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***The Tampa Bay SunGuide<sup>SM</sup> Center***



The Tampa Bay area, located on the west coast of Florida, is well known for its beautiful beaches and pleasant year-round temperatures. It includes the cities of Tampa, St. Petersburg, Clearwater, and a multitude of smaller cities, towns, and communities. Home of the World



Champion Tampa Bay Buccaneers, it is also home to 2.3 million people, many of whom drive on the area's freeway system on a regular basis.

As the name implies, the Tampa Bay area is centered around Tampa Bay, a large body of water connected to the Gulf of Mexico. Tampa is located on the east side of Tampa Bay in Hillsborough County. St. Petersburg and Clearwater are located on a peninsula between Tampa Bay and the Gulf of Mexico in Pinellas County. Interstate 275 connects the two counties, and crosses Tampa Bay twice — on the Howard Frankland Bridge (north) and on the Sunshine Skyway Bridge (south). Interstate 4 also services the Tampa Bay area extending from its terminus at Interstate 275 in downtown Tampa, eastward to the Orlando and Daytona Beach areas. Interstate 75 runs north and south along the east side of Tampa Bay.

The Tampa Bay SunGuide<sup>SM</sup> Center, a regional transportation management center (RTMC), will also serve as the District's Emergency Operations Center as well as the regional law enforcement dispatch center of the Florida Highway Patrol and other state law enforcement agencies. Combining these three functions will allow a multiple agency approach to transportation management all in one centralized facility.



The proposed two-story building will have 19,000 square feet of floor area and is estimated to cost \$5 million to complete. The RTMC will be a hardened facility, allowing operations to continue before, during, and after hurricanes or other severe storms.

The operations staff at the Tampa Bay SunGuide<sup>SM</sup> Center will be responsible for utilizing the RTMC as an effective tool for transportation management. A typical scenario for an incident starts with the RTMC

identifying the location of a possible incident based on the detector data being received. A RTMC operator will view that section of the roadway to confirm the presence of an incident and the needed level of response, which may include dispatching police, fire rescue, a Road Rangers service patrol vehicle, or maintenance forces. The operator will also activate appropriate messages on nearby dynamic message signs, updating the information as the incident evolves. The media may also be notified based on the extent of the incident. If traffic needs to be diverted to alternative roadways, the operator will contact the appropriate local agency to implement special signal timings.

The first phase of the Tampa Bay SunGuide<sup>SM</sup> Center will come on line in 2006, with additional phases, covering all of Pinellas and Hillsborough counties, completing over the following six years.

This article was provided by James D. Bitting, FDOT District Seven. For more information, please contact Mr. Bitting at (813) 975-6401 or email James.Bitting@dot.state.fl.us.

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## ***The Importance of RTMC Security***

*Terrorism is the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.*

— Federal Bureau of Investigation (FBI) Definition

Prior to September 11, 2001, the United States had been mostly spared from terrorist attacks, although problems related to vandalism, the deliberate spreading of computer viruses, and disgruntled employees were not uncommon.

The United States Department of State reports nearly 140 significant terrorist attacks worldwide since 1961 (*Patterns of Global Terrorism - 2001*, May 2002, United States Department of State). While many of these attacks have been against interests of the United States, prior to September 11, 2001, just three of these attacks were on the homeland:

- World Trade Center (first) attack in 1993;
- Oklahoma City attack in 1995; and
- Empire State Building sniper attack in 1997.

Research by the Mineta Transportation Institute on terrorist attacks and serious crimes involving public surface transportation systems indicates that worldwide there has been an average of five significant attacks per month during the 1990s (*Protecting Public Surface Transportation Against Terrorism and Serious Crime: Continuing Research on Best Security Practices*, September 2001, Mineta Transportation Institute). None of these were on United States soil. Research by the Federal Transit Administration indicates that 58 percent of international terrorist attacks in 1998 were on transportation targets and, of these, 92 percent were on surface transportation.

Attacks are not always physical in nature. The CERT<sup>®</sup> Coordination Center (CERT/CC) is a major reporting center for Internet security problems. CERT/CC statistics give a quarterly overview of the growth of incidents and vulnerabilities reported each year, along with other data about CERT/CC activities, such as the number of security alerts published. The statistics indicate that, over the years, there has been a steady increase in security problems reported to the CERT/CC. For example, more than 82,000 incidents were reported in 2002, compared with less than 22,000 in 2000, and less than 4,000 in 1998.

While there are many lessons that transportation agencies can learn from previous terrorist attacks, the relatively small number of attacks on the United States' homeland leaves transportation systems planners, designers, and operators with a dilemma. On the one hand, there is a heightened sense of

awareness of threats and vulnerabilities. On the other hand, there is little in the way of hard data to influence systems design and operation.

