



# Future of Internet: 3D and Health/Wellness

29 Apr 2011

Heikki Huomo

**Center for Internet Excellence**  
Next step to internet

# Oulu Innovation Alliance

- The ultimate goal of Oulu Innovation Alliance is to keep Oulu as an **internationally acknowledged center for innovation**.
- The OIA founding partners have committed
  - 1.To focus their operations, education, research and development activities on **agreed innovation areas**.
  - 2.To invest in the development of **agreed infrastructures**.
  - 3.To create and develop **mechanisms** for mutual use.
- The initial **focus areas** are: Internet research, printed intelligence, international business, environment and healthcare sectors.



UNIVERSITY of OULU  
OULUN YLIOPISTO



OULU UNIVERSITY OF  
APPLIED SCIENCES



**TECHNOPOLIS**



**Center for Internet Excellence**  
Next step to internet

# Internet everywhere – the next opportunity

- CIE aims to create internet-driven growth opportunities by combining cutting-edge innovations and open networks with agile new business creation.
- CIE's role is to combine the best ideas, people and resources from different fields of industries and science for co-creation of next generation internet technologies, appliances and services.



# CIE – multidisciplinary – based on network

## Infrastructures

OULLabs  
Oulu Urban Living Labs  
  
Test environments  
Test user community  
Infrastructures  
One stop shop service

## Research

Projects  
  
Initiation  
  
Coordination

Intel and Nokia  
Joint Innovation  
Center

## Commercialization

Turning Ideas into  
Business process  
  
Coaching  
Market research  
Feasibility studies  
Funding  
connections

OULU UNIVERSITY OF  
APPLIED SCIENCES



OULU  
FINLAND

UNIVERSITY of OULU  
OULUN YLIOPISTO

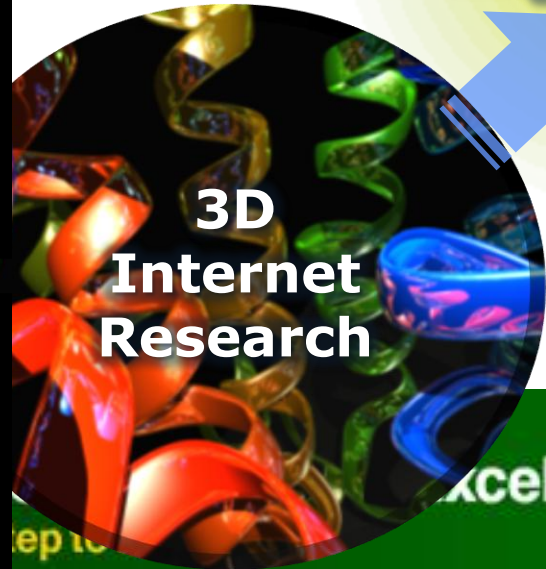
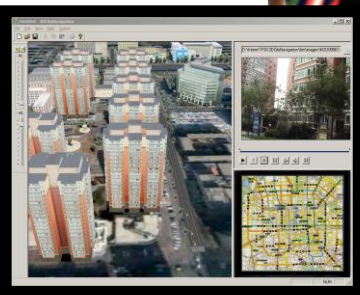


TECHNOPOLIS



Center for Internet Excellence  
Next step to internet





excellence  
step to

# Internet everywhere – the next opportunity

- Internet of Things
- 3D Internet
- Key characteristics:
  - Application driven
  - New business models
  - Cloud computing at all levels
  - New traffic classes
  - Fast evolution



# 3D Internet

- 3D Internet is all about doing something together
- Avatars play a crucial role in recognizing users and as self-expression
- Real vs virtual worlds and how they overlap?
- 3D User Interface to blend seamlessly with 3D Internet



