

# On the fly: Building a dynamic mobile web-app on a (small) budget and in a (big) hurry



hello, world

**practical strategies for a quick turnaround:**  
the redesign of the Indiana University Bloomington Libraries mobile site  
focus: **user-centered methods** and integration of **dynamic data** sources.

dynamic data

prototyping for touch screens

**Problem:**  
Previous mobile site launched as a test in 2009. Minimal staffing. Full participation in campus sponsored app impossible. User experience nil.

**Solution:**  
Modify existing site - minimal work for maximum impact.

**Focus:**  
Improve existing information architecture, aesthetic  
Cross platform solution  
Increase traffic to mobile site  
Leverage new technologies: HTML5, jQuery Mobile, etc

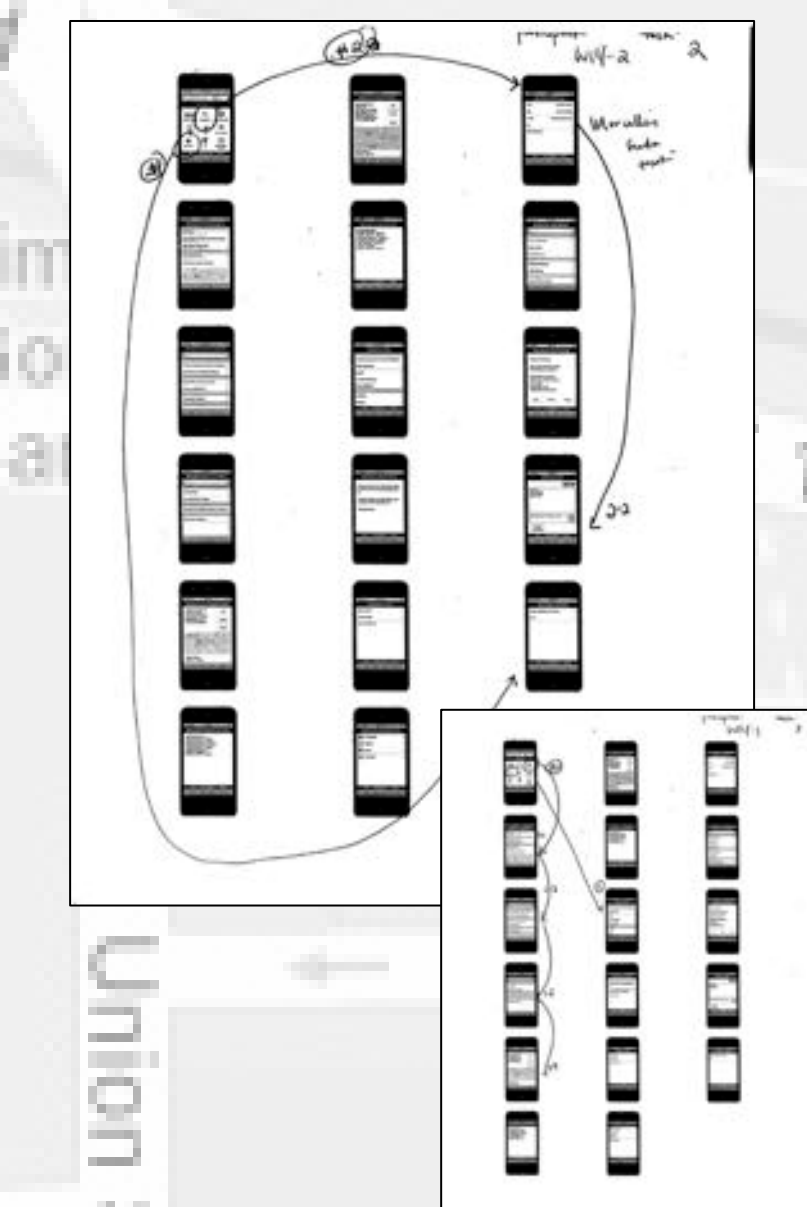


UX first

Leveraged the same dynamic data sources that power the Library's desktop web site – hours, library & staff information, news feed.

**Geolocation (HTML5)**   
- Provide location-based mapping using a combination of Leaflet (JavaScript interactive map library) & Google Maps  
- Lat/Long data provided by our GIS librarian  
<http://leaflet.cloudmade.com>

**jQuery Mobile**  
- Accelerated development process  
- Built on established, extensible JavaScript library  
- Cross-platform, touch-optimized  
<http://jquerymobile.com/>



New interactions require new ways of testing. Rather than go big, we went small and relied on paper prototyping. This also necessitated some innovation in how we collected data during testing.

