

# 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, Wisconsin



September 1999 Volume 4.2

## Annual Meeting Well Attended in Madison

ITS Midwest held its 1999 annual meeting on June 2nd and 3rd at the University of Wisconsin in Madison. Over 150 members of the midwest ITS community, including ITS decision makers and service providers, were on hand to view the exhibits, learn about projects and initiatives, and attend social events.

"We were very happy with the turnout at this year's event," said ITSMW president Adrian Tentner. "The attendees also enjoyed the meeting and their feedback

was very positive."

This year's meeting was co-sponsored by ITS Midwest, the University of Wisconsin, the Federal Highway Administration, and ITS America. Among the speakers addressing the meeting were Robert Puentes, Director of ITS America, Charles Thompson, Wisconsin DOT Secretary, and John Vesco, VP at Schneider National.

*Additional coverage on page 2*

PHOTOS BY EWING



ITSMW president Adrian Tentner welcomes members to the annual meeting (left). The meeting was hosted this year at the University of Wisconsin, which is located in the state's capital, Madison (above).

## Klika Appointed New INDOT Commissioner

Cristine M. Klika was named as commissioner of the Indiana Department of Transportation effective June 2, 1999.

Klika began her career at INDOT in 1988 as a design-engineering supervisor in INDOT's Seymour District office. She went to INDOT's Design Division in 1990 as consultant services supervisor and then was employed as design services manager. Her career continued as Technical Services Division chief and



as manager of INDOT's Preliminary Engineering Section.

Since October of 1997, Klika has served as Deputy Commissioner for Planning and Intermodal Transportation.

A native Hoosier, Klika has a degree in civil engineering from Purdue University and is a registered professional engineer.

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

### **ITS Midwest Executive Board:**

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**EDITOR-IN-CHIEF:**  
Tom Ewing, Argonne National Lab

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## President's Message



The ITS Midwest Annual Meeting, held on June 2nd and 3rd in Madison, Wisconsin, was a great success, both in terms of attendance and quality of presentations. The University of Wisconsin at Madison hosted the meeting, providing the

facilities for sessions and social events, as well as the beautiful views of the Madison campus. Special thanks are due to Prof. Bin Ran, from the University of Wisconsin, who chaired the Program Committee, and his staff who coordinated all the logistical details. Ten companies, both members and non-members, exhibited a wide range of ITS products. Coordinated by Jon Ringler of HNTB,

the exhibits attracted many visitors and were the focal point for conversation and interactions during the breaks scheduled throughout the two meeting days. Eight member companies responded to the invitation of our sponsorship campaign co-chairs, Parson's Syd Bowcott and Motorola's Paul Dowell, by partially sponsoring various social events. Starting with a strong endorsement of ITS delivered by Charles Thompson, Wisconsin Secretary of Transportation, the meeting provided an excellent overview of ITS deployment and research activities in the Gary-Chicago-Milwaukee Corridor, the states of Illinois, Indiana, and Wisconsin, and the nation. It provided a once-a year opportunity to meet many friends, to talk about current projects and discuss new ones. Our Outreach Committee, led by Jeff Hochmuth, is now busy planning for the ITS

Forum, co-sponsored by ITS Midwest and ITE Wisconsin, which will be held on Sept. 29, 1999 at Marquette University in Milwaukee, WI. And we are already planning the semi-annual ITS Midwest Meeting, which will be held again in February 2000, in conjunction with the Chicago Auto Show at the McCormick Exhibit Hall. The ITS Midwest Board of Directors met on August 25, 1999 and discussed a number of future activities, including preparations for the Chicago ITS World Congress in 2002, an increased effort to promote ITS private-public partnerships, and a possible ITS student competition. As always, I want to invite all our members to get involved in our many activities and to take advantage of our newsletter by sending comments, suggestions for new activities, and information about new ITS products to our editor, Tom Ewing.

## Cicero Avenue Smart Corridor Test

In July 1998, the Illinois Department of Transportation (IDOT) and the City of Chicago, Department of Transportation (CDOT) executed an agreement to conduct Phase I engineering services for the Cicero Avenue Smart Arterial Corridor Operational Test being funded under the Gary-Chicago-Milwaukee (GCM) Priority Corridor. The maximum budget for Phase I engineering services is \$120,000.

