



SUNGUIDE® DISSEMINATOR

Moving Into a New Era and a New Home

The Florida Department of Transportation (FDOT) District Four Intelligent Transportation Systems (ITS) Program is pleased to announce that the Palm Beach SMART SunGuide® Transportation Management Center (TMC), formerly known as the Palm Beach Interim Traffic Management System (ITMS), is operational. It is not just a name change, but a location change; one that was made without any operational downtime. The seamless transition was a result of months of careful planning and team work.

In 2001, the ITMS was established in Palm Beach County to bring ITS presence to I-95 during its multi-year, major widening and reconstruction projects. The ITMS was responsible for maintaining 24/7 operations and dispatching Road Ranger Service Patrols. It also provided traffic information and camera images to the local public and media as well as building strong relationships with emergency response agencies. The contract for ITMS came to an end in September 2009, taking the mobile ITS equipment with it. Due to the permanent ITS deployment schedule getting pushed back, no ITS would be available until March 2011, resulting in 1.3 years with severely reduced incident management coverage on the 46-mile corridor. Fortunately, the District Four ITS Program applied cost-saving techniques throughout the duration of the seven year, \$33 million dollar contract resulting in significant savings, of which \$5.3 million was used to fund a 1.3 year contract extension.

One of the ways in which funds were saved on the ITMS project was by not renewing the lease at the current building location. Rather, the FDOT space at the Palm Beach Vista Center Complex was completed and prepared to be occupied. The planning for an August 2009 move commenced in February 2009—knowing that it was not going to be as easy as unplugging a few things and loading up a moving truck. There were software issues to contend with, partner agencies to be notified, staff procedures to be revamped, and an extensive amount of equipment to be relocated. On top of the move-related tasks, the District Four ITS Program identified this as the ideal time for the ITMS staff to start using the SunGuide Software, which added training and software integration to the long list of things to do.

Weekly meetings were held to closely monitor progress on the project plan. “We had individuals’ names assigned to each task to create a sense of ownership and accountability,” said Dong Chen, District Four ITS Program Manager. “Every person involved with moving the ITMS was held responsible for completing their tasks on time. By staying on top of the project plan, we were able to move in and commence operations ahead of schedule and without any glitches.”

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When the ITMS was moved into the permanent location for Palm Beach ITS management, the name was changed to the Palm Beach SMART SunGuide TMC to reflect that it was no longer an interim solution. To formally announce the TMC location to the media and motoring public, a press event was hosted in the control room. Representatives from all the major television networks in Palm Beach attended, shooting live interviews and traffic reports from the control room and describing to their viewers how the TMC monitors the roads, dispatches Road Rangers, and posts travel information to 511.



The Palm Beach SMART SunGuide TMC works hand in hand with the Broward SMART SunGuide to monitor traffic and partner with response agencies in District Four. With the contract extension and move accomplished, motorists, media, responders, and the FDOT will benefit from continuous ITS coverage on I-95 throughout Palm Beach County. For additional information about the Palm Beach SMART SunGuide TMC, contact Daniel Smith, District Four ITS Operations Manager, at Daniel.Smith@dot.state.fl.us.

This article was provided by Sarah Stanley, FDOT District Four. For information, please contact Ms. Stanley at (954) 847-2697 or email to SStanley@smartsunguide.com.

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District Six Enhances Network Communications in Monroe County



The Florida Department of Transportation (FDOT) District Six Intelligent Transportation Systems (ITS) Program recently evaluated their ITS communications network. Based on the outcome of this evaluation and other fiber sharing opportunities with regional partners, the ITS Program is in the process of revamping their communications network. For increased bandwidth and redundancy, the ITS Program will add new lease lines at strategic locations along the 129-mile stretch from Florida City to Key West to enhance the overall performance and reliability of the ITS communications network in Monroe County.