**Pro:**  
Quick to make  
Easy to change  
More analogous to touch screen interface

**Con:**  
Awkward to use at first  
Can be slow depending on size of prototype

**Tools used:** Omnigraffle, iPhone stencils

**IU Libraries Mobile**

- Libraries & Hours
- Contact Us
- Text Us (812-671-0275)
- Chat (for Smartphones)
- Renew
- Recall
- Wells Library Collections Directory
- News & Events
- Getting to IU
- Indiana University Bloomington
- IU Libraries

user testing

**Round One: Needs Assessment**

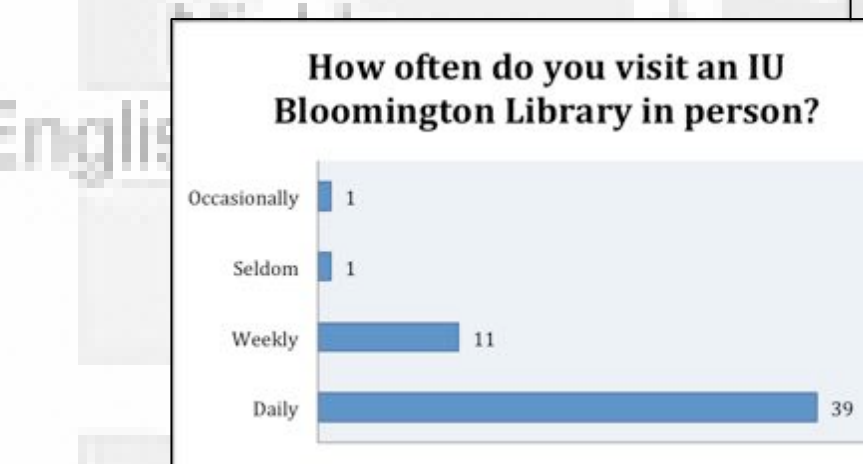
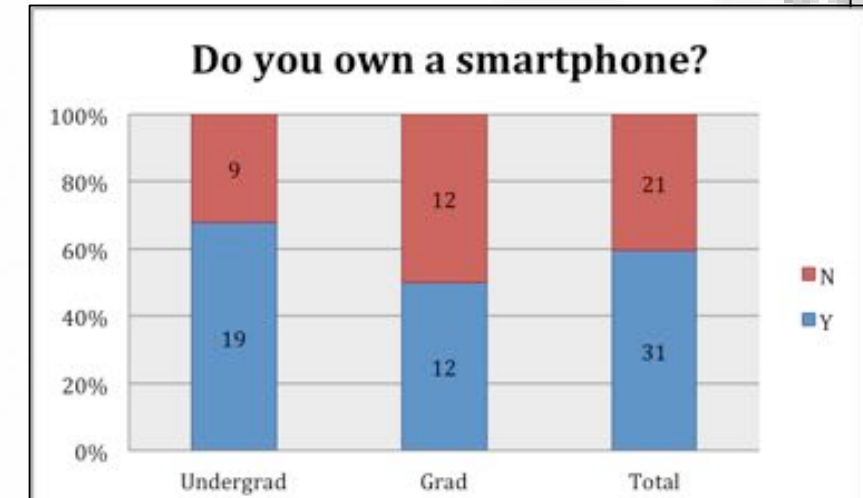
Surveyed 52 students about use of libraries, library site, smartphones. Facebook, Google, & IU e-mail were cited as the most frequently used web sites, followed by OnCourse (campus LMS) & OneStart (campus portal). The most heavily used services on the Library site were the most requested additions to mobile site: IUCat (library catalog) & Databases.

**Round Two: Paper Prototypes** (see above for process)

Conducted five tests with paper prototype, focused on labels, site structure, icons. Resulted in a total shift in approach.

**Round Three: Live Site**

Conducted six tests on live site. Focused on mapping function, information architecture, and labeling. Plans for several significant improvements.



