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# From Bovine Horde to Urban Players: Multidisciplinary Interaction Design for Alternative City Tourisms

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### ABSTRACT

This paper tells a story of an international and multidisciplinary atelier-based design experiment. For ten days in Rome, the ‘White Group’ explored a cyclical process of fieldwork and intervention, critical reflection, design concept generation, and prototyping to generate two novel and situated forms of technologically-mediated city tourism. We wanted to ‘re-design’ experiences of city tourism - both for visitors to a city and for the people who live there – and to do that we needed to experience the city ourselves. Inspired by Situationism and sociological ‘breaching’ experiments, we ‘played’ in the city in order to design something intimate for the people in it. In doing so, we contribute to existing research on technology and tourism, as well as offering creative ways to approach other projects.

### INTRODUCTION

In September 2003, over thirty international graduate students and designers came together for two weeks in Rome to participate in the EU CONVIVIO Network for People Centred Design of Interactive Systems’ Summer School on Mixed Realities. The organisers, lecturers, design atelier leaders and participants represented diverse public and private sector interests, industrial and visual design, cognitive and behavioural sciences, social sciences and humanities, art and architecture, economics and business, computer science and engineering – as well as over a dozen cultural backgrounds and languages.

In addition to attending morning lectures by international scholars and practitioners, each person was assigned to one of three design ateliers (named for the three colours of the Italian flag). Each atelier group had ten days to prototype a ‘mixed reality’ technology. This paper tells the story of the experience and design process of one atelier: the ‘White Group’<sup>1</sup> led by Alan Munro (University of Strathclyde).

In keeping with the workshop’s focus on exploring methods for the design of mobile and ubiquitous services, we begin the paper with our inspirations, and continue with our explorations and development of design themes. We then describe our two prototypes, and provide use scenarios for each. Finally, we critically reflect upon our design themes and process. In sum, our work can be seen to contribute to the existing literature on tourism and technology, as well as offer what we call a “mind-and-feet” approach to interaction design.

### INSPIRATIONS

The original inspiration of the theme of the atelier, ‘the Invisible City’ came from Italo Calvino’s *Invisible Cities*, which discusses the transition between the traveller’s first intense experiences of a city to those when they become familiar with the city. This, Calvino says, allows parts of it to eventually ‘disappear’.

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<sup>1</sup> The White Group was Elena Ferrara, Anne Galloway, Magnus Ingmarsson, Simon Larsen, Martin Ludvigsen, Valentina Novello, Erik Sandelin, Johan Sandsjö, Luke Skrebowski, Hillevi Sundholm, Joerg Traub, and Alan Munro.

“When you arrive in [the city], you rejoice in observing ... At every point the city offers surprises to your view ... But it so happens that you must stay in [the city] and spend the rest of your days there. Soon the city fades before your eyes...” (Calvino 1997: 90).

We agreed to begin our task by exploring the city and looking for Rome’s ‘invisible cities’.



### EXPLORATIONS & CONCEPT DESIGN

The group consisted of a number of different skill-sets and disciplines, and this was reflected in the varied and different types of inspiration which they were able to garner from the city. A number of differing approaches were taken, often based on ethnographic methods, but also taking inspiration from more non-traditional approaches. Some participants used various algorithmic and ‘game-like’ elements in order to help them see aspects of the city that they might otherwise not see. For example, they used activities and ‘rules’ which meant that they had some kind of randomised or formalised method of choosing just what parts or aspects of the city to explore. Though this is not the subject of the paper in itself, it is more than worthy of another more methodologically focussed paper, and the group is in the process of doing this. Particularly interesting is the heuristic usefulness of Situationist-inspired ‘methodologies’ in this area.

Venturing out in smaller groups, our explorations consisted of algorithmic walks, ‘pseudo-stalking,’ observations and ‘interventions’. Although some approaches as said before were Situationist-inspired, other approaches took more of a sociological ‘breaching’ approach.

