An Introduction to

UCLA Geo-Mobile Tour

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Overview

1. Motivations and Goals
2. Application Interfaces
3. Leveraging the Framework
   1. Touch Transitions
   2. Geolocation
4. Compare and Contrast – why MWF?
5. Demo: Any interesting places around you?
Growing Mobile Presence
Implementing Geo-Interactivity
Motivations and Goals

• Demonstrate the ease at which a GPS-based, platform-independent, and device-agnostic application can be developed utilizing MWF.

• Application Goals
  – Create a GPS based mobile tour application.
  – Engage the user with an interactive workflow.
  – Achieve uniform results across the mobile tier.
  – Utilize device-agnostic development.
Application Interface

• User Interface
  – Ability to find tour locations around the mobile user.
  – Tour view with images, text, navigation buttons, etc.
  – Locations categorized into regions for static view.

• Administrative Interface
  – Ability to map GPS-based regions to specific tour locations.
  – Tour information management.
  – Tour region management.
User Interface

• Both static and interactive content available depending on the device capabilities.

• View depends on MWF semantic entities to display content.

About the Mobile Tour

This self-guided tour will utilize your GPS location to provide information about your surrounding buildings. While you are touring UCLA, your mobile view will update periodically in order to provide you with the most pertinent information - if at any moment you would like to update the view manually, feel free to hit Update. If your mobile device asks for permission to use the GPS locator, please approve in order to proceed.

Start the Tour

University of California © 2010 UC Regents
Help | View Full Site
User Interface

• In case the device is JavaScript enabled, the user will be prompted for geolocation acquisition permissions.

• Depending on the granted permission, the user will either be directed to the geo-enabled view or the static view.
User Interface

- Given the mobile-user’s geolocation, only nearby tour locations are displayed.
- The user has the option to update the view after moving into a new location.
User Interface

• In case the user does not have a JavaScript enabled device, or does not allow geolocation, then the static view is displayed.

• Static view categorizes all locations in easily recognized regions that the user may browse.
User Interface

• In both of the cases, the location view displays a tour-specific image and background information text.

• Users have the option to flip through locations in the same region via touch transitions or via control buttons.
Administrative Interface

• Tour Location Management
  – Specifying images, tour background information, etc.
  – Mapping locations to specific GPS cell blocks

• Tour Regions Management
  – Creating new regions
  – Grouping tour locations into regions
Location Management

- Admins may create, delete, and edit locations.
- Location information includes tour name, region association, tour text, image, and an alternate image-text.
Location Mapping Schema

- Campus map can be divided into table-cells ranging from a 5x5 to 60x60.
- User maps each a location by specifying n number of cells.
- Each cell is represented by two GPS points.
Administrative Interface

- Several administrative dialogs allow management of multiple locations and regions.

<table>
<thead>
<tr>
<th>Entity Name</th>
<th>Entity Text</th>
<th>Entity Region</th>
<th>Image</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ackerman Student Union</td>
<td>Inside Ackerman Student Union are restaurants...</td>
<td>Bruin Walk</td>
<td></td>
<td>Modify</td>
</tr>
<tr>
<td>Anderson School of Management</td>
<td>The UCLA Anderson School of Management...</td>
<td>Wilson Plaza</td>
<td></td>
<td>Modify</td>
</tr>
<tr>
<td>Ashe Center</td>
<td>The Arthur Ashe Student Health and Wellness...</td>
<td>Bruin Plaza</td>
<td></td>
<td>Modify</td>
</tr>
<tr>
<td>Boelter Hall</td>
<td>Boelter Hall is the home of the Henry...</td>
<td>Court of Sciences</td>
<td></td>
<td>Modify</td>
</tr>
<tr>
<td>Botanical Gardens</td>
<td>The UCLA Botanical Gardens maintains one...</td>
<td>Medical Center</td>
<td></td>
<td>Modify</td>
</tr>
<tr>
<td>Bradley International Hall</td>
<td>The Bradley International Hall is named...</td>
<td>Bruin Walk</td>
<td></td>
<td>Modify</td>
</tr>
<tr>
<td>Broad Art Center</td>
<td>The Broad Art Center (formerly Dickson...</td>
<td>Broad Art Center</td>
<td></td>
<td>Modify</td>
</tr>
<tr>
<td>Bruin Bear</td>
<td>The Bruin Bear is UCLA's mascot. The 6...</td>
<td>Bruin Plaza</td>
<td></td>
<td>Modify</td>
</tr>
<tr>
<td>Bruin Walk</td>
<td>The central artery running through campus...</td>
<td>Bruin Walk</td>
<td></td>
<td>Modify</td>
</tr>
<tr>
<td>Bunche Hall</td>
<td>Bunche Hall, named in honor of Nobel Laureate...</td>
<td>Sculpture Garden</td>
<td></td>
<td>Modify</td>
</tr>
</tbody>
</table>
The Mobile Web Framework
Rapid Mobile App Development
MWF Touch Transitions

- Only Requires CSS entity classes
  - webkit-touch-transition-transition-trigger
  - webkit-touch-transition-transition-target

- Example HTML:

```html
<body class="webkit-touch-transition-transition-trigger">
  <div class="content-elements webkit-transition-slideX webkit-touch-transition-transition-target">
  
  </div>
</body>
```
MWF Geolocation

- mwf.touch.geolocation library
- Utilizes either HTML 5 or Google Gears
- As simple as:

```javascript
mwf.touch.geolocation.getPosition(
    function(pos){
        alert( "Latitude:"+pos['latitude'] + ", Longitude:"+pos['longitude'] + ", Accuracy:"+pos['accuracy']]);
    },

    function(err){
        alert("Err:"+err);
    }
);
```
Why Mobile Web Framework?

Compare & Contrast
Convenience

• Only one source code implementation.
• Easy to use and manage.
• JS Libraries allow browser-independent function execution.
• Much less learning curve as opposed to writing geolocation-enabled applications for iPhone OS or Android phones.
Demo

Looking for interesting sites to visit while in UCLA?
Thank you

Questions or Comments?