Today, transportation agencies are addressing the need for threat and vulnerability assessments, redundancy in networks and control facilities, and personnel policies and practices. They are also re-examining how existing emergency management plans will play out during an emergency, such as an attack on homeland security. While much of the focus to date has been on protecting critical infrastructures, we must not overlook the role played by information systems in operating the transportation network and providing information to travelers.

FDOT has five operational, and seven planned, Regional Transportation Management Centers (RTMCs). The RTMCs have multiple functions, all of which involve voice, data, or video information systems and databases. These functions are listed as follows:

- Surveillance and monitoring;
- Traffic management;
- Incident and emergency response;
- Coordination with the Florida Highway Patrol and other local jurisdictions;
- Provision of travel information; and
- Turnpike operations, including payment systems.

Field devices are associated with each of the above functions. Connectivity between these field devices and the RTMCs relies on communications and power systems.

Each system has different vulnerabilities to different types of threats. Specific threats to RTMC systems can be accidental, intentional, or a natural disaster, and can result in one or more potential impacts. FDOT refers to these potential impacts as threat categories and they are defined as follows:

- **Denial of service** — any action or series of actions that prevent(s) any part of a system from functioning as intended;
- **Disclosure** — the acquisition of sensitive information through unauthorized channels;
- **Manipulation** — the modification of systems information, whether being processed, stored, or transmitted;
- **Masquerading** — the attempt by an unauthorized user or process to gain access to a system by posing as an authorized entity;
- **Replay** — the retransmission of a valid message under invalid circumstances to produce unauthorized effects; and
- **Repudiation** — the successful denial of an action.

An RTMC may be highly protected against the threat of unauthorized physical intrusion by sophisticated alarm systems and security guards. However, RTMC systems may be vulnerable to the threat of cyber attacks from individuals acting from remote locations, many miles from the intended target. For example, a hacker may gain access to the RTMC traveler information sub-system and change the message displayed on a dynamic message sign.

FDOT's RTMCs are the brains of Florida's highway network, with multiple functions for managing day-to-day operations and emergencies. Given the ongoing concerns of future attacks on the homeland, ensuring the security of the RTMCs is critical. Florida has already developed a RTMC security white paper which may be viewed at [www.floridait.com/special\\_projects.htm](http://www.floridait.com/special_projects.htm). Based on recommendations from the white paper, the FDOT's goal is to make an assessment of the level of security at each of our existing RTMCs and to develop guidelines to assure that these facilities, and

future RTMCs, will be adequately secured from a threat on the physical structure (natural threats included), as well as a threat on the systems controlled by the RTMCs. The FDOT is already taking the first step in achieving a higher level of security for our RTMCs with a vulnerability assessment of the District 5 RTMC as part of the *i*Florida model deployment. This effort will provide the starting point to achieve an adequate security level in all our existing RTMCs and to provide guidelines for future RTMCs.

This article was provided by Keith Jasper, PBS&J. For more information, please contact Mr. Jasper at (703) 471-7275 or email [KeithJasper@pbsj.com](mailto:KeithJasper@pbsj.com).

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### ***I-95 Corridor Coalition Intermodal Leadership Forum***

The I-95 Corridor Coalition (Coalition) held its second Intermodal Leadership Forum in conjunction with the Spring 2003 Executive Board Meeting in Arlington, Virginia, on May 13-14, 2003.

On the first day, the Intermodal Leadership Forum drew 75 participants from across the I-95 Corridor (Corridor) and was an interactive event for key transportation executives and senior-level transportation professionals. The focus was on critical intermodal issues and their implications for the Corridor.

The Coalition commissioned seven white papers on intermodal issues which included:

- *Intermodal Passenger Issues*
- *Understanding the Geographic Growth of the I-95 Corridor Coalition: Implications for the Analysis of Passenger Travel in the Coalition Region*
- *Freight Rail*
- *Highway*
- *Rail Financing*
- *Security*
- *Water*

These papers can be found at [www.i95coalition.org/tracks/meeting\\_itpg.htm](http://www.i95coalition.org/tracks/meeting_itpg.htm).

A presentation was also made addressing the recent addition of the state of Florida to the Coalition and its similarity to the original Coalition states. Mike Akridge from the FDOT ITS Office was asked to make a presentation on highways for the Coalition.

The afternoon consisted of lively discussions on the presentations and identified issues and specific recommendations that the Intermodal Leadership Forum felt needed to be advanced to the Coalition's Executive Board. The focus leaned heavily on issues relating to capacity, security, economics, and funding. In the end, the Intermodal Leadership Forum decided to advise the Executive Board of three key issues:

- Consideration of the overall system as the driver;

- Development of a framework to evaluate major policy choices at the regional level; and
- Necessity for member agencies to support committee participation and projects.

On the second day, the Coalition's Executive Board met to discuss the Intermodal Leadership Forum's recommendations and to approve the *Annual Work Plan* for projects brought forward by the Coalition's Program Track Committees.

