

**Madison Area Transportation Planning Board (an MPO)
Regional Intelligent Transportation System (ITS) Strategic Plan Implementation Committee
August 18th, 2016 Meeting Minutes**

1. Roll Call

Members present: Rich Beadles, Dave Eveland, Yang Tao, Paul Logan, Jon Riehl (for Peter Rafferty), Elizabeth Schneider

Members absent: Dave Bursack, Shaun Olson, Sgt. Jeff Heil, Kyle Hemp, Dan Holt, Patrick Kass, Lt. Trevor Knight, Dan Pruess, Bill Putnam

MPO Staff present: William Schaefer, Philip Gritzmacher, Michael Cechvala

Others present: David Dryer, Diane Paoni, Urvashi Martin

2. Introductions

Schaefer introduced Dave Eveland, Metro Transit ITS Manager, who is replacing Kate Christopherson as the official representative on the committee, and Jon Riehl, who is an alternate with UW TOPS Lab.

3. Approval of February 19, 2016, Meeting Minutes

Moved by Logan, seconded by Beadles, to approve the February 19, 2016 meeting minutes. Motion carried.

4. Report on Smart City Initiatives, ITS Trends, and Potential ITS Pilot Projects

Yang Tao provided a report on the numerous ITS related activities that he has participated in, including the ITS America Conference, USDOT's Smart City Challenge, and ITS Pilot Projects.

ITS America Conference

The three-day conference was held in San Jose California in June. Each day featured a different topic area:

- Day 1: Connected vehicles, autonomous vehicles, and drones with a special focus on security.
- Day 2: Connected infrastructure.
- Day 3: Funding options for ITS – government funding, public-private partnerships, grants, payment systems

Due to its location and attendees, topics were tech-heavy. A number of tech and other types of companies were in attendance, including Google, Amazon, Apple, Cisco, Uber, and Lyft. Keynote speakers presented on autonomous vehicle projects, future technologies, and open-source software.

USDOT's Smart Cities Challenge.

The City of Madison worked with the UW TOPS Lab and the MATPB to complete an application for the Smart Cities Challenge Grant. USDOT narrowed the applications down to 7 for the final round and selected Columbus, Ohio as the winner. Tao hypothesized that Columbus won because they demonstrated a high-level of public sector buy-in, securing over \$90 million from local partners. Additionally, Columbus outlined how winning the grant would help address issues outside of transportation, such as environmental justice, health care, and poverty.

Though Madison was not selected, the application has spurred local interest in ITS and has translated into a number of potential ITS pilot projects.

Potential ITS Pilot Projects

The City of Madison is pursuing a number of ITS pilot projects including:

- Sending railroad pre-emption signals to vehicles to let them know a train is coming and the gates will be going down.
- A vehicle-to-infrastructure project that will alert motorists to a left-turn conflict with pedestrians and/or cyclists.
- A connected vehicle corridor project on Park St. in cooperation with a local GM dealership and Metro Transit.
 - GM will equip new 2017 vehicles sold at this dealership with connected vehicle capabilities, Metro will equip buses running the corridor with these capabilities, and the City will connect signals and incorporate new technology allowing the signals to communicate with the vehicles. Transit signal priority will be implemented as part of the project.
 - UW TOPS Lab is partnering to help with installation and helping to secure funding. Riehl commented that the Connected Vehicle Deployment Challenge grant program could be a funding source. The challenge is attempting to have one connected corridor of at least 20 signalized intersections in each state by January 2020. Tao said that this would be the first in the state and one of the longest connected corridors in the country.
 - Schneider said that WisDOT would likely be interested in extending the project to the Beltline and advised contacting the Bureau of Operations once the project was further along.
- An autonomous vehicle pilot project in which autonomous shuttles will be deployed on the Epic and UW campuses and on State Street.
 - If this moves forward, it would be the first test in an environment with snow. The shuttles being explored are from France and the vendor will be demonstrating the products next week. Riehl said that the vendor has a lot of interest in deploying the shuttles on State Street. Tao said that a meeting with the mayor would be forthcoming.
 - Riehl informed the group that Epic is willing to provide funding if UW and the city can guarantee that the shuttles will be able to operate in the winter. Other funding could come from a US Department of Energy grant.

