# SUNGUIDE®

# DISSEMINATOR

## There's an App for That…Road Rangers!

Road Rangers are an integral part of the Florida Department of Transportation's (FDOT) Incident Management Program, and the services they provide to improve roadway clearance times for FDOT and their partners. FDOT's Road Rangers assist by clearing travel lanes of debris and damaged vehicles. Also, when incidents are not occurring, Road Rangers respond and assist motorists who have mechanical problems on the state's highway system.

Road Rangers patrol the Interstate system and work in close coordination with the transportation management centers (TMC). The TMC operations staff provide details of incidents to Road Rangers who then attend to those incidents. Road Rangers typically use radios or cell phones to communicate with the TMC operations staff who enter information received from Road Rangers into the SunGuide® software system, Florida's advanced traffic management software. With recent advancements in technology, in some regions, Road Rangers carry portable laptops in their vehicles to enter incident details directly into the SunGuide system rather than providing information to TMC operations staff who would then enter the incident details. Current practice includes using laptops with attached or embedded global positioning satellite (GPS) units communicating through a cell card. With their increasing popularity and capabilities, smart phones now provide a platform capable of meeting these needs. Today's smart phones are light, portable, GPS-equipped, have touch screen interfaces, include cameras, and are designed to connect to the Internet via WiFi® hotspots or a cellular network. These features make them a good choice for Road Rangers to carry as they collect information and aid motorists. Also, this can potentially save the FDOT money as Road Rangers only need to carry a smart phone rather than a phone and a laptop.

The FDOT's District Two (northeast Florida region) is planning to replace the Road Rangers' existing phones with the smart phones in the very near future. This will be a significant move for Road Rangers using radios/cell phones to correspond with TMC staff. It is anticipated that it will save TMC operations staff time as they will not have to enter this information into the SunGuide system.

### Smart Phone Application Details

There are many functions that can be included in a Road Ranger smart phone application, but the primary data point is location. Location updates are routinely sent to SunGuide so the TMC operations staff can track the position of Road Rangers and appropriately dispatch them. Location updates are displayed on the SunGuide operator map to show real-time Road Ranger movement. Having the real-time location of all Road Rangers on the SunGuide operator map will enable

## Inside This Issue
### December 2010

TMC operations staff to effectively and efficiently manage the entire Road Rangers fleet.

For existing events, a TMC operations staff can dispatch a Road Ranger to an event by simply clicking on the SunGuide operator map interface and the information is relayed to the Road Range's smart phone application. The Road Ranger receives an alert indicating that they should go towards an event. This alert will include an audio notification so the Road Ranger will be aware of the message. They will then acknowledge the dispatch so the TMC operations staff is aware that the message was received and they are en route to the incident. SunGuide will automatically update the alert dispatch time.
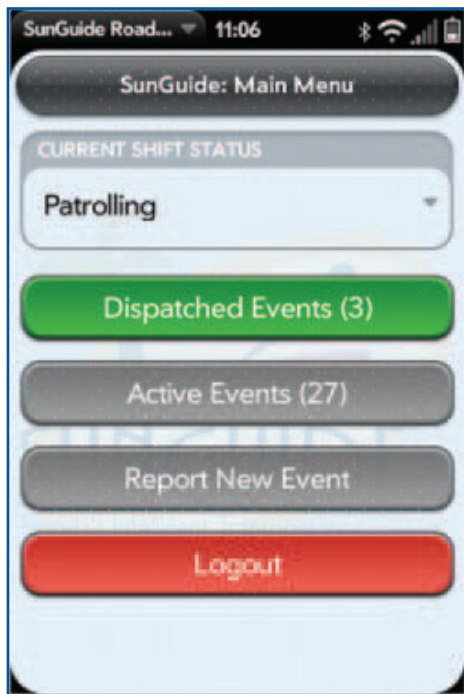
Road Rangers can create events and enter event details into the SunGuide system. These events will contain basic information, including location and roadway direction of the event. These events must still be managed by a TMC operations staff as the Road Ranger will not have access to the full functionality of the SunGuide system. When a Road Ranger arrives at an event, they will send an update to TMC operations staff indicating that they have arrived. The smart phone application will automatically log the time when the Road Ranger arrived on-scene in the SunGuide system. While on-scene, the Road Ranger will be able to view the details of the event at which they have arrived. The smart phone application will stay in-sync with the SunGuide system and the Road Rangers will be able to view the most current incident details. Road Rangers will also be able to call the TMC while the application is open on the phone in order to report additional event details. Once a Road Ranger has completed work at an event, the application will allow them to change their status to "departed from scene" and indicate to the SunGuide system that the Road Ranger is going to patrol for other events.
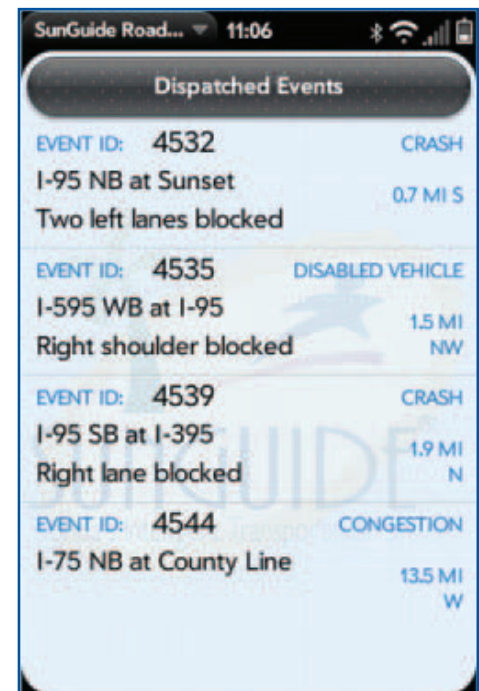
Most currently available commercial-of-the-shelf smart phones are capable of running this type of application. The Android-based phones are proposed to be used due to the large number of available phones with multiple carrier choices.