The discussion from the Intermodal Leadership Forum generated the following comments:

- All modes are currently over-crowded and congested.
- There is no modeling instrument available as a decision-making tool; Integrated System for Corridor Operations Management may provide needed data.
- All solutions will cost more than available funds.
- The problems and solutions are multi-jurisdictional. There is no financing mechanism available to implement regional solutions.
- Agencies need to evaluate the options of moving freight from highway to other modes to relieve congestion.
- Responsibility for relieving rail congestion needs to be determined.
- As the gas tax fund shrinks, new financing methods need to be found.
- Improvements are being made in intermodal freight efficiency.
- There is a need to package and sell regional projects, stressing economic and air quality value.
- TEA-21 reauthorization is coming up in the next year; it tends to pit one state against another and discourages efforts to address the regional system.
- It is requested that member agencies, when addressing reauthorization with elected officials, mention the work of the Coalition.
- Agencies dealing with multiple modes struggle with the distribution of funds within the modes.
- The system is too complex to rely on traditional single jurisdiction cost/benefit analyses to evaluate potential projects.
- There is competition for funding between freight rail and commuter rail activities. A fair and equitable way to allocate resources needs to be determined.
- Homeland Security needs to be addressed by all modes; it is not just an airport issue.
- The Intermodal Office at USDOT has disappeared. There will be challenges in finding support as long as intermodal leadership is missing at the federal level.

The review and discussion of the *Annual Work Plan* generated the approval of 14 projects at a cost of \$2,225,000 for the next fiscal year.

This article was provided by Mike Akridge, FDOT ITS Office. For more information, please contact Mr. Akridge at (850) 410-5607 or email [Mike.Akridge@dot.state.fl.us](mailto:Mike.Akridge@dot.state.fl.us).

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We invite you to have some fun and complete the *SunGuide<sup>SM</sup> Disseminator* Word Challenge!

An answer guide follows the Editorial Corner.

***Enjoy and Good Luck!***

N E R U S O L C S I D D M D R Y M P Q T M S D R  
 C F E M K R M Z E V A C U A T I O N E Z T E E T  
 H O X C L X D T D N N Y T D F P C N V Q N I T R  
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Beta  
CCTV  
Cellular

Evacuation  
FBI  
FDOT

Mobility  
Monitoring  
OOCEA

SunPass  
Surveillance  
Technologies

Communications	GPS	Partnering	Terrorism
Connectivity	Incident	Payment	Traffic
Copper	Infrastructure	Powerhouse	Transponder
Disclosure	Integrated	Probe	Transportation
Disseminator	Internet	Protocols	Turnpike
Dynamic	ITS	Repudiation	Web
E-Pass	Manipulation	RTMC	Wireline

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### *The Future of ITS*

As the new President and Chairman of the Board of Directors of ITS Florida, I look forward to the opportunity to be of service to you and to help our state make further progress towards our overall goal of establishing Florida as an **ITS Powerhouse** that also plays a leading, effective, and, most importantly, cooperative role in ITS nationally. We hope to provide dynamic leadership, focused action, and advocacy for the effective and efficient application of advanced technologies to transportation management, hence saving time, lives, and money. We plan to continue:

- Defining and explaining the benefits and values associated with ITS to the widest possible audience;
- Organizing and sponsoring conferences, workshops, and professional development activities; and
- Reaching out to technical leaders and non-technical decision-makers.

In order to see ITS within a wider context, I would like to explore the future of ITS and consider what the ITS industry can realistically achieve in the next decade. While the development of new technology and public acceptance of that technology can be extremely difficult to predict, I want to illustrate how ITS might continue to evolve as an integral part of our transportation infrastructure, delivering significant benefits and addressing important transportation policy issues.

Since the creation of Mobility 2000 and its successor organization in the early 1990s, ITS America, ITS has become an integral part of the transportation system in the United States. But the concept of using information and telecommunication technologies in the transportation arena really got its start much earlier with pilot projects such as the Electronic Route Guidance System tested in the United States in the 1970s, the Ali-Scout dynamic route guidance trial in Berlin in the 1980s, and the Japanese signal controller program tested in the 1980s. These systems proved there was a direct relationship between the application of technology and improvements in safety. Over the past decade, we have seen amazing progress in the identification and application of a wide range of technologies that have enhanced the transportation system. While we have not yet completed the job of deployment,



significant parts of our transportation system and a growing number of drivers make use of ITS elements that are delivering value and benefits.

Improving in-vehicle design and infrastructure management is absolutely central to ITS development over the next decade.