**East Tower - Herman B. Wells Library**

1320 East Tenth Street  
Indiana University  
Bloomington, Indiana 47405  
[View on Google Maps](#)

Powered by Leaflet - Map data © 2011 OpenStreetMap contributors, Imagery © 2011 CloudMade

Shelf Locations in Wells

**IUB Libraries Mobile**

Get EBSCOhost App

Installation instructions

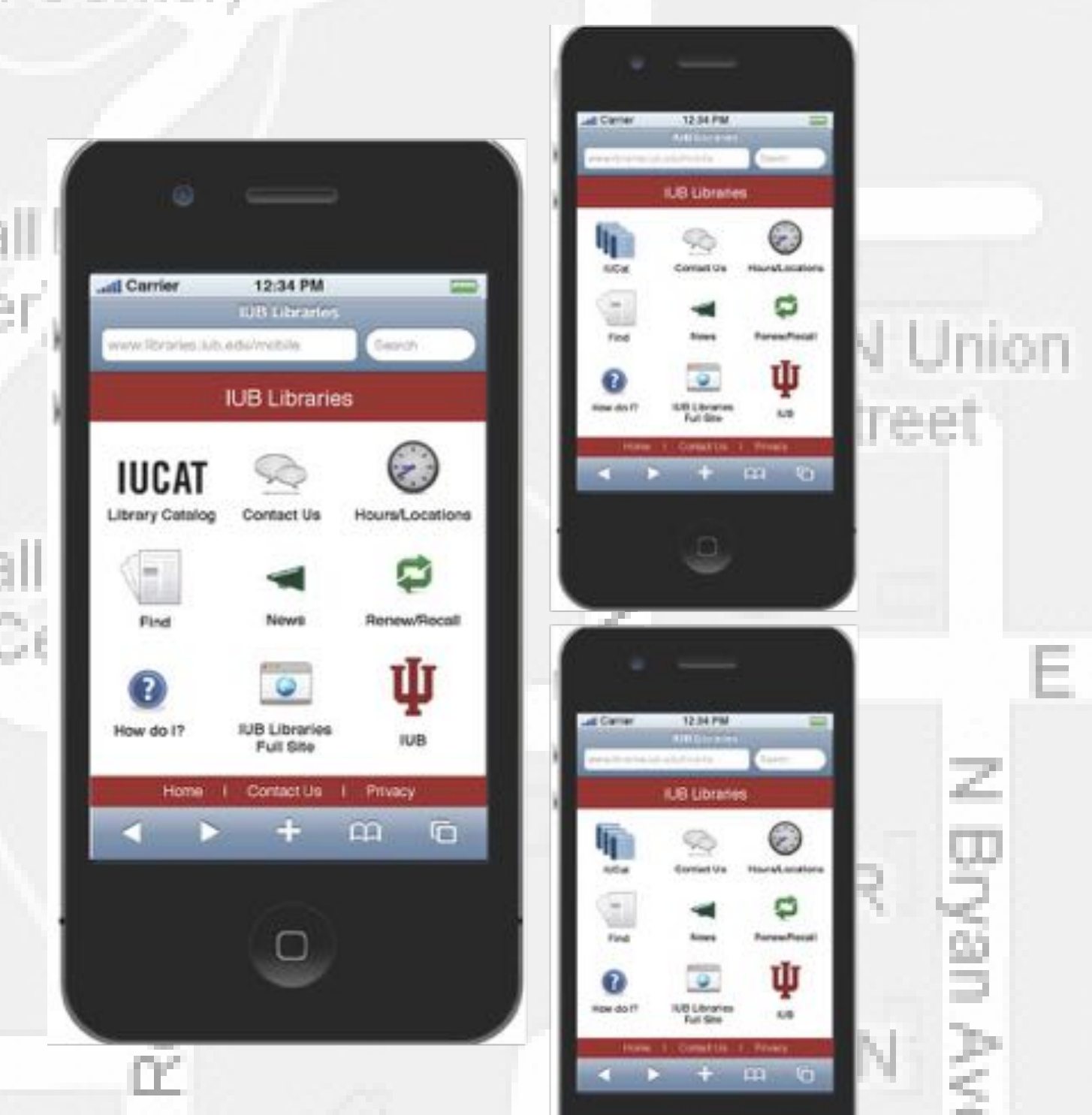
1. Access any EBSCOhost mobile database and click on the link, "New EBSCOhost iPhone/iPod Touch Application".
2. You will be asked to provide your email address.
3. View the email you are sent on your iOS device, you will be provided with a link to download the app and a link to activate access.
4. Note: You must access the activation link from the iOS Mail app or cut and paste the link into a browser window. The activation link will expire in 24 hours.

E-mail Instructions To Me

Mobile sites are on a small scale, literally and metaphorically: a carefully curated subset of essential services and resources.

**Focus on context:** person, platform, place

**Attention to detail:**  
craftsmanship through iterative design



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