Urban Tapestries: Exploring Public Authoring in the City

Alice Angus, Giles Lane, Karen Martin, Dikaios Papadogkonas,
George Papamarkos, George Roussos, Sarah Thelwall, Zoetanya Sujon and Nick West

Introduction

Social Tapestries (ST) is an exploration into the potential costs and benefits of public authoring, that is, mapping and sharing of local knowledge within the urban environment. The aim of this investigation is to reveal the potential of pervasive computing to create and support relationships that transcend established social and cultural boundaries and enable the development of new practices based around place, identity and community. The ST programme was conceived and initiated by Proboscis, an artist-led studio, in 2002 and since then further developed and implemented in collaboration with a variety of technical, academic and civil society partner organisations [Lane *et al* 2005]. The core enabler of the playful experiments conducted within ST is the Urban Tapestries (UT) platform, a mobile computing system developed specifically to support public authoring and its many expressions.

At its simplest form, UT allows individuals to compose *pockets* at specific places and weave them into *threads* overlaid on the city. Pockets are seen as the main mechanism of publishing personal interpretations of situations within a particular spatiotemporal context by allowing individuals to annotate places with text, data, images and sounds. Often an author would create a pocket using a mobile phone running the UT application while being at the particular place where content is captured or otherwise created. When pockets share a common theme, for example historical, personal, practical, or tourist topic, authors can link them together into pocket-sequences to create so-called *threads*. Other UT participants can subsequently join a thread -- also using the UT application on their mobile phone -- and follow it across the city, thus consuming the content produced by other individuals.

A thread across Bloomsbury for example, could follow the rich literary history of this London neighbourhood by associating pockets with places that have particular significance for the author in this context. One such pocket could mark the house of Virginia Wolf at 46 Gordon Square and hold a picture of the building (taken by the author of the thread on her way to work using the UT application on her phone) as it stands today as part of Birkbeck College. This pocket could also contain a hyper-textual annotation and an audio clip -- also recorded using the UT client -- reminiscing a memorable evening spent reflecting on the nature of perception while reading “To the lighthouse.” Another pocket in the same thread could be placed at the Elysee Taverna, where George Orwell used to enjoy dinners with his friends. This pocket would hold a picture of the infamous reproduction statues by the entrance of the restaurant and text commenting on the current use of the property as one of the few remaining plate-smashing live Greek music venues. UT users can also employ their mobile phones to search the UT repository during a visit to a particular area to retrieve pockets placed near their current location and identify threads that they may wish to follow. Finally, threads can be browsed outside their spatial context through a web-based mapping interface that allows access to pocket content from the desktop.

In its broadest form, UT is the enabler for sharing socio-cultural meanings embedded in or associated with place. In particular, through its ability to invite people to get involved in negotiating place and their own spatial practices UT enables a user-generated articulation of meaningful or interesting behaviours. Following de Certeau’s distinction between space and place [de Certeau 1984], the role of UT is to realise the translation of space into place in that it is designed to reveal the layers of presence within urban environments across time (cf. Figure 1). Moreover, UT allows individuals and communities to communicate and understand the intimate knowledge that make a place home or conversely, what makes it not home; to share what parts of the landscape hold meaning for people; and reading the individual markers people use to make sense of the city. UT enables the exploration of the social, historical and tangible materials making up the social centralities of place, or the repository of the largely invisible pathways left

by urban occupants in order to better understand the identities and specificities of place – what we refer to as urban social tapestries.

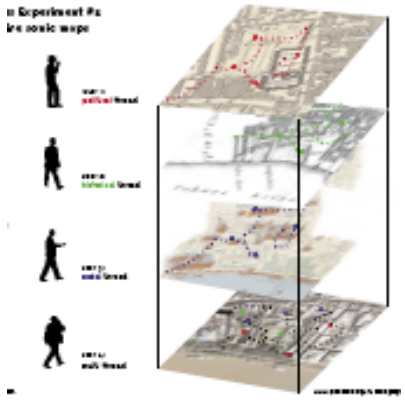

Figure 1. Revealing the many layers of presence in the city.