### **In-Vehicle Design**

Substantially more technology will assist drivers and passengers in private, transit, and commercial vehicles by the year 2013. We are already witnessing the emergence of in-vehicle devices such as navigation systems, cellular telephone-based information systems, and Mayday alert systems such as General Motor's OnStar. Over the next 10 years, we should see a significant acceleration of these products and services into the marketplace. A major impetus for this is the rapid evolution of wireless technologies. Similar advancements have been made in traditional landline technology utilizing fiber optic lines which are now capable of carrying as many as 100 gigabits per second per line, or the equivalent of 1.5 million simultaneous voice telephone calls. Even older, more mature technologies such as copper wireline have been given a new lease on life by the development of more sophisticated communication protocols that enable us to maximize data transmission. For example, a simple two-pair copper wire initially designed to support one voice telephone call at a time can now support the equivalent of 15,000 simultaneous calls. Similar technological advances are expected in the world of wireless communications.

Communication infrastructure is critical to the evolution of ITS. Advancements in wireless technology are vital because you can't communicate to and from a moving vehicle any other way! What will be the impact of ubiquitous, high-capacity wireless communications on in-vehicle information products and services? In direct terms, wireless technology opens up a pipeline to and from a vehicle enabling in-vehicle availability of Internet services that we access from our homes and offices today. Current emerging wireless technologies offer the kind of data capacity and speed experienced using existing landline connections. Even greater capacity and speed is expected to develop in the coming decade. The question is, what will the impact of such increases be on the operational safety of vehicles? Clearly, new technologies have the potential of distracting drivers rather than helping them drive more safely. However, the emergence of voice recognition and haptic feedback technologies should reduce the risk for drivers who must access these kinds of information sources. Even today, voice recognition and voice synthesis technologies are in operation on landline information services such as TellMe (1-800-555-TELL).

The use of haptic feedback has been motivated by a major concern that could hinder consumer acceptance of ITS. The concern surrounds automated systems that remove drivers from direct control of their vehicles. Some drivers may resist this type of system while others may use such systems as a way to push the safety envelope, potentially incurring automobile or subsystem manufacturer liability, or even road owner or operator liability. One answer to this potentially harmful scenario has been the adoption of a cooperative driving approach to automated vehicles, which leaves control with the driver, but provides enhanced driver support functions. This technology has already been demonstrated in prototype vehicles that vibrate the brake pedal to indicate to the driver that it may be a good idea to apply the brakes. Other experimental designs include a system that automatically adjusts the suspension, making it feel as if the vehicle is riding over a hump in the road, if the driver tries to change lanes when another vehicle is within the threat zone. As technology advances and these systems are refined and perfected, we can expect future vehicles to be much safer through utilization of ITS.

## Infrastructure Management

Beyond safety, these new devices will provide a long list of other customer convenience features to help drivers navigate the roadway network. To make such features work successfully, roadway operators will have to expand their highway investment beyond concrete and asphalt to computers and software. Some infrastructure management applications are:

- **Traffic Management** - Building on the progress we have already made with respect to freeway, expressway, incident, and urban traffic management, look for significantly wider uses of wireless telecommunications techniques to interlink traffic sensors, dynamic message signs, and control devices together, as well as with transportation management centers. We will also see extensive use of probe-vehicle techniques enabling selected vehicles in the traffic stream to act as probes to provide travel time data for traffic management and traveler information. In urban traffic control systems, look for a significant increase in Internet and Web technologies to communicate with, manage, and control traffic. Combined with high-capacity wireless communications, traffic professionals will use Web-based data storage and management techniques to determine appropriate traffic signal timings, monitor for faults, and communicate traffic strategies to the general public. It will also be possible to display more than just a traffic signal at intersections. LED technology will enable full-function message signs to be combined with traffic signals. Thus, signals will tell you how long you will have to wait for a green light. In-vehicle information services could also advise you about traffic signal timings and tell you what constant speed to aim for in order to hit the green wave through every signal along a corridor.
- **Traveler Information** - In-vehicle delivery of decision-quality traveler information can be obtained via high-speed Internet services on a personal digital assistant, or over a cellular phone. Broadband cellular phones will display closed-circuit TV images from surveillance cameras allowing drivers to observe roadway conditions and decide which route to take ahead of time. With the use of a cellular phone, full access to traveler information services, including weather information, trip-time reliability, and cost of various travel alternatives, will be available in vehicles, offices, and homes from just about anywhere in the world. The system will be seamless and multi-modal, incorporating bus, rail, and airline information. In the event that a manmade or natural disaster occurs, these systems will provide information about evacuation routes and the availability of shelters. Evacuation time assumptions from emergency management professionals will be communicated to traffic and transportation managers, who will configure their traffic and traveler information systems to help achieve the target evacuation times.
- **Payment Systems** - Payment for transportation services is becoming easier as cash is replaced by electronic short-range communication devices such as transponders, cell phones, and smart cards. Most agencies now have electronic payment systems operational. Since 1994, my organization, the Orlando-Orange County Expressway Authority, has allowed customers to bypass cash toll lanes and pay using E-PASS™, a transponder-based system that is installed in the customer's vehicle. To date, 365,000 customers have embraced the E-PASS™ technology. With the statewide deployment of the



FDOT's SunPass® system, there are now more than one million people in Florida using transponders to pay their tolls. The next generation electronic payment device for highway users could be based on GPS, or Global Positioning System, technology — such a system is already being tested in Germany. GPS technology allows drivers to be charged various toll rates depending on the type of highway they use, the distance they travel, and the time of day they use the road.

