



2014 Executive Committee

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INTERSECTION TRAFFIC CONTROL COMMITTEE

Meeting Minutes

March 11th, 2015

ATTENDEES

Table with 2 columns: Name, Agency. Rows include Dean Chamberlain (WSB), Mark Wagner (SEH), Jerry Kotzenmacher (MnDOT), Matt Allwood (Traffic Control Corp.), Jon Krieg (Hennepin Co.), Ken Levin (Alliant Engineering), Morgan Abbott (SEH), Nick Erpelding (SRF), Nick Ollrich (SRF), Roger Plum (SEH), Jan Rybar (Dakota Co.), Kevin Schwartz (MnDOT), Molly Stewart (Bolton & Menk), Heng Hu (University of Minnesota).

MEETING LOCATION: SEH, Inc., Vadnais Heights Office

I. Remaining meeting times/locations for 2015

- April 1, 2015 (8:00-10:00am): MnDOT Water's Edge, Room 323
May 6, 2015: Time and location to be determined
June-August: No meetings
September 2, 2015 (8:00-10:00am): MnDOT Water's Edge, Room 403
October 7, 2015 (8:00-10:00am): SRF - Plymouth
November 4, 2015 (8:00-10:00am): HDR - Golden Valley
December 2, 2015: Time and location to be determined

II. SMART Signal Presentation - Heng Hu

The following is a summary of Heng's presentation.

- 1. SMART Signal is patented by the University of Minnesota
a. Live Traffic Data, LLC is the exclusive licensee
b. Implemented in Minnesota and Pasadena, CA since 2007
2. Heng played a video with more background on SMART Signal
3. Current status of traffic monitoring/data collection

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- a. Time-consuming, expensive
- b. Data is neither stored, nor analyzed
4. SMART iQueue System
 - a. iMeasure/iMonitor
 - b. dotapp7.dot.state.mn.us/smartsignal
5. Kevin S./Jerry K./Jon K. discussed measurement of traffic congestion on arterials
 - a. How to measure?
 - b. Corridor travel time or delay by intersection?
6. Jerry K. asked Heng if they are measuring travel time right now. Are they giving that information to the public out on the road? Heng responded that they are not doing this right now. They would like to have a more metro-wide implementation first.
7. Molly S. commented that she has seen changeable message signs on some arterials. Kevin S. agreed that these signs are out on some arterials, but they're not currently being used. The RTMC would have to get involved to display information regarding accidents/travel times. As a side note, Kevin added that the RTMC does monitor some arterial intersections, and that information is available to the public.
8. Heng noted that all the data being discussed is valuable. Then you have to decide what is best to share with the public.
9. Matt A. asked the group if they thought the travel time/traffic data provided by Google Maps is valuable or not.
 - a. General consensus was that it is not accurate
 - b. Does not account for signal phasing/stops
 - c. Is crowd-sourced, so dependent on what Google is able to collect at any given time.
10. Heng compared congestion information from Google Maps and Live Traffic Data LLC (SMART) against MnDOT video for a single intersection
 - a. SMART signal was much more accurate
 - b. Dean C. asked if SMART signal was always more accurate
 - c. Heng: generally yes, but it depends on what kind of information Google is receiving (e.g., phone in pedestrian pocket vs. travelling vehicle)
11. Dean C. asked if wider implementation of SMART signal technology is rolling out soon. Heng replied that he is looking to rollout the system as soon as possible.
12. Dean C. asked if they were looking at any specific areas next. Heng responded that they will implement wherever they can.
13. Jon K. asked what the cost per intersection was. Heng estimated the cost at \$2500 for hardware and \$5000 for software per intersection. But they are looking at ways to provide the technology to cities at a lower cost.