UT's modus operanti reflects the two main ingredients of public authoring:

- public authoring recognises the importance of production at the ends in contrast to the currently dominant model of broadcasting which places production at the centre; and,
- public authoring supports open, participatory and transparent media content co-production as a direct alternative to the authority of the single source.

Unlike other research projects, in recognising these aspects of public authoring, ST attempts not only to record but rather to effect change. In this sense, ST has an intimate relationship with practices of participatory or citizen's media. Alternative and community radio, television, fanzines and other print media have similar aims with UT [Downing 2001] and more recently, BBS, Indymedia and of course blogging, which is perhaps most reminiscent of the public authoring framework, also use technology to enable content production and distribution from the ends to the centre [Atton 2004].

Since its inception, ST has undergone significant changes reflecting the rapid technological developments in ubiquitous computing and our developing understanding of everyday and spatial practice. Several projects initiated within ST including Feral Robots, Snout and Everyday Archaeology, are exploring related aspects of urban computing, following a variety of distinct approaches and taking different points of view on public authoring for example learning, entertainment or community building. Although it is not possible to report on all this work here, in this article we aim to highlight the issues raised and explored by ST and record our changing perceptions, priorities, interests, and the current state of this work. That is not to say that we are not aware or appreciative of parallel avenues of exploration followed by other researchers and groups in this area but rather that we wish to use this opportunity to share the experience of ST and hopefully communicate the insights into the practice of public authoring in the city. Finally, while ST is still evolving with several projects active at this time, perhaps more importantly ST is also a committed community of people with distinct interests working towards the common vision of public authoring.

Public authoring: Basic concepts and rationale

Public authoring is the term used within ST to describe the mapping and sharing of knowledge, information, data, memories, stories and experiences. The term also implies a rift with the concept of a publicly authored knowledge in the traditional way, in which information is passed from a centre to the margins as generally encountered in the broadcast model of newspapers, television and radio. Instead, public authoring suggests an alternative *experience commons* in stark contrast to the passivity and narrow focus of consumerism in that it presents the opportunity for people to be agents, actors and authors.

Public authoring was introduced as a counterpoint to the prevailing view of cellular mobile and location sensing technologies of the late 1990s that saw the tourist as the principal general[1] user of such technology. But if most people are only tourists for a couple of weeks of the year, what location-sensitive services are being devised for the other fifty weeks? The answer seemed to be mobile advertising spam and coupons for loyalty card type services triggered by presence at a particular location. This vision is unnecessarily impoverished and we undertook to explore what it was about local places that mattered on an everyday basis to people as they went about their very mundane routines of daily life: going to school, work, shopping; dealing with neighbourhood issues, planning, access to local services and so on. In all these cases it became apparent that the most knowledgeable people were also those who would be considered the consumers of such information following the traditional content distribution view. But true daily life is richer and more complex than consumerism, relying as much on social networks, personal experiences and chance interactions and connections. Pervasive computing applications should attempt to reflect this richness and complexity.

At the core of such diverse everyday activities lies *social knowledge*, a term used in ST to refer to the ephemeral communications that are the glue of society and communities: the everyday and essential sharing of information, stories, knowledge, memories and stories with friends, family, neighbours and strangers. Social knowledge posits communication as story-telling, a social and cultural practice that is not just informational or practical. This sharing or gift of social knowledge is often undertaken only for the pleasure taken in it. Social knowledge can be interpreted as encompassing ideas and memories as well as behaviours. It is a term that attempts to indicate the broad variety of human activities, concepts and ways of being social: from how we interact with shopkeepers and follow routines of travelling through the city, to how we take (or do not take) part in public authoring as imagined during a body-storming workshop on communal activities. Seen in another light, social knowledge is the hidden or obscured resources and assets of a locale or of a community – created between and around people as they go about their daily life.