## ITS Institutions

While overcoming technological challenges has been a huge task, the biggest challenge to ITS professionals has been overcoming jurisdictional boundaries, territorial limits, and competitive interests. To be successful, ITS deployment must be integrated. Like the historic battle among VHS and beta technologies, ITS could easily get bogged down in disputes between various parties who have their own individual goals and aspirations. Whether it's a battle between competing manufacturers with a similar technology or two government agencies fighting over control of a regional transportation management center, our failure to cooperate has the potential of delaying implementation of vital services and ultimately hurting the consumer. I feel that overcoming this issue will be the greatest challenge to the successful deployment of ITS around the world.

There is no simple solution to this problem. I am not suggesting that a single worldwide or national entity should pass down mandates, although that may be appropriate in some instances. But, I am suggesting that we, as corporate and government leaders, need to look at the tremendous potential ITS has to save lives and not let our individual or organizational aspirations unnecessarily disrupt the effective deployment and integration of ITS.

With that said, it is important to recognize that, so far, ITS has been deployed in a very isolated way, with various entities in specific regions developing small stand-alone systems that do not share information. We have enhanced efficiency and demonstrated that ITS works, but we have only scratched the surface on the wide-scale value and benefits that can be gained through large-scale integrated deployment. We need to define and successfully implement comprehensive projects that are fully integrated, system-to-system and technology-to-technology.

To help support the needed transition to larger ITS deployments, we should take a close look at our organizational structures and our methods of funding ITS projects. With respect to funding mechanisms for ITS, the public sources that are available have been limited and we need to look for new opportunities to tap into these sources to fund larger-scale deployment, especially at the federal and state levels where interoperability initiatives can be driven. Clearly, ITS funding should come with as few strings attached as possible. But, at the same time, such funding can offer a great opportunity to set standards and to require cooperative efforts. When money is at stake organizational boundaries and structures can become surprisingly flexible.

We should also take a close look at the methods that can be employed to engage private-sector financing and funding for ITS deployment. It is clear that many ITS application areas offer the allure of profit opportunities for the private-sector. One such example has been the joint use of communication facilities on government rights-of-way. Whether it is a cell tower or a fiber optic conduit, government agencies have the opportunity to work with private-sector companies to deploy ITS and other communication services at a lower cost by partnering on infrastructure investment. Another example of joint deployment is the operation of data and voice communication services that alternate between government-supplied highway advisory information and traditional commercial functions such as music, news, and advertising.

Perhaps we should also revisit the range of business models and partnering mechanisms that may be brought into play to support public/private collaboration in the deployment and management and operation of ITS. With respect to this later category, private-sector companies can bring a great deal of experience and expertise to the table in the form of organizational management, management by objectives, business process mapping, and engineering by integrating ITS with business improvements. They can provide us with considerable assistance as we migrate our thinking beyond transportation operations into transportation system operations. Most notably, private-sector

construction, operation, and maintenance of ITS provides a tremendous level of flexibility for government agencies.

## Conclusion

In conclusion, there is great optimism that ITS will revolutionize the transportation industry. This optimism is based on the assumption that new and exciting technologies will be developed that consumers will value and embrace. Gaining consumer acceptance requires that we first ask consumers what they want before we make assumptions and develop it. ITS is no longer a pilot project playground for technology junkies. We are now at the stage where ITS investment is growing dramatically and consumers need to see the value, especially when it comes to public-sector investment. Therefore, it is critical that we develop successful systems and then communicate their value to the community and to our non-technical decision-makers. Justifying technology investments and providing appropriate levels of funding and resourcing for ITS programs will take a highly professional marketing approach that focuses on the three basic objectives of ITS — saving lives, time, and money. We need to start quoting both the general and specific values of ITS. We can save lives, time, and money — And whose life did we save today? How much time did commuters in your jurisdiction save today as a result of ITS? And how much money is a state, county, or city saving by making the management and operations of their transportation system more effective and efficient through the application of ITS?

### **These are the real questions for the future of ITS.**

This article was provided by Hal Worrall, Ph.D., P.E., President and Chairman of the Board of ITS Florida. For more information, please check the ITS Florida Web site at [www.itsflorida.org](http://www.itsflorida.org) or email Erika Ridlehoover at [Erika.Ridlehoover@transcore.com](mailto:Erika.Ridlehoover@transcore.com).

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## Editorial Corner

I was in the midst of my visit to ITS America's 13th Annual Meeting and Exposition in Minneapolis, Minnesota in late May when I ran into Chester Chandler, who suggested that I write a guest editorial for this month's *SunGuide<sup>SM</sup> Disseminator*.

