Overview

- Background of Inspection Systems
- Development of the Original ISS
- PRISM and Development of SafeStat
- Development of the Current ISS
- Looking to the Future
  - Query Central
  - ISS enhancement pilot
Inspection Systems

- Why Developed?
  - Improve data accuracy and timeliness
  - Help focus resources

- What systems exist?
  - ASPEN – inspection software
    - Collects inspection details, prepares report, transmits data
  - ISS – Inspection Selection System
    - Provides recommendation, carrier snapshot
Inspection Systems (continued)

- PIQ – Past Inspection Query
  - Retrieves recent inspection reports
- CDLIS Access – Commercial Driver’s License Information System Access
  - Retrieves driver status reports and/or conviction history
- QC – Query Central
  - Combines the functions of ISS, PIQ, & CDLIS Access, plus more

- For more information:
  http://www.ugpti.org/tssc/
Original ISS

- Introduction
- Background and Motivation
- Definition
- Development and Testing
- Results and Implications
ISS - Introduction

- States conduct various safety activities including:
  - Driver/vehicle inspections
    - Level I - check driver and vehicle (including underneath)
    - Level II - check driver and walk around vehicle
    - Level III - check driver only
    - Level V - vehicle inspection at a carrier’s terminal
    - Any serious violations found then placed OOS
  - Compliance reviews
    - Detailed review of records to measure compliance
    - Assign/change rating or enforcement action
ISS - Motivation

- Relationship between OOS rates, compliance ratings, and accident rates
- OOS rate good indicator of safety problems, but need reasonable number of inspections to calculate
  - 40% of carriers with zero inspections
  - 28% with one or two inspections
  - 152 carriers with more than 1,000 inspections
- Conclusion: Need to better allocate resources to carriers with worst safety performance and/or with little or no information
ISS - Definition

- ISS as solution to aide inspectors at the roadside to select “best” drivers/vehicles
  - Inspector enters DOT/MC number and is given an inspection value and recommendation
  - Inspector can also access details screen for additional information
- Targets carriers with poor safety history, and those with no or little information relative to their size
- Also recommends specific regulatory areas to concentrate on based on previous OOS violations
- ISS makes recommendation, inspector makes final decision
ISS – Development and Testing

- Development guided by a Roadside Technology TWG
- Included representatives from Alabama, Colorado, Connecticut, Idaho, Kansas, Michigan, Nebraska, New Mexico, Ohio, Ontario, Virginia, Washington, D.C., and Wyoming
- Initial ISS algorithm tested and adjusted using actual carriers a focus group was familiar with
- ISS integrated into ASPEN
- First testing began May 1995, additional states started Fall 1995 through present
- ASPEN and/or ISS is currently in use nationwide
ISS - Testing Results

- 60 percent increase in the number of vehicles and/or drivers put OOS when the ISS recommended an inspection
- Also a significant increase in the number of carriers inspected with less than three inspections previously
PRISM

- Performance and Registration Information Systems Management
- Two major processes
  - CMV registration process
    - Ensures each vehicle is identified with carrier responsible
    - Safety fitness as a requirement to obtain plates
    - Use of registration sanctions as incentive to improve
  - MCSIP process
    - Means by which carrier safety is tracked and improved
    - Use of SafeStat for prioritization for either a warning letter or a compliance review
SafeStat

- Four Safety Evaluation Areas (SEAs)
  - Accident, Driver, Vehicle, Safety Management
- For each SEA, measures are calculated
- Measures are then ranked relative to all other carriers, producing indicators
- Indicators are combined to compute SEA values
- Final score is only given to carriers with 75 or above in two or more SEAs
  - Accident SEA is weighted by 2, Driver SEA by 1.5, and then values are summed
Current ISS

- Background and Development
- Testing
- Results
Current ISS – Background

- Why integrate SafeStat into ISS?
  - Original ISS was successful, but a desire existed for a uniform rating system for carriers
  - Differing goals of ISS versus PRISM
- Comparison of original ISS and SafeStat scores
- Which level of SafeStat data to use?
- Current ISS safety algorithm
- Current ISS insufficient data algorithm
- Every carrier in MCMIS has an ISS value
Current ISS - Testing

- Distributed for testing January 1999
- Presentations, interviews with states relayed positive responses regarding the system
- Comparison of original ISS and current ISS
  - Of those recommended in the current ISS, less than 4% were not recommended in original ISS
- Data from 213,585 inspections in 7 states between January and June 1999
Table 1. OOS Rates by the Original ISS and ISS-2 Recommendations Overall (n=213,585 inspections)

<table>
<thead>
<tr>
<th></th>
<th>Original ISS Recommendation</th>
<th>ISS-2 Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pass</td>
<td>Optional</td>
</tr>
<tr>
<td>Number of inspections</td>
<td>118,029</td>
<td>57,067</td>
</tr>
<tr>
<td>Driver OOS Rate</td>
<td>5.5%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Vehicle OOS Rate</td>
<td>18.9%</td>
<td>30.4%</td>
</tr>
<tr>
<td>Total OOS Rate</td>
<td>19.8%</td>
<td>30.8%</td>
</tr>
<tr>
<td></td>
<td>Original ISS Recommendation</td>
<td>ISS-2 Recommendation</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td></td>
<td>Pass</td>
<td>Optional</td>
</tr>
<tr>
<td>Number of inspections</td>
<td>112,070</td>
<td>45,791</td>
</tr>
<tr>
<td>Driver OOS Rate</td>
<td>5.4%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Vehicle OOS Rate</td>
<td>18.7%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Total OOS Rate</td>
<td>19.6%</td>
<td>31.1%</td>
</tr>
</tbody>
</table>
Table 3. OOS Rates by the Original ISS and ISS-2 Recommendations for those Inspections of Carriers with Insufficient Safety Data (n=30,346 inspections)

