

SOCIAL TAPESTRIES

Community-Based Public Authoring with Mobile Chemical Sensor Networks

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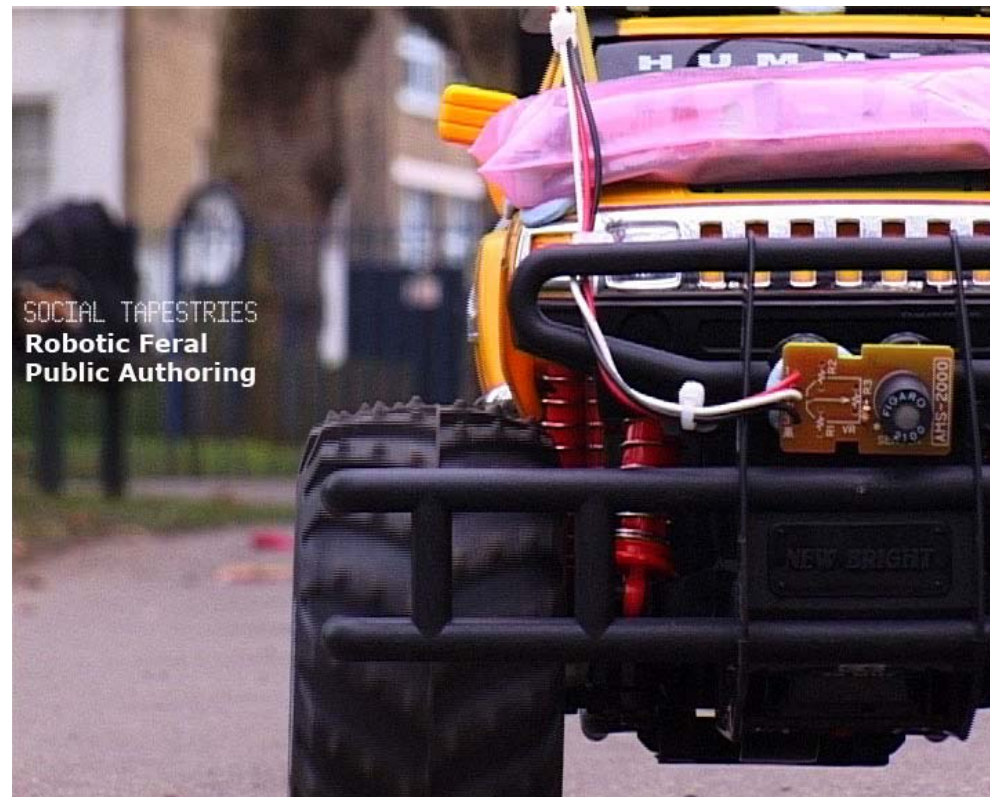
<http://proboscis.org.uk> / <http://socialtapestries.net>

Presentation Overview

- Project video
- Technology
 - Urban Tapestries
 - Feral Robot client
- Community workshops
- Field trials
- Discussion

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Project Video



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Robotic Feral
Public Authoring

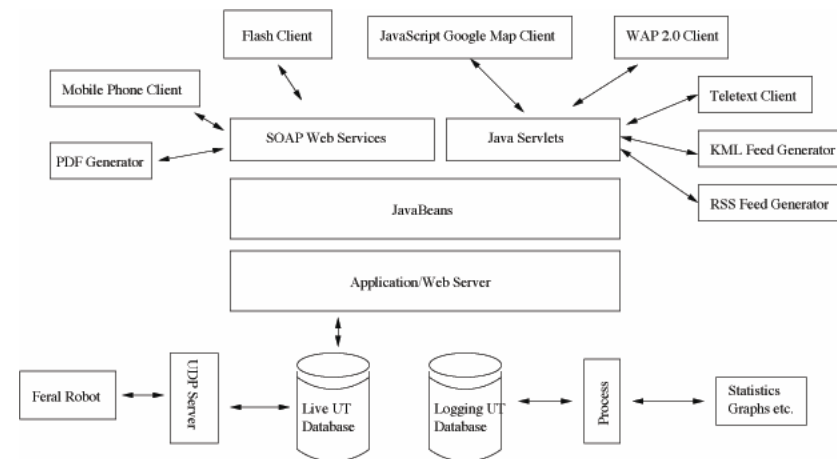
Urban Tapestries

- UT is an experimental software platform for knowledge mapping and sharing – public authoring
- UT aims to enable people to become authors of the environment around them
- Aim to build up organic, collective memories that trace and embellish different kinds of relationships across places, time and communities
- Urban Tapestries Version 2 available since April with complete redesign of server and several new client

