to do - Google Search

To Do - Google Docs
https://docs.google.com/Doc?docid=0AZn_E9DEluTCZGhieDQzY21fNj8kejR6Z3RkOA&hl=en

www.maclife.com/article/how_to_remove_the_iphone_sim_card - How to Remove the iPhone SIM Card | MacLife

to do list

to do in boston
to do boston

See all pages in history containing to do

To Do - Google Docs
https://docs.google.com/Doc?docid=0AZn_E9DEluTCZGhieDQzY21fNj8kejR6Z3RkOA&hl=en

Connecting to Ground..
http://airborne.gogoinflight.com/abp/page/abpDefault.do?REP=127.0.0.1&AUTH=127.0.0.1&CLI=172.19.131.155&PORT=54...

Gmail - Do you have easy access to the full list of UIST 2010 submissions? - rcmiller@gmail.com
https://mail.google.com/mail/?hl=en&shva=1#mbox/12cb7e600ca04958

Visualizer: steps to help someone do....
file:///Users/rcm/Desktop/decompose_visualizer.html

Gmail - Turkit to-do items suitable for AUP projects? - rcmiller@gmail.com
https://mail.google.com/mail/?hl=en&shva=1#mbox/12ce2eb1afe1b31b

NSF FastLane :: Project Reports Requirements
https://www.fastlane.nsf.gov/researchadmin/listProjRpts.do?awdID=0712793&awdTtl=III-COR: Data+Homesteading:+++

Wednesday, April 25, 12
Mobile User Interfaces
Metaphors
Prototyping
Layout
Failed batteries and subway tunnels
Metaphors and Style Guides
Metaphors: iPhone & Android

- Return to home
- Go back
- Undo
- Get new data
- Search
- Delete

- Switch tasks
- Dashboard / heads up panel
- Cut/Copy/Paste
- Move icon
- Delete icon
- Voice question
Style Guides - Android

Android

http://developer.android.com/design/index.html
Style Guides - Android

Android

http://developer.android.com/design/index.html
Style Guides - Android

Android

http://developer.android.com/design/index.html
Style Guides - Android

Android Patterns

http://www.androidpatterns.com/
Style Guides - Android

Apple Human Interface Guidelines

Prototyping
Templates
Layout
- Enormous relative difference 800x480 is 23 times bigger than 128x128

- Orientation difference (portrait v. landscape)

Different Resolutions, Uses Different Icon Sizes

<table>
<thead>
<tr>
<th>29</th>
<th>iPhone, iPad</th>
<th>Settings+Spotlight (iPhone) Settings (iPad)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22x29</td>
<td>iPhone</td>
<td>Document icon</td>
</tr>
<tr>
<td>48</td>
<td>iPad</td>
<td>Spotlight</td>
</tr>
<tr>
<td>44x58</td>
<td>Retina</td>
<td>iPhone Document icon</td>
</tr>
<tr>
<td>57</td>
<td>iPhone</td>
<td>App Icon</td>
</tr>
<tr>
<td>58</td>
<td>iPhone</td>
<td>Settings, Spotlight, Notifications</td>
</tr>
<tr>
<td>64</td>
<td>iPad</td>
<td>Document icon</td>
</tr>
<tr>
<td>72</td>
<td>iPad</td>
<td>App Icon</td>
</tr>
<tr>
<td>96</td>
<td>Retina</td>
<td>iPad Spotlight</td>
</tr>
<tr>
<td>114</td>
<td>Retina</td>
<td>iPhone App Icon</td>
</tr>
<tr>
<td>144</td>
<td>Retina</td>
<td>iPad App Icon</td>
</tr>
<tr>
<td>320</td>
<td>iPad</td>
<td>Document icon</td>
</tr>
<tr>
<td>512</td>
<td>iTunes</td>
<td>App Store Icon</td>
</tr>
<tr>
<td>640</td>
<td>Retina</td>
<td>iPad Document icon</td>
</tr>
<tr>
<td>1024</td>
<td>Retina</td>
<td>iTunes App Store Icon</td>
</tr>
</tbody>
</table>
Different Resolutions, Uses Different application containers

Don’t use the entire screen
Different Resolutions, Uses Different application containers

Fit in the screen... but are oddly aligned
Different Resolutions, Uses Different application containers

Don’t fit in the screen, and require awkward scrolling
Fixed Layout

- 800px
- 90px
- 500px
- 190px
Fixed Layout

• describe exact pixel positions and dimensions of content
• ensures consistent design across screens, but is that the right design for all screens?
Fluid Layout

- describe content relative to window size
- max- and min-width properties to set absolute bounds
Elastic Layout

\[
\begin{array}{ccc}
\text{X em} \\
\text{Y em} & \text{Z em} & \text{W em}
\end{array}
\]
Elastic Layout

- absolute, because the *em* is fixed *per user*
- relative, because everything is calculated with respect to font size
Floating Layout
“Tap to zoom” makes screen size virtual

Smooths differences w/r/t Absolute, Fluid, and Elastic Layout
Fixed screen size
Fixed screen size

Free Food Finder

Old Pizza
Sushi from Last Week
Half a granola bar
Thousand Island dressing
10lb bag of red Skittles

