Systematic analysis of ubicomp services
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From research to product development

- Deployment of research results to product development must be systematic
  - Not dependent on communication skills of researchers
- Minimizing the risks of product development requires that research results are
  - **reliable**
  - **justified**

Reliable and justified research results

- ## Reliable research results

  - Reliability in research comes from correct application of solid methodology on verifying a focused hypothesis

  - Well-planned and executed **experimentation** is the key

- ## Justified research results

  - Research results are applicable in product development only if their **rationale** is known, i.e., they are justified

  - SSUR models carry the rationale from research to the product development process

Multidisciplinary designing

- Experts use the concepts and methods of their own area
  - Verified research and design methods ensure exactness and reliability

- Explaining the consequences and significance of technologies and enablers in multidisciplinary designing requires special design data models
  - SSUR (**Scenario, Service, Use case and Realization**) models bind together the results of the experts in different fields
  - SSUR allows explicating, sharing and analysis of different design viewpoints and their relationships

Summary

- Innovations are nothing miraculous, or bouncing unsubstantiated ideas and visions around, but results of **systematic designing**

- Ubicomp services are not made by developing separate technologies, but by **combining enablers**

WISEciti public event – PM&RG Class B320

- Presentations
  - Systematic analysis of ubicomp services, Mervi Ranta and Henrik Asplund
- Demonstrations
  - Case study: Ämppäri, Tatu Kilappa
    - The experimentation investigates the delay experienced by the application streaming audio over TCP/IP when an uninformed LAN to WLAN vertical handover occurs.
- Poster presentations
  - Experimentation: determining audio buffer size from LAN-WLAN vertical handover delay
  - Experimentations and SSUR modeling
  - Further posters
    - PM&RG – Innovation prototyping, application area, research group activities
    - Experimentation cycle and SSUR models in Innovation prototyping methodology
    - Experimentation: Measuring QoS parameters to determine media transport capabilities
    - 3 posters from the Ubicomp and experimentation poster exhibition in TKK CS building, Otaniemi

WISEciti tasks of PM&RG

- ## WP1 Services and economic models
  - ### Task 2: Future end-user services
    - SSUR workshops and SSUR data structuring
    - Communication data analysis
    - Conclusions on community services

- ## WP3 Network connectivity in mobile environment
  - ### Task 3: Application architecture and APIs for multi-access terminals
    - Experimentations: Buffer size, Network parameter analysis, Interaction data gathering...
      - Experimentation planning, Implementation and validation of the experimentation setting, Experimentation, Analysis of the results and conclusions
    - VHO API
      - Revision of VHO API and analysis of potential extensions and constraints
      - Integrating SSUR data structuring results to VHO API analysis
      - Proposals and conclusions