



UERG

User Experience Research Group

Helsinki Institute for Information Technology

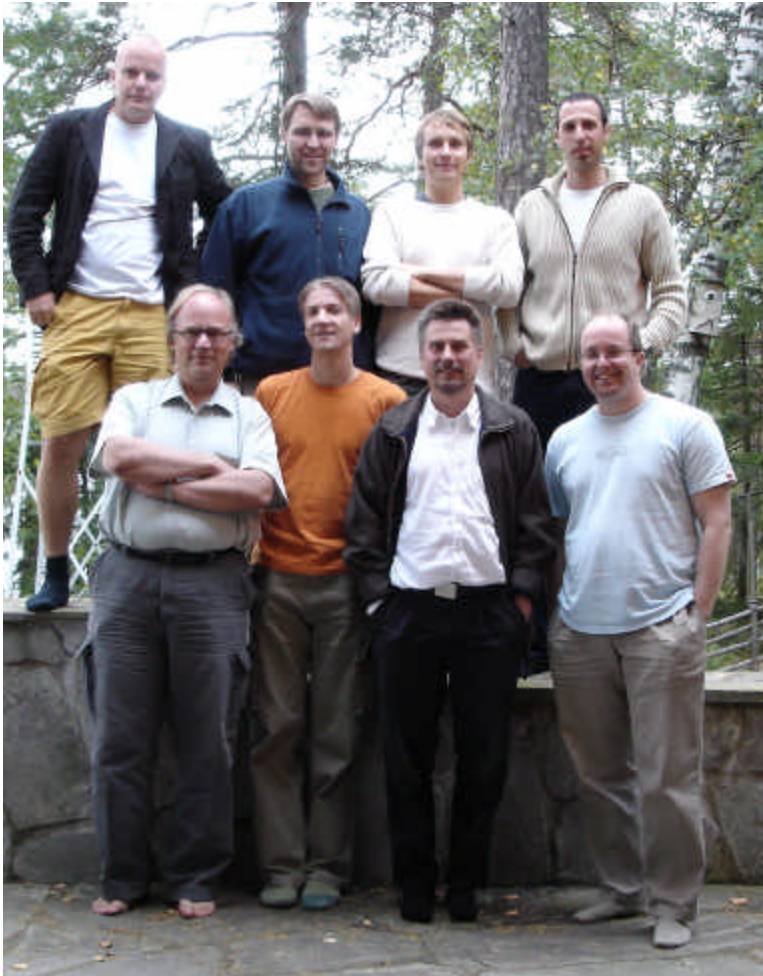
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Group Status



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Members



? Formed 2000

? Growing 2004 ~~to~~ 2005

? Six full-time members

- Leader, Senior Research Scientist, Dr. Timo Saari
- Co-leader, Prof. Martti Mäntylä
- Research Scientist, Dr. Giulio Jacucci
- Researcher, Lic.Phil. Antti Oulasvirta
- Researcher, M.A. Esko Kurvinen
- Researcher, M.Sc. Antti Salovaara
- Researcher, M.A. Sauli Tiitta
- Researcher, M.Sc. Matti Rantanen
- Researcher, M.A. Vesa Kantola
- Researcher, M.A., M.Sc. Tomi Kankainen
- Elisa Visiting Researcher, M.Sc. (Econ.), Annakaisa Häyrynen

Projects

? **Context**

- Academy of Finland
- UERG: User-research on and modeling of "mobile use contexts"

? **MobiLife**

- EU Integrated Project
- UERG: Coordinating user-research activities

? **Wireless Festival**

- Eureka Celtic
- UERG: Ethnographic studies and field trials on mass events

? **Drama**

- Academy of Finland
- UERG: Methodology development

? **MC2** aka Mobile Content Communities

- TEKES
- UERG: Community research, concept development, field trials

Collaborators

? International

- SonyEricsson
- UC Berkeley, SIMS
- Mobility, Interactive Institute, Sweden
- SonyEricsson
- Vienna University of Technology, Austria