IDOT and CDOT identified the Cicero Avenue (Illinois Route 50) Corridor between Interstate 55 and Chicago Midway Airport as a candidate for a Smart Arterial operational test. Under the Phase I engineering services, a preliminary design and operational test plan report will be prepared for the Cicero Avenue Corridor.

Based upon the results of the Phase I engineering phase, this project will seek to demonstrate the effectiveness

of arterial street traffic signal operations that are integrated with freeway operations as well as focused traveler information. The project incorporates transit components including real time information on the Chicago Transit Authority's (CTA) Orange Line and airport information including parking information. Bus priority operations will also be considered along with the potential to provide information on rail movements. Cicero Avenue is a high volume truck corridor and the potential for Commercial Vehicle Operations (CVO) involvement is high, consistent with national and other metropolitan area initiatives.

The primary emphasis of this project is to coordinate arterial and expressway traffic management and information. Features of the project will include advanced

**See Cicero Smart Corridor page 3**

## Photo Gallery

PHOTOS BY EWING



UW host Bin Ran and ITSMW President Adrian Tentner (top right), Paul Dowell and Jennifer Wilson with Adrian Tentner at the Motorola exhibit booth (top left), David Zavattero of the ITSMW Executive Board with Connie Li at the TranSmart booth (bottom right), UW campus (bottom left).



## Calendar of Events

ITS Forum, sponsored by ITE Wisconsin and ITS Midwest, Sept. 29, 1999, Marquette University, Milwaukee, WI. Contact: Larry Henson, (414)-774-1771.

6th ITS World Congress, sponsored by ITS America, VERTIS, ERTICO; Nov. 8-12, 1999, Toronto, Canada. Contact: Kip Stacy-Protts (202)484-4542, kstacy@itsa.org.

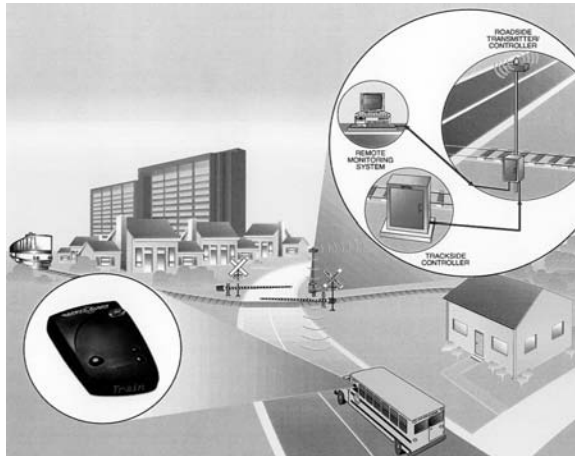
ITS Midwest semi-annual meeting, February 2000, Chicago Auto Show, McCormick Place, Chicago. Contact: Syd Bowcott (312) 930-5147, sydney\_bowcott@parsons.com.

# Railroad Crossing Pilot Study

**On May 15, 1997, the Illinois Department of Transportation (IDOT) executed a consultant contract with Raytheon Systems Company to design, install, oversee, operate and maintain a demonstration system for a Pilot Study of Advisory On-Board Vehicle Warning Systems at Railroad Grade Crossings. IDOT is directing this pilot program that seeks to provide vehicles approaching railroad grade crossings with an in-vehicle warning system.**

Approximately 300 vehicles will be outfitted with an on-board system as part of this pilot study. The vehicle mix will include a variety of ground transportation vehicles in the study area including:

- (1) School buses serving the study area
- (2) Emergency service vehicles operating in the study area
- (3) Commercial vehicles that are primarily housed in the study area



Source: IDOT

The system will use low powered communication transmitters located at the crossings that will be triggered by a train approaching or occupying the crossings. This transmitter will send a signal between 800-1,200 feet in all di-

rections from the grade crossing and activate a receiver in any equipped vehicle within the range to alert the driver of a train's presence. The receiver in the vehicle will contain an audible, a visual, or a combination audible/visual warn-

ing. The pilot study area includes five grade crossings along the Metra-Milwaukee North Line equipped with detection and warning systems.

