

# ITS MIDWEST & GCM *Express Lanes*

**ITS MIDWEST**  
The Intelligent Transportation Society of the Midwest  
A regional chapter of ITS America including the states of  
Illinois, Indiana, and Wisconsin



May 2000 Volume 5.2

## University of Illinois Hosts Annual Meeting

On June 7-8, the Midwest ITS community will gather in Urbana-Champaign, Illinois for the 2000 ITS Midwest Annual Meeting. The 2-day meeting will draw key ITS decision makers and is open to all organizations interested in the application of advanced technologies to improve transportation efficiency and safety. Current ITS activities and opportunities in Illinois, Indiana, and Wisconsin will be discussed.

The program will include presentations about the National ITS Program, current and planned activities in the Gary-Chicago-Milwaukee (GCM) Corridor, and research activities and other projects in Illinois, Indiana, and Wisconsin. Illinois DOT Secretary Kirk Brown is scheduled to kick off the meeting on June 7th with a state perspective on ITS. Larry Smarr, Director of the National Center for Supercomputing Applications, one of the country's leading technology centers, will be the guest speaker at the ITSMW dinner on June 7th.

The ITS Midwest Annual Meeting is sponsored by ITS Midwest, the University of Illinois at Urbana-Champaign, the Federal Highway Administration, and ITS America. □



The University of Illinois at Urbana-Champaign is a comprehensive, major public university providing undergraduate and graduate education in more than 150 fields of study. The campus includes some 200 major buildings on 1,470 acres, serving more than 2,000 faculty members, 26,000 undergraduates, and 10,000 graduate and professional students. National surveys consistently rank the University of Illinois at Urbana-Champaign among the top ten institutions in many fields of study, with several colleges and departments ranked among the top five.

For registration information, contact: Judy Benigno, (630) 252-5586, [jbenigno@anl.gov](mailto:jbenigno@anl.gov).

**EXPRESS LANES is the official newsletter of ITS Midwest and the GCM Priority Corridor. Your comments, suggestions, and contributions are welcome.**

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## Inside this issue

- 2 CALENDAR
- 2 RTA STUDIES
- 3 ITSMW MEETING  
REGISTRATION
- 4 NEWS BRIEFS
- 4 REGIONAL ITS
- 5 FLEETONLINE™
- 6 MEMBERSHIP

## President's Message



As I write this column, the ITS Midwest Annual Meeting, which will be held this year at the University of Illinois Urbana-Champaign, is only a month away. This is a good time to look back at our efforts to promote the deployment of ITS in Illinois, Indiana, and Wisconsin and reflect on new activities and initiatives. An important function of ITS Midwest is to promote the exchange of ideas and facilitate the dialog between private and public organizations with an interest in deploying ITS in our region.

During the past year, we organized the 1999 Annual Meeting, hosted by the University of Wisconsin in Madison, WI. It was a very successful event that attracted approximately 150 participants. We worked closely with ITE Wisconsin in organizing the ITS Forum in Milwaukee, WI, in September 1999. The ITS Forum has now become an established ITS regional event, and we plan to continue sponsoring it in the fall of 2000. In February of this year, the ITS Midwest Outreach Committee, with support from ITE Illinois, organized the second Semi-Annual ITS Meeting in conjunction with the Chicago

See **Message** page 2

**Message***Continued from page 1*

Auto Show. This event attracted over 110 participants, who also had the opportunity to visit the Auto Show and see the newest ITS technologies being offered by the auto manufacturers.

Another important area of activity for ITS Midwest is membership development. A key development affecting membership is the new Affiliation Agreement, which was recently approved by the ITS Midwest and ITS America. This new agreement allows national organizations that are not members of ITS America to become members of ITS Midwest. I believe it will provide new opportunities for our organization to recruit new members. ITS Midwest and ITS America will continue to offer free membership in ITS Midwest to members of ITS America, subject to certain limitations described in the Affiliation Agreement.

The ITS Midwest Newsletter has been expanded to serve not only the members of ITS Midwest but also the Gary-Chicago-Milwaukee Coalition. This has increased the circulation considerably, and has provided more in-depth coverage of many ITS projects and activities of interest to the readers.