? Finland-based

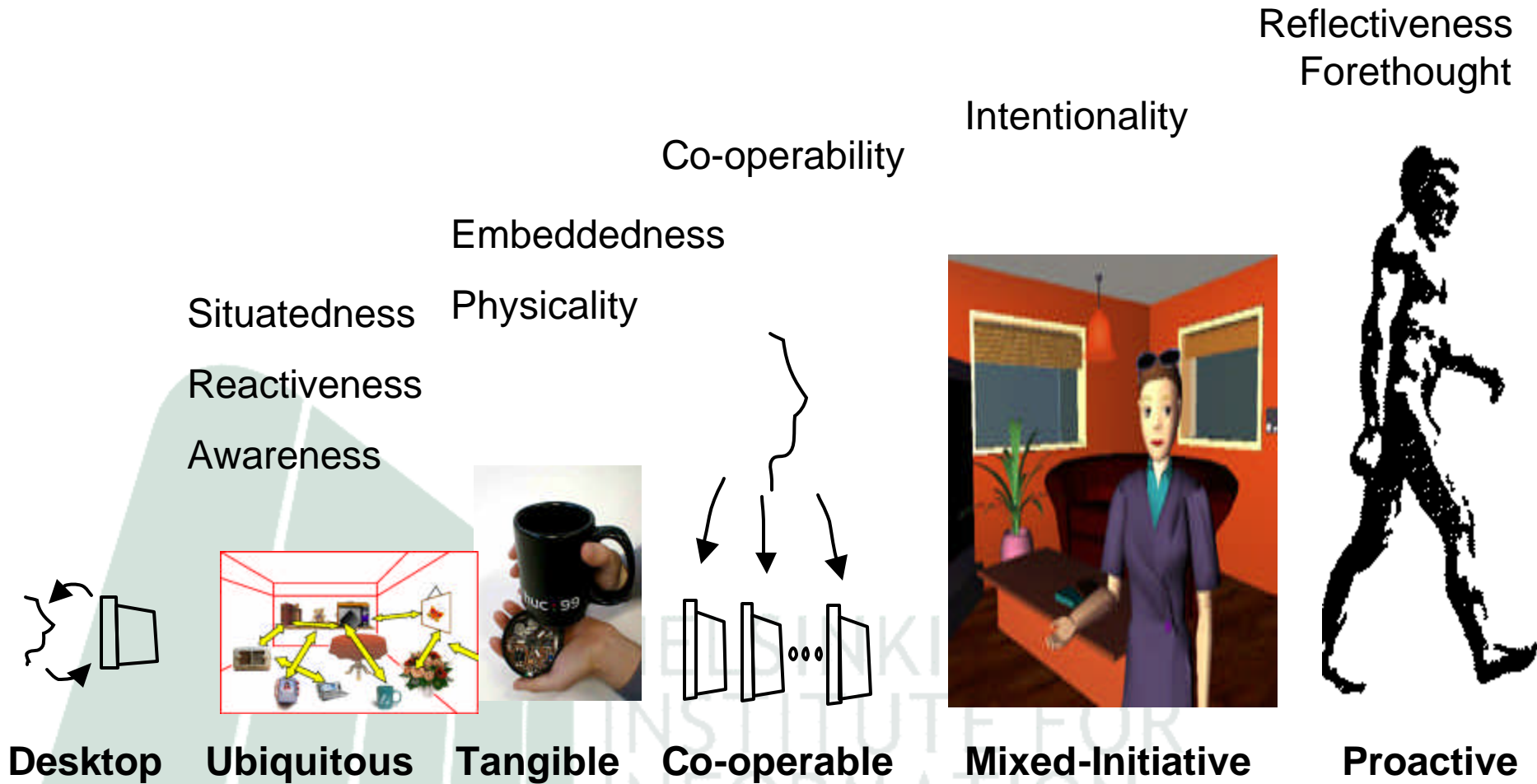
- Helsinki University of Technology TKK
- University of Tampere
- University of Jyväskylä
- University of Oulu
- Center for Knowledge and Innovation Research, Helsinki School of Economics
- Suunto
- Nokia Research Center, Nokia Business Infrastructure

Approach



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The Evolution of H-C Interactions: Possibilities and boundary conditions



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Approach

Strategy

- ? Human-centeredness
- ? Empiricism
- ? Multi-disciplinarity

Principles

- ? Contextuality
- ? Naturalism
- ? Constructivism

Process

- ? Iterative development
- ? User participation



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UE Research Span

Basic user research

- ? Explorative user/interaction research
 - E.g., how CFEs prepare for ad hoc multi-device ecologies?
- ? Hypothesis-testing and experimentation
 - E.g., how does mobile situation affect attentional resources for HCI?

