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MICHIGAN AT FOREFRONT OF OPERATIONS MANAGEMENT AND MOVEMENT

BY TONY KRATOFIL



The American Association of State Highway and Transportation Officials (AASHTO) is the organization of state transportation agencies, which identifies policies and standards by which the member states across our nation agree to abide. AASHTO has created a number of committees to discuss issues and conduct business deemed important to the member states. Several years ago, the Standing Committee on Highways (SCOH) formed a new subcommittee, the Subcommittee on Systems Operations and Management (SSOM). MDOT has regularly participated in SSOM, and this year, Jason Gutting and I attended the annual meeting held jointly with the Subcommittee on Traffic Engineering (SCOTE) in Manchester, New Hampshire. I would like to share with you a few general observations I had of the meeting. Additionally, there were a number of interesting presentations you can view by going to the following web link:

<http://www.transportation.org/?siteid=42>

Observation 1: Michigan is becoming recognized as a lead state in Integrated Transportation Systems Operations & Management (ITSOM). MDOT was one of only a few states who attended the meeting, and our regular participation is putting us in the same league as other lead states, such as Virginia, Washington, Minnesota and California. While our active role in leading IntelliDrive™ (formerly VII) is well acknowledged, our establishment of organizational units for ITSOM and advancement of program areas for congestion management and traffic incident management (TIM) are now being looked at as models for other states. Way to go MDOT! This is a very good thing.

Observation 2: One topic area of discussion was the new SCOH Strategic Plan, and specifically a goal statement to, "Create a congestion-free America through improvements to the multimodal transportation system and improve system performance through advanced technology and operations." ITSOM plays an integral role in achieving this outcome, both in congestion management strategies for recurring congestion and TIM strategies for non-recurring congestion. Most other lead states are in locations that are experiencing population and traffic growth, so applications such as "active traffic management" are topics of high interest for them. There are exciting, new things happening in these arenas, which we certainly should keep our eye on.

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But in Michigan, as you know and probably realize every day, we're seeing stagnant if not declining population and traffic growth. An increasing percentage of our congestion is related to traffic incidents. This gives us a unique opportunity to leverage the many excellent practices we have developed in TIM and take them to the next level to become a national leader in incident response and clearance.

Observation 3: ITSOM is gaining importance on a national level in terms of the amount of research effort and funding dedicated to topics within its scope. This is a positive trend; however, the discipline of the research process is clearly being outpaced by the speed of technological developments and technology applications. By the time many of these syntheses of practice and research reports are completed, their subject technologies will be outdated. While we should support the research efforts, it is at least equally important then that we continue to stay near the leading edge of technology in order to continue to be a lead state for ITSOM. Our active role in IntelliDrive™ and recent approaches to obtain probe vehicle data keep us in the right mix, and we should strive to stay there.

The difficult times we are experiencing in Michigan state government are not unique – they are being felt by our counterparts across the country. But every cloud has its silver lining, and these austere times present many opportunities for applying cost effective ITSOM strategies and technology to have measurable benefit for our customers, thus allowing Michigan to stay on the leading edge of innovation and advancement of ITSOM.

NOTE FROM THE EDITORS BY JIM SCHULTZ AND LYNDI KOWATCH

In a June 2 Detroit Free Press editorial, it was noted that Michigan needs to change in response to the many events that are rocking the state's economic foundations. Nothing stays the same through this kind of process. Hard choices have to be made. Survival can be a powerful motivator.

For Michigan, it starts with throwing out a lot of assumptions about the way things are supposed to be done and dealing with reality. It starts with determining what this state, with its resources, work ethic and intellectual capital, can be. And then it takes the courage to change -- and the wisdom not to turn against one another in the process.

Are we tired enough of being called the Rust Belt? Can we muster now the collective will to become the Green Belt or the Smart Belt? Can we become the place where new ideas are welcomed?

And so this new beginning starts with this newsletter making MDOT staff aware of all of the operations-related activities that have been done in the past so that we can begin the process of integrating them into a cohesive process that gets us closer to a goal of sustainable transportation.

For further information or future article ideas for SOM Talk, please contact either Jim Schultz, at 248-483-5131 or schultzs3@michigan.gov or Lyndi Kowatch, at 517-335-3299 or kowatchl@michigan.gov.

SOM INITIATIVES BY JASON GUTTING



The SOM Section hopes to bring several new initiatives to the forefront over the next year. Our division and bureau are working on an Operations budget to help the advancement of our section. SOM is heavily reviewing performance factors for operations that will provide a good flavor of our progress and accountability. Each unit is developing performance measures to become a part of the overall MDOT performance management that has evolved from the road and bridge condition goals. We want each Michigan citizen to know that MDOT is striving to be the best DOT across the country as we consistently and accurately provide them with operating information to make better travel decisions.