Recent advances in smart phone technology have significantly increased the amount of computing power available to users on the road. The FDOT plans to add this to its tool-kit for incident management strategies. With smart phones, Road Rangers can reduce the electronic gadgets needed, saving money. Also, this will save time as TMC operations staff can rely on Road Rangers to enter some incident-related information and will not have to be solely responsible to enter all the information. By using a single device to communicate with the TMC, receive dispatch notices, upload activity reports, and document scene conditions, overall Road Ranger performance can be improved and equipment and communication costs reduced.

Please note the smart phone screen shots used in this article are conceptual in nature and do not represent the final application design.

This article was provided by Peter Vega, FDOT District Two and Arun Krishnamurthy, FDOT Traffic Engineering and Operations Office. For information, please contact Mr. Vega at (904) 360-5463 or email to Peter.Vega@dot.state.fl.us; or contact Mr. Krishnamurthy at (850) 410-5615 or email at Arun.Krishnamurthy@ dot.state.fl.us.

* * * *

# Moment of Humor!

There's an app for that!

## Cross-County Commuters Now Receiving Travel Time Messages on I-95

For the first time in south Florida, drivers are getting accurate, up-to-the-minute travel time information on Interstate 95 (I-95) when crossing between Miami-Dade and Broward Counties.

A total of 11 dynamic message signs (DMS) are now displaying travel times along the 21-mile stretch of the highway on the local lanes. Adding this information is a critical achievement for this region, especially since I-95, within the project limits, serves as the main north/south connector for cross-county commuters and typically carries more than 250,000 motorists during a regular work week. It also serves as the region's life line, containing the state's first high-occupancy toll lanes as well as connecting out-of-town visitors to some of the area's most popular tourism and commerce destinations.



The signs are placed in advance of the county line with four DMSs in Broward County displaying travel times for trip estimates between Interstate 595 (I-595) and the Golden Glades Interchange and seven DMSs in Miami-Dade County displaying information between Interstate 395 and I-595. These strategic locations provide commuters with enough time to make more informed decisions when traveling along the corridor, and also assists those considering paying to use the 95 Express for time savings purposes.

This achievement is the result of the on-going collaboration between the Florida Department of Transportation's (FDOT) District Six and District Four Intelligent Transportation Systems (ITS) Offices and their goal to enhance the regional mobility for area motorists. Team members worked nearly three months on the initiative and hosted a series of project meetings to ensure a seamless deployment. They worked on a variety of aspects which included coordinating a floating car study conducted by Florida International University to verify the accuracy of the travel time links, developing an operational plan to ensure adequate postings, and working with public information staff to inform partner agencies and the media of the new enhancement which went live on October 26.

A similar cross-county initiative was launched last year along Interstate 75; District Six is currently working with Miami-Dade Expressway Authority to post travel time messages along more destinations throughout Miami-Dade County.

This article was provided by Daniel Smith, FDOT District Four and Javier Rodriguez, FDOT District Six. For information, please contact Mr. Smith at (954) 847-2633 or email to Daniel.Smith@dot.state.fl.us; or contact Mr. Rodriguez at (305) 470-5341 or email to Javier.Rodriguez2@dot.state.fl.us.

\* \* \* \*

# The FDOT ITS Program Responds to the Deep Water Horizon Oil Spill

At 9:45 p.m. Central Standard Time on April 20th, 2010, explosions onboard the Deep Water Horizon drilling platform marked the beginning of an oil spill disaster that would eventually affect all of the Gulf states. Once the scale of the disaster began to unfold, Florida Governor Charlie Crist responded by making several emergency declarations; first on April 30th for the six western coastal counties, including Bay County, home to Panama City and one of the region's transportation management centers (TMC).

On May 12th the Governor directed the Department of Environmental Protection to accelerate preparedness for the anticipated coastal impact of the oil spill. Part of this effort included deployment of an oil boom system across the inlet at St. Andrew's State Park near Panama City. This commercial shipping passage required a unique barrier system that closed most of the inlet, leaving an approximate 400-foot gap in the middle for boat traffic. During incoming tides, if the oil spill arrived in Bay County, even this middle section of the barrier would have been closed to all boat traffic. The Bay County TMC needed to be able to monitor this inlet during the construction and operational deployment of the barrier. The trouble was, there was no infrastructure at the inlet. The state park that surrounds the inlet is rural and primitive. There was no way to set up a video monitoring system in time.

To address the problem, Bay County contacted the Florida Department of Emergency Management who put the Florida Department of Transportation (FDOT) Intelligent Transportation Systems Program in touch with the county. It turns out the FDOT had just the solution Bay County needed—a mobile equipment trailer that is easy to deploy and comes with a portable Internet connection and a video monitoring system.

The FDOT initially developed the mobile equipment trailer as part of a pilot project to investigate providing wireless internet service to travelers on Florida's highways. The mobile equipment trailer provides temporary WiFi service at rest areas and can be relocated quickly and inexpensively to test traveler usage of WiFi services at multiple locations. The technology that made the trailer viable for this project includes an "untethered" connection to the internet that is provided via sophisticated satellite equipment mounted on the trailer. When the satellite equipment is turned on it first determines where it is and then automatically points its antenna at the right place in the sky to initiate an internet connection via satellite.

The FDOT quickly recognized that the trailer presented strategic opportunities beyond this original intent to provide WiFi services to travelers. The WiFi service itself could be used to support public safety and FDOT personnel at emergency events, but further, by adding a simple video system, the trailer could visually monitor any number of traffic situations or related emergency events and transmit that video securely through the internet. The trailer's mobility meant that this video monitoring could be deployed on a moment's notice, wherever it was needed. So in 2009, FDOT modified the trailer to include a video camera pod on a telescoping tower.