IDOT has also executed an agreement with the University of Illinois at Urbana-Champaign to evaluate the on-board vehicle warning system that is being installed as part of this pilot study. The evaluation for the pilot study will emphasize the reaction/perception of drivers to the information provided in their vehicles and the understandability of this information.

Trackside equipment has been installed at the five grade crossings, but is turned off awaiting installation of 300 advanced in-vehicle receivers. These receivers are scheduled to be installed by the end of October 1999, and a fully functional system is expected to be operational in November 1999. The active system's deployment will continue for a period of twelve months. Following completion of the active system deployment, an evaluation report will be prepared including performance of trackside and in-vehicle equipment.

*For more information, please contact Chuck Sikaras, IDOT, 847-705-4800.*

## Cicero Smart Corridor

*Continued from page 2*

traffic signal operations (e.g. closed loop operation, centralized control and monitoring capabilities, integrated traffic responsive operations, and signals capable of operating under emergency and transit priority). Other features will include traffic monitoring and surveillance with fully operable video cameras, traveler information for motorists, and airport and transit users, and the use of Variable Message Signs and Highway Advisory Radio.

It is anticipated that the Phase I engineering services shall be completed by the end of the year.

*For more information, contact John Ellis, Chicago DOT, (312) 744-4608.*

## WisDOT Pursues Public/Private Partnerships for ICOP

The Wisconsin Department of Transportation recently identified five possible public/private partnerships for the test segment of its Integrated Corridor Operations Project (ICOP). The one-year field operational test will begin in the summer/fall of 2000 and spans 13 miles along I-94 from Howard Avenue to the Racine County line in southern Milwaukee County.

The five potential public/private partnerships which were identified as advantageous for the test segment are:

- Fiber optic communications system backbone equipment – Will provide the infrastructure for a single-integrated voice, data, and video communications network management system for the test segment.
- Traffic control system – Will provide

a fully operational, real-time, multi-agency traffic signal coordination and management system for signalized intersections within the corridor.

- Traffic-signal-system equipment, e.g. advanced traffic controllers, loop detectors, and transit priority devices – Will upgrade, modernize, and expand the capabilities of the existing traffic signal systems within the corridor. In addition, this equipment will improve transit bus system operations by giving buses priority along signalized intersections of a selected route in the corridor.
- Traveler information system – Will place two interactive kiosks within the test segment area at General Mitchell International Airport that

See ICOP page 4

# Advanced Traveler Information System for CVO

**In May of 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 -- FleetOnline -- for Commercial Vehicle Operations (CVO). This system will provide commercial vehicle dispatcher and drivers with the information on congestion, incidents, weather, and routing necessary for safe, effective routing and dispatching.**

The project goals are to enhance the safety and efficiency of motor carrier operations and to reduce traffic congestion by providing information that will improve carrier routing and dispatching. The project also offers an opportunity to apply the public-private partnership



EWING

concept and creates a working platform on which the CVO industry and public and private collectors and distributors of traveler information can work cooperatively together.

The FleetOnline software system provides the commercial vehicle dispatchers with up-to-the minute 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, such as over-height/over-weight or over-length/over-width, apply. Furthermore, it provides route specific, point-to-point warning of major incidents and construction. While enroute, drivers can receive this customized information from the dispatcher over his/her wireless communications in the vehicle.

The FleetOnline system is scheduled to be launched on November 8, 1999. The project started in May and will have a twelve-month schedule. The system development will be completed in the first six months. The remaining six

months are for system testing, evaluation, and enhancement. Currently, the project team is working on identification of the functional requirements, information collection, database creation, and CVO traveler information needs identification.

Under the current public-private partnership arrangement, the project is focusing on the Chicago metropolitan area. Assuming the initial deployment is successful, the system may be expanded to other major metropolitan areas in the region and the entire GCM Corridor.