As we come to define more and more clearly what constitutes social knowledge, so we are able to articulate its value; to make concrete what can often appear ephemeral or intangible. Social knowledge can be understood as a form of social capital – something that has intrinsic value within a context of locality and community, if not a clear relation to monetary value. The more deeply embedded within a context such knowledge is, the harder it is to gauge its value – what public authoring offers is a means to expose this knowledge and the social networks that support it, widening access and understanding of crucial resources.

In the long term, the practice of public authoring can offer new opportunities for people to intervene in situations and contexts that have previously been tightly controlled. An example of this might be a museum or gallery and the way in which the interpretation of the works displayed is the preserve of the curators and experts employed by the institution. With public authoring it isn't hard to imagine alternative viewpoints of interpretation being locally annotated that challenge an institution's position and which in other cases the institution wouldn't permit being voiced or written within its physical domain. Another example of such intervention is offered by one of the ST projects with the participation of residents of the Havelock Estate in Southall, Ealing. Residents of the estate were involved in public authoring activities with a view to manage local knowledge to support the operation of a tenant management organisation that aims to take over the management of their estate. In this case, it appears that a public authoring approach may provide a unique opportunity to create a record of the actual living situation that far exceeds what is possible through the normal estate management services. Such activities should not necessarily be seen as threats to established authoritative sources of knowledge but rather as people's desire to participate.

Four principles guided the design of UT and related experiences that were seen as critical to respect the essence of these activities and foster their development:

- *Co-creation*. Public authoring relies on the co-creation of its own content by the people who participate in sharing it, rather than the consumption of mass-produced content offered by media organisations. Essentially it is another form of personal communication, differing only in its link to geographic places and the public nature by which it is shared.

[1] Rather than the professional user.

- *Decentralisation*. Maintenance and distribution of publicly authored content is carried out in a cooperative and largely anonymous fabric. Sharing of the kinds of knowledge, stories, memories and information that people think will be of interest to others is supported by a network or peers and depends on trust networks, risk and chance to validate its content rather than depend on top-down validation by authoritative sources.
- *Organic*. Publicly authored content grows and fades with time, at the pace set by the people who participate in it. It is both the layering and excavation of layers of knowledge and experience – a real-time microcosm of how our cities and communities develop, change, prosper and die. It adds persistence to local memories and knowledge that otherwise might completely disappear. The point of public authoring is to reflect the complexities of the world we live in, not to simplify it or attempt to replace any aspect of our human interactions.
- *People-centric*. The main role of public authoring is to augment and assist our everyday life rather than seek to replace any aspect of it. It is the trigger for social encounters and enables participation in social and community activities. As such, priority is given to those facilities that empower individuals and communities rather than those dictated by engineering or technical constraints.

Technical development

The UT blueprint calls for a server-side peer-to-peer system with content repositories established and maintained by independent organisations in support to their specific priorities and domains of interest. UT clients are mobile devices, usually mobile smart phones that associate with specific servers and communicate with them via well defined service access points. After the initial stages of UT development in 2002-2004, considerable limitations were identified that prevented the platform from providing adequate functionality to meet the emerging usage requirements. The complete system was redeveloped from scratch during 2005-2006 giving priority to the need for future extendability. The current version of the system has been implemented completely in Java and using open source components: the UT server employs PostgreSQL 8.0 (with some PostGIS extensions) as its database and Tomcat 5.0 for its application server. Service provision through web services towards UT clients is facilitated by the AXIS SOAP and Java Servlet implementation. Internally, the web architecture follows the MVC design pattern with the application logic implemented as Java Beans. Flexible data management is provided by the Hibernate ORM mapper to support object-relational mappings. This redesign has allowed the rapid development and publication of new client services tailored to a variety of non mobile telephone devices.