Initially the FDOT mobile equipment trailer was considered for monitoring the I-10 bridge over the Suwannee River in the spring of 2009, during a nearby flood, but the trailer video modifications were not yet complete. Then in early 2010, the trailer supported the Florida Department of Emergency Management's field exercise on communications interoperability called Operation Radar. The FDOT trailer video camera pod allowed event monitoring and the WiFi system provided wireless internet services for the Federal Emergency Management Agency and the Florida Department of Health, among others. The wireless internet connection also
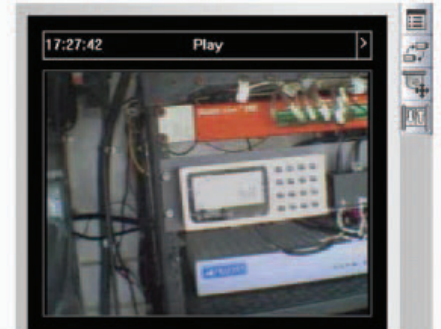
*Original camera feed.*

permitted the Florida Department of Management Services to cross connect from laptop computer to the Florida Statewide Law Enforcement Radio System via satellite and WiFi—possibly the first time such a voice radio connection has ever been made.

So when the Governor of Florida declared a state of emergency for the Deep Water Horizon oil spill, and Bay County made the request for the deployment of the FDOT trailer to help monitor the construction and operation of their oil barrier system, the FDOT was ready. Within several days of the request, the FDOT trailer was on site and providing a video feed from the onboard cameras to the Bay County TMC.

The top left camera, the number 1 camera, was focused directly on the inlet. This was the only adjustable camera in the original video pod configuration on the trailer. That camera could be turned left and right, tilted up and down, and zoomed in and out. The other cameras were all fixed cameras and could not be adjusted. The camera pod mounts on top of a telescoping tower and the camera mounting positions on the pod were chosen strategically to monitor opposing directions of a highway from a parked position in the right-of-way. The trailer position at St. Andrew's State Park was some distance from the inlet and so the number 2 and number 3 fixed cameras provided only limited coverage of the approaches to either side of the oil spill barrier. The number 4 camera monitored the trailer equipment shelter interior.

After using the system for several weeks, discussions between Bay County and the FDOT concluded that quick modifications to the trailer could be made that would dramatically improve the monitoring capabilities of the trailer video system, thereby providing the increased level of surveillance of the inlet desired by Bay County. The FDOT developed a plan to modify the trailer video system, taking it off-line for only three days. The modifications involved refitting the camera pod with three pan-tilt-zoom controllable cameras rather than one fixed camera. The result was a surveillance profile that permitted detailed monitoring of both shorelines as well as the open passageway in the middle.
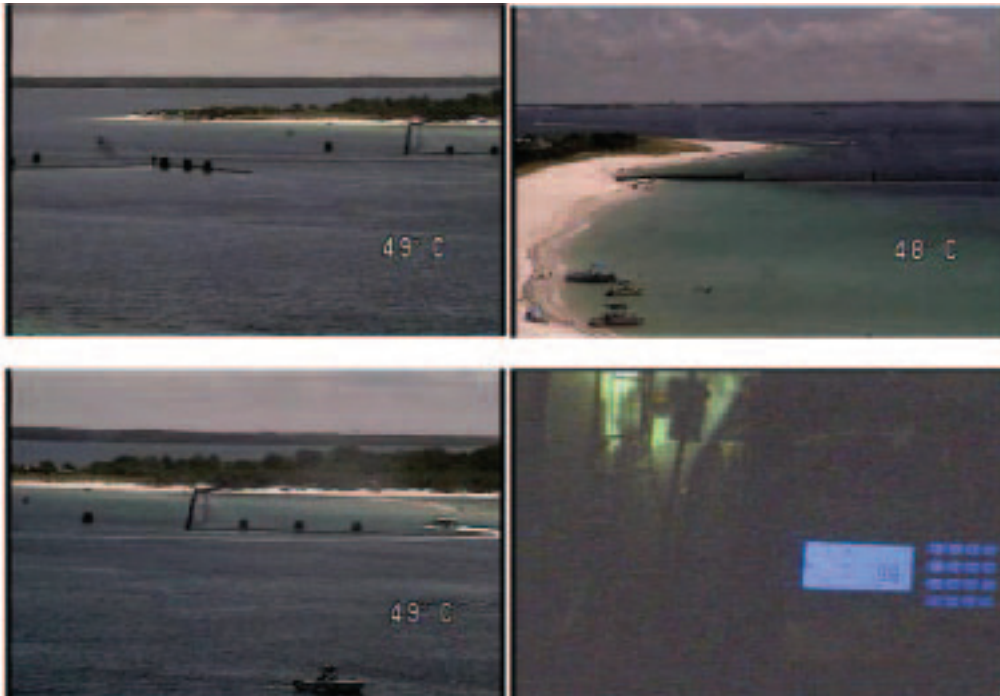


*Improved video monitoring configuration.*

After the modifications, camera 1 still focused on the open central part of the oil barrier system, while cameras 2 and 3 monitored the western and eastern shores, respectively. Achieving this higher level of surveillance also required that the trailer tower system be fully extended to a height of approximately 100 feet. A system of nine guy ropes was used to secure the tower. Since the deployment was during hurricane season and the trailer was literally parked on the beach at Panama City, the FDOT watched the gulf coast weather very closely to ensure strategic plans could be activated in time to stow the trailer tower and other systems in advance of any severe storms.

During the three and a half month long deployment, the FDOT mobile equipment trailer performed very well and the Bay County TMC reported that they were very pleased with the surveillance they were able to achieve.

