

North Carolina Statewide Model Users' Group Meeting

Rhett Fussell (DOT) started the meeting at about 10 am with informal introductions. The question and answer sessions extended to 3 pm leaving no time for discussion about a few topics listed on the agenda. Attendees introduced themselves with their name, education and work background. (See sign-in sheet for more information). He also mentioned that the next Semi-annual model users' group meeting will be held in conjunction with the MPO conference in Greenville, NC from October 26th - 28th. He asked the attendees to inform him if they were interested in either learning or sharing about specific topics at the next meeting.

The focus of the day's session was on Data Needs for Models. Four speakers spoke about innovations in data collection, automation, scenario management and data analysis.

GPS/GIS based Speed and Delay Studies – William Bachman, GeoStats

William spoke about GeoStats tool to collect and analyze speed and delay data. He started by describing the importance of speed and delay data for travel demand modeling models, emissions models and system performance evaluation. He described the systematic data collection techniques involved, in particular about the GPS and LASER/RADAR technologies.

He also spoke about the methodology involved in populating the sample data, the probe vehicle process, and the use of GPS for network assignment. The drawbacks of the GPS technology including signal losses and quality control involved in effectively analyzing and reducing large set of associated data. He described the travel time data collection process and analysis procedures.

William then spoke about project preparation, data processing needs, and data analysis results in the form of maps, charts and tables. In the discussion session, the compatibility of the software with various GPS devices and the pros and cons of circuits and loops was addressed.

Network Data Collection – Pramoda Gode, Natalie Menglekoch, Kimley-Horn & Associates

Pramoda and Natalie spoke about a network data collection tool, automation of the modeling process and incorporating the data and the model outputs with the Long Range Transportation Planning process.

Pramoda demonstrated a network data collection tool that has been developed at KHA to quicken the process of network attribute data collection. The tool was developed for a Table PC edition but can be used with any laptop. The tool when used with a ling layer network in a specific format allows the user to enter most of the attribute data from either a drop down list or a Boolean value (Except for road names and From/To cross section

details). This data is geographically attached to the line layer, hence eliminating any tedious data management procedures, like spreadsheets used in the past. She also demonstrated a scenario management tool that was developed to take a look at the attribute data associated with different alternatives/scenarios at one instance , rather than looking up various networks or various databases associated with different scenarios.

Natalie spoke about the integration of the data collection tool with the planning process. She spoke about the various steps involved in compiling the data collected using the data collection tool. She also spoke about increased efficiency in data management due to the automation. She used maps and graphics to aid her in this process.

CTPP Access and Use- Todd Steiss, PB

Todd spoke about how data from the CTPP can be incorporated into the modeling process. He started with a quick introduction about CTPP (Census Transportation Planning Package), what it stands for and its data source. As a modeler CTPP allows us to understand current conditions and develops tool to examine future conditions.

He gave an overview of the tables, variables involved and the geographical hierarchy of the data. He described a typical table and helped the audience understand what it means in simple terms. Todd also spoke about the data suppression and rounding issues associated with the CTPP data. Todd also provided useful internet links to access the data on the internet and also spoke about the pros and cons of using the data available on the CD's. In the discussion session various topics ranging from PUMA data to the upcoming census updates were addressed. Todd also passed around handouts describing a study a statewide county-to-county commuter flow study that he as involved in which used the CTPP data.

TransCAD Network Manager – Hong Qi Lu, NCDOT

Hong Qi spoke about the Beta version of the TransCAD Network Manager that the NCDOT planning manger has put together in the recent past. The driving idea behind the development of the tool was to gather base and future year network attribute data from ONE master line network file. All the geographic and attribute edits are made to the master line layer and with the help of selection sets future year networks are created.

The tool allows you to code each future year road project individually and manage them in different alternatives. The tool has the ability to manage multiple scenarios and change project priority. NCDOT is presently working on incorporating additional functionality including:

- Ability to view and add new links
- Ability to delete alternatives
- Ability to delete specific links from a project
- Ability to edit project attributes
- Compatibility with TransCAD's dualize links function

Suggestions from the Attendees

- Ability to identify errors as and when data is entered in the base layer, right now it stores it as a selection set in a new map file although the changes have to be made to the master line layer.
- Incorporate TIP Project # if available to identify the projects for future updates.
- Automate the process; such that any change in the base year non project link is reflected in all the alternatives, right now any such change would entail the recreation of all alternatives.
- Enhance the tool to view network attributes for multiple alternatives with ease.
- Test and upgrade the tool to handle transit networks.
- Include the ability to query projects by born year and create alternatives based on the year.
- Flag roadway links that have multiple projects associated with it.

Discussion-

It was decided that the next meeting will have model development process updates from various developers across the state. Pam Cook will send a preliminary email to everyone before the October meeting.