**Calendar of Events**

ITS Midwest Annual Meeting, sponsored by UIUC, ITS Midwest, FHWA, and ITS America. June 7-8, 2000, University of Illinois, Urbana-Champaign, Illinois. Contact: Judy Benigno, (630) 252-5586, jbenigno@anl.gov.

ITS Forum 2000: Success Stories, sponsored by ITE Wisconsin, Marquette University, Wisconsin DOT, FHWA, and ITS Midwest, Sept. 27, 2000, Marquette University, Milwaukee, WI. Contact: Todd Szymkowski, (262) 797-6577, todd.szymkowski@transcore.com.

7th ITS World Congress, sponsored by ITS America, VERTIS, ERTICO; Nov. 6-9, 2000, Turin, Italy. Contact: Kip Stacy-Protts, (202) 484-4542, kstacy@itsa.org.

Finally, we have continued the efforts to prepare for the Chicago 2002 ITS World Congress. Representatives from ITS America and ITS Midwest met in Chicago earlier this year with representatives from the offices of the Illinois Secretary of Transportation and Mayor of the City of Chicago. Both offices have expressed support for this important event, and a number of specific actions were agreed upon. The World Congress Organizing Committee will meet in Boston in May, during the ITS America Annual Meeting, to discuss the planning for the Chicago World Congress. I plan to attend and I will

inform our members about the latest developments in the next issue of this newsletter.

As we approach our next Annual Meeting, I want to invite all our members to think about new initiatives that would advance the deployment of ITS in our region. The Annual Meeting will provide an ideal opportunity to discuss new ideas and actions that can help turn ideas into realities. I look forward to seeing you in June at the University of Illinois Urbana-Champaign for what promises to be a very interesting and exciting event. □

**RTA Studies ITS Technologies**

*In December of 1998, the Regional Transportation Authority (RTA), in conjunction with Chicago Transit Authority (CTA), Pace and Metra, initiated studies to evaluate three ITS technologies designed to significantly improve transit travel options for RTA riders.*

The major en route traveler information and trip planning technologies studied include Active Transit Station Signs (ATSS) and Parking Management Systems (PMS). A third technology under study is Transfer Connection Protection (TCP). An executive summary describing the feasibility and potential benefits of TCP was completed by Wilson

Consulting in December of 1999 and preliminary planning for future TCP demonstrations is underway.

ATSS provide real-time "next train" or "next bus" transit service information by way of Variable Message Signs (VMS) and visual displays at a broad range of transfer facilities and stations. The RTA's ATSS study is being conducted by Wilbur Smith

Associates and focuses on regional integration strategies, message content, display and detection technology, hardware, software, and communications requirements.

PMS is employed to direct commuters to available parking spaces at park-n-ride facilities. When used in conjunction with VMS, they can also reduce travel times along expressways, arterials, and local roads by conveying real-time status of transit service and station parking availability while en route to a facility. In addition to the service boards, preliminary planning of Parking Management Systems is being

See **RTA Studies** page 3



Active Transit Station Signs provide valuable real-time information, such as "time to next train."

## RTA Studies

*Continued from page 2*

coordinated with state and local highway operating agencies. Wilbur Smith Associates also conducted the PMS study.

The objectives for both ATSS and PMS include:

- Investigating suitable technologies for demonstration and deployment.
- Determining functionality, messaging, and display requirements for integration.
- Utilizing existing and planned Automatic Vehicle Location (AVL) and Variable Message Sign (VMS) systems.
- Identifying potential sites for demonstration and recommending a deployment strategy.
- Ensuring interoperability among agencies.

Key stakeholders met periodically to discuss major issues and coordinate technologies for seamless integration of similar systems. They determined that the "time of arrival" in a count-down format was preferred as a means of displaying real time information on ATSS. Also, a technology review indicated that GPS (Global Positioning System) or track circuit based vehicle location systems are favored. Results of a technology review for PMS concluded that for monitoring of parking status, detection, and roadway and parking signage, aisle counts in large lots or

level counts in parking structures are favored.

