

ABSTRACT

Travel time is a fundamental measure of system effectiveness in transportation and is very useful for the travelers and system operators. Providing travel time information before start of journey to the road users allows them to make a more informed route choice decisions which in turn helps the system by distributing the travel demand. In this thesis, an attempt has been made to predict travel time of a road section based only on speed data. Such a prediction is not very easy for Indian traffic as in other countries like USA. Indian traffic condition differs from the traffic condition of countries like USA in terms of (i) lack of lane discipline and (ii) presence of extremely heterogeneous traffic comprising of motorized and non-motorized vehicles. For this study, field data on spot speed, flow and travel time have been collected from different sites at different levels of service: A/B and C/D. Travel time has been predicted in two ways: (i) using spot speed data and (ii) simulation based prediction using VISSIM.

Keywords: Travel time, Spot speed, VISSIM, Heterogeneous traffic, Lane discipline.