FDOT's Traffic Engineering and Operations Monthly Newsletter

SUNGUIDE[SM] DISSEMINATOR

INSIDE THIS ISSUE

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Link to Florida's Statewide ITS General Consultant

SunGuide[SM] Software Update

With the participation of representatives from the FDOT Traffic Engineering and Operations, District 4, and Miami-Dade Expressway Authority offices, the SunGuide Software Release 1.1 Factory Acceptance Test (FAT) was observed at Southwest Research Institute (SwRI) in San Antonio, Texas, on June 1-3, 2005. After the successful FAT, Release 1.1 was deployed at the District 4 Broward County Regional Transportation Management Center (RTMC) on June 13-17, 2005. Operator and administrator training sessions were offered after the deployment. Additionally, design and maintenance training was offered on August 16, 2005. The joint efforts by FDOT District 4, Office of Information Systems, Traffic Engineering and Operations, and Southwest Research Institute made the software deployment a cooperative accomplishment.

A Change Management Board (CMB) was held to review Engineering Change Proposal (ECP) 2.0 on July 20, 2005. The CMB Committee approved the following submodules and enhancements:

- Incident management through center-to-center communications;
- Road Rangers subsystem;
- Software support and management;
- Travel time subsystem;
- Performance measures;
- Tag reader subsystem; and
- Enhancements requested during the FAT.

Engineering Change Order (ECO) 2.0 will be provided based on the ECP 2.0. Most of the submodules and enhancements will be implemented in SunGuide Software Release 2.X.

Major project activities are listed as follows:

- SunGuide Software Milestone Demo No. 2 was scheduled for August 29-31 at the District 6 Miami RTMC. This is part of the independent verification and validation (IV&V) to ensure that SunGuide Software is built to meet the FDOT requirements. This demo conducted testing procedures for closed-circuit television (CCTV) cameras, dynamic message signs (DMSs), transportation sensor systems (TSSs), and video walls.

- SunGuide Software Release 1.1 is scheduled to be deployed at the District 2 Jacksonville TMC on September 6-9, 2005.

- The FDOT IV&V for SunGuide Software Release 1.1 is scheduled to be performed at the District 4 Broward County RTMC on September 13-15, 2005.
- The SunGuide Software Release 2.0 FAT is scheduled to be held at SwRI on November 1-3, 2005. After the Release 2.0 FAT, SunGuide will be deployed at District 6 on November 7-11, 2005. Operator, administrator, and design and management training sessions will also be provided after this deployment.
- The City of Tallahassee has expressed an interest in using SunGuide Software to control DMSs on I-10 once the project is deployed. The SunGuide Software Project Team will coordinate details with the city.

This article was provided by the SunGuide Software Project Team. For more information, please contact Liang Hsia at (850) 410-5615 or email Liang.Hsia@dot.state.fl.us, or visit the project Web site at http://Sunguide.datasys.swri.edu.

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South Florida ITS Technologies Save Time and Lives

You have probably seen cameras along expressways like I-95, SR 826/Palmetto Expressway and SR 836/Dolphin Expressway. You also may have noticed the intelligent overhead electronic signs, called dynamic message signs, or DMSs, often used to communicate with motorists about lane closures, delays, or accidents on these roadways.

If you have been stranded on any of the major expressways in Miami-Dade, Broward, or Palm Beach Counties, or on Florida's Turnpike, then you have experienced the Road Rangers service patrol in action. The Road Rangers help more than 7,500 motorists a month and ultimately keep traffic moving.

Maybe you dial 511 for up-to-the-minute reports on South Florida traffic information for I-95, the Turnpike, and many other roadways, before getting in your car. This communications technology is spreading rapidly across the United States. The 511 program is now used in Miami, Tampa, and Orlando in the state of Florida as well as 22 other states. Currently, more than 200,000 people in South Florida call 511 every month from their landline or cell phone. This is a free FDOT service, but charges from communications providers may apply.

But did you know that each of these components is an element in ITS administered by FDOT? FDOT is using ITS to reduce road congestion and make our highways safer and more efficient.