The technology selection for roadway and parking signs will be amber-colored, light emitting diode or (LED) signs. To ensure compatibility with other systems, both ATSS and PMS will comply with the National Transportation Communication for ITS Protocols or NTCIP, Transit Communication Interface Profiles or TCIP,

National ITS Architecture Interim Guidelines, and the GCM Corridor Strategic Plan.

Five sites were selected for demonstration of ATSS primarily at CTA and Metra stations:

- 1) Davis Street - Evanston
- 2) Cumberland Avenue - Chicago
- 3) Harlem Avenue - Oak Park
- 4) Roosevelt Road/State Street - Chicago
- 5) Martin Luther King Drive at 35th Street - Chicago.

Additional planned sites for demonstration of ATSS include O'Hare and Midway Airports. Four sites selected for demonstration of PMS (primarily

at Metra park-n-ride facilities) are:

- 1) Schaumburg - Milwaukee District West Line
- 2) Lake Cook Road - Milwaukee District North Line
- 3) Hickory Creek - Rock Island District Line
- 4) Illinois Route 59 - Burlington Northern Santa Fe Line.

In addition, Cumberland Avenue and Davis Street sites are being considered for PMS demonstrations. Demonstrations for both ATSS and PMS are expected to begin by March 2001. All signs shall be coordinated and installed in accordance with local ordinances and regulations.

These demonstrations will be conducted by the RTA, CTA, and Metra. The total cost (including design costs) for ATSS demonstrations over a five year period is estimated to be \$1.5 million, while the total cost for PMS is estimated to be \$2.4 million. Funding is available to the RTA through FY2000 federal ITS allocations. □

*For additional information, please contact Angela Johnson, Manager of Engineering and Technology, at (312) 917-0781.*

## ITS MIDWEST Annual Meeting

June 7-8, 2000

Illini Union, 1401 W. Green Street  
University of Illinois  
Urbana-Champaign, IL

### REGISTRATION INFORMATION

The registration fee is \$120 for ITSMW members (\$145 after May 26) and \$160 for non-members (\$185 after May 26). Please call Helen Echols if you need to verify membership (630-252-1617). Students may register for \$20 (\$25 after May 26). To have an application FAXed or emailed, call Judy Benigno, 630-252-5586, jbenigno@anl.gov.

Full registration fee includes continental breakfast, breaks, and lunch each day, plus a dinner on June 7th. Lunches and dinner not included with student registration.

A block of hotel rooms have been reserved for the meeting. Contact Judy for details.





## NEWS BRIEFS

### Mulcahy Becomes New Secretary of WisDOT

Terry D. Mulcahy succeeds Charles Thompson as Secretary of the Wisconsin Department of Transportation. Thompson, who had led WisDOT since January 1992, left the department to resume private business activities. Mulcahy is a career WisDOT employee who started with the department in 1956. He had served as WisDOT Deputy Secretary since November 1992. □

### Kussart Appointed WisDOT Deputy Secretary

Incoming Wisconsin Department of Transportation Secretary Terry D. Mulcahy announced the appointment of Gene Kussart as the new Deputy Secretary for the agency. Kussart was Governor Tommy Thompson's Special Assistant for Building Tomorrow's Workforce. A Sheboygan native, Kussart was Chief of Staff to U.S. Representative Thomas E. Petri (R-Fond du Lac) before joining Governor Thompson's administration. □

### Zavattero becomes IDOT ITS Program Manager

On March 16, 2000, David A. Zavattero was named the ITS Program Manager for the Illinois Department of Transportation. He replaces Jeff Hochmuth, who stepped down to take a private sector job. Mr. Zavattero brings a wealth of public and private sector experience in the transportation

industry. Since 1993, he served as Deputy - Operations for the Chicago Area Transportation Study (CATS). Previously, he spent eight years in various transportation related positions for three consulting firms. Mr. Zavattero began his 27 year transportation career with CATS in 1973. □

