
Portraying Individual and Group Experiences

Wolfgang Gräther

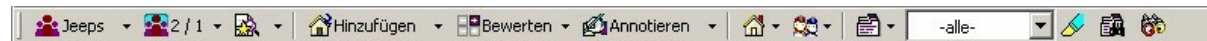


Fraunhofer
Institut
Angewandte
Informationstechnik

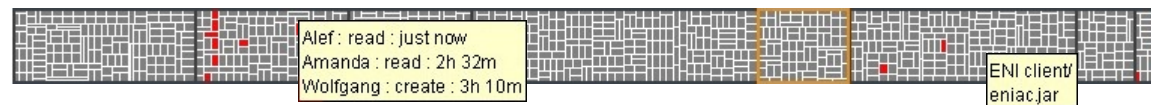
Introduction

- Computer Scientist at Fraunhofer FIT
 - Data bases, model bases, statistics, micro analytic simulation models
 - Artificial intelligence: expert systems, case-based reasoning
 - Computer-supported cooperative work

- FIT community toolbar supporting Web communities



- Visualizations supporting group awareness



- My position on user experience design for pervasive computing:
 - *“The most profound experiences are those between people.”*

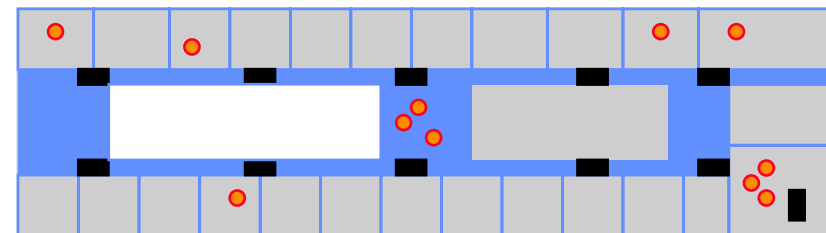
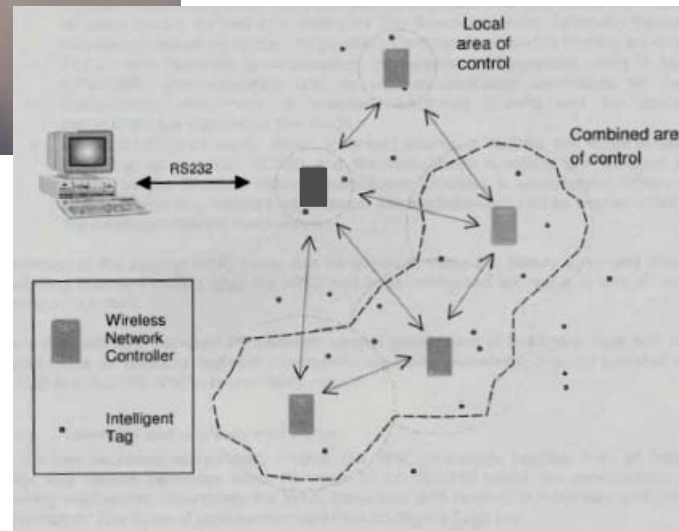
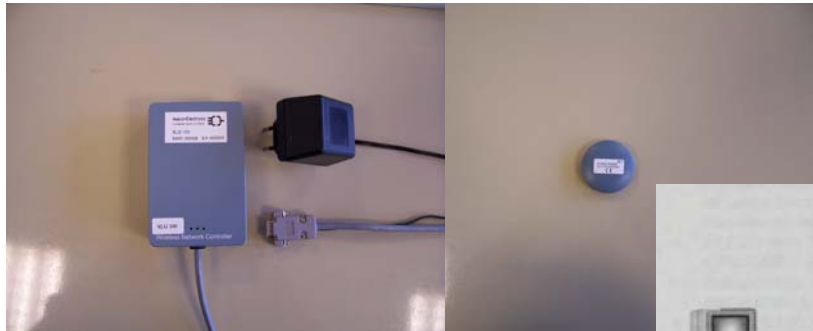
Outline

- Introduction
- Problem
- Solution
- Application scenarios
 - What is currently going on?
 - My visit to Fraunhofer FIT
 - Replay of activities
- Conclusion and Outlook

Problem

- Automatic acquisition of location data in an office environment to enhance group awareness
- “... awareness is an understanding of the activities of others, which provides a context for your own activity.” Dourish & Bellotti, 1992.
- “A factor contributing to the application’s failure [groupware] is the disparity between those who will benefit from an application and those who must do additional work to support it.” Grudin, 1988.
- Requirements: off-the-shelf-hardware, low-cost, ‘room’-accuracy, scalable