Constructive research

- ? Concept innovation and development
 - E.g., how could mobile gamers record their games?
- ? Interaction design
 - E.g., how should "trust" be represented in the UI?
- ? Interventions
 - E.g., the impact of group media on spectator UE?

Recent Achievements



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Academic achievements

? Awards

- Pro Oeconomia 2004, business book of the year, honourable mention
- Best Paper Award, Design 2004 Dubrovnik
- (CHI/NSF student stipend, 2005 Portland)

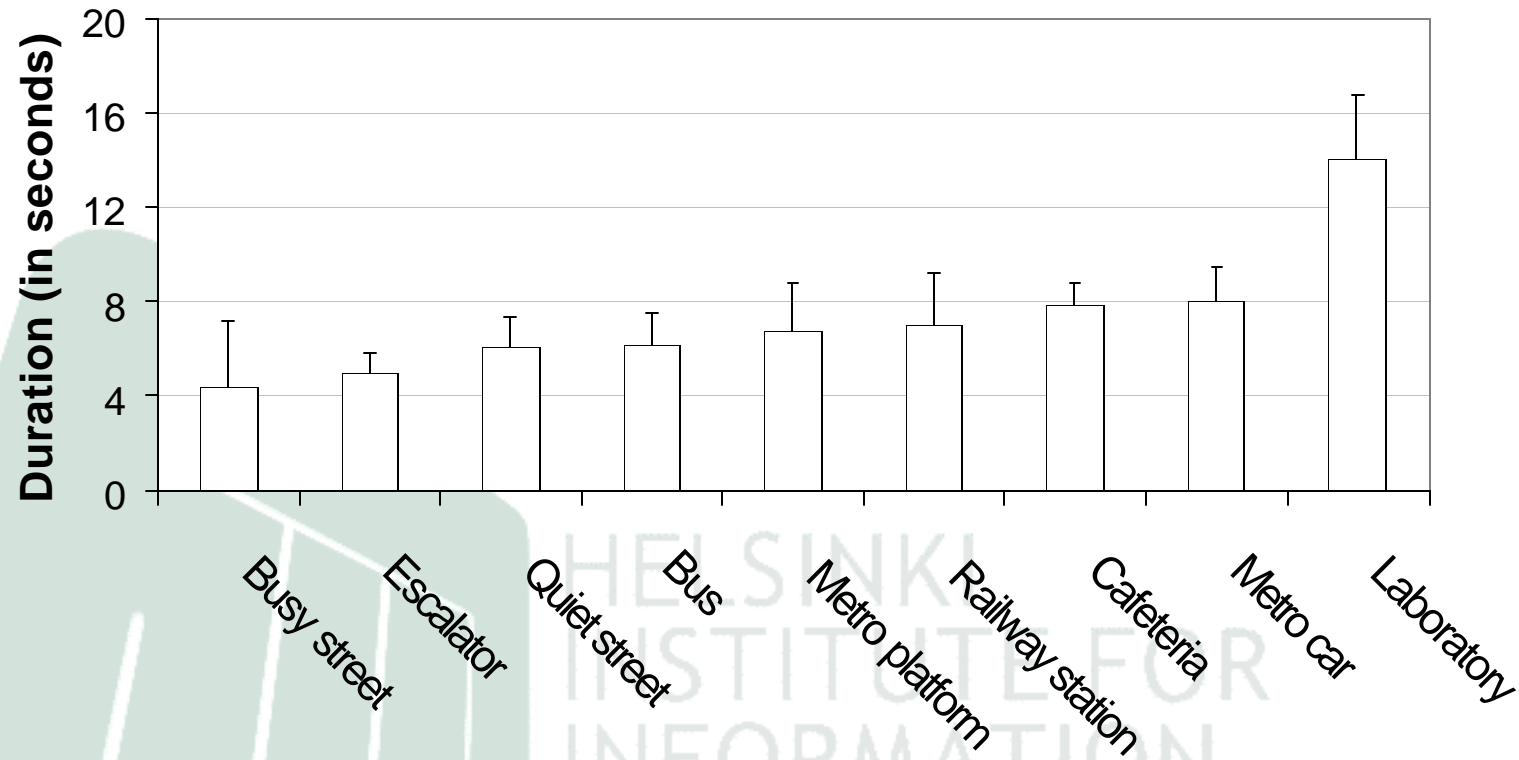
? 2004: Building a culture of collaboration

