

From Paper to TDOT'S Automated Inventory

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Tennessee DOT began development of GPS-based technology in 1994 to produce digital data to replace and automate the maintenance of their manually generated GIS network. This development work was completed in 1997 and the technology was used during the 1998-2000 time period to collect new GPS-based data and expand the GIS control network to include the complete road network for the Departments 35,000 miles of State-Maintained and Functional Class Highways. Additional efforts were funded by TDOT in 2001-2004 to develop and demonstrate an automated inventory update process that could be used for local roads. The resulting process provided simultaneous collection and processing of GPS data for the GIS network and logmile inventory update data for four database tables. Over 2:1 improvements in productivity were demonstrated as compared to previous methods.

TDOT contracted with Navstar Mapping Corporation (NMC) in 2007 to implement this process using their automated data collection and data processing system. The contract period for updating the 70,000 mile local road network spans five years. We are currently in the second year of the contract, and this presentation will describe the automated data collection system and processing steps used. The transition from TDOT's manual method of data collection to the automated systems will be highlighted. The problems encountered and solutions that were implemented during the first year of production will be summarized.