



SUNGUIDE® DISSEMINATOR

FLORIDA DEPARTMENT OF TRANSPORTATION'S TRAFFIC ENGINEERING AND OPERATIONS NEWSLETTER



Editorial Corner: TSM&O Program Update

By Fred Heery, Sr., P.E., State TSM&O Program Engineer

The Transportation Systems Management & Operations (TSM&O) section of the State Traffic Engineering and Operations Office (STEO) was active on several fronts including the preparation of a grant applications for funding by the Federal Highway Administration (FHWA). During the last few months, STEO's TSM&O section prepared an application for Fostering Advancements in Shipping and Transportation for the Long-Term Achievement of National Efficiencies (FASTLANE) grant funding, which resulted in an award of \$10.7 million by the FHWA. This funding stream will help advance the Department's ongoing effort with the statewide Truck Parking Availability System (TPAS). The project is being managed by Jeff Frost of STEO's Commercial Vehicles Operations section. TPAS will provide truck parking availability information at the welcome centers, rest areas, and weigh stations on interstates across Florida.

One of the major ongoing activities at the TSM&O section is the development of a training and capacity building initiative titled the Statewide TSM&O Excellence Program (STEP). STEP is currently developing modules on Intelligent Transportation Systems - Facilities Management (ITS-FM), Work Program Instructions and ITS Inspection. Development of modules on Systems Engineering and other areas such as traffic signal systems are expected to begin over the coming months.

TSM&O staff updated the Traffic Signal Maintenance and Compensation Agreement. The document was published and made available to the Districts for distribution to the local traffic signal maintaining agencies. The Agreement was prepared in consultation with the Districts, and offices of the Comptroller, General Counsel, and Maintenance.

In July, the TSM&O section hosted a Statewide Arterial Management Program (STAMP) Big Idea workshop. The active discussion included the Districts and Central Office staff. The goal of the Workshop was to develop a program that meets the current needs and looks to the future with such efforts as multimodal intelligent traffic signal systems and integrated corridor management.

SunGuide® version 7.0 is authorized and will include the truck parking subsystem to support the TPAS project. It will also include Signals in SunGuide, which is an interface to vendor traffic signal software.

For information, please contact Fred Heery at (850) 410-5600 or e-mail to Fred.Heery@dot.state.fl.us.

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District Six Participates in TRB's International Conference on Managed Lanes

By Javier Rodriguez, P.E., ITS Operations Engineer

The Florida Department of Transportation District Six participated and served as the local organizing chair for the Transportation Research Board's (TRB) 2016 International Conference on Managed Lanes. The conference was held from May 4 through 6, 2016 in Downtown Miami. It allowed the Department to showcase its growing managed lanes network and share their lessons learned in this prestigious forum.



The conference explored the planning, design, and operational aspects of managed lanes as well as the emerging research needs related to integrating them into modern transportation systems. Representatives from FDOT Central Office, District Six and Florida's Turnpike Enterprise were selected to present on a wide range of topics including incident

management, operational growth, public information and customer service.

In addition to presenting in the conference's lectures and panel discussions, the Department hosted two off-site tours. The first tour showcased the District's Transportation Systems Management & Operations Program that manages 95 Express in Miami-Dade County. This tour focused on the resources required to operate the project on a daily basis. Guests were cycled through four demonstration sites that showcased the software used to manage the project, its incident management resources, the control room layout and traffic operator workstation as well as an overall presentation project. The combination of these demonstrations provided a comprehensive overview of what it takes to manage one of the busiest managed lanes projects in the country. The second tour was a bus tour of South Florida's emerging managed lanes network in Miami-Dade and Broward Counties. Five highway projects, in their different stages of deployment, were featured in this tour. Attendees got to hear from their representatives about the challenges of each individual system and how they are working together to meet the regional needs of the network.

As local chair, District Six developed the agenda for these tours, created the corresponding materials, coordinated logistics and hosted each event. The tours added to the event's overall experience and gave attendees a first-hand view of Florida's managed lane effort.

For more information about TRB, please click [here](#) or contact Javier Rodriguez at Javier.Rodriguez2@dot.state.fl.us or call (305)-470-5312.

ITS and OIT, Working Together

By Chrissie Collins, Central Office - Information Security Analyst

Several years ago, the decision was made to bring Intelligent Transportation Systems (ITS) in the districts into the fold of Information Technology with respect to policy and compliance. Florida's ITS program has grown to the point that every district has dedicated ITS staff (both Department and consultants) with Regional Transportation Management Centers (RTMCs) to manage our freeway systems. Many of these RTMCs are also connected to partner transportation and transit agencies to provide or assist in providing better management and operations arterial roadways.