It is interesting to note that TranSmart and ATAF are working together to pursue incorporating the GCM FleetOnline system into ATAF's Phase 2- Electronic Cargo Manifest project. The Electronic Cargo Manifest project will develop and test a "universal" electronic cargo manifest that will be transferred throughout the cargo supply chain and secured with a biometric "thumbprint" identifier. This electronic manifest will provide an immediate transfer of essential cargo information, thus expediting and securing the movement of goods through various intermodal facilities. However, the ground-based cargo itself may still encounter the standard barriers of the surface transportation system.

Incorporating the FleetOnline system

into the Electronic Manifest project could enhance the literal movement of the goods to the intermodal facilities. It was believed this can be done at very little additional expense, but it will add great value to either project.

*For more information, contact Phil De Cabooter, WisDOT Chief ITS Engineer at (608) 267-0452 or Dr. Connie Li, Principal of TranSmart Technologies, at (608) 273-4740.*

## ICOP

*Continued from page 3*

will provide an integrated multi-modal traveler information system for commuters and tourists.

- Field systems integration - Will be performed by a systems integrator to combine and connect the test segment's components with the existing MONITOR Freeway Traffic Management System.

"The public-private partnerships will play an important role in operating and managing the field test project," explained John Corbin, the Wisconsin Department of Transportation project manager. "This process brings major transportation corridors in Southeastern Wisconsin a step closer to optimal operation and management through the use of ITS strategies and technologies."

WisDOT is currently negotiating with the potential private partners for possible contracts. In addition, WisDOT is currently exploring its traditional state and local procurement practices to identify and remove any potential public/private partnership contractual issues that could prove to be barriers to deployment of the test segment.

WisDOT contracted with a consultant team headed by Edwards and Kelcey to provide support with the public/private partnership process, and to develop the design of the test segment. The Edwards and Kelcey consultant team includes JMS Communications & Research and NET Corporation.

*For more information, contact John Corbin, WisDOT, 414-227-2150.*

## Strategic Early Deployment Plan for ITS Approved

The Chicago Area Transportation Study (CATS) Policy Committee approved the Strategic Early Deployment Plan (SEDP) for Intelligent Transportation Systems for northeastern Illinois on June 10, 1999. The SEDP was coordinated through CATS as the Metropolitan Planning Organization and sponsored by CATS, the Illinois Department of Transportation (IDOT), the Regional Transportation Authority (RTA), the Chicago Department of Transportation (CDOT), and the Illinois State Toll Highway Authority with participation by all regional stakeholders.

Northeastern Illinois has a long history of applying technology to improve the performance of the transportation system. This tradition includes the early traffic signal systems, nearly forty years of expressway surveillance by the IDOT Traffic Systems Center, and more recently the Chicago Transit Authority's (CTA) Bus Service Management System, the Tollway's I-Pass system, the GCM Gateway, and many other projects. The SEDP continues and builds on these systems. In fact, a challenge was to structure the SEDP to address on-going systems in an integrated regional plan that would benefit both the operators and users.

The SEDP was coordinated with the transportation management component of the 2020 Regional Transportation Plan (RTP). It supports the national goal for ITS and helps reduce congestion and delay. Congestion costs northeast Illinois \$4 billion annually according to the latest Texas Transportation Institute estimates. While the 2020 RTP includes over \$30 billion of investment, more than 80% of this is devoted to maintaining the existing system. Even with this investment, CATS travel models predict a continuing increase in congestion indicating a role for ITS as part of a coordinated strategy to improve performance.

The SEDP identifies \$136.4 million of ITS investment over the next 10 years in four areas: core infrastructure, subre-



## NEWS & ANNOUNCEMENTS

### GCM Meeting

The GCM Executive Committee met on July 15, 1999 at the Mississippi Valley Transportation Conference in Chicago. The Executive Committee approved the 2000 Business and Financial Plan and discussed the future focus of the GCM Corridor Program.

The annual committee chairmanship rotation also took place at the July 15 meeting. Indiana Department of Transportation Commissioner Cristine Klika is the new chair of the Executive Committee. The new chair of the Deployment Committee and the Coordination Work Group is Dan Shamo, ITS Program Engineer for INDOT.

