

An Introduction to **The Mobile Web Framework**

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Overview

1. Approaching the mobile app landscape
2. Leveraging the Mobile Web Framework
3. Building a mobile web application

A mobile presence

is not just a desire, but an expectation.

The Mobile Trend

- Mobile is soon to overtake the desktop.
- Diverse landscape:
 - Devices
 - Operating systems
 - Browsers
- Rapidly changing technology.

The Mobile Trend

- Over 50% of students have a handheld device.
- 74% of students either have or intend to buy an Internet-enabled handheld device in the next year.
- Students are more likely to remember their cell phone than their wallet.

Native versus Web

Native Applications

- + 14B app downloads
- + Rich features and API
- Device specific
- Manual updates
- Diverse environments

Mobile Web

- + Broad distribution
- + Established paradigm
- + Scalable architecture
- + Lower maintenance
- Limited API
- New & evolving specs

The mobile web
is a vibrant and growing landscape.

The Mobile Web Framework

is federated, platform-independent and device-agnostic.

Principles

- Device agnostic
- Graceful degradation
- Unified mobile presence
- Technology & platform independent
- Scalable, distributed architecture
- Modern web standards

Device Agnostic

- Least common denominator
 - XHTML MP 1.0: GIF, JPG, 256 colors, 120x120 px
- HTML entities are defined semantically
- Framework determines best presentation
- Progressive enhancement
 - Three tier classification scheme
 - Deeper device awareness


Graceful Degradation

UCLA Campus Tour

Bruin Walk

Ackerman

[Next >>](#)



[Next >>](#)

Inside Ackerman Union are restaurants offering everything from burgers to a variety of ethnic foods. Ackerman also houses a ballroom, arcade, candy store, portrait studio, and ATMs.

Go to Next Location


Go to Previous Location

Back to Tour Locations

UCLA Campus Tour


Bruin Walk

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Moore



UCLA Campus Tour


Bruin Walk

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Moore

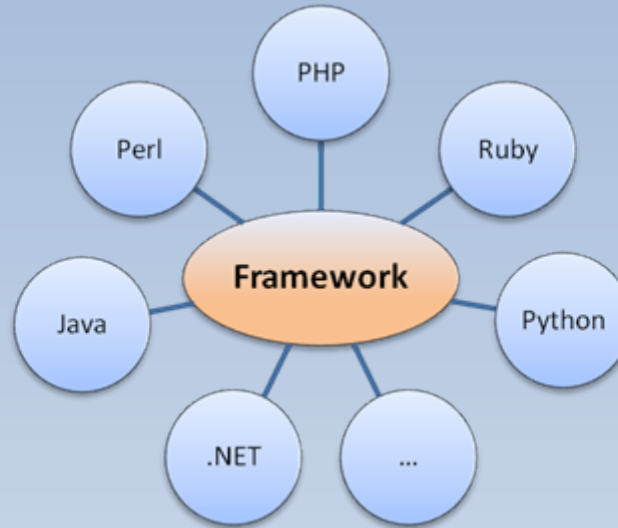


One Code, Many Devices

- Works on any device with a web browser.
- Markup-driven with semantic entities.
- Progressive enhancement for a rich user experience on more capable devices.



One Framework, Many Environments



- Framework uses browser-side technologies.
- Compatible with any server-side languages, technologies and environments.
- Use your programming language of choice.

Modern Web Standards

- XHTML MP 1.0 and WCSS static markup.
- Dynamic markup from newer standards:
 - HTML 4.01 & 5
 - CSS 2.1 & 3
 - ECMA-262-3
- Availability of new HTML 5 technology features for deep device functionality.

Leveraging the framework

in mobile web applications.

Getting Started

- Two handlers drive the framework.
 - <http://m.berkeley.edu/assets/js.php>
 - <http://m.berkeley.edu/assets/css.php>
- Additional special scripts for other functions:
 - CSS & JS Minification
 - Image Compression and Conversion
 - Mobile Redirection

Getting Started

- Include the core handlers in the <head>

```
<link rel="stylesheet"
      href="http://m.berkeley.edu/assets/css.php">

<script type="text/javascript"
        src="http://m.berkeley.edu/assets/js.php">
</script>
```
- Some other scripts are included in <head>.
- Others are included inline such as in .

Style Entities

- Page elements
 - Header
 - Footer
- Content elements
 - Content Areas
 - Menus
 - Forms
 - Buttons

Interactivity Libraries

- Transitions
- Touch Transitions
- Geolocation

Standalone Scripts

- CSS and JS Minifiers
 - Reduce payload size.
 - Consolidate CSS and JS into one file each.
 - Target assets at a single classification level.
 - [MWF 1.1] Minify directly in CSS and JS handlers.

Standalone Scripts

- Image Compression and Conversion
 - Optimize images based on device size.
 - Convert to a device-supported format.
- Mobile Redirection
 - Continuity with device parsing.
 - Remember redirection preference.
 - [MWF1.1] Modal prompt for redirection.

Demo

Moving forward
into a richer mobile experience.

The Current Version of MWF

- Classification and capability management.
- Base set of CSS user interface elements.
- Base set of JS utility functions under mwf.
- Several CSS 3 / JS interactivity libraries.
- Compression, conversion and minification.
- Other utilities libraries and functionality.

The Next Version of MWF

- Alpha release tagged on Github.
- Production release intended for July 2011.
- Content provider improvements include:
 - Device telemetry passed into CSS.
 - Integration with Javascript UI libraries.
 - Classification changes:
 - “webkit” to “full”
 - “touch” to “standard”

The Roadmap for MWF

- Availability of new APIs and functionality.
 - Page performance and transitions
 - Improved user interfaces
 - Rich interaction
- No backwards compatibility issues.
 - All existing interfaces are maintained.
 - Semantics remain constant.
 - Early access to HTML 5 technologies.

Suggestions

for the mobile web.

Understand your Audience

- Desktop browsing is characterized by
 - page hops
 - searches
 - large blocks
- The mobile experience is characterized as
 - an integrated experience
 - short and directed content
 - rich interaction and movement

A New Approach to Content

- Don't create a mini version of a desktop site.
- Reconsider movement around the site.
- Keep focus on the current task.
- Consider the context:
 - Small screen
 - Touch interface
 - Mobility

Keep It Simple

- Design markup with compatibility in mind.
 - XHTML MP 1.0
 - WCSS
- Keep the user focused
- Keep the experience directed.
- Do not clutter the screen.

Q&A

for anything unanswered?

Thank you
for listening.