- Publications in 2005
 - 8 conference papers
 - 5 journal papers
 - 1 book chapter
- Workshops
 - Manipulate Media (media literacy and TUIs), Glasgow 2005
 - HCI Issues in Proactive Computing, Tampere, NordiCHI 2004
- Conference organization
 - Mobile HCI 2006, Helsinki

Findings: Fragmentation of mobile HCI

? Cognitive resources in mobile HCI

Continuous span of attention to mobile device



Findings: Analysis of interactions in ad hoc multi-device ecologies

? w/ Nokia Business Infrastructure



Findings: HHI through mobile media

? Describing the Interactive aspects of multimedia messaging



Subject: dishes

Date: Sat, 4 Mar 2000 13:07 +0200

From: Ilmari

To: [Group 2]

HELLO!

Take a look at this pile of dishes; oh shit. Some statistics: almost forty glasses, twenty cups, plates like hell. Its so great to start saturday morning with this kind of deed. Dear gentlemen, I am not doing ok now!

lle



Subject: RE: dishes

Date: Sat, 4 Mar 2000 13:28:45 +0200

From: Esa

To: [Group 2]

i havve the same thing, fuck this dishwashing deed hit me and goddamnit there's a collection of shitty dishes again... only 4 hours left, my mouth is cracking...

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Findings: Spectator Experience

- ? Social, spatio-temporal, and artefactual aspects of Spectator Experience
- ? Concepts for supporting Spectator Experience
- ? Neste Rally 2004



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Product Concepts: Mobile Gaming Communities