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14. Molly S. asked what the lifespan of the software and hardware was. Heng replied that there is no update fee for the software and he expects that the hardware has a very long life span.
15. Morgan A. asked if this system can work in combination with a real-time monitoring system like InSync. Heng responded that SMART is more of a monitoring tool, not a timing tool. But timing features are planned for the future.
16. Roger P. noted that effective use of the SMART system requires a lot of detection. Heng responded that the system works with existing detection.
17. Roger estimated that costs of adding the system could double or triple if additional detection must be added.
 - a. Also added that the system could be very useful to engineers putting together signal timing plans
 - b. Detection is necessary for each turning movement. Not always the case at non-MnDOT intersections.
 - c. Heng responded that the data would be less accurate in situations with less detection, but they've tried to account for that in the SMART system.

III. Round Robin

1. Kevin S. – MnDOT is now using Synchro 9, and it seems like a step back from Synchro 7.
 - a. Time Tracker that can't be disabled.
 - b. Log files must be deleted constantly to save space
 - c. Files give no indication as to what version they are for
2. Jerry K. – Complaints/comments could be sent to Trafficware
3. Kevin S. – Any positives to using Synchro 9?
 - a. Molly S. – Synchro 9 can do HCM analysis
 - b. Ken L. – The user interface is very customizable
4. Kevin S. – MnDOT is updating the Signal Timing & Coordination Manual in the spring and taking the opportunity to update yellow, all-red, and pedestrian timing recommendations at all intersections.
5. Nick E. – Different speed assumptions are in the new timing recommendations.
6. Roger P. – Seems to be a lot of negative commentary regarding the new recommendations.
7. Kevin S. – Speeds for left turns still assumed to be 25 mph.
8. Jerry K. – MnDOT Signal Timing and Coordination class June 2nd – 4th. The manual will be ready by then.
9. Matt A. – Regarding APS, common problem with setting volumes for the push-button assemblies.
 - a. Buttons have gain control to adjust volume to ambient conditions, but sometimes the buttons play off each other
 - b. Noise levels becoming an issue for some intersections.

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- c. Some manufacturers are now recommending not using gain control.
 - d. Gain control may affect noise perception in the visually impaired
 - e. Volumes can be hard to set. Constant volumes setting would be better. Issue has come up as APS installations have increased.
10. Jon K. – Seems like a site-specific issue.
11. Matt A. – There are options to change volume by time-of-day, but constant manual adjustment of time setting is required.
12. Jon K. – Noise from APS can be an emotional issue for some people.
13. Jerry K. – Is APS required to have volume levels above ambient?
14. Matt A. – Not sure, MnDOT usually specs that.
15. Jerry K. – TEO meeting minutes
- a. Met in January
 - b. ADA/Ped accommodation topics
 - i. Pedestals are breaking where they should
 - ii. Approved Products List has approved pedestal bases
 - c. Painting/décor on signal cabinets
 - i. Minneapolis has a spec write-up for this
 - ii. MnDOT looking into allowing this
 - iii. TEO accepts it, is crafting a policy
 - d. Handholes – new designation (HHS) for sidewalk handholes
 - e. Loop detector designs
 - i. Finding that detectors are misplaced in some situations
 - ii. Discussing different designs
 - iii. Where to place with a pushed-back crosswalk
 - f. Conduit
 - i. Bridge conduit deteriorating much faster than expected
 - ii. PVC-coated RSC specified for conduit on bridges
 - g. PIF for signal cabinets, controllers, etc.
 - i. Updated to reflect exactly what MnDOT wants
 - h. Ground rods/Cabinet pads
 - i. Two ground rods needed now to meet NEC code
 - ii. MnDOT detail has been updated to reflect this
 - i. ADA
 - i. Extender on all PA and BA poles and pedestal poles for push-buttons.
 - ii. Bozenator pipe on all PA and BA poles
 - iii. Push button detail not online, now on pole mount detail
 - j. Jon K. – Hennepin County advertising position for signal timing engineer
 - k. Nick E and Matt A. – Discussion regarding whether solar power is sufficient for APS push buttons on rectangular rapid flashing beacon systems.

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NEXT MEETING:

Date: Wednesday, April 1st (8:00-10:00am)

Location: MnDOT Water's Edge – Room 323
1300 County Road B2 West
Roseville, MN 55113

Topics: Flashing yellow arrow update

Minutes Submitted By: Mark Wagner