Our section is looking past 511 to an interactive travel time application that notifies you of travel times, non-recurring congestion, re-routing options and travel time reliability. We want motorists to be provided with immediate traffic information on how the system is operating. SOM is partnering with MDIT and the Office of Communications to develop the next phase of Mi-Drive (<http://www.michigan.gov/drive>) that will incorporate many of these initiatives. Historical travel times coordinated with weather events will allow us to provide travel time reliability for traffic movements around the state, and ultimately eliminate unexpected delay.

The Traffic Incident Management (TIM) area has already provided simple and inexpensive tools to the Michigan State Police accident reconstructionists around the state. Scrap metal is being used with scrap reflectorized material to make reflectors for data collection, which enhances the visibility of MSP officers, allowing them to open roadways quicker. SOM plans to continue and expand the statewide TIM training sessions and provide quick clearance public outreach after legislation is passed (hopefully) later this year. Plans to map out incidents with historical travel time data will begin shortly and be provided by the ITS area's contract with Navteq. This information will allow us to determine queue lengths and delay times for all types of incidents to predict clearance times to provide to the public.

CONSTRUCTION ANALYSIS FOR PAVEMENT REHABILITATION STRATEGIES (CA4PRS)

BY ANGIE KREMER

Software Integration of Design, Construction, and Traffic for Accelerated Highway Rehabilitation Projects



FHWA recently acquired the CA4PRS group license from Berkeley for all 50 state DOTs after they approved its market-ready technologies and provided introductory training session for MDOT regional trainers. This software is now available and free for you.

What is CA4PRS?

CA4PRS software is a decision-support tool that helps transportation agencies select more effective and economical strategies for highway rehabilitation and maintenance projects. CA4PRS incorporates three interactive analytical modules: a schedule module calculates project duration; a traffic module quantifies the impact of lane closures; and a cost module estimates total project costs.

Benefits of CA4PRS

CA4PRS is designed to identify optimal rehabilitation solutions that balance on-schedule construction production, traffic inconvenience, and agency costs. This allows CA4PRS results to integrate with microscopic traffic simulation tools to estimate road user delay costs that arise from construction.

During the design and construction phases of highway rehabilitation projects, CA4PRS helps transportation agencies, contractors, and consultants:

- develop staging construction plans,
- establish CPM schedules,
- estimate cost (A) + schedule (B) contracts and calculate incentive/disincentive specifications.

Software and additional information is available through your MDOT regional trainer. Please contact Julie Johnston, at 517-322-5774 or jonhstonju@michigan.gov to find out who your regional trainer is.

SOM FORMS WORK ZONE BUSINESS TEAM

BY BRIAN ZIMMERMAN

In the beginning of 2009, staff from Work Zone Administration, Traffic and Safety, Central Maintenance, Region/TSC Construction, and Traffic and Maintenance joined to form the SOM Work Zone Business Team. As a subcommittee of the Traffic Recommendations Committee, the team brings statewide work zone issues to a central point for discussion of problem solving, best practices, industry issues and sharing of other statewide issues and concerns.

For more information or to present items to the committee, you can contact your Region, TSC, division representative or Brian Zimmerman, Committee Chair, at 517-322-6794 or zimmermanb@michigan.gov.

2009 MIDWEST WORK ZONE ROUND TABLE

BY JULIE JOHNSTON

In May, Jennifer Foley, University Region Assistant Delivery Engineer, and Julie Johnston, Work Zone Delivery Engineer, attended the 2009 Midwest Work Zone Round Table meeting. The annual meeting is a great opportunity for Midwest DOT's and FHWA to discuss and share current best practices and policies with regards to work zones. Contributing states include: Illinois, Iowa, Michigan, Kansas, Nebraska, Missouri, Wisconsin, Ohio, Minnesota and Indiana. An email group has been set up allowing these states to continue to share information throughout the year.

Topics among discussion at this year's meeting were: ITS in work zones, contractor ingress and egress issues, mobility policies, work zone process reviews and performance measures, balloon lighting, moving lane closures, customer surveys, ARRA projects and signs, speed limits, and the funding of law enforcement in work zones. Meeting notes are available in Project Wise under "Documents", "System Operations and Management", "Work Zone Safety & Mobility" and "Midwest Work Zone Round Table 2009".