My first reaction was surprise that Chester had already run out of people in Florida to write this column. Then he told me that he would like me to comment on Florida's ITS Program from a national perspective, as someone based in Massachusetts (who admittedly spends a lot of time in Florida) and part of a company that just opened its first Florida office in Tallahassee last January.

Florida was the star attraction at this year's ITS America meeting. Certainly the showmanship of the Florida ITS Pavilion helped — a seemingly unending panoply of presentations and giveaways (my SunGuide<sup>SM</sup> t-shirt looks great in the gym; although, I'm not sure what people in Massachusetts think of it). And of course, the \$10 million federal grant for the iFlorida "infostructure" model deployment

turned many heads. But what made Florida such a force at this year's annual meeting is the depth of the state's program.

*Florida will be the crowning touch on a string of innovative research and deployment projects during the past few years in Florida:*

- E-PASS™ and SunPass™
- 511;
- Hurricane evacuation;
- Smart workzones;
- Unmanned aerial vehicles;
- Probe vehicles;
- Electronic truck screening at agricultural stations;
- Smart cards for port access;
- Truck rollover warning systems;
- Virtual weigh stations;
- Center-to-center network communications; and
- Mobility measures.

Name almost any innovative concept in ITS today, and Florida is somehow involved.

In a span of just a few years, Florida has emerged as one of the nation's leaders in ITS. This stature is the result of the creativity and commitment of a large corps of professionals in the public and private sectors, such as those represented in ITS Florida. Add to that the proactive leadership of FDOT, which committed significant funding to a statewide ITS Program and convened partners through the ITS Working Group Meetings. Also factor in the continued commitment and interest of the Florida Transportation Commission, a high-level champion of ITS that is not enjoyed in every state, as well as the state's large and growing electronics and simulation industries.

Ultimately, ITS is succeeding in Florida because it is addressing real-world problems with practical solutions. In the early days, in many states, ITS appeared to be a technology in search of a solution. Not in Florida. ITS is not a mere "option" in Florida, it is a strategic imperative for the state's transportation community.

In today's Florida, the arithmetic of transportation supply and demand makes a strong case for ITS. The state's population is increasing at a 2.2 percent annual rate, adding about 280,000 new residents per year. Vehicle-miles-of-travel are increasing even more rapidly — at about 4 percent per year. But lane-miles on the Florida Intrastate Highway System (FIHS), the centerpiece of the state's roadway infrastructure, are increasing at a rate of less than 1 percent per year. The result is an inexorable increase in delay, which is growing by almost 6 percent per year. This growth in delay may continue unless the state:

- Operates the transportation system more efficiently, using new technologies like ITS as well as traditional techniques;
- Reduces the demand on the FIHS by moving traffic to other modes or other roads; or
- Provides more capacity.

Realistically, it will take an aggressive combination of all of these actions, but ITS may be the only strategy that can be accomplished in the near term.

These numbers are important because Florida's transportation system is absolutely critical to the state's economic competitiveness and its quality of life. In a survey of major businesses conducted for the Florida Chamber of Commerce Foundation, every business surveyed reported that highways were "important" or "very important" to their business operations — in some cases, rating the importance of highway access as a locational factor as high as the cost of doing business or the quality of the labor force. For Florida's businesses, increasing delay and deteriorating reliability on the transportation system inhibit customer service and erode already thin profit margins. Each minute of delay costs Florida trucking companies about \$1 — and the amount can climb to as much as \$2 to \$3 for unexpected delay that disrupts just-in-time inventory and quick-response distribution practices, such as those operated in the state's burgeoning high-tech sector.

Of course, it's not just an issue of dollars and cents. It's also quality of life. Motorists in three of Florida's largest urban areas — Miami, Orlando, and Fort Lauderdale — on average, spent more than 60 hours per year caught up in congestion in 2000, according to the *Texas Transportation Institute 2000 Annual Mobility Report*. Two other areas — Tampa and West Palm Beach — were close behind, with more than 40 hours of average annual delay per motorist. This is time that could be better spent with families and friends or on the job.

Florida also consistently ranks among the top states for the highest fatality rate, whether for passenger cars, trucks, bicyclists, or pedestrians. There is ample opportunity to use ITS to save lives and save time for Florida's residents and visitors.

