

# MOSES

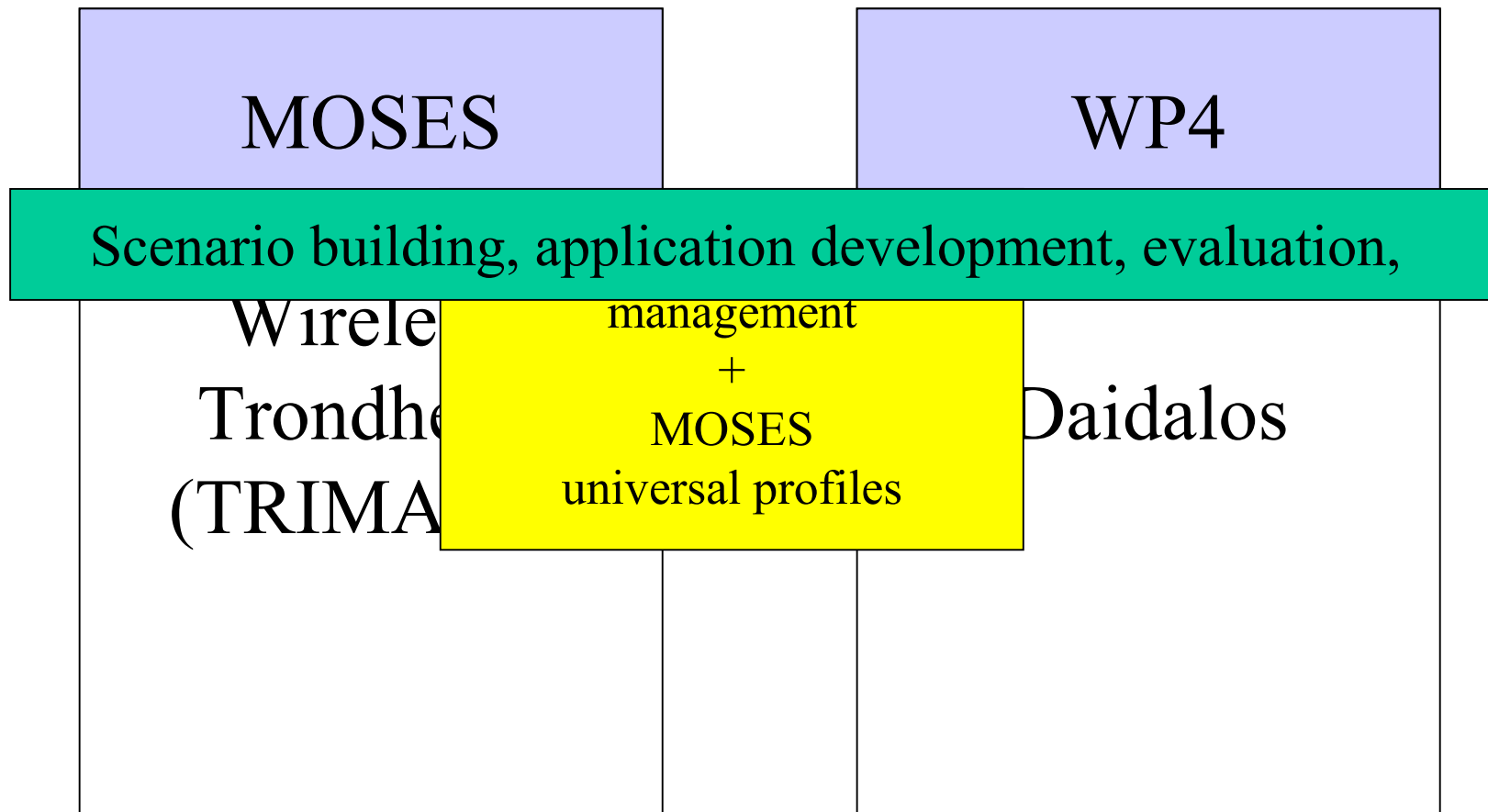
(Model Driven Service Development for  
the Semantic Web) and Wireless  
Trondheim (TRIMAKS)

