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## RESEARCH PROCESS

Proboscis is an organisation focused on creative innovation – researching, facilitating and developing projects and research that cross boundaries and disciplines through our research programme, SoMa (social matrices). Urban Tapestries builds upon previous projects and activities as part of the *Species of Spaces* research theme. It is an action research project taking an approach that is not just multidisciplinary, but *transdisciplinary*. The project team comprises a range of skills and backgrounds including filmmaking, sculpture, literature, philosophy, ethnography, information design, communications, interface design, programming and interaction design.

What makes this project different is that the whole team is involved in decisions and development of each key research area – we learn from each other's knowledge and experience not just by observation but by collaborating together. The products of this process range from films, events, ethnographic research, written papers and articles, software design, technical research and development to the development of new models of collaborative working and methodologies, such as the *Bodystorming Experiences*. We have found that this combination of skills and techniques blends together to add distinctiveness and freshness to established practices, it creates a powerful group dynamic and energy that supports individual efforts, and has enabled a whole field of enquiry to be opened up and explored in a short span of time without sacrificing richness or complexity.

Openness and public debate have also been crucial to our process – putting our research into the public domain quickly to stimulate informed debate and share insights and revelations with our peers.

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## BODYSTORMING

Proboscis uses a technique called *bodystorming* to rapidly iterate and test ideas. Ideas are brainstormed then turned into material forms and situations to reveal the kinds of relationships that occur between social and cultural interactions between people, places and things. *Bodystorming* is the transformation of abstract ideas and concepts into physical experiences, a tactile approach allowing us to investigate different qualities that ideas may have when applied to physical settings – part of a dynamic and continuous process of trial and error.

Proboscis has been developing a playful experience to engage people in the broader issues surrounding Urban Tapestries. Like a game it reveals the tensions and pleasures of rules and constraints. We use props such as a large floor map taken from a 1930s London guide, pre-authored Urban Tapestries threads to suggest the kinds of things people might annotate about a place, different coloured Post-it notes as the authoring tool and Proboscis' own custom Urban Tapestries' DIFFUSION eBooks to annotate each participant's threads.

The experience is intended to offer a gentle, non-technological, introduction to the concepts of mobile public authoring – to provoke and cajole unexpected and unintended ideas for what Urban Tapestries could be for different people. It creates a collaborative framework for testing our own assumptions and pre-conceptions about public authoring and social knowledge – about what happens when ideas become technologies, practices, and relationships. *Bodystorming* allows us to ask questions in an open and co-creative environment, where all the participants are responsible for their experience as much as we are for facilitating it.

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## CONCEPT DESIGN

Part of the Urban Tapestries research has been to investigate and imagine the future potential for the system through the development of a Catalogue of Ideas. The catalogue explores the different contexts and user scenarios in which an Urban Tapestries system might be deployed; looking at ways in which people can view, interact and author digital content unrestrained by the limitations of current devices. This exploration imagined and described scenarios for emerging technologies that will have connectivity capabilities. Not only does the catalogue imagine the types of technologies that people might use with the Urban Tapestries system but it looks at the kinds of content that people could view and author and the ways they might use it in everyday life.

Around twenty scenarios were developed and the examples above include the *Camera Guided Tour*, the *Blow Device* and the *Smart Footwear*. A *Camera Guided Tour* allows a person to use a smart connected camera to create and leave a thread of pictures linked to subject areas and locations for others to access and enjoy. The *Blow Device* is an interface that enables the author to release their finished content into the air by blowing the fan like device at the top of their PDA; like blowing seeds from a dandelion head to propagate the field of view with digital seeds of information. Wearing *Smart Footwear* a person can leave an electronic trail wherever they walk or run, creating routes for other runners or following those that have been created by others. It might also be used by artists to create *E-Geoglyphs* – digital drawings across the city like the Geoglyphs at Nazca in Peru.

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# URBAN TAPESTRIES

### Public Authoring in the Wireless City

Urban Tapestries is a framework for understanding the social, cultural, economic and political implications of pervasive location-based mobile and wireless systems. To investigate these issues, we are building an experimental location-based wireless platform to allow people to access and author location-specific content (text, audio and pictures). It is a forum for exploring and sharing experience and knowledge, for leaving and annotating ephemeral traces of peoples' presence in the geography of the city.