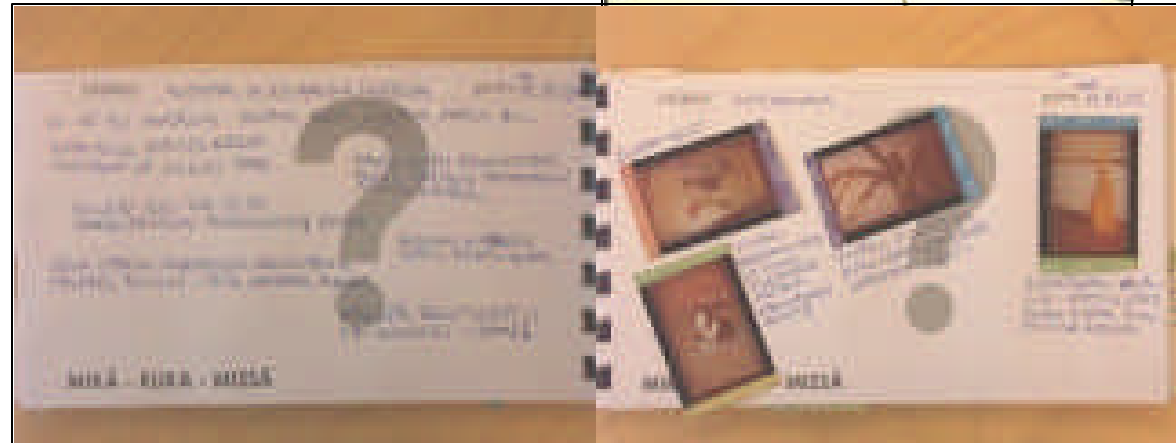


Mobile Content Communities project

Methods: Drama

? Combining UCD with drama

FG



Diary



Play-back theatre



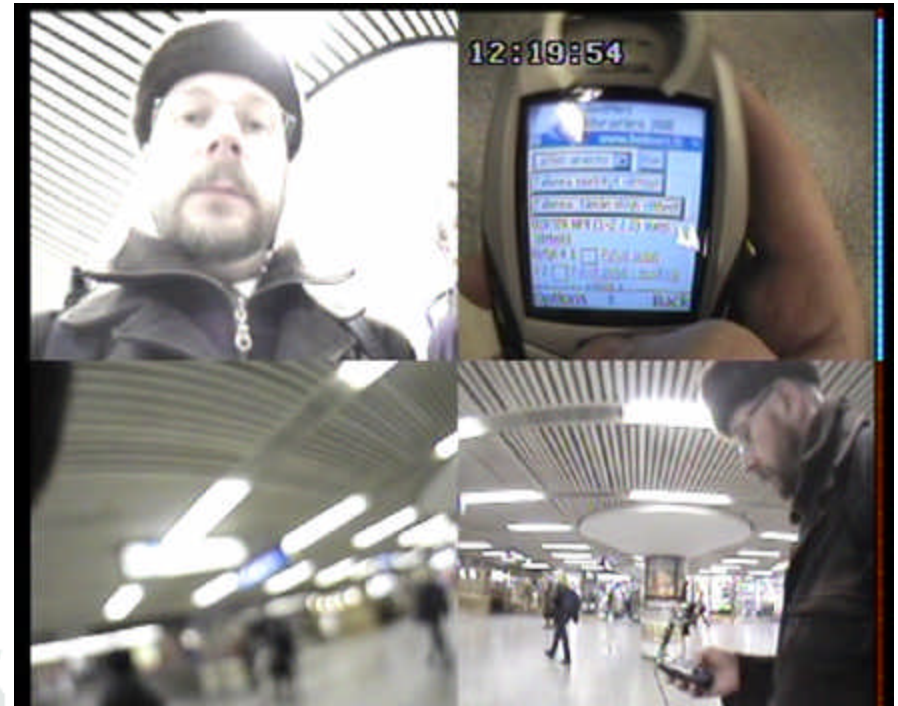
Drama workshop



Forum theatre

Methods: Quasi-Experimentation

? Mobile quasi-experimentation



Four minicams wirelessly collected
to one data stream

Example of data

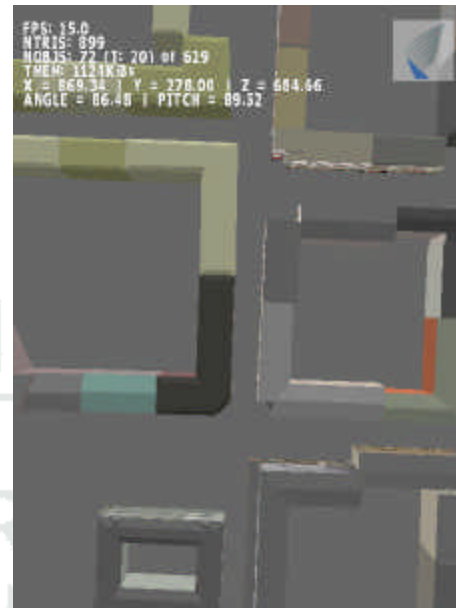
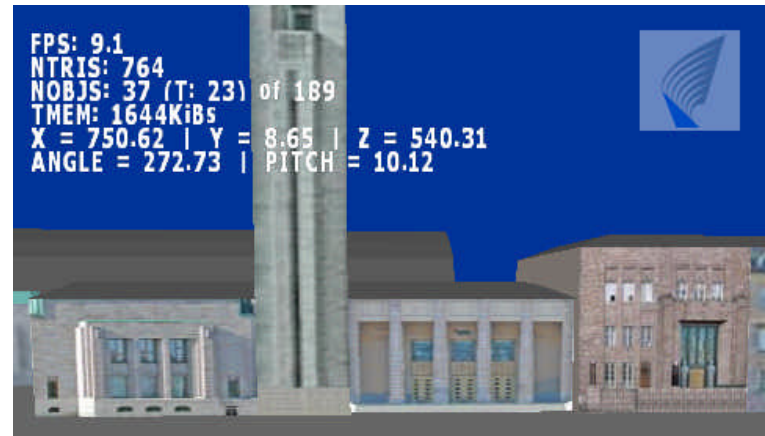


Systems: ContextPhone

- ? Prototyping platform and research tool for context-aware services (S60)
 - w/ FDK of BRU
- ? Close to 10 applications used by about 10 institutions around the world for research purposes