ITS encompass a broad range of advanced wireless and wireline communications technologies. When integrated into the South Florida transportation system, and into vehicles themselves, these technologies help ease congestion on our roads. In turn, this improves safety and enhances our productivity by enabling motorists to get where they are going faster and safer.

“We are proud to say that Florida has traditionally been recognized as a leader in ITS,” said Jesus Martinez, FDOT District 6 ITS Administrator. “These intelligent transportation systems give motorists a sense of comfort in that we know what is happening on our roadways at all times and we can dispatch help immediately if someone should require it,” he said.

According to Martinez, “ITS is currently helping you in your everyday travels, but you may not be aware of it.” For example, DMSs, the overhead electronic signs you see on I-95, give you real-time information—the latest information available—on what you should watch out for on the roadway. With the start of the 2005 hurricane season, you can also expect these DMSs to notify you of any essential evacuation information.

“But these DMS do even more than provide roadway information and hurricane evacuation notices,” pointed out Martinez. “One of the most innovative uses for the dynamic message signs is the national Amber Alert program,” he said. In the unfortunate event that a child is abducted, the license plate and make of the car goes up on the DMS as quickly as the information is made available. Several children have already been saved through this Amber Alert program.

How does FDOT know what’s happening on our roadways? Closed-circuit television (CCTV) cameras are located along our major South Florida roadways—I-95 from SW 28 Road in Miami-Dade County to north of Indiantown Road in Palm Beach County; SR 836 (Dolphin Expressway); SR 826 (Palmetto Expressway); and US 1 at SW 17 Avenue—to directly monitor roadway conditions and the flow of traffic. These live camera images are monitored by FDOT at the traffic management centers (TMCs).

“The 24/7 SunGuide℠ TMC is the ITS operations center for all of South Florida. It enables FDOT to manage surface transportation more efficiently and safely while empowering motorists to make smarter travel decisions,” said Martinez. “If FDOT tells a motorist about a major traffic delay through the DMS, for example. That motorist has the real-time information necessary to select an alternate route in order to avoid that delay,” he explained.

FDOT continues to evaluate and implement new ITS strategies to assist motorists every day. Before you go on the road you can actually see these South Florida ITS technologies at work. Just visit either of these Web sites: www.SunGuide.org/ or www.511SouthFlorida.com. You can click on the live camera images for South Florida roadways to check traffic flow and to see if there are any major delays or accidents on the routes you plan to take.

"FDOT continues to upgrade ITS technologies to improve road safety and to alleviate road congestion, so keep reading your newspaper for more information on what FDOT is doing," recommended Martinez.

This article was provided by Alicia A. Gonzalez, Media Relations Group. For more information, please contact Ms. Gonzalez at (305) 254-8598 or email AGonzalez@mrgmiami.com.

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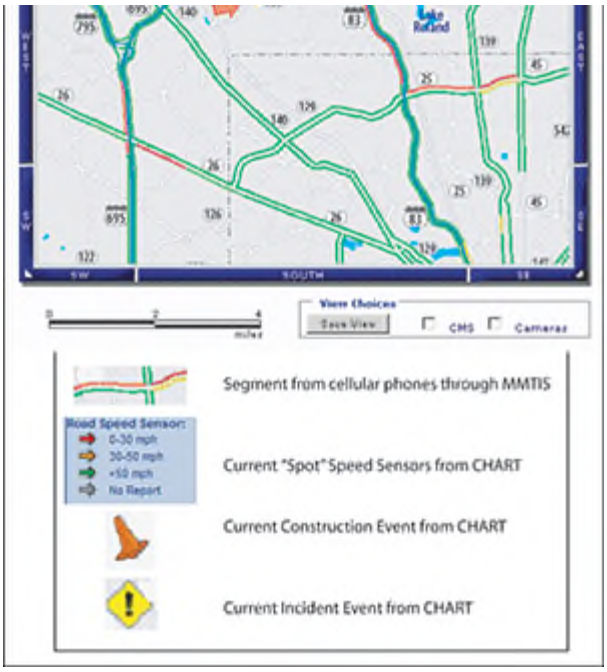
Maryland to Participate in Groundbreaking Traffic Monitoring Project