The current UT server incorporates several improvements and new features: system activity logging has been migrated from flat files to a relational database schema; the refactoring of a considerable proportion of client functionality of the previous version into the server, thus providing a more lightweight implementation that can be supported by a wider variety of phones; making extensive use of stored procedures and triggers in the database to improve performance; and finally use of XML for storing user profiles and preferences. On the client, the current version is implemented in full using mobile Java supporting MIDP 2.0 enabled devices. Several additional J2ME interfaces are used to provide the facilities required by UT including JSR75 to support reading and writing files to persistent memory for example Secure Digital cards, SanDisks and the phone's internal memory; JSR135 is used to provide interaction components with web services; JSR82 is used to provide Bluetooth connectivity for external devices for example standalone GPS receivers; and JSR179 is used to manage location services. Rather than using locally stored maps as in the previous versions of UT, the new client supports dynamic retrieval from Google maps depending on the user location. Location sensing is currently supported in two ways either using an external Bluetooth GPS receiver or if the client supports JSR179 then it is also possible to enable GSM beaconing.

The current UT version has also introduced several new features related to pockets and threads. Pockets of different shapes are supported including arbitrary polygonal pockets that can be defined in free-form. Pockets have also acquired an aging property which has been a long time requirement of UT with their expiration time set by the author. Pockets can also record additional comments and ratings from users other than the author and access can be controlled on the basis of individuals or user groups.

Significant changes have also been made to threads. Access control on user groups has been extended to complete threads and also a categorisation scheme has been introduced that classifies threads thematically. More importantly, meta-threads have been introduced to act as a means to aggregate thread classes in a single object reference. Keyword search is supported on threads and pockets and system logging and usage analysis have also been implemented. Finally, GPS tracks have been introduced as a new primitive to support sensor data and using the thematic categories defined for pockets and threads RSS feeds are exported from the server to notify subscribed users of the availability of newly published content of interest.

In addition to the mobile device client, two web-based interfaces have also been developed: one client uses Macromedia Flash to visualise threads and the second client supports additional interactive features using Javascript and Google maps with geo-referencing provided by Ordnance Survey data. In addition to these custom interfaces, a semi-automated process can be used to extract UT data to Google Earth. Finally, UT threads can be printed as hard-copy foldable story books for those who prefer a more traditional way of interacting with the content.

Access to the UT software has also been considerably extended. The client code is published in open source on sourceforge, but this has not yet happened for the server due to packaging limitations of its current version. However, an operational UT server is available at http://ut.dcs.bbk.ac.uk/ and open to registration for testing. Finally, it should be noted that although it is certainly possible to coordinate UT servers to create a unified "global" UT fabric though this functionality is not yet well supported by the platform.

