SUNGUIDE® DISSEMINATOR

Florida Department of Transportation's Traffic Engineering and Operations Newsletter

FDOT

ITS on I-75 in Southwest Florida Nears Completion

By Chris Birosak, FDOT District One

Drivers traveling I-75 through southwestern Florida will enjoy even more benefits of the Florida Department of Transportation's (FDOT) intelligent transportation systems (ITS) when the new ITS goes live later this year in Manatee and Sarasota Counties. Dynamic message signs (DMS) and highway advisory radio (HAR) stations will relay real-time information about traffic conditions that prepare motorists for what is ahead. ITS allows drivers the time to make decisions about their routes depending on crashes, congestion, lane closures, or poor weather ahead on the highway. If a crash occurs, ITS enhances emergency response times to incident locations and reduces secondary crashes that can create extended delays. Drivers with disabled vehicles also typically receive assistance more quickly.America's Missing: Broadcast Emergency Response (AMBER) and Silver alerts can be posted on DMSs to assist law enforcement in locating people.

District One is installing 81 closed-circuit television cameras as part of their ITS on I-75.

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April 2014

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In April 2012, one year after the successful launch of ITS operations in Charlotte County, and two years after ITS began operations in Lee and Collier Counties (January 2010), FDOT and the design/build team began development of a $20.7 million project that will complete ITS throughout District One. This much anticipated job includes installation of 81 closed-circuit television cameras, 25 DMSs, 138 roadside sensors, 10 HAR stations, and fiber optic communications cable and transmission equipment along 57 miles of interstate in Manatee and Sarasota Counties. When completed, ITS operations will be fully integrated along I-75 in the District from the Collier/Broward County line to the I-75/I-275 interchange in Manatee County, approximately 180 miles. Staff in District One's Southwest Interagency Facility for Transportation SunGuide® Center in Fort Myers will continue to monitor real-time traffic conditions. Operators will also monitor traffic locally from the Manatee County Satellite Traffic Management Center (STMC).

The project team continued DMS installations and stand-alone testing throughout March. Crews have installed HAR stations and signs throughout the project limits, and work at the Manatee County STMC is nearing completion. Operational testing and system integration are expected to begin in April. Project completion is scheduled for late summer 2014.

For information, please contact Mr. Birosak at (863) 519-2507 or e-mail to Chris.Birosak@dot.state.fl.us.

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Installation of DMS on I-75.

Word Challenge Answers

Remember when we used MAPS?

