

3.3.3 How Freight Moves: Estimating Mileage and Routes Using an Innovative GIS Tool

Presenter

Steve Lewis

USDOT Bureau of Transportation Statistics

Steve.Lewis@dot.gov

Co-Presenter

This presentation describes the development and implementation of a GIS-based multimodal, integrated, freight routing tool and the associated transportation networks for the 2007 Commodity Flow survey (CFS). The 2007 CFS is being conducted by the Research and Innovative Technology Administration, Bureau of Transportation Statistics (RITA/BTS) in partnership with the U.S. Census Bureau. RITA/BTS is tasked with estimating the distance, by mode of transportation, traveled by each shipment sampled in the CFS. Each sample in the CFS includes information on the zip code of origin, the zip code of destination, and the mode sequence (i.e. highway-rail-highway). Using this information as input, RITA/BTS developed a custom multimodal routing tool based on the ArcGIS Network Analyst. A complete multi-modal transportation network was built for this project. The presentation will cover the challenges in building the multi-modal network, freight modeling, and the computational issues involved in routing different modes.