

MICHIGAN STATE
UNIVERSITY

Project Plan

Web-Based Geography Management

The Capstone Experience

Team Urban Science

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*From Students...
...to Professionals*

Project Overview

- Create a geography management tool for efficient data analysis
- Must contain a hierarchy:
 - Census Tracts
 - Primary Market Areas (PMAs)
 - Markets
 - Regions
- Allows the re-assignment of geographical territories at any zoom level
- Easy interaction on an iPad



Functional Specifications

- Map Area
 - Displays geometric boundaries depending on zoom level
- Re-assignment of Geographic Areas
 - Ability to re-assign any classification of territories and dynamically update the database
- Search Options
- Add and Edit Dealer Locations
- Export Changes

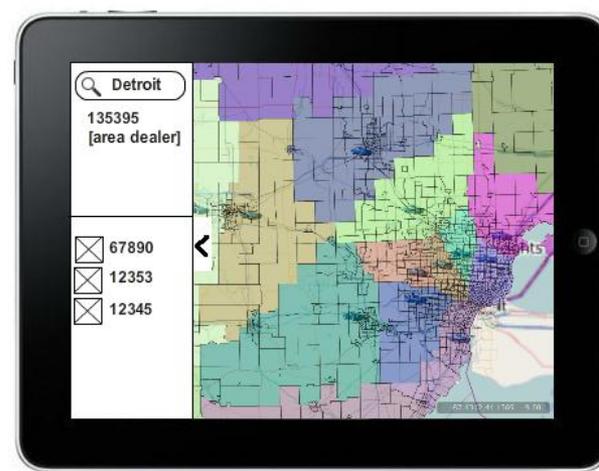
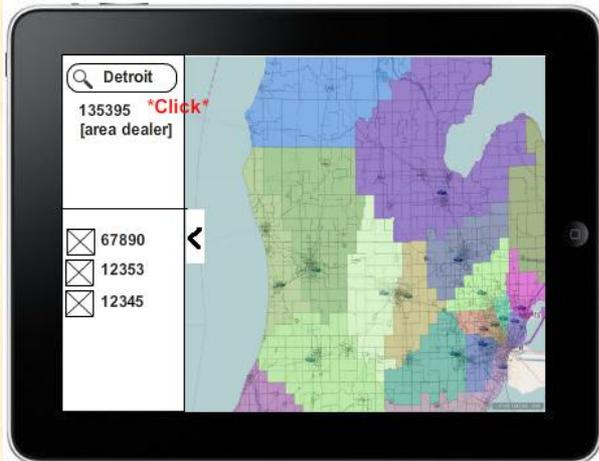
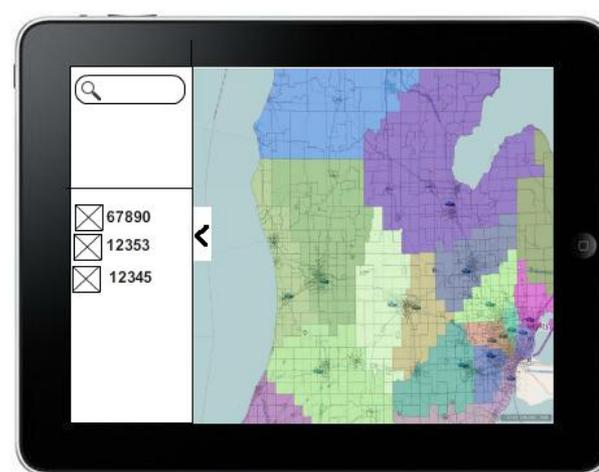
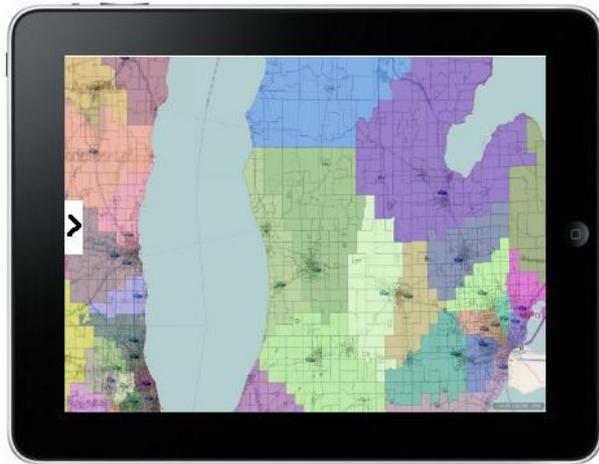