The 105-day mission had a 95 percent availability rating with only five days of down time. The deployment did present some challenges and the FDOT was able to respond quickly to them, usually within 24 hours. For example, on one occasion a power outage at St. Andrews State Park had to be addressed. FDOT personnel deployed to the park, determined the source of the outage, and restored service within 24 hours. The most significant incident that FDOT responded to involved a suspected lightning strike in mid-August which damaged several subsystems on the trailer. The FDOT was able to restore video service to the TMC within two days by utilizing the versatile and redundant aspects of the trailer subsystems to make temporary repairs. The trailer continued to support its mission until late September when it was no longer needed.

For this emergency response the primary and secondary missions of the FDOT mobile equipment trailer were reversed: providing video surveillance was more important than providing WiFi internet service. Ironically, the trailer's WiFi service still provided internet access to a significant number of Panama City vacationers who were visiting the park and its beaches! The

trailer's WiFi system had more than 2500 log ins from beach goers during the mission period, performing on average just like the WiFi service operates at a typical Interstate welcome center.

This article was provided by Randy Pierce, FDOT Traffic Engineering and Operations Office and Brian Kopp, The Semaphore Group. For information, please contact Mr. Pierce at (850) 410-5608 or email to Randy.Pierce@dot.state.fl.us.

\* \* \* \*

## 18th World Congress Technology Showcase

After over two years of planning and much anticipation, the 18th ITS World Congress will open in Orlando on October 16, 2011.

One of the most anticipated events within the World Congress is the Technology Showcase. The showcase will have a series of demonstrations focusing on several key areas, such as safety, mobility, pricing, and environmental issues. These demonstrations will take place on both the Orland-Orange County Convention Center parking lot as well as on roadways in the vicinity. Several of the roads being considered for these demonstrations include I-4, John Young Parkway, and International Drive.

Make plans to join us for the 18th ITS World Congress in Orlando.

This article was provided by Elizabeth Birriel, FDOT Traffic Engineering and Operations Office. For information, please contact Ms. Birriel at (850) 410-5606 or email to Elizabeth.Birriel@ dot.state.fl.us.

\* \* \* \*

# SunGuide® Disseminator Word Challenge



Let the cars do the ☐☐☐☐☐☐☐!

**L O B I M I T Y**
☐☐☐☐◯☐◯☐
District Six saw regional improvements of this with the completion of several major projects.

**K Y S**
☐◯☐
Mobile WiFi points its antenna to the right place here.

**I M M A**
☐☐☐◯
Makes the Maintenance Inventory Management System accessible to District Four.

**N U U I G E D S**
☐☐☐◯◯☐◯☐☐
Road Rangers smart phones stay in-syn with this software.

We invite you to have some fun and complete the
*SunGuide Disseminator Word Challenge!*

Unscramble the letters to complete the word for the clue found under the boxes.
Use the letters in the red circles to complete the final puzzle.
The answers can be found on the page 9.

Enjoy and Good Luck!

# District Six Achieves Key Program Milestones

## Improves Regional Mobility

For the Florida Department of Transportation (FDOT) District Six Intelligent Transportation Systems (ITS) Office, Fiscal Year (FY) 2009/2010 was an accomplished period, which marked the completion of several major projects that optimized key services and helped advance the state's ITS Program mission on a national and international level.

Among these accomplishments was the completion of Phase 1B of the 95 Express Project in January 2010, which commenced tolling on the southbound portion of Interstate 95 (I-95) and introduced motorists to the area's first direct, cross-county transit service for commuters traveling between Miami-Dade and Broward Counties. This service increased the facility's person throughput and implemented the project's final traffic management component to combine transit, tolling, technology, and travel demand management to reduce congestion. On all accounts, the 95 Express Project has been a success. Customers, including transit riders, choosing to use the express lanes significantly increased their travel speed during their weekday rush-hour commute – both southbound and northbound – from an average speed in the previous high occupancy vehicle lane of approximately 20 mph to an average speed of 64 and 56 mph, respectively. Drivers travelling via the local lanes also experienced a significant peak period increase in average travel speed since implementation of 95 Express Project – from an average of approximately 15 mph (southbound) and 20 mph (northbound) to an average of 51 and 41 mph, respectively.


*Phase 1B of the 95 Express Project launched in January 2010.*

Another factor in the success of the 95 Express Project was completion of Phase 1B of the ramp signaling system that activated ten ramp signals on the southbound entrance points of the highway plus two more ramp signals on the northbound portion. Phase 1B launched in April 2010, and is metering the rate at which vehicles enter the highway; thus reducing the bottleneck congestion that occurs when too many motorists attempt to merge onto the mainline at the same time, particularly during the weekday rush hour periods. The signals have improved the overall mobility on the local lanes, with Phase 1B increasing average travel speeds by 11 percent in the southbound direction, while Phase 1A increased speeds by 16 percent northbound. A total of 22 ramp signals are now active along I-95 in Miami-Dade County.


*I-95 Ramp Signaling System is the first of its type in the state of Florida.*

Currently, Districts Six and Four are working on Phase 2, which is designed to extend the project onto Interstate 595 in Broward County. Construction is expected to begin in 2011.

In addition to the strides made in its traffic management services, the District's Incident Management Program achieved several milestones as well. The Rapid Incident Scene Clearance (RISC) Program proved to be an effective and helpful tool to first responders on the highway and a pilot program to provide RISC services on the arterial roads was approved to launch in 2011. Along with Road Rangers and Incident Response Vehicles, the expansion of the RISC Program further enhances the reach and effectiveness of the District's incident management services. During the 2009-2010 fiscal year, the combination of these services helped the District achieve a 31-minute average roadway clearance time.