For more information regarding the 2009 Midwest Work Zone Round Table, please contact Julie Johnston at johnstonju@michigan.gov or 517-322-5774.

TRAFFIC INCIDENT MANAGEMENT WORKSHOPS

BY ANGIE KREMER

Excitement is spreading throughout the regions to teach the importance of Traffic Incident Management (TIM) through workshops and meetings. The main focus of these workshops is incorporating the National Unified Goal (NUG) to:

- Responder Safety
- Safe, Quick Clearance
- Prompt, Reliable, Interoperable Communications

Partnerships with the first responder community are developed or enhanced through these activities. The MITS Center has trained close to 300 people within 24 different agencies this past summer and spring. Training activities include "Hats of Incident Management", a humorous DVD depicting stakeholders involvement in incidents, as well as the lane taper exercise where the class deploys cones based on skip marks on the roadway.

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Recent workshops held this past summer include: Jackson County, Independence Township Fire Department, Westland Fire Department, Dearborn Fire Department, Redford Fire Department, Dearborn Fire Department, Saginaw County, and Oceola County, Wexford County, Huron County, Tuscola County, Sanilac County, 5 Counties in Superior Region along the US-2 Corridor. More requests are coming in each week.

Planned TIM Workshops are: Novi Police, Hazel Park Fire Department, Wayne County Airport authority, Oxford Township Fire Department, Muskegon County, Monroe County, and Genesee County, Midland County, and US-127 Responders in Bay Region. More requests are coming in each week.

With winter just around the corner it is a perfect time to meet with your first responders to discuss TIM and winter maintenance, a proven success in Southwest Region. If you need help organizing a workshop, help with topics, presentations, speakers, or anything regarding TIM, please contact Angie Kremer, at 517-636-0120.

MICHIGAN'S COMMERCIAL VEHICLE STRATEGY TEAM (CVST)

BY JASON FIRMAN

CVST was established in October 2005 to build a stronger collaborative and cooperative partnership between MDOT and the Michigan State Police/Traffic Safety Division (MSP/TSD). CVST's vision is to work toward improving highway safety and security, protecting highway infrastructure, and enforcing the laws of the State as they pertain to Commercial Motor Vehicles (CMV).

Co-Chaired by: Capt. Robert Powers (MSP) and Bobbi Welke (MDOT)

Infrastructure Subcommittee (CVST-IS)

Co-Chaired by: Insp. Randy Coplin (MSP) and Mark Dionise, MDOT Manager, Utility Coordination & Permits)

To advance the vision, CVST-IS was formed to develop and implement the strategies necessary to be in accordance with the goals and expected outcomes of CVST. The Infrastructure Subcommittee is responsible for promoting activities which protect highway infrastructure through targeted enforcement and optimized investment of limited resources.

Committee members have determined the most effective enforcement operational strategies and the tools necessary to advance the vision. Decisions in part were based on a variety of assets available to the CVST such as:

1. establishing safe enforcement sites
2. implementation of effective CMV enforcement operations
 - permanent intermittent truck weigh stations (PITWS):
 - weigh-in-motion (WIM)
 - wireless communication to WIM
3. availability of truck weight data

