MICHIGAN STATE UNIVERSITY

Project Plan

Catastrophe Insurance Adjuster App

The Capstone Experience

Team Auto-Owners

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Fall 2013

From Students…
…to Professionals

Project Overview

- Auto-Owners Insurance uses teams of catastrophe adjusters to handle a sudden influx of claims caused by unexpected, large scale events (e.g. Hurricanes, Hail etc.). Currently these teams are provided by outside firms and are deployed when and where they are needed. In order to reduce cost and eliminate efficiency, Auto-Owners is looking to form its own catastrophe team. In order for the new team to operate successfully, job assignments must be clearly communicated and the appropriate tools must be provided. Mobile friendly software is needed to enable the adjusters to receive assignments, locate loss locations, plan visits, and document inspections while travelling in unfamiliar territory, including remote locations with unreliable internet connections.

Functional Specifications

- A General Solution
  - Team coordinators will input claims into the system and assign each to a specific adjuster. The adjuster will log in, view their assigned claim events, and select events to schedule for their daily itinerary (including rearranging events based on priority and client availability). The application will display a map of both scheduled and future events, allowing for on-the-fly trip planning by the adjuster. The adjuster will be able to view event details, make notes for themself, and mark the event as in progress or completed. The map will display route information based on the current itinerary.

Functional Specifications

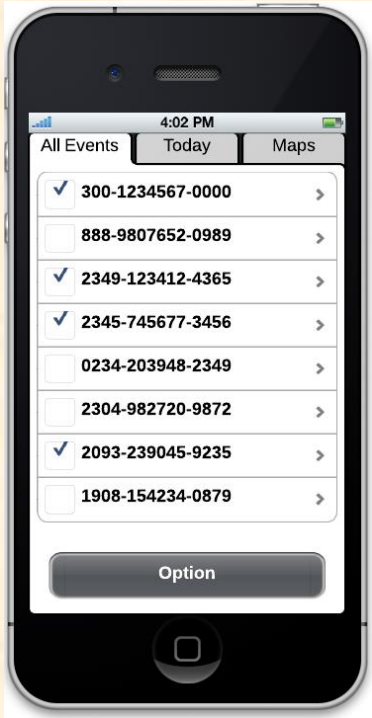
- Example Scenario
  - Mr. Smith is the coordinator of a catastrophe adjuster team. Whenever a local catastrophe exceeds the local adjusters' ability to timely handle claims—generally, fifty claims within one region—he summons his team, ordinarily occupied with other work, and deploys them to that region to process the claims. At the same time, he loads all of the catastrophe claims into the Catastrophe Insurance Adjustment Application (CIAA) and assigns each event (a claim's specific location; claims may have multiple, separate locations) to one of his catastrophe adjusters based on his sound discretion. As new claims come in, he will continue to load them into the CIAA and assign them to his crew.
  - Ms. Jones is one of the catastrophe adjusters on Mr. Smith's team. When she's called up to duty, she packs her suitcase and drives or flies to the disaster area to stay until the claims processing is complete. En route or at arrival, she logs in to the CIAA from her laptop or mobile phone, reads through the descriptions of her assigned events, calls the clients responsible for each claim to verify their availability and get a sense of priority, and then selects and sorts several to handle on her first day on location. She makes important notes—*no, Rufus doesn't bite, honest!*—in the CIAA for her convenience.
  - When she arrives, the CIAA lists her scheduled events for her and shows a map with a suggested, efficient route. After processing each claim, she marks it completed in the CIAA and may update the notes for her future use. She may choose to rearrange or modify her itinerary throughout her day as needed.

Design Specifications

- Business Process
  - After the occurrence of a catastrophe (*e.g.*, hail, tornado, hurricane) Auto-Owners Insurance sends its catastrophe adjuster team to the location.
  - Claims from the catastrophe are assigned to adjusters from Auto-Owners' internal software.
  - From their hotels, the adjusters schedule their visits for the next day.
  - The application plots a course that is efficient from one claim to another.
  - When an adjuster completes the inspection for an event, she marks it as complete, which begins the route to the next scheduled event.