PROBE

BATTERIES

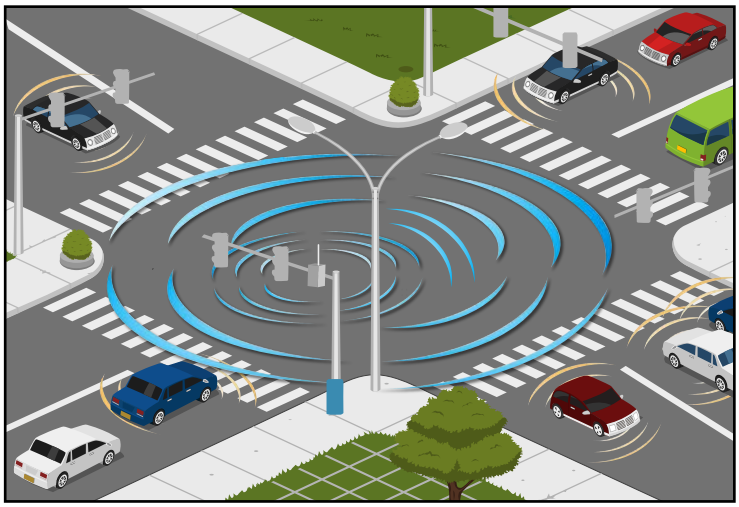
AUTOMATED

MANATEE

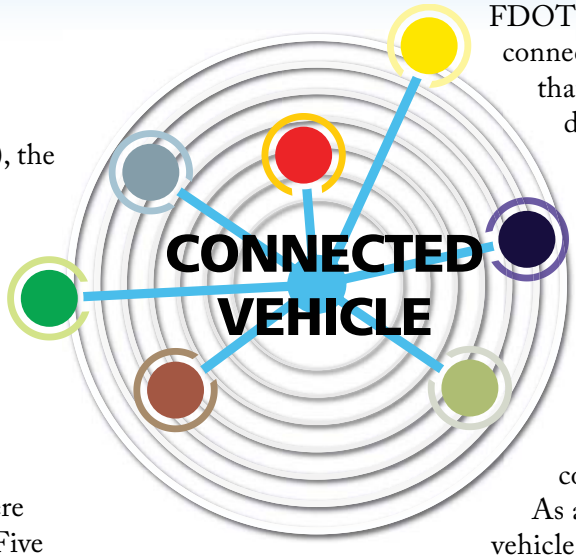
Connected Vehicle in Florida

By Stephen Novosad, Atkins

In preparation for the 2011 World Congress on Intelligent Transport Systems (World Congress), the Florida Department of Transportation (FDOT) Traffic Engineering and Operations Office ITS Program established a connected vehicle test bed in Orlando in proximity to the Orlando-Orange County Convention Center. The test bed was established along Interstate 4, International Drive, and State Road 528 to demonstrate connected vehicle technology and remained in place for use following the World Congress. Twenty-nine roadside units (RSU) were deployed and connected to the FDOT District Five regional transportation management center via the FDOT fiber network. SunGuide® software, FDOT's advanced transportation management system (ATMS) software, was modified to communicate with the RSUs, which communicate with onboard units. FDOT continues to operate and maintain this connected vehicle deployment, which was the first to have connected vehicle infrastructure communicate directly with an ATMS.



The United States Department of Transportation (USDOT) identified the Orlando deployment as one of seven national test beds in 2012. The goal of the test beds was share information and lessons learned that occurred at the test beds. More recently, the USDOT has placed a greater emphasis on these test beds, renaming them to affiliated test beds. More information on these affiliated test beds can be found at www.its.dot.gov/connected_vehicle/dot_cvbrochure.htm.



FDOT has been active in advancing connected vehicle technology. Now that the safety pilot model deployment has generated the connected vehicle data for evaluation and the National Highway Transportation Safety Administration has ruled that dedicated short-range communications radios will be mandated in future light vehicles, FDOT is preparing to upgrade its connected vehicle infrastructure. As a leader in real world connected vehicle deployments, FDOT is preparing to deploy applications that no other connected vehicle test beds have. These applications will address wrong-way driving and work zones. FDOT will deploy these applications and make the Orlando test bed available to entities that want to conduct connected vehicle testing, provided they meet and follow the required policies and procedures.

FDOT is part of the vehicle-to-infrastructure (V2I) integration prototype project funded by the USDOT. This project will develop and document the process for deploying V2I. FDOT will utilize the documentation to perform V2I deployments in the Orlando test bed (real world environment). FDOT will be the first to deploy V2I using these processes and will provide lessons learned on what worked and did not work for the deployments.

As FDOT continues to evolve its connected vehicle test bed, FDOT recognizes that autonomous vehicles are making rapid progress. FDOT plans to evolve the connected vehicle test bed into an automated vehicle test bed where both connected and autonomous vehicle technology can be tested. FDOT is considering providing a closed track for testing as well. Possible locations are at FDOT's Traffic Engineering Research Laboratory in Tallahassee and a test track along Florida's Turnpike.

More information on FDOT's connected vehicle activities is available at www.dot.state.fl.us/trafficoperations/its/projects_deploy/cv/Connected_Vehicles.shtm.

For information, please contact Elizabeth Birriel at (850) 410-5606 or e-mail to Elizabeth.Birriel@dot.state.fl.us.

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FDOT Uses Batteries to Avoid Service Interruptions