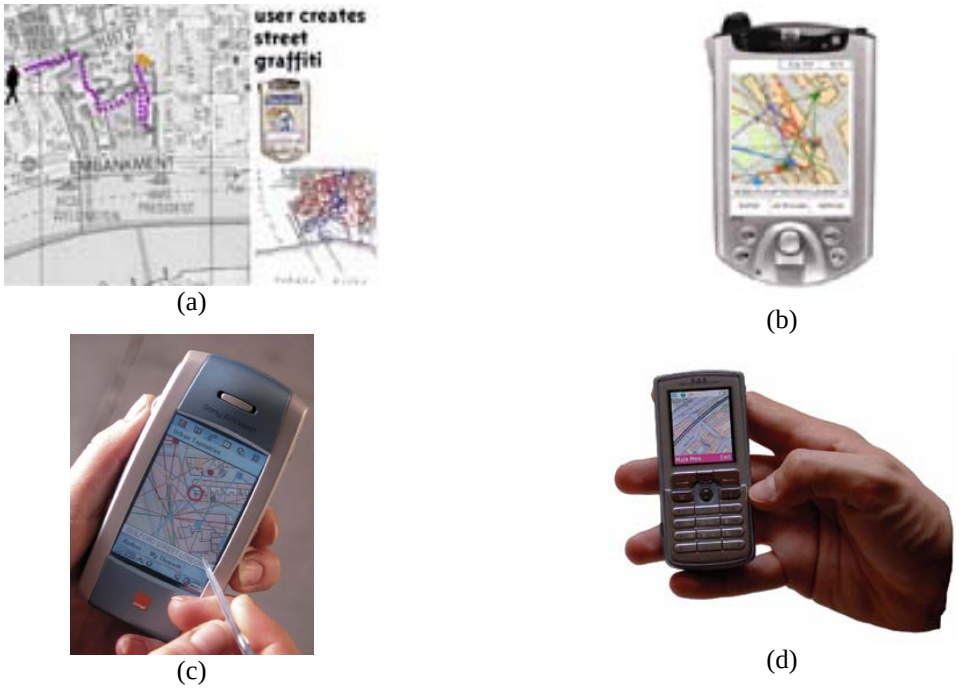

Figure 2. Evolution of the Urban Tapestries interface: (a) conceptual design (1999), (b) PDA-based user interface using mesh-networking connectivity (2002), (c) native mobile phone client on the Ericcson P800 (2004), and (d) Java based client with Google maps (2006).

ST links to theory of everyday urban practice

The involvement of a variety of collaborators with distinct points of view and complementary expertise has provided novel insights in public authoring. While clearly one of the priorities of ST must be to develop the practice of public authoring into a viable application, it became evident from early on that public authoring also has significant implications when viewed from a more theoretical perspective. Indeed, several of the ideas developed in ST have an intimate relation to the work of theorists of the urban and the everyday in

that it raises issues about the relationship of space, time and the social, and thus forces a re-examination our assumptions about the city and everyday life. While an exhaustive discussion of such relationships is not possible here, it is nevertheless worthwhile to point out some of the most significant links (for more information on these links refer to [Silverstone 2003, Galloway 2003], also for reference to the works briefly discussed below).

The ideas explored in ST seem to sit particularly comfortable within the frameworks of production of space and place as discussed by Lefebvre and de Certeau in that they also view movement through the city as integral to its experience. Of particular relevance is the similarity between the way de Certeau views the process of re-appropriation of cultural processes by the everyday person to construct their ordinary life as one of a constant struggle to re-use traditions, language, symbols, art and articles of exchange and the practice of public authoring. Indeed, the latter can be seen as a practical way to support the former through a process of sharing, local participation and self-reflection through narrative.

There are a number of other theoretical concepts immediately reminiscent of ST, and the spatial practices of urban inhabitants. Some of these include Guy Debord's dérive, the situationist practice of 'unitary urbanism' and Georg Simmel's concept of the 'stranger'. Walter Benjamin's vision of the city walker, the flâneur, and the ability of technology to make the invisible visible are also intimately related to public authoring practice. Thread visualisations overlaid on the city map in particular create direct associations to Lynch's city as the experience with districts, edges, paths, nodes and landmarks, and their relational properties.

Activities within ST

Linking practice and theory has a clear role in ST in helping to make sense of a number of observations during trials. For example, de Certeau suggests that the city is meaningful only in the familiarity of our experience of it, that is, "we walk, and as we walk we make sense." That is, the experience of the city is the result of physical and symbolic movement through the urban environment which is projected against the structure of streets and buildings. Seen in this light, UT provides a way of marking the significance of place for both the individual and the communal. This view does not exclude the ad-hoc encounters of passing tourists but incorporates them within the more grounded relationship of neighbourhood and community. Yet, practical experiences with UT have indicated that the availability of such shared and shareable overlays engraved along the sidewalks of the city, require much more than spontaneity to become meaningful. Such experiences cannot operate in a vacuum but it is necessary that an infrastructure or a project or a design should be in place to help develop a kind of literacy associated with the new capabilities enabled by the technology of UT. Otherwise, there is a real danger that UT -- and indeed urban computing in general -- will only produce more noise, adding its digital emissions to the already oppressive pollution of much of urban space. This need for structure has actually been observed in UT experiments and as a result a series of more focused projects within a specific context have been devised and carried out. Next, we will briefly discuss two such ST experiments namely Feral Robots [Lane 2006] and Everyday Archaeology [Lane and Woods 2006].