Urban Tapestries allows people to author their own virtual annotations of the city, enabling a community's collective memory to grow organically, allowing ordinary citizens to embed social knowledge in the new wireless landscape of the city. People will be able to add new locations, location content and the 'threads' which link individual locations to local contexts, which are accessed via handheld devices such as PDAs and mobile phones.

Urban Tapestries was conceived, initiated and is being developed by Proboscis. It is a partnership with Hewlett-Packard Research Labs, Orange and the London School of Economics in collaboration with France Telecom R&D, Locustworld and the Ordnance Survey. The project has been funded by the Department of Trade and Industry, Arts Council England and the Daniel Langlois Foundation for the Arts, Science and Technology with additional sponsorship from Garbe UK, Apple Computer UK & Sony Europe.

Urban Tapestries is led by Giles Lane with a core team of Alice Angus, Daniel Angus, John Paul Richard, Katrina Jungnickel, Rachel Murphy, Zoe Sujon and Nick West and with assistance from Nigel Palmer, Huw Jeffries and James Wilkes.

[www.urbantapestries.net](http://www.urbantapestries.net)

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## PUBLIC AUTHORIZING

In recent years the dominant metaphor for pervasive location-based services has been a commercial one which posits people merely as consumers of pre-authored content chosen and served to them by network providers.

Real city life is richer and more complex than this, relying as much on social networks, personal experiences and chance interactions and connections. We believe that pervasive wireless/mobile platforms should attempt to reflect this richness and complexity, rather than re-purposing solutions designed for a different age. The peer to peer and multiple points of connections offered by internet-based networks present wholly new ways of inhabiting the city and communicating with the people around us in everyday situations. Urban Tapestries aims to privilege the experience and creativity of the individual over typical location-based services which control and author the user experience. Our model makes authorship and sharing of content the central relationship, enabling people to act as co-creators of the information embedded within the wireless environment, not merely as consumers of pre-authored content.

The Urban Tapestries model relies fundamentally on communities, not on service or network providers. It is intended to be a pervasive rather than ubiquitous system, rooted in locale and community. A local Urban Tapestry could be as small as a street, or as big as a district. It proposes that the kinds of information about the city that we need on an everyday basis are far more likely to come from our neighbours and colleagues than from large corporations or the media.

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## SOCIAL KNOWLEDGE

Urban Tapestries is designed to allow its users to embed social knowledge into the fabric of the city via wireless and mobile networks, using a variety of geographic information systems to link memories, stories, histories, images, sounds and movies to specific places.

Social knowledge can be interpreted as encompassing both 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 part (or not) in communal activities. It could be described as 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 systems like Urban Tapestries offer is a means to expose this knowledge and the social networks that support it, widening access and understanding of crucial resources.

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## PUBLIC TRIAL

To demonstrate a prototype of the Urban Tapestries public authoring platform, Proboscis ran a nine day public trial in the Bloomsbury area of London in December 2003. One hundred participants in the trial were able to borrow a wireless device (an HP IPAQ PDA) running the Urban Tapestries client software to drift around London's Bloomsbury district authoring and accessing local content for a two hour session. A temporary network of 802.11b nodes created a street level wireless 'mesh' providing internet access to the devices.

The aim of the trial was to help introduce and explore the social and cultural possibilities of public authoring. Participants were invited to take part in an experiment to explore what the future for pervasive mobile networking might be like. To give a sense of context for this Proboscis devised a series of task-based activities for participants to embed their own content in geo-specific locations, weaving their own threads to create an organic, accretive Tapestry.

As part of our exploration of new models and methodologies we used an innovative feedback technique, combining post-experience video interviews with online blogging of the participants' experiences. This allowed participants to review each other's comments and to return after their experience to add further feedback. Being a publicly accessible blog, it immediately became a research resource which has already been tapped into by peer researchers investigating location-based and pervasive communications.

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