*The District Six RISC program launched in July 2009.*

District Six also optimized its traveler information service this year. After signing an agreement with TrafficLand, one of the nation's market leaders for traffic video aggregation, the District made all of its traffic camera images available for public view and use via www.trafficland.com as well as www.sunguide.org. In addition, the District enhanced Miami-Dade County's 511 Traveler Information System by adding congestion messaging to alert motorists of reduced mobility on the 95 Express toll lanes. Cross-county travel time messages also debuted during this period, providing trip time estimations for commuters traveling between Miami-Dade and Broward Counties on Interstates 75 and 95. In Monroe County, District Six increased its traveler information


*Travel time messaging plays an important role in the District's travel information service.*

support by posting 2,758 more event messages this fiscal year, compared to the previous year. The Monroe County messaging structure was also adjusted to make it easier for motorists traveling into Monroe who are unfamiliar with the mile marker signage.

All of the enhancements made to the District Six ITS Program's key services are increasing the drive time reliability of our regional highway system. These initiatives are not only building the foundation for program expansion in the future, but more importantly, are making our roadways safer and more efficient today.

This article was provided by Javier Rodriguez, FDOT District Six. For information, please contact Mr. Rodriguez at (305) 470-5341 or email to Javier.Rodriguez2@dot.state.fl.us.

**\* \* \* \***

# Maintenance Inventory Management System

## A Real-Time Inventory Tracking Solution

The Florida Department of Transportation (FDOT) District Four Intelligent Transportation Systems (ITS) Unit is willing to try new practices and create new tools that will be useful to other ITS programs. Most recently, District Four created time-saving software to manage ITS inventory and maintenance requests. What sets this software apart from off-the-shelf options is that it was designed to be integrated with SunGuide®, the statewide software used to operate ITS devices.

Early in 2010, the District Four ITS Unit developed and implemented a new inventory tracking software called the Maintenance Inventory Management System (MIMS). In the past, it took a full-time employee five weeks to track down and inventory devices tracked by the Office of Information Systems (OIS) across the five-county District. Using the MIMS software, which is already integrated into District Four's version of SunGuide, the same full-time employee can complete a full inventory of all of the ITS devices in less than a week, a time reduction of 80 percent. District Four has up to four times as many ITS field devices as it does OIS devices, so applying the use of MIMS to that inventory process will result in even more time savings.

The Maintenance Inventory Mobile Application (MIMA) was built to make MIMS accessible to maintenance technicians working in the field. By utilizing MIMA (run on ruggedized laptops), technicians saved up to 25 percent of their work hours each week spent in between maintenance related tasks. MIMA allows technicians access to real-time online maintenance requests, which eliminates a lot of extra paperwork, phone calls, and traveling. Technicians can focus on responding to trouble tickets and keeping ITS devices in working order.

Noteworthy features of MIMS and MIMA include:

- Configured to work with SunGuide
- Real-time information
- Inventory tracking (active ITS field devices, spare parts, office equipment and furniture), including resource location and status

- Inventory data entries and updates via handheld scanner
- Online trouble ticket management
- Efficiency for technicians (time saved in driving, phone calls, and paperwork)
- Reduced errors in transcribing data
- Disaster preparation and response tools

Not only are MIMS and MIMA one-of-a-kind, but District Four also anticipates that over five years, they will save $1 million in staff time (calculated to be $472,000 for MIMS and $664,000 for MIMA). Furthermore, the District expects to continually improve the management of every device in the field, whether that is location, status, or availability of spare parts, thanks to having this software in place.

Suspecting that other Districts may be interested in the benefits MIMS had to offer, District Four demonstrated how the software is currently being used during the statewide SunGuide conference call on August 19, 2010. The other participating Districts were pleased with the features of the software and expressed an interest in using it in their respective programs. If adapted statewide, the MIMS could have a tremendous time and cost savings effect.

This article was provided by Dong Chen, FDOT District Four. For information, please contact Mr. Chen at (954) 847-2785 or email to Dong.Chen@dot.state.fl.us.

**\* \* \* \***

# Florida Highway Patrol Prepares for Move to SWIFT Center

The South West Interagency Facility for Transportation (SWIFT) SunGuide® Center is the hub of real-time traffic operations for I-75 in southwest Florida (Florida Department of Transportation [FDOT] District One). The two-story, 49,800 square-foot building currently houses the FDOT's District One ITS operations staff, a majority of the personnel from the District's Southwest Area Office (SWAO), and FDOT's regional Office of Motor Carrier Compliance (OMCC). Early next year, Florida Highway Patrol (FHP) Troop F Fort Myers Headquarters and FHP dispatch will take up residence in this impressive facility, designated the Joseph P. Bertrand Building, and named for the FHP trooper who died in the line of duty in Fort Myers in December 1967.

Work is already underway to prepare for FHP's arrival. Communications consoles for FHP were installed in late October with the remainder of its communications equipment to be delivered and installed soon. Under the current schedule, FHP should complete its move by the end of January 2011.

Having a strong incident management team under one roof – that includes ITS and 511 operations, Road Rangers dispatch, OMCC, FDOT, and now FHP – means enhanced communications and coordination to accelerate removal of disabled vehicles, cargo, and debris from roadways. It also means quicker and more efficient restoration of the safe, orderly flow of traffic following a motor vehicle crash or highway incident.

FDOT District One welcomes FHP to the SWIFT SunGuide Center and looks forward to a long and mutually beneficial partnership that helps fulfill our mission with the *Open Roads Policy* throughout southwest Florida.

This article was provided by Chris Birosak, FDOT District One. For information, please contact Mr. Birosak at (863) 519-2507 or email to Chris.Birosak@dot.state.fl.us.

✻ ✻ ✻ ✻





## Word Challenge Answer

SUNGUIDE
SKY
MIMA
MOBILITY
¡TALKING!