By Randy Pierce, FDOT Traffic Engineering and Operations

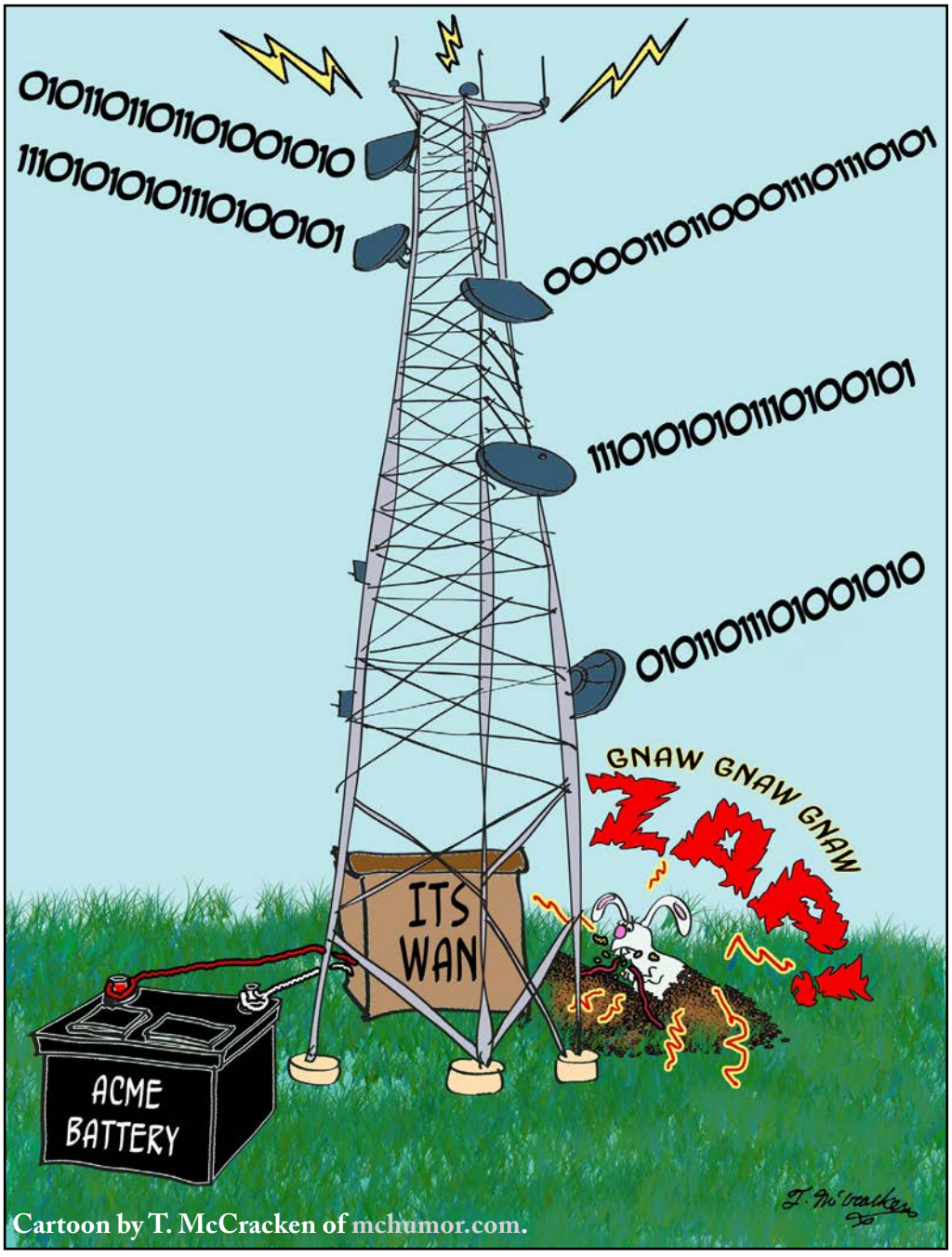
The Florida Department of Transportation (FDOT) has a new program that makes it possible to know the details about their battery systems, which are at the heart of the operation of the statewide intelligent transportation systems (ITS) network. The ITS network consists of nearly 100 strategic communications equipment locations, involving both microwave and fiber-optic communications that make it possible for FDOT's Districts to share ITS data with each other. This network is also responsible for carrying the voice radio traffic that supports FDOT crews in the field and for supporting other applications used by Florida's Turnpike Enterprise and other Districts.

Each of these communications equipment locations is important for the whole ITS network to function. If just one location experiences a serious problem, such as a power failure, it can interrupt communications on the network and cause problems for the transmission of some video camera signals or the voice radio calls between FDOT field crews. To avoid these issues, FDOT used telecommunications carrier-class equipment and design techniques to construct the statewide ITS network. This approach helps ensure any problems that do occur are quite rare.

FDOT designed around one such problem for power outages from commercial electric power service. FDOT's statewide ITS network is robust enough that even during a severe disaster that interrupts commercial power for days or even weeks in some cases, the network equipment sites will keep running. This is possible with the use of electric power generators that run on propane gas. These generators can take over for commercial power when there is an outage. The large propane fuel tanks at each network equipment site provides plenty of run-time for the generator, even during a major power disruption such as what might occur during and after a hurricane.

When a commercial electric power outage occurs, the generator automatically starts and the time that the equipment site is without electric

Moment of Humor!



Avoid a "harey" situation. Always use battery backup.

Typical FDOT microwave tower.

Typical FDOT statewide ITS network communications equipment site.

power is usually only a few seconds. However, this outage of only a few seconds can cause significant problems for the complex equipment that makes up the statewide ITS network. In addition, any variations in the commercial electric power, including power fluctuations known as brown-outs, are too short in duration for the generator to help with, but again can be very problematic for the network equipment, causing unexpected conditions in the communications equipment that might interrupt service. To combat this vulnerability to electric power variations and momentary outages, FDOT has adopted the industry standard technique of using battery systems to power all communications equipment sites in the statewide ITS network. Battery systems provide a continuous smooth power source for the complex communications equipment. With a battery system, the commercial electric power or generator power is only used to charge the batteries in the battery system. In this way, the communications equipment is, in effect, isolated from the issues associated with the variations in the electric power.