The challenge for FDOT began while trying to determine how to communicate with the ITS districts when it came to Information Security, software licensing and compliance with policies. Two liaison positions were created within the Office of Information Technology (OIT) to bridge the gap; one was for information security and the other was for tracking software licenses.

For OIT, traveling to each ITS district office proved to be an educational experience. Time was spent getting to know the ITS personnel in charge of maintaining the infrastructure for video monitoring and traffic management. While each district ITS office was impressive in their

operational setup, it was apparent that they all have different maturity levels based on the beginning of their existence and appropriated funds.

It didn't take long to determine that while ITS is an integral part of the agency, its business model and technology needs are quite different from the majority of the agency. In cases like this, the best way forward is to bring together the subject matter experts and begin working toward common goals. Progress has been made in the areas of the reporting cybersecurity incidents, and licensing consolidation. The Transportation Systems Management and Operations (TSM&O) Program in the State Traffic Engineering and Operations Office is also coordinating with OIT to develop a draft ITS chapter for incorporation into the Information Technology Resource User's Manual (Topic No. 325-000-002). Once the draft chapter is complete, it will be sent to the District ITS liaisons for review and comment.

The expectation is that the relationship between the ITS districts and OIT will continue to grow as well as the level of maturity for ITS as a whole when it comes to Information Technology standards and compliance.

For more information, please contact Chrissie Collins at (863)-519-2269 or email to Chrissie.Collins@dot.state.fl.us.



Florida's 511 is Getting Serious Attention in 2016

By Russell Allen, P.E., ITS Program Development Engineer



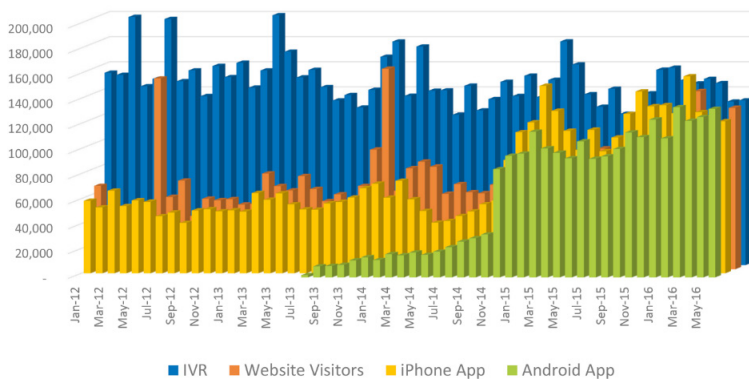
FDOT's District Two ITS Manager, Joshua Reichert, talks to a WJXT-TV reporter about how Florida's 511 can help drivers avoid traffic during The Players Championship 2016. Photographed by Ron Tittle, FDOT's District Two Public Information Officer.

More and more, Floridians are turning to the Florida Department of Transportation's (FDOT) 511 Traveler Information System for real-time traffic and travel information for their daily commute. In 2016, Floridians and our state's visitors also turned to 511 for vital information during natural disasters, emergencies, and national and international sporting events.

In the first half of the year, 511 experienced nearly 12 percent growth in usage over the same period in 2015. FL511.com has received 142,000 more visits than last year, growth of nearly 28 percent, while Android and Apple app usage grew by 25 percent and 9 percent respectively. Florida residents and visitors have used the system more than 3 million times, for an average of 98,723 uses each day. My Florida 511 personalized services have delivered another 11 million text, email and phone alerts to subscribers.

The first half of 2016 has also seen the Apple and Android apps regularly surpassing the phone system as the most-used Florida 511 platform. Android app usage topped Apple usage for the first time in May, and again in June. The website had its third highest month ever in March with 142,000 visitors, and fourth highest in June with 129,000.

Florida 511 Core System Monthly Usage



511 hits a new high in March

March is traditionally 511's strongest month with Spring Break travelers and visitors generating a lot of non-recurring traffic throughout the state. March 2016 was no exception, and saw the highest one-month 511 usage ever – a total of 584,794 calls, web visitors and app sessions. That's nearly 8 percent higher than the next busiest month: March 2015. January and June 2016 were the third and fourth busiest ever for 511, with people using 511 more than 500,000 times each month.