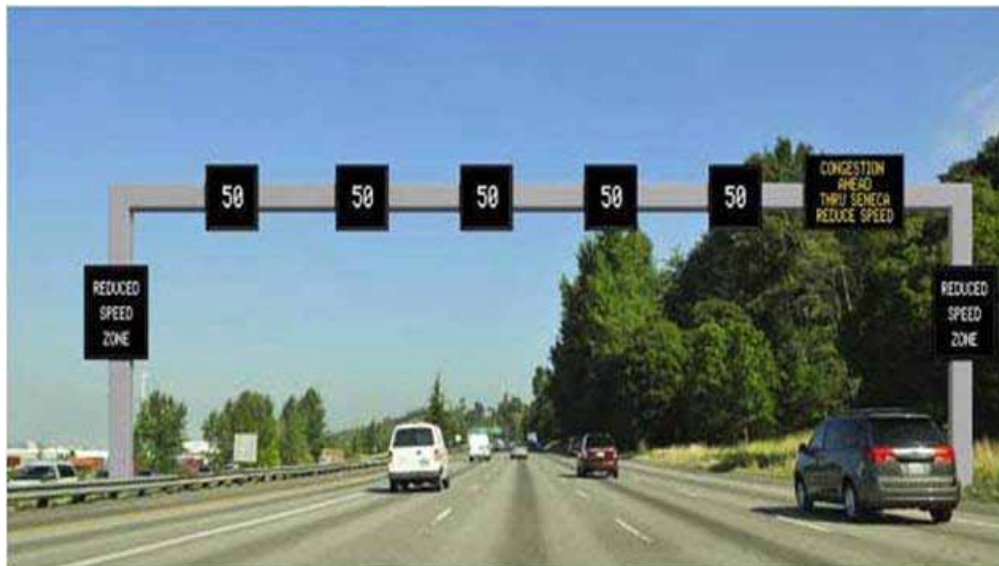
LOCALIZED BOTTLENECK REDUCTION (LBR) PROGRAM

BY JASON FIRMAN

MDOT met with FHWA in late March to discuss how to reduce congestion on a low cost, quick turnaround basis through the LBR program. Signal optimization, merge improvements and hard shoulder running were among the proposed cost effective solutions to reduce congestion without adding a lane. Other states' implementation and specific projects being constructed based on the LBR program were also presented. These examples led to the discussion of Michigan-specific challenges in relation to the LBR program.

MDOT is searching for ways to fund such projects as they have been determined significant, valuable improvements to transportation in Michigan.

Proposed variable speed limit signs in Washington State



SOM is meeting with various regions and the Michigan State Police in July to discuss possible use of variable speed limits and their application in Michigan. SOM will continue to research and evaluate all potential bottleneck reduction applications for possible use in Michigan. For more information, please visit the FHWA website, at <http://www.ops.fhwa.dot.gov/bn/index.htm>.

If you have questions or new applications regarding the LBR program, please contact Jason Firman, at firmanj@michigan.gov.

2009 ANNUAL MEETING OF THE INTELLIGENT TRANSPORTATION SOCIETY OF MICHIGAN

“SHARING INFORMATION FOR BETTER OPERATIONS”

BY GREG KRUEGER AND JIM BARBARESSO

HNTB Vice President / National ITS Practice Leader and
ITS-Michigan President 2009-10

As one of the premier ITS events in the nation, the 2009 ITS Michigan Annual Meeting attracted approximately 300 attendees and 50 exhibitors on May 12 and 13. The theme for this year’s event – “Sharing Information for Better Operations” – focused on connectivity among people, vehicles, and infrastructure as a framework for transportation operations, now and in the future. From the opening session to the closing of the conference, speakers discussed the importance of communications to improve incident and emergency response, but also as the glue that holds the transportation operations framework together. Representatives from the public sector and the auto industry provided perspectives on how IntelliDrive will transform transportation, making us a safer and more mobile society.

With a new transportation authorization bill on the horizon and the full impact of the Recovery Act still unknown, transportation funding was another hot topic at this year’s meeting. Most of the meeting participants shared a common vision of additional funding with priorities based on performance. ITS will play a key role in the new authorization bill as the means to measure and monitor system performance, but also as the IntelliDrive program moves closer to deployment.

Like last year, the exhibit hall and outdoor IntelliDrive demonstrations were highlights of the event. After perusing the exhibit hall, attendees could take a ride in vehicles equipped with the latest safety and IntelliDrive technologies. The MDOT IntelliDrive Model Deployment demonstrated 10 possible applications, ranging from congestion pricing and mileage-based user fees (MBUF) to emergency vehicle traffic signal pre-emption and V2V incident warnings.

The success of the ITS Michigan Annual Meeting was accomplished through the hard work and dedication of many volunteers from our member organizations, but also from the contributions of MDOT, the event sponsors and the exhibitors. ITS Michigan thanks everyone who assisted in making this event a success.

MDOT ADDS NEW FEATURES TO MI DRIVE WEB SITE

BY JON REINCKE AND JASON GUTTING

The MDOT Office of Communications and the MDIT Web Services Team, in cooperation with the state’s Center for Shared Solutions & Technology Partnerships and the ITS Program Office within the MDOT Division of Operations, have been working for months to add new features to the MI Drive Web site. The site was recently revamped, adding several new layers to the interactive map to display information regarding toll bridges and tunnels, movable bridges in Bay City, and bridge weight class and statewide clearance information. With the new layers, motorists can get information about toll bridges and tunnels and whether movable bridges are open or closed to traffic. Commercial truckers and dispatchers later this fall will be able to use the bridge weight and clearance information to plan routes for oversize and overweight loads prior to submitting a permit application to MDOT. As of July 1, the Web site has a link titled “Statewide Travel Times,” which advises motorists of traffic flow on state trunklines. Green lines on the interactive map represent traffic that is moving smoothly, while red lines indicate traffic that may be slowed or stopped. As always, motorists can find lane closures, traffic speed data and other information, at: www.michigan.gov/drive.