ADAM Assignment 1: Introduction to ADAM

Objective:

This assignment helps students to understand the concepts of travel demand modeling using ADAM. The exercises will familiarize students with ADAM and facilitate the completion of subsequent assignments and enable better understanding transportation planning models.

Instructions:

The agent based travel demand model (ADAM) can be accessed online at the website http://street.umn.edu/ADAM_appl.html. Opening the html file you can see the graphical user interface which has several major parts: network editing, global variables, the network map, and the legend.

The panel of inputs contains several choice boxes and scrollbars, which enable the selection of different networks and different values for global variables. The buttons under the editing option help you create your own network and change the properties of links and nodes. You can save and reload the network you created by clicking the corresponding option. Clicking the restore button will change all options back to their default value.

The legend illustrates the meaning of the colors on the map after the model is run. You can also trace a particular vehicle. The statistics option will list all the important characteristics of the current network, including all global variables, the OD matrix generated, as well as important measures of effectiveness. You should save this result in a text file and include it as an appendix to your lab report.

Tasks:

1. Use the evolve option with the default settings.
2. Test different options of the model to understand its meaning.
3. Modify the Sioux Falls network and create your own network.
4. Use the evolve option and see the result generated. Choose one particular node and illustrate the relation between the number of workers and final number of trips generated.
5. Understand the meaning of OD matrix and see how it is obtained.
6. Write up the results (~1 page), describing what you did and what it means. Include an appendix with statistics and picture of the network.