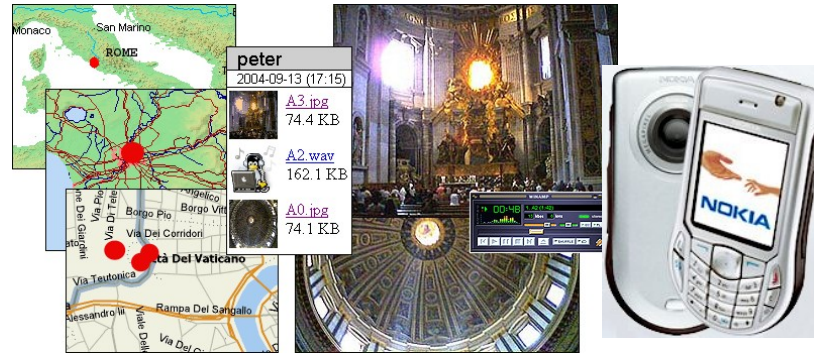# Mobile Location Aware Applications

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Outline

- Project OneMap
- Locus Lab Toolkit
- MoBuddy: Map Based Mobile Messaging
- Locus Times: Grassroots Journalism
- Okapi: Collaborative Geotagging
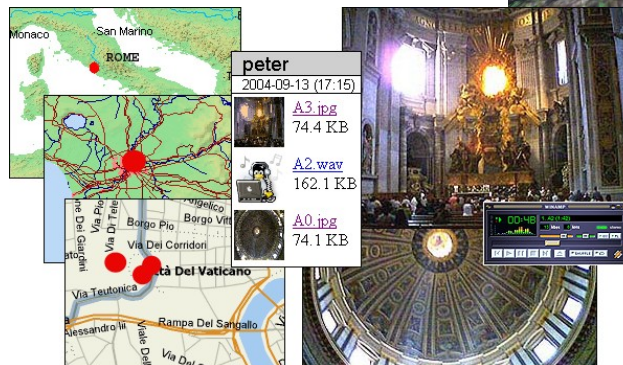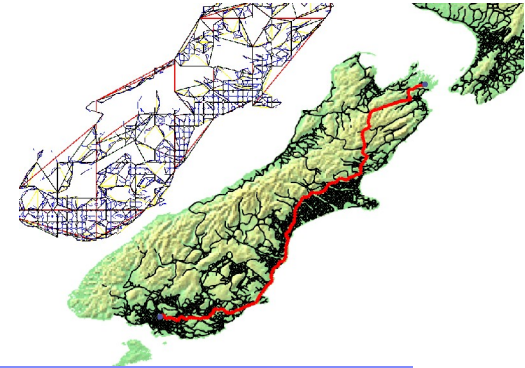- Demo
- Final Remarks

Project OneMap

- Long term effort contributing to the fusion of standard web technologies and geographic content, often referred to as the GeoWeb.

- Open/free content

- Open standards/formats

- Student effort

- Started 2002

Part of the
Mobile Applications Group,
Østfold University College

www.onemap.org

Project OneMap

- 3 main R&D activities:
  - Methods for managment of vast amounts of geospatial data
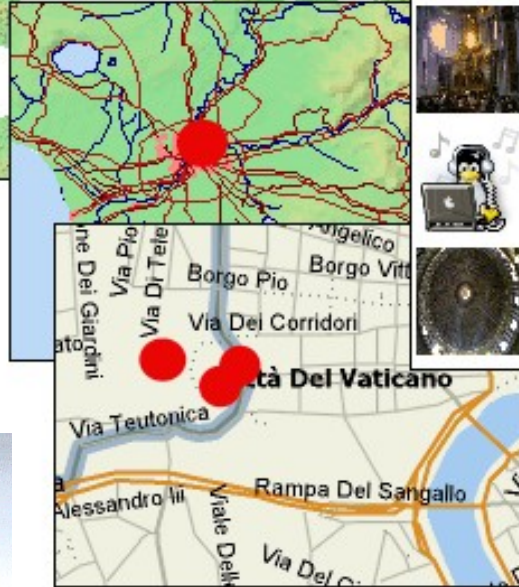 - 3D visualization of 2D map data
  - Mobile, location aware applications

www.onemap.org

Student Based R&D

- So far, 31 registered publications (ForskDok), involving 14 student authors

- Foundation for research based education

- So far, around 60 students have been involved in various OneMap projects

- 9 master students have graduated during the two last years, and 8 more will finish their thesises in 2006 (hopefully)

Mobile Location Aware Applications

Locus Lab Toolkit

- Locus Lab Toolkit is a framework for developing and deploying mobile, location aware applications
- The client terminals are typically mobile phones, but may also be PDAs and laptops
- Serverside: LAMP services
- Advanced Location Based Services
  - LBS is currently mostly about "one way" communication (content pushing), the user is only a consumer
  - We involve the user. In addition to being a consumer, the user is also a producer of content
- Based on 3 years of research and developmement
- 12 students have so far been involved
- Open standards
- Open source software
- Open services
- Java MIDP, Python for Series 60, Opera Platform