The Robotic Feral Public Authoring (RFPA) project links UT and hobbyist robotics. This project builds upon previous work carried out in collaboration with Natalie Jeremijenko that augmented re-configurable robot dog toys with cheap off-the shelf sensors adapted to sniff out chemicals in the atmosphere. RFPA extends this idea by providing location context to such captured information and a real-time link to the UT system which creates visualisations of this information (cf. Figure 4b). Data collection is only a small part of the RFPA approach and contraction of Feral Robots and commenting on the captured data are equally important. To this end, all device designs and software are available as open source and enable a person with some limited experience with electronics to assemble a device on their own. Participants in RFPA workshops are invited to share their interpretations of the collected information and offer their local knowledge to relate them to the history of the place and events from the part.

It is noteworthy that an early objective of RFPA was been to empower local communities by supporting them in taking ownership of their local environment and explore relationships between the environment

and pollution. Early on in the project it became apparent that this was not a priority for local communities. Instead, an alternative approach was developed named Everyday Archaeology, to describe investigations of the local environment using a combination of techniques and tools created to gather evidence and stimulate public authoring. For example, RFPA hosts were used at the Jenny Hammond Primary School by students to gathered audio recordings, created photographic evidence (cf. Figure 3). Students used the augmented toys to monitor air quality in a local park, they wrote stories based on the Endless Landscape, imagined their own feral robots and created structures and environments using the StoryCubes. Additional activities and homework before and during the week were designed to build on the activities and link it to the core curriculum. These activities and the guided use of UT not only provided a comprehensive framework for students to work and think within but also enabled them to produce their own content on which their meaning making developed as part of their learning experience. For a full discussion of the Everyday Archaeology project refer to [Lane 2006].

Figure 3. The prototype Robotic Feral Public Authoring device (left) and everyday archaeology workshop at the Jenny Hammond Primary School (right).

Urban Tapestries and the urban experience

From its very start, ST sought to develop a people-centred approach into creating and sharing knowledge and experiences about places. UT attempted to identify the elements and fulfil the role of the technological enabler to the everyday knowledge mapping and sharing that people do naturally. In particular, UT set out to demonstrate the concept of a public knowledge commons linked to place that reflected the real world context and situations people find themselves in every day.
To understand the structure of public authoring and the implication of UT use, a twofold approach was adopted. Proboscis artists focused on playful experience designs iteratively developed through bodystorming workshops and trials. Moreover, in collaboration with the Media and Communications department at the LSE an experimental ethnography approach [Silverstone and Sujon 2005] was developed involving a methodological triangulation of participant observation, phase interviews and experimentation. This combination of methods aimed to provide a deeper exploration of the implications of UT use by providing multiple points of view or indeed ways to think about it. These methods although complementary, they nevertheless are also contrapuntal in their points of view [Silverstone 2003]. In all cases, studies were conducted in or around Bloomsbury in central London with participants drawn from the local communities.

A complete account of the experimental ethnography studies conducted for ST [Silverstone and Sujon 2005] reveal a number of interesting facts. Indeed, UT can act as a catalyst for articulating the embedded knowledges of users and illustrate their “views from Bloomsbury.” In this case, UT can facilitate the negotiation of individual and collective boundaries and last but not least provide a unique opportunity for participants to reflect upon place and experiment in a way that they have not experienced elsewhere. It appears that the way that UT has selected to represent the knowledge commons in terms of pockets and threads is a useful means to explore the dynamics of social space. In particular, UT has proven to be a good starting point for exploring people-cantered “views from somewhere,” which in this case, were firmly grounded in Bloomsbury and local experiences of community and place. Such points of view are recorded in threads from the early stages of the project, and can be easily extracted from the UT system. Figure 5

shows such a thread taken from the studies reported in [Silverstone and Sujon 2005] but note that such laying out of threads as booklets is now a standard feature of UT.

