Crowdsensing Travel Behavior – Door-to-door travel chains

Motivation

Traffic accounts for about ¼ of peoples' total energy consumption; in some metropolitan areas people can spend 2h/day in traffic. Significant savings are possible if people could be advised on better travel options based on real-time traffic information collected from mobile devices and traffic information sources.

The improving sensing capabilities and the increasing penetration of smart phones has recently made this kind of service a practical opportunity. In Helsinki Region other enablers are the changes in the transportation environment - the demand responsive transportation system (e.g., Kutsuplus), the remote parking arrangements, and ridesharing systems - and the availability of new traffic-related information sources: maps, journey planners (Reittiopas.fi), traffic incident reporting (Digitraffic.fi), and bus fleet tracking of HSL.

Contents

The seminar will study models, technologies, and tools to sense, represent, learn, predict, and influence the travel behavior of people based on:

- the information provided by their mobile devices (location, activity mode, and other sensor data), and
- other information sources (journey planners, traffic incident reports, bus fleet tracking data, parking lot availability).

The focus is on multi-modal, door-to-door travel chains that include walking, biking, bus travel, cars, DRT, and so on.

Format

Seminar meetings are on Fridays between 10-12 in the meeting room A106. Topics are given on Friday 4.10.2013. Each student writes a report and makes a presentation of the selected topic. Presentations are held on 15.-29.11.2013.

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