Designing Mobile Browsing
Madhava Enros, Mozilla
Why mobile?

• it’s the new normal

• uncharted territory, interaction-wise

• we are all mobile sometimes
The same but different

• Congratulations - it’s the future!

• mobile browsing is nearly as powerful as desktop browsing

• time to focus again on how it’s different
  • characteristics of the devices
  • characteristics of mobile users
Devices Characteristics

- Small screens
- Difficult to type
- Direct manipulation - touchscreens
- Many abilities - rich devices
- Constant but interruptible connection
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Changing foundations

\[ T = a + b \log_2 \left( 1 + \frac{D}{W} \right) \]

- Fitts’ law still applies in terms of implications for proximity and size of controls
- for touchscreens, the implications about the value of the screen edges and corners don’t apply!
- surprise!
Sizing for fingers

<table>
<thead>
<tr>
<th>Screen size</th>
<th>Resolution</th>
<th>Aspect ratio</th>
<th>Screen dimensions</th>
<th>Pixels/Inch</th>
<th>Size of 1/4&quot; button (px)</th>
<th>Size of 1/3&quot; button (px)</th>
<th>Size of 0.4&quot; button (px)</th>
<th>Size of 1/2&quot; button (px)</th>
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</thead>
<tbody>
<tr>
<td>N800</td>
<td>4.1&quot;</td>
<td>800x480</td>
<td>5:3</td>
<td>~3.5&quot; x 2.1&quot;</td>
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<td>5.12:3</td>
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<td>2:3</td>
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https://help.ubuntu.com/community/UMEGuide/DesigningForFingerUIs
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Mobile user is mobile

- Mobile
- Interruptible and distractible
- Available
- Sociable
- Contextual
- Identifiable

Taxonomy from Barbara Ballard
Mobile

• On the move - already navigating in the real world

• not much with them, otherwise

• motor precision not at peak
Interruptible and distractible

- The outside world will take priority - user won’t necessarily be able to choose the best time for software
- Fewer social cues that they’re busy
Available

- People take their phones/devices with them everywhere
- Clay Shirky: coordination vs. planning
- It’s not always a good time
Sociable

- People who need people - luckiest people in the world

- Engaged in the world of people, as they should be

- online sociability vs. sociability in person
Contextual

• more affected by context -- environment affects how a device is used

• location

• time

• weather

• schedule
Identifiable

- users are connected to and associated with their devices - phone numbers
- Devices tend to be personal
- Sharing, at least in North America and Europe, is rare
Design Goals for a mobile Firefox

- Maximize screen space dedicated to content
- Minimize typing wherever possible
- Give primacy of interaction to a finger-oriented touchscreen
  - accommodate finger size
  - increase the physicality of the interface
- Support the quick lookup scenario
Future themes?

• Make it easier to bridge mobile and desktop

• Make it simple to share things with your friends

• Make it simpler to authenticate, given than the phone is a personal device

• Better support the "entertain me / check-in-with-updates" use-case

• Be smarter about online/offline and wifi/cell data/roaming

• Help people cope with always being connected
Thank you!

- madhava@mozilla.com
- @madhava on twitter
- #UX and #mobile (irc.mozilla.org)
- http://madhava.com/egotism/
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