FDOT District Six currently owns and operates several ITS components along US-1 in Monroe County. The ITS components include closed-circuit television (CCTV) cameras and dynamic message signs (DMS) used by the FDOT for incident management, traveler information, and during hurricane evacuations. These ITS components currently operate on a wireless communications system. The devices

communicate through a bus topology or “daisy chain” mode of communication. This means that each ITS device directly depends on the other to maintain the network’s connectivity.

This project will distribute all existing Monroe County ITS devices from one long segment into three strategic segments based on their geographical location in the upper, middle, or lower portion of the county. The three segments will form three separate Metro Ethernet networks and will use leased lines to supplement the system’s wireless communications. Separating the ITS devices into three individual networks and adding this communications redundancy will enhance the overall capacity of the network in terms of reliability, strength, and quality. This is especially important as State Road 5 / US 1 serves as the county’s main evacuation roadway in times of emergency situations and maintaining reliable communications with the transportation management center is critical during these times. Upon project completion in December 2009, this effort will also increase the bandwidth capacity of the network and improve the quality of the video images received from the nearly 50 CCTV cameras deployed in the county. This will support the FDOT’s video sharing efforts to improve the quality of information distributed to the public via its partner agencies.

By reallocating resources and implementing other cost savings measures this project is being implemented at no additional cost to the FDOT.

This article was provided by Alicia Torrez, FDOT District Six. For information, please contact Ms. Torrez at (305) 470-5757 or email to Alicia.Torrez@dot.state.fl.us.

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TERL Runs Test for Florida's Turnpike Enterprise Software Migration

With the recent migration of the Florida's Turnpike Enterprise (FTE) transportation management center (TMC) at Turkey Lake from SunNav® to SunGuide® Software Release 4.2.2, there is a need for testing legacy Turnpike intelligent transportation systems (ITS) devices for "SunGuide compliance." And again, the Traffic Engineering Research Lab (TERL) has accepted the challenge. On Thursday, September 17, 2009, TransCore and TERC staff installed two TransCore automatic vehicle identification (AVI) systems, including antennas, controllers, and Encompass 5 Multiple Protocol Readers at the TERC test site. One system was installed on the mast-arm in front of the TERC building; the other was configured to operate on a test bench in the TERC ITS test lab.

On the second day, TERC staff successfully configured the TransCore AVI systems with the SunGuide test system and the test began in the afternoon. The goal of this testing was to verify the communications between SunGuide and the TransCore Encompass 5 Multiple Protocol Readers and provide data input for travel time calculation. The test was highly sophisticated—TERC staff ran up and down the street with transponders in their hands! SunGuide was able to obtain the reads successfully. There were some minor issues that were observed, but these issues are not anticipated to impact operations.

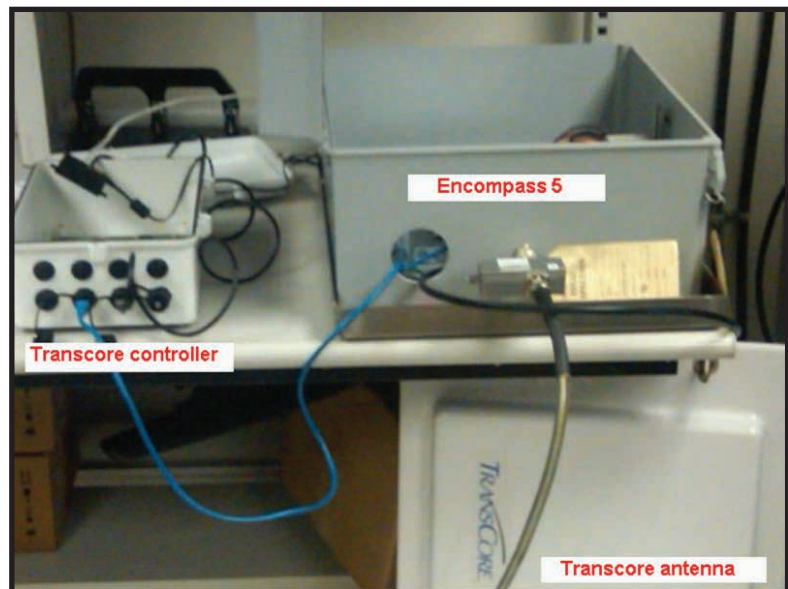
The successful testing brings FTE one step closer to a successful migration to the SunGuide Software. Lowering the risks of software deployment is a key objective of the TERC, resulting in better service to the Turnpike's customers—the traveling public.

