

Theming and Designing for Mobile Devices

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Introduction and Outline

- About how to **think** about mobile design
- About how to **approach** your theming tasks
- A touch of implementation near the end

How big of a deal is mobile stuff?

- 418 Million mobile internet users in Europe (David Moore)
- US Usage doubled in 2009 (David Moore)
- How many of you use a smartphone or internet connected mobile device? (iPhone, Droid, BlackBerry)

Stats

Mobile Devices

May 10, 2010 - Jun 10, 2010
Comparing to: Site



These mobile devices sent 315 visits via 7 operating systems

Site Usage

Visits	Pages/Visit	Avg. Time on Site	% New Visits	Bounce Rate	
315 % of Site Total: 3.09%	6.35 Site Avg: 9.11 (-30.28%)	00:04:57 Site Avg: 00:05:05 (-2.68%)	52.06% Site Avg: 43.17% (20.61%)	39.68% Site Avg: 22.51% (76.26%)	
Operating System	Visits	Pages/Visit	Avg. Time on Site	% New Visits	Bounce Rate
iPhone	144	3.98	00:03:56	52.08%	50.00%
iPad	71	12.85	00:07:37	52.11%	22.54%
iPod	48	5.62	00:02:50	33.33%	20.83%
BlackBerry	28	5.14	00:07:26	60.71%	53.57%
Android	20	4.70	00:04:47	75.00%	50.00%
SymbianOS	3	1.67	00:03:48	100.00%	66.67%
Windows	1	2.00	00:00:00	100.00%	0.00%

1 - 7 of 7

Stats

Mobile Devices

May 10, 2018 Jun 10, 2018
Comparing to: Site



These mobile devices sent 3,478 visits via 8 operating systems

Site Usage

Visits	Pages/Visit	Avg. Time on Site	% New Visits	Bounce Rate	
3,478 % of Site Total: 3.89%	3.76 Site Avg: 9.32 (-59.71%)	00:04:51 Site Avg: 00:06:06 (-20.61%)	53.08% Site Avg: 50.96% (4.16%)	42.09% Site Avg: 26.14% (61.06%)	
Operating System	Visits	Pages/Visit	Avg. Time on Site	% New Visits	Bounce Rate
iPhone	2,292	3.26	00:04:10	48.56%	44.59%
Android	455	4.36	00:08:13	58.24%	38.90%
iPad	350	6.77	00:05:21	60.29%	22.57%
BlackBerry	193	2.23	00:03:38	68.91%	54.92%
iPod	157	4.62	00:04:35	64.33%	41.40%
Windows	17	2.06	00:12:22	76.47%	58.82%
Samsung	13	2.92	00:03:35	69.23%	30.77%
PalmOS	1	1.00	00:00:00	100.00%	100.00%

1 - 8 of 8

How big of a deal is it to YOU?

- Look at stats for your current sites.
- What percentage of your visitors are mobile?
- How does that compare to last year?
- What are the most common mobile devices to visit your site?
- How do their traffic patterns compare?

What should I think about?

- **The Visitor**
- Their needs and objectives
- In and out, looking for something, quick results
- Base this on the data you can gather from your visitors

What should I think about?

- **The Technology**
- Slow transfer speeds
- Often there are fees for data transfer
- Small screens (100 x 80 to 480 x 320)
- Fewer features (no flash, limited javascript, bookmarking, clicking vs tapping)
- Again, base this on data you gather from your visitors

What's the big idea?

- What is the one main goal of your site for **you**?
- Sell a product?
- Distribute information?
- Get a contact or lead?
- Establish an image?
- Provide availability information? (rentals, flights)

- And not just your mobile site. What's the main point of your main site?

Approaches

- 1. Solid foundation of logical markup and other good practices
- Or put it this way: a mobile friendly desktop theme
- Allows for graceful degradation
- Allows repurposing of content to happen more logically and easily
- You can't know ALL of the possible destination devices -- the fridge computer, and the talking computer in your car

Approaches

- 2. CSS that adjusts for smaller screens -- “media queries”
- `<link media="screen and (max-device-width: 480px)" rel="stylesheet" type="text/css" href="mobile.css" />`
- <http://www.alistapart.com/articles/responsive-web-design/>
- Great for designs that are minimal to begin with

Approaches

- 3. Different theme, same content
- The theme is altogether different
- Content from the same site is displayed in this theme
- Content is optimized for mobile delivery (smaller & fewer images, leaner HTML, minimal javascript and CSS)

Approaches

- 4. Completely separate site
- Completely different content, only lightly related to the desktop site.
- Separate theme.
- Wouldn't even have to be a Drupal site, necessarily.
- Redirect mobile users to this other site by auto detection or by user choice.