Some Projects
(finished or ongoing)

- Multimedia mobile geoblogging (Globbing !?)
- Collaborative traffic information system
- Electronic logbook for fishing vessels
- Mobile grassroots journalism (locustimes.hiof.org)
- Instant field reporting of georeferenced data
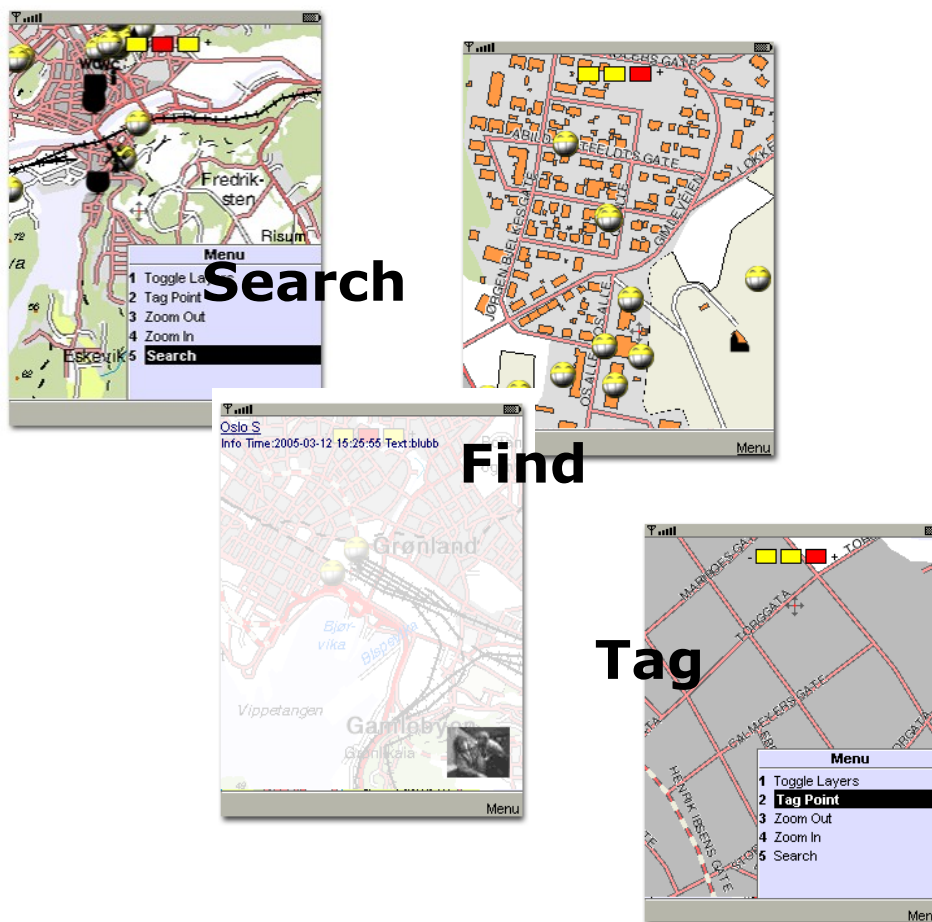
MoBuddy: Mobile Map Based Messaging

- The positions of the participants in a buddy group are continously logged on a service by a background process on the mobile phone.
- The positions and identities will appear on a map, as clickable icons.
- By clicking on a buddy, the user may "automatically" send an SMS or MMS, or initiate a voice call.
- The functionality is also available in a desktop application, making it easy to implement systems that require a central coordination.
- Use Case I: Instant Search and Rescue
- Use Case II: Geochatting

Locus Times

- Demo

Okapi: Collaborative Geotagging

- Users adds annotations to a map (tagging)

- Example: The user finds a restaurant with excellent food. He then goes on to take a picture of the dish in question, and uploads this, along with a recommendation, to the server. The tag will then be added to the map, and become available to other users of the system.

Search

Find

Tag

Misund et. al:
Mobile Location Aware Applications

Project OneMap

OGC Member

Software 2006
Oslo, February 9th 2006

Okapi Case: Oslo Accessibility Project

- Statens Kartverk, Oslo Kommune, Handikapforbundet, Blindeforbundet
- Making accessibility information available to the disabled:
  1. Paper maps
  2. Web portal
  3. Mobile Clients
- Mobile Applications Group: Mobile version of the web portal including functionality for collaborative annotions
- Video

Demo

- Okapi

Final Remarks

- Open standards (OGC, W3C, ...), open-source tools, open services makes it possible to design an implement a whole range of novel location aware mobile applications

- Also possible to use the new technologies and services in courses and master projects

- New application areas, new user groups, new markets, ...i.e., lots of fun!

- Finally: We could never do what we do without various Norwegian map services...thanks a lot!