John Krogstie, Babak Farshchian  
Daidalos public workshop, 29/06-2006

# KMB-project MOSES in Norwegian Research Council program area ICT 2004-2007

- Partners
  - IDI, NTNU
  - DnB NOR (Largest Norwegian finance company)
  - Telenor
  - DNV (Insurance company)
  - OLF (Oil producers' organization)
- Total budget 4,2 MNOK (525 k€)
- 1 PhD student (Lillian Hella)
- 1 Researcher Position (Sari Hakkarainen)
- Diploma and project students
- <http://moses.idi.ntnu.no>
  
- Project manager: Professor John Krogstie: <http://www.idi.ntnu.no/~krogstie>

# Cooperation with Daidalos: Overview



# Moses: Context and vision

- An approach to personalized and context-aware service provisioning focusing on **mCommerce** applications will be developed: This needs to demonstrate the following properties:
  - *User-centered* : The approach needs to be centered on users' context, needs and preferences. It has to be easy-to-use and enjoy universal applicability among a vast number of users with different backgrounds and abilities.
  - *Decentralized* : So that third-party service providers can offer and personalize their services in a decentralized manner.
  - *Universally interoperable* : So that all services and all user profiles can interoperate with each other.
- The project will investigate and demonstrate the utility of the *semantic web* approach as a viable approach to solve the abovementioned problems.

# Moses: Objectives

- Universal personal profiles
  - Static personal information (name, address....)
  - Permanent interests
  - Temporary interests
    - Recurrent
    - One-off
- How to populate these?
  - Permanent interests
    - Based on tracking of user behaviour (context and learning)
  - Temporary interests
    - Ontologies
    - Incremental aggregation of collective classifications
- Who is administrating the profile?
  - The government
  - User through a profile service (e.g. PING, The Personal Internetworked Notary and guardian. <http://ping.chip.org/>)?