Approaches, the guiding principles

- Reduce markup
- Reduce content
- Optimize for the mobile user

How to think

- Think in terms of “panes” rather than “pages”
- Focus on single column layouts, rather than multiple columns.
- What do I want to keep? (rather than: What do I want to eliminate)
- What is the one most important user action?

A little experiment

- Which sites have mobile versions available?
- For the ones that do, notice what they chose to keep.
- Notice the design elements.

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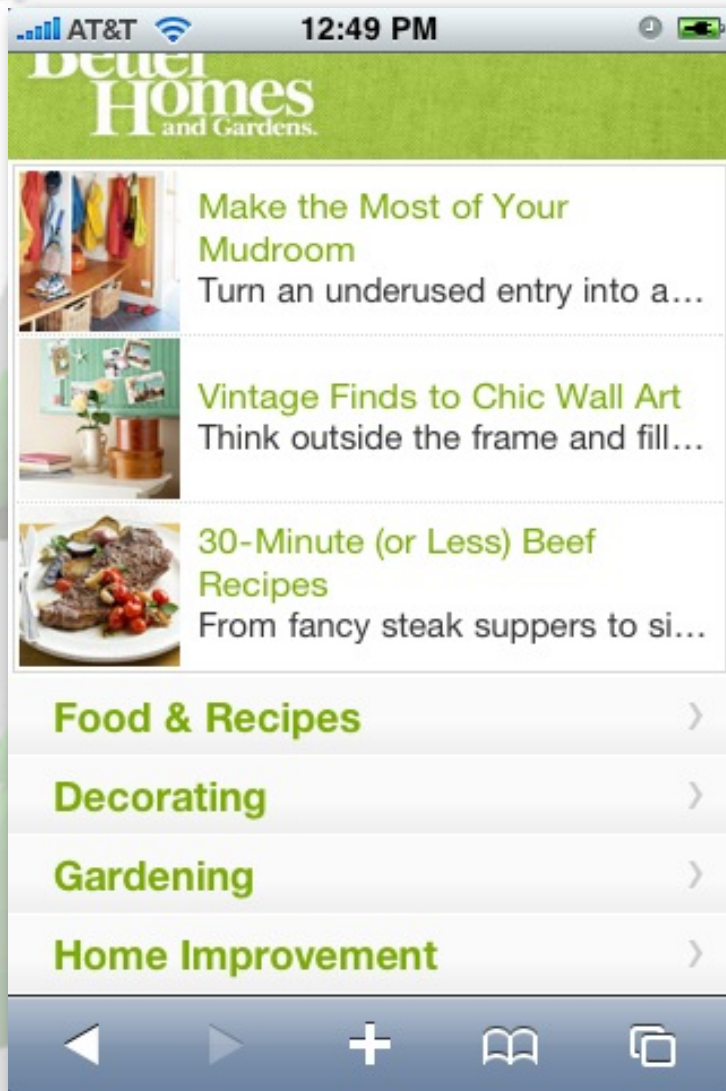
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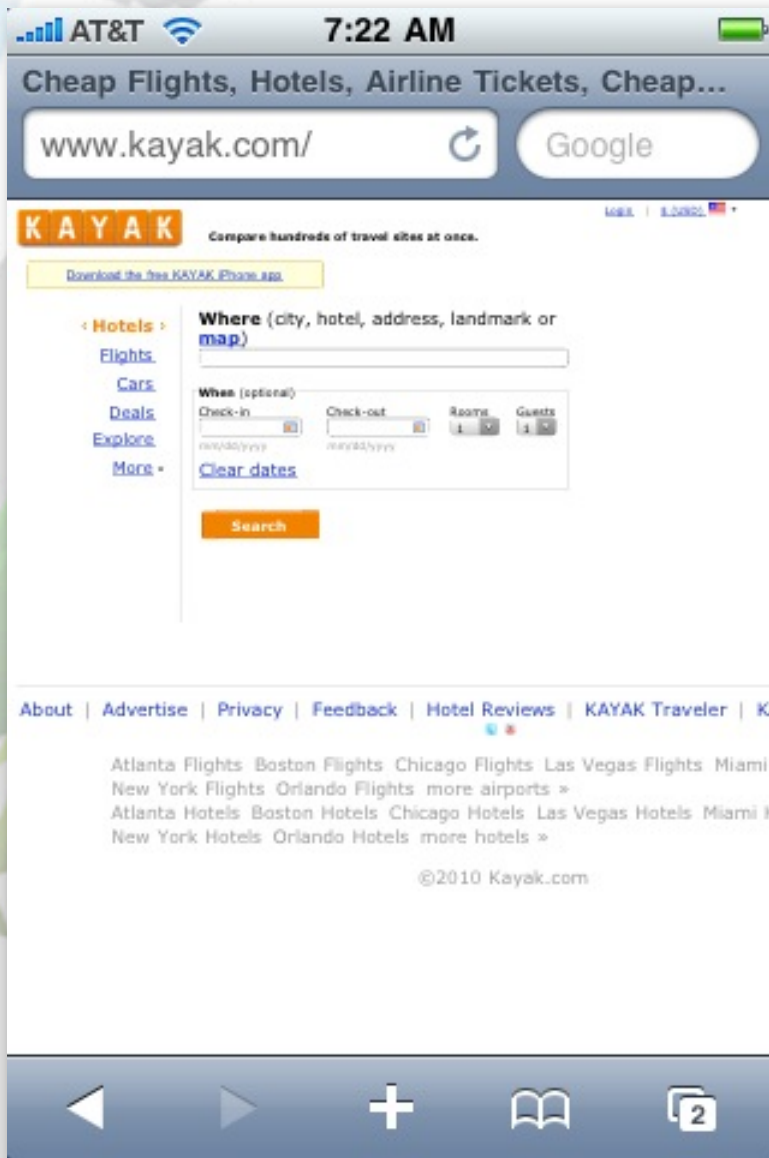
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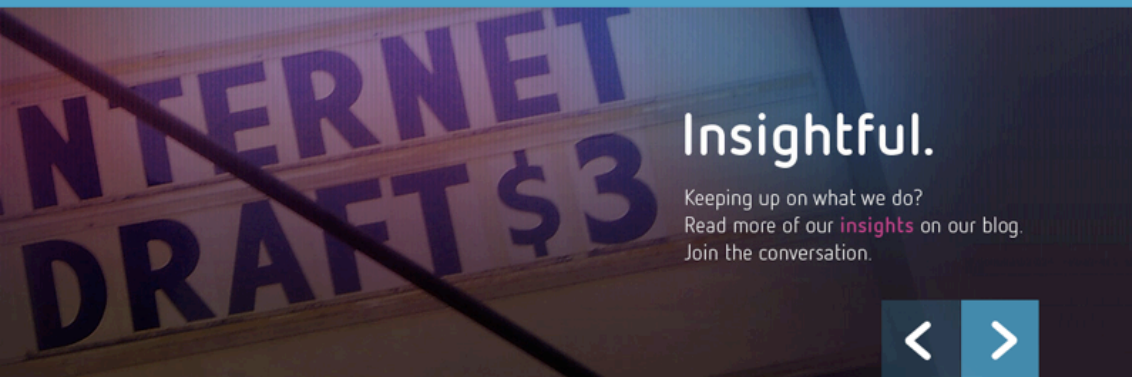
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RT @lchisholm: 10/90 rule for getting value from Web Analytics. Sit up and take notice! <http://bit.ly/7HPx0e>
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From [Twitter](#) @ May 25, 2010, 9:30 pm

