TECHNISCHE UNIVERSITÄT DRESDEN

Department of Computer Science Institute for System Architecture, Chair for Computer Networks

Application Development for Mobile and Ubiquitous Computing

Own Task: Mobile WMS Maps Application
Second Presentation

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Description

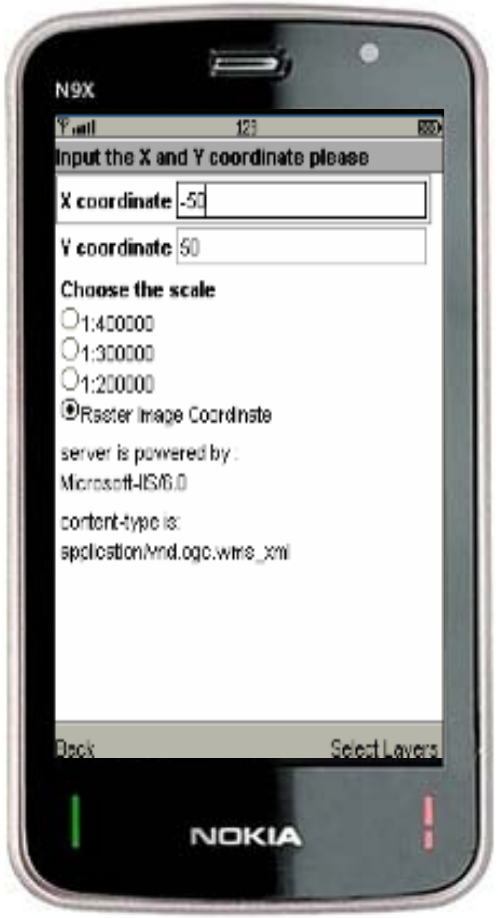
- An mobile application with the capability of displaying a map with the current location.
- Navigation through the maps.
- Capable of display different layers (topographical, aerial, roads, etc)
- As OGC map service we propose the use of the Atlas Sachsen: www.atlas.sachsen.de

Objective

- Adapt from a web browser application to a mobile application

Functionality

- show standardized maps of the current position (aerial pictures, topographic maps)
- search functionality for other Web Map Services in combination with the actual current (catalogue service for the web – OGC CSW)

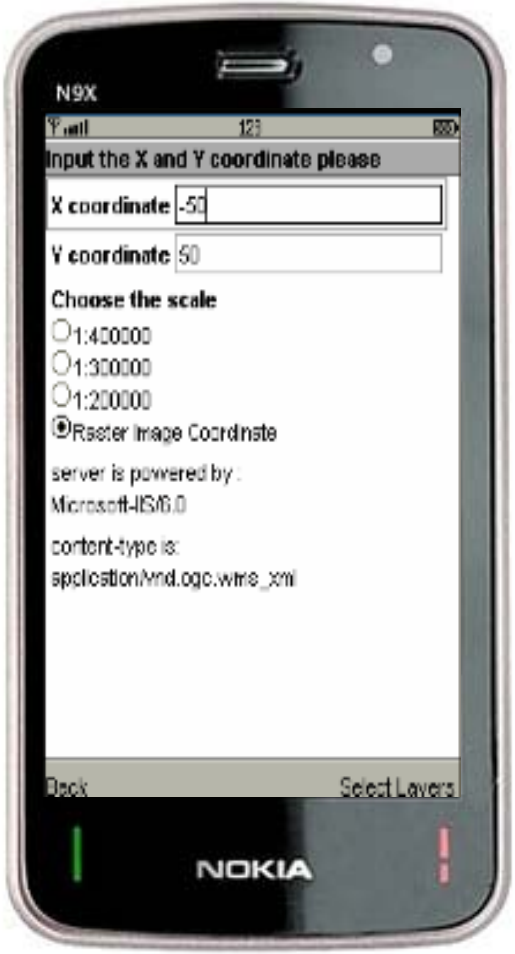


Application Scenario

- GPS
  - Obtain the current position from the device intigrated GPS.

Application Scenario

- Layers
  - The user will receive the available layers
  - Select the layers wanted



Application Scenario

- Maps
  - The application return desired map

Technologies

- Smartphone Nokia 5800

J2ME

Mobile Client

GPS position

OGC WMS

HTTPRequest/Get

XML

WMS

GeoMIS.Sachsen

SOAP

CSW

WMS metadata

Technologies

- We use HTML Request and XML.
- The GUI create the HTML Request to load and present the map as picture.
- The coordinates from GPS create a HTML Request for a map of the current position.
- Use another Web service from a Metadata information system to search local geo data and geo services.
- We will use a SOAP interface who will include the GPS coordinates too.
- The Response is a XML file.
- We can select a geo service and transfer the endpoint URL to the WMS client and can visualize new maps

Challenges

- Adapt a web based application to mobile devices
- Memory
- Connectivity
- Device Resorces
- GPS connection
- GPS is not able to connect in all devices
- Programming Languages
- J2SE to J2ME