# Exploring Mobile Phone Interaction with Situated Displays

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Mark Rouncefield, George Saslis-Lagoudakis,
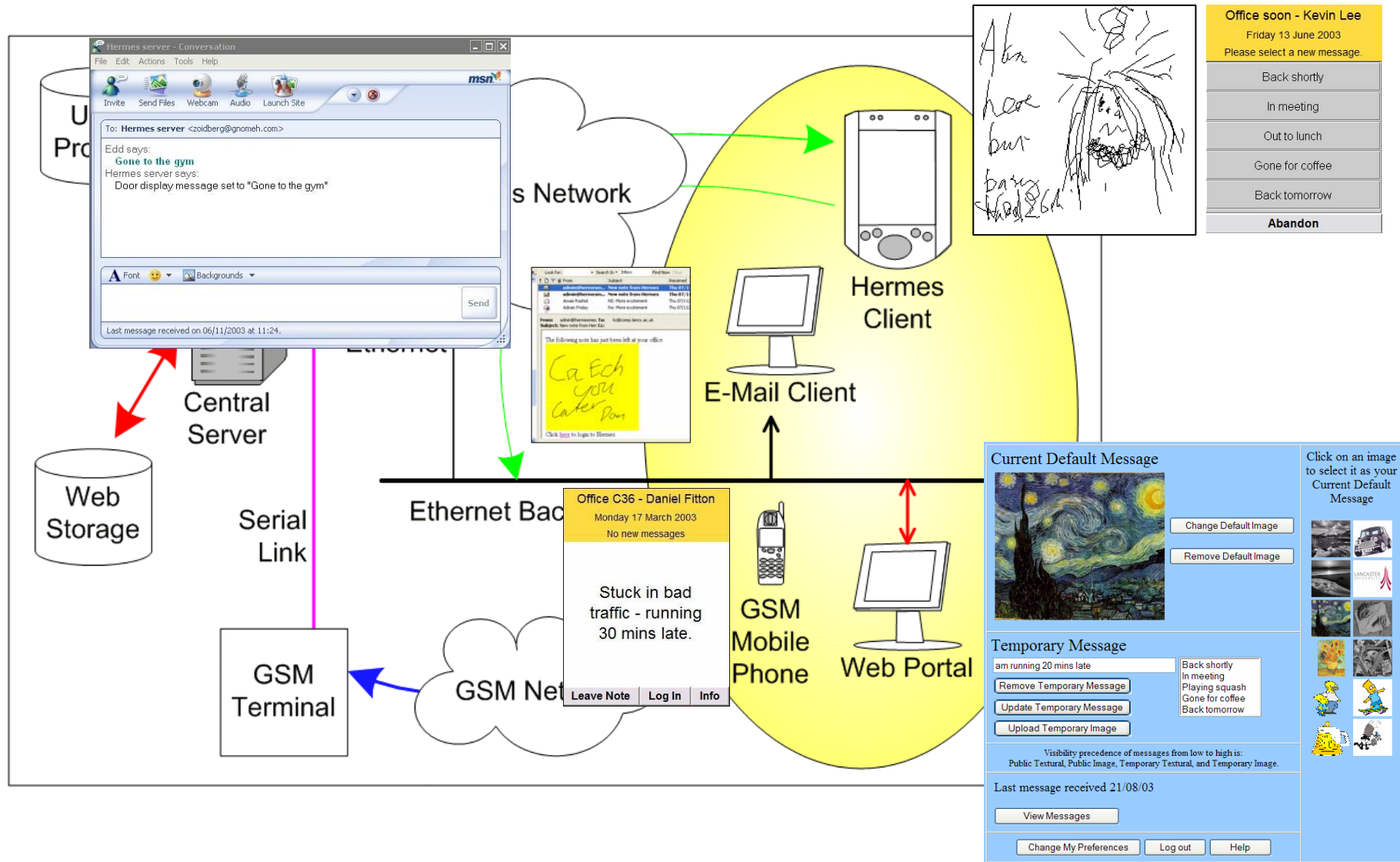Jennifer G. Sheridan

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# Hermes Overview…

- **Functionality**
  - Owner
    - Lecturers, secretaries
  - Visitor
    - Students, colleagues
- **Longitudinal study…**
  - Months not days…
  - Multiple units…
  - Exploring the patterns of interaction that occur in semi-public/private place
    - Appropriation

