About the Necessity to Change the Perspective for Mobile Web Services

Marc Jansen
University of Applied Sciences Ruhr West
Computer Science Institute
Agenda

- Problem Description
- Mobile Web Service provisioning
- Different perspective on mobile Web Services
- Resulting Architectures
- Future Work
Problem Description

• The number of reasonably powerful mobile devices is steadily increasing
• **Strong heterogenity among mobile devices:**
  - Operating system
  - Display size
  - ...

Gartner 2013
Mobile Web Service provisioning

- Mobile devices established as Web Service clients
- Provisioning of Web Service problematic for mobile devices:
  - Usually IP addresses of mobile devices are not public
  - Frequently changing IP addresses
  - Devices might temporarily not be connected to the internet and/or switched off at all.
- Idea: implementation of a proxy that automatically generates a Web Service facade for a Web Service running on a mobile device
Mobile Web Service provisioning

- `ws_provider`
- `ws_proxy`
- `ws_client`

- `registers service`
- `informs mobile device about a new request`
- `requests service request metadata`
- `returns service request metadata`
- `stores service result`
- `performs service request`
Different perspective of mobile Web Services

• **Usually Web Services are developed to:**
  • extend the computational power, and/or
  • extend the memory, and/or
  • provide access to large datasets
  • … in general: to extend limitations of a lokal machine/device.
Different perspective of mobile Web Services

• Web Service running on mobile devices are obviously not well suited for extend limitations of other devices, but can provide access to contextualized data of the current user.
Resulting Architectures
Future Work

• Development of more detailed example scenarios
  • Online voting/marketing systems
  • Mobile Learning Scenarios
  • Contextualization of the user
Thanks a lot…

… for your attention!

Please feel free to get in contact with me:
marc.jansen@hs-ruhrwest.de