

TDOT Reduces Use of Its Legacy System by 90 Percent with Intergraph[®]'s Web-based Solution

E-TRIMS Gives Users Instant Access to Roadway Information, Enhances Reporting Capabilities



FACTS AT A GLANCE

COMPANY: Tennessee Department of Transportation (TDOT), United States

WEBSITE: www.tdot.state.tn.us/

DESCRIPTION: The Tennessee Department of Transportation provides state residents and travelers with one of the best transportation systems in the country. TDOT consistently wins awards for its projects, highway design, and innovative approach to transportation. The agency has approximately 3,900 employees with four statewide region facilities in Jackson, Nashville, Chattanooga, and Knoxville. TDOT headquarters is located in downtown Nashville.

INDUSTRY: Transportation

COUNTRY: United States

PRODUCT USED

- GeoMedia[®] Desktop
- GeoMedia WebMap

KEY BENEFITS

- Automatic updates to users
- Reduced time and maintenance costs
- Compliance with federal and state reporting standards



IDENTIFYING GOALS

Roadway transportation plays a vitally important role in our daily lives, moving people and goods to more areas than ever before. The Tennessee Department of Transportation (TDOT) takes great pride in its transportation network, which is recognized as one of the top highway systems in the United States. The Tennessee Roadway Information Management System (TRIMS) has served TDOT well for many years. In 1996, Intergraph® converted the mainframe application to a client/server application, and TDOT has since implemented numerous updates and enhancements to TRIMS.

TRIMS streamlines TDOT's roadway inventory management workflows into an Oracle database and provides workflows for ingesting data from field collection processes. This system's embedded business rules increase confidence in TDOT's data and allow users to make applicable edits. With TRIMS, TDOT can perform simple and complex queries to support its daily work activities like creating reports. The TRIMS database and application integrates information from several systems – including bridge management, crash, traffic, and pavement systems. This has helped TDOT quickly comply with federal reporting requirements listed in the MAP-21 Mandate, as well as Functional Classification, GASB34, NBI, and others – saving TDOT thousands of hours each year.

Already a technology leader among transportation agencies, TDOT wanted to further update its roadway information management system to meet operational challenges and provide Tennessee residents with the best highway network possible. With more than 1,500 employees using TRIMS on a daily basis, TDOT wanted to ensure each employee was working with the latest software updates and had access to up-to-date roadway information. To do this, TDOT needed to place its TRIMS data on a simple, web-based interface that minimized software maintenance overhead and provided more users with roadway information.

OVERCOMING CHALLENGES

- Enable query, view, and map functions using a web-based application
- Reduce costs associated with maintaining a client/server application
- Ensure all users have access to up-to-date, accurate information
- Meet federal and state reporting requirements



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REALIZING RESULTS

TDOT partnered with Intergraph once again to create a web-based application called E-TRIMS to access all of its TRIMS data. With E-TRIMS, potentially 4,000 TDOT employees – federal, state, and local government agencies – and TDOT contractors can view, analyze, and report on all types of roadway data. Much of the data managed in TRIMS is made available through the E-TRIMS viewer for query and mapping. This new system provides a “Simple Query” function that allows users to quickly locate information, even if they have minimal knowledge about the data. For experienced users that perform more complex workflows, E-TRIMS offers an “Advanced Query” function that overlays multiple functional systems for analysis. Both simple and advanced queries can be saved for later use and shared with other users at TDOT. Also, with the “Save Sessions” functionality, E-TRIMS can save the entire workspace as a user session that can be accessed later or shared with others via hyperlink.

TDOT places strong emphasis on its reporting capabilities, and with E-TRIMS, it can generate reports easier than ever before. A highly popular E-TRIMS feature is its ad-hoc reporting capabilities for the most commonly used reports from TRIMS. These reports are provided in a simple PDF format to distribute to others at TDOT.

“With the E-TRIMS system, we can select a point on the road and display all the inventory data associated with that point,” explains Brian Terrell, GIS Technician Manager 2 at TDOT. “This View All Inventory Data tool is extremely powerful and has helped us eliminate 90 percent of our TRIMS client/server application use, which translates into fewer costs and less time to get the data we need.”

Both TRIMS and E-TRIMS also provide access to TDOT’s photo log application, which allows users to view images of the actual roadway in the comfort of their office. “We don’t have to send out crews every time we get a report about a dangerous curve or intersection,” continues Terrell. “We just view the imagery from our desks and assess what action needs to be taken from there.”

MOVING FORWARD

TDOT expects E-TRIMS to continue to evolve as technology changes and with users’ requirements. Meanwhile, state and federal regulations drive modifications to reporting capabilities. TDOT also continues to enhance E-TRIMS to add more client/server functionality to the intranet.

While E-TRIMS is currently available only within TDOT, other state agencies will have access to it in the future, along with metropolitan planning organizations and consultants.



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