

DYNAMIC ROUTE ARRIVAL TIME PREDICTION

By

Brian Michalski

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Approved:

Mukkai S. Krishnamoorthy, Thesis Adviser

Rensselaer Polytechnic Institute
Troy, New York

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ABSTRACT

Predicting the arrival time of a vehicles is an important operation in the mass-transit field. As passengers waiting at stops are increasingly connected to the internet, we seek to provide an estimation of time until the next arrival. Looking specically at non-scheduled transit systems, we explore methods for estimating the arrival time of vehicles providing access to near-real time travel data. To achieve this, we implement an extendable arrival estimation algorithm with adjustable parameters to account for variations in the transit system. In support of this, we develop several components to identify dynamic routes and the vehicles traveling on them. After extensive testing on a campus shuttle system, we found this approach to provide accurate arrival predictions. Further application of these techniques may improve the accuracy and performance of the prediction system.