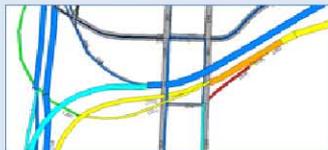


Overview

- The Dynamic Traffic Assignment (DTA) model provides a time-based simulation of traffic flows on roadways in the region. The assignment reflects the routes of individual vehicles as they travel from their origin to their destination. DTA displays the results of all vehicles on the road system as time progresses.
- The dynamic traffic assignment of traffic responds to the details of the highway network. A vehicle's route choice is sensitive to signal timing, lane configurations, turn pockets, pricing, and congestion/queuing. Bottlenecks and traffic queues may cause vehicles to divert to faster alternative routes, so that the travel time and route of a vehicle traveling at one time of day may be different than the travel time and route experienced by that same vehicle if it were traveling at a different time period.
- DTA represents an advancement in the travel forecasting profession made possible by improvements in both computing hardware and model algorithms. It enables regional-scale vehicle assignment with microsimulation-level detail.

Vehicle volumes: 5:30 to 5:35 pm

Color indicates vehicle density



Queuing effects: 5:15 to 5:20 pm

Red indicates congested lanes

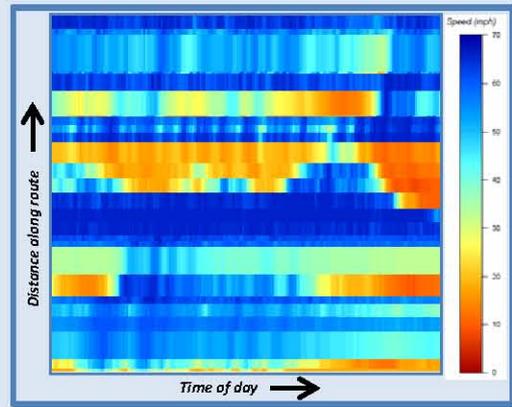


How it's used

- Projected transportation demand of persons and goods in the metropolitan planning area over a designated time period is based upon all applicable short and long-term land use and development plans. Simulation of traffic on the regional highway network is an important component of understanding the impact of both infrastructure investments and transportation and land use policy decisions. Uses for DTA include the following:
 - Use in analysis of projected traffic conditions at different times-of-day:
 - Vehicle volumes on roads
 - Congested travel times
 - Average speeds on roadway segments
 - Traffic queues/backups
 - Duration of congestion
 - Use in studying short term project impacts:
 - Lane closures
 - Ramp changes
 - Construction impacts
 - Evacuation planning
 - Use in understanding long term impacts to regional transportation and land use (Planning-level alternatives analysis):
 - Land use changes
 - Pricing alternatives
 - Reliability analysis
 - Time of day decisions for travel
 - Transportation network scenarios
 - Peak period analysis (AM and PM)
 - Greenhouse gas emission analysis

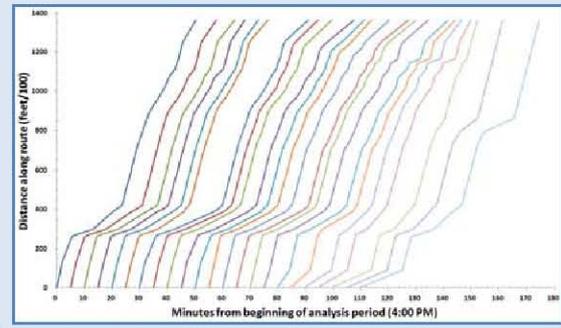
Space time diagram

Color indicates speed through a corridor

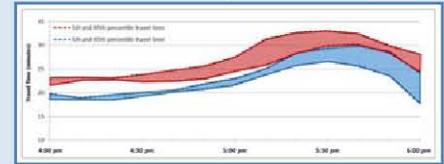


Travel time trajectories through corridor

'Steepness' of lines indicate speed of travel



Alternatives analysis of travel times



For more information, contact:

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