The Mannheim University Library App
concept and further development

IgeLU 2015

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My Name

- is Alexander Wagner

I am

- Systems Administrator & Developer

Last year's project

- Mannheim University Library App
  (UB Mannheim App)
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Agenda

Background

Vision

Concept

Development

Live presentation

Questions
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Background

- students orientation has changed
- mobile services grow larger in nearly every aspect (daily life, business)
- concept based on students working methods
- improve library attractivity by creating modern workspaces and directly delivering the services they need
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Concept

What decisions had to be made to satisfy the students needs?

- requirements analysis
- determine services, modules and interfaces
- provide UI design / UX
- select codebase (language, tools)
- choose platforms & stores
- set development periods
- create prototype
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Concept

What the prototype looked like ... (August 2014)
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Concept

What we figured out with the help of the prototype

Services
- 4 main functions
  ◦ browsing the mobile website
  ◦ search the online catalogue primo
  ◦ check the library's news
  ◦ find free seats in the library
- additional functions
  ◦ configuration (customize app)
  ◦ help

User Interface
- classical interface well accepted
  ◦ horizontal menu bar on top
  ◦ logo and configuration menu
  ◦ 4 buttons on main screen
- slightly different arrangement of content in each view
- keep it simple
- form follows function
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Mannheim University Library App

June 2014

August 2015

- meanwhile, app is available in Google Play Store and Apple Store
- it provides selected services for mobile use on different devices

https://itunes.apple.com/de/app/ub-mannheim/id1020101750?mt=8
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User Interface
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User Interface
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Presentation
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Services

Website

shows mobile website in webview (simple frame „webview“ that shows webcontent)

• mobile website created in 2013, based on a PHP script / Javascript wrapper, that extracts the TYPO3 content and generates static HTML files, which are published every morning

• displays static, automatically generated HTML
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Services

Primo

- shows mobile Primo website in webview with known features
- added voice input (only Android)
- already had the mobile primo running, difficulties in handling account management and patron information properly
- no changes planned, awaiting new Primo UI
- information from the last days will help to improve :) ◊ developer meeting on saturday
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Services

News
shows latest news from the blog

- RSS client loads content from Wordpress interface
- module shows the latest news in a preview and detailed listview
- links to blog entry
- news count can be configured
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Services

Free Seats
shows the number of free seats in the reading rooms, based on WiFi data

- app gets data from JSON endpoint and shows the occupancy as a traffic light (including absolute and relative values)
- collaboration with computing center
- favourite application of students
- widely known, constantly used
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Services

Free Seats

- library stuff can manage the values
- set customized display of occupancy for a certain period
- integrated statistic tool that can help to calculate the average library usage
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Services

Configuration / Cache

customize app, choose individual start module, set news count, (de)activate cache

Help

explains services and configuration items
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Development Details

Further topics regarding our development process

- components
- development periods
- scheduled improvements (bugfixes, updates)
- publishing process
- future goals / targets
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Components

Interfaces, plugins, libraries

Typescript

ExLibris
Primo

jQuery mobile

WordPress

SQLite

{JSON}

RSS

<xml />

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Timeline

June 2014  December 2014  August 2015

- Proof of concept (Android, iOS)
- preparation of environment and servers
- wire-frames / UI layout
- services and design concept

- Android development
  - prototype
  - implementation of services and server-side interfaces
  - testing
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Timeline

June 2014

- Proof of concept (Android, iOS)
- preparation of environment and servers
- wire-frames / UI layout
- services and design concept

Android Development
- prototype
- Implementation of services and server-side interfaces
- testing

December 2014

- iOS development
- prototype
- implementation of services
- testing

August 2015

- Android bugfixing and further development
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Scheduled Improvements

Upcoming Versions
• Primo voice input (iOS)
• detailview for news (Android)

• multilanguage Support
• link & start other apps from main screen
• barcode scanner
• support other library services

• changes according to latest versions of iOS and Android
  ◊ layout (flat design requested)
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Publishing Process

Differences between Google and Apple

Google
- simple process
- create package while building app
- publish in Play Store
- wait 1 day
- finished

Apple
- complex process
- create separate archive and upload to iTunesConnect (*)
- publish in app store
- wait 5-10 days for review
- if result positive, finished

(*) only possible with specified rights and iTunesConnect account, apple developer account ist not enough
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Publishing Process

Differences between Google and Apple

Create Developer Account
Develop Test
Create Package
Create Itunes-Connect Account
Upload
Review
Release

Developing
Preparing
Publishing
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Vision

Open Source
• usage in other libraries
• create independent modules
• prepare modules / tools for simple customization
• provide proper documentation &
  clear code structure
• check cross-platform development?
• merge trunks?
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Vision

Construction kit
- modularized building set
- choose services by config
- configurable by *.xml or *.txt files

Structure
- modules
- color, logo
- language

Content
- labels, text, descriptions
- URLs
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Vision

3 Steps

1. Download from GitHub
2. Configure & build
3. Publish
Other Development projects

UBMannheim@Github
- PalMA (Team Monitor)
- Virtual Book Shelf
- Library Game
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Links

Website
http://www.bib.uni-mannheim.de

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UB Mannheim on Github
http://www.github.com/UB-Mannheim
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Questions

Thank you