Florida 511's Leading Champion

A product champion is someone who uses a product and encourages others to do the same. Prior to the landfall of Tropical Storm Colin, and after the June 12 shooting at Orlando's Pulse nightclub, Florida Gov. Rick Scott included 511 in his media releases, and tweeted about 511 to more than 67,000 Twitter followers. The news stories that resulted from the governor's releases helped generate an audience of hundreds of thousands for the 511 message.



Global-5's Nicolle Masters explains the 511 system to emergency management personnel at the Museum of Science and Industry (MOSI) Hurricane Expo in District Seven.

511 helps prepare for hurricane season

The 511 outreach team attended ten different hurricane preparedness expos throughout the state during April, May and June. The team spoke to thousands of people about how to use 511 during severe weather and hurricanes.

511 helps Florida welcome the world

Florida is one of the world's top tourism destinations, and it is home to some world-stage sporting events. Florida's 511 has played a role in four internationally known events this year: Daytona Speedweeks, the Invictus Games, The Players Championship, and three Copa America games. While FDOT staff provide essential traffic management services, 511 provides visitors and residents with the information they need to manage their trips to or around the event. News and social media outreach prompts drivers to check 511 before heading out.

Construction builds 511 usage

Orlando is in the midst of Florida's largest highway construction project: I-4 Ultimate. With 21 miles of already congested roadway now experiencing nightly lane closures and major lane shifts, residents are turning to 511 for real-time construction information on I-4 and SR-408, plus alternate routes around the construction. I-4 is the phone system's second most requested roadway in 2016 (behind I-95); and the metro Orlando area generated the highest number of phone callers, and second highest number of web and app visitors.

Loyal customers, high-profile champions and some of our nation's most unique traffic challenges add up to great success for 511. But it also challenges us to continue to make sure that our real-time traffic information is accurate and reliable – for daily commutes, and planned or unplanned special events.

For more information, please contact Russell Allen at (850)-410-5600 or email to Russell.Allen@dot.state.fl.us.



District Two with Two Projects Chosen as Finalists at ITS America Annual Meeting

By Peter Vega, P.E., District 2 TSM&O Project Manager

During this year's ITS America Annual Meeting, District Two had two projects that were chosen as finalists for the award ceremony held in San Jose, California. This year's competition was a little different in that there were three categories from which to win an award. Each was appropriately named, from "Wheels and Things" that focused on using new ITS technologies, to "Infrastructure of Things" that dealt with the components which tied ITS technologies together, to the last option which was "Show Me the Money" that challenged nominees to look into the future. Both of District Two's finalists were placed in the "Infrastructure of Things" category and competed against ten other finalists, five of which were from the State of California.

Our belief was that our North Florida RTMC project had all the components to bring home a winner. This nomination focused on our new facility and latest technology being utilized. It also stressed the winning combination of having a multitude of agencies on one operations floor that included FDOT, FHP, FWC, Local Law Enforcement, Fire/Rescue and City Traffic Signals. Likewise, the fact that we had the North Florida TPO under the same roof shows a concerted effort by our region to address transportation issues as a partnership among many agencies. Some of the unique features in the building included taking a LEEDS approach to design, thereby producing a facility that requires one-third the cost for energy when compared to similar sized RTMC buildings. We also have two large video walls at each end of the floor with quad screens beside each work area so that "teams" could focus on assigned events.

The second finalist was the I-75 Paynes Prairie ITS deployment in Gainesville that incorporates several technologies, including infrared cameras, a mix of wireless/fiber communication, visibility sensors, an automated response plan for DMS and automated flashing beacon signs for approaching arterial roads. This system was designed whereby the visibility sensor data could automatically activate the DMS with a predetermined message and flashing beacon signs once preset thresholds had been reached. If the surroundings are too foggy to see traffic or roadway events, the operator can switch to infrared mode on the cameras to determine prevailing conditions. All of this is managed by our RTMC in Jacksonville (approximately 60 miles away) through partnership with the City of Gainesville and portions of their traffic signal fiber communication network infrastructure.