I believe that some of the greatest opportunities for use of ITS in Florida are just now emerging. For example:

- **Longer-distance travel management.** Florida's economy increasingly operates at a regional scale, with more and more commuting, personal, and freight trips occurring across county boundaries. ITS can be a tool for more effectively sharing traffic information over larger geographic regions, and for helping business and personal travelers make informed decisions when confronted with limited options for intercounty and, especially, interregional travel.
- **Port access and security.** Florida's seaports and airports moved some \$73 billion in exports and imports in 2001. This includes some 2.5 million containers moving annually through the state's seaports. Recent studies by groups like the Florida Ports Council and the Port Authority of New York and New Jersey have suggested that up to one-half of the cost of a long-distance container movement is accounted for by what happens at the port itself and on the landside corridor to or from the port. It is time to automate gate clearance and processing, so we can reduce the time trucks spend idling and exchanging as many as 19 separate pieces of data with terminal operators. It is also time to better manage traffic flows on access roads to the ports and terminals, many of which move through downtown areas and historic districts. Moreover, it is time to use ITS to better identify and track high-risk drivers and cargo — recognizing that of the 62 million containers moving in the United States each year, as few as 2 percent are currently inspected.
- **Tourist services.** Florida hosted more than 71 million out-of-state tourists in 2001, a total that is expected to top 100 million by 2020. That's a large potential market for tailored information on travel options, tourist attractions, and visitor amenities as well as a lot of unfamiliar drivers on the state's highway system. About half of all tourists visiting Florida arrive via airplane. That's a sizable market for multimodal traveler information that links flight arrival/departure data with information on highway traffic and bus schedules as well as for electronic payment systems that bundle rental car, toll, parking, and other fees.

- **Special services for the elderly.** About 17 percent of Florida's population, some 2.7 million residents, are over the age of 65, compared to just 13 percent nationally. This share is expected to rise to about 22 percent of the population by 2010. Florida's older drivers are a large potential market for vision-enhanced driving systems and other specialized services to ensure their safety and comfort while on the road.

Perhaps the greatest opportunity (and challenge) for ITS in Florida, as in other states, is to continue to move toward the mainstream of the state's transportation system. This is happening. I was encouraged last year when we worked with the 41-member Strategic Intermodal System (SIS) Steering Committee, representing a wide swath of Florida's transportation, business, and environmental interests. Many of the committee members were familiar with ITS and wanted to ensure that ITS solutions were considered in planning for the SIS, which will help focus federal and state transportation funding on facilities and services of statewide and interregional significance. I was also encouraged last month during a meeting with a city council member in northeast Florida, who confirmed the growing interest in ITS and other innovative transportation strategies among the state's elected officials. That same week at their summer meeting, the Florida Chamber of Commerce Board of Governors voted transportation as one of their top legislative issues for the next year and reaffirmed their support for investment in smart highways, smart gateways, and smart travelers to make Florida's transportation system operate efficiently, as outlined in their *Transportation Cornerstone* report. **When ITS becomes part of the dialogue of elected officials and business leaders, it has gained traction.**

It's an exciting time for transportation in Florida as well as nationally, as the era of system construction winds down and the era of system optimization begins. Through its ITS program, Florida is very much at the forefront of these trends. The future of SunGuide<sup>SM</sup> and the rest of the Florida ITS Program is indeed quite bright, but it will require even more creativity and commitment than what so many have contributed over the past several years.

This editorial was provided by John Kaliski, Cambridge Systematics, Inc. For more information, please contact Mr. Kaliski (617) 354-0167 or email [JKalisky@camsys](mailto:JKalisky@camsys).

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**Wherein a compendium of various random facts and snippets of humor is presented on an irregular basis for purposes of cerebral edification and mental diversion!**

**Feeling old on the way to work this morning?** Henry Ford had a working example of a motorized vehicle in 1896. He founded the Ford Motor Company in 1903; they are celebrating 100 years of continuous production this year. Henry's first cars were all black.



**Never got around to buying that sports car?** The Chevrolet Corvette is 50 years old this year. The first year's productions were all white, with red interior and a 6-cylinder engine. The 2003 version is a little more powerful with an 8-cylinder unit, producing some 400 horsepower.

### **Useless Facts Department:**

- Natural sponges are animals, not plants. They can grow as big as 6 feet in diameter.



- Can you name the seven basic colors of the rainbow? (Hint: Sir Isaac Newton could.)



- The electric light bulb was invented by Thomas Edison, in 1879. He used one of the hardest elements, tungsten, for the filament. Nothing better has been found and this material is still used today.

