Active Transportation, Neighborhood Planning and Participatory GIS

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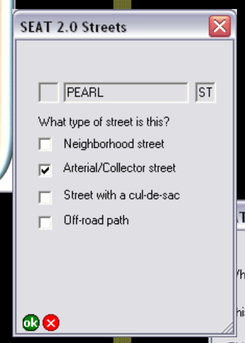
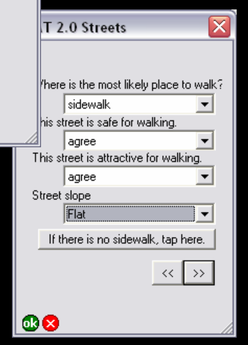
Abstract

This multi year project is aimed at developing community-based transportation decision support systems focusing on pedestrian safety and the enhancement of the pedestrian infrastructure. These goals will be achieved through the development, testing, evaluation, and transferring of GIS and PDA-based tools focusing on measuring and mapping the pedestrian environment. The tools are developed in a way that maximizes public involvement by local municipalities, school districts, transit agencies, and citizen groups while minimizing the training needs of a general, non-GIS using public. With the data, communities can conduct self assessments of local scale walkability, identify specific geographic areas of unsafe conditions, prioritize areas of greatest need, engage with local transportation officials more productively, and be better prepared to leverage enhancement funds.

Subsequently, the purpose of the tools is twofold: 1) to collect relevant information about the walking environment that can lead to greater safety and an increase in pedestrian utilization; and 2) to catalyze community involvement that can leverage public and other resources that can result in increased rates of walking.

Data is collected using mobile GIS technology on Personal Digital Assistants (PDA)





Acknowledgements

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Objectives

- To develop and test a series of GIS-based pedestrian assessment tools that can be utilized in a public involvement forum where data gathering, data synthesizing, and basic map production can be carried out with minimal training and minimal need for an outside technician.
- To package these tools into self-contained applications for distribution to communities throughout the country

What makes a walkable environment?

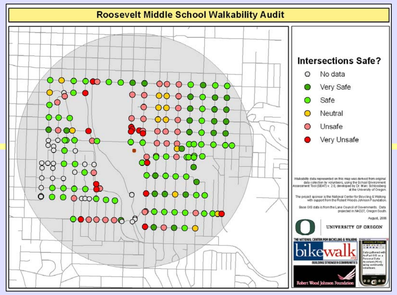
Methodology

- Identify key variables for assessing walkable & bikeable environments
- Translate those variables into data gathering instrument within GIS
- Design instrument in “dummy proof” format for general citizen use
- Train citizens on the issues of urban form, active transportation and public health, and GIS tool
- Citizens gather data
- Synthesize data & make maps instantaneously
- Convene citizen discussion about results
- Plan citizen action steps to translate data into community action

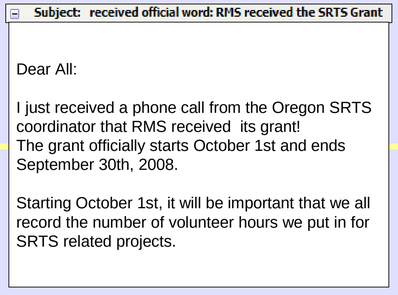
The Workshops

1. Train citizens on healthy communities, transportation, and mobile GIS

2. Citizens collect data in the field using PDAs and GIS



3. As citizens return from the field, maps are made with new data



4. The new citizen coalition transforms data, analysis, and political capital into action.

Completed Tool

School Environment Assessment Tool (SEAT)

- Focuses on safe routes to school, walking, and healthy transportation for kids
- Tested in Oregon, Washington, Wisconsin, & Minnesota
- Tool, training, and data instrument packaged for nationwide distribution

S.E.A.T
SCHOOL ENVIRONMENT ASSESMENT TOOL

Tools in Progress

Complete Streets Assessment Tool (CSAT)

- assesses if arterials/collectors accommodate bikes & peds

ADA Assessment Tool (ADAAT)

- assesses sidewalks & intersections in terms of ADA standards

Transit Stop Assessment Tool (TSAT)

- assesses pedestrian environment to/from/around transit stops

Bike Parking Assessment Tool (BPAT)

- assesses bike parking (legal and illegal) in compact areas

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