Let the cars do the

# ITS Florida—Preparing for the 18th World Congress

ITS Florida and ITS America are planning a wide range of technical tours throughout Florida for the 18th World Congress on Intelligent Transport Systems to be held in Orlando on October 16-20, 2011.

The technical tours are featured on the www.ITSWorldCongress.org web site. Technical and scientific papers to be considered for World Congress are now being accepted and can be submitted through the web site. ITS Florida will be seeking additional volunteers to assist with the 18th World Congress in the months ahead and we look forward to seeing you in Orlando in October!

This article was provided by Mary Hamill, Global-5 Communications. For information, please email Ms. Hamill at MaryKHamill@global-5.com.

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.

**\* \* \* \***

| Tour | Description |
|------|-------------|
| **ORLANDO AREA TRANSPORTATION MANAGEMENT AND EMERGENCY OPERATIONS CENTERS**<br>**Time of Tour: 5 hours, Max # of People/Tour: 30** | |
| Turnpike Turkey Lake RTMC & SunWatch Center | The Turnpike Turkey Lake TMC is the 24/7 central facility for the control, monitoring, operation, and management of Turnpike traffic in the northern portion of the Turnpike Enterprise System. In addition, they serve as a secondary monitoring and control facility for ITS infrastructure and traffic management in the South Florida Turnpike roadways.<br><br>The TMC utilizes 555 CCTV cameras, 116 Dynamic Message Signs, 16 Highway Advisory Radios, the Statewide 511 system, 6 CB Radio Advisory Systems and Public Information Displays to provide information to the traveling public.<br><br>Florida's Turnpike Enterprise is also providing a rare opportunity to learn about SunWatch, their internationally recognized, award winning Operation Center that controls over 1200 toll collection "equipment" lanes across the state. The SunWatch Operation Center is a technology command and control center designed to meet the challenges of the future. With the move to such sophisticated technologies as All Electronic Tolling (AET) and Open Road Tolling (ORT), the ability to manage and support true "lights out" technical operations becomes more critical. From complex systems like SunPass Dual Protocol RF systems and fiber optic WAN networks, to security systems, backup generator systems and climate control, the SunWatch Operation Center manager will share with you how advanced technology supports a wide range of complex systems in real time. This is a real world, behind the scenes look at an application of advanced technology used on Florida's Turnpike. |

| Tour | Description |
|------|-------------|
| Joint Florida Department of Transportation (FDOT), District 5 Regional Transportation Management Center (RTMC) and Regional Joint Communications Center (RJCC) | The RTMC operates all DOT ITS in the Orlando region, including 515 CCTV cameras which includes Orlando Orange County Expressway Authority' (OOCEA) cameras, 239 Dynamic Message Signs. It also dispatches Safety Service Patrols (Road Rangers) for I-4 and OOCEA network. The center is responsible for publishing all traffic related information to statewide 5-1-1 automated traffic information system and website. FDLE's direct contact for disseminating Amber, Silver, and LEO Alert information to all districts in State of Florida. The RJCC dispatches law enforcement responders from 13 state agencies (dispatched by Florida Highway Patrol, FHP). |
| Central Florida Intelligence Exchange (CFIX) | The Central Florida Intelligence Exchange (an Intelligence Fusion Center) collects, analyzes, fuses, and distributes intelligence data and homeland security information for all-hazards threats for the Central Florida region. |
| City of Orlando Traffic Control and Emergency Management Centers | The Traffic Control Center manages all city-owned ITS, which includes traffic signal controllers, traffic surveillance cameras, signs, video detection, and emergency vehicle preemption equipment. The Emergency Operations Center provides for emergency support functions for major incidents. |
| **ORLANDO AREA RESEARCH FACILITIES**<br>**Time of Tour: 3.5 Hours, Max # of People/Tour: 50** | |
| University of Central Florida (UCF ) Institute for Simulation and Training Lab | Multiple stations demonstrating modeling and simulation using virtual reality, "mixed reality" and driver simulations, including the Center for Advanced Transportation System Simulation (CATSS) Lab with driving simulator and autonomous vehicles. |
| **Tampa Bay Area ITS Facilities**<br>**Time of Tour: 5 Hours, Max # of People/Tour: 50** | |
| FDOT District 7 Tampa Bay SunGuide RTMC | The Tampa Bay SunGuide Center is a state of the art command facility for managing mobility and promoting safety on major roadways throughout the Tampa Bay area. Using intelligent devices and communications, information on roadway conditions and incidents is efficiently relayed to the control center where appropriate action can be initiated immediately. The $9 million dollar facility features a 20 screen video wall, where operators monitor and control the 190 miles throughout Hillsborough, Pasco, Hernando, Pinellas, Polk and Manatee Counties, with the use of closed circuit television cameras, dynamic message signs, traffic detectors, and the Road Rangers. The Center also communicates closely with the FL511 Traveler Information System.<br>The Tampa Bay SunGuide Center is also home to the FDOT D7 Emergency Operations Center, which is dedicated for use to coordinate and respond to emergencies and catastrophic events. During emergencies such as hurricanes, the Center serves as a central communications hub for the State Emergency Response Team.<br>Also stationed in the SunGuide Center facility is the Tampa Bay Regional Communications Center (TBRCC), consisting of the Florida Highway Patrol, Florida Fish & Wildlife Conservation Commission and other state law enforcement agencies. The TBRCC is responsible for dispatching State law enforcement. |
| Tampa's Selmon Expressway Reversible Lanes and Control Center | Delegates will receive a first-hand tour of the Tampa Reversible Express Lanes (REL) commuter highway, winner of numerous international, national and state planning, design and construction awards, including the 2007 International Bridge Tunnel and Turnpike Association (IBTTA) President's Award as the best toll project in the world. The tour will include a trip on the REL elevated section, recognized by the US Federal Highway Administration with their biennial Award of Excellence as the county's best bridge project and a visit to the Transportation Management Center that controls all REL operations. An overview of the basis for development and operation of the project will also be presented. |

