



Advanced Technology Task Force

Meeting Notes - June 13, 2007

The meeting was called to order at 10:00 AM at the CMAP Offices, 233 South Wacker Drive, Suite 800, Chicago, Illinois. Those present at the meeting were:

Attendees

	David Zavattero, Co-Chair			
	Duana Love, Co-Chair			
Members:	Marty Anderson	<i>IDOT Elec. Op.</i>	John Dillenburg	<i>UIC</i>
	Tony Khawaja	<i>LCDOT</i>	Jim LaMantia	<i>Chicago OEMC TMA</i>
	Chuck Sikaras	<i>IDOT, ITS</i>	Tom Szabo	<i>Kane County</i>
	David Tomzik	<i>Pace</i>	Erin Willrett	<i>KKCOM</i>
	Steve Wojtkiewicz	<i>Metra</i>		
Interested Parties:	Joseph Brahm	<i>Delcan</i>	Christopher DiPalma	<i>FHWA</i>
	Abraham Emmanuel	<i>Chicago OEMC</i>	Mayank Goyal	<i>Edwards & Kelcey</i>
	Eric Holeman	<i>Wilbur Smith</i>	Matt Letourneau	<i>Edwards & Kelcey</i>
	Taqhi Mohammed	<i>Pace</i>	Jon Nelson	<i>LCDOT</i>
	Kevin O'Neill	<i>URS</i>	Ellen Partridge	<i>CTA</i>
	Steve Peters	<i>IDOT Elec. Op.</i>	Jim Powell	<i>Wilbur Smith</i>
	Lee-Ann Seeling*	<i>Trichord</i>		
CMAP Staff:	Claire Bozic	Parry Frank	Craig Heither	
	Tom Murtha	Dan Rice	Jose Rodriguez	

* Lee-Ann Seeling teleconferenced.

SUMMARY OF COMMENTS:

- Approval of meeting notes from April 18, 2007 Task Force meeting.** The notes were approved as submitted.
- Urban Partnership Technology Components Summary**

The region's Urban Partnership proposal (<http://www.catsmpo.com/prog/cms/urban-partnership-submittal.pdf>) was submitted by IDOT and included input from RTA, Metra, Pace, CTA, Chicago OEMC and others. Tom Murtha notified the task force that the northeastern Illinois region was not selected by USDOT as one of the ten regions that would be considered for funding under the Urban Partnership program.

The selected regions had similarities in their proposals: nine included HOT lanes (high occupancy toll). The remaining region selected was New York City which is planning a cordon toll for access to the CBD. The USDOT indicated that there were some very good elements of the northeastern Illinois proposal.

Some of the proposal elements will continue to be pursued in the region, for example some IDOT proposals have been submitted for CMAQ funding. David Tomzik stated that the Pace

projects contained in the UPP were already in their long-range plan and would still be pursued. Duana Love stated that the RTA would still be pursuing its proposals.

3. **Regional ITS Architecture Update.**

Matt Letourneau summarized the four ITS Architecture workshops held at CMAP in May. The first half of each workshop was structured to gather information on how the architecture may have changed, while in the second half, participants were allowed to revise the information flow diagrams. A potential fifth meeting, which would cover projects that involved more than one functional group, was not deemed necessary because sufficient cross discussion took place to address the issues. A listing of the architecture changes was distributed to task force meeting attendees and the consultants will still hold some one-on-one meetings with key stakeholders to clarify issues. Lee-Ann Seeling noted that an updated architecture file will be available for task force review in August.

Jim Powell asked about the overall schedule for the update and Mr. Letourneau stated completion is set for October, with a possibility of finishing in September. Duana Love asked participants for their impressions of the workshops and the general feeling was they went well. Ms. Love stressed the goal of making the architecture a more useful product for implementers and Mr. Letourneau stated the consultants are trying to make the update more project-focused within the constraints of the Turbo software.

