Street Sound

Navigate with your ears

Free web application for the visually impaired to access street information

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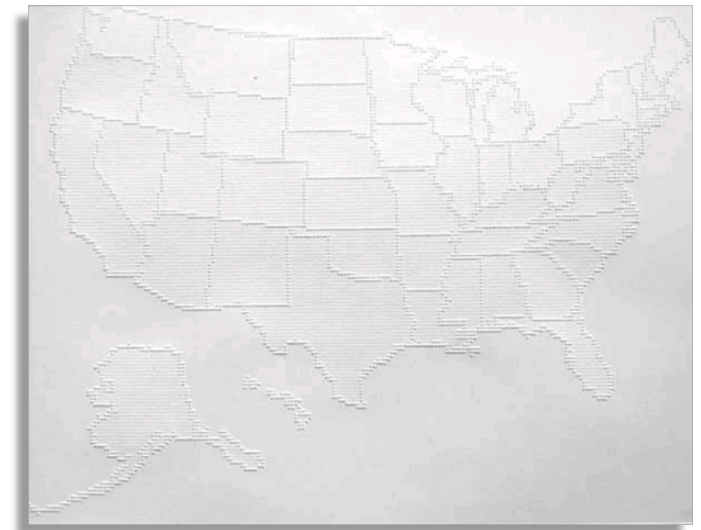
with

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Current Mobility Methods

– Verbal directions

– Trial and error navigation

    – Long white cane

– Static tactile map

    – Order ahead of time
    – Purchase embosser and self-print

– Hire guide

    – Dog
    – Sighted person

– Limit travel to familiar areas

What You Need

- Internet connection

- Firefox web browser

    -FireVox text-to-speech plug-in

- Audio output

    -e.g. Speakers, Headphones

- Tablet pen (optional)

- That's all!

What You DON'T Need

- Expensive screen reading software

  -e.g. ~$1000 for JAWS or Window-Eyes

- Specialized interface device

  -e.g. SensAble PHANTOM Desktop device

- Force feedback

  -e.g. Logitech *Wingman* force feedback mouse

- Complicated installation process

- Specific operating system

  -e.g. Windows, Mac, Linux

Street Sound Features

Type in any address

Zoom and move map

Click for intersection

Click for street name

Move off map notification

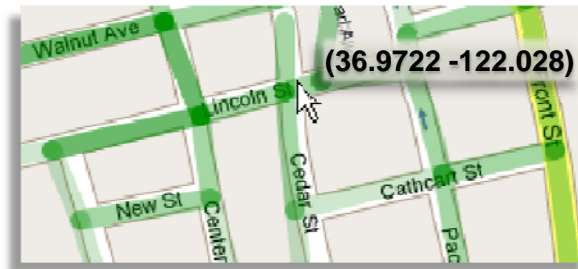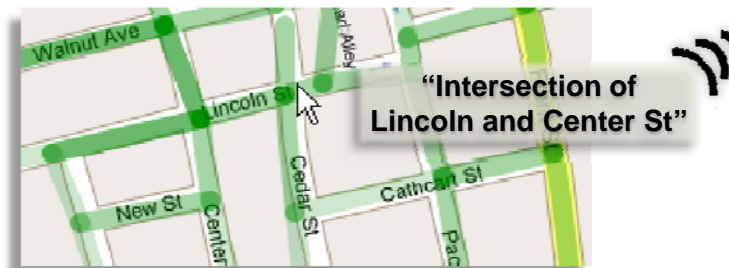Move off street notification

Find local businesses

Street Sound
Navigate with your ears

How Street Sound Works

- Extracts latitude-longitude coordinate from cursor location
    - "Reverse geocoding"

- Looks up coordinate in *Geonames* database

- If loading, returns and draws nearby street segments

- Responds to user's cursor location and activity

Visually Impaired Accessible

– All actions possible with keystrokes

  – Zoom

  – Scroll

  – Search

  – Set address

– When following a street, beep notifies if deviate

– Warning if no longer on map

– User can now hear what you and I can see!

Technological Aspects

- GoogleMaps API

- Javascript event processing

- *Geonames* database for street information

- Wacom *Intuos3* 9x12 pen tablet

  - More natural interface for blind than mouse

Future Development

– Multi-touch display

– Automatic intersection and street name notification

– Local database of street data

– Travel directions between two locations

– Audio guidance to specific location on map