

SunGuideSM Disseminator

FDOT's Monthly ITS Newsletter

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May 2002

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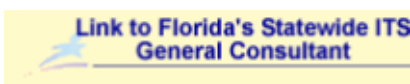
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This is your newsletter and we would like to hear from you!

We need your input for future articles. If you have an article you would like to share, please submit it to us for future publication. **We would like FDOT's Monthly ITS Newsletter to be the source for all ITS happenings in Florida.** Please send your articles to Karen.England@dot.state.fl.us.



SunGuideSM Exhibit Draws Crowds



FDOT's SunGuideSM Exhibit was a hit at the ITS America 2002 Annual Meeting and Exposition in late April, drawing heavy traffic throughout the three-day exhibition as well as attracting attention from the show's media provider, officials from FDOT's ITS Office said.

"The meeting in Long Beach went way beyond our expectations," said ITS Office Manager, Chester Chandler. "We effectively delivered the message about our FDOT ITS Program opportunities. We were very pleased with the visitor turnout in our exhibit booth and, we look forward to exhibiting next year in Minneapolis."

FDOT decided to exhibit at the ITS America 2002 Annual Meeting and Exposition in order to get the word out about the state's \$1.5 billion commitment to ITS over the next 11 years.

The exhibit used a space theme **"Florida ITS - We're Really Taking Off!"** and integrated space images and attractions to the exhibit to tell the story of Florida's past and future commitment to ITS.

Large display units across the back of the booth highlighted FDOT's past and future ITS program commitments and a PowerPoint presentation choreographed to music told the story in more detail. ITS Florida program brochures and materials on CD-Rom were distributed.



Special attractions included an opportunity to meet and have a photo taken with Space Shuttle Mission Commander Rick Searfoss on Monday; a drawing for a NASA jacket and t-shirts on Wednesday; and a variety of trinkets given away throughout the show, including a stress reliever in the shape of a space shuttle. FDOT created a database of nearly 300 ITS industry consultants, contractors and vendors based on the jacket drawing and other contacts made at the show.

Florida's ITS program was also visible through two articles in the show press, attention on the ITS America website, and ITS America Conference sessions that featured FDOT ITS Program Administrators Liang Hsia and Mike Akridge as presenters and moderators.

"Networking at national ITS events such as this gets the word out and helps attract interest in upcoming requests for proposal," Chandler said. "Making contacts and developing relationships now will help immensely as we head into major program commitments and look for opportunities to create and promote public-private and public-public partnerships."

For further information, please contact Mr. Chester Chandler III, PE, FDOT ITS Office Manager, in Tallahassee, (850) 410-5600.

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Defining Rural ITS Needs For Florida

(Excerpted from paper presented by Michael C. Pietrzyk, PE at 2001 ITS America Annual Meeting)

Rural Florida

More Floridians (over two million residents) live in rural Florida today than ever in the state's history. Almost half of the counties in the state (32 of 67) are "rural" as defined by the State's rural development plan, with 97 cities in these counties defined as "rural" cities. Rural designated land constitutes nearly 80 percent of the state's total land area, and serves more than 12 million "eco-tourists" each year (or about 30 percent of the total annual volume of tourists to Florida) that visit parks, preserves, and historic sites scattered throughout the rural areas of the state.

What are the Needs?

Rural residents and visitors should not be overlooked when it comes to preserving mobility and safety. The overall economic vitality of Florida also requires that safe and efficient movement of people and goods be maintained within and through the rural and inter-urban areas of Florida. In rural Florida, the following needs are most prominent.

Safety and Emergency Management Services

Crashes in rural locations tend to be more severe because they occur at higher speeds, with 70 percent exceeding 55 miles per hour as recorded by the officer at the scene of the crash. In Florida, the highest percent of fatal crashes to total crashes also occurs in rural counties. The top five rural counties (in 1999) for crash fatalities are Jackson, Gadsden, Putnam, Columbia, and Nassau. Five rural state roadways, not necessarily in or through these

counties, have recurring high crash locations (SR 43, SR 44, SR 54, SR 64, and SR 100). Improving response times to incidents (particularly those involving heavy vehicle crashes), reducing high-speed crashes at unsignalized intersections, implementation of non-passive control at rail grade crossings, and construction work zone safety and control are the top rural safety issues in Florida. Response times to crashes in rural areas are at least twice that in urban areas, primarily due to greater distances from response teams and medical centers. Equipping EMS vehicles with AVL technology coupled with computer-aided dispatch can better track and assist in all portions of response.

