
Interaction Techniques for Continuous Information Spaces

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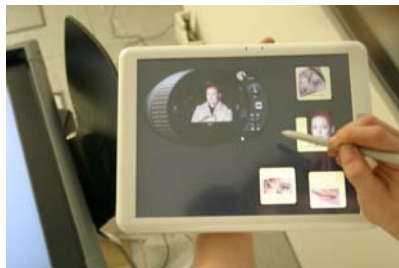
Personal Information

- Diploma in CS from TU Munich 2004
- PhD. Candidate at University of Munich (LMU)
- Started thesis in july 2005 in the FLUIDUM research group
- Current thesis working title: „Hybrid Interaction Techniques for Continuous Information Spaces“
- <https://wiki.medien.ifi.lmu.de/view/Main/OtmarHilliges>

Talk Overview

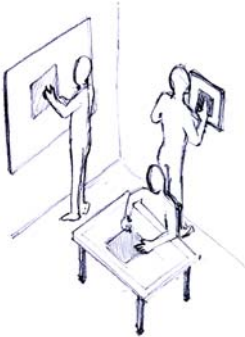
- Fluidum Interactive Environment
- Continuous Information Spaces
- Emerging Challenges
- Current Status
- Personalized Interfaces
- Discussion Topics

The Fluidum Instrumented Environment



- Displays of varying size and resolution.
- Standard Interaction techniques do not work:
 - Lack of mice and keyboards
 - Users roam the environment
 - Information spreads over several displays
 - Information is shared among multiple users
- Research Focus on explicit interaction for activities we *want* to do.
 - Media access
 - Communication
 - Discussion

Continuous Information Spaces



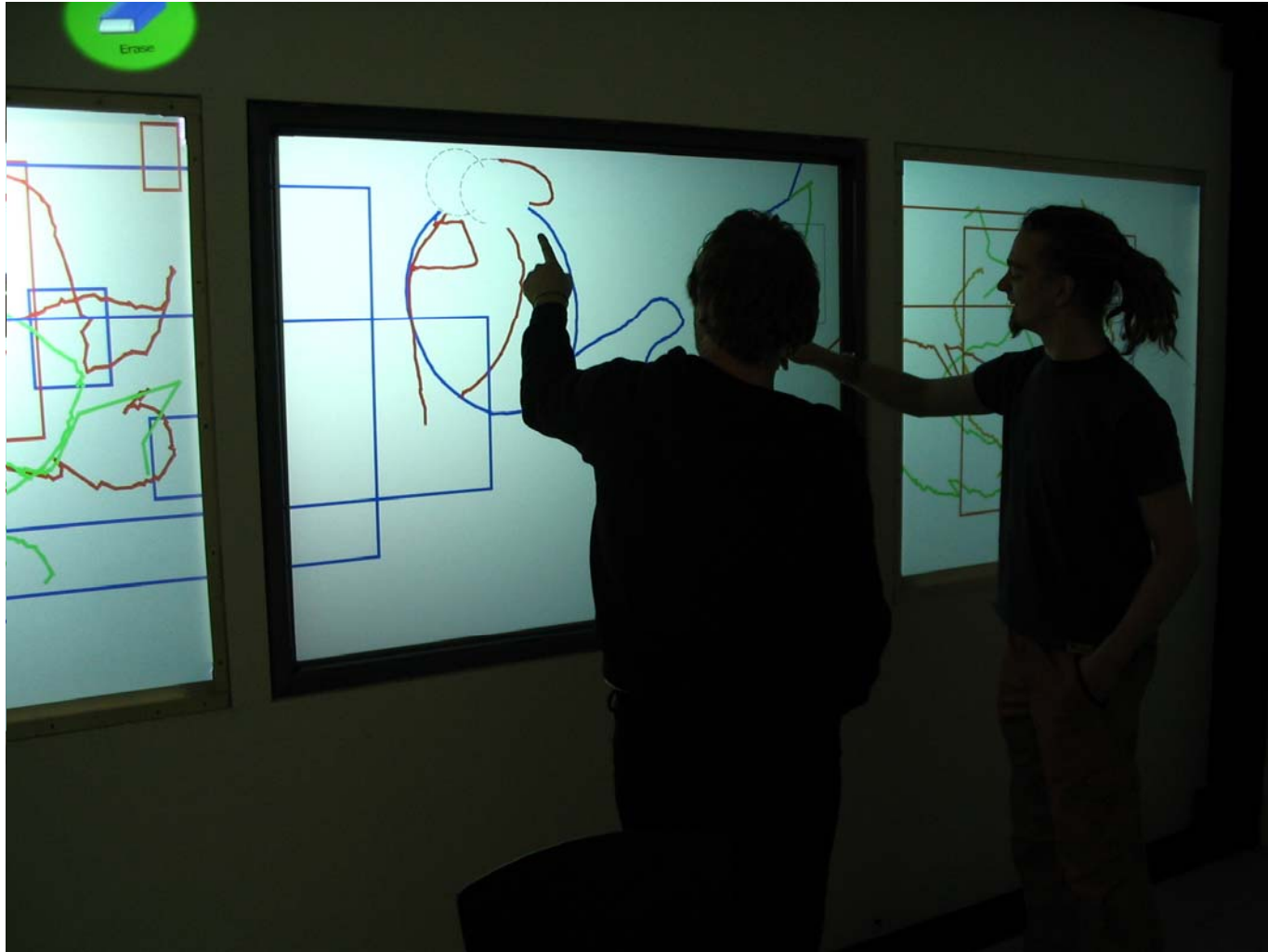
- Displays blend into the environment.
- Environments become containers for information.
- Users live in the environment, manipulate it and communicate in it.
- Users can work concurrently and also collaboratively.