If there is a commercial electric power outage, then during the few seconds it usually takes to start the generator, the battery system will provide all the necessary power for the communications equipment. Even on the rare occasion that a generator fails to start, the battery system has the capacity to operate all the communications equipment for a few hours, until a technician arrives.

Just as a household flashlight may use two or four batteries connected in series to create enough voltage to turn on its light bulb, the battery system at each FDOT statewide ITS network equipment site uses 24 batteries to create enough voltage for the communications equipment. Each battery provides two volts and the combined battery system produces 48 volts of direct current power. Continuing the flashlight analogy, as the batteries are used and depleted, the light bulb will eventually dim and fail to light. Similarly, as the 48 volt battery system is used and depleted, the communications equipment will eventually begin to fail. The problem with this scenario is that the 48 volt battery system is kept constantly charged by the commercial electric power or generator and the status of each battery in the system is not easy to discern. As a result, an individual battery in the system could deteriorate but the entire battery system, along

Typical FDOT battery system with 24 individual batteries connected in series.

Continued on next page...

with its battery chargers, might not show the problem. Only when electric power is lost, and the battery system chargers are removed, will the problem with the individual battery be detectable. But by that time, it may be too late.

During a recent test at one FDOT statewide ITS network site, an individual failed battery caused the entire battery system to fail. There were no service-interruption issues because it was a test, but the failure highlighted a vulnerability in the way these battery systems are used by the industry. Fortunately, the industry has also recently found a solution and FDOT has started using it. The solution involves monitoring each and every battery in a battery system. Specifically, individual battery voltage is measured for every battery. Temperature information is also collected. This new battery system telemetry allows FDOT to know in real time whether any individual battery has developed an anomalous behavior. If the voltage on an individual battery begins to drop at a rate that is too fast, or at a rate different from that of the other batteries in the system, then there may be a problem with that battery. If the battery telemetry indicates a worsening condition, FDOT may elect to initiate replacement of that individual battery in advance of any crippling outage that may disturb the communications equipment.

FDOT receives the battery telemetry through its network management systems so there is a process already in place to keep technicians and engineers informed of any issues. The battery monitoring system can set alarm thresholds and detect trends; this can help limit the amount of information technicians and engineers need to review. The first few sites to be outfitted with this new technology have just come on line in FDOTs statewide ITS network. FDOT hopes this improved "situational awareness" will help increase the resilience of the network and help identify potential issues with battery systems before they become a problem for the network.

For information, please contact Mr. Pierce at (850) 410-5608 or e-mail to Randy.Pierce@dot.state.fl.us.

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Inside the TERL

By Alan El-Urfali, FDOT Traffic Engineering and Operations , and Ron Meyer, Atkins

The Florida Department of Transportation (FDOT) Traffic Engineering Research Lab (TERL) evaluates, certifies, and adds new products to the FDOT Approved Product List (APL). The TERL is also a regular stop for visitors participating in FDOT's Professional Engineer (P.E.) Training Program, a premier instructional opportunity for graduate engineers that encompasses all aspects of FDOT's operations and prepares trainees for a role in organizational leadership.

FDOT recently welcomed 22 P.E. trainees from across the state for a tour of the TERL and an overview of operational activities and programs within the Traffic Engineering and Operations Office (TEOO) in Tallahassee. Staff from the Intelligent Transportation Systems Section of the TEOO joined the regular staff at the TERL to provide information on a variety of programs and work performed by the TEOO. In addition to an overview of the APL program, the group was briefed on other programs and systems such as FDOT's SunGuide® software and Florida 511. Following introductions and some brief presentations in the TERL's transportation management center, the group was given a tour of the TERL facility that included several hands-on demonstrations with a variety of traffic control devices and equipment.

The trainees visited various areas around the TERL, including the mast arm and span wire intersections used for product evaluation, ITS equipment test areas, and other indoor and outdoor features of the lab.

Camera lowering device and mast arm intersection device demonstrations.

TERL staff enjoyed the opportunity to meet with the trainees and provide insight into the daily operations of the TERL, the benefits of the APL program, and the other work being performed within our offices. We wish the trainees luck in their future endeavors and hope they enjoyed their visit!

For information, please contact Mr. El-Urfali at (850) 921-7354 or email to Alan.El-Urfali@dot.state.fl.us.