# Owner Interaction…

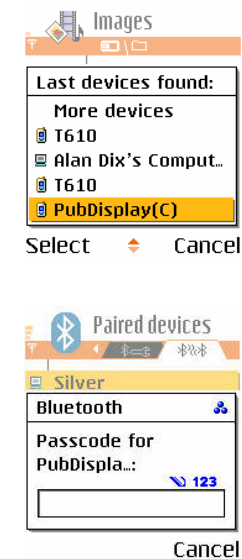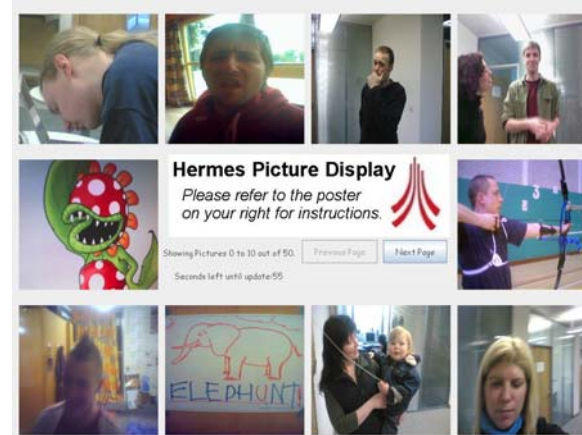# Integration with Hermes...

- But awkward to write/draw message on screen…
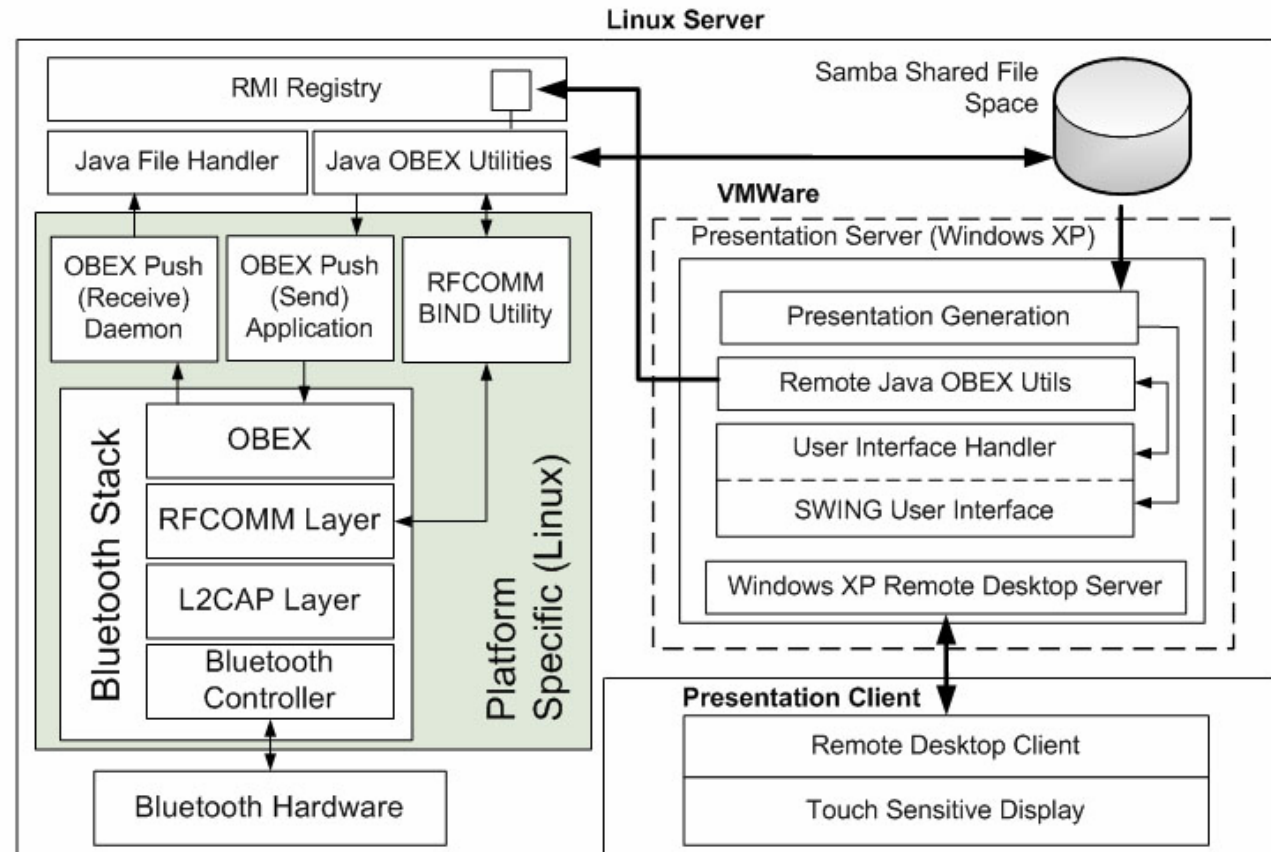