During a major evacuation, it would be desirable for emergency management officials to be able to obtain traffic information from a wide range of sources. Special focus on live video feed of traffic conditions is especially critical. The initial infrastructure for a fairly wide-coverage (but autonomous) system of CCTV devices currently exists, primarily in coastal county areas. Unfortunately, the individual video feeds from these cameras are not being transmitted to a centralized emergency management center. To the greatest extent possible, the future Florida Fiber Network should be utilized as the primary communications linkage system for these devices because of its greater bandwidth features. In addition to the statewide fiber network currently being planned, the FDOT has a 92-tower microwave backbone system in place today located on Interstate and Turnpike right-of-ways. This network would be capable of supporting transmission of slow scan video images, but once again the linkage to a centralized emergency management center is still needed.

Rural Tourism

The volume of Florida tourism in rural areas contributes substantially to the state's economy. Many state and national parks are located in proximity to major metropolitan areas. For example, 121 state parks are within 60 miles of urbanized areas in Florida. Roadways leading to these rural high-tourist attractions provide the venue for potential application of advanced recreational information systems, especially if they are located in remote areas (e.g., Gasparilla Island). Static and real-time traveler information on directions to the attraction, schedules, amenities, special events, etc. can be disseminated via roadside variable message signs, kiosks at nearby rest areas or new rural welcome centers, and traveler information radio for real-time availability of park amenities.

Paratransit Productivity

In rural areas, paratransit service generally addresses the particular needs of the transportation disadvantaged who (by State of Florida definition) are unable to transport themselves or have no other form of transportation available. Community Transportation Coordinators, approved by the Florida Commission for the Transportation Disadvantaged, serve the transportation disadvantaged in 51 designated service areas statewide in all 67 counties. Thirty-two of the 51 designated service areas (63 percent) are defined as predominantly rural. The estimated "transportation disadvantaged population" in these 32 rural counties is just over 350,000, and during 1999 about 1.5 million passenger-trips and 12 percent of the total statewide paratransit VMT were logged serving these rural counties. During 1999, there were two rural counties (Jackson and Gadsden) that recorded over one million vehicle-miles of travel of paratransit service, and another seven counties (Sumter, Putnam, Washington, Walton, Levy, Hendry, and Flagler) that exceeded one-half million vehicle-miles of rural paratransit service. The application of ITS technologies (automatic vehicle location and computer-aided dispatching) certainly can be used as a tool to improve paratransit tripmaking. The state's welfare-to-work program, known as WAGES, can be enhanced with this type of ITS application.

Intermodal Connectivity

Many intermodal facilities exist throughout Florida, and quite a large number of them are located in predominantly rural or inter-urban areas. More than 60 percent of the continental U.S. is accessible from Florida by overnight motor freight. Florida is ranked 8th among all states in tonnage of commodity shipments, and 78 percent of these shipments are made by truck. Marion and Polk counties have the greatest motor freight activity in rural Florida. The [2020 Statewide Florida Intermodal System Plan](#), completed in February 2000, identified high statewide priority freight movement projects where ITS applications could be focused.

From the perspective of improving intermodal connectivity for public transportation systems, ITS applications are certainly appropriate and beneficial. At least several municipal urban transit providers in Florida are also utilizing some type of AVL technology for improving operating efficiency. Information currently being provided to agency dispatchers should be shared with area wide and regional traffic management centers. This same "next arrival" information should also be fed via multimedia kiosks into public airports, sea cruise ports, Amtrak stations, intercity and local bus terminals, and park-n-ride lots to perhaps reduce the dependency on single-occupant vehicle trips and make public transportation more attractive to the "choice rider".

How Can ITS Deployment in Rural Florida Help?

Unlike most urban areas, rural mobility and safety needs are relatively isolated or dispersed. ITS applications in rural and inter-urban areas can therefore be viewed as a tool for providing contiguous traffic monitoring and traveler information only if specific problem areas can be identified, and cost-sharing and real-time information sharing can be maximized. Rural ITS deployment in Florida should be driven by several objectives as summarized below.

