From labs to cities: Mapping the social impact of ubiquitous technologies

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University of Oulu

- Founded in 1958
- 6 faculties
- 16,000 students
- 2,900 employees
- Total funding EUR 226 million
- Four research focus areas:
  - Information Technology
  - Biosciences and Health
  - Cultural Identity and Interaction
  - Environment, Natural Resources and Materials
Active exchange programs

- USA: Bilateral, n2n, ISEP
- Canada: Bilateral, n2n, ISEP
- Mexico: Bilateral, ISEP
- Argentina: Bilateral, ISEP
- Brazil: ISEP
- Chile: Bilateral, ISEP
- Zambia: Bilateral, ISEP
- Botswana: Bilateral, ISEP
- South Africa: Bilateral, ISEP
- Namibia: Bilateral, ISEP
- Senegal: Bilateral, ISEP
- Russia: Erasmus, Nordplus, FIRST, n2n
- China: Bilateral
- Japan: Bilateral, ISEP
- South Korea: ISEP
- Hong Kong: Bilateral
- Singapore: Bilateral
- Australia: Bilateral
- New Zealand: Bilateral
- Japan: Bilateral, ISEP
- North-South-South
• Ubiquitous computing (MediaTeam)
• Machine vision
• Intelligent systems and security
• Biomedical engineering
Impact
Ongoing work

- Social and complex networks
- Sensing for public transport
- Public interactive displays
- Instrumenting mobile platforms
- Security and privacy

- Human Computer Interaction, Trust, Privacy, Phishing
- Spatial & Transpatial Social Networks
  - Urban Mobility & Encounter
  - Epidemiology & Diffusion
  - Space Syntax
- Augmented Spaces
  - Situated Services
  - Delay Tolerant Networks
City-scale lab
Interaction model

1) Ambient Display
2) Implicit Interaction
3) Subtle Interaction
4) Personal Interaction

Face detection
Read UBI-key
Touch screen
Interface
panOulu WiFi
Bluetooth network
3D Oulu
Which half is real?
Reconstructing movement
Catchment areas
Where is it busy now?
Live demo?

Click and pray!
Open to the community: UbiChallenge

Lessons learned
Analysis of user needs

Brainstorming

Storytelling

Ethnographic studies
Location, location, location
Public scrutiny
Successful services

UbiPostcard

Hangman

Users don’t know what they want

Sustainability

140 880 €

Maintenance & Moderation
Novelty
Interaction blindness

Privacy - Who benefits?

The resulting network has greater than 99% of the residential and business contain more than 90% of the mobile phones and sure this relation directly, at the population level. The work studied to date and coupled this social network provide insights into social alternatives to traditional economies, understanding this relation between net-

...
Raising awareness about over-sharing

Check out our guest blog post on the CDT website.
The end

• 3rd Ubi Summer School 2012

• Researcher in Residence program

• Special issue of IJHCS on Social Networks and Ubiquitous Interactions (May 2012).

• Or just come visit!

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