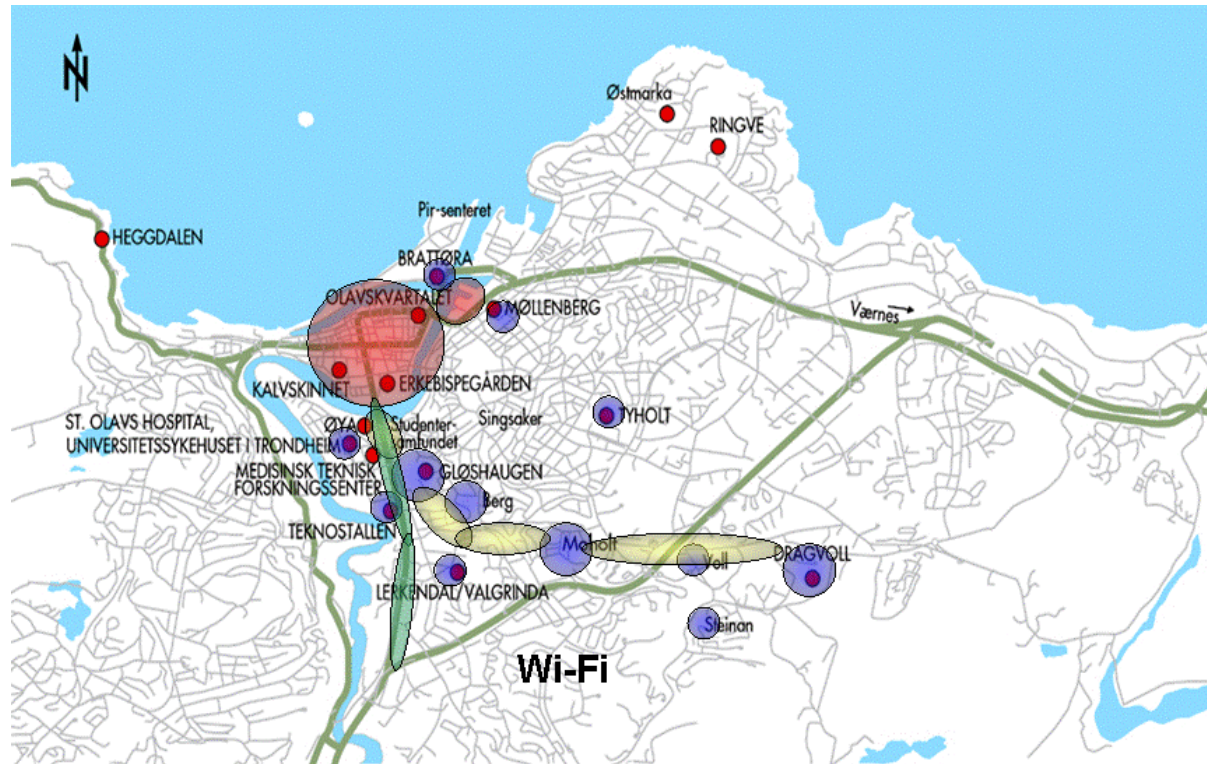


## TRIMAKS added-value

- Contribute to the future of Norwegian trade and industry with cutting edge expertise in wireless services and products
- Create a world-class laboratory for research and development in wireless technologies, products and services.
- Make Trondheim and NTNU more attractive to students, researchers and technology-based businesses



