Mobile IxD Design Workshop

Web2.0Expo SF March 31, 2009
Kim Lenox — kimlenox@mac.com
March 31st

1:00  Understanding Mobile Behaviors
1:30  Activity — Think like a Mobile Designer
2:15  Break
2:30  Mobile IxD Design Essentials
3:00  Activity — Design a Mobile Product
“In 2006, total worldwide mobile subscriber base grew from 2.1 billion to 2.7 billion.”*

— Tomi T. Ahonen

*This is before the first iPhone launch.
“...more people now access the web via mobile phones than via PC in China, Japan and South Korea...”

— Tomi T. Ahonen
Leveraging What You Already Know
Mobile 2009 = Internet 1999
Understanding Mobile Behaviors
Mobile Information Ecologies

- Context of use
- Different paces of user interaction
- Network availability, processing power & hard drive capacity
- How it interacts with physical resources (Bluetooth, RFID)
- How it interacts with other devices

Adapted from Mobile Interaction Design, Matt Jones & Gary Marsden, 2006
Context
“Life is Mobile”

“Our research shows users want custom content that enables a mobile lifestyle, where their content and their entertainment move with them.”

— Ken Olewiler, Punchcut
Part of Daily Life
Different Paces of User Interaction

http://www.flickr.com/photos/alexbct/3032093071/
http://www.flickr.com/photos/28343258@N06/3220081887/
Continuous Partial Attention

- Design for 1 minute tasks
- Shallow, quick access navigation
- Auto saving data
Empty Moments

“...the mobile internet strength lies in doing small tasks in idle time.”

— Christian Lindholm, Interaction Designer for Nokia’s Lifeblog
Snacking, not a meal
Network, Power, Capacity

- What’s your product experience online and offline?
- Gracefully handle poor connectivity
- Caching certain content locally on the device
- Download updates behind the scenes
- Don’t be a battery hog
Linking Physical & Virtual Worlds

LifeScan iPhone Diabetes Monitor
Interacting with Other Systems
I'm a KnitOwl, just knitting away...

Wednesday, September 27, 2006

Tuesday, September 19, 2006
Gloves continue, and grey shawl done

I've really been knitting!
More pictures of the second glove in construction.
I found the first and second fingers difficult - then the rest was easy!
Interacting with Other Systems

Content Ecosystem circa 2006

- Phone Calls -
  - SMS -
  - Photos/Videos -
  - Phone Book -
  - Calendar -
  - Music/Ringtones -
  - IM -
  - Games -
  - Email -
  - Voice (voicemail, voicenotes, voiceSMS) -
  - Notes -
  - Storage -

- Email -
  - Photos/Videos -
  - Phone Book -
  - Calendar -
  - IM -
  - Music/Ringtones -
  - Notes -
  - Storage -
  - Apps/Tools -

- Email -
  - websites (General) -
  - websites (Personal) -
  - Photos/Videos -
  - Apps/Tools -
  - Music/Ringtones -
  - Phone Book -
  - Calendar -
  - Games -
  - Storage -
Interacting with Other Systems

Content Ecosystem Concept

- Phone Calls -
- SMS -
- Photos/Videos -
- Phone Book -
- Calendar -
- Music/Ringtones -
- IM -
- Games -
- Email -
- Voice (voicemail, voicenotes, voiceSMS) -
- Notes -
- Storage -

Mobile Phone

View
Create/Edit

Sync

PC

View
Create/Edit

Sync

Samsung Web

View

Publish

Sync
Interacting with Other Systems

Content Ecosystem Concept

Content
- Phone Calls -
- SMS -
- Photos/Videos -
- Phone Book -
- Calendar -
- Music/Ringtones -
- IM -
- Games -
- Email -
- Voice (voicemail, voicenotes, voiceSMS) -
- Notes -
- Storage -

Mobile Phone
- View
- Create/Edit

Sync

Publish

Samsung Web
- View
- Create/Edit
- Manage
Interacting with Other Systems

Content Ecosystem Concept

- Mobile Phone
  - View
  - Create/Edit
  - Manage

- PC
  - View
  - Create/Edit
  - Manage (Lite Version)

- Samsung Web
  - View
  - Create/Edit

Content

- Photos/Videos
- Music/Ringtones
- Voice (voicemail, voicenotes, voiceSMS)
- Notes

