



NORTH CENTRAL SECTION

INSTITUTE OF TRANSPORTATION ENGINEERS

2016 Executive Committee

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NCITE Simulation and Capacity Committee (SimCap)

Meeting Date: November 15th, 2016, 1 to 3 pm

Location: MnDOT Waters Edge, 1500 W County Road B, Roseville, MN

Attendance:

Kevin Sommers – MnDOT
Pat Otto – MnDOT
Tiffany Kautz – MnDOT
Shuo Wang – MnDOT
Graham Johnson - SEH
Haifeng Xiao – SEH
Tom Sachi – SRF Consulting
Vahid Moshtagh – SRF Consulting
Mark Powers – Stantec
Sudheer Dhulipala – WSB
Bryan Nemeth – Bolton & Menk
Ben Hao – Hennepin County - **Chair**
Joe DeVore – SRF Consulting - **Co-Chair**

I. Introductions

II. Presentation by Derek Lehrke (UofM): Comparison of mesoscopic traffic simulation programs

- Project Objective was to identify a software capable of creating a metro wide dynamic traffic assignment (DTA) model.
 - Programs compared included Aimsun, Cube, Dynameq, DynusT, Transmodeler, and VISSIM
- Very few comparable models due to the size of the roadway network and the amount of information contained in it.
- Major problems with regional wide DTA models include:
 - Importing different signal timing formats from different agencies.
 - Selecting numerous outputs impacts model run time drastically
- Major difference from using a DTA model instead of a regional model is that the DTA model simulates traffic down to the lane level instead of a link level.
- There are numerous pros and cons of building and maintaining a regional DTA model.
 - Reduced startup cost for projects
 - Ongoing investment in the regional model
 - Need to keep an up to date log of changes

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➤ Transmodeler was selected as the preferred software to continue with for setting up a twin cities regional model.

- Model is intended to be open source and have the ability to reach 1%-3% convergence.

- Initial calibration of the model is expected to take 3 months with each recalibration taking up to a month.

III. **Task Group Updates:** Ben provided an end of the year roundup of the different task groups. The remaining task groups will be reorganized and carried over to next year to complete with the addition of any more task groups.

➤ Data Collection and capturing true demand (Tom S, Max M)

➤ Calibrate roundabout to real capacity (Phil K)

IV. **2017 Committee Chair and Co-Chair:** Ben called for nominations for the Co-Chair position for 2017. Derek Lehrke and Phil Kulis were both nominated for the Co-Chair position and a vote was taken based on present members. Derek Lehrke was elected for the 2017 co-chair.

2017 Chair – Joe DeVore

2017 Co-Chair – Derek Lehrke

V. **Round Robin/New Topics**

➤ Derek – Looking at the possibility of a MnDOT signal database that would incorporate MnDOT, Hennepin County, Ramsey County, and any other signal databases into one location.

➤ Kevin S – Gave an update that an RFP for the EB Hwy 36 MnPass modeling would be out soon between I-35W and I-35E

➤ Ben H – Hennepin County will be upgrading the County Management System to a fiber connection over the next five years to be able to dynamically control signals.

➤ Sudheer D – Working on a railroad modification model in Wilmar

➤ Mark P – Working on Rochester 2nd Street modeling and stated that he would present on the results in the future.

➤ Vahid M – Using DynasT/DYNA Studio to model for I-494/Hwy 62 MnPass Study

➤ Bryan N – Using Freeval to model I-494/France Avenue. Using VISSIM to model a 2-Lane to 4-Lane highway conversion near a casino.

➤ Heifeng X – Travel demand modeling for Hwy 36/Hadley and 694/Rice Street

➤ Tom S – Paisley Park traffic study and a 394/Plymouth Ave access request



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Next Meeting:

Presentation: TBD
Tuesday, February 21st, 2017
1:00 pm – 3:00 pm at MnDOT Waters Edge