Recommended ITS Applications for Rural/Inter-Urban Florida

APPLICATION AREAS	OBJECTIVES
Inter-Urban Connectivity	Leverage deployment cost of urban Florida ITS to identify and provide feasible ITS continuity into rural and inter-urban areas of the state, and to stimulate rural economic redevelopment
Safety and Emergency Management Services	Improve response times to incidents along recurring high crash rural roadways (particularly those involving heavy vehicles, hazardous materials, and single vehicle crashes on low volume roads), and create a coordinated video monitoring system suitable to assist in statewide evacuation
Tourist Information Services	Enhance eco-tourism market by providing pre-trip and en-route information to visitors (particularly those visiting rural attractions)
Paratransit Productivity	Improve cost-efficiency and coordination of rural paratransit tripmaking (particularly intercounty trip performance for rural counties with large rural paratransit VMT)
Intermodal Connectivity	Expand and maximize commercial fleet monitoring capabilities (particularly electronic credentialing and weigh-in-motion systems serving ports, airports, bulk cargo terminals, rail-highway terminals, and major warehouse distribution centers in predominant rural areas)

For further information, please contact Mr. Michael Pietrzyk, PE, at the Center for Urban Transportation Research (CUTR), University of South Florida - College of Engineering, (813) 974-9815.

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Microwave Communications System Facilities/Improvements Project

FDOT is currently implementing a four-phase project to upgrade its statewide microwave communications system. The upgrade is being performed to accommodate changes to the Motorist Aid Call Box System as well as to provide support to FDOT's ITS projects. The first phase, the Microwave Communications System Facilities/Improvements Project, is responsible for the final microwave communication site construction as well as all electrical system upgrades to existing sites.

The remaining three phases of the project involve the installation of new communications equipment and the reconfiguration of existing communications equipment. This portion of the project is currently in the planning stage. These phases of the microwave upgrade will be reported in the near future.

The Microwave Communications System Facilities/Improvements Project consists of upgrading the existing 12-channel analog Alligator Alley microwave communications system (Naples to Ft. Lauderdale) to a 672-channel digital microwave communications system. The project also includes the installation of a microwave path between two microwave communications sites located near Wildwood to connect the statewide microwave communications system to the Turnpike District microwave communications system in order to provide system redundancy. Lastly, the project includes the installation of new emergency power generator systems at key locations as well as lightning protection system upgrades for older sites.

The contract for this project was awarded to Goff Communications (Sarasota, FL) for a value of \$3.5 million. The project is scheduled for a one-year construction period to be completed by July, 2003.

For further information, please contact Mr. Nick Adams, ITS Telecommunications Consultant Coordinator, at the FDOT ITS Office in Tallahassee, (850) 410-5608.

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Editorial Corner

Communications, the Forgotten Link

Communications is a major part of our daily lives, sometimes to the extent that we tune it out and ignore it before we become overloaded. We are inundated with messages via phone and e-mail, little yellow pieces of paper on the refrigerator door or posted on top of piles of documents. We tune our radios for the latest roadside travel bulletins. This, along with television and other advertising, all competes for our attention. When your tire is shredded and your spare is flat, it's easy to take for granted that the message will get through as you pull down the handle of a roadside call box. We don't give a thought about the role communications plays in our daily lives.

Yet, as ITS design engineers and implementers, communications is often the last thing we think about when planning our ITS projects. We design traffic management networks to interact with other control systems in mind-boggling complexity. After everything else is done, then the time seems to come to figure out how to get systems to talk to each other so that information can be presented in a manageable format. The communications function is important and needs to be considered in conjunction with other vital parameters during the project's development. How will the various signals be conducted back to a central point? How many conduits are needed? How big? What capacity is available on the microwave backbone? Any fiber in the area of consideration?

Don't forget the "glue" that holds your systems together. Many aspects of communications may easily be integrated into a project in the initial stages. If neglected until late in the process, costs rise, schedules slip and project complexity increases.

The ITS Office maintains extensive files on FDOT's existing and proposed communications infrastructure. We have site information, FAA and FCC license and registration files, route and interface locations, and device capabilities and requirements. We conduct research on the latest software and methods for conveying information. We can help with that highway advisory radio budget pricing. **So don't forget to think about communications early in your project process, and call on us for assistance.** Any member of the FDOT ITS Office staff will be happy to provide the input required for your needs.

Regards,



For further information, please contact Mr. Nick Adams, ITS Telecommunications Consultant Coordinator, at the FDOT ITS Office in Tallahassee, (850) 410-5608.

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Announcements

We have received several name suggestions for FDOT's Monthly ITS Newsletter as follows:

- Intelligence Reports
- Central Intelligence
- SunGuide Communicator
- SunGuide Connection
- SunGuide Summary
- SunGuide Update
- UPDATE/from Florida's Transportation Districts
- SunGuide Scout
- SunGuide Review
- SunGuide Journal
- SunGuide Intelligentsia
- SunGuide Disseminator

We would like you to take the time to cast a vote for your favorite name. Simply type the name of your preference and e-mail to Karen.England@dot.state.fl.us. You have through June 14th to cast your vote. The votes will then be tallied and the name with the most votes will be used for all future newsletters. *Thanks for your input!*

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