Figure 4. Urban Tapestries web interface: (a) browsing threads, (b) air quality sensor visualisation from RFPA, (c) creating pockets and threads, and (d) searching for pockets.

Users of UT engage with the system in interesting and meaningful ways. Even those that, whether due to the technical unfamiliarity, sensations of technological saturation or even outright distrust of new technologies are more reticent, they nevertheless speak about what they do with UT, about their experiences of Bloomsbury, of home, of their relationships with technology and their perceptions of UT in ways that are most certainly both rich and engaging. UT users view the experience of public authoring as an enjoyable one – a finding we suggest means that UT is fundamentally a playful technology, a peek-a-boo of oral history and social knowledge.

Moreover, we find that in practice public authoring facilitates the tracing, the negotiation and marking of individual and collective boundaries. As boundaries and dividing lines are mapped, new levels of exclusion and inclusion are created. Respondents engaged different navigational tactics depending on their relationship to Bloomsbury, and used UT to not only aesthetically embellish their spaces, but also to place themselves in their localities – or as some theorists would argue – to claim ownership over their territories.

Figure 5. Thread storybooks developed as a prompt for discussion as part of the experimental ethnography approach developed for UT by LSE (left). Bodystorming workshop run with a community group of senior citizens in Bloomsbury, London.

Bodystorming [Oulasvirta 2003] is a methodological tool used by the UT team to explore the social, cultural and practical dimensions of both technological concepts and tools and involved bringing groups of people together to experiment with a mock-up of the UT prototype. Bodystorming sessions focused primarily of the specifics of public authoring, in particular on identifying the kinds of annotations, knowledges and stories that could be shared and the many steps that public authoring requires. Starting with hypothetical scenarios of use, participants were invited to act them out both in the studio and on the streets of London in a series of workshops with people from many different walks of life, including several with a local community centre (cf. Figure 5b). Participants created threads and pockets using colour-coded post-it notes on a large map (20 ft x 20 ft) of Bloomsbury in central London. Such bodystorming experiences demonstrated the problem of the interface and creating single instances of interface and interaction. Knowledge, experiences, memories, stories all come in different formats and processes of articulation. Having just one or even two ways to share those with others is far too limiting and technological for most people to bother with. It became very clear that public authoring needs to be responsive to people in the contexts and situations they find themselves in – which often vary dramatically for the same person throughout the day.

In many ways public authoring can be seen as a means of orchestrating the notes, snaps, memos and half worked out associations we make everyday. Looked at another way, it should also be seen as a group activity – perhaps one where people have different tasks (for example, one group (seniors) have the stories, and another group (youths) have the time and inclination to work the technology. This reflects the fact that not only do different age groups have different technological capabilities, but that they have very different motivations for sharing memories and knowledge. For seniors it is not as important that other people have access to the stories and memories they share, but that they come together regularly to share amongst themselves. There is some interest in leaving these memories as traces of their presence in the city, but this isn't as strong as the sense of community created by the activity in the here and now.

A second observation that emerged from the bodystorming experiences is the importance of creating continuous feedback loops to incorporate responses in the development process. One effective way to do so is by putting all the material into the public domain to stimulate informed debate and to share insights. ST maintains a creative lab and public forum, where bodystorming experiences and films, event documentation, research notes and articles are consistently sought to engage the public and peers in a dialogue about public authoring. This approach has been extended to the system trials using blogs to capture and immediately disseminate the experiences of the participants.

Discussion

One of the central premises of ST is the increasing importance of innovation from the ends to the centre. Public authoring can potentially enrich this emerging experience commons by enabling the sharing of knowledge and experiences about the places where people live work and play in. People who participate in this commons shift away from a crude consumerism and seek to re-appropriate popular culture into more intimate and meaningful ways. Indeed, public authoring practice goes beyond simple social utility; it is also about creative expression and participating in culture for its own ends. Public authoring is one of the first expressions of place-cognisant media enabled by pervasive computing technologies that question the currently dominant model of broadcasting and endeavour to rebalance cultural production towards public participation.

