TECHNOLOGY

Dynasmart-P

OVERVIEW

DYNASMART-P is one of the two state-of-the-art dynamic network traffic operational planning tools developed under the Federal Highway Administration's (FHWA) Dynamic Traffic Assignment (DTA) research project. DYNASMART-P, developed by researchers at the University of Maryland, supports transportation network planning and traffic operations decisions, including evaluation of ITS deployment options, through the use of simulation-based dynamic traffic assignment. This tool combines (1) dynamic network assignment models, used primarily in conjunction with demand forecasting procedures for planning applications, and (2) traffic simulation models, used primarily for traffic operational studies. DYNASMART-P provides the capability to model the evolution of traffic flows in a traffic network, which result from the decisions of individual travelers seeking for the best paths en-route over a given planning horizon. It overcomes many of the known limitations of static tools used in current planning practice. These limitations pertain to the types of alternative measures that may be represented and evaluated, and the policy questions that planning agencies are increasingly asked to address.

DYNASMART-P defines a new generation of transportation planning methodologies, which can interface readily with existing four step procedures, yet provides a meaningful jump in the range and type of measures that can be evaluated. Because it considers the time-varying nature of traffic flows, it is expected to produce more useful estimates of state variables such as speeds, queue lengths, delays and congestion effects to better assess the functional and environmental impacts of a variety of traditional and emerging transportation planning measures, including the deployment of ITS.

DYNASMART-P is available from the Center for Microcomputers in Transportation (McTrans) see http://mctrans.ce.ufl.edu/aboutMctrans/.

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CATEGORIES

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EXTERNAL RESOURCES

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