On September 8, 2004, the Maryland Board of Public Works approved a 2-year, $5.6 million contract with DelCan/National Engineering Technology (DelCan/NET) Corp., a Reston, Va., company, to develop a traffic monitoring system that will provide comprehensive incident, travel time and speed information on roadways in the Baltimore region. This project, called the Multi-Modal Travelers Information System (MMTIS), will be a groundbreaking effort that will include the first implementation in the U.S. of a technology which has been successfully demonstrated overseas, to derive traffic information by using data obtained from cell phone companies. This technology is unique, since it depends entirely on statistical analysis of existing cellular data, and doesn't require the installation of additional monitoring equipment. The technology will be implemented by ITIS Holdings, a British-based company, as a sub-contractor on the project. This data will be fused with other data received from traffic, transit, and emergency operations centers in the Baltimore region.

The contract with DelCan/NET is also unique, since it establishes a public-private partnership for the execution of the project. DelCan/NET will contribute $3.7 million of the $5.6 million cost of the project, with the remaining $1.9 million coming entirely from federal funding. As a result, the project will require no state funding. In exchange for their investment, DelCan/NET will be able to market the travel information to develop a sustainable business model. The Coordinated Highways Action Response Team (CHART) Program will receive the data at no additional charge beyond the initial investment of federal funds, to support the program's operational needs.

Another significant characteristic of this project is that the approach that the technology employs protects the privacy of travelers. This technology is incapable of actually "tracking" an individual cell phone.



Traffic information will be derived from a statistical analysis of data that cell phone companies already collect to manage their cell network. Based on this anonymous information, as a whole, DelCan/NET/ITIS Holdings will use statistical techniques to identify groups of cell phones that have common travel patterns. The system doesn't track individual cell phones, but determines a rate of flow based on movements between cells. This rate of flow information is what is used to determine travel times and, consequently, derive highway speeds.

Maryland's Office of CHART & ITS Development will provide project management and administrative support to the project. CHART will receive traffic speed and travel time data for freeways and other major routes that have never previously been monitored. CHART will be able to use this data to better manage incident response, analyze incident impacts, evaluate alternate routes, and provide improved traveler alerts.

On October 8, 2004, representatives of MDOT, CHART, and DelCan/NET/ITIS Holdings met to kick-off the project. In late 2004, the company completed the development of a data collection model for a test corridor along Interstate 95, and by May, 2005, had expanded the system to cover the entire Baltimore metropolitan region. Currently, data is being shared with the project partners through a development Web site. DelCan/NET is working to move the data delivery to a more stable production environment, and Maryland is initiating an independent evaluation/validation of the data. The migration to a production platform and independent evaluation/validation are both scheduled for completion by early 2006. The contract is scheduled to run through September 2006.

This article was provided by Glenn McLaughlin and Richard Dye, Maryland State Highway Administration. For more information, please contact Mr. Dye at (410) 582-5619 or email RDye@sha.state.md.us.

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Electronic Payment Systems at the Orlando International Airport

Orlando International Airport First With Electronic Payment System (EPS) For Parking

On February 22, 2005, the Orlando International Airport (OIA) became the first to automate their parking payment system by accepting payment via E-PASS, SunPass, and O-PASS transponders.

The 2-year pilot study, funded by the Orlando-Orange County Expressway Authority (OOCEA) and the Greater Orlando Aviation Authority (GOAA), provides a significant convenience for air travelers. Transaction time for electronic payment is approximately 3 to 4 seconds. Compared to the 30 to 60 seconds required for a typical cash or credit card payment, this can result in a savings of as much as 20 minutes during peak hours.