### Railroad Grade Crossing Study

The nine-month deployment phase for the Pilot Study of Advisory On-Board Vehicle Warning Systems at Railroad Grade Crossings began on March 10. Approximately 300 vehicles have been equipped with an in-vehicle warning system that provides drivers with either visual-only, audible-only, or combination visual/audible warnings. *For more information, contact Chuck Sikaras, (847) 705-4800.* □

### New INDOT Traffic Center to Open in Summer

Construction is nearing completion on the new Borman Expressway Traffic Management Center building. The building will house the Indiana Department of Transportation's state of the art traffic operations and incident management systems being developed for the northwestern part of the state. Completion of this facility provides a major component in the GCM Corridor's integrated management network to deal with the Corridor's traffic and safety problems. A July opening is anticipated. □

### WisDOT Updates MONITOR System

The Wisconsin Department of Transportation's Freeway traffic management system in southeastern Wisconsin (MONITOR) recently underwent a facelift to enhance its operating capabilities. MONITOR is a computerized system of electronic detectors, ramp meters, and message signs used to improve traffic flow and safety on the Milwaukee freeways. The key component of the upgrade is a centerpiece map that can be used by the operator to observe traffic conditions, change message signs, and control ramp meters. The new system uses a Windows NT operating system, Oracle database technology, and ETAK mapping. *For more information, contact Donald Rhodes, WisDOT, (262) 548-8835, Donald.Rhodes@dot.state.wi.us.* □

### New Data Sharing Projects in Southeastern Wisconsin

The Traffic Incident Management (TIME) program in southeastern Wisconsin is improving interagency and data-sharing through the implementation of a wireless and wire-line communications system called TESCNET (Transportation and Emergency Services Communications Network). TIME is an inter-jurisdictional effort of law enforcement, transportation agencies, and private organizations working to manage traffic, coordinate emergency services, and efficiently clear crashes and other incidents affecting traffic flow. Edwards and Kelcey will provide technical and administrative assistance to WisDOT, which has responsibility for the communications network that supports data sharing among computer-aided dispatch systems. *For more information, contact Donald Rhodes, WisDOT, (262) 548-8835, Donald.Rhodes@dot.state.wi.us.* □

# A Regional ITS for Southeastern Wisconsin

*The Southeastern District of the Wisconsin Department of Transportation (WisDOT) has identified the architecture elements for a regional intelligent transportation system (ITS). These elements include traffic signal controls, freeway management systems, multi-modal traveler information systems, emergency management systems, incident management systems, and railroad grade crossing warning systems.*

There is significant motivation to establish a regional ITS. Over the past ten years travel on interstate highways has grown by more than 30% and is expected to increase another 50% by 2020.

More than half of all urban freeways experience congested conditions. The annual cost of congestion in lost productivity alone, not counting wasted

fuel and environmental damage, is over \$100 billion. In many locations, construction of more freeways or freeway lanes is no longer a choice because of economic, environmental, or political considerations.

The regional ITS will be compliant with the national architecture, as mandated by the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21). Compliance is a

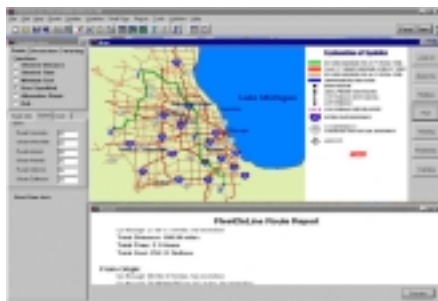
condition for receiving Highway Trust Funds money; however, it will also (1) make the process of designing and implementing ITS components easier, (2) improve inter-jurisdictional, inter-agency, and public-private interaction, (3) improve design and component quality, and (4) reduce design and other system costs.