### GCM Communicator

The GCM Communicator (GCMC) is an Internet-based communication tool designed to provide GCM Corridor participants with the capabilities to transfer electronic files, participate in online discussion, exchange email, and review a calendar of events. The GCMC is implemented as a secure web site that requires a user name and password to gain access. It was developed to be an improved successor to the Information Clearinghouse (ICH).

The GCMC provide users with cost-effective tools to exchange information and documents by minimizing the need to mail hardcopies between users. For example, users can upload draft documents and notify other users of the document's availability via email. Recipient users can, in turn, download these draft documents for review and comment. The GCMC encourages collaborative efforts among the various user organizations by providing a virtual network base on the Internet. Contact: Daryl Taavola, BRW, 612/373-6529.

gional hubs, integrated operations, and information management services. The Plan describes the user service objectives for this investment and identifies a long-term regional vision for ITS deployment. The SEDP also addresses the national architecture issue. The SEDP adopts the Gateway architecture as the regional architecture, discusses how the regional architecture is consistent with the national architecture, and describes a planning and programming process to insure that ITS projects in northeastern Illinois will comply with the regional architecture and applicable standards. Further, the SEDP also includes a regional integration strategy that describes the relative levels of integration anticipated among the regional systems.

Core infrastructure projects in the Plan include fiber optics installation to provide high quality, high capacity communications (particularly between regional Traffic Management Centers), variable message signing on the Tollway and IDOT systems, expanded use of closed-circuit television systems, and intelligent bus and paratransit systems at the CTA and Pace. Subregional hubs include completion of the Gateway TMC as the backbone of the three-state and regional architecture as well as completion of hubs for the Tollway, CDOT, and the counties where cost effective.

Integrated operations include an expanded Cicero Avenue "smart corridor" recommended to extend from I-57 to I-94, interagency signal coordination with DuPage County as a prototype of this strategy, integrated expressway and arterial operations, transit signal priority as proposed by the RTA and the service boards, and arterial incident management with Lake-Cook Road as a prototype for other arterials. Finally, information services include active transit signing, regional kiosk systems, and creation of a travel data archive for planning and research use. The Plan encourages public-private partnerships to support ITS deployment.

About 60% of the funding needed for the SEDP has been identified. The long-term component of the Plan identifies additional ITS deployments and will require additional funding. The CATS Policy Committee provided an ideal forum to develop an SEDP which cuts across models and institutions and to facilitate the coordination and consensus needed to realize the regional goals for ITS.

*For further information, contact David Zattero, CATS, (312) 793-0360.*

## Membership

Membership in ITS Midwest is open to corporations, companies, government agencies, universities, and other organizations which are either members of ITS America, or operate within the three-state geographical boundary of the ITS Midwest chapter. 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.

### ITS Midwest Members:

3M  
Alpine Electronics  
Argonne National Laboratory  
Barco America - Visual Systems\*\*  
BRW Inc.  
Chicago Area Transportation Study  
Chicago Transit Authority  
Chicago DOT

City of Madison, WI\*\*  
City of Milwaukee, 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  
Hartman Group, Inc.  
Illinois DOT  
Illinois State Toll Highway Authority  
Indiana DOT  
Intellect Network Technologies  
KG Rear Vision  
Landstar Systems Inc.  
Matsushita Information Systems Co.  
Marquette University  
Miami Valley RPC  
Motorola Inc.  
Navistar International Transportation Co.  
NE Indiana Regional Coord. Council  
Northern Telecom  
Northwestern University  
Odetics ITS Division  
Oklahoma DOT  
PACE Suburban Bus  
Panasonic  
Parsons Transportation Group, Inc.  
PB Farradyne Inc.

\*\* Indicates new member

Positron Industries\*\*  
Purdue University  
Raytheon  
Regional Transportation Authority\*\*  
Robert Bosch Corp.  
Schafer Corp.\*\*  
Schneider National  
Siemens North America  
Steelye, Stevenson, Value & Knecht  
STV Inc.  
The Hoosier Company Inc.  
Traffic & Parking Control Co.  
Traffic Control 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.\*\*  
Wisconsin DOT

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

### ITS MIDWEST

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



### 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:

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w FAX: 630-252-4500  
w 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>

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Address Correction Requested