

Notes from the Des Moines MPO meeting
July 19, 1999
Des Moines MPO Office

As part of the CTRE GIS-TranPlan Interface project, Richard Storm, Jerry Shadewald, and Phil Mescher traveled to the Des Moines MPO office to discuss the progress and direction of the project. The members of the MPO present included Kevin Gilchrist, Stu Turner and Jay Tiefentaller.

The first issue expressed was the need to implement an integrated socio-economic data overlay tool into the workings of the interface. This would be helpful with the updating and validation of the model network. This update is required to be completed once every five years, therefore, Des Moines is updating the 1990 model to a 1995 model. Currently, the main issue with this update is the validating of the employment data. Without being able to use the GIS interface to view the employment data, the validation has been a time consuming task.

As part of the updating process, TP-ARC is being used to update the model in conjunction with the E plus C method. The E plus C method takes the existing network and adds those planned projects that have been guaranteed funding within the next three years. Once this is complete, validation is required, which brings about the concept of the socio-economic data's usefulness.

Other thoughts on making validation more readily accomplished using the interface include the following:

- Adding TIGER files

- Making Work Force Development data into a thematic layer

- Using aerial photos as backgrounds to visually identify production and attraction sites

- Displaying TAZ's graphically as a layer of the network

- Registering networks in ArcView, building networks in ArcView, and digitizing networks

Discussion then turned to coordinates, and the difficulty that Des Moines is having being able to view multiple layers of information simultaneously. Each layer of information appears to have a separate coordinate system, and the question arose to the usefulness of the interface in such a situation.

The next question was the procedure used when making edits to an unloaded network. Current practice is to copy the unloaded network to a new directory, where edits can be made. Several options were discussed as to the following required options, however, it was decided that a Join Run in Progress tool would be very useful so as to eliminate the possibility of unknowingly changing information when reloading the network. The ability to change and edit a network easily and re-run would be a very useful tool in the interface.

Screen and cut lines were also brought up as possible areas of further research. As part of the streamlined approach to the interface, the screen and cut lines should be both user-friendly and quick. Display of this information could be accomplished in several manners, including graphs, charts, tables, and visual line types. A network wide visual approach was agreed to be a highly useful tool, especially when coupled with a socio-economic layer. This network wide layer could be designed so as to show a simple ratio of ground counts versus loaded volumes. The links would be displayed using color coding as having too low or too high of a ratio, and the extent of the ratio would be depicted with the line width. By encoding the links with their federal classification, then using this information to set the acceptable range of the ratio, a very exacting image could be made. With the use of this image, areas with gross errors in productions and/or attractions could easily be located. Then by cross-referencing with both the socio-economic data and the aerial photos, errors could be easily located.

Turning movements and turn prohibitors were mentioned in regards to their importance to the planners in Des Moines. Although not considered to be vital by the Des Moines MPO, consultants working for Des Moines often ask for such data. One instance where turn prohibitors are used is in relation to the Interstate. Turns are prohibited in certain cases, especially on ramps. Also, the Interstate system through Des Moines has been coded as two distinct roadway links, one for each two-lane section. Therefore, turn prohibitors are also required for on-ramps as well.

Finally, some other tools and features that would be useful were mentioned.

One view that would contain all useful data as separate data layers.

Ability to move quickly and easily from TranPlan to ArcView and back.

Continue using the Browse function that has been implemented on the new interface software.

Display the total capacity of links in one column.

Be able to handle centroids and nodes separately.

Handle or display links and centroid connectors separately.

Automate the labeling of links, nodes, centroids, and TAZs.

Screen and cut lines.

Simplified tables, display only requested information. For example, show only link ID and loaded volume.

Join the loaded network information with ground counts and any other pertinent information.

Be sure that the interface can easily and accurately handle one-way links.

JKS