The European Disappearing Computer Initiative

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The European „Disappearing Computer“ Initiative

IST is an integrated EU research programme that builds on the convergence of *information processing, communications* and *media* technologies.

FET promotes research that is of a *longer-term* nature or involves particularly *high risks*.

- **16 projects** started on Jan. 2001
  - durations 2 - 3 years
  - several European countries each
  - more projects will follow
- **37 institutions** (academia and industry) in 13 countries
- **Total effort:** ~300 *person years*
A Vision of the Future (Jakub Wejchert)

...everyday objects and places become ‘infused’ and ‘augmented’...

...computers disappear into the background...

...artefacts with new and emerging properties, and augmented places, appear...

... enrich everyday life simply and naturally...
Moving Towards the Vision
(Jakub Wejchert)

- Set the trends for future development
- Draw together various skills
- Critical mass
The „Disappearing Computer“

- Diffuse information technology into future forms of everyday objects
- Create new information artifacts
  - possibly with sensors, micro mechanical systems, wireless connections,...
- Emerging new functionality from collections of interacting artifacts
  - awareness of other artifacts in the environment
- Emphasis: new people-friendly environments
  - e.g., design of new user interfaces

www.disappearing-computer.net
Goals of „Disappearing Computer“

- Explore how everyday life can be supported and enhanced through the use of collections of interacting artifacts
  - together, these artifacts will form new people-friendly environments in which the computer-as-we-know-it has no role
  - the aim is to arrive at new concepts and techniques out of which future applications can be developed

- The initiative focuses on three inter-linked objectives:
  - developing new tools and methods for the embedding of computation in everyday objects so as to create artifacts
  - research on how new functionality and new use can emerge from collections of interacting artifacts
  - ensuring that people's experience of these environments is both coherent and engaging in space and time
Disappearing Computing Activities

- **Jamborees**: As a focus for the Disappearing Computing community, two major conference-like events will be organized every year where all 16 projects will present and demonstrate their work – the first of these will be organized in **October 18-19, 2001** at ETH Zurich.
Disappearing Computing Activities

- **1-day workshops** that identify themes of broad interest to the community
- **Troubadour traveling grants** to enable researchers to travel between a number of sites
- **Research ateliers**: Small budget and short time scale projects (<3 months, typically 7 to 10 days) which merge ideas from different projects, help build new consortia, or encourage new developments
The 16 Projects

- 2WEAR  A Runtime for Adaptive and Extensible Wireless Wearables
- ACCORD  Administering Connected Co-Operative Residential Domains
- AMBIENT AGORAS  Dynamic Information Clouds in a Hybrid World
- E-GADGETS  Extrovert Gadgets
- FEEL  Non-intrusive services to support focussed, efficient and enjoyable local activities
- FICOM  Fiber Computing
- GLOSS  Global smart spaces
- GROCER  Grocery Store Commerce Electronic Resource
- INTERLIVING  InterLiving - Designing Interactive, Intergenerational Interfaces for Living Together
- MIME  Multiple Intimate Media Environments
- ORESTEIA  Modular Hybrid Artefacts with Adaptive Functionality
- PAPER++  Paper++
- SMART-ITS  Interconnected Embedded Technology for Smart Artefacts with Collective Awareness
- SHAPE  Situating Hybrid Assemblies in Public Environments
- SOB  the Sounding Object
- WORKSPACE  Distributed Work Support Through Component-based Spatial Computing Environments

www.disappearing-computer.net
Example: The „Smart-Its“ Project
www.smart-its.org

- **Vision:** enable everyday objects as smart interconnected information artifacts
  - by attaching „Smart-Its“ to them
  - makes objects self aware

- **Next generation of smart labels**
  - processor & memory
  - wireless communication (e.g. Bluetooth)
  - various sensors perceive the environment
    - customizable behavior
    - remote update
  - cheap, small, compact, autonomous

- **Project partners** in Switzerland, Germany, Sweden, Finland, Great Britain

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Prototype from ETH Zurich
Ubicomp Summerschool

- Planning a Summerschool on Ubiquitous and Pervasive Computing
- **August 7-17, 2002** Schloss Dagstuhl, Germany
- Needed:
  - 7-10 lecturers
  - ideas
  - help
  - sponsors
- Contact me: mattern@inf.ethz.ch
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