthiness and occupant protection systems.

- Probability-based design
- 24 sites in 17 states (subset of GES sites)
- 600+ variables coded from investigation-based data
- Towed passenger vehicle crashes only
Congressional Directive: Modernize

Considerations:

- Is sample size and design sufficient?
- Is scope too limited?
- What data needs to be collected?
- What data do external stakeholders need?

Congress appropriated $25M in FY2012 for NASS modernization.
Major Project Components

Survey Modernization

Information Technology Modernization & Consolidation

Implementation & Operations
Survey Modernization Progress

- Evaluated data needs
- Developed sample conceptual design
- Collected data for site selection
- Completed the 3-stage sample design and selected the first and second stage sites
New Sample Design

• Probability-based (needed for rulemaking)
• Two independent sample systems
• No intentional overlap between “old” and “new” data collection sites
• Flexibility to add special studies (peds, trucks, motorcycles, etc.)
• Sample scalability
Current Implementation Plan

Assumptions

- End GES in 2015
- Begin CRSS in 2016
- End CDS in 2015
- Begin phasing in CISS in 2015
- New IT for sampling, collection, coding
CRSS Sample

- 60 Sites (PSUs) in 31 States
- Larger sites w/more injury crashes
- 392 Police Jurisdictions (~6 PJs/PSU)
- ~50,000 annual cases

CRSS should produce similar or smaller standard errors than the current GES for key estimates.
CRSS 60 Sites

National Center for Statistics & Analysis
Phase 1 CISS Sample

- 24 Sites (PSUs) in 15 States
- Smaller sites that target late model year vehicles and injury crashes
- 176 Police Jurisdictions (~7 PJs/PSU)
- 4,000 to 4,500 annual cases

Add additional sites as budget permits and add modules for special studies: peds, motorcycles, etc.
Phase 1 CISS Sites
Data Modernization: Major Project Components

- Survey Modernization
- Information Technology Modernization & Consolidation
- Implementation & Operations
IT Progress

• Began consolidation of system components on a shared environment
• Implemented new security features to meet Federal IT security requirements
• Implementing electronic form data collection
• Planning on enhanced web products
Data Modernization:
Major Project Components

Survey Modernization

Information Technology Modernization & Consolidation

Implementation & Operations
Implementation Progress

- Evaluated and field-tested data collection tools – Total Station, tablets
- Finalized variables to be collected in CRSS and Phase 1 CISS
- Developed an implementation plan
- Developing training materials
- Started cooperation process
Enhancements

**SAMPLING**
- Flexible
- Scalable
- Reflects population
- Targets severe crashes
- Targets newer vehicles

**IT SYSTEMS**
- Agile
- Secure
- Reliable
- Efficient
- Consolidated

**DATA**
- New data: EDR inspection, etc.
- More complete
- More accurate
- More timely
- Better QC
- New products and services
Additions to Public CISS Files

- EDR data (speed, brake status, belt use)
- Tire data
- Post-crash measurements
- Lateral and vertical rollover crush locations and damage
- FMVSS 214 msts. (Door-sill differential)
- Occupant contact location(s)
- Crash avoidance technologies
- Enhanced child safety seat data
Example Benefits of CRSS and CISS

- New IT infrastructure to improve timeliness and enhance online reporting tools
- New system sample will enable more precise estimates and more accurate and faster problem identification
- More data will be available and accessible to the public, while meeting information security requirements
- Additional analytical products and better user documentation