The system incorporates radio frequency (RF) readers at designated entry and exit lanes for the main parking garages at OIA. Upon entry, the reader recognizes the transponder and begins the transaction by date stamping the entry time. Upon exit, the transponder is read, and a transaction is completed. Upon completion of the transaction, the exit gate is raised, allowing the customer to exit. In the event the customer's account balance is inadequate, there are attendants available that can collect the parking fare. All balance checking and replenishments occur in an overnight batch process.

Equipment is installed on two entry and two exit lanes at both the A and B side parking garages. Special signage was developed to inform customers which lanes are equipped to accept the transponders. The system was designed to be expandable, and there is some consideration being given to incorporating EPS at the satellite lots.

The use of automation and increased throughput realized by using EPS is a win-win for OIA. Automation results in reduced operational costs; and the increased throughput reduces future capital expenditures to add more exit lanes. As part of the pilot study, there are no processing fees charged by OOCEA.

Results to date indicate that the pilot study is a great success. Over 243,000 electronic transactions were processed between the February 22, the opening date, and August 1. A total of $3.8 million has been collected electronically, for an average transaction amount of $14.54. The average cash transaction is $12.06, indicating that the E-PASS, SunPass, and O-PASS customers are parking for longer periods than the average traveler. During the month of July, 23 percent of all transactions were collected electronically, accounting for 26 percent of

parking revenue. E-PASS, SunPass and O-PASS customers pay the same parking fee as cash paying customers.

Customer feedback has been overwhelmingly positive. Customers have indicated the system is convenient, easy to use and is a real time saver. OOCEA customers will have access to their account information on-line in the near future allowing them to easily view and print their airport transactions. Currently, if a customer supplies their e-mail address, they receive their parking receipt, e-mailed to them the very next day. The airport staff is also very complimentary and supportive of EPS, as indicated by their consideration to expand EPS to the satellite lots.

This article was provided by L.A. Griffin, OOCEA. For more information, please contact Mr. Griffin at (407) 316-3800 or email GriffinL@oocea.com.

For more information on ITS Florida, please check the ITS Florida Web site at www.itsflorida.org or contact Diana Carsey, Executive Director, at (727) 409-5415 or email CarseyD@verizon.net.

If you wish to contribute an article to the *SunGuide Disseminator* on behalf of ITS Florida, please contact Erika Ridlehoover at (813) 376-0036, or email Erika.Ridlehoover@transcore.com.

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Editorial Corner—The 15 Minute Rule and You

In my travels throughout the country I have seen many traffic incidents. I have had the opportunity to work these incidents as well as be a passing motorist. Since I have become involved in traffic incident management each time I come upon one of these incidents, I try to look for ways things could be done better.

There are three groups I often find myself looking at: the victim; the responder; and the highway user. Each one of these is critical and important, and each eventually affects the other.

Often times, individual responder disciplines have different priorities. Fire and emergency medical services are looking at the safety of their responders as well as the victim. Law enforcement is trying to protect the integrity of the scene and control traffic. Public works is often trying to establish traffic control, and determine the extent of damage and what temporary repairs are needed. Towers are often trying to determine what type of equipment is needed and if there is any special equipment necessary for removing the vehicle. And the list goes on and on…

Sometimes one of the simplest things we can do to ensure added protection and scene safety is to use the 15 minute rule. Simply

stated, this rule applies the process of looking at the entire scene every 15 minutes to see what has changed and how traffic control can be improved to ensure the safety of the victim, responder, and highway user.

Traffic conditions are constantly changing and traffic cues are constantly increasing. By monitoring these changes and conditions we can act appropriately and apply the suitable maintenance of traffic to the situation. By making these changes every 15 minutes, it helps to mitigate secondary crashes, congestion, and ensures the safety of responders.

The simple additions of advanced warning sign locations to slow traffic, establishment of needed detour routes, and/or 511 message updates to alert motorists are also imperative. Also, with ITS in our urban areas the use of dynamic message signs, traffic cameras, and roadway sensors are key to effective traffic management and should be monitored every 15 minutes as well to assist in scene changes.