| Tour | Description |
|------|-------------|
| **Orlando Amway Center Tour**<br>**Time of Tour: 2 hours, Max # of People/Tour: 30** | |
| Amway Center | The new Amway Center, home to the NBA's Orlando Magic and the Arena Football's Orlando Predators, was designed to comfortably seat everything from 17,000 screaming NBA All-Star Game fans, to a few thousand jazz aficionados. The arena has one of the most technologically advanced audio-visual systems in the world, to ensure that fans' experiences are world class. A number of ITS devices have been installed in the area to manage access to and egress from the complex.<br><br>Highlights:<br>• Most technically-advanced sports arena in North America.<br>• Latest technologies in voice, data, imaging, video, and virtualization<br>• For the first time ever, every single fan in the arena will experience broadcast of the action in real<br>  time—no delays, no waiting. From CCTV cameras to digital displays, to a state-of-the-art self-healing wireless mesh across every square-foot of the center.<br>• World's most sophisticated High Definition broadcast center<br>• Fully integrated IPTV and Digital Signage System<br>• Social Media Enabled |
| **Commercial Vehicle Operations Tour**<br>**Time of Tour: 13.5 hours, Max # of People/Tour: 30** | |
| I-4 Weigh Station & VACIS Imaging Inspection System | Laser technology for length, height, and width measurements; weigh-in motion scales; electronic pre-clearance with confirmation readers; license plate readers; and it possibly will have automated infrared brake testing technology at the time of the tour (not active currently).<br><br>The VACIS (Vehicle and Cargo Inspection System) Unit utilizes the latest gamma ray technology to enhance the inspection capabilities at various agency interdiction stations located on highways leading into the state. When deployed, these units are used at the interdiction stations while conducting routine agriculture inspections. Mounted on a truck chassis, the mobile VACIS imaging system helps trained operators see the contents of closed vehicles and containers, assisting them in intercepting weapons, contraband, and other items of interest, as well as verifying shipping manifests. The Unit also participates in national, federal, and state security events. |
| FDOT District 4/PBC TMC (West Palm Beach) | Co-located with the Palm Beach County Traffic Engineering Division, this TMC manages all interim ITS devices on 45 miles of I-95 in Palm Beach County and the PBCoTED manages 1006 traffic signals in the county. Permanent ITS devices are being installed on the Interstate, gradually replacing the interim system. |
| FDOT District 4/Broward RTMC (Ft. Lauderdale) | Co-located with Broward County Traffic Engineering Division, this RTMC manages all ITS devices on 72 centerline miles in Broward County (25 on I-95 & 47 on I-75), as well as ITS devices in Martin, Lucie, and Indian River Counties to the north. Broward Co. operates more than 400 traffic signals in the county from this location. A display of emergency response vehicles will be included. |
| 95 Express Lanes and FDOT District 6 RTMC (Miami) | The 95 Express Lanes are the first High-Occupancy Toll (HOT) facilities in the State of Florida and one of only a few in the U.S.A. Two managed lanes both north and southbound from the Golden Glades Interchange to just north of downtown Miami on Interstate 95 are reserved for paying single-occupant vehicles, but (3+) registered car pools, hybrid vehicles, motorcycles and transit buses ride free in the lanes. The District Six RTMC manages all ITS devices for FDOT in Miami-Dade County and Monroe Counties. Additionally, Miami-Dade Expressway (MDX) Authority and the Florida Highway Patrol Troop "E" Dispatch staff are co-located in the RTMC for improved traffic and incident management efforts in the southeast Florida region. |

* * * *

# Editorial Corner—Exhibit Sales and Paper Submissions Now Open for the 18th World Congress on ITS

Exhibit sales have officially opened for the 18th World Congress on Intelligent Transportation Systems! The event will be held at the Orange County Convention Center from October 16-20, 2011, and will set new standards with the world's most comprehensive exhibition of intelligent transportation systems (ITS) products and services displayed in a 400,000 square-foot exhibit hall.

The list of exhibitors is growing daily and already includes a high caliber of presenting companies, including Telvent, Siemens, the I-95 Corridor Coalition, Avego, Econolite, California PATH, the Florida Department of Transportation, and TransCore. If your organization is involved in the design, development, or manufacture of information, communications, and transportation technologies that focus on safety, security, and mobility, we invite you to be a part of the 18th World Congress exhibit hall. For more information, please contact Barbara O'Connor at 800-374-8472 ext. 4217 or BOConnor@itsa.org.

Under the theme of *Keeping the Economy Moving*, the 18th World Congress will feature interactive technology showcases, more than 250 sessions, and countless networking events with ITS industry leaders from across the world.

Another way to participate is to submit a technical or scientific paper for presentation during the conference. If you are involved in any aspect of transportation or ITS research and development, we invite you to submit a paper for consideration by January 14, 2011.

Authors chosen to present their work at the 18th World Congress will have an excellent opportunity to demonstrate personal expertise and high-level achievement within the field of ITS. Additionally, selected authors of scientific papers will be reviewed for the possibility of international peer-reviewed publication of their work in a world-class forum for ITS-related research. The three journals, *The Journal of Intelligent Transportation Systems*, *IET Intelligent Transport Systems,* and *The International Journal of Intelligent Transportation Systems Research*, will publish a special World Congress issue focusing on different areas of ITS.

Finally, in addition to hosting an exhibit or presenting a paper, you can get involved in the 18th World Congress by demonstrating your latest ITS products and services at the technology showcase. We will be taking over the parking lot at the Orange County Convention Center and several surrounding roadways to show ITS in action!