One group chose to explore the city by coding a simple algorithm that would govern their walking (c.f. the ‘.walk’ algorithmic framework of the *generative psychogeography project*<sup>2</sup>). Another group chose to follow particular Romans

around the city, occasionally taking pictures. Each approach involved arbitrary ‘rules of engagement’ and while each allowed us to witness different parts of the city – as well as to produce wonderful anecdotal evidence - the algorithm was considered to be too restrictive and repetitive, and the ‘stalking’ approach of following people was considered unethical and potentially dangerous.

Two groups chose to do types of situational observation. By visiting famous tourist destinations, as well as residential neighbourhoods, hectic public transportation hubs, quiet gardens, suburban and industrial areas, both groups watched and recorded interactions between people, objects and environments. One focussed on the margins of the city, while the other focussed on non-tourist areas and tourist-local interactions in public spaces. Both groups were able to gather a sense of what it may be like to live in Rome, and while the approach worked well for preliminary investigations, more formal ethnographic methods would be appropriate later in the design process.



Another group chose to conduct ‘cultural probes’ and interventions into Roman life. The first probe involved two hand-drawn paper maps taped on the back of a sweater and a jacket. The maps had routes with schematic symbols connected by arrows showing the direction to follow. Each of the signs showed famous tourist destinations or different places of interest in the neighbourhood. Two people wore the maps without having seen them, and walked around asking local people where to go. Two other people were following and taking pictures from a distance, observing the scene and the reactions. Most of the locals couldn’t speak any English but, as soon as they saw the map, all of them understood the problem and did their best to point us in the right direction – and everybody seemed really amused. We had reservations about whether this concept might work if there were hundreds of tourists wearing maps on their backs, asking locals where to go, but in this case the concept seemed promising, and we decided to work on it further.

<sup>2</sup> <http://www.socialfiction.org/psychogeography/index.html>



The second intervention was ‘Rent-a-Tourist’ - a way to have locals and tourists interact, and allow the tourist to experience everyday Roman life by helping out with daily chores. This method played with tourist vulnerabilities and dependencies by placing the tourist directly at the service of locals. However, this set-up appeared to be too unusual in this particular cultural context and no one wanted to participate. Together with the t-shirt experience, this concept explored the balance of power between the tourist and the local and focused our attention on the notion of *co-dependency* that is explored in the later prototypes.



These activities took the entire first week. After our daily interactions in a wide variety of city contexts, we reconvened as a group and reported on our experiences. Thus there was a cyclical process of fieldwork and intervention, critical reflection, and early design concept generation.



After returning from a weekend away, the group came together to discuss our recent experiences. From these discussions and reflections upon the previous week’s explorations, the group articulated a list of desirable qualities for design. At this point, we had still made no decisions regarding the technological form and function of our design.

#### DESIGN THEMES

We believed that the ‘conventional’ city tourism we observed all around us offered a predictable, mass-produced and strangely *isolating* experience. It seemed heritage-heavy and neglected the living diversity of the city. Interactions between a city’s residents and its visitors seemed to be reduced to routine commercial transactions. Tourists appeared to ‘graze’ through the prescribed sights and get in the way of locals, while parts of the city became no-go zones for its residents, as ‘bovine hordes’ of tourists blocked the streets in slow-moving masses. Tourists seemed to have few other options - they are offered only tacky souvenirs or the chance to gape at prearranged spectacles. For their part, residents of Rome appear to have no choice but to endure constant tourism. We asked how we could turn these bovine hordes into *urban players*.

From the above list of desirable qualities for design, we articulated our design objective:

“We will attempt to re-design the experience of city tourism, both for visitors to a city and for the people who live there. The new product or service would ensure that:

1. City tours become better experiences for tourists.
2. Locals and tourists have more fun and engaging interactions.
3. Local inhabitants of the city also experience their city in new ways.

The final design should offer direct physical engagement between tourists and locals and should be intimate, warm, and fun for all concerned. It should create a shared, tangible experience that promotes diverse views of the city. The user experience should unfold unpredictably over time, start

new conversations and elicit new and unexpected information.”