The preliminary information that was gathered during the meetings is listed here http://www.catsmpo.com/agenda/attf/attachments/2007-06-13_arch_updates.xls.

4. **CAD/TMC Integration**

An overview of the benefits and challenges of integrating CAD (computer aided dispatch) information into ISTHA's traffic management system (TIMS) was given by Joseph Brahm. CAD reports consist of incident information compiled by law enforcement agencies and have numerous fields that describe the incident itself, ranging from the incident location to the type of incident. CAD reports are frequently updated with notes (which may number in the hundreds) that detail all of the actions involved with the incident.

CAD/TMC integration yields benefits for both the traffic management and CAD sides. From a traffic management perspective the benefits of CAD/TMC integration include improved incident detection; faster response time; better/more timely updates; improved interagency coordination; improved event records and improved personnel management. Integration benefits from the CAD side include another form of incident detection; better event verification; providing more details for better response and improved interagency coordination.

There are a number of challenges involved with CAD information being shared with TMCs. Sensitive information contained in CAD reports may need to be edited/scrubbed and TMC staff may need to be trained on using the information appropriately. The cost of operating the CAD system will likely increase due to upgrading (which may cost between \$25,000 and \$150,000) and the need to maintain the interface with the TMC.

An important challenge is getting buy-in from the law enforcement community, which may be hesitant due to the sensitive nature of the data. Other challenges involve minimizing the effects of information overload as TMC operators receive a wealth of additional data, determining the best way to filter events to only those that the TMC should be concerned

with, integrating CAD fields into the TMC and handling duplicate events. There are also security issues concerning hacking into the CAD system, therefore it might be necessary to only allow information to be sent out of the CAD system.

There were over 93,000 CAD events in 2006 in the TIMS/CAD system. Of these, nearly 40,000 were stalled vehicles events and over 31,000 events were in the Other/Unknown category. TIMS was the first to report an incident 989 times and TIMS assisted in dispatch 2,382 times in 2006.

Jim Powell asked about the 1/3rd of events that fell into the Other/Unknown category and Mr. Brahm explained that the classification set for TIMS doesn't exactly match up with the CAD system. Abraham Emmanuel mentioned that within the City of Chicago, there are around 150,000 accidents per year and about one-half of the accidents are reported at the police station. These incidents may or may not have a report in the CAD system

Jeff Galas asked if the accident data TIMS is collecting is pushed to the Gateway or traffic.com. Mr. Brahm stated event details do go to the Gateway and John Dillenburg noted that an operator has to physically push a button to send it. Only incidents marked with high confidence are sent to the GCM site (the external site). Mr. Galas noted that the traffic.com site includes value-added information on incidents; the company employs staff to monitor emergency stations for additional information and to filter the information.

David Tomzik asked if the architecture update will address this topic. Duana Love stated it will include the general flow of information but the specific information that will be exchanged will not be listed. She also noted this is important information that could feed into a regional data archive.

5. Transit Signal Priority Projects

Harvey Transportation Center Transit Signal Priority (TSP) Pace: Taqhi Mohammed and Kevin O'Neill summarized Pace's TSP project. This initiative will implement TSP in the vicinity of the Harvey Transportation Center. The project will determine the appropriate approach to upgrade and modernize 15-30 existing traffic signals along 154th Street, US 6 and Halsted Street to facilitate TSP. The project also includes optimization of signal timing plans and the simulation of before and after conditions to evaluate the impact of TSP on corridor traffic. The effects of queue jumping will be studied. Implementation of TSP in this corridor is expected to improve the service reliability of Pace routes and enhance the terminal transit operations.

There are two types of communications systems available. The first is based on infrared and relies on line of sight to send a signal. The other type of system is GPS based. The TSP request is conditional on how far behind schedule the bus is operating. Most systems only allow one threshold for all bus routes. Novax transponders have the ability to use different thresholds by time of day and location.

