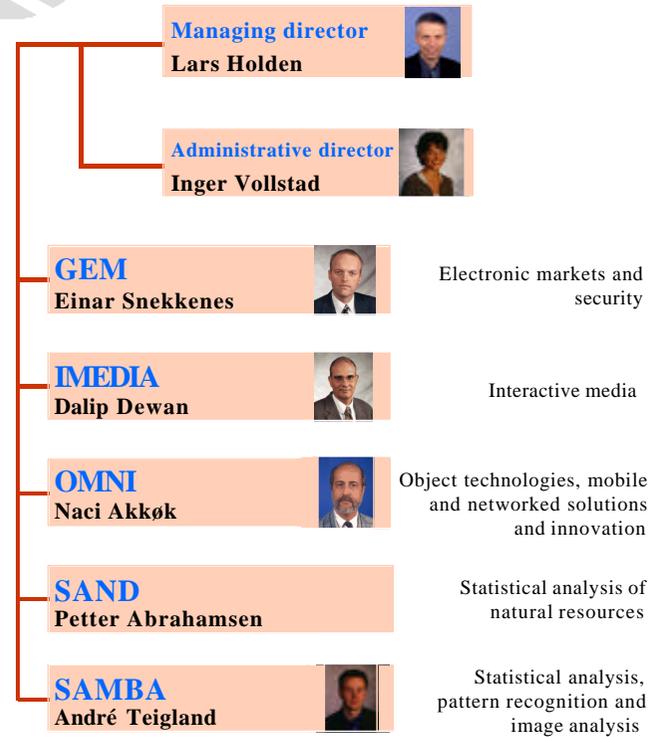
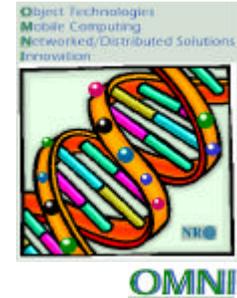




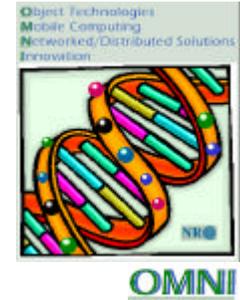
## Norwegian Computing Center





## Distributed Systems and Software Engineering

- OMNI works to improve the development and utilisation of distributed systems by applying and extending state-of-the-art technologies and techniques to real-world problems.
- Applications
  - We use distributed systems technology to build systems in interesting problem domains. For example, during 2001 we worked on a large tourist application that would operate on mobile, hand-held devices.
- Techniques
  - We evaluate and improve the techniques people use to build distributed systems. For example, evaluating the application of product-line architecture techniques to our customer's collection of J2EE-based information systems.
- Technologies
  - We evaluate and improve the technology used in distributed systems. For example, evaluating the security aspects of the OSA and Parlay standards for mobile applications for one of our clients.



## Mobile Systems

- OMNI has worked on several projects within Mobility over the last few years
  - Demonstrations e.g. at Telecom'99 and CeBIT 2000
- 2.5G, 3G and beyond
- Are looking into how speech technology can be applied to (in particular) mobile systems
  - Multimodal user interfaces
- Mobile systems and Groupware (small-group applications)
- Support for Disorganisation
- Distributed Communities of Interest
  - Self-configuring networks of mobile and fixed people, devices and applications
  - Peer-to-peer computing
- Healthcare



## Formal Languages and Models

The Formal Languages and Models group represents in-depth knowledge of programming languages and formal modelling and specification with skills in a variety of programming languages, including functional languages.

**Applications** Examples of our application domains are automatic checking of XML documents and petri-nets for workflow modelling.

**Technologies** In our work we employ all kinds of programming languages, including functional programming, and we help design domain-specific programming languages for special needs.

**Techniques** We build or help build complex systems where conventional programming languages or techniques fall short. To this end we use the theory and practise of programming languages and calculi, logic and formal methods.

## Patients' Mobility: Integration Issues in Telemedicine

*By patient mobility is meant:*

- the ability for a patient to access (tele)medical services at different terminals, on the basis of a unique identifier; the id can be either biometric (e.g., fingerprint), or based on security on electronic cards or certificates (e.g. SIM card)

*and*

- the capability of the network to provide those services in compliance with the patient's service profile.



## Integration Issues for Providing Patient Mobility

- **Knowledge integration**
- **Application and service integration**
- **Skill integration**
- **Device integration**
- **Network integration**
- **Patient information integration from different locations**
- **Transaction integration**



## Building Blocks for Mobile Patient Network

- **Medical Net Instruments**
- **Means of Telecommunication**
- **Electronic Patient Record (EPR) Systems**
- **Databases and Transaction Services**
- **Medical Intelligence Systems**
- **Security Services**
- **Workflow Systems**
- **Means of user interactions**

## Simplified Use Cases of Cardiovascular Rehabilitation System