Solution: RFID infrastructure

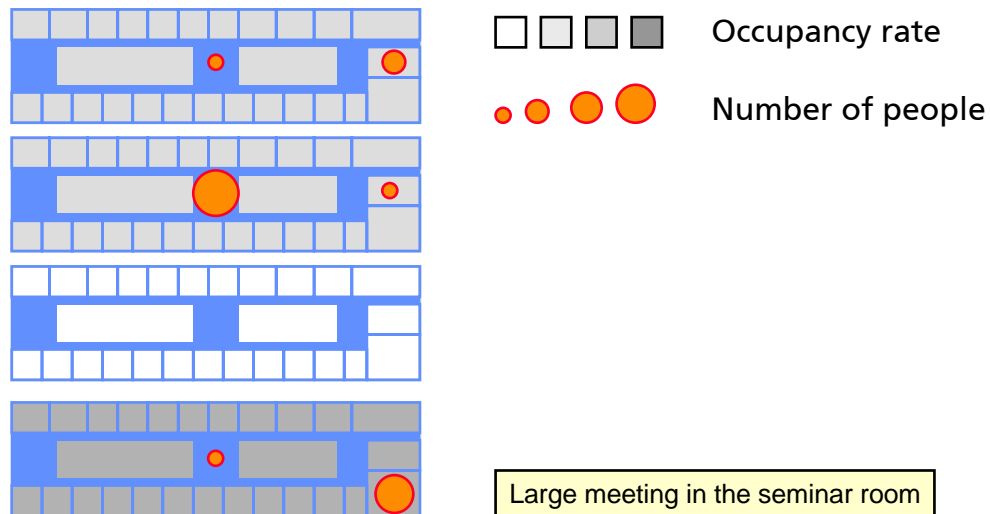


Solution: signal processing

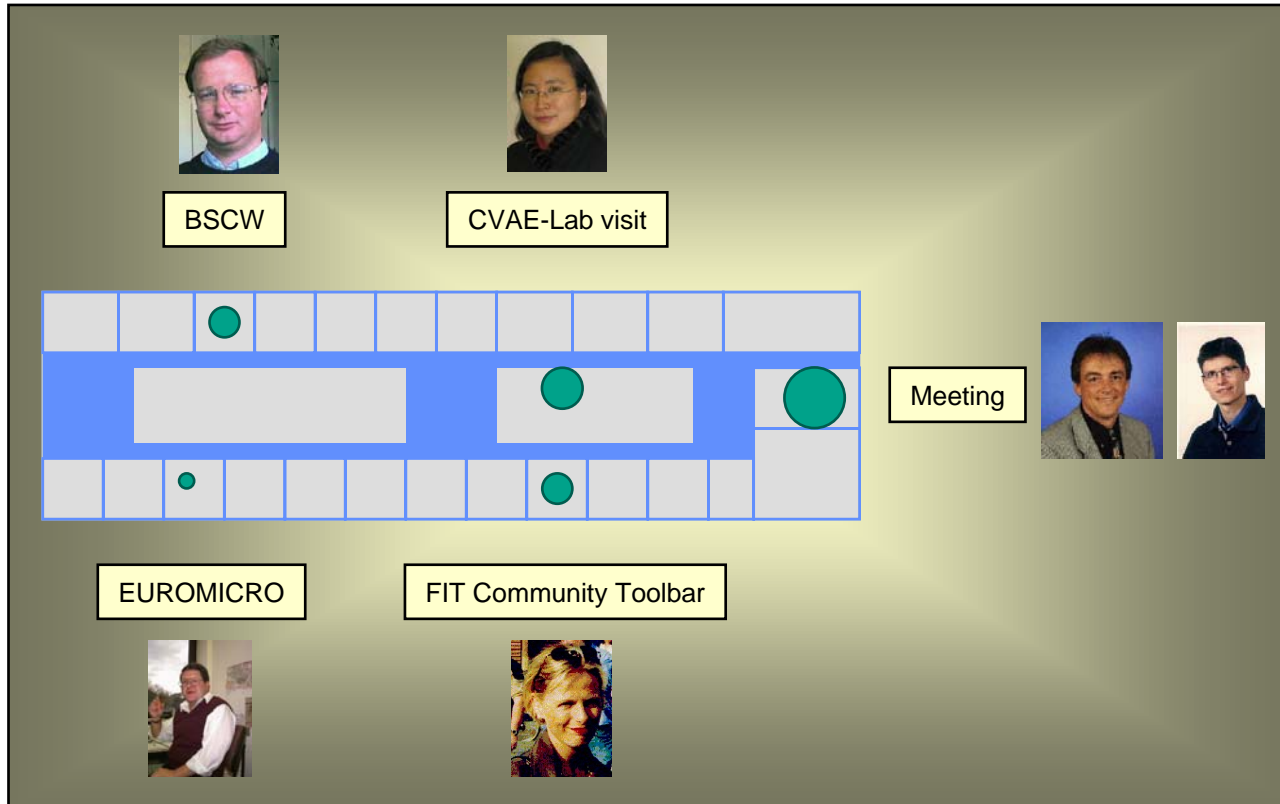
0. Acquire empirical location data
1. Tag signal is detected by reader(s)
2. Similarity assessment of signal strength(s) with empirical data to receive location data
3. Store location data as events (ENI - event and notification infrastructure, tuple database)
4. Event processing (use background knowledge)
5. Event distribution and visualization

What is currently going on?

- Have I forgotten to participate in a meeting?
- Is there a celebration going on?
- Is there a chance to meet colleagues at the coffee machine?



My visit to Fraunhofer FIT



Replay of activities

- Movement in the office environment



- Representation of more ambiguous activities



Outlook



Contact



<http://www.fit.fraunhofer.de/>

wolfgang.graether@fit.fraunhofer.de