

“Bring & Share”: A Tabletop-based Sharing System for Information on Mobile Devices

Project Thesis (3 months)



Project Description:

The Fluidum project investigates interaction with different types of information in instrumented environments. The instrumented room in the basement of Amalienstrasse 17 is equipped with a large interactive conference table that uses pen-based input. In addition, users can bring their own devices, such as cell phones or PDAs that are capable of storing large sets of information. Transferring data directly between these mobile devices is often a difficult and complex task. Thus, we are searching for new opportunities that leverage large displays as transaction mediators.

The idea is to display the desired content of a mobile phone on large screens, such as a tabletop display. To do so, the user needs to place his or her mobile phone on the table's surface. Once the system has detected the position using the SmartBoard technology, it displays an image directly beneath the mobile phone's camera. This image can then be transferred to the host computer in order to associate the mobile phone and the detected position. In addition, this technique gives the orientation of the phone. Afterwards, the system can display the contents of the phone in a window attached to the mobile device.

With the same technique, another user can open the phone's content on the table. After removing the cell phones, both users can share their content by dragging the desired information units into the other user's window. They need to be able to distinguish between “moving” or “copying” data. Hence, an appropriate method needs to be found. It should also be possible to move or copy data from the phone onto the table.

For this project thesis, the student is expected to implement the interface described above. In addition, a suitable scenario – such as exchanging images between mobile devices – should be implemented and evaluated against standard transfer methods such as infrared or Bluetooth.

Required skills:

Object-oriented programming language, Mobile programming

Contact: Sebastian Boring
sebastian.boring@ifi.lmu.de
FLUIDUM Research Group,
Media Informatics, Amalienstrasse 17, Room 206
T: 089 2180 4684
<http://www.fluidum.org>

Project Thesis
Start: immediately

Keywords:
Tabletop systems, Ubiquitous Computing,
Mobile Computing, Pen-based Input