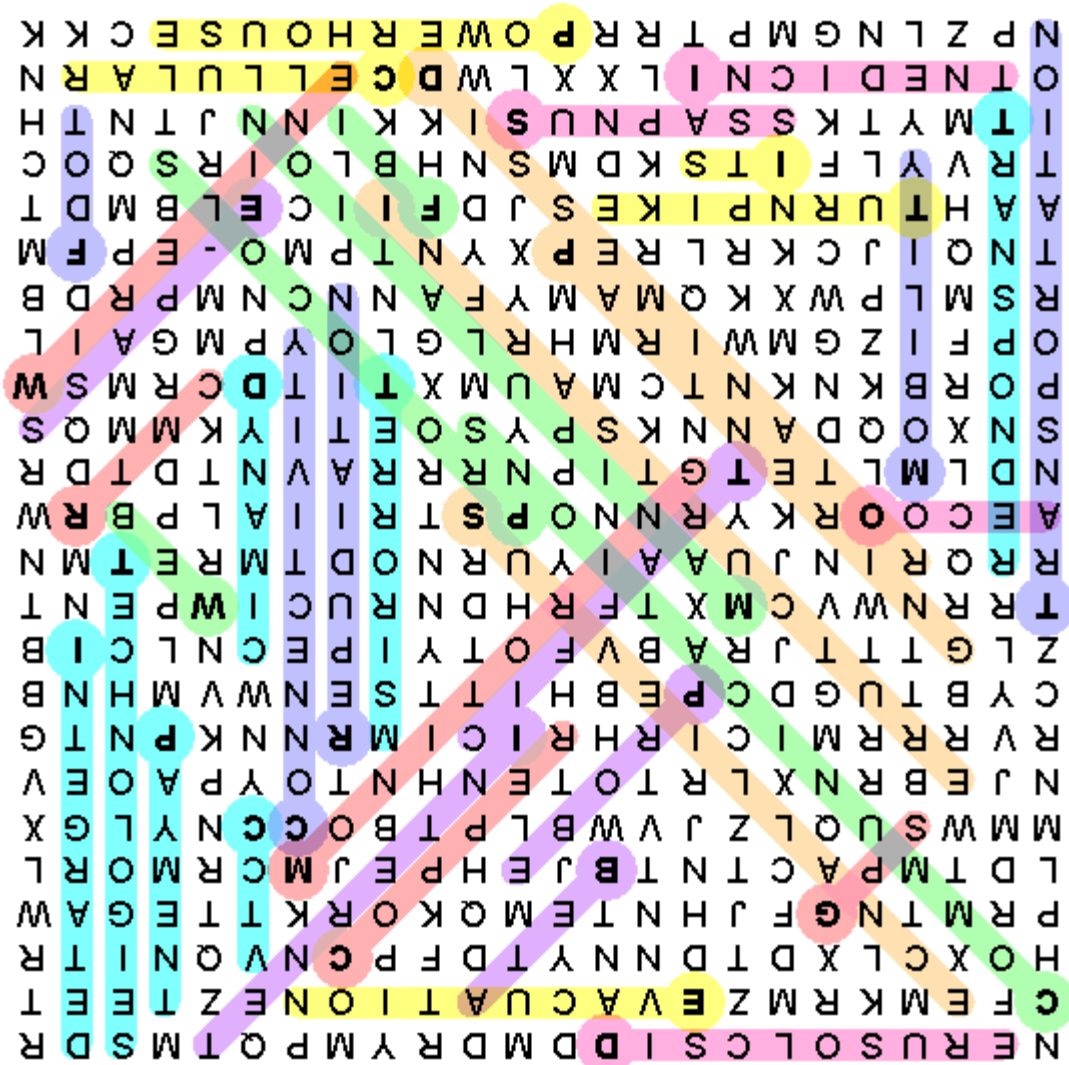


***If you would like to contribute some interesting trivia,  
email [Nick Adams](#)  
All submittals welcome!***

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**SunGuide<sup>SM</sup> Disseminator Word Challenge Answers**



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### Announcements



#### Don't Miss the 2003 NRITS Conference!

The 2003 NRITS Conference, to be held on August 10-13 at the Westin Innisbrook Resort in Palm Harbor, Florida, is fast approaching. This year's theme is **What's Going on in Rural ITS and Who's Doing It?**

The conference features tracks on Public Mobility, Traveler Information/Communication Systems, and Safety & Operations.

San Harbor, FL - Aug. 10-13, '03

Festivities will kick-off Sunday evening with a Sunset Dinner Cruise on the 180-foot StarShip vessel. Monday morning will start with the Opening Session, featuring keynote speaker, Jennifer L. Dorn, Federal Transit Authority Administrator.

The conference will conclude with the FDOT Secretary José Abreu providing his observations on rural transportation.

All-in-all, this conference is packed with great events you will not want to miss. So make your plans early. Registration is available on-line at <http://www.itsflorida.org/#NRITS>.

### The FDOT Mid-Year ITS Working Group Meeting

The FDOT ITS Office will host its Mid-Year ITS Working Group Meeting, August 13-14, 2003, immediately following the 2003 NRITS Conference. The Mid-Year ITS Working Group Meeting provides a forum for the FDOT District ITS Offices' staff and the Central ITS Office staff to discuss statewide ITS issues.

For more information, please contact Leslie Boatman, FDOT ITS Office, at (850) 410-5620 or email [Leslie.Boatman@dot.state.fl.us](mailto:Leslie.Boatman@dot.state.fl.us).

### Can You Rename This Mouthful?

FDOT's ITS Office is searching for just the right name for the Statewide Transportation Management Center Software Library System (STMCSLS). If you have a name you would like to have considered, please submit via email to [Karen.England@dot.state.fl.us](mailto:Karen.England@dot.state.fl.us). We will provide the list of names in a future *SunGuide*<sup>SM</sup> Disseminator for your review and voting.

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**July 2003**

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