Sync

Publish
Interacting with Other Systems

Content Ecosystem Concept

- Phone Calls -
- SMS -
- Photos/Videos -
- Phone Book -
- Calendar -
- Music/Ringtones -
- IM -
- Games -
- Email -
- Voice (voicemail, voicenotes, voiceSMS) -
- Notes -
- Storage -

Sync

Mobile Phone
View
Create/Edit

Content
- Email -
- Photos/Videos -
- Phone Book -
- Calendar -
- IM -
- Music/Ringtones -
- Notes -
- Storage -
- Apps/Tools -

Publish

PC
View
Create/Edit
Manage

Publish

Web Partner

Web Partner

Web Partner

Web Partner

Web Partner

View
Interacting with Other Systems

Content Ecosystem Concept

- Phone Calls -
  - SMS -
- Photos/Videos -
- Phone Book -
- Calendar -
- Music/Ringtones -
  - IM -
  - Games -
  - Email -
- Voice (voicemail, voicenotes, voiceSMS) -
  - Notes -
  - Storage -

Mobile Phone

View
Create/Edit

Sync

PC

View
Create/Edit
Manage

Web Partner

Publish

Email -
- Photos/Videos -
- Phone Book -
- Calendar -
- IM -
- Music/Ringtones -
- Notes -
- Storage -
- Apps/Tools -

Publish

Web Partner

Web Partner

Web Partner

View
Q&A
Activity
Think Like a Mobile Designer
Break
Mobile IxD Essentials
Mobile 2.0 Ecosystem

Platforms
- j2me
- windows mobile
- android
- linux
- blackberry
- symbian
- iphone

Devices
- RFID
- NFC

Browsers
- brew
- j2me
- gestures

Applications and Services
- widgets
- ethnography
- startups
- social media
- observation

User Experience
- the internet of things
- the new mobile environment

Content
- music
- video
- games

© dotopen
http://dotopen.eu
Mobilize Don’t Miniaturize

Miniaturizing “treats the mobile environment and technology as a subset of the desktop environment.”

— Barbara Ballard

Designing the Mobile User Experience, Barbara Ballard, 2007
Mobilizing, on the other hand, “precisely targets mobile user needs, making [the] best possible use of technology.”

— Barbara Ballard
Mobilize Don’t Miniaturize

“Contextual user tasks, not the existing website, determine the content, architecture, and user experience of the mobilized site.”

— Cameron Moll

The Hellingly Hospital Railway was a light railway owned and operated by East Sussex County Council, used to deliver coal and passengers to Hellingly Hospital, a psychiatric hospital near Hailsham, via a spur from the London, Brighton and South Coast Railway's Cuckoo Line at Hailsham railway station. The railway was constructed in 1899 and opened to passengers on 20 July 1903, following its electrification in 1902. After the railway grouping of 1923, passenger numbers declined so significantly...
Mobile Design Process

observing
concepting
evaluating
sketching
prototyping
wireframing
storyboarding
Prototype, Prototype, Prototype!
(problems with) Usability Testing

http://www.flickr.com/photos/rachelcreative/2664091856/
interaction methods (devices)

content design

navigation design
Which Devices?

“All phones are not created equally, but all phones are equally valid.”

— Barbara Ballard
Interaction Methods

- 5-ways & scroll wheels
- Always has a focus
- Challenging for long lists
- Use paging shortcut keys
- Context menu & soft keys
Interaction Methods

- 5-ways & scroll wheels
- Always has a focus
- Challenging for long lists
- Use paging shortcut keys
- Context menu & soft keys
Interaction Methods

- Fingers & styli
- capacitive
- resistive
- touch targets*
- iceberg tips
- adaptive targets

*target = (target size in inches) \times (screen width in pixels) / (screen width in inches)

Designing Gestural Interfaces, Dan Saffer, 2008
Interaction Methods

- Fingers & styli
  - capacitive
  - resistive
  - touch targets*
  - iceberg tips
  - adaptive targets

*target = (target size in inches) \times (screen width in pixels) \div (screen width in inches)

Designing Gestural Interfaces, Dan Saffer, 2008
How to Design for Both?