At this point, we broke up into smaller groups and brainstormed possible applications. After critically discussing each design as a group, we combined ideas from each and agreed on two designs to prototype. This process itself took a few days, and was a very intensive phase involving a number of iterations. This was because of a need to fit with time restrictions - which are always present in such atelier-based projects but just as much in the ‘real’ world - by having only two surviving prototypes to fully work with, and also the competing perceived need in the group to save some of the richness of the various ideas and concepts. Therefore there was a constant trawling of the rich materials which had been generated, and which adorned every surface, in order to see if there were any ways in which they might add to the surviving concepts, and so prototypes.

#### PROTOTYPE 1: THE TOUR-SHIRT



Our first prototype took a ‘low-tech’ approach to interaction design by simply refining the t-shirt probe used earlier, and creating the Tour-Shirt. The Tour-Shirt lets you explore the city in an entirely new way: you can meet people as well as see new sights. A use scenario might go as follows:

*Hillevi, a 25-year-old Swede visiting Rome for the second time, wants to try out this new Tour-Shirt concept, so she goes to a store to buy one. In the store she spends 10 minutes at a computer designing her personal tour. At the computer she enters her wishes for the tour, which in this case are quite open. She does want to see Piazza di Spagna, and she would like her tour to end at her hotel in the evening, but otherwise, she chooses to let the computer (and locals) surprise her.*

*When she has finished her designing, the T-shirt is printed in the backroom of the store. The storekeeper helps her put on the shirt without her seeing the motifs printed on the back of the shirt. She leaves the store and heads out into Rome. Wanting to start the tour right away, Hillevi stops a local man to ask where to start her tour. “Do you speak English?” she asks. “Non capisco...” responds the man. Gesturing at the map on her back, the local eventually recognises the picture of Piazza di Spagna, and explains the way to Hillevi. Shortly afterwards she arrives at her destination.*

*The next picture on the shirt shows a more generic item, in which case the tourist and locals have to decide what it means. The following picture is empty, which means that locals can design the tour on the spot. Hillevi continues to tour Rome in this way, and finally she uses the T-shirt to find her hotel and get some well-earned rest.*

#### PROTOTYPE 2: THE CUBE

Our second prototype - The Cube – took a more ‘hi-tech’ approach to interaction design, but still focussed on simplicity of form and function. Simply rolling or throwing The Cube causes it to display an image from the city. The images are all slightly ambiguous and users will almost certainly need to ask other people to find out what it might be. Each time The Cube is rolled a new image is generated for users to track down, either on their own or with friends. Because The Cube draws on a huge variety of images it is suitable for both tourists and locals alike. The Cube is for those who want to explore the many facets of the city, whether they have just arrived or lived there all their lives.

Furthermore, once the user finishes their tour, they can take The Cube home with them as a souvenir. As they travel through the city it acts as their outboard memory, saving all of the images of the city that they have experienced en route. When back at home, they can re-live their trip by watching The Cube cycle through a unique, personalised photo album of the city. They also become part of a growing global community of Cubers, individuals committed to new ways of experiencing the urban environment and sharing their insights with other urban adventurers.



*In our first scenario we find Johann, a 24-year-old from Berlin visiting Rome for the first time. He has been in the city for three days now and has already tired of following tourists round the standard attractions. We find Johann at a tabaccheria where he has stopped to buy a metro ticket. As he hands over his change a display of Cubes on the counter catches his eye. He is intrigued and after looking briefly at the point of sale copy, hands over some money to give it a try.*

*He reads quickly through the instructions:*

- 1. Find a friendly-looking person and ask them to roll your Cube for you.*
- 2. Pick up the Cube and look for the picture that will have appeared.*
- 3. Ask the other person to help you try and work out just what the picture is and how you could find what it shows (or something similarly interesting).*
- 4. Set off and find it, asking for further help along the way if necessary.*
- 5. Once you have found it, enjoy and learn about what you have discovered and roll again.*

*He also notes two important features:*

- 1. The Cube is active for 24 hours after you first throw it.*
- 2. Once the 24 hours are up the Cube changes modes and becomes a souvenir of your trip, cycling through all the places you visited and allowing you to re-experience the city in all its diversity.*

