MTF Toll Sub-Committee Meeting

July 14, 2010 – 9:30 am to 11:00 am

Attendees

Ahmed Mohideen, *Cambridge Systematics*
Arturo J. Perez, *Leftwich Consulting Engineers*
Betty McKee, *FDOT – District 5*
David Rae, *URS*
David Schellinger, *Systra Mobility*
Prof. Fang Zhao, *Florida International University*
Jack Klodzinski, *Florida Turnpike*
Jim Fennessy, *Fennessy Associates*
Mathew Martimo, *Citilabs*
Michael W. Doherty, *URS*
Roberto Miquel, *Wilbur Smith Associates*
Rob Schiffer, *Cambridge Systematics*
Sung-Ryong Han, *BCC Engineering*
Vidya Mysore, *FDOT – Central Office*
Vladimir Majano, *FDOT – Central Office*
Yew Song, *Florida Turnpike*

Agenda

1. Presentation by Jim Fennessy on the advanced toll model project results, including preliminary statistics.
2. Comments and recommendations provided by the subcommittee members on the draft report.
3. Discussion about the direction of future work on the advanced toll model methodologies for phase 2. (We encourage to send your ideas in advance to Subcommittee Chair, Prof. Fang Zhao).
4. Set up date for next Toll Subcommittee meeting.

Introduction

Prof. Zhao gave a rundown of the agenda items for the meeting. This was followed by a brief introduction of the attendees. Jim gave his presentation which focused on the work done so far for the advanced toll modeling project. He talked about the modeling techniques used and the results from the implementation of these techniques. His presentation was followed by a question and answer session.

Discussion on Results

Rob asked which models were used for the comparison between Tranplan and Voyager. Jim replied that the Orlando model was used for ramp-to-ramp comparison. He also said that the models used for comparison are not going to be identified in the report unless the committee needs it to be.

Arturo wanted to know whether the Tranplan modifications would be available for all users or only for users with the license to the source code. Jim replied that this is up to Citilabs to decide. Mathew added that Citilabs will evaluate the need for the Tranplan modifications among the users and make a decision based on that. Jim said that right now he gives the modified Tranplan codes only to users with source code license.

Arturo asked how many iterations were run for making the comparisons and Jim replied that the models were run until convergence.

Prof.Zhao inquired whether the large difference in volume for the ramp-to-ramp tolling is due to coding problems. Jim answered that this was not a coding problem and that this should be looked into further and also complex ramp-to-ramp systems should be tested. Vladimir replied that Florida is just looking into, and learning ramp-to-ramp tolling and there are several limitations such as report producing. Prof.Zhao questioned whether there is a problem with the software. Vladimir replied that there is no problem with the software, but there may be a different way of coding the ramp-to-ramp tolling and that is what Citilabs is looking into. Jim mentioned that the way the highway network was coded caused Voyager to crash but there is a workaround to this.

Prof.Zhao asked how long it will take to finish this project. Vladimir answered that this should be done by this Friday once we finalize the report and HOT lane value pricing coding.

Toll Companies/Pseudo Links/Zero Service Times/Turnpike Data

David Schellinger wanted to know whether there is an overall statewide or regional system for ramp-to-ramp tolling. Jim answered that there is no single system for Florida. He also said that there are around 43 toll companies in Florida and each company is handled individually. David Schellinger asked what if a trip uses different toll facilities. Mike answered that each facility has a toll schema but during path building they are joined together in a path.

Arturo wanted to know how the pseudo links work and are they created manually by the user or by the program. Jim replied that they are created by the program and also explained the concept of pseudo links using the figure given in the draft report.

David Schellinger inquired about the zero service times for tolls and asked whether all tolls will have zero service times in the future. Mike answered yes and added that right now Orlando uses a barrier for slowing down vehicles in the cash lanes so that we can transition to open road tolling in the future for all tolls. Roberto said that it will be good to look into driver's path selection in response to toll prices. Mike replied that this is being looked into right now.