- Simplified IA
- Bigger hit states
- Screen percentages, not pixel perfect
- Don’t use Fireworks, use vector tool of choice
Navigation & Content Design

- Menus - icon grid, list, tabs, toolbar or carousel?
- Information architecture
  - Shallow vs. deep navigation
  - Content vs. action/task
- Sense of place
  - Breadcrumbs, previous, back, transitions
- Keep it simple
- Robust search
Menus

[Images of various menu interfaces, including a weather application, a social media platform, and a media player interface.]
Information Architecture

Shallow vs. deep navigation
Information Architecture

- Content vs. action/task
Information Architecture

Content vs. action/task

- Facebook
  Fri, Feb 27, 2009
  Getting Started 6:41p
  Notification
  Getting Started 6:41p
  Notification

- Gmail
  11:04 PM
  Inbox (0)
  No messages.
Sense of Place

- Transitions
- 4 edges, z-order, flip
- Breadcrumbs or previous
- Back button (5-way)
Visual vs Text for pattern recognition
Keep it Simple

All blogs

CrunchBoard Jobs: Web Sales Manager, Senior Metrics Engineer... It's time for CrunchBoard Jobs. This week on TechCrunch

Palm: yeah, so we lost $100m - who cares, here comes the Pre! Palm's third quarter earnings have been... CrunchGear

Heartwarming Watch Storytime Hour (TM): “The hooker sold my watch and Clock Forum we find a funny... CrunchGear

Review: Locavore for the iPhone The term Locavore is one that I’m not... CrunchGear

Google Ventures Almost Ready To Launch, But It Is A Bad Idea Bill Maris. A Googler at another confere... TechCrunch

Updated: Sat, 21 Mar 2009 20:15:19

Sports

Headlines

Michigan St beats No. 1 seed Louisville 64-52
1 Hour ago

Tar Heels, Sooners set for battle of big men
Yesterday

Mr. Martinsville: Johnson wins again at paper clip
24 Minutes ago

Photos

Videos

AT&T

Updated 3:15 PM
Robust Search

Search Results

- Mobile software
  Mobile software is designed to run on handheld computers, personal digital assistants (PDAs), enterprise digital assistants (EDAs), ...
  4 KB (615 words) - 07:38, 5 February 2009
- Bookmobile (redirect Mobile library)
  A bookmobile or mobile library is a large vehicle designed for use as a library. They are designed to hold books on shelves so that when ...
  4 KB (533 words) - 18:36, 13 February 2009
- List of Sharp mobile phones

Other search engines...

Google Search

Full Wikipedia Search

English

No entries found.

1. Petite Deli
   752 Columbus Avenue, North Beach/Tel...
   $ 139 Reviews

2. Ike's Place
   3506 16th St, Castro
   $ 722 Reviews

3. Gary Danko
   800 N Point St, Fisherman's Wharf
   $$$ 1333 Reviews

4. Roxie Food Center
   1901 San Jose Ave, Mission Terrace
   $ 255 Reviews

5. Arizmendi Bakery
   1331 9th Ave, Inner Sunset
   $ 559 Reviews

6. June Taylor Preserves
Q&A
Activity
Design a Mobile Product
References & Resources

References
DotOpen, Mobile 2.0 Ecosystem http://dotopen.eu
Rachel Hinman, Mirjana Spasojevic, Pekka Isomursu, PC Internet Deprivation Study
   http://portal.acm.org/citation.cfm?doid=1358628.1358652
Dan Saffer, (2008) Designing Gestural Interfaces

Resources
http://library.ixda.org/ - Look for Jenifer Tidwell’s talk on Mobile Design Patterns
http://www.squidoo.com/mobiledesign
http://www.mobilemonday.net/
http://mobiforge.com/Designing
http://www.littlespringsdesign.com/  http://design4mobile.mobi/
http://phonegap.com/
http://www.adaptivepath.com/blog/#thelist
http://mobili.st/  http://dev.mobi
Thank you

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Photo Credits

**Context slide**
- Men on boat http://www.flickr.com/photos/dnevill/2818839015/
- Underground http://www.flickr.com/photos/e01/2656058861/
- Stalls http://www.flickr.com/photos/iconeon/445984637/
- Bus http://www.flickr.com/photos/seattlemunicipalarchives/2851696370/
- Man with mobile http://www.flickr.com/photos/bobcatrock/293410753/
- Mall http://www.flickr.com/photos/waterwin/603449470/