This article was provided by Arun Krishnamurthy and Trey Tillander, FDOT Traffic Engineering and Operations Office. For information, please contact Mr. Krishnamurthy at (850) 410-5615 or email to Arun.Krishnamurthy@dot.state.fl.us or Mr. Tillander at (850) 410-5617 or email to Trey.Tillander@dot.state.fl.us.

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Transcore AVI system on the TERC's mast-arm facing north.



Transcore AVI system in TERC's ITS lab

SunGuide® Software Efficiency and Performance

SunGuide® Software is the statewide traffic management center software. It is a Web-based solution and uses Microsoft® Internet Explorer to navigate through various functionalities. The SunGuide Software development was initiated in 2003, and continues to be enhanced to date. The software has grown to be more than three million lines of code. The software team is committed to supporting the software users; the team has invested several hundred thousand hours on software development, enhancement, and maintenance. I consider the team to include the software development contractor, software project management consultant, and the Florida Department of Transportation (FDOT) personnel and their consultants.

For a project of this magnitude, it is important to ensure the confidence of the users. The software user's confidence is dependent on many factors, including the software performance and customer service. In this editorial, I will only touch on the performance and efficiency of the software. From a software management stance, it is important to ensure that the software performs tasks efficiently. As the software grows in magnitude and with more functionality, some features may take longer to perform than previously experienced. It is a balancing act between the functionality and performance of the software. In mid-2008, some District operations staff observed delays in SunGuide. At that point, new requirements were introduced in SunGuide to perform certain operations within a specified amount of time. These included the ability:

- To open the SunGuide map screen and be able to use it within 60 seconds
- For operators to navigate through response plan screens for incident management within 60 seconds
- To generate any report within SunGuide within two minutes.

To meet these requirements, modifications were made to SunGuide which enables screens to open more seamlessly and with less delay. With such stringent software requirements and also good software development practice, the software operates without noticeable time delay as operators have to perform thousands of functions in any given day.

In the next couple of months, FDOT is preparing to make a significant modification to the existing SunGuide map that could further improve the efficiency of the overall software. The SunGuide map is anticipated to use advanced programming languages, including Microsoft C Sharp which also powers such internet-based mapping applications as Google Maps and Microsoft Bing, which are extensively used by the internet community.

One of the factors that can be used to understand the performance of the software is the "post release defects." Post release defects are the number of defects identified in the software. These defects could range from minor bugs to critical failure causing issues, or include enhancement requests in the software. As with any software of this magnitude, users have found defects in the SunGuide Software over the past several years. Based on our records, we have identified approximately 1,400 defects over the past five years since the first software release. This quantity of post release defects is not uncommon in the industry.

The software efficiency and performance helps us understand if the software meets the user's expectations. It is critical to ensure that the software is efficient as it is essential to the efficiency of the transportation management center operator's performance.

This article was provided by Arun Krishnamurthy, FDOT Traffic Engineering and Operations Office. For further information, please contact Mr. Krishnamurthy at (850) 410-5615 or email to Arun.Krishnamurthy@dot.state.fl.us.

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Inside the TERL

The FDOT has a goal to assure that only a safe and uniform traffic control system and ITS are implemented in the state of Florida. The Traffic Engineering Research Lab (TERL) plays a part in obtaining this goal by satisfying Florida Statute 316.0745 - Uniform Signals & Devices. Below is a look Inside the TERL at activities that help accomplish our goal.