See **Regional ITS** page 5

# FleetOnline™ Operational

*In May, 1999, the Gary-Chicago-Milwaukee (GCM) Corridor formed a public private partnership with TranSmart Technologies and the American Trucking Associations' (ATA) Foundation to deploy a real-time traveler information system called FleetOnline™ for Commercial Vehicle Operations (CVO). This system provides commercial vehicle dispatchers and drivers with information on congestion, incidents, weather, and routing necessary for safe, effective routing and dispatching.*

The FleetOnline™ software system provides the commercial vehicle dispatchers with up-to-the minute real-time and predicted traveler information on the planned routes. The FleetOnline™ system allows users to choose the shortest route or alternative routes. It also measures and analyzes the costs of these routes. More importantly, the FleetOnline™ system provides driving restriction information on user's planned routes and provides alternative routes when some driving restrictions,



The FleetOnline™ Software System User Interface.

such as over-height/over-weight or over-length/over-width, apply. Furthermore, it provides route specific, point-to-point warning on major incidents and construction. While en route, drivers can receive this customized information from the dispatcher over his/her wireless communications in the vehicle.

The FleetOnline™ system has been fully developed, integrated, and tested and is now in the

operational and deployment stage. Nine trucking companies have agreed to participate in the operational test and provide comments on system functionality and performance. These trucking companies are Cresco Lines Inc., Leoni Motor Express, A&M Cartage of Tinley Park, Adrian Carriers, Inc., Cox Transfer, United Parcel Service, Transport Service Company, Cushing Trucking, Inc. and Whimsey, Inc.

Dispatchers from these trucking companies participated in the introduction session of the FleetOnline™ system provided by TranSmart staff. ATA Foundation will summarize the comments from the industry and provide the evaluation report. The system will be enhanced based on the comments from the industry. □

*For more information, contact Phil DeCabooter, WisDOT Chief ITS Engineer, at (608) 267-0452 or Dr. Connie Li, Principal of TranSmart Technologies, at (608) 273-4740 ([connie@trafficonline.com](mailto:connie@trafficonline.com)). The TranSmart Website is at [www.trafficonline.com](http://www.trafficonline.com).*

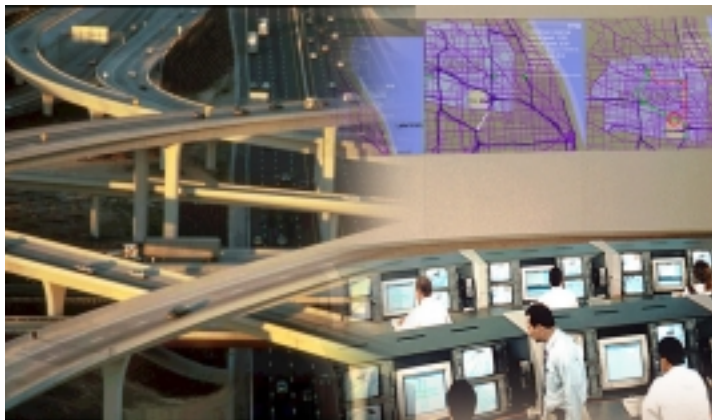
## Regional ITS

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Southeastern Wisconsin has unique geography, demographics, and institutions. Determining the best regional ITS architecture required information from a wide range of government agencies and private citizens. It was important to establish how a regional system should be integrated from both technical and institutional perspectives. Of special concern was ensuring that components could be built and installed as funds become available.

A consultant was hired to obtain information from law enforcement, transportation, and other agencies to determine each organization's particular ITS requirements. The information gathering process included a survey of 180 regional "stakeholders" to compile a current inventory of ITS information needs. Based on the information

obtained by the consultant, a proposed regional ITS systems architecture was crafted. The architecture identifies the types of communication and interactions needed between different transportation management organizations.



EWING

On February 23-25, 2000, a workshop sponsored by the Federal Highway Administration was held at WisDOT's Traffic Operations Center in Milwaukee to review the proposed southeast

Wisconsin regional ITS architecture. A top-down examination was made to see how the regional proposed system would fit with the national architecture. The final regional ITS workshop was held on March 14 to introduce the proposed new system to users.

The development of a regional ITS architecture in southeastern Wisconsin will provide numerous benefits for the management of transportation, the easing of congestion, and enhancing safety. An early benefit of beginning the process has been a sense of partnership and cooperation between the agencies involved in the project — a partnership sure to strengthen the ITS alliance in southeastern

Wisconsin. □

*For more information, contact Donald Rhodes, WisDOT, (262) 548-8835, [Donald.Rhodes@dot.state.wi.us](mailto:Donald.Rhodes@dot.state.wi.us).*

## Membership

Membership in ITS Midwest is open to corporations, companies, government agencies, universities, and other organizations with an interest in ITS development and deployment. Members of ITS America are entitled to up to three free chapter memberships, based on their ITS America dues.