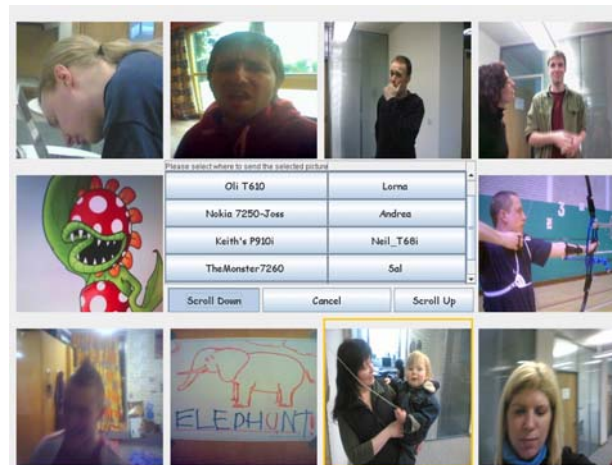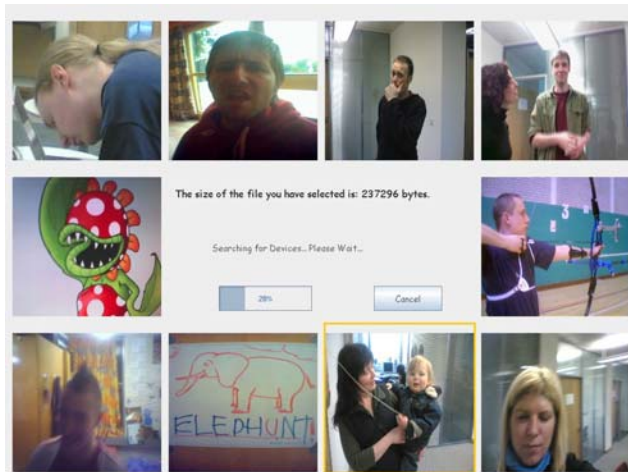- But expressiveness of drawing desirable…

# Hermes Photo Display…

- Extension to Hermes system…
- Send picture to own or 'public' display…
- Sending pictures via BT

# Architecture…



**Linux Server**

RMI Registry

Java File Handler | Java OBEX Utilities

Samba Shared File Space

**VMWare**

Presentation Server (Windows XP)

Bluetooth Stack:
- OBEX Push (Receive) Daemon
- OBEX Push (Send) Application
- RFCOMM BIND Utility
- OBEX
- RFCOMM Layer
- L2CAP Layer
- Bluetooth Controller

Platform Specific (Linux)

Presentation Generation

Remote Java OBEX Utils

User Interface Handler

SWING User Interface

Windows XP Remote Desktop Server

Bluetooth Hardware

**Presentation Client**

Remote Desktop Client

Touch Sensitive Display

# Receiving…



The size of the file you have selected is: 237296 bytes.

Searching for Devices... Please Wait...

29%                    Cancel

ELEPHUNT

Please select where to send the selected picture

| Oli T610 | Lorna |
| Nokia 7250-Joss | Andrea |
| Keith's P910i | Neil_T68i |
| TheMonster7260 | Sal |

Scroll Down | Cancel | Scroll Up

Orange
Tu 15/02/2005

Receive message via Bluetooth from paired device PubDisplay(C)?  **?**

Yes          No

# Initial Evaluation?

- Evaluation…
  - Voluntary Computing/MRes students
  - Generally positive feedback (Questionnaire)
    - "Overall I enjoyed engaging with the system" (all but one)
    - Simplicity of interface (>75%)
    - Enthusiasm for exchanging pictures (>75%)
    - Pace of interaction,
    - Distance, Content – Control…
    - Also specific feedback leading to modifications in the UI
  - To be presented at MobileHCI 2005

# Supporting Community…

- ## LU Climbing Club
  - Initial mtg held…
  - User centered design…
    - Obtain empirical data
      - Cultural probes
    - Participatory Design Workshops (June)
    - Iterative Development