

Senior Design Project Report

CSE/EEE/ETE 499

AN APPROACH IN TRAVEL DEMAND MANAGEMENT EMPLOYING CROWD SOURCED DATA ON A SOCIAL NETWORKING INTERFACE



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DECLARATION

This is to certify that this Project is our original work. No part of this work has been submitted elsewhere partially or fully for the award of any other degree or diploma. Any material reproduced in this project has been properly acknowledged.

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Approval

We take great pleasure in submitting our senior design project report on “An Approach in Travel Demand Management Employing Crowd Sourced Data on a Social Networking Interface”. This report is prepared as a requirement of the Capstone Design Project CSE/EEE/ETE 499 A & B which is a two semester long senior design course. This course involves multidisciplinary teams of students who build and test custom designed systems, components or engineering processes. We would like to request you to accept this report as a partial fulfillment of Bachelor of Science degree under Electrical and Computer Engineering Department of North South University.

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Acknowledgement

This report has been a collaborative effort on the part of the three of us, and our supervisor.

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We would also like to thank the ECE department of North South University for providing us with the opportunity to have an industrial level design experience as part of our curriculum for the undergraduate program.

Finally, we would like to thank our families and everybody who supported us and provided with guidance for the completion of this project.

AN APPROACH IN TRAVEL DEMAND MANAGEMENT EMPLOYING CROWD SOURCED DATA ON A SOCIAL NETWORKING INTERFACE

Abstract

According to research unveiled by the Accident Research Institute (ARI) of the Bangladesh University of Engineering and Technology (BUET) in 2018, traffic congestion in Dhaka costs the Bangladeshi economy approximately five million work hours and Tk. 37, 000 crore, annually. Amidst various other causes, the unpredictable nature of traffic in Dhaka creates prolonged traffic congestions. A significant part of these statistics can be attributed to a lack of information about traffic and no reliable central source of information to consult regarding the advisability of conducting a journey at any particular time. The only moderately reliable approach to gathering information regarding traffic is consulting Google Maps. However, the estimated time of arrival provided therein often fails to be satisfactorily accurate. In this paper we propose an online web application that combines the nature of a social media interface with crowd sourced data- a tool of our times the potential of which we are only beginning to grasp now- in order to provide the users with a central source of reliable information with the purpose of increasing traffic awareness, and thereby, discouraging congestion using concepts of travel demand management (TDM), particularly intelligent transportation technologies.

Key words: traffic awareness, travel demand management, TDM, crowd-sourced information, Google Maps