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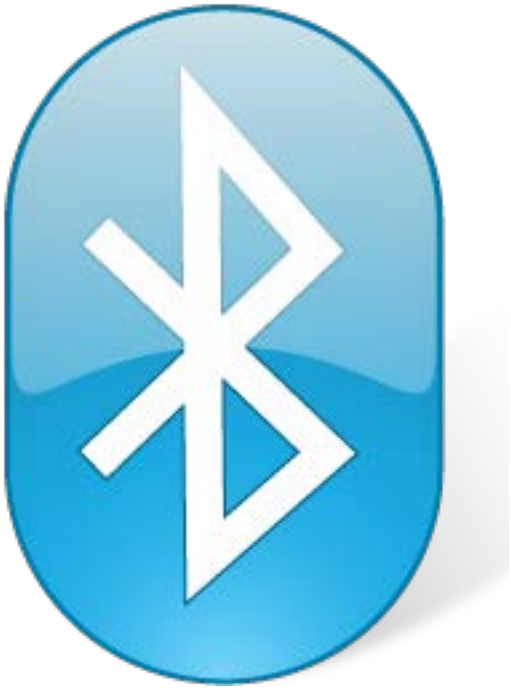
SunGuide® Software and BlueTooth Technology

By Clay Packard, Atkins, and Derek Vollmer, FDOT Traffic Engineering and Operations

The Florida Department of Transportation's advanced traffic management software, SunGuide® software, is always integrating the newest, latest, and greatest technologies to support traffic operations. Several technologies are used to obtain probe data including connected vehicles, license plate readers, toll tags, and BlueTooth®. This article takes a look at the BlueTooth technology used by SunGuide software.

BlueTooth has the ability to provide probe data because of the vast market penetration of small, mobile devices that many people have adopted. New smartphones, ear pieces, tablets, and in-car radios likely come equipped with BlueTooth interfaces. Roadside BlueTooth readers can detect the media access control (MAC) addresses of these BlueTooth devices when used while traveling. The MAC address and the time stamp of when the device was read are collected by SunGuide software. When the same MAC address is read at a downstream roadside BlueTooth reader, the travel time can be calculated for the resulting match. The known distance between readers allows speed over that distance to be calculated. In order to protect privacy, neither BlueTooth MAC addresses, nor any other probe data identifiers are stored persistently. Once SunGuide software is finished processing the data for travel time and speed calculations, these identifiers are removed from memory.

These matches go through the same additional processing and filtering that is applied to all probe data. Several configurable thresholds are used to eliminate invalid reads, invalid matches, and outliers to generate accurate travel times. These travel times are then presented to the user for trip planning.



Travel times are also archived in the database for later processing. Archived travel times are used for multiple purposes including travel time reliability calculations for performance measures and for traffic simulation.

Roadside BlueTooth readers are needed to capture BlueTooth MAC addresses. There are a few different options available for BlueTooth readers.

Iteris makes BlueTooth readers with a product named Vantage Velocity™. Iteris enhanced the SunGuide software driver to support their Vantage Velocity protocol. SunGuide software can now connect directly to Vantage Velocity devices and collect the BlueTooth reads for further probe data processing and use.

TrafficCast provides a BlueTooth solution with a product named BlueTOAD™. BlueTOAD comes with a set of readers and a service for collecting data, processing the data into travel times, and providing the processed data in a data feed over the Internet or on the transportation management center network using a BlueTOAD server. TrafficCast has a proprietary matching algorithm on their server that processes the BlueTooth reads into travel times rather than using the SunGuide software algorithm. SunGuide software has a center-to-center (C2C) plug-in that connects to the BlueTOAD data feed and converts it to C2C speed data and, thus travel time.

BlueTooth data is fairly new to SunGuide software. Much of Florida's limited-access facilities already have radars and other detection technology deployed. However, probe data seems to overcome a specific challenge presented by interrupted traffic flow in arterial roadways. Interrupted traffic flow is not best represented by the speed at a single point nearly as well as non-interrupted traffic flow. A vehicle may travel full speed between intersections, but have to stop and wait at the next signal. Thus, the travel time experienced is much longer than the travel time that would be calculated by a point speed measurement halfway between intersections. The actual travel time of a sampling of cars over a distance that includes intersections is a much better measurement. Thus, BlueTooth technology may be used more as arterial management efforts increase.

For information, please contact Mr. Derek Vollmer at (850) 410-5615 or e-mail to Derek.Vollmer@dot.state.fl.us.

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District Six: FDOT Increases Toll Rate on 95 Express to Improve Operations

By Javier Rodriguez, FDOT District Six

The Florida Department of Transportation (FDOT) District Six Intelligent Transportation Systems (ITS) Office increased toll rates on its first managed lanes program in Miami-Dade County, 95 Express, on March 1, 2014. The increase is a result of the new toll rules recently adopted by the State of Florida. The minimum toll amount rose from $0.25 to $0.50 and the maximum toll rate increased from $1.00 per mile to $1.50 per mile. As a result of these new rules, customers are now being charged a minimum toll amount of $0.50 per trip and a maximum toll amount of $10.50 per trip during times of heavy congestion within the express lanes.