Center for Internet Excellence  
Next step to internet



# Case: Architecture



**Center for Internet Excellence**

Next step to internet



# Case: Augmented reality



**Center for Internet Excellence**  
Next step to internet

# Case : Health and Wellness

- Motivation:
  - Aging population and other lifestyle/environment driven challenges
  - Day in a hospital costs society ~ 1k€
- Key elements:
  - Awareness of indicative parameters
  - Peer support/pressure
  - Wisdom of crowds



# Technology at our fingertips and pockets

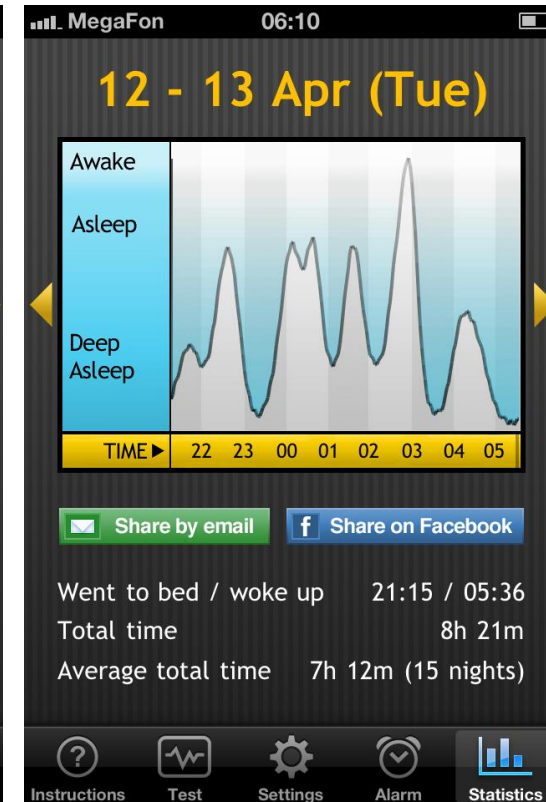
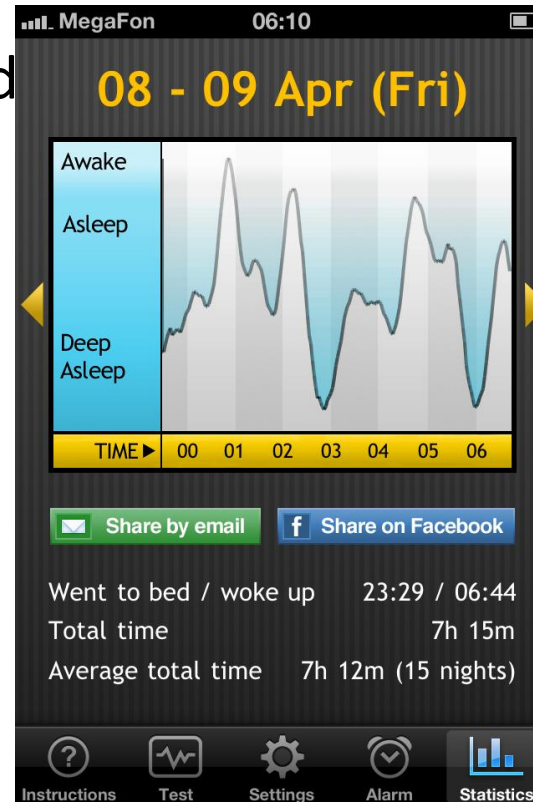
- Heart rate measurement by camera from fingertip
  - Settings to personalize reference
  - Historical measurements
  - Time series for interval exercise/recovery
  - Sharing on social media
  - 0.79 €



# Technology at our fingertips and pockets

## Sleep Cycle:

- Motion sensors and placement to bed
- Clever alarm
- Statistics
- Sharing on social media





# Case : Health and Wellness

## Wisdom of crowds

- Flu or other epidemics
- Quality of environment: water/air/pollen
- Stray effects of medication
- Correlation to genetic cohort



**Thank you!**



**[www.cie.fi](http://www.cie.fi)**

**Center for Internet Excellence**  
Next step to internet