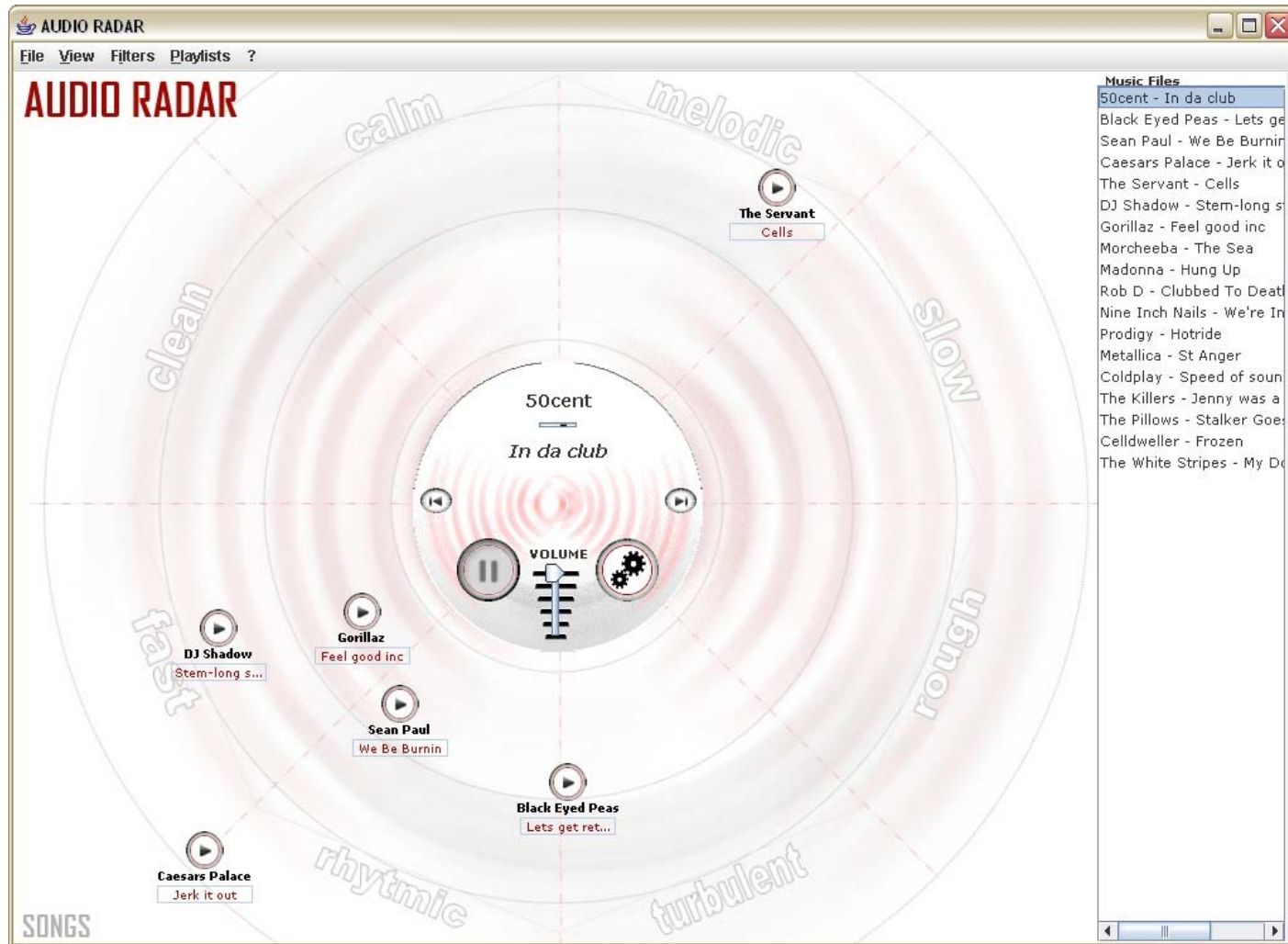
Identified Issues

- Fixed spatial coordinates for menus do not work any longer.
- Truly parallel input and sharing of data with multiple users.
- Manipulation of visualization and data needs to be restricted to a local scope without crippling possibilities for communication and collaboration.

Current Status - Interactive Wall



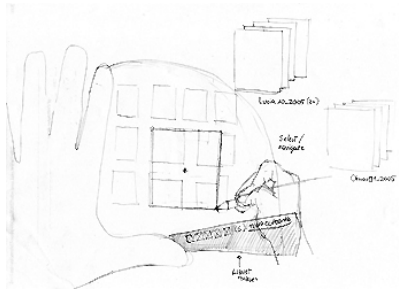
Current Status - Audio Radar



Current Status - EnlighTable



Personalized Interfaces



- Peepholes into information landscapes
 - Transparent overlay attached to the non-dominant hand
 - Reference frame for cognition and interaction.
 - Incorporates functionalities of a toolglass and controls for interaction
 - Allows customized views onto the data without interfering with the work of other users

Avoiding Modechanges

- All Controls are always in place
- Hands don't have to travel to and from spatially fixed menus
- The current task can be perceived as mentally coherent.
- Actions are carried out by clicking „through“ the transparent controls.

Discussion Topics

- Technology problems
 - Tracking and interpreting multiple parallel input.
 - Identifying roaming users.
- Assessment methods
 - How to measure subjective „soft“-factors (enjoyability, likability)
 - How to separate influences of media quality and interaction technique

Questions ? - Thank you!

Otmar Hilliges