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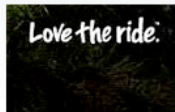
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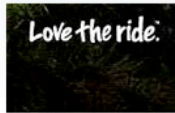
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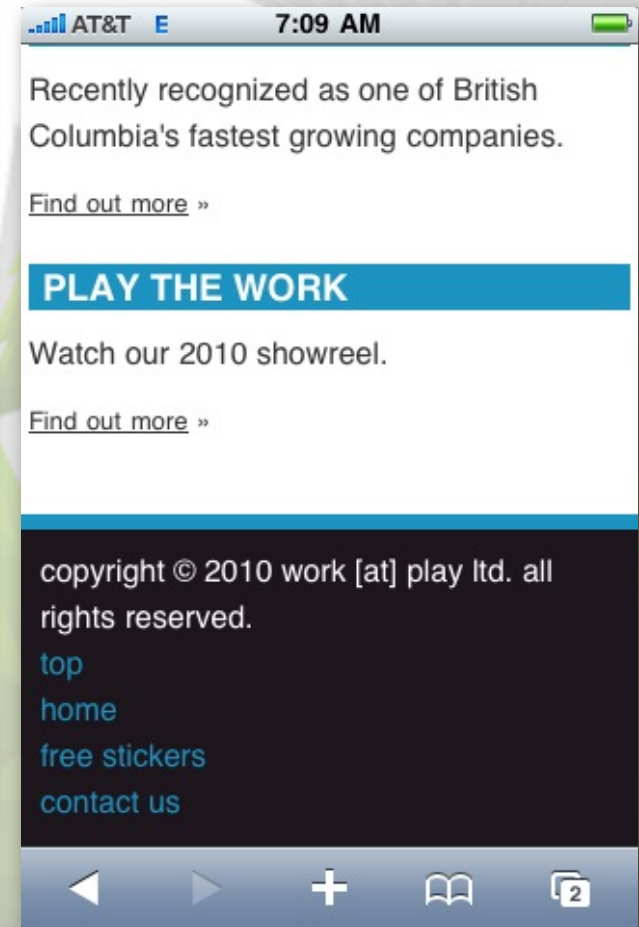
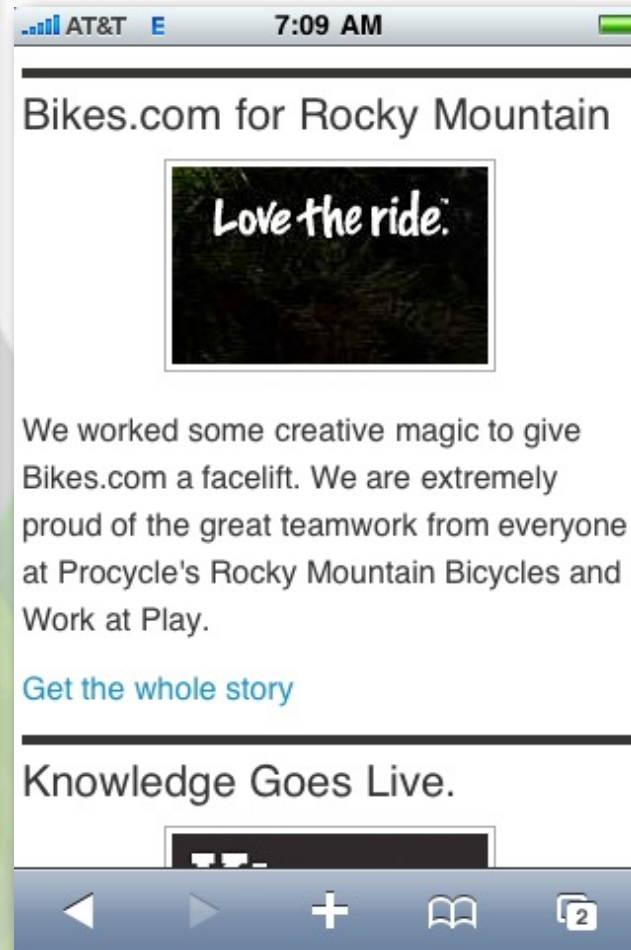
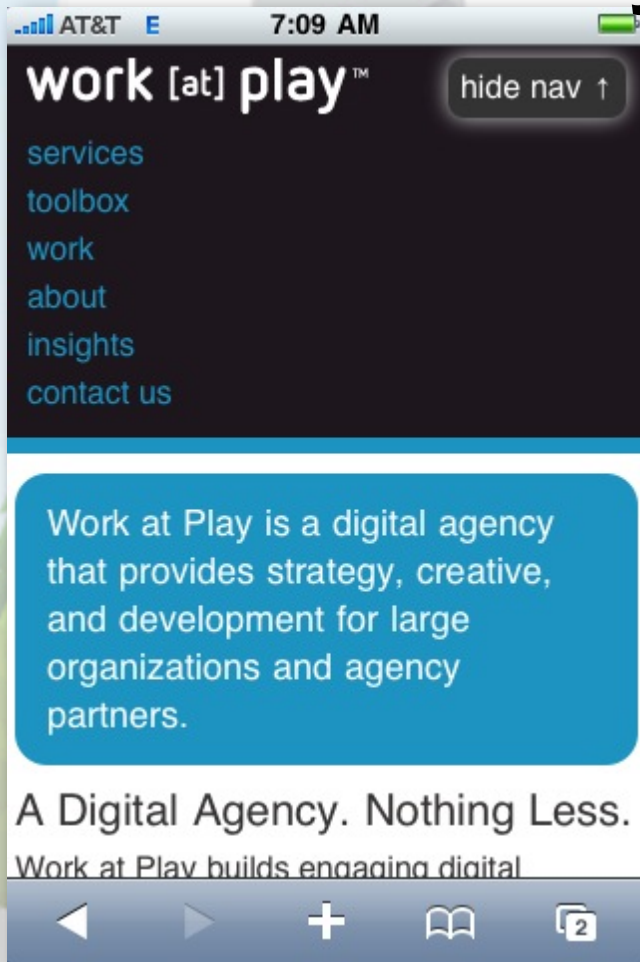
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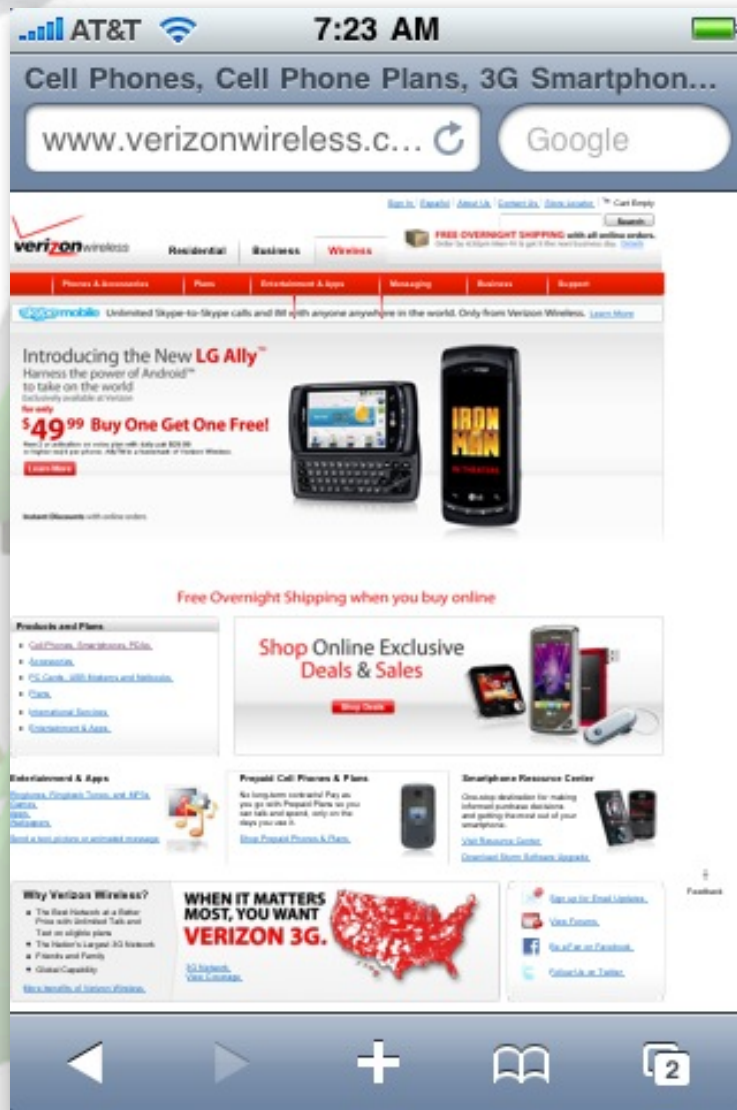