*Johann sets off to find someone friendly-looking.*

*In our second scenario we encounter Valentina, Eleanor and Riccardo, three middle-aged Romans who have heard about The Cube craze sweeping Europe and have decided to give it a go. They have lived in Rome all their lives but are bored of visiting the same old places and are eager to experience their city with new eyes.*

*We find them in Trastevere. They have already successfully tracked down two different pictures from The Cube (a small ice cream store and a little-known gallery). Riccardo throws The Cube to Eleanor who catches it. All three gather round The Cube to see the picture and try and work out what this one is all about. They discuss it for a minute or two but really don't have a clue what it might be and decide to ask someone else. They find a passer by and get him involved in the interpretation. They come to a consensus as to roughly where they might find this thing (although they're still not sure exactly what it is) and set off in the general direction.*



## **REFLECTIONS ON THE DESIGN THEMES & PROCESS**

The decision to design for tourism emerged directly from our personal and group experiences as tourists and locals in Rome – our group comprised ten visiting foreigners and two Italian residents of Rome. By drawing on our immediate contexts, we positioned ourselves – from the beginning - as both designers and users'. Focussing on mundane or everyday experiences also allowed us to experiment with design that augments or adds to an existing experience, rather than replacing it with a new one. Similarly, we worked with observable practices and expectations surrounding city life and tourism, rather than creating a new set of user behaviours and expectations (c.f. Mynatt 2000).

In general, we may refer to our design approach as a process requiring “mind-and-feet.” In other words, we used

our intellects and our imaginations as much as we ‘got out there in the wild,’ exploring and experimenting. Each activity inspired the next, and informal observation and cultural probes were the primary means by which we explored aspects of the user experience and contextual design (see also Beyer and Holtzblatt 1999; Jääskö and Mattelmäki 2003). Yet integral to our process were group discussions, de-briefings, brainstorming sessions, and deciding how to proceed after each – in the spirit of Bellotti and Smith’s (2000) “intimate relationship between iterative fieldwork and design thinking”.

Designing technology for tourism is not new (see for example Yang et al. 1999) and more recently, Brown and Chalmers (2003) completed ethnographic studies of tourists, and describe three types of tourist technologies: “systems that explicitly support how tourists co-ordinate, electronic guidebooks and maps, and electronic tour guide applications.” Our work can be seen to fall within this broader tradition of research, however, following Gaver et al. (1999:25) we also sought to “provide opportunities to discover new pleasures, new forms of sociability, and new cultural forms ... [to] shift current perceptions of technology functionally, aesthetically, culturally, and even politically.”

The way a user of our conceptual system would become part of a city is fundamentally different from that which is normally offered to a tourist. Being dependent on locals to guide you around the city not only lets you interact with them outside of formalised settings, but also exposes you to a broader range of human interaction - like lying about the locations of sites or simply telling a different story than the one you were asking for. In our design, the tourist experience is not just of the official stories and sites, and it shifts from a goal-oriented and efficiency-oriented endeavour to a more subtle interaction with the city where the user is open to surprises and strange experiences.

Accordingly, our design sought to create new kinds of ‘mixed reality’ experiences and technologies. If we were to design for tourism, we wanted to also play with the notion of tourist, and see if local residents of an area might be able to temporarily ‘see with a tourist’s eyes’. By encouraging particular types of local-tourist interaction, our designs subtly interrogated the status-quo of tourism. Both designs played with traditional power relations between locals and tourists, as well as among locals in their own city. We wanted to ‘defamiliarise’ the city, and in the process, ‘familiarise’ the people. Our prototypes encouraged personal vulnerability in so far as users were required to trust strangers’ interpretations, directions and advice –

fostering more intimate collective actions and experiences than normally afforded in mainstream tourism.

However, we also acknowledge that our designs are speculative, remaining in the paper-prototype phase. The design challenge itself was unusual, and working intensely for two weeks with a dozen strangers of diverse backgrounds presented its own host of obstacles and limitations. We are not certain how our context compares to others, but we believe that our experiences can serve as example and inspiration for more radically convivial, multidisciplinary and critical interaction design.

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