Practical Course: Development of Media Systems / Praktikum Entwicklung Mediensysteme

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http://www.mimuc.de
Structure

- Basic conditions of the practical course
- Topic: Mobile Museum Guide
  - Idea
  - Scenario
  - Work Packages
  - Architecture
- Organizational aspects
  - Tutorials
  - Next meetings
Basic Conditions

- Software development as teamwork
- Management and self-organization
  - Project and time management
  - Plan → result
  - Specification and documentation
- Project schedule / Requirement specification
  - Who does what and when?
  - Work packages, milestones, dependencies, structuring the tasks
Basic Conditions

- Predetermined
  - result
  - generic work packages
  - technical scope
  - there should be a kind of organization

- Official meetings (mostly) every 2 weeks
  - 18/04, 25/04, 02/05, 16/05, 30/05 (preliminary report), 13/06, 27/06, 11/07 (final report)
Mobile Museum Guide: Idea

- Usage of the own mobile device as a virtual guide (instead of using paper material or lending an audio player)
  - User (Tourist)
    - Already familiar with his own device
    - Access to the information also after this visit available
    - Possibly to request additional information (e.g. from WWW)
  - Museum / Park / Exhibition
    - New services for the visitor
    - Reduced costs (?)
    - Easy update of information
Mobile Museum Guide: Scenario

- Visitor enters the museum / park / exhibition
- Download of an MIDlet (Java application) or i-mode webpage
- Direct interaction with the exhibit (visual code), physical link → Gets information (audio or visual) on his mobile device
  - Usage of built-in camera of the mobile phone, Marker on poster represents service (URL)
  - Bridge between the real and the virtual world
- Indirect interaction with the exhibit, position-based (user is nearby an object) → Gets information (audio or visual) on his mobile device
Work packages

- **WP 1: Scenario**
  - Description of the scenario, prototype and functionalities
  - For which exhibition / museum / park → petuelpark.de ???

- **WP 2: Architecture**
  - Define basic architecture
  - Define communication mechanisms

- **WP 3: Implementation**
  - Contents for mobile guide (audio, video, structure)
  - Test the direct and indirect interaction (visual code, GPS)
    - Existing implementation
  - Implementation of the prototype based on the architecture and the scenario

- **WP 4: User study**
  - User study
Petuelpark ???
Architecture

Server
- Tomcat
- Directory servlet
- Visual code recognition
- J2SE

Mobile Phone
- Browser (Built in)
- Mobile Museum Guide
  - J2ME / MIDP 2.0
- Bluetooth
- GPS - Device

Exhibit
- Visual Code
- Exhibit
- Exhibit
- Exhibit
- Visual Code
- Camera
- Position

Directory:
ID + Exhibit Name + Visual Code ID + Position + Content
Organizational stuff

- 4 SWS
- Room for the practical course
  - 103, Amalienstraße 17
  - open during normal working times (7.30-17.00)
  - 1 key
  - 5 PCs
- Mailing lists
  - pem05@medien.ifi.lmu.de
- News (Meetings, Slides, etc.)
  - http://www.medien.informatik.uni-muenchen.de/lehre/ss2005/pem.html
Organizational stuff

- **Hardware**
  - Mobile Phones: Nokia 6600 (4x), Siemens S65 (2x), Nokia 6630 (?)
  - Tablet PC (2x)
  - Bluetooth sticks (5x)
  - SIM-Card (O2 with 10 Mbyte GPRS, UMTS ???)

- **Book:** “Wireless Java: Developing with J2ME”, in Room 103
Organizational stuff

- **Enrico Rukzio**
  - [Enrico.Rukzio@ifi.lmu.de](mailto:Enrico.Rukzio@ifi.lmu.de)
  - Room 206, Amalienstraße 17

- **Albrecht Schmidt**
  - [Albrecht.Schmidt@ifi.lmu.de](mailto:Albrecht.Schmidt@ifi.lmu.de)
  - Room 505, Amalienstraße 17

- **Rainer Fink (Administrator)**
  - [rainer.fink@ifi.lmu.de](mailto:rainer.fink@ifi.lmu.de), Room 102

- **Hiwis**
  - Specific technical questions: UI, storage, communication, etc.
  - Eva Vodvarsky ([eva@vodvarsky.de](mailto:eva@vodvarsky.de))
  - Dominik Schmidt ([dominik.schmidt@der-weihnacht.de](mailto:dominik.schmidt@der-weihnacht.de))
Next meeting

- Date 18/04/05, 10.00, Room 107
- Tutorials:
  - Tutorial: Usage of Tortoise / Subversion
  - Tutorial: Developing J2ME applications
  - Introduction in the visual code API: Karin Leichtenstern
  - Introduction in the Bluetooth GPS API: Dominik Schmidt
- WP1: Scenario
  - Functionality of the prototype
  - Without thinking about technical aspects (Is this technically possible?)
Meeting 25/04/05

- Presentation:
  - project plan, detailed work packages
  - who does what and when
  - first results, WP 1: Scenario, WP 2: Architecture

- Furthermore:
  - HelloWorld, Tutorials
  - Own running application on mobile phone
  - Familiar with developing environment / SVN
Participants / Room 103

- Participants
  - Wolfgang Spiessl
  - Stefan Seitz
  - Jessica Aust
  - Michael Buschmann

- Room 103
  - Blocked time frames (every week) ????