Old Pizza
Sushi from Last Week
Thousand Island dressing
10lb bag of red Skittles

http://www.domain.com
Google

Wednesday, April 25, 12
Fixed screen size

Free Food Finder

- Old Pizza
- Sushi from Last Week
- Half a granola bar
- Thousand Island dressing
- 10lb bag of red Skittles

<meta name="viewport"
content="width=device-width, initial-scale=1, maximum-scale=1, user-scalable=0"/>
user-agent string is like a fingerprint

iPhone 4
Mozilla/5.0 (iPhone; U; CPU iPhone OS 4_0 like Mac OS X; en-us) AppleWebKit/532.9 (KHTML, like Gecko) Version/4.0.5 Mobile/8A293 Safari/6531.22.7

Google Nexus
Mozilla/5.0 (Linux; U; Android 2.2; en-us; Nexus One Build/FRF91) AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile Safari/533.1
Responsive Design

image: David Hughes <http://www.davidhughes.org>
Responsive Design

- CSS+JS that automatically adapts your page layout based on the screen size
- Makes use of semantic markup via HTML5 and CSS classes
Responsive Design

- CSS+JS that automatically adapts your page layout based on the screen size
- Makes use of semantic markup via HTML5 and CSS classes

Semantically driven, *declarative* cross-device layout

document.addElement("p")  --->  p

device-specific templates  --->  “This is the navbar”
Twitter Bootstrap

1. `<div class="row">
2.     `<div class="span4">...</div>
3.     `<div class="span8">...</div>
4.   </div>`
# Twitter Bootstrap

<table>
<thead>
<tr>
<th>Label</th>
<th>Layout width</th>
<th>Column width</th>
<th>Gutter width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smartphones</td>
<td>480px and below</td>
<td>Fluid columns, no fixed widths</td>
<td></td>
</tr>
<tr>
<td>Smartphones to tablets</td>
<td>767px and below</td>
<td>Fluid columns, no fixed widths</td>
<td></td>
</tr>
<tr>
<td>Portrait tablets</td>
<td>768px and above</td>
<td>42px</td>
<td>20px</td>
</tr>
<tr>
<td>Default</td>
<td>980px and up</td>
<td>60px</td>
<td>20px</td>
</tr>
<tr>
<td>Large display</td>
<td>1200px and up</td>
<td>70px</td>
<td>30px</td>
</tr>
</tbody>
</table>

[http://twitter.github.com/bootstrap/](http://twitter.github.com/bootstrap/)
### Twitter Bootstrap

<table>
<thead>
<tr>
<th>smartphone</th>
<th>fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>smartphone or tablet</td>
<td>fluid</td>
</tr>
<tr>
<td>portrait tablet</td>
<td>4x42 = 168px</td>
</tr>
<tr>
<td>normal display</td>
<td>4x60 = 240px</td>
</tr>
<tr>
<td>huge display</td>
<td>4x70 = 280px</td>
</tr>
</tbody>
</table>

### 8

<table>
<thead>
<tr>
<th>smartphone</th>
<th>fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>smartphone or tablet</td>
<td>fluid</td>
</tr>
<tr>
<td>portrait tablet</td>
<td>8x42 = 336px</td>
</tr>
<tr>
<td>normal display</td>
<td>8x60 = 480px</td>
</tr>
<tr>
<td>huge display</td>
<td>8x70 = 560px</td>
</tr>
</tbody>
</table>
• http://mattkersley.com/responsive/

• http://www.alistapart.com/d/responsive-web-design/ex/ex-site-flexible.html

• http://www.bostonglobe.com/
Connectivity and Distributed Application State
Connectivity and Distributed Application State
Kendall Square T Line, 1912

Source: Boston Public Library
When do Disruptions in Connectivity Occur?
When do Disruptions in Connectivity Occur?

User <-> App Connectivity

• Battery dies
• Phone call received
• “Home” button accidentally pushed

Application
Quits or Pauses
When do Disruptions in Connectivity Occur?

User <-> App Connectivity

- Battery dies
- Phone call received
- “Home” button accidentally pushed

App <-> Internet Connectivity

- Bad reception
- Insufficient bandwidth
Application Resume

What are the implied semantics of restart?

- Battery dies
- Phone call received
- “Home” button accidentally pushed
Application Resume

Would you like to resume your game?

Yes  No
Application Resume - Implementing

Sort of like a persisted, app-wide undo stack of depth 1

Current state of the app

On State Change:
  savedState <- App.State

On Shutdown:
  savedState <- null

On Startup if savedState:
  resume(savedState)
Application Resume - Implementing

- Welcome
- Play Game
- Player 1 Turn
- Move Options
Application Resume - Implementing

Sort of like a persisted, app-wide undo stack of depth 1

Current state of the app

Move Options
Player 1 Turn
Play game
Welcome
Variable Connectivity

Mosh Web site ideas

* What should it look like?

** Ideas

*** Boring free software Web site...

*** Old-timey newspaper: "Amazing remote shell program sweeps nation!!!!"

*** Make it look like a fake startup company. <-- Let's go with this.

* Benefits of Mosh

** Roam across Wi-Fi networks or to cell without dropping connection.

** More pleasant to type -- intelligent local echo is instant.

** No need to be superuser to install.

** Mosh doesn't fill up buffers, so Ctrl-C works quickly on runaways.

** Designed from scratch for Unicode; fixes bugs in SSH, other terminals.

** Free / open-source software.

-UU-:***--F1 site.txt All L19 (Org)--------------------------