Comparison of Using Different Kinds of Traffic Data in Best Route Analysis Based on GIS

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***Abstract*—Geographic information systems (GIS) represent one of the emerging tools in transportation network analysis. It is very important how transportation network is modelled regarding traffic data. Fixed travel speed data was often used till now, but due to advancements in information and communication technologies (ICTs) and location-aware technologies (LATs), it is now possible to collect large amounts of mobility and activity data in real-time or near-real-time. The aim of the research is to make a comparison between different types of best route analysis regarding different travel speed information: fixed travel speed, historical traffic, and live traffic. The question is about the differences in travel time and if they are significant. This finding would not be important only for best route analysis but also for other types of network analyses. Locationally, the research is focused on the city of Celje with its surroundings. In the paper we first distinguish between different kinds of travel speed information, then we present our practical work of creating three different types of network models according to different types of traffic speed data, and finally we perform best route analysis according to mentioned models and compare the results.**

***Key words*—traffic data, live traffic, transportation network analysis, best route analysis, geographic information systems (GIS).**

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