Design Specifications

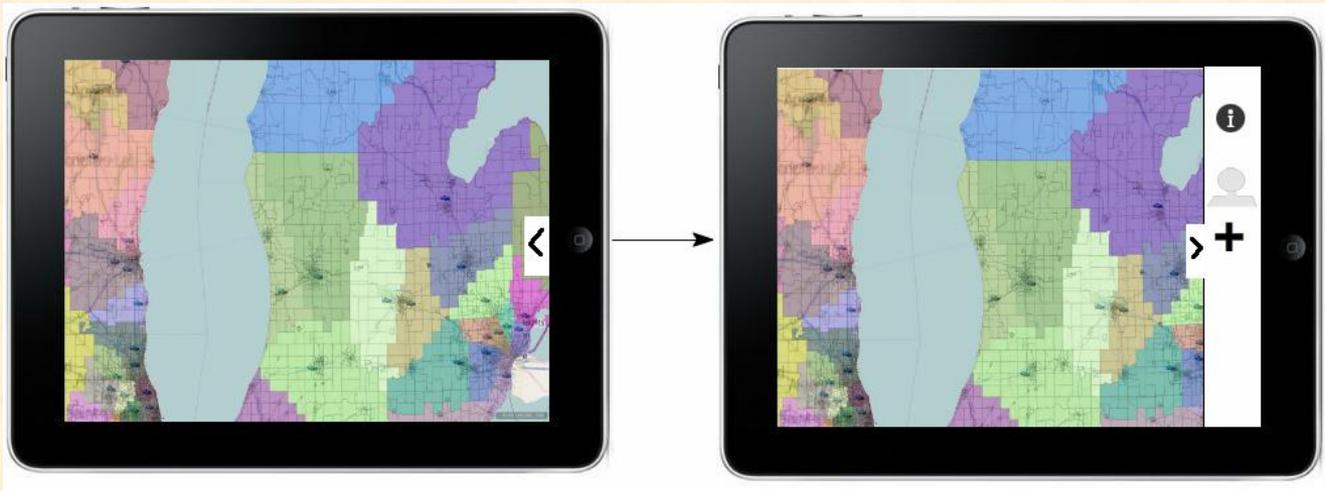
- iPad
 - Allow for touch interactivity designed with mobile platform in mind
- Easy to use interface
- Efficient retrieval of data



Screen Mockup: Search Pane



Screen Mockup: Menu Pane

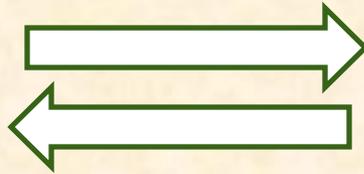
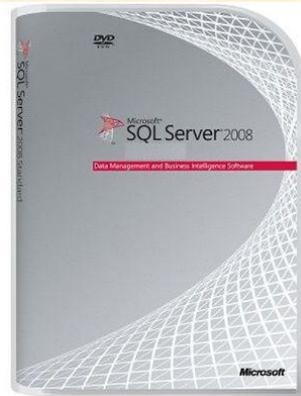


Technical Specifications

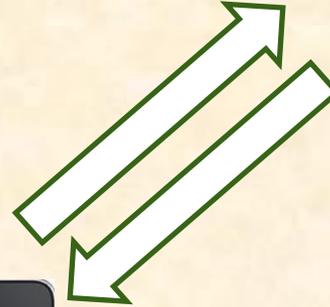
- Bing Maps
- PhoneGap
- Microsoft SQL Server 2008
- Web Technologies - HTML 5, Javascript, RESTful web services



System Architecture



RESTful Web Service



System Components

- Hardware Platforms
 - Dell Server
 - iPad
- Software Platforms / Technologies
 - Windows Server 2008
 - Bing Maps
 - PhoneGap
 - Microsoft SQL Server 2008
 - HTML 5/ Javascript/ CSS 3



Testing

- Testing will be done as features and functionality are developed.
- No plans for automated testing



Risks

- PhoneGap
 - No experience
 - Going through online tutorials
- Web Technologies
 - Limited experience with Javascript, HTML5, CSS3
 - Going through tutorials and reference texts
 - Experimenting with HTML5 for touch events for iPad
- Bing Maps
 - No experience
 - Going through tutorials of the Bing Maps SDK
- RESTful Web Service
 - No experience
 - Understanding how to communicate with database