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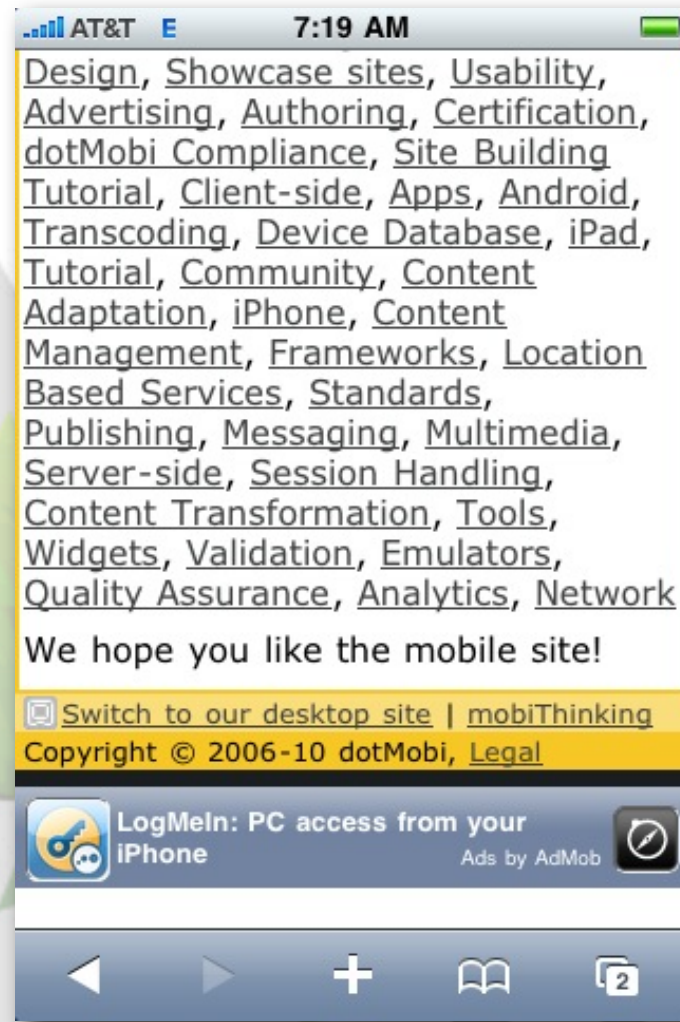
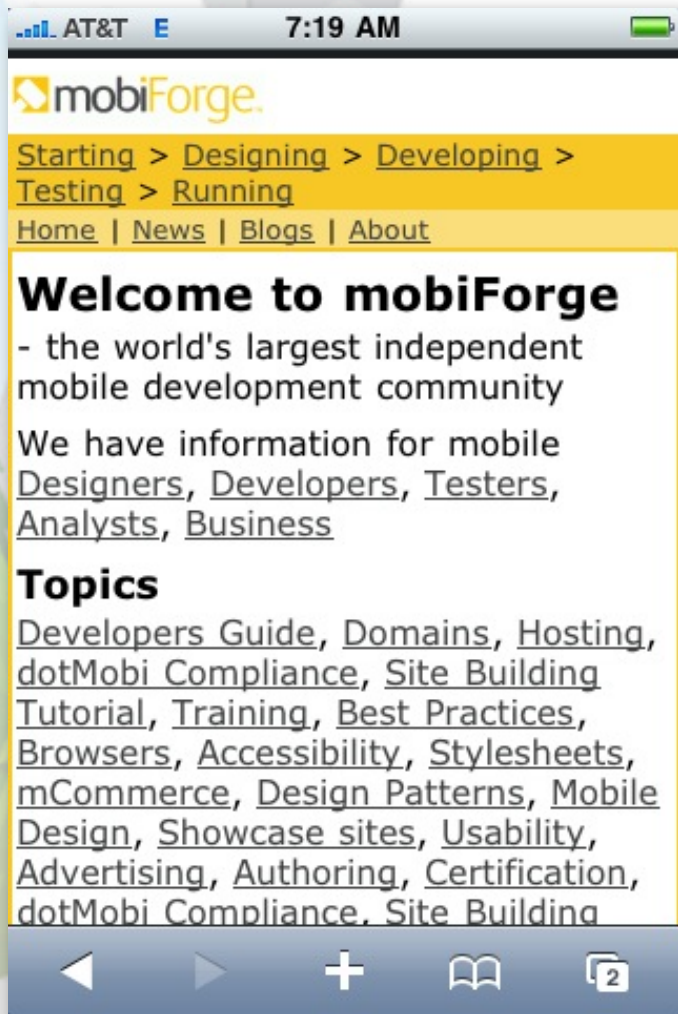
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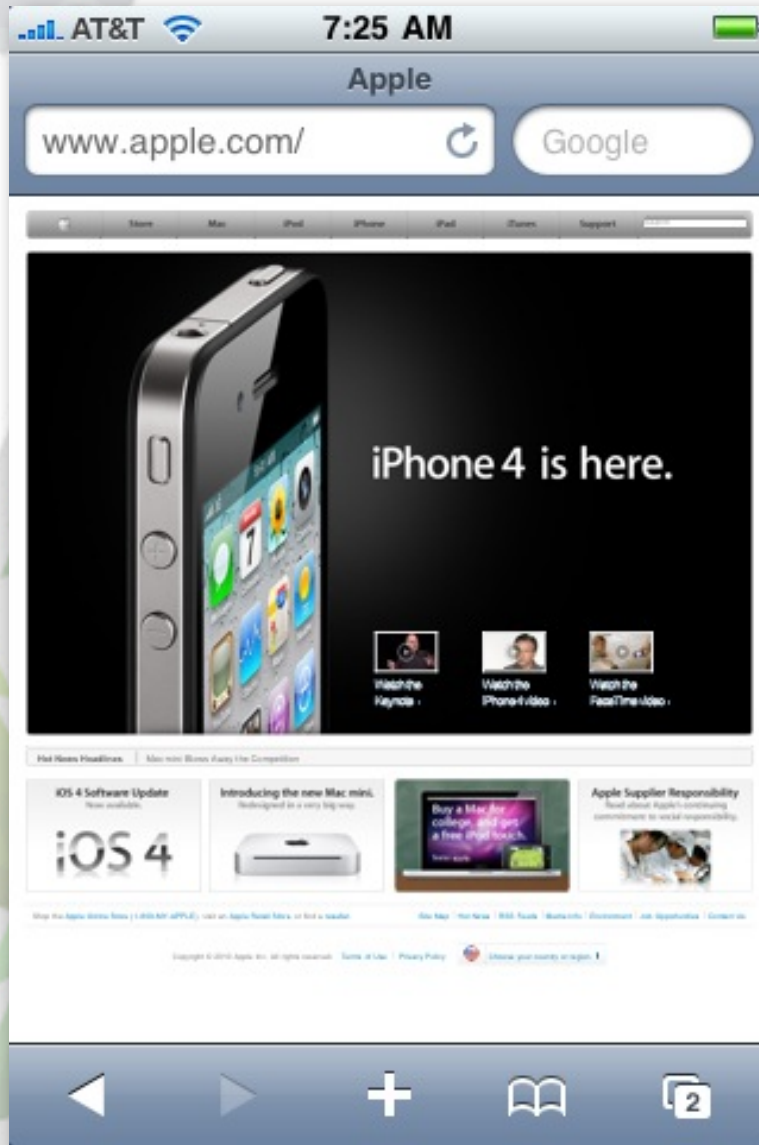
Apple?