So the next time you respond to a traffic incident, remember the 15 minute rule. It could save your life, the life of other responders, or the life of the highway users.

This article was provided by Paul Clark, FDOT Traffic Engineering and Operations, Traffic Incident Management Section. For more information, please contact Mr. Clark at (850) 410-5631 or email Paul.Clark@dot.state.fl.us.

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FDOT Equipment Certification

The FDOT Traffic Engineering and Operations Office, through the Traffic Engineering Research Laboratory (TERL), is responsible for approving all traffic control signal devices. Approved devices are kept on the FDOT Approved Products List (APL), a listing of devices that may be relied upon as meeting FDOT specifications, standards, or other criteria.

The APL is a means for the FDOT to meet *Florida Statute 316.0745, Uniform Signals and Devices*, which states, “All official traffic control signals or official traffic control devices purchased and installed in this state by any public body or official shall conform with the manual and specifications published by the Department of Transportation pursuant to subsection (2).”

More information on the FDOT APL may be viewed at www.dot.state.fl.us.TrafficOperations/TERL/APL.htm. Specific approved products in the FDOT APL may be searched at rite.eng.fsu.edu/iapl/page1.php.

For more information, please contact Carl Morse, FDOT Traffic Engineering and Operations Office, at (850) 414-4863 or email Carl.Morse@dot.state.fl.us.

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Announcements

Welcome Secretary Stutler

Governor Jeb Bush named Denver Stutler as Secretary of the Department of Transportation (DOT). Stutler previously served as Chief of Staff for the Executive Office of the Governor. He began his new duties as DOT Secretary on July 9. Prior to joining the Governor's office, Stutler served as chief of staff for the Florida Department of Environmental Protection from 1999 to 2002. Prior to his work in public service, Stutler worked for 10 years at private engineering firms.

"Denver is a true public servant and has repeatedly proven his ability to effectively lead and manage some of our state's most daunting challenges," Governor Bush said, "His dedication, experience and passion will be integral in continuing the progress we've made throughout the state. I know he will be an exceptional secretary for this important agency."

"I am honored Governor Bush has asked me to take on this exciting new role," Stutler said. "While much has been accomplished at the agency I believe there is still important work to be done. With the recent passage of the Growth Management Act, the Department has a unique opportunity to forge the strategic plan for the investment made in Florida's transportation infrastructure during the next several years. I believe every investment in Florida's transportation system is an investment in the backbone of our economy."

Stutler, born in Germany, was raised in Florida, and received his undergraduate and graduate degrees in civil engineering from the University of Central Florida. Former Secretary Abreu had the opportunity to work closely with Secretary Stutler and had high praise on the appointment. "Denver will continue to build upon the foundation that has been the cornerstone of the Department in the past, using the Department's talented staff, to meet the agency's mission in moving people and goods throughout Florida."

Please join us in congratulating Secretary Stutler on his appointment.

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Congrats!

L. K. Nandam, District Traffic Operations Engineer, is pleased to announce the appointment of Chris Birosak to the position of ITS Program Manager for District One.

Chris started with FDOT in 1980 as a draftsman, then took on the challenge of Senior Transportation Systems Project Manager for ITS in 1987.

Chris began his new position on June 10. He has been instrumental in the development of the ITS program for District One and has played an active role in the planning and implementation effort of the ITS program for the State of Florida.

Chris is an avid (understatement) BUCS fan. He loves to fish and golf. He's been a member of the FDOT Bowling League for many years boasting an average of 156. Currently, the team he is a member of, Alley Oops, is in first place. Chris's teenage son, Christopher, attends school in Lakeland.

Please congratulate Chris on his promotion as the ITS Program Manager for District One.

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...And a Hearty Welcome to Bill

The Traffic Engineering and Operations Office is pleased to announce the addition of Bill Lueck to PB Farradyne's Tallahassee, Florida team, effective July 25, 2005. Bill is a networks administrator, managing the Florida ITS Wide Area Network, through FDOT's Telecommunications General Consultant. Bill will be located at the TERL when the renovations are completed.