<table>
<thead>
<tr>
<th></th>
<th>Original ISS Recommendation</th>
<th>ISS-2 Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pass</td>
<td>Optional</td>
</tr>
<tr>
<td>Number of inspections</td>
<td>5,959</td>
<td>11,276</td>
</tr>
<tr>
<td>Driver OOS Rate</td>
<td>6.8%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Vehicle OOS Rate</td>
<td>22.2%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Total OOS Rate</td>
<td>23.9%</td>
<td>29.8%</td>
</tr>
</tbody>
</table>
Current ISS - Conclusions

- Current ISS is as effective as the original ISS in meeting its goals
- Carriers with insufficient data should continue to be targeted for inspection
- Current ISS:  
  http://www.ugpti.org/tssc/projects/mcp005.php
- Original ISS:  
The Future - Query Central

- Motivation
- Carrier, vehicle, and driver information retrieval via the Internet
- Single input retrieves data from multiple sources
- Provides data analysis and summarization
- Data is real time, and generally from the authoritative source
QC – Carrier Search

Rapid central access to current Motor Carrier Safety information from many sources.

To search for motor carriers, select a search type and enter search criteria.

Press SEARCH to submit query
### Carrier Summary

**Motor Carrier Identification & Safety Data**

<table>
<thead>
<tr>
<th>Legal Name</th>
<th>USDOT#</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMPLE TRANSPORT INC</td>
<td>99999999</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DBA Name</th>
<th>MC/MX#</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>99999999</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical Address</th>
<th>Phone#</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>615 S ARLING</td>
<td>(555)123-0000</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>LOWELL, AR 73744</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Mailing Address</th>
<th>MCSIP Level</th>
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</thead>
<tbody>
<tr>
<td>PO BOX 11</td>
<td></td>
</tr>
<tr>
<td>LOWELL, AR 73744</td>
<td></td>
</tr>
</tbody>
</table>

**Inspection Value:** 37 - **PASS**

*Inspection Value is based on SAFESTAT data.*

Visit the [SAFER Website](https://www.fmcsa.dot.gov/safer) for additional information.
QC – Past Inspections

<table>
<thead>
<tr>
<th>Inspection Date/Time</th>
<th>State</th>
<th>Inspection Location</th>
<th>Highway</th>
<th>Violations</th>
<th>QOS</th>
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</thead>
<tbody>
<tr>
<td>06/02/2002 08:09 AM</td>
<td>NE</td>
<td>FREMONT SCALE</td>
<td>F-77</td>
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<td>0</td>
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<tr>
<td>04/30/2002 04:04 AM</td>
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<td>WHITE TWSP.</td>
<td>RT. 46 &amp; CR. 519</td>
<td>1</td>
<td>0</td>
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<tr>
<td>04/29/2002 05:11 PM</td>
<td>IA</td>
<td>23 - LEMARS</td>
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<tr>
<td>04/29/2002 11:53 AM</td>
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<td>FT MORGAN CO</td>
<td>I76</td>
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<tr>
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<td>IA</td>
<td>I-80 MM 151 MITCHEL</td>
<td></td>
<td>0</td>
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<tr>
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<tr>
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<td>HWY 3 AND 7</td>
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<td>04/09/2002 03:10 PM</td>
<td>NE</td>
<td>HEBRON</td>
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<td>44 - EARLY SCALE</td>
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<td>2</td>
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<td>IA</td>
<td>HWY 3 AND 7</td>
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<td>SOUTH HAVEN M.C.I.S. #26A</td>
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<td>0</td>
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</tr>
</tbody>
</table>
QC – Vehicle Search

Rapid central access to current Motor Carrier Safety information from many sources.

Plate#: [ ] Country: [Mexico] State: [Mexico]

Plate/State Search

OR

VIN#: [ ] Country: [Mexico]

VIN Search
### QC – Vehicle Summary

![Vehicle Summary Image]

**VEHICLE SUMMARY**

Past Inspection Summary

<table>
<thead>
<tr>
<th>Past Inspections</th>
<th>Total Violations</th>
<th>OOS Violations</th>
<th>HazMat Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Vehicle Identification:** R99999 IA

**Associated Carriers:**
- SAMPLE CO

**Associated Drivers:**
- THOMAS ANDY

**Prism Information:**
- USDOT Number: 999999999
- Carrier Name: SAMPLE CO
- Vehicle VIN: 1GRAA09999W999914
- Plate/State: R99999 IA
QC – Driver Search

Rapid access to current Motor Carrier Safety information from many sources.

Query Type: Status  Country: USA  State: Alabama

☑ CDL:  [ ] Indicates Required Data

☐ First Name:  Last Name:

☐ DOB: Month:  Day:  Year:

☐ SSN:

[Search]  [Clear]
QC – Driver Summary

Driver Identification
- **Driver Name:** JOE SAMPLE
- **Address:** 123 GETAWAY LANE, DENVER, CO 80202
- **CDL#:** 111112345, **State:** CO
- **Date of Birth:** 04/15/1951

CDL Summary
- **Status:** LICENSED
- **Expires:** 04/15/2005
- **Classes:** CLASS A
- **Restrictions:** NONE
- **Endorsements:** HAZARDOUS MATERIALS
The Future - ISS Enhancement Pilot

- Addition of Carrier-Driver-Conviction (CDC) measure
- See related “Driver Safety History and ISS” presentation at:
Contact Information / Discussion

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Email: brenda.lantz@ndsu.edu