The primary mission of the TERL is to maintain an Approved Product List (APL) of devices that have been tested and verified to meet FDOT requirements. Establishing and maintaining the APL encompasses a broad variety of activities. These activities include the review of manufacturer quality assurance/quality control (QA/QC) programs, comprehensive product evaluation and testing, development and continuous improvement of specifications, maintenance and technical operations of the systems used for testing (including the design, installation, and operation of a small-scale transportation management center [TMC]) as well as the installation and integration of field devices around the TERL facility and various remote testing locations. The primary goal of these efforts is to ensure that products sold and deployed on transportation projects in Florida are safe and reliable, perform as required, are of good quality, and are manufactured by companies who have demonstrated good QA/QC practices and customer service.

Notable activities during the past month included the following:

- Evaluation of an arterial dynamic message sign (ADMS), manufactured by “Skyline,” began in October. If approved, the ADMS will be listed on the FDOT’s APL.
- Delivery of a dynamic message sign (DMS), manufactured by Ledstar, to the TERL for evaluation. If approved, this full-size, walk-in, 18-inch character DMS will be listed on the APL. This would be the third DMS certified for use in Florida.
- Delivery of an ADMS, manufactured by Daktronics, to the TERL for evaluation. If approved, this 12-inch character ADMS will be listed on the APL.
- Construction of the TERL’s mast arm test intersection began September 25, and is progressing quickly. Construction is estimated to be complete in the first quarter 2010.
- Renovation of the TERL’s “large equipment” testing facility was completed in October. This facility will be used to conduct testing on various devices, such as controller cabinet assemblies, etc. The facility also includes a “light tunnel” that will be used to test the intensity and color of equipment, such as traffic signals and electronic display signs.
- Completed an on-site QA/QC audit of an APL manufacturer. These audits help to ensure all required QA/QC procedures are in place as presented to the TERL during the manufacturer’s original paperwork qualification.

The TERL welcomes and encourages any comments and feedback you may have regarding product listed on the APL. We want to hear from you.

Is there a product you would like to have placed on the APL?

Are you a maintaining agency in Florida that would like to sponsor a project to evaluate a new product or would you like to share your experiences with a product (good or bad) with us?

If so, please contact us; we want to hear from you.

This article was provided by Jeff Morgan, FDOT Traffic Engineering and Operations Office. For more information, please contact Mr. Morgan at (850) 921-7354 or email Jeffrey.Morgan@dot.state.fl.us.

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Editorial Corner—TIme 4 Safety

I can remember years ago—about 14 or so—when I took the Intermediate Maintenance of Traffic (MOT) Course. At that time I was a construction inspector for the Florida Department of Transportation (FDOT), working in the Lakeland Construction Office. This two-day course was a vital part of my job, dealing with construction projects and understanding how to properly set up lane closures and signs for these projects. My job was to ensure that everything was properly set up for the safety of the motoring public as well as the workers on the job.

Now my role is a little different; I am still dealing with lane closures, but they are of a much different nature. The closures that I am concerned with are those resulting from a traffic crash, where the first person on a scene could be a law enforcement officer, Road Ranger service patrol operator, fire/rescue, or some other incident responder. These people have a very important role at the scene and do a great job. The problem is that they have all had different training when it comes to setting up a lane closure.