The screenshot shows the Apple website homepage during the iPhone 4 launch. The top navigation bar includes links for Store, Mac, iPod, iPhone, iPad, iTunes, and Support, along with a search bar. The main hero section features a large image of the iPhone 4 on the left and the text "iPhone 4 is here." on the right. Below the text are three video thumbnails with the following captions: "Watch the Keynote", "Watch the iPhone 4 video", and "Watch the FaceTime video".

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Apple?



Hicks Design?

Finally, a fluid Hicksdesign
is a post on The Hickensian



I've been wanting a fluid layout on this site for about 5 years. I had a brief redesign back in 2005 where I flirted with it for a few months, but it was soon switched back to fixed as I couldn't get it right.

Last year, I discovered CSS media queries while working on the internal pages of the Opera Browser, and tried to implement it here. It was half-assed and was removed, again after a few months.

It took Ethan Marcotte's excellent article for [A List Apart Responsive Web Design](#) to motivate me to do it properly, as well as know HOW to do it properly. I don't think I've read anything as exciting and inspirational for a long time. So I started from scratch, working on the basic skeleton of the layout, getting the various resolution dependant layouts in place, before re-implementing the design (making a few changes long the way of course).

So now, you'll see the layout and type size change depending on the available width. From a narrow single column (which **should** be the view you'll see on mobile devices)...



The Hickensian is the journal of Jon Hicks, one half of the creative partnership Hicksdesign. [Read more about us.](#)

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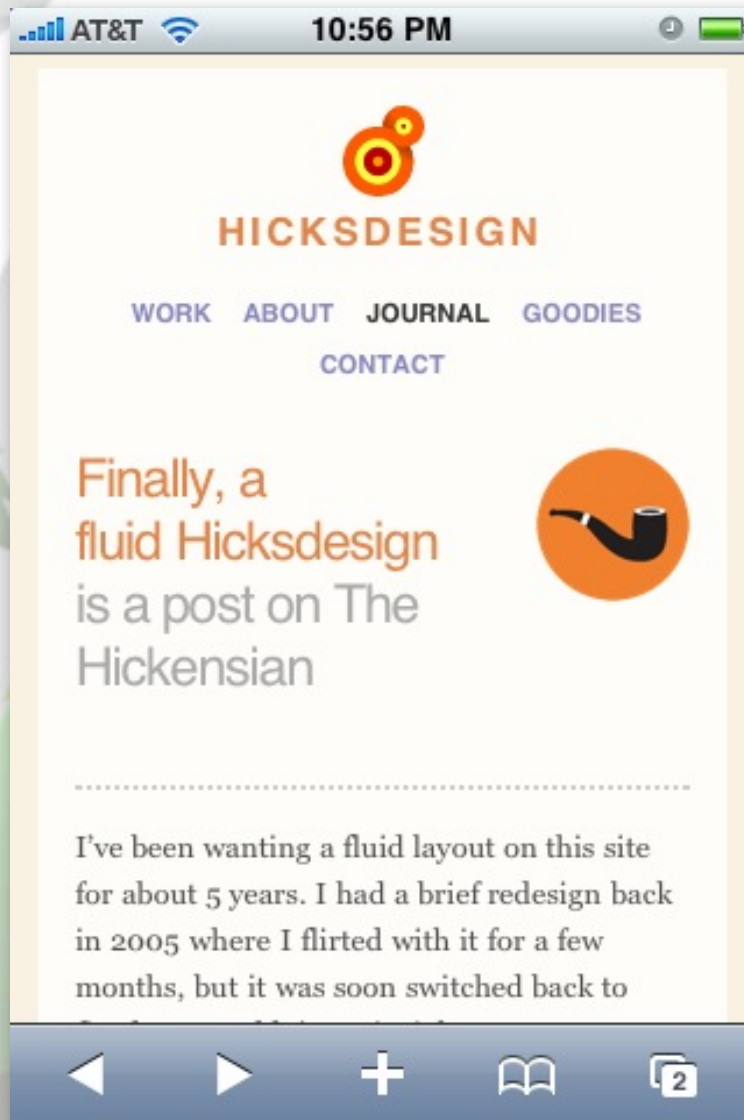
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Hicks Design?