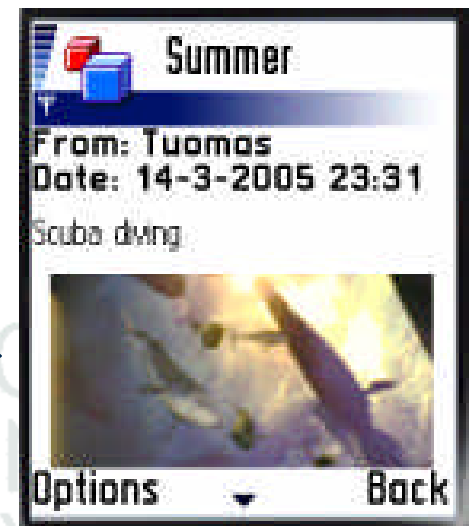
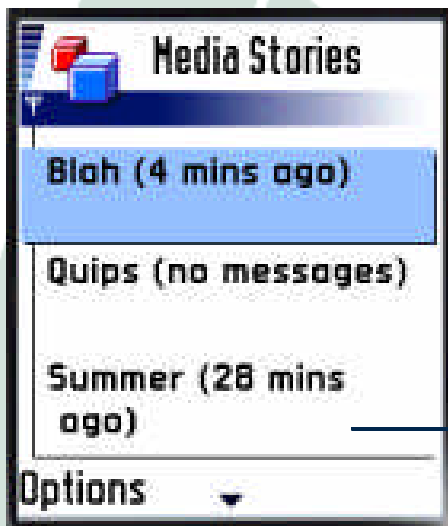
Systems: mLoma



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Systems: mGroup

- ? Combines aspects of
 - MMS, Instant Messaging, Chat, Blog, Digital albums
- ? A new application providing simultaneously
 - Mobile Media Chats
 - Presence
 - Shared digital memories



UCD coordination in an European Integrated Project

? MobiLife IP

- Beyond 3G apps & services for families
- 23 partners from 9 countries
- Iterative user-centric process
 - Example: FamilyMaps/Baby Cart
 - Mobile *Wizard-of-Oz*
- User-centric development of *middleware* and *enabling components*



Towards the year 2009



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Acknowledged Challenges

Identity

- ? Overcoming legacy of CS/Eng
- ? Finding theoretical coherence over diversified projects
- ? Developing a clear vision of future HCI

Agency

- ? Creating a clear roadmap
- ? Achieving autonomy in building prototypes
- ? Increasing societal/industrial impact
- ? Conquering new areas beyond Mobile ICT
- ? (Are we a reactive or proactive agent in the field?)

“Executive Plan”

- ? Create a new **field based user centric research testbed/framework** for Helsinki area
 - A research program integrating user centric design, psychology of context, media psychology, prototype construction and content generation
 - Offering end-to-end toolbox for user research in Helsinki area, networking with CKIR, Init/TKK, UH, TAIK
- ? Provide user experience research **services** for groups in HIIT
 - Participate in project proposal preparation and consult/integrate the user research into the project
 - Offering parts of end-to-end toolbox or whole toolbox
- ? **Expand and strengthen UERG**
 - Participate in various funding applications in EU and Finland
 - Currently 9 applications under construction or submitted
 - Acquire capacity for prototype building

Emerging Research Themes

- ? Mobile mixed reality technologies (mobility, AR)
 - There will be more opportunities to combine properties of physical and digital environments with implications for how we perceive and express through media
- ? Interaction with and through computer-provided context
- ? Mobility and mobile cognition
- ? Distributed cognition and appropriation with technology
 - people's creative use of, and cooperation with, technology to achieve practical goals
- ? Psychology of media
 - User behavior and optimal interaction designs in future media rich ubiquitous environments will be influenced by immersive/attentive processes of the users, persuasive technologies as well as emotional states and moods of the users
- ? Interaction and conversation analysis
 - Social complexity increases, social coordination and use of technology and social creation of technology become more important in understanding interactions

Possible New Application Areas

- ? We continue to go beyond abstract use scenarios:
 - Towards realistic settings that are challenging and provocative to investigate presence, mobile cognition, co-experience
- ? Mobile technologies are the core of our research on interaction and we are open to new application areas, for example:
 - Commercial and public services
 - Healthcare, public transportation, life-management, user centric product and service design, urban design
 - Edutainment
 - Urban planning
 - Distributed and knowledge work in industrial settings
 - Service and maintenance