Members paying \$15,000 in dues to ITS America get three chapter memberships, those paying \$5,000 to \$10,000 get two memberships, and those paying between \$500 and \$3,000 receive one membership. A qualifying organization which is not a member of ITS America may join the ITS Midwest chapter for \$245. Organizations belonging to ITS America which have used up their complimentary chapter memberships may also join for \$245.

Chapters like ITS Midwest play a key role of outreach, education, and support for ITS technical and planning activities. ITS Midwest also provides a forum for planning and support of the GCM Priority Corridor. **Join ITS Midwest today and play a role in shaping our future transportation systems!**

## ITS Midwest Members:

3M  
Alpine Electronics  
Argonne National Laboratory  
Barco America - Visual Systems  
BRW Inc.  
Chicago Area Transportation Study  
Chicago DOT  
City of Madison, WI  
County of Lake, IL  
DuPage Mayors and Managers Conf.  
Eaton Corp.  
Edwards & Kelcey  
Etak Inc.  
Federal Highway Administration  
Federal Transit Administration  
Ford Motor Co.  
General Motors  
Great Lakes Engineering  
Hartman Group, Inc.  
Illinois DOT  
Illinois State Toll Highway Authority  
Indiana DOT  
Intellect Network Technologies  
Iteris Inc.  
KG Rear Vision  
Landstar Systems Inc.  
Ligas Consulting  
Marquette University  
Miami Valley Reg. Planning Commission  
Motorola Inc.

National Engineering Technology Corp.  
Navistar International Transportation Co.  
NE Indiana Regional Coord. Council  
Northern Telecom  
Oklahoma DOT  
Pace Suburban Bus  
Parsons Transportation Group, Inc.  
PB Farradyne Inc.  
Positron Industries  
Purdue University  
Regional Transportation Authority  
Robert Bosch Corp.  
Schneider National  
Siemens North America  
Steelye, Stevenson, Value & Knecht  
The Hoosier Company Inc.  
Traffic & Parking Control Co.  
Traffic Control Corp.  
Transintel Corp.  
TranSmart Technologies Inc.  
TRW Inc.  
University of Illinois at Chicago  
University of Illinois at Urbana-Champaign  
University of Wisconsin at Madison  
Weiland Consulting Co.  
Wilbur Smith Associates  
Wisconsin DOT

For further information about joining and the benefits of membership in ITS Midwest, please contact Philip DeCabooter, membership chair, at (608) 267-0452. □

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## How to reach us...

Please address all publication inquiries, comments, suggestions, and contributions to: *Express Lanes* Editor, ITS Midwest, c/o Argonne National Laboratory, 9700 S. Cass Avenue, ITS/208, Argonne, IL 60439. *Express Lanes* may also be reached at:

- ◆ Telephone: 630-252-1617
- ◆ FAX: 630-252-4500
- ◆ email: ITSnews@anl.gov

*Express Lanes* is the newsletter of the Intelligent Transportation Society of the Midwest and the GCM Corridor Coalition.

Contributions of general interest to our readers are encouraged, including news from members, upcoming events, articles on technology/research and

deployment projects, and other ITS-related information.

For further information on GCM corridor activities, contact your local DOT representative or the BRW consulting team.

GCM Corridor C-TIC Home Page:  
<http://www.gcm.travelinfo.org>

#### Illinois DOT

David Zavaltero 847/705-4800  
Chuck Sikaras 847/705-4800

#### Indiana DOT

Dan Shamo 317/234-0410

#### Wisconsin DOT

Phil DeCabooter 608/267-0452

#### BRW

Jeff Benson 612/373-6444  
Daryl Taavola 612/373-6529

### ITS MIDWEST

c/o Argonne National Laboratory  
9700 S. Cass Ave., B208  
Argonne, IL 60439

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