Tech Brief

Need a solution?
Think Jersey DOT

THE FUTURE OF TRANSPORTATION MODELING

HERE'S THE PROBLEM

Transportation experts have traditionally used models for transportation planning, engineering, and management to find solutions for complex problems. Models are used to evaluate the impacts of proposed alternative solutions. Transportation models have evolved throughout the years and many software packages have been developed to implement these models and address the needs of the transportation professionals. The abundance of software packages available in the market creates many practical questions for users and managers, such as: "What program should I buy?" "Would this particular program cover my specific needs?" "Is there a program that can do it all?"…

AND, HERE IS THE SOLUTION…

- Identify the most widely used software packages and the most important features for each application group
- Collect all possible data from software developers and transportation professionals as well as the Internet, about the identified software packages
- Sort the collected data according to the application areas
- Organize the collected data into a database

1

- Develop a software application that will facilitate browsing through the database, finding requested information about each software package and compare features of various packages

THIS IS WHAT IT CAN DO

- Give information about selected software packages
- Compare the capabilities of any two software packages
- Provide information about interconnectivity between software packages
- Rank the software packages according to several criteria
- Allow update of information regarding any of the software packages in the database

THE BOTTOM LINE…

Overall, there is a need for software packages that are capable of covering a wide range of applications. Traditional package capabilities need to be complemented by other tools or upgraded to include additional capabilities. Integrated tools seem to be preferred by the users. In transitioning from a current application to a new one, the level of integration and interoperability as well as the ease of transition are major factors being considered. The software application developed as part of this project aims to support decision making in determining which applications may be used to cover the modeling needs of State DOT transportation professionals. There is a strong push from the research community for software packages with dynamic network analysis capabilities. These tools seem to be more accurate in terms of traffic flow estimations, impacts, and emissions modeling. Although an increasing number of agencies are supporting the testing of new and innovative tools, their wide adoption is typically delayed due to the reluctance of the various agencies to rely on applications that have not been tested sufficiently and have not been proven in practice.

FOR MORE INFORMATION CONTACT:	3
NJDOT PROJECT MANAGER:	**Dr. Nazhat Aboobaker**
PHONE NO.	**(609) 530-4491**
e-mail	**Nazhat.Aboobaker@dot.state.nj.us**
UNIVERSITY PRINCIPAL INVESTIGATORS	**Dr. Maria Boile**
UNIVERSITY:	**Rutgers The State University of New Jersey**
PHONE NO.	**(732) 445-7979 ext.**
e-mail	**boile@rci.rutgers.edu**

A final report is available online at http://www.state.nj.us/transportation/research/research.html

If you would like a copy of the full report, please FAX the NJDOT, Bureau of Research, Technology Transfer Group at (609) 530-3722 or send an e-mail to Research.Bureau@dot.state.nj.us and ask for:

Report Title: The Future of Transportation Modeling

NJDOT Research Report No: FHWA-NJ-2005-016