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Urban Tapestries Platform

- User Groups
- Polygonal Pockets
- Thread categories
- Pocket/Thread Rating
- Meta-threads
- Advance System Logging and Data Analysis
- GPS Tracking
- AXIS SOAP
- New DB schema

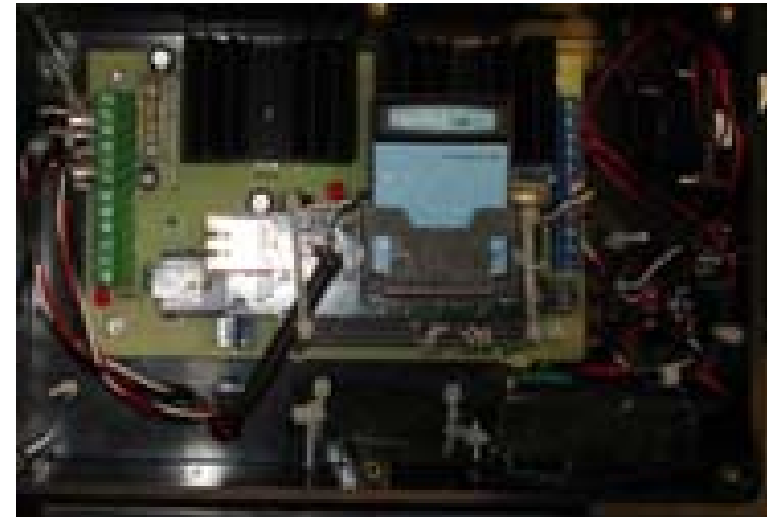


Feral Robot client

- Open source hardware-software
 - Source code
 - Gerber schematics
 - Instructions
- Gumstix core with embedded Linux
- WLAN, Bluetooth GPS
- Figaro chemical sensors (CO₂, air quality)
- Custom PCB and enclosure design

PCB and enclosure design

- Power regulation
 - Gusmtix stack assembly (80x20x6mm)
 - Sensor boards
 - Battery recharging
 - Terminal access
 - Air flow
 - Mechanical host



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Software

- Linux programme to loop and sample sensors and location
- Package data in standard format
- Transmit to UT server
- Separate software on robostix to ADC and sample sensors
- Sensor reading browser using maps



Community Workshops

- London Fields in Hackney, East London
- Collaboration with SPACE Media Arts
- Mapping workshops with local residents
- Issues raised during the workshops:
 - Levels of pollution, asthma, feeling of being under threat
 - Relationship between experiments and perceptions
 - Acceptance of the fact, denial of its relevance



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Trials

- First field trial end-January 2006
- Mesh network from locusworld covering the park
 - Relayed via SPACE studio router
- Successful operation and data rendering
- Recent workshop July 3-7, *Everyday Archaeology*
 - Jenny Hammond Primary School

The screenshot shows the 'URBAN TAPESTRIES' web application. The main content area features a map with several yellow sensor icons overlaid on an aerial view of a school and surrounding area. The map includes navigation controls like zoom in/out and pan. The left sidebar lists 'Recent Threads' and 'Recent Pockets' with details like author names and dates. The right sidebar includes a 'Locate' section with search options and a 'Search' box.

Discussion Issues

- Initial focus on pollution proved questionable
 - Useful as evidence to campaign
 - Collection valuable in itself
- Embedding workshops within local community events: everyday archaeology
- Learning games:
 - Engineering skills
 - Representation and understanding