Separate demonstration areas will focus on safety, mobility, pricing, and the environment. The technology showcase will highlight IntelliDrive[SM], congestion pricing, next generation traveller information, and many other intelligent transportation solutions that are revolutionizing transportation.

Not only will this provide a unique and valuable experience for World Congress attendees, we will also be able to demonstrate the real-world benefits of ITS to the millions of people who come to Orlando for conferences or vacation.

To learn more about the 18th World Congress on Intelligent Transportation Systems in Orlando and ITS America's Annual Meeting & Exposition, please visit www.itsworldcongress.org.

We hope you will get involved; help us showcase the best of ITS here in Florida. So mark your calendars for what is sure to be an unforgettable event!

This article was provided by Emily Fishkin, ITS America. For information, please contact Ms. Fishkin at (202) 721-4204 or email to EFishkin@itsa.org.

* * * *

# Inside the TERL

## TERL Hosts Big Bend ITE Luncheon

For the second time in ten years, the Florida Department of Transportation (FDOT) Traffic Engineering Research Lab (TERL) opened its doors to the Big Bend Florida Chapter of the Institute of Transportation Engineers (BBFCITE). The BBFCITE held their monthly luncheon at the TERL's facility to allow members of the local chapter to get a look Inside the TERL.

Approximately ten years ago, in October 2000, the TERL hosted the Big Bend Chapter ITE luncheon. FDOT's Eric Larson, charter member and past (first) president of the local chapter, hosted the tour along with Jeff Morgan, Carl Morse, and Thomas Jackson. Many changes have occurred in the ten years since. Mr. Larson has since retired. Mr. Morgan, Mr. Morse, and Mr. Jackson still show up daily to accomplish the goals and objectives of the TERL.





In true traffic engineer fashion, the recent luncheon was held under one of the TERL's two test intersections. While members enjoyed their lunch under the traffic signals, BBFCITE president David Bright provided opening comments that were followed by an introduction to the TERL by FDOT's Mark Wilson, Trey Tillander, and Jeff Morgan. Highlights of the tour included the two test intersections (mast arm and span wire), the recently renovated certification lab (along with its light testing "tunnel," a dynamic message sign test area, and a rectangular rapid flashing beacon installed at the TERL for evaluation.

Along with all other equipment listed on the Approved Products List (APL), various vehicle detection devices are routinely installed in both TERL test intersections for evaluation to FDOT standards.

## Approved Product List Additions

The following products were approved and listed on the APL within the past three months:
- North Star Lighting (CLS) Camera Lowering Device, Model CDP6-16HDA Series.
- iMPath Networks Video Encoder, Model i5110ET.

## Recently Qualified Manufacturers

American Signal Company, Traffic Safety Corporation, Alpha Technologies, Raycap, and IST International all passed the TERL's quality assurance evaluation within the past three months and have been listed as qualified allowing each manufacturer to submit product for evaluation and listing on the APL.

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

**＊ ＊ ＊ ＊**

## FDOT Traffic Engineering and Operations Mission and Vision Statements

**Mission:**
Provide leadership and serve as a catalyst in becoming the national leader in mobility.

**Vision:**
Provide support and expertise in the application of Traffic Engineering principles and practices to improve safety and mobility.

# FDOT Contacts

### District 1

L.K. Nandam, DTOE
Chris Birosak, ITS
FDOT District 1 Traffic Operations
PO Box 1249
Bartow, FL  33831
(863) 519-2490

### District 2

Jerry Ausher, DTOE
Peter Vega, ITS
FDOT District 2 Traffic Operations
2198 Edison Avenue
Jacksonville, FL  32204
(904) 360-5630

### District 3

June Coates, DTOE
Chad Williams, ITS
FDOT District 3 Traffic Operations
1074 Highway 90 East
Chipley, FL  32428-0607
(850) 638-0250

### District 4

Mark Plass, DTOE
Dong Chen, ITS
FDOT District 4 Traffic Operations
2300 W. Commercial Blvd.
Ft. Lauderdale, FL  33309
(954) 777-4350

### District 5

Richard Morrow, DTOE
Michael Smith, ITS
FDOT District 5 Traffic Operations
719 S. Woodland Blvd., MS 3-562
DeLand, FL  32720-6834
(386) 943-5310

### District 6

Omar Meitin, DTOE
Rory Santana, ITS
FDOT District 6
1000 NW 111th Avenue, MS 6203
Miami, FL  33172
(305) 470-5312

### District 7

Gary Thompson, DTOE
Chester Chandler, ITS
FDOT District 7 Traffic Operations
11201 N. McKinley Dr.
Tampa, FL  33612
(813) 615-8600

### Florida's Turnpike Enterprise

John Easterling, DTOE
Eric Gordin, ADTOE
Florida's Turnpike Enterprise
PO Box 9828
Ft. Lauderdale, FL  33310-9828
(954) 975-4855

### Mark Wilson

State Traffic Engineer
(850) 410-5600

### Elizabeth Birriel

Deputy State Traffic Engineer - ITS
(850) 410-5606

### Trey Tillander

Deputy State Traffic Engineer - Systems
(850) 410-5617

### Paul Clark

Deputy State Traffic Engineer - Incident Management and Commercial Vehicle Operations
(850) 410-5607

### Fred Heery

Deputy State Traffic Engineer - Operations
(850) 410-5419

**Physical Address:**
Rhyne Building
2740 Centerview Drive
Suite 3-B
Tallahassee, FL 32301

**Mailing Address:**
Burns Building
605 Suwannee Street
MS 36
Tallahassee, FL  32399

**＊ ＊ ＊ ＊**

**＊ ＊ ＊ ＊**