IPRO 305
Communiity Maps

Fall 2010

Are you or your community group interested in participating in this project? If so, please speak to one of our team members at our display.

What to expect in future semesters:

• A crowd-sourcing experiment with more participants and two forms of data collection.

• Quantitative study results from an experiment that involves a viable number of participants from at least three community groups.

• Qualitative results obtained from focus groups where the community groups give feedback about the experiment, thus helping NAVTEQ create a better crowd-sourcing solution.

ILLINOIS INSTITUTE OF TECHNOLOGY

NAVTEQ

Imagine being able to tailor a map to your exact needs

THE PROJECT: FALL 2010

NAVTEQ is a traffic data and mapping data company. Their recent project has been to allow users to update maps with data that they feel is important. This gives the community at large an opportunity to create a map that can be useful for itself and the world at large.
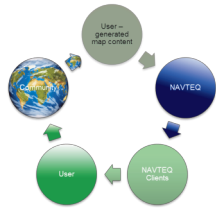
IPRO 305's job is to make NAVTEQ's project a reality. By recruiting communities to participate in gathering POI (point of interest) data and analyzing the best incentives to incite crowdsourcing, IIT students are helping to create the maps of tomorrow.

Our team's work lays the foundation for full-scale crowd-sourcing. We have created and tested an experimental methodology which will be the groundwork for all future experiments in crowd-sourcing of data.

IPRO 305: UNRIVALED REAL WORLD EXPERIENCE

Several challenges were encountered during the semester. As a result, our team gained practical knowledge about assessing challenges, maximizing resources, and redefining objectives. We did not have the necessary hardware and software functionality to conduct a larger crowdsourcing experiment. As a result, we improvised by running a shorter experiment with a smaller pool of volunteers while still using the planned incentives and the King of the Road application. We also used a web-based tool to maximize data gathering. Our team focused on developing and testing a unique experimental design. This semester, we placed special emphasis on assessing user feedback and streamlining the entire crowd-sourcing experiment, allowing future semesters to spend more time on POI data analysis.

THE POI TOOLS

During this semester, two tools were used to collect POI data. King of the Road is a smart-phone application that takes the POI data inputted by the user and uploads it to NAVTEQ's map database. To compensate for potential software bugs, our team also used a web-based tool which allowed users to input data from their computer.

RECRUITING COMMUNITIES

To test our crowd-sourcing methodology, we had three groups who volunteered this semester:

Downtown Evanston
Community: Business people
POI data: Tenancy

Northwestern University
Community: Football coaching staff, interns
POI data: Restaurants, practice fields

Chicago Nightlife
Community: College students, business professionals
POI data: Restaurants, bars

COLLECTING POI DATA

During two–one week periods, our groups gathered POI data using King of the Road as well as a web-based tool. Each week had a different incentive: group-based, individual-based, or no incentive.

REVIEWING THE DATA

Upon completion of the experiment, our team began researching what are important steps to making crowd-sourcing effective. Because of the challenges we encountered, our team focused on user feedback and pioneering a crowd-sourcing methodology which will be used in all future semesters of this IPRO.