Arturo asked if all the 43 toll companies are based on 2-axle toll. Mike answered yes and for including trucks tolls, the toll schema should be adjusted. He also added that more effort should be put into mode choice to better estimate the trips using the toll road.

Prof.Zhao mentioned that the turnpike has lots of data and asked Mike whether they are using this for modeling mode choice. Mike replied back yes. Prof. Zhao also asked whether this data is available to local model developers. Mike answered yes and asked anyone interested in this data to contact Jack.

Prof.Zhao further asked whether this data also includes OD information. Mike said that he has to look into it and there might be some restrictions to this data.

Time-Of-Day (TOD)

Prof.Zhao asked the committee, how it feels about proceeding to the next steps. She underlined Jim's comments in the report about including income in toll facilities modeling. Jim mentioned that congestion pricing related to toll roads is most important and depending on funds the future steps should be decided. Arturo said that congestion pricing works with TOD modeling and there is only one model which has TOD modeling. Mike answered that there is only one planning model but there are several revenue models with TOD modeling.

Prof.Zhao asked whether this project should wait for the research results from TOD modeling. Roberto suggested that this project should start coordinating with TOD modeling research and not necessarily wait for it to be done. David Schellinger recommended testing congestion pricing using some models within Florida and assumed segmentation of trips. Prof.Zhao asked David Schellinger about the segmentation and he replied that, income and some peak and off-peak segmentation should be tested. Roberto mentioned that TOD modeling procedure developed should not make implementing congestion pricing difficult. David Schellinger said that there is variation in income and one value of toll for a time period is not good, so the toll model should have value of time by purpose and also related to income. Mike replied that at the end, the validation is going to be with one value, which is traffic count. Arturo asked how the income data can be obtained since the census does not provide it. Mike replied that it can be derived.

Prof.Zhao asked what the committee wants for future. Mike said that a report from the TOD modeling committee on the progress of their research would be good. Rob answered yes for the report and also said that TOD data is very good and he will talk to Krishnan about this.

Roberto suggested that time periods other than peak periods should be looked into, to see if they have to be considered for congestion pricing. Rob asked if there are any other congestion pricing in operation other than I-95 and Lee County. Arturo replied that I-595 might have it in the future.

Dynamic Traffic Assignment (DTA)

Vladimir asked how DTA affects the toll facilities modeling. Mike replied that for doing congestion pricing in DTA, hourly assignments should be done and this might be difficult. David Schellinger said that he is looking into how CUBE Avenue is used for DTA. Prof. Zhao asked if there are any other agencies using CUBE Avenue for toll facilities modeling. Mathew answered that Washington D.C. and other agencies outside U.S. are doing this.

Mike asked about the SHRP2 project in Jacksonville. Vidya replied that SHRP2 project in Jacksonville is using TRANSIMS and it is too early to say how it is going to work out. Vladimir asked whether it will be good to have a short presentation on this Jacksonville project for the next meeting.

Conclusion

Vladimir asked the committee for future direction in this project. Prof. Zhao replied that the committee would like to know what is going on with TOD modeling, and also need more details on market segmentation for congestion pricing. She said that for the next meeting there should be a presentation on TOD modeling and would like to know what data is needed for more detail income information. Vladimir said that Mathew could provide a presentation on DTA using CUBE Avenue that is taking place outside Florida. Vladimir said that he will schedule the next meeting for mid September and send the presentation to the committee members and also reply to all the chat questions.

Questions/Comments from Chat Window

1. "In the documentation for the open road toll, why not use the Toll Type code # instead of "X" to identify as open road toll plaza?"

   Answer: The "X" was used to tell the software that value pricing (different toll by vehicle occupancy) information is on the TOLLLINK file. The information is exclusive of the toll type.

2. SHRP2 - Jacksonville project
   "We haven't received any word on a final report but their focus was more on micro simulation. They were going to attempt providing additional macro scopic information relating to their research"

   "The shrp2 project had more of an implementation on microscopic modeling but we did request they attempt to provide some potential application information on macro and meso scopic modeling because their work on driver/travel behavior seemed a high potential for future implementation/application"