TEKNILLINEN KORKEAKOULU
HELSINKI UNIVERSITY OF TECHNOLOGY

PM&RG

Product modelling & realization group
Tuotemallittamisryhmä

Innovation prototyping

Innovation prototyping, developed by PM&RG, is a methodology for mobile and ubicomp service idea generation, design and development. It consists of:

Balanced brokering

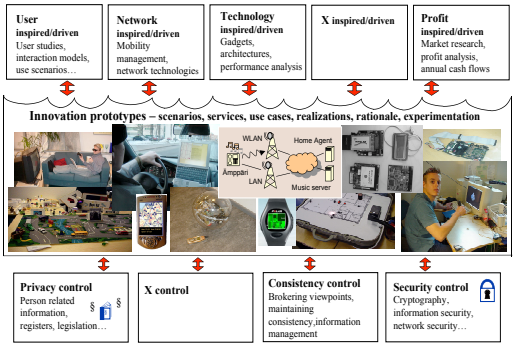
• Multidisciplinarity is not a feature of an individual or even a research group.

Experimentation

• Justification and proof – Focused systematic proving of certain crucial features to avoid scattering information like in generic demonstrations

Design data modelling

• SSUR modelling enforces the design work to be analytical and systematic to cope with the unexpected and the unintended



Innovation prototyping – big picture, © Mervi Ranta and Henrik Asplund

Application area

Pre-product development

• Precedes product development

• On-going process to analyse objectives and produce rationale for product development

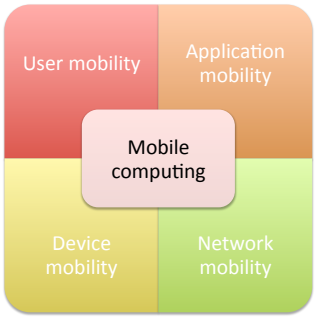
Ubiquitous computing (ubicomp, jokapaikallinen tietotekniikka)

• PM&RG uses the definition of ubicomp by Mark Weiser

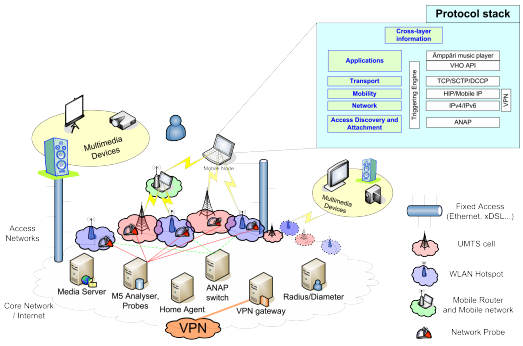
• Two central features have been derived by PM&RG

1. Ubicomp services can be used everywhere utilizing the facilities available in the environment and in accordance with the situation
2. In ubicomp environment the devices and computers disappear and the interaction is done with everyday objects

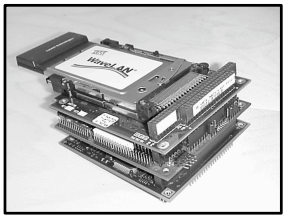
Mobile computing



Elements of mobile computing



MERCoNe big picture, 2007


Ämppäri, 2000

Research group activities

Research

Developing Innovation prototyping methodology and applying it in Tekes projects:

• VHO - Innovation prototyping for vertical handover

• MERCoNe - Multiaccess Experimentations in Real Converging Networks

• WISEciti – Wireless community services for mobile citizens

Research workshops

Education

Based on the research results of PM&RG.

Autumn 2008 – a special course and a seminar:

TTKM - Research and product development methods (T-106.6200)

UCA - Ubiquitous computing approaches (T-106.5800)

Instructing M.Sc. and B.Sc. thesis workers.

Collaboration

Expert networks:

• Hangarounds are members of other research groups, students, experts in companies

• SIG is loosely connected communication network

Tutoring first year students until B.Sc. degree

Events and seminars

Modelling & realization

Each innovation prototype is designed to facilitate a planned, methodologically solid experimentation.

Examples: GO-Ämppäri, VHO-Ämppäri, MERCoNe-Ämppäri, Business card exchange, GOforKoti, SIMA, Distant participation

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