# Wireless Trondheim - TRIMAKS

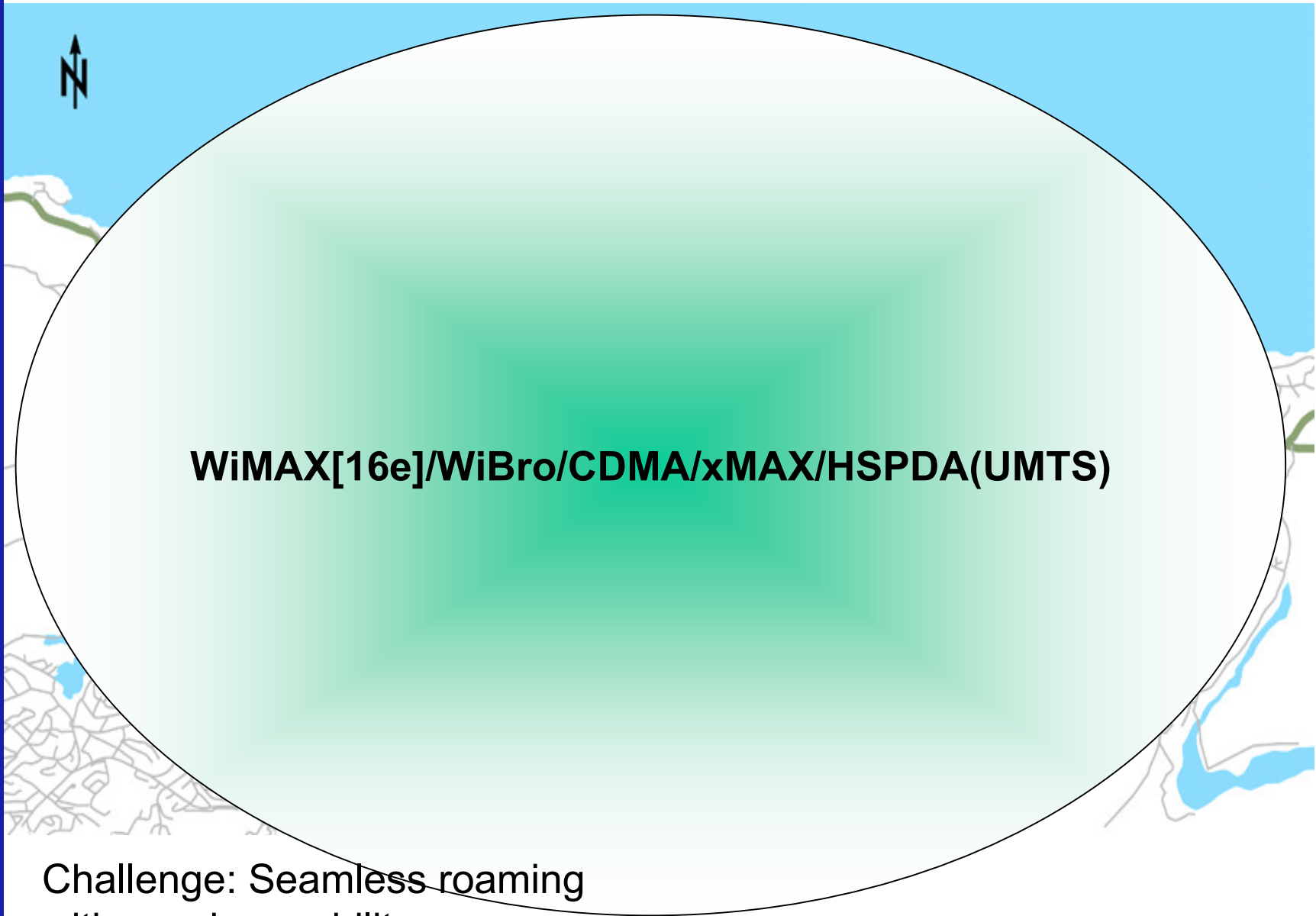


Three subprojects

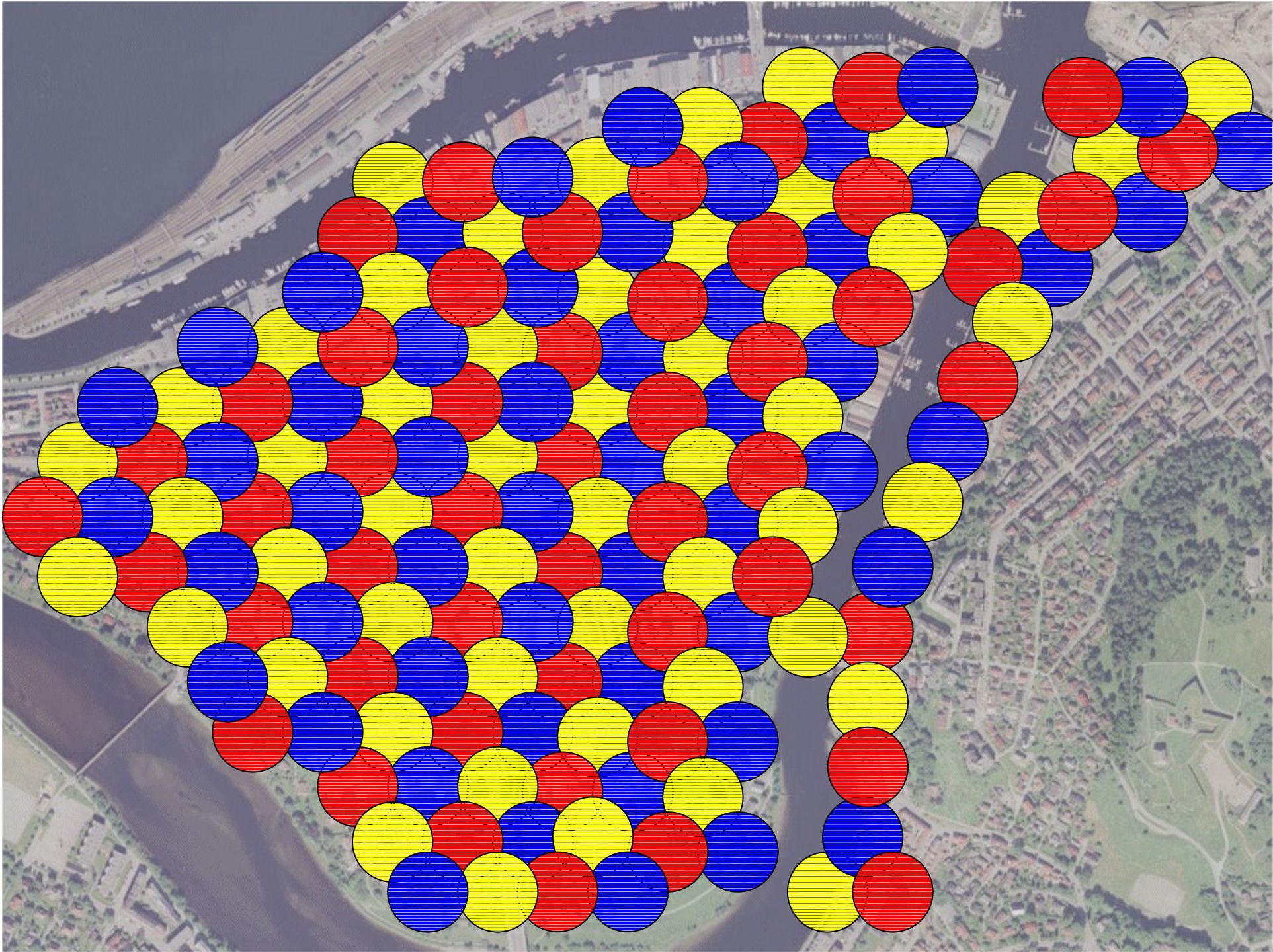
Trondheim city wireless network

TRIMAKS network laboratory

TRIMAKS information services



Challenge: Seamless roaming  
with session mobility



# What is unique for this liaison?

- Duality between R&D and commercial utilization
  - a stable network running commercial services and a platform for R&D on new products and services (including smart antennas, amplifiers, radios).
- Managed infrastructure (not a collection of existing, cheap access points)
- A service platform supporting:
  - High bandwidth
  - Mobility
  - Positioning of users
  - Security



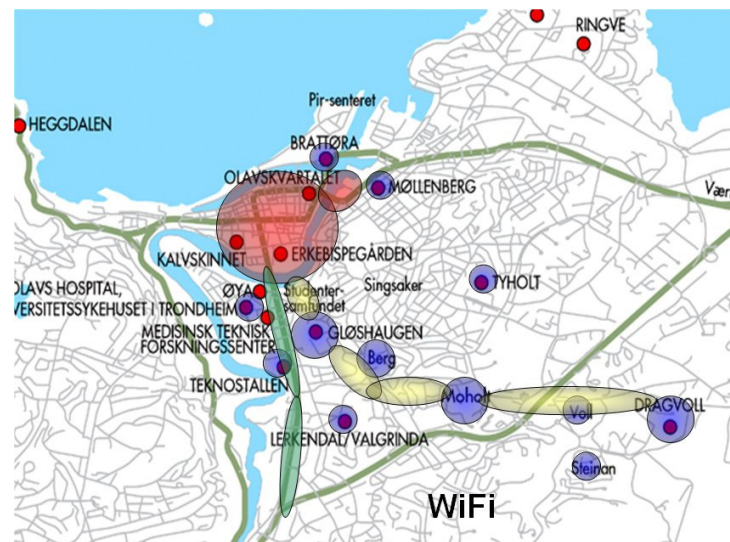
# Progress plan

1. March '06

15. august '06



Area: Nedre Elvehavn  
and Solsiden mall  
Scope: 15 access points



Area: Midtbyen Trondheim  
Scope: 150 access points

## Commercial services applying profile information

- Proximity marketing (push-pull)
- *Jason is out shopping in Trondheim. His status is set to free. When he enters one of the shopping centres he gets a notification on his mobile device from one of his favourite shops at the centre. They are giving her a special offer as he is such a good customer. If he buys some jeans today, he will get a new amount of bonus points that he can use as payment in all the stores in the centre. Jason is a registered customer at the shop, and this simplifies the purchase process. He tries out some new jeans models that are right for him that the saleswoman has found in his size. He decides to buy one of the jeans models. As the offer is taken advantage of the purchase is registered at the shop. In his profile everything he has bought in the store is registered, and combinations of outfits from his wardrobe can be found.*
