



Project Title: Providing Reliable Route Guidance - Part 2

Principal Investigator:

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Center Project Number: Y2-02

Award Amount: \$ 62,457

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Abstract:

The overarching goal of the project is to enhance travel reliability of highway users by providing them with reliable route guidance produced from newly developed routing algorithms that are validated and implemented with real traffic data. Phase I of the project (funded by CCITT in 2008) focused on demonstrating the value of reliable route guidance through the development and dissemination of Chicago Testbed for Reliable Routing (CTR). Phase II aims at bringing the implementation of reliable-routing technology to the next stage through *initial deployment* of CTR.

The first objective in Phase II is to create a travel reliability inventory (TRI) of Northeastern Illinois using CTR, by collaborating with public agencies such as Illinois Department of Transportation (IDOT), Chicago Transit Authority (CTA) and Chicago Traffic Management Authority (CTMA). TRI documents travel reliability indices (e.g., 95 percentile route travel times) between heavily-travelled origins-destination pairs in the region, which are of interest to not only individual travel decision-making, but also regional transportation planning and traffic operations/management. The second objective is to perform an initial market test in order to understand users’ need for and response to reliability information and reliable route guidance.

To these ends, the following research activities are proposed to further develop CTR:

- Implement and test latest reliable routing algorithms that are suitable for large-scale applications.
- Develop a web-based version of CTR and host the service at Northwestern University’s Translab Website. A web survey will be designed and posted along with CTR in order to collect user feedback.
- Explore the possibility of achieving a greater degree of data coverage of the study area. Specifically, archived automatic vehicle location (AVL) data of CTA’s bus fleet is considered an important data source to supplement GCM data and will receive a focal study.