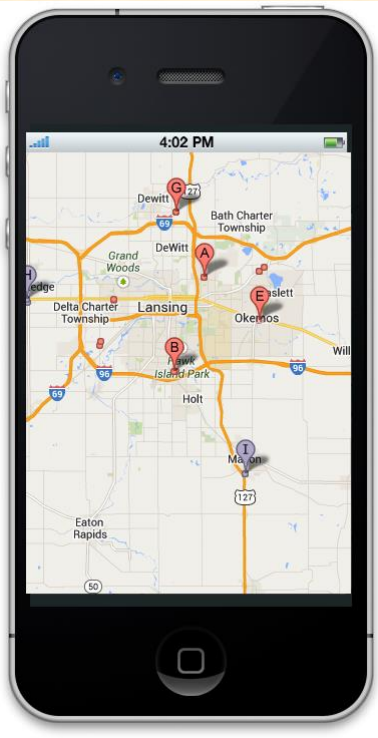
Screen Mockup: Mobile

Login Screen



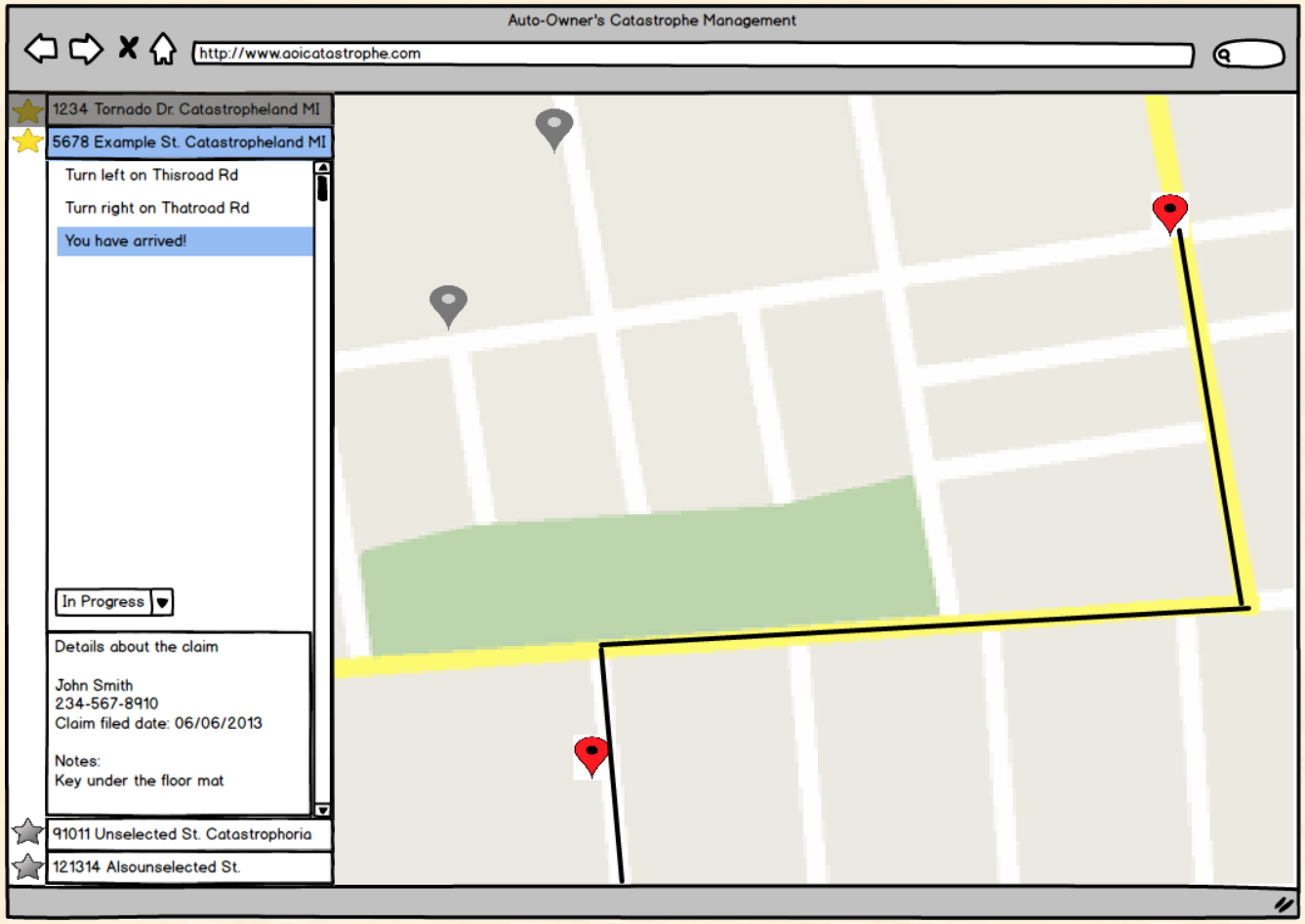
All Events Screen

Event Details Screen



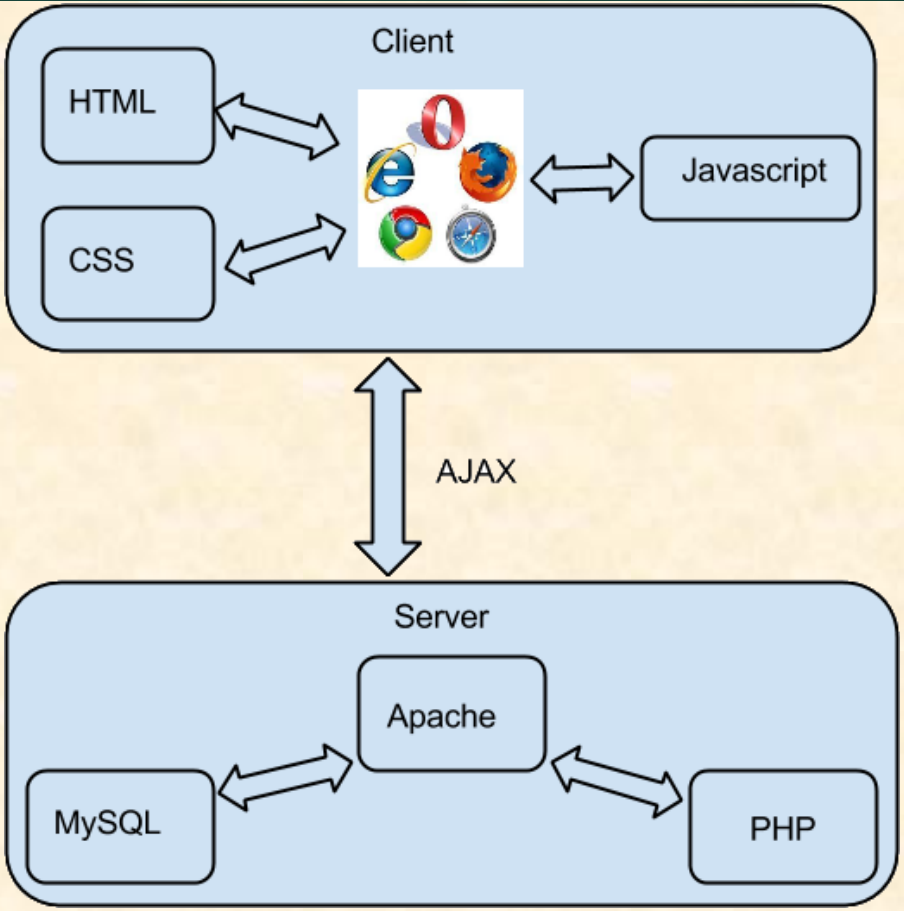
Map Screen

Screen Mockup: Desktop/Laptop

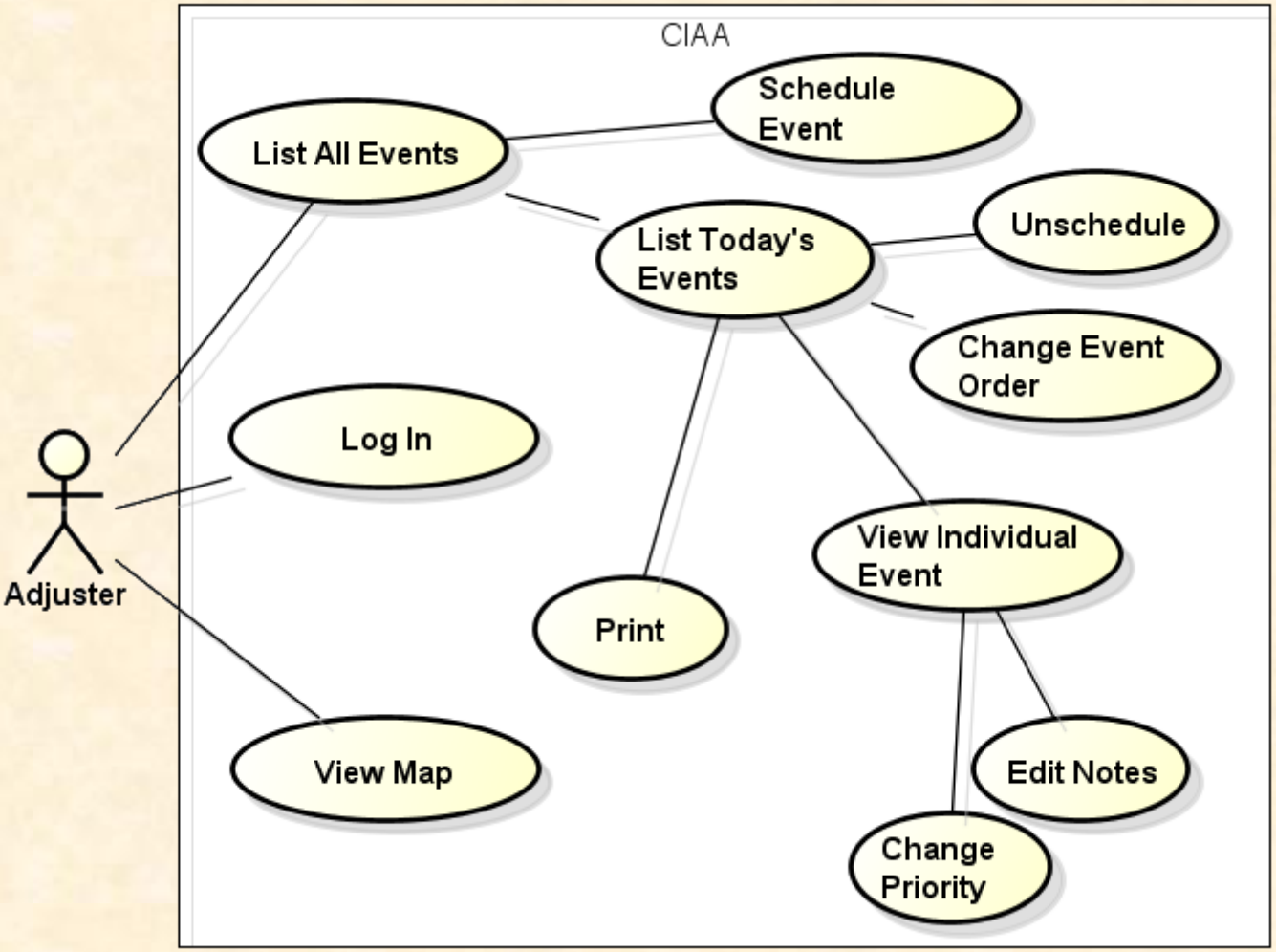


Technical Specifications

- Our application is written in PHP with CodeIgniter, a lightweight MVC framework. It is developed for deployment on Apache with MySQL, but it will be portable to Microsoft IIS with Microsoft SQL Server with minimal hassle. Client-side, our application will use jQuery and CSS3 media inquiries to accommodate a variety of screen sizes and input capabilities (*e.g.*, touch on mobile devices and mouse clicks on desktops). AJAX will be used to seamlessly reflect data changes.



System Architecture



System Components

- Hardware Platforms
  - Mobile Devices
  - Laptop/Desktop
- Software Platforms / Technologies
  - CodeIgniter Framework
  - Apache
  - MySQL
  - AJAX
  - JQuery

Testing

- Use on multiple platforms
- Able to send/receive data from database
- Updates route and map according to what claims are selected/left
- Updates when a new claim is assigned

Risks

- Making a clean, fast, easy-to-use mobile interface will be one of our larger challenges as none of us has any experience with mobile Web development.
  - Research and tutorials will be our best way to mitigate this risk.
- Interfacing with Google Maps API.
  - Following tutorials of similar Google Maps API use will reduce the risk.
- Implementing dynamic data access through AJAX.
  - Focusing on this early in the development process will mitigate this.