The toll rate increase was a result of increasing travel demand within the facility, which led to decreasing performance levels along the corridor. Traffic managers found that the maximum toll rate was no longer effective to manage demand in the express lanes as had been the case in past years. From its initial launch in late 2008 through 2009, 95 Express never reached the maximum amount. Fast forward to 2013, and the maximum toll amount was reached 172 times. The increasing demand began to impact the reliability of the express lanes during peak times and caused more congestion along the corridor (express lanes and I-95 local lanes). FDOT hopes the increased toll rate will stabilize demand to improve the flow of traffic on the express lanes and further improve the overall travel time reliability of the entire corridor.

95 Express has been operating with the new rate for approximately one month. The public has adjusted to the new prices and the increase has positively impacted operations. This smooth transition is a result of a detailed plan that was developed by Florida's Turnpike Enterprise and District staff to support this effort. This plan included identifying and implementing enhancements to the existing software, conducting traffic analyses, developing new procedures, and training operations staff.

The team held multiple working meetings to discuss and plan these changes. They analyzed the project's historical data to identify how the rate increase was to be implemented. They revised the project's business rules and updated software to handle the new minimum and maximum toll amount values.

FDOT continues to analyze the impact this toll rate increase has had on 95 Express and I-95 as a whole. The toll rate increase, coupled with bus rapid transit service, carpool/vanpool efforts, and technology will create a better facility for commuters, freight carriers, and visitors to south Florida.

For information, please contact Mr. Rodriguez at (305) 470-5757 or e-mail to Javier.Rodriguez2@dot.state.fl.us.

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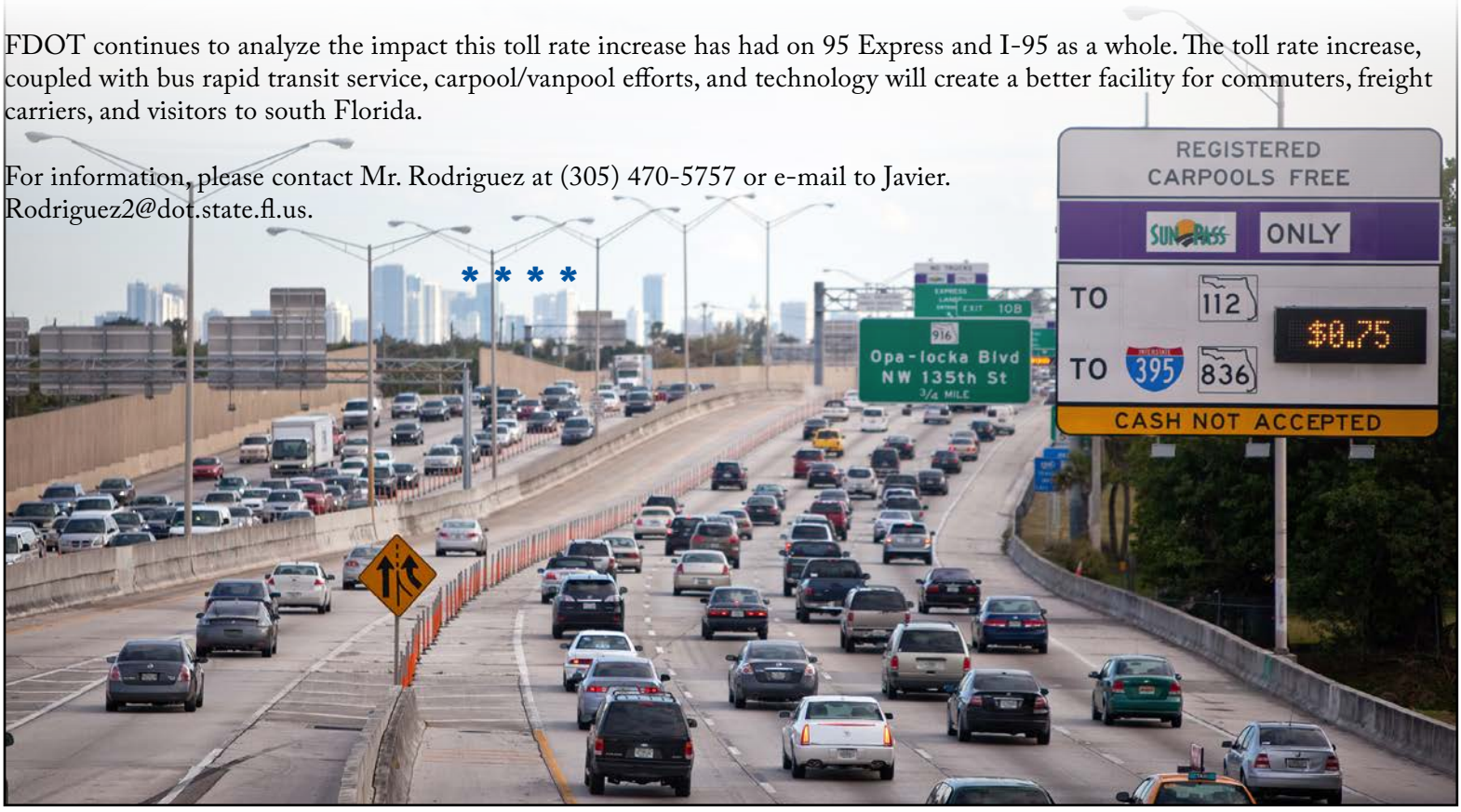

