Virginia DOT Finds Crowd-Sourced O-D Data to be More Cost Effective than License Plate Recordings

*Accuracy is Similar but Cost of Data is Significantly Less*

Virginia’s Department of Transportation is using TomTom’s Origin-Destination (O-D) data to try to improve traffic conditions for people going through the heavily traveled corridor where Interstates 95 and 64 overlap in the heart of the state’s capital. The seven-mile corridor through Richmond can become a chokepoint for travelers heading north, south, east and west.

Last summer, VDOT initiated a major study of this overlap section. TomTom spokeswoman Maureen Williams explains that because of the high volume of traffic in the corridor and the high density of interchanges, “VDOT decided to construct a detailed micro simulation model to better understand the operational issues and test potential alternations.” She notes that in building the model, “it was important to understand where travelers were entering and exiting the study area.”

Williams explains that VDOT weighed TomTom’s O-D data against recording license plates with automated license plate recognition (ALPR) technology and matching them to obtain the O-Ds. They found the results to be comparable in terms of accuracy. However, when it came to cost, Williams says VDOT recognized that TomTom’s data could be obtained for “a fraction” of the price. Thomas Phillips, a former operations official at VDOT, confirmed this by saying that TomTom’s data showed considerable savings when compared to using ALPR to obtain O-D data. In fact, a VDOT spokeswoman says the agency spent $10,000 for the TomTom data and $236,000 for ALPR.

VDOT says the I-95/I-64 overlap corridor is one of the oldest stretches of interstate highway in Virginia and was not built to modern interstate standards. A VDOT report notes the area experiences “significant capacity and safety problems.” In studying the problem area, TomTom provided VDOT with data that included travel time information per road segment for individual days of the week and different times of day as well as an O-D matrix. These were main components of building a simulation model using VISSIM software that accounts for traffic volumes that vary by time of day and day of week.

Using the TomTom data, VDOT is establishing short, intermediate and long-term goals for improving travel conditions through the corridor. Steps may include interchange improvements, longer acceleration/deceleration lanes, longer merge/weave lanes, emergency shoulder/pulloffs and ITS improvements.

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