Design Issues

- Forms: minimal & simple (limited screen space)
- Links, anything clickable, make a large clickable area
- Scrolling in only one direction. Scrolling a long pane is OK, but if you have to scroll left and right too? Not so good.

Implementation Issues


- Device detection -- Is it mobile? How big is the screen? Is it a touch device?
- Site selection and redirection
 - m.example.com, example.mobi, example.com/m
- Content selection and optimization

A Splash of Implementation

- SonnenalpRealEstate.com (a development copy)
- New theme: .mobi
- Conditionally switch theme: mobile_tools
- Custom home page
 - panels variant with php snippet
 - hook_boot() in a custom module
- New top menu

SonnenalpRealEstate.com


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- Home
- Sonnenalp Properties
- All Properties

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Navigation icons: back, forward, home (+), bookmarks, notifications (3)

PHP Snippet

- Using the mobile_tools module
- In a Panels Selection Rule

```
if (module_exists('mobile_tools'))
  $device = mobile_tools_is_mobile_device();
}
else {
  return FALSE;
}
if ($device['type'] == 'mobile' && $device['group'] != 'ipad') {
  return TRUE;
}
else {
  return FALSE;
}
```

- In a Custom Module

```
function MYMODULE_boot() {
  if (module_exists('mobile_tools')) {
    $device = _mobile_tools_is_mobile_device();
    if ($device['type'] == 'mobile') {
      global $conf;
      $conf['site_frontpage'] = 'mobile_frontpage';
    }
  }
}
```

Takeaways

- Much of this work has more to do with **architecture** and **planning** and **usability** than about visual aesthetics.
- There are some good implementation techniques for Drupal, but there is no complete and ready to go solution. Your developer must assemble elements that meet the mobile needs of your site and visitors.

Drupal Modules

- mobile_tools
- mobile_redirects -- a module that Bob Christenson is working on, only at github currently.
- idrupal -- for managing a drupal site by iphone (+ idrupal_ui theme)
- wurfl -- for device detection
- browscap -- for device detection
- mobile_theme -- simply switches theme when it detects a mobile device
- mobileplugin -- device detection, redirection, automatic content optimization

Drupal Modules (more to look at)

- context
- section
- rules
- domain
- subdomain
- spaces
- ds (display suite) plus views or panels to override default node display

Drupal Themes

- .mobi -- very lean
- mobile -- very lean
- nokia_mobile -- looks nice right away
- iui -- provides an iPhone-like interface
- iwebkit
- mobilewebkit -- only at hedindexdesign.com

Design, testing, and development resources

- iphonetester.com
- User Agent Switcher -- addons.mozilla.org/en-US/firefox/addon/59/
- jqtouch.com
- iPhone stencils -- mortenjust.com/2010/05/02/iphone-wireframe-stencils-for-google-docs/
- Mobile Design and Development, O'Reilly, Brian Fling
- noupe.com/how-tos/mobile-web-design-tips-and-best-practices.html
- mobiledrupal.com/content/overview-mobile-modules-drupal

Bonus Resources

- Slides from David Moore's mobile presentation -- <http://crookednumber.com/sites/crookednumber.com/files/mobile101.pdf> (more details on implementation)
- mobiforge.com -- discussions and resources on all things mobile. (and their site is in Drupal)
- Mobile Analytics
 - google.com/analytics
 - code.google.com/mobile/analytics/docs/web/
- handsetdetection.com -- "Mobile Website Redirection | Mobile Analytics | Handset Detection"
- delicious.com/nadavoid/mobile

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