Interstate 95 in Miami-Dade County

SunGuide® Disseminator Word Challenge

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 2.

Enjoy
and
Good Luck!

Cartoon by T. McCracken of mchumor.com.

Remember when we used ☐☐☐☐?

B R O P E
○☐☐☐☐
Mobile devices enable Bluetooth to provide this type of data.

S T A I R B E E T
☐☐☐☐☐☐☐☐○
FDOT uses these to avoid service interruptions.

T O M U T A D E A
○☐☐☐☐☐☐☐☐☐
FDOT plans to evolve their connected vehicle test bed for these vehicles.

E A T E N M A
○☐☐☐☐☐☐
One of the counties where ITS will go live later this year.

ITS Florida: Transportation Funding Source Unsustainable

By Mark Reichert, Florida Transportation Commission

It's that time of year again. No, not when a young man's fancy turns to thoughts of love, but when 160 legislators return to Tallahassee to debate the state's budget. Fortunately, times have improved to the point where the Florida Legislature has a budget surplus to work with and is no longer eyeing the State Transportation Trust Fund as a pot of money from which it can shore up the General Revenue Fund. In fact, the proposed budget for the Florida Department of Transportation for fiscal year 2015 is the largest on record. One would think that good times are ahead for the state's transportation infrastructure. However, transportation funding shortfalls will grow more acute in the coming years as improved vehicle fuel efficiency and more alternative fueled vehicles reduce federal, state, and local fuel tax receipts by billions of dollars.

The majority of the revenues required to preserve, maintain, and modernize Florida's transportation system come from fuel tax revenues—federal, state, and local—that are based on the amount of fuel consumed. Over the past several years, vehicles have become much more fuel-efficient; the statewide fleet of vehicles is also slowly transitioning to a more fuel-efficient group in comparison to the group of vehicles in the statewide fleet a decade ago. Therefore, users of these more fuel-efficient vehicles have been paying lower fuel taxes at the pump than they did just a few years ago for the same number of miles driven. As a result, fuel tax revenues are in permanent decline even as road costs continue to increase.

Between 1990 and 2005, fuel consumption in Florida increased an average of 3.4 percent each year. Since then it has decreased an average of 1.3 percent each year. Since 2006, the state's Revenue Estimating Conference (REC) has decreased projected transportation revenue receipts by billions of dollars due to the drop in fuel consumption.

Federal and state fuel taxes comprise approximately 67 percent of the revenue deposited into the State Transportation Trust Fund that is used to preserve, maintain, and expand Florida's transportation infrastructure. The amount of revenue derived from these taxes is based on the amount of fuel consumed. In 2006, two events occurred which impacted the consumption of fuel. First, 2006 was the beginning of the "Great Recession." Secondly, the price of fuel began its climb that topped out at over $4.00 per gallon by the summer of 2008. The high cost caused many drivers to modify their driving behavior in order to conserve fuel. It also prompted many drivers to dump their less fuel-efficient vehicles for one of the ever-increasing number of high fuel-efficiency vehicles.

These events appear to have had a lasting impact on the culture of driving in this country. One would assume that as the economy continues to recover from this recession and the demand for gasoline and diesel fuel increases, transportation revenue generated from the sale of fuel will also increase. However, the changes in personal driving habits as well as new federal regulations and a change of culture within the automobile manufacturing industry have had and will continue to have a profound effect on the state's ability to raise sufficient revenue from the sale of fuel to support the state's transportation infrastructure.

So where does all of this get us? When one analyzes the estimated fuel tax receipts based on the March 2006 REC (which was the last positive REC before the recession started) and compares it to the actual receipts and estimates from the latest REC from March 2014, the difference between the estimated receipts in the 11 common fiscal years is almost $4.2 billion dollars; meaning anticipated fuel tax revenue has decreased by $4.2 billion during that period.