Bill's expertise includes network installation, configuration, testing, and security; programming; mobile-data computer systems; and telecommunications. His projects have also included local and wide area network configuration, operating system generation, hardware and software installation, system checkout, and user training for new systems.

Before joining PB, Bill worked for Motorola Inc., in Tallahassee, for 4½ years. Also in Tallahassee, he has provided networks administration services to Florida State University, the Bureau of MIS, Florida Department of Corrections, Florida Department of Motor Vehicles, and the Florida Department of Management Services' State Technology Office.

Please join us in welcoming Bill.

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Don't Miss the 2005 NRITS Conference!

Don’t miss the 2005 NRITS Conference, to be held on September 11-14, in beautiful Spokane, Washington.

The 2005 National Rural ITS Conference will provide a wonderful opportunity for transportation professionals dealing with rural transportation issues to discuss current topics, exchange information, and attend valuable and memorable networking events. This is a unique opportunity to learn first hand about new and innovative approaches to helping solve the many challenges facing rural transportation.

Plan on attending NRITS in this vibrant city of the “Inland Northwest.” More information is available on-line at http://depts.washington.edu/trac/nrits2005/.

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Experience ITS at the 12th World Congress on ITS

The 12th World Congress on ITS will be held on November 6-10, in San Francisco at the Moscone Center. This year’s theme, “Enabling Choices in Transportation,” communicates the emphasis on the end-user in transportation.

Visit their Web site at www.itsworldcongress.org/ for registration and program information.

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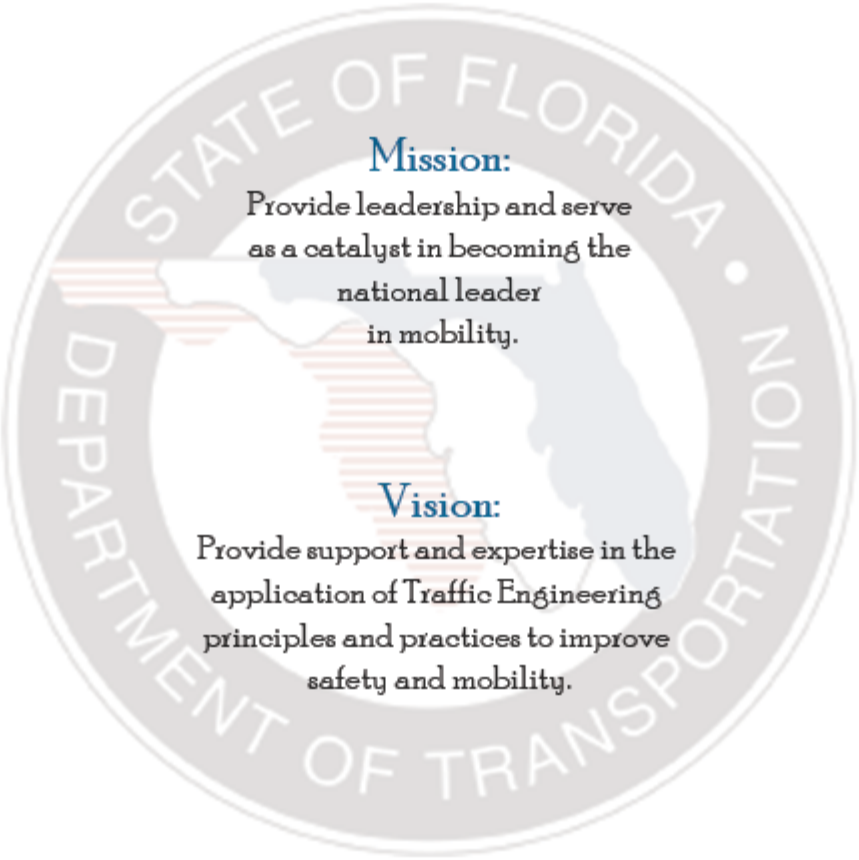
FDOT Traffic Engineering and Operations Mission and Vision Statements



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