

ITS Field Operational Test Summary

Automated Mileage and State Line Crossing Operational Test (AMASCOT)

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Introduction

The AMASCOT ITS Field Operational Test demonstrated and evaluated the feasibility of automating the collection of mileage-by-jurisdiction data and electronic data interchange (EDI) for International Fuel Tax Agreement (IFTA) and International Registration Plan (IRP) reporting. The test demonstrated the capability of automated mileage reporting to reduce time and paperwork necessary for motor carriers to comply with and for states to administer the regulatory processes for vehicle licensing, permitting and fuel tax filing, thus enhancing productivity of motor carriers and state agencies. The project originated in 1993.

Project Description

The test involved the motor carrier regulatory agencies in the states of Iowa, Minnesota and Wisconsin and 30 specially equipped interstate commercial trucks which collected mileage-by-jurisdiction data as they operated throughout the United States and Canada. For three months the data was transmitted by satellite to the vendor supplier and then transferred to the Independent Evaluator facility, which simulated the role of motor carrier operations data handling. Auditors from the three states examined the data for compliance with IFTA/IRP requirements. Figure 1 provides an illustration of the test configuration:

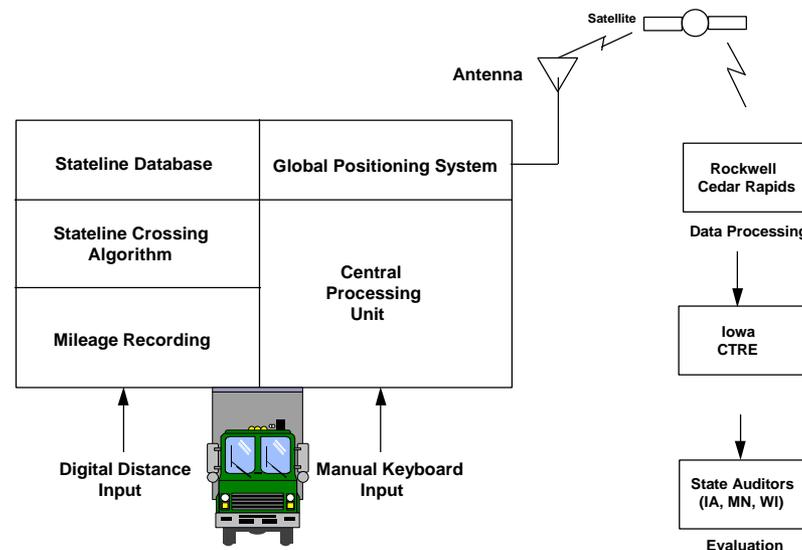


Figure 1. AMASCOT Test Configuration

The evaluation included three main components:

1. Truck System and EDI
2. State Agency Cost, Benefits and Acceptance
3. Motor Carrier Acceptance and Benefits.

The evaluation activities included detailed analyses of the EDI data for geo-location accuracy and data reporting consistency, as well as extensive interviews with state regulatory agency and motor carrier operators and administrators.

Results

From the Truck System and EDI evaluation, the following conclusions were made:

- ◁ Automated data collection using an electronic data path is feasible. It can meet IFTA and IRP requirements, and the motor carrier costs of integration are relatively affordable.
- ◁ Independent of the state and motor carrier acceptance evaluation, these findings demonstrate the technical and practical feasibility of electronically collecting mileage by jurisdiction. This data can be integrated into both current systems and more advanced systems able to accommodate end-to-end electronic data paths for IFTA and IRP data collection, processing and reporting to a base jurisdiction.
- ◁ With the viability of the concept proven, states and motor carriers can move ahead to solve the related issues of EDI standards, EDI facilities and electronic funds transfer. They must also clear the way for implementation of similar technologies and processes for streamlining IFTA and IRP administration and compliance for both states and motor carriers.

From the State Costs, Benefits, and Acceptance evaluation, the following conclusions were made:

- ◁ The implementation of electronic mileage data collection and electronic filing for IFTA and IRP compliance promises benefits to states' IFTA/IRP data processing and auditing processes. Analysis of state agency IFTA processing and auditing processes identified potential benefits from electronic mileage data collection and electronic filing.
- ◁ States can benefit from automated electronic mileage data collection and electronic filing for IFTA and IRP compliance through reduced staff effort for data entry, increased integrity of the data received, reduced data storage requirements, and increased data accessibility and portability. The extent of these benefits will vary by state, and will be influenced by the rate of implementation of such systems by motor carriers.

- ◁ State auditing and processing supervisors agreed that the impact of electronic mileage data collection and filing on their systems depends on the level of implementation by home-state-based motor carriers, and that large impacts would not be realized until the implementation had filtered down to carriers of less than ten trucks.
- ◁ States face a number of institutional issues in implementing automated electronic mileage data collection and filing for IFTA and IRP. These issues have achievable solutions and many are being addressed through other efforts. The most significant turning point will be when the IFTA and IRP communities acknowledge acceptance of these technologies for compliance. Such acceptance will allow implementation of these technologies by states and motor carriers that perceive an appropriate level of benefit.

From the Motor Carrier Benefits and Acceptance evaluation, the following conclusions were made:

- ◁ The test demonstrated that technology is capable of automatically collecting mileage and routine data for IFTA and IRP compliance. Participating motor carriers found an excellent correlation between the test data and mileage and routine data collected by their drivers. These carriers also agreed that this data could easily be used to generate IFTA and IRP reports.
- ◁ Motor carriers participating in AMASCOT agreed that significant benefits could be achievable through automated mileage and route data collection for IFTA and IRP compliance. Primarily, benefits could be accrued through reduced data entry, reduced data errors and associated reconciliation, reduced paperwork, and electronic record keeping. A majority of these carriers identified significant potential cost savings from automated mileage and route data collection. These potential savings were estimated to be from 33 to 50 percent of current IFTA and IRP administration costs.
- ◁ Motor carriers identified privacy concerns associated with electronic mileage and route data, particularly related to limiting the use of and access to their data. They offered possible solutions to these concerns.
- ◁ Automated mileage and route data collection is most likely to be implemented by larger motor carriers with more technologically advanced business information systems. This is consistent with the conclusions of the evaluation of the costs of implementation. These motor carriers will pioneer the use of electronic mileage and route data collection for other business functions, ultimately demonstrating its economic viability and paving the way for more widespread implementation.

Legacy

The system ceased operations after the test concluded. The test was configured to demonstrate the technology and not for specific deployment purposes. This type of system, which is included as part of a package that provides other capabilities, is known to

be offered by at least two commercial firms that provide the trucking industry with business information systems.

Partners

Iowa Department of Transportation
Minnesota Department of Transportation
Wisconsin Department of Transportation
ATA Foundation
Iowa Motor Truck Association
Minnesota Trucking Association
Wisconsin Motor Carriers Association
Rockwell International
Center for Transportation Research and Education
Federal Highway Administration

References

Automated Mileage and Stateline Crossing Operational Test Evaluation Summary - Final Report, Iowa State University, Center for Transportation Research and Education (CTRE), May 1996.