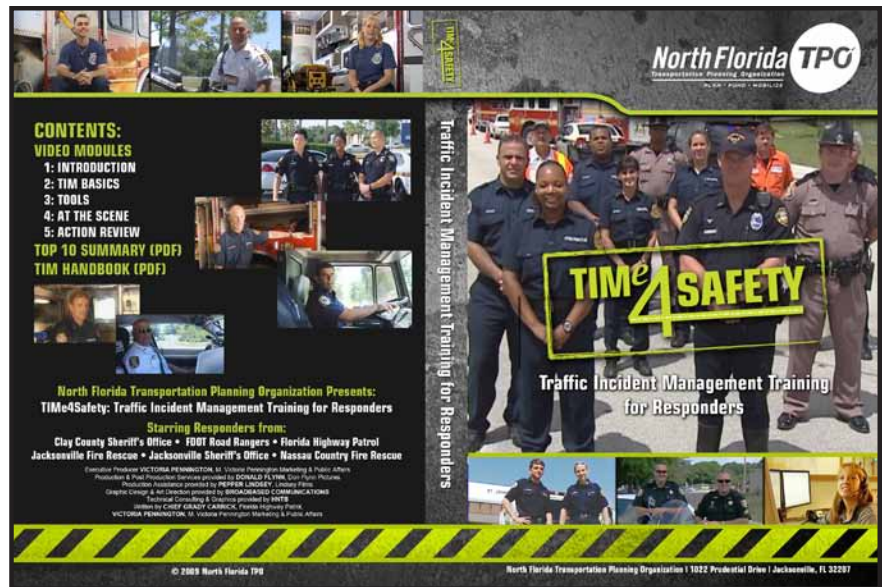
As a result of it being recognized that all incident responders need to be trained in MOT, the FDOT and University of South Florida's Center for Urban Transportation Research developed a course —“Maintenance of Traffic for Incident Responders.” This six-hour classroom course is ready for delivery throughout the state. It was provided to several different incident responders for comment, including the Florida State Fire College. Subsequently, changes were made to the course based on their comments. This is a great course; however, it is still a little too long to get it out to every incident responder, but they still need this knowledge.

In order to provide training to every incident responder, the North Florida Transportation Planning Organization and the First Coast Traffic Incident Management Team collaborated on the writing, development, and production of the “TIme 4 SAFETY” video. This video was developed as a comprehensive multi-agency, multi-discipline program—dedicated to improving safety, coordination, communication, cooperation, and enhancement of traffic incident management within the northeast Florida region for all responders. This video is truly unique; it was developed by responders, for responders and, as result, will reach much further than the initial intended audience.

This video looks at an often overlooked threat to incident responders—working in or near traffic. Traffic incident management is a proactive approach to help ensure the safety of incident responders at a traffic crash; this video looks at incident responder's safety and risk reduction by deploying three strategies:

- Enhance the traffic incident management and operations training to include the basics of response vehicle positioning and parking. Use temporary traffic control devices to increase the effectiveness of incident scene clearance and reduce congestion by lowering the safety risk to responders, motorists, and victims.
- Enhance situational awareness learned through training and exercises. Effectively manage operations during the incident to reduce the risk of secondary collisions involving incident management responses.
- Enhance visibility of incident management personnel using retro-reflective apparel, such as high-visibility vests, and visibility of response vehicles with vehicle lighting and taping.

If you haven't seen the video yet, you need to. It can be viewed online at <http://www.northfloridatpo.com/index.php?id=25>



The development team needs to be commended for their work on this project; not only have they developed a product that is going to improve the safety for northeast Florida responders, but it will also affect responders nationwide. I am proud to be associated with such a proactive group of responders—keep up the good work.

This editorial was provided by Paul Clark, FDOT Traffic Engineering and Operations Office. For further information, please contact Mr. Clark at (850) 410-5607 or email to Paul.Clark@dot.state.fl.us.

Register Now for the ITS Florida Annual Meeting and Awards Banquet

The Intelligent Transportation Society of Florida (ITS Florida) Annual Meeting and Awards Banquet will be held December 8th at the Rosen Centre Hotel in Orlando. The keynote speaker from ITS America will focus on the latest plans for the 18th World Congress on Intelligent Transport Systems which will be held in Orlando in 2011. To reserve your space for the ITS Florida Annual Meeting and Awards Banquet, please visit itsflorida.org.