- Similar services is currently provided by local shopping centres on Trondheim (not including location information)
- More openness for such services among younger people (according to survey performed Spring 2006)

# Wireless, historical cityguide

- Movement in both space AND time



Trondheimsbilder.no



# MOSES – DAIDALOS cooperation

- Development of a common platform
  - **Service management** infrastructure from Daidalos
  - **Universal user profiles** and **eCommerce** support from MOSES
- This combination of infrastructure from Daidalos and MOSES will constitute a platform for **development of innovative applications** in a cybercity context (Wireless Trondheim).
- A number of test applications will be used, **demonstrated**, and will possibly be used for **empirical evaluation** of the results.
- A document will be produced to summarize the findings from the liaison activity.

# Timeline: Moses-Daidalos cooperation

**Fall 06**

**Spring 07**

**Fall 07**

**Spring 08**

Description of a demonstration/evaluation scenario.

A common architecture for the platform will be outlined in cooperation.

In case a decision is made for empirical validation, experiment design will be done and experiments will be performed

Analysis of results and production of documentation.

# Moses-Daidalos: Aiming at synergies

- For Moses:
  - Access to operator-driven service management infrastructure
- For Daidalos:
  - Strengthening Daidalos approach with semantic web and ontology
  - Access to real world applications (eCommerce)
  - Access to real world demonstrations and validation in a real cityscape