Looking ahead, the Florida Transportation Commission attempted its own analysis with the help of the Florida Department of Transportation to show the impact of what the new Corporate Average Fuel Economy standards will have on future fuel tax receipts. We concluded that the impact to just the state motor fuel tax collections due to the influx of more fuel-efficient vehicles will be an additional hit of almost $3.7 billion through fiscal year 2024/25.

So what are we going to do about the situation? A majority of policymakers and industry analysts across the country now agree that the fuel tax can no longer be relied upon to provide sustainable revenues to maintain and operate our transportation infrastructure. What is needed in its place is a reliable alternative that can keep up with our transportation infrastructure needs regardless of the amount of fuel being consumed. Many studies have been undertaken across the country to address this funding paradigm. The consensus appears to be to move away from a tax based on fuel consumption towards a tax based on the number of vehicle miles driven—a road user charge. However, the Florida Transportation Commission seeks to explore all viable options available.

Why do we need a transportation revenue source that can keep up with the needs of a growing state like Florida? The link between investments in the transportation system and the economy has been substantiated in prior studies. Most recent reports indicate that every dollar invested in Florida's transportation infrastructure returns five dollars in positive economic returns. A transportation system that can be relied upon by businesses to move goods and provide services in a timely and cost-efficient manner is essential to the "bottom line." A seamless transportation system affords us the opportunity to travel to work, move goods efficiently, take advantage of healthcare, visit friends and family, and take full advantage of the natural resources that are available in Florida.

Without a viable source of transportation funding, we will not be able to make the necessary investments in our transportation infrastructure, causing economic turmoil and negatively impacting our quality of life.

For information, please contact Mr. Reichert at (850) 414-4103 or Mark.Reichert@dot.state.fl.us.

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Editorial Corner: District Four SunGuide® Software Release 6.0 Update is a Hit

By Dong Chen, FDOT District Four

The Florida Department of Transportation (FDOT) District Four Intelligent Transportations Systems (ITS) Unit is nearly a month into the deployment of the SunGuide® software release 6.0. With the expertise of an exceptional software team, FDOT District Four is the only District to manage its own upgrade. The end result of the deployment is still pending; however, things look promising for release 6.0 as the District Four Regional Transportation Management Center (RTMC) operators use it on a daily basis. The initial installation did not go as smoothly as planned, but whenever working with new software, issues can be anticipated and resolved.

FDOT Central Office has been in the planning and development stages for several months for the release 6.0. The development lifecycle began with the concept of operations, leading to the systems requirements and detailed requirements, and the software design process. After development of the software enhancements, the software underwent significant testing before deployment at District Four's RTMC. Software testing was a critical component of the development lifecycle and was essential to ensure that the software met the user's requirements.

View inside a District Four RTMC.

A notable enhancement in SunGuide software release 6.0 is support for full matrix/color dynamic message signs (DMS). Because of their ability to relay information to motorists through pictures, color DMSs are becoming increasingly popular in Florida and have significant benefits over traditional single-color (amber) DMSs. Two of these benefits are: increased ease of message recognition and the ability to convey additional information using pictures that traditionally cannot be conveyed due to space restrictions. Other significant enhancements to SunGuide software include support for Microsoft SQL Server 2012 and video on desktop. Previously SunGuide software only supported Oracle. This release allows SunGuide software to support Microsoft SQL Server as well. The video on desktop software on the operator workstation desktop allows for video management to enhance user experience.

FDOT's District Four RTMC uses SunGuide software to monitor ITS technologies to provide motorists with reliable traveler information. The RTMC is staffed 24/7 with operators that interact with the software and handle incidents as they occur. When an operator receives an alert, they investigate the area of the alert by checking the closed-circuit television camera in that location. Once the operator determines the issue, they inform the proper agency so they can react to the problem. This information is also provided to FL511, Florida's advance traveler information system.

FDOT's RTMCs require software that enables real-time, 24-hours a day, 7-days a week operation of the transportation system and that is just what SunGuide software provides.

For information, please contact Mr. Chen at (954) 847-2785 or e-mail to Dong.Chen@dot.state.fl.us.

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Announcements

Upcoming Conferences

World Congress
Detroit is the scene for the 21st World Congress on September 7-11, 2014. Don't miss this event that only occurs in the US once every three years!

Information on registering and/or participating is available at http://itsworldcongress.org/.

3C Summit
Registration is now open for the the 2014 ITS 3C Summit, a joint annual meeting between the Gulf Region Intelligent Transportation Society, the Intelligent Transportation Society of Florida, and the Intelligent Transportation Society of Georgia. The meeting will be held September 14 - 17, 2014 at the Arthur R. Outlaw Convention Center in Mobile, Alabama. More information is available at http://www.its3csummit.com.

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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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