Beadles asked for further information on how drones fit in with transportation. Tao said that they would be used for deliveries. Gritzmacher said that Amazon has stated that they have an interest in doing so and has provided [information about their prototypes](#).

5. Report on Potential Metro Transit Smart Card Project

Eveland said that Metro Transit is in the process of developing a Smart Card application that will allow the use of the Smart Card readers that were included on the new bus fareboxes. Metro is interested in migrating to the Smart Card because the readers do not have moving parts and the cards are reusable. This will mean fewer repairs and a less expensive fare collection system in the long run.

Roll out of the new smart card system will occur in phases. Metro employees will receive smart cards first, then unlimited ride partners. Some partners would like to use employee badges, which may be possible, depending on protocols. In the future, Metro would like smart cards to be cross compatible with the Parking Utility and Bicycle.

Dryer asked if customers would be able to add cash value to the smart cards. Eveland said that this is a possibility once Metro determines if the city or an outside vendor would provide cash-handling services.

Logan asked if Metro has considered transitioning to an app-based system. Eveland said that Metro has considered this and that Near-Field Communication (as found on Android devices) is ready; however, Metro is currently unable to support Apple Pay due to the closed nature of the system. In the future, Metro hopes to have this option become available.

Schaefer asked how much the project would cost to implement. Eveland explained that a majority of the cost has already been incurred since the new fareboxes already have the capability of using smart cards. The most expensive part of the system will be the smart cards themselves; however, since the cards are reusable, there will be cost savings there in the long run.

Eveland cautioned that the smart card system would not decrease dwell times at stops or boarding times since the magnetic strip cards used by a majority of customers are already fast; however, he views the cards as a marketing opportunity and a way to preserve the fareboxes.

6. Update on Metro Transit Project to Upgrade the Automatic Vehicle Locator (AVL) System “Trapeze TransitMaster”

Eveland said that Metro is working with Trapeze to update its radio system and AVL system software. One of the things the software does is help prioritize operations service calls. He explained that transit vehicles have systems that provide engine warnings to the operations department when issues occur. Currently, these messages are not priorities and operations must go through all messages to determine which are the most important. Many of the messages are noise and do not require a response. This update will address this issue.

Further, the update will reduce times in between the “polling” of vehicle location to provide more accurate information for real-time transit applications. Currently, Metro is able to poll vehicle locations once every 60 seconds due to bandwidth limitations, which will be reduced to 30 seconds.

Metro has also been approached by a professor from UW about a pilot project that sends data across white space spectrums that were previously used for terrestrial television signals. The professor already has provisional FCC approvals. Data would move much faster using this system, increasing poll times to 5 seconds or less. Initial implementation would be limited to paratransit vehicles until the project receives full approval.

7. Brief Update on WisDOT Project to Develop New Statewide Advanced Transportation Management System (ATMS)

Schneider said that WisDOT has selected IBI, the vendor for 511, to replace the current 20-year-old ATMS system. Implementation will occur in two phases:

- A discovery phase in which pricing and features will be negotiated. Existing equipment will be examined to ensure all existing functionality is retained in the upgrade. This phase will be completed by November 2016.
- A replacement phase, when all ATMS equipment is replaced, beginning in November 2017. This phase focuses on system reliability and customer services.

Once the system has been upgraded, WisDOT will have a much more reliable, more integrated system. Schneider explained that the upgrade will bring multiple systems together, such as signal timing systems and message boards. Many processes that are currently handled manually, such as

notifying 911 providers of accidents, will be automated. This will relieve the operations center staff. Schneider also said that performance management systems will be in place after the initial phase if the budget allows. The system currently saves one year of data, so WisDOT will have to determine how to archive data.

8. Discussion of Future Meeting Topics

- Logan said that the new 911 Center facility on the southeast side will open in early November. He said that he could host the November 18th meeting at the center.
- Schneider said that the Governor's Conference on Safety will take place at the end of the month.
- Schneider said that the 511 system will have routing capabilities in the future.
- Eveland said that he would be willing to demo the new AVL system at the next meeting.

9. Adjournment

The meeting was adjourned at 12:13pm.

Next Meeting: Friday, November 18