Unfortunately, both finalists lost to the Caltrans/Xerox team's project that involved HOV lane technology. Their use of technology that could automatically fine motorists who violated the policies/restrictions for riding in an HOV lane helped lead to their win. I was not bitter nor surprised by the outcome because I knew we had a tough sell when competing against the "home team." I was somewhat surprised that this ended up being the winner since I felt our greatest competition came from the Alameda County, California, and Philadelphia finalists. The

reality was that the cards were not in our favor this year because of the method used for selecting a winner. In the past, an award committee would review the finalists and select the winner based on merit and value to the ITS industry. This year, it was decided to allow the annual meeting attendees to vote by placing their business card in a fish bowl beside the finalist's poster board that they felt merited the annual award. A drawback was the hometown team would have an advantage since a majority of the attendees would be from the State of California. I knew this would be a challenge once I learned about the selection process because we'd have to overcome this disadvantage in a very dramatic fashion.

Even though we did not come home with the trophy I felt that our finalists left California as winners based on the responses received from inquiring minds. The reality is that the new North Florida RTMC has already paid huge dividends in less than a year with the prospect of seeing even greater benefits once we overcame the learning curve. The other day, I heard an FHP Duty Officer receive a 911 call on her radio. By the time she finished the conversation our TMC operator had located the incident on the camera, began dispatching Road Rangers and was dialing the phone to notify FDOT Roadway Maintenance; what used to take about 10 minutes to coordinate between multitudes of agencies and execute took less than 2 minutes by my count.

As for the Paynes Prairie finalist, all I can say is that we've received nothing but compliments since the implementation of the visibility system. This project has left motorists in the Gainesville region chomping at the bit for the completion of the ITS deployment from the south end of the City to Georgia. Likewise, they constantly inquire about the deployment District Five is working on in the Marion County portion of I-75 since many of the commuters live in that area. This region has caught the "ITS bug" so to speak and continuously inquire about other types of technology that could be implemented in their area. They've even inquired about the possibility of installing variable speed limit signs along I-75, so I continuously have to respond with "Whoa! Don't put the cart before the horse." The first thing needed is the completion of the fiber communication network and basic ITS devices, then we can see what else would be helpful – all this because of a few visibility sensors and a couple of infrared cameras!

For more information, please contact Peter Vega at (904)-360-5630 or email to Peter.Vega@dot.state.fl.us.



Registration is Open for Transpo2016!

By Sandy Beck, Chapter Administrator, ITS-FL



Transpo2016 registration is now open at <http://cvent.com/d/ffqcts>. Transpo2016 is Florida's premier event you do not want to miss. The Florida Section ITE (FSITE) and Women in Transportation (WTS) have partnered with ITS Florida to host Transpo2016 at the Hilton West Palm Beach.

You don't want to miss out on these continuing education opportunities, exhibitors, technical tours and awards banquet. The program includes four tracks as follows:

Integrating a Transitional Society: From Bicycles to Connected Vehicles			
Track 1	Track 2	Track 3	Track 4
Serving Pedestrians and Bicycles - Non-Motorized Transportation	Keeping the Economy Moving - Progressive Transportation Engineering and Planning	Advancing TSM&O - ITS Applications for Operations and Management	Making Vehicles Smarter - The Future of Connected Vehicles

The 'Call for Speakers' is out and there is limited time to submit your abstract. Abstracts should be one-page and include: your name, title and organization; working title of the presentation; and a description of the presentation content, short project or technology details. Please also include a brief biography of the presenter(s) and the track for which you would like to be considered. The presentation's scope and originality must be of interest to a significant number of conference attendees. Presentations that market specific products and services will not be accepted, nor are presentations of this nature acceptable at the conference. Case studies should be presented by the sponsoring organization, not by vendors.

Each presenter is allotted 15 minutes, plus five minutes for questions. Sessions will be scheduled with three other presentations, and opening and closing comments by the moderator, to form a cohesive session of 90 minutes in length.

E-mail your abstract to Pete Costello (pfc@iteris.com) by August 29, 2016. There is something for everyone.

Calling all golfers!

Golf will be held at the Madison Green Country Club on Sunday, November 13th. A welcome reception will also be hosted at the hotel Sunday evening. The new hotel opened this year! The \$149/night rate is also good 3 days prior and post November 13 - 16.



Calling all Exhibitors!

It's time to reserve your booth. Selections are available on a first come, first serve basis. The information is available via the registration link (<http://cvent.com/d/ffqcts>) or by getting in touch with Karen Crawford at (850)- 224-7775 or kcrawford@cmc-associate.com for additional pricing and availability.

Sponsorships are available via the registration page as well. HNTB is the diamond sponsor for Transpo2016!

ITS Florida, FSITE and WTS look forward to seeing you in November!