ITS Florida has arranged to have rooms available at The Rosen Centre Hotel at a rate of \$98 per night. Reservations can be made by calling 1-800-204-7234. Please let them know this is for ITS Florida. This rate is also good up to three days before and three days after the event.

What You Can Expect

December 8th

- December Board of Directors meeting at 1:30 p.m. followed by a planning session.
- Reception at 6:30 p.m. followed by the Awards Banquet at 7:00 p.m.
- ITS Florida Awards
- Scholarship Awards
- 2010 Board Members

December 9th

A one-day Technology Forum is planned. This forum will focus on emerging intelligent transportation systems (ITS) topics of most interest to our members. Recently confirmed topics for the session include:

- Transportation System Management and Operations
- Better Integration of Traffic and Incident Management for Transportation Management Centers (TMC) and Emergency Operations Centers
- Traffic Signal Control System Innovations
- Intelligent Corridor Management / Active Traffic Management
- IntelliDrive Update
- ITS-related Environmental Topics
- TMC of the Future
- Vendor Presentations
- Adaptive Signal Control
- Technical Solutions Subcommittee Update



Rosen Centre in Orlando, Florida

Professional Development Hours (PDH) will be awarded.

December 10th

A Leadership Workshop for ITS Florida Board Members will take place from 8:00—noon.

The Florida Department of Transportation will also be holding a District Traffic Operations Engineer meeting on December 9—10.

This is a great time to join your fellow ITS Florida members! Please visit itsflorida.org for full details and to reserve your space at the ITS Florida Annual Meeting and Awards Banquet.

This article was provided by Sandy Beck, ITS Florida. For further information, please email Ms. Beck at itsflorida@itsflorida.org.

For more information on ITS Florida, please check the ITS Florida Web site at www.itsflorida.org or contact Sandy Beck, Chapter Administrator, at itsflorida@itsflorida.org. If you wish to contribute an article to the *SunGuide Disseminator* on behalf of ITS Florida, please email Mary Hamill at MaryKHamill@global-5.com.

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Announcements

Congratulations Jerry Ausher

Please join us in congratulating Mr. Jerry Ausher on his appointment as the new District Two Traffic Operations Engineer. Jerry replaces Jim Scott, who retired in September.

Jerry has over 16 years of engineering experience with FDOT, serving in various roles. Jerry graduated from the University at Buffalo in 1993, with a Bachelor's Degree in Civil Engineering and then obtained his Master's Degree in Civil Engineering from the University of Central Florida. He is a Registered Professional Engineer in Florida.

We wish Jerry all the best in his new position.

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95 Express Wins People's Choice for America's Best Transportation Award

The Florida Department of Transportation District Six Office is proud to announce that the 95 Express recently won the People's Choice Award for America's Best Transportation Project in 2009.

With more than 200,000 votes, the 95 Express won the top spot over ten other projects in the final stage of the national competition. Sponsored by The American Association of State Highway and Transportation Officials (AASHTO), the U.S. Chamber of Commerce, and the AAA, the competition evaluated 50 highway projects from 33 states in three areas: "Innovative Management," "On Time," and "On Budget." After winning the regional competition in the "Innovative Management," category and scoring the highest number of overall points during the evaluation process, the 95 Express went on to compete for the national title and won by a very strong lead over the other contenders.

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District Six Launches New and Improved www.SunGuide.org Web Site!

The Florida Department of Transportation (FDOT) District Six Intelligent Transportation Systems (ITS) Program is proud to announce the release of its newly improved Web site—www.SunGuide.org.

The site has been re-designed to reflect the ITS Program as it operates today. It hosts new features to provide users with detailed information about past, current, and existing projects as well as its traffic management-related services. Visitors may view the latest news about upcoming activities and initiatives. Also available is a section for ITS reports and public information materials, such as newsletters, photo galleries, videos, and more!

Please make sure to visit our Web site – comments and suggestions are welcome!

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FDOT Traffic Engineering and Operations Mission and Vision Statements



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