

U.Va. Library Mobile (uvalibmobile)

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This Presentation

- **uvalibmobile**: Initiation factors
- **uvalibmobile**: What it does
- **uvalibmobile**: Project plan
- Web application vs. Platform application
- **uvalibwurfl**: The Library's new capabilities web service
- **uvalibmobile**: How we build it and test it

uvalibmobile: Initiation Factors

- **Technology trends** measured by ITC and the Library indicate an increasingly mobile student body that uses mobile/handheld devices to access web resources;
- **User requests** for library web resources have reinforced the importance of the mobile context;
- **Market demands** for more and better mobile web sites supported by an evolving family of devices are formally acknowledged with strategic support.

uvalibmobile: Mobile Discovery/Delivery

- Find an item in **Library collections** in the Library and see availability
- Find an article in most of our **research databases** and in many cases **read the fulltext item**
- Refine the search by **Format**
Book, Newspaper article, Journal article, DVD+
- Refine the search by **Subject**
Edgar Allen Poe > University of Virginia > Periodicals
- Refine the search by **Language**

uvalibmobile: Project Plan

Plan to throw one away; you will, anyhow.

-- Fred Brooks, "The Mythical Man Month"

uvalibmobile: Project Plan

- **Phase 1** (Q2 '09) – An early release supported **touchscreen handheld devices** Primarily the iPhone/iPod Touch; Android G-1
- **Phase 2** (Q3 '09) – The upcoming release adds support for a broad range of mass-market **low-def** and **high-def** handsets
 - *Samsung*: Blackjack, Insight +
 - *Palm*: 750/850, Pre +
 - *Android/HTC*: G1, G2, MyTouch +
 - *Apple*: iPod Touch, iPhone +
 - *Blackberry*: Curve, Storm, Bold +

Web App vs **Platform App**

- **PRO:** Better performance (arguably)
- **PRO:** Experience resembles the native applications
- **PRO:** Use the camera, network, power management, contacts
- **CON:** SDK programming language *not (usually) for web developers*
- **CON:** *Deployment* via vendor/carrier “deck” or “market” (walled garden)
- **CON:** Only support a *narrow range of devices*

Web App vs Platform App

- **PRO:** Easier for web people to build and deploy (go to [www....](#))
- **PRO:** Most of the same functionality as platform apps (HTML5)
- **PRO:** Support virtually any device
- **CON:** Need to know device capabilities for certain functionality
- **CON:** Implementation and QA arguably more complex
- **CON:** More challenging to give a “native” UI experience

uvalibmobile: Web App Architecture

Presentation

HTML/CSS/JS: Basically a tiny site

Templating

High-def/Low-def handset

Capabilities

WURFL Web Service

Web Application

Webapp / Django

Web Services

Hours Catalog News Events Contact

Precursor Services

Blacklight Summon Google Spreadsheets RSS

Capabilities Web Service (**uvalibwurfl**)

- **Publicly available** and documented in Q3 '09
<http://wurfl.apps.lib.virginia.edu/>
- Uses the open-source **Wireless Uniform Resource Library** device database API (<http://wurfl.sourceforge.net>)
- Takes **User agent string**, finds **nearest match** using Levenshtein distance or **best fallback**
- Returns a **JSON array with capabilities** for the device
- Supports **patch file for new devices**, or local/carrier variations

uvalibmobile: Testing/QA

- **Applied user stories** capture the requirements for implementation/testing
- **Challenge:** supported devices are a moving target
- **Emulation:** day-to-day construction
- **DeviceAnywhere:** end-of-cycle demo testing
- **Code Coverage:** Unit tests / Continuous Integration

uvalibmobile: What's Next

- **Refactor the codebase** into **Django** for better portability across the various cloud providers (Google, Amazon, Microsoft)
- **Recreate the UI** based on the refactored codebase
- **Revisit the requirements** with a focus group
- Setup **automated QA processes** (CI)
- Launch **uvalibwurfl** web service
- Launch a **public beta** of the site (September/October)