



Project Summary

Texas Department of Transportation

0-5339: Integration and Consolidation of Border Freight Transportation Data for Planning Applications and Characterization of NAFTA Truck Loads for Aiding in Transportation Infrastructure Management

Background

The quantity of truck transportation handled in Texas increased dramatically in the 1990s especially after the full implementation of the North American Free Trade Agreement (NAFTA). Accurate information on truck volumes and truck characteristics is critical to the transportation planning and transportation operation activities performed by the Texas Department of Transportation (TxDOT) and other agencies responsible for the freeway and roadway system in the state of Texas. Information for freight transportation planning, in particular truck-related data, is expensive and difficult to collect, but various agencies located at the Texas-Mexico border already gather information that is used for operation or statistical purposes.

What the Researchers Did

Truck-related information needs could be satisfied in a more efficient and cost-effective way by making use of all the related information that is being collected by federal and state agencies. The Texas-Mexico border serves as a key point in the supply chain where truck-related information is already being collected for trade, security, and safety concerns.

Researchers from the Texas Transportation Institute and the Center for Transportation Research first analyzed what information is being collected and is collected on a regular basis by federal, state, and local agencies in the United States and in Mexico, and by the private sector. The researchers also identified NAFTA truck-related data and information required by TxDOT for transportation planning and infrastructure management planning, through surveys and interviews at seven TxDOT divisions and four districts.

The research team performed a gap analysis comparing the needs information gathered from the survey of TxDOT divisions and districts with the data and information available from the various sources. Gaps were defined as lapses in the data availability that could be either complete lack of a data source or data that are inaccessible either through security concerns or lack of resources to serve the various needs.

Research Performed by:

Texas Transportation Institute (TTI),
The Texas A&M University System

Center for Transportation Research (CTR),
The University of Texas at Austin

Research Supervisor:

Juan Carlos Villa, TTI

Researchers:

Dan Middleton, TTI
Jeffery Warner, TTI
Jolanda Prozzi, CTR
Jorge Prozzi, CTR

Project Completed:

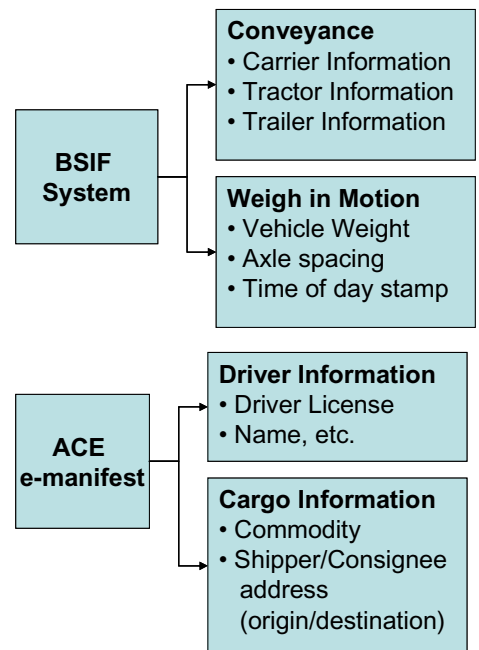
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What They Found

Based on the results of the gap analysis, the research team found that there is substantial information that is “potentially available” that could be used by TxDOT. However, this information is not accessible to use on a constant basis. An ideal system would be one that assembles the information already collected by various agencies and organizes it in a way that is useful for transportation planning purposes.

The research team proposed developing a system that takes advantage of the border crossing as a point where information on carrier, conveyance, driver, and cargo is captured for safety and security reasons. The proposed system should be based on information captured at this point.

The proposed structure of the integration system follows the same concept of the Automated Commercial Environment/International Trade Data System (ACE/ITDS) in which the required transportation information could be obtained from already existing databases. The two sources of data at the border crossing are the ACE e-manifest that is managed by U.S. Customs and Border Protection (CBP), and the Border Safety Inspection Facility (BSIF) data collection system that is being developed and implemented by the Texas Department of Public Safety (DPS). Conveyance information could be obtained from the BSIF system through an agreement with DPS to share information with TxDOT. Cargo- and driver-related information would need to come from the ACE e-manifest through an agreement with CBP.



Proposed Truck Information Integration System

What This Means

By developing the proposed data collection system, TxDOT and other agencies would benefit by having information on international trucks and cargo crossing into Texas from Mexico collected on a constant basis. Most of the information that is needed is already being collected by various agencies, mainly CBP. Texas DPS will start collecting information soon through the BSIF system. The development and implementation of the ACE/ITDS system presents a good opportunity for TxDOT to negotiate access to the information that will be disseminated to all federal agencies.

Once the proposed system is in operation, it could be enhanced by adding other data collection points within the state. This will complement the data collected at the border with more inland data points that could be used to develop a more accurate picture of truck flows in the state that originate or terminate at the border. The system could also be expanded and modified to be implemented at other large truck traffic generators like ports and distribution centers.

For More Information:

Research Engineer - Duncan Stewart, TxDOT, 512-465-7403
Project Director - Laura Perez, TxDOT, 512-486-5035
Research Supervisor - Juan Carlos Villa, TTI, 979-862-3382

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Research and Technology
Implementation Office
P.O. Box 5080
Austin, Texas 78763-5080
512-465-7403

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