

# Visualisation on Small Displays

Discussion



# Participants

- Stefan Neudeck – Swisstopo
  - PhD thesis: Map Design for Screen Displays
- Tiina Sarjakoski – Finnish Geodetic Institute
  - EU-funded Project: GiMoDig
- Tumasch Reichenbacher – TU Munich
  - PhD-project: Adaptive Visualisation for Mobile Cartography
- Birgit Elias – University of Hannover
  - PhD-project: Landmarks (GiMoDig)
- Suchith Anand – University of Glamorgan
  - PhD-project: Generalisation for Small Displays
- Rob Weibel – University of Zurich
  - EU-funded project: WebPark

# Topics

- New role of generalisation for small displays
- Adaptation and generalisation
- Visualisation methods
- Data enrichment
- Service integration
- Software and tools
- Hardware

# New Role of Generalisation

- See generalisation in a broader sense
- Essential part of adaptation
- Adapting to context
- Adaptation can reduce the problem space for generalisation
- Most important adaptation is selection (model generalisation)
- „dramatic re-design“ of how information is displayed“

## ... Adaptation and Generalisation

- Cartographic quality gets less important, but reliability and relevance are crucial
- Usability issues
- Interdisciplinary approach necessary

# Visualisation Methods

- Fish-Eye-View / Vario-scale
- Topogram (graph schematisation)
- Helicopter zoom
- Re-design of conventional maps for special requirements of small displays
- Displaying context-related information (e.g. relevance, priority, availability) and landmarks
- Multimedia (image or video sequences)
- Animation and 3D ?

# Data Enrichement and Service Integration

- Data integration is a general issue in many fields ( LBS, conflation, matching ...)
- Mobile users need more than pure topographic maps - > additional valuable information (e.g. POI)
- Additional Information (e.g. restrictions, opening hours, ...)
- Service Integration: mapping + POI + ...

# Software and Tools

- Libraries:
  - Geotools
  - Deegree WFS
  - JTS (Java Topology Suite)
  - Batik (SVG generation and manipulation)
- Formats:
  - GML
  - SVG
  - XSLT



## Software and Tools (2)

- Viewer:
  - Adobe SVG-Viewer (PC)
  - Batik Squiggle (PC)
  - Bitflash-SVG player (PPC)

# Hardware

- Limiting factor: battery power
- Problems:
  - network connections
  - Positioning (GPS, Triangulation)
- „use what is available“