For more information on ITS Florida, please check the ITS Florida website at www.ITSFlorida.org or contact Ms. 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:

- Ms. Stephanie Hoback: Stephanie.Hoback@Wavetronix.com, or
- Ms. Sandy Beck: ITSFlorida@ITSFlorida.org.



District Four ITS Unit Awarded 2016 Prudential Productivity Award

By Natalie Cortes, Marketing/Public Outreach Coordinator SMART SunGuide RTMC

Another plaque for outstanding achievement hangs in the lobby of the Florida Department of Transportation (FDOT) District Four Regional Transportation Management Center. On June 22, at the Hilton Miami Airport Hotel, District Four Intelligent Transportation Systems (ITS) Manager, Dong Chen, accepted an award on behalf of (ITS) maintenance team at the 2016 Prudential Productivity Awards Ceremony.



District Four received their nomination after Chen revised the required vehicles listed within the 2015 maintenance contract to include more fuel efficient vehicles. The initial contract required two Ford Super Duty F-250 trucks for usage during maintenance checkups and duties in the field.

By carefully reviewing and analyzing the large fuel exhaustion from the Super Duty F-250 trucks, Chen negotiated the advertised contract cost for economical F-150 trucks to replace the F-250 trucks previously being used. The new fuel efficient F-150 trucks received an average of 22 miles per gallon (MPG) compared to the previous 14 MPG. Due to Chen's innovative approach, the new contract earned a savings of \$46,000 over the length of 1-year.

Winning nominations were selected based on the following criteria: innovation, exemplary work performance, and cost efficiency. Out of 165 winners, 32 received cash prizes, 119 received plaques and 14 received certificates of commendation. The 2016 Prudential Productivity Awards included Chairman Barbara Ray from the North Highland Company and Vice Chairman Tom Glennon of Capital Health Plan, as members of the distinguished panel of judges.

Congratulations again to Dong Chen and the District Four ITS Maintenance Unit!

For more information on District Four's 2016 Prudential Productivity Award, please contact Mr. Dong Chen at Dong.Chen@dot.state.fl.us or (954) 847-2785.

In Memory of Jeremy Johnson

By Jeremy Dilmore, P.E., District Five TSM&O Engineer – Freeways



Jeremy Gerald Johnson served as the Florida Department of transportation (FDOT) District Five Information Technology Manager for the Transportations System Management and Operations (TSM&O) Group. On April 16, 2016, Jeremy passed away at his home in Deltona, Florida, leaving a hole that will never be filled in the TSM&O group.

Jeremy began his career with FDOT as a consultant for the Office of Information Technology (OIT) (formerly OIS)

The plaque displayed in the backup RTMC, a project Jeremy designed and implemented.

where he designed, programmed, and implemented numerous pieces of software still in use throughout the Department. His immense talent was recognized and the Intelligent Transportation Systems (ITS) group (now known as the TSM&O group) brought Jeremy on board. In two years, Jeremy upgraded the server environment, aided in the migration from analog video to MPEG-1 and MPEG-2, established the first set of Juniper firewalls, and installed the tape backup system. Jeremy then moved to the private sector for a brief period before returning to OIT in his role of designing, programming, and

implementing software. Once again, his excellence in the ITS group led to the TSM&O knocking on the door. This time Jeremy brought his technical excellence as the lead of the TSM&O IT section. He ushered in changes such as upgrading the video wall controller (from MPEG-2 to H.264), firewalls, core routers, Virtual Private Network (VPN), server environment, and Storage Area Network, and implementing a new NAS for offsite backup. While these contributions were in line with the high expectations that Jeremy set from his first engagement with ITS, his leadership, curiosity, and drive brought new innovations to TSM&O including the network core conversion from Metro Ring Protocol (MRP) to Optimal Shortest Path First (OSPF), separation of multicast domains, development of domain structure with local agencies allowing sharing of software, and introduction of thin clients to replace PC deployments. He was actively researching Connected Vehicle (CV) security standards standup certificate servers and implemented a robust analytics and data storage environment at the time of his passing.

While Jeremy's technical accomplishments were many and impressive, it was his relationships that really told the story of the man. His network of friends, who became family, reached widely across the District. A former employee once visited and proudly proclaimed to be his "work mom." At Christmas time, we will miss his haystacks and millionaires that he carefully crafted each year. Jeremy's willingness to help out on any and every task he could shoehorn into his day, and the playful tricks he played on coworkers, will be his lasting memory.

Jeremy's contributions both big and small will continue to live on in the work we do every day in a system and a group of people that will forever have his imprint on them.



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.

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