Yet, for this commons to materialise there is also a need to coalesce patterns of acceptable behaviour in making and sharing annotations. It is not enough to only to counter obvious concerns such as race-hate or 'poison-pen' content, but also other forms of emergent anti-social behaviour, such as blanket advertising or unacceptable commercial exploitation of public goods contributed to the commons. These new forms of communicating will not appear overnight but will need careful cultivation and time to develop. Enabling and researching such behaviours is a long term challenge and in the future ST aims to provide the fabric for this through further experiments and by supporting a community around UT services.

Public authoring is also intimately linked with the work of the mass observation movement. Mass Observation [Hubble 2005] was a UK social research organisation founded in 1937 and operated until the mid-1950 (revived in 1981 at the University of Sussex) with a view to record all aspects of everyday behaviour in the country. At its peak, over two thousand volunteers created records and diaries of their everyday activities and participation in public events in minute detail which now represent an invaluable source of material of everyday life. ST is currently inviting members of the public to sign up to create their own repository of local knowledge about the architecture, communities and history of London. It is the intent of the Social Tapestries programme to support this resource as a central repository of contributed knowledge in the spirit of mass observation.

Nevertheless, to realise public authoring and social tapestries in their fullest potential more than just grass roots enthusiasm and activism is certainly required. Regulatory nurturing and calculated risks on the part of business people are also needed. Only when individuals and groups of all kinds find simple and everyday uses for location-sensitive technologies will speculations turn into reality. The role of artists, designers, researchers, technologists and activists is to sketch a rich and enabling vision of the possibilities in this future, whilst keeping an eye on the limitations and social costs. And of course, there is also a definite responsibility to shepherd it along the fraught path of development avoiding excessive commercialisation, over regulation or banal implementation.

References

1. Atton, C., 2004. An Alternative Internet. Edinburgh, Edinburgh University Press
2. de Certeau, M., 1984, he Practice of Everyday Life, trans. Steven Rendall, University of California Press, Berkeley.
3. Downing, J. 2001. Radical Media. Thousand Oaks, Sage
4. Galloway, A., 2004, *Intimations of Everyday Life: Ubiquitous Computing and the City*, Cultural Studies 18(2-3), pp. 383-407.
5. Hubble, N., 2005, *Mass Observation and everyday life: culture, history, theory*, Palgrave.
6. Lane, G., 2003, *Urban Tapestries: Wireless networking, public authoring and social knowledge*, Personal and Ubiquitous Computing, 7(3-4), pp. 69-175.
7. Lane, G, Brueton, C., Diall, D., Airantzis, D., Jeremijenko, N., Papamarkos, G., Roussos, G. and Martin, K., 2006, *Community-based Public Authoring with Mobile Chemical Sensor Networks*, Proc. IEE Intelligent Environments, 5-6 July, Athens, Greece.
8. Lane G., and Thelwall, S., with Angus, A., Peckett, V. and West, N., 2005, "Urban Tapestries: Public Authoring, Place and Mobility", A Proboscis Report: http://socialtapestries.net/outcomes/reports/UT_Report_2006.pdf
9. Lane, G., and Woods, O., 2006, "Everyday Archaeology, children's relationship to the environment", A Proboscis Report: http://socialtapestries.net/jennyhammond/EverydayArchaeologyReport06.pdf
10. Oulasvirta, A., Kurvinen, E., and Kankainen, T. (2003). *Understanding contexts by being there: case studies in bodystorming.* Personal and Ubiquitous Computing, 7(2), pp. 125-134.
11. Silverstone, Roger. 2003. ‘Private Reveries and Public Spaces.’ Proboscis Cultural Snapshots No. 4, January.
12. Silverstone, R. and Sujon, Z., 2005, Urban Tapestries: Experimental ethnography, technological identities and place, MEDIA@LSE Electronic Working Papers No. 7.