Additional deployments that might possibly be integrated into the system include location based advertisements, fare collection at bus shelters and bus requests at bus shelter. Pace expects to conduct an on-street TSP test next year.

Chicago Transit Signal Priority: James La Mantia gave an overview of the TSP system the CTA is planning to implement which will enable buses to travel more efficiently through signalized intersections. Benefits of the project include faster bus service, better bus service,

lower operating costs and safer traffic flow for all users. Assigning priority in the traffic signal cycle to approaching buses is an effective way to address delays resulting from traffic signals and slow traffic: a similar program in Los Angeles decreased travel times by 8%.

The CTA proposes to implement a signal priority program that will help improve the flow of buses along Western Avenue while having a minimal effect on cross traffic. The project will attempt to demonstrate the feasibility of TSP within a busy corridor, and build a local knowledge base of bringing TSP projects to the implementation and operation stages, coordinating efforts between transit agencies and signal operators, and optimizing the benefits of the system.

The TSP project will equip all buses operating along the X49 Western Express route with emitters that will allow traffic signals (77 signalized intersections along the X49 corridor) to detect oncoming buses. Selected signals along the route will be equipped with additional software and hardware to help the signal controllers process the priority requests, and with detectors to alert signal controllers to bus arrivals. For the demonstration, 25 vehicles will be equipped with passive optical emitters, enabling the buses to request priority at signalized intersections. Twenty-one buses will be needed to provide the initial service, and four buses will be available as spares.

Where an express bus stop exists, it will be a candidate for TSP if either northbound, southbound or both stops are expected to become far-side stops when the project is implemented. The CTA anticipates that ten intersections will have both northbound and southbound near-side stops for the foreseeable future; these intersections are not being considered for TSP demonstration. The signals can accept 1 call per 10 minutes. Additional detectors may be necessary to determine when the level of service is poor.

The first deployment will be on South Western Avenue with possible deployment at 57th Street, 59th Street, 61st Street, 63rd Street and 65th Street. The second deployment will be on North Western Avenue, possibly at Armitage Avenue, Lyndale Street, Logan Boulevard, Schubert Avenue, and Diversey Avenue.

The project will determine the most suitable technology (IR, GPS, WI-FI) for communication between the bus and the signals to use with the existing infrastructure and will also help to identify corridor characteristics that are suitable for implementation of TSP. The city will be ready for an on-street test in fall 2008. Tony Khawaja noted the importance of measuring non-bus delay when examining the benefits of the project.

6. Regional Traffic Signal Inventory Project

Dan Rice described the status of the Regional Signal Inventory update and enhancement project. This planning-level inventory is based upon the Regional Signal Inventory that was developed seven years ago as part of the RTA Regional Transit Priority Integration Plan. Currently there are approximately 7,700 signalized intersections in the database with about 75% of the signals owned and operated by IDOT or CDOT. The goal of this project is to develop a database inventory of traffic signal locations and agency jurisdictions, as well as additional information regarding emergency vehicle preemption equipment, signal controllers, vehicle detection capabilities, and updated information for signal interconnect systems in the region.

A GIS coverage is under development based on CMAP aeriels and the new revised IRIS GIS coverages that are available for public download from the IDOT website. In addition, Mr.

Rice has met with IDOT Districts 1 and 3, the seven counties in the CMAP planning area, and a few of the larger municipalities to explain the project and gather information on the signals that they own or control. The next step will include gathering input from additional municipalities. David Zavattero suggested a future task force meeting topic could be applications using the signal database.

7. Upcoming Meetings and Conferences

<u>Meeting Title</u>	<u>Location</u>	<u>Dates</u>
FTA Safety & Security Roundtable	Chicago	July 23-5, 2007
GCM meetings	Consult calendar at www.gcmcommunicator.com	
ITS Midwest meetings	Consult calendar at www.itsmidwest.org	

8. Next meeting

The next ATTF meeting is scheduled for Wednesday, August 29, 2007 at 10:00AM.