Mobile Phones, Sub-Culture and Presence

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Abstract

This paper describes a prototype mobile phone application which is designed to make people feel present in the sub-culture of a city. It explores some of the issues with measuring sense of place and presence on mobile devices, particularly when what users are being asked to experience is culture.

Keywords

Mobile phones, place, presence, culture, gps, navigation

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

Mobile devices such as phones and PDAs are frequently used to provide location based information, for example through museum tour guides and other systems. The work in this paper discusses a system (Street Beat) which gives people an experience of the underground sub-culture of Berlin, for example the hangouts of famous writers through to the alternative nightclubs. The intention is to make people feel as if they are part of the cultural experience as they stop or walk past them. Hence issues to do with presence and place, in

particular how the content can influence these are critical to the success of the application. However the paper is not concerned with the more traditional view of presence and awareness issues which are connected with mobile phones.

Street Beat

Street Beat (see Figures 1 & 2) is a location aware mobile, music based city tour which lets the user experience an alternative side to Berlin. It features stories, pictures and music about the sub-culture of the city and in doing so takes people to outside various important locations, all of which were decided by a respected music magazine editor. In total seven locations across Berlin are featured in Street Beat, the music, narrative and pictures change depending on the location of the user. Maps are also provided and users can take photographs using their phones. In common with gpsTunes [1] and other work [2] one objective was to keep the users cognitive load while walking between locations to a minimum. The present implementation does not make full use of audio cues for navigation but we are exploring how systems such as gpsTunes and AudioGPS use cues to represent distance and direction.

Place, Presence and Street Beat

One of the key aims of Street Beat is to make people feel as if they are present in the cultural experience of particular locations and the city. However, it is important to note that they are unable to physically enter many of the locations. Therefore the experience as depicted by the mobile phone must create in them a sense of place and presence, for example they must feel that they are in the White Trash Night Club.
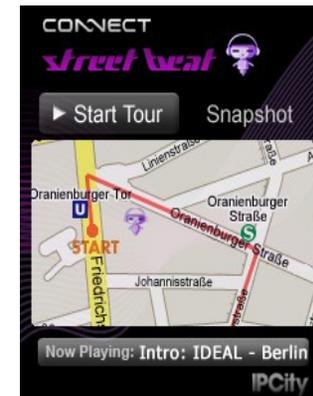
Figure 1. A localised map within the display.
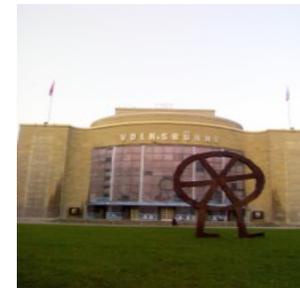
Figure 2. Volksbühne, a location on the Street Beat tour.

There are also varying types of presence: physical, social and co-presence [3]. Physical presence is when someone feels they are physically somewhere. Social presence is when they feel they are with others either locally or remotely and finally co-presence is when someone feels they are co-located somewhere else with other people and is related to physical and social presence. The sense of presence in Street Beat

straddles the middle ground, in that we are asking people to feel present in a location which they know little about and with people who are not represented in anyway. In many ways this is quite similar to the sense of being immersed in a book, where words and pictures are the only gateway into a new and perhaps fantastic world. In the context of the work here we will call this "cultural presence" as we are seeking to make people feel as if they are part of a specific cultural experience both at individual locations and as they walk around the city; where this sense of culture has no specific time, people or even a specified location either within a building or across the entire city. However this is more for the sake of finding a convenient term rather than to define another form of presence.

In many ways the feeling of being culturally present within an experience shares many aspects of sense of place. According to Relph, place is a combination of the physical properties, meanings and activities [4]. Sense of place can evolve through second hand information, for example you can read a travel guide and decide which areas sound interesting or boring. Photographs can also engender a sense of place. However anecdotal evidence suggests that a truly strong sense of place can only arise through first hand experience. In the context of Street Beat, the nearest to first hand experience is often standing outside the building. Therefore there is a need to explore which content can create this sense of place and in turn make people feel present within the desired cultural experience.

Preliminary Study

In order to explore the issues within Street Beat an exploratory study was conducted in which the two users were asked to complete the tour. An objective of the study was to find out which locations were in need of improvement in terms of content and presence. Prior work on measuring place and presence in virtual environments appeared to provide a suitable starting point [5]. Other objectives included exploring the usability of the system and trying out some informal measurement techniques.

During the study the participants were video taped and notes were taken. At the end of their experience they were asked a number of questions about StreatBeat ranging from usability issues through to those related to presence. They were than asked to rank various criteria as outlined below:

- Their level of interest in each location
- Appropriateness of the music at each location
- Appropriateness of the picture(s) at each location
- Appropriateness of the narrative at each location
- Their sense of presence, or being in the "cultural experience" at each location

On completion of this stage they were then asked some more questions based on their responses then asked to provide 12 words or terms. These were then analysed using the semantic differentials technique [6]. This is where the participants pick two words they perceive as opposites then place all others in between, the objective being to uncover the relationships between different responses.

Preliminary Results

The study was being undertaken at the time of writing so as yet it is too early to provide full or detailed results, however a few initial findings are worthy of further investigation. Initial results point to the content

being critical in providing users with a sense of being present in the cultural experience, for example when the music, narrative, pictures and level of interest in a location are high it is not unsurprising that people experience a higher degree of presence. Also sense of presence is further enhanced when there is support for entering a building or location. These results therefore agree to some extent with earlier presence research which indicates that presence is related to sense of immersion (within a location), engagement (with the content e.g. they are focused pictures, and narrative) and the range of affordances/activities on offer (i.e. being able to walk around a location).

The users found the interface simple and intuitive, however using the map still requires too much attention and as in other work [7] there is a need to explore alternative navigational aids or map display methods.

It is acknowledged that the study sample is small and the data collection techniques are rudimentary. However our intention is to conduct a larger study using more formal techniques.

Conclusions

The purpose of this paper was to explore how mobile phones can play a part in sharing a sense of culture within a city. Moreover it also set about exploring the differences between traditional views of presence and what it means to feel culturally present. The findings point to it being possible to create a degree of presence within a cultural experience and that some of the theories from classic presence research are relevant.

References

[1] Strachan, J., Eslambolchilar, P. and Murray-Smith, R. gpsTunes – Controlling Navigation via Audio Feedback. In the Proceedings of Mobile HCI'05. ACM Press, (2005). 275-278

[2] S.Holland, D.R.Morse, and Gedenryd, H. AudioGPS: Spatial audio navigation with a minimal attention interface. Personal Ubiquitous Computing., 6,4, (2002), 253–259.

[3] IJsselsteijn, W.A. & Riva, G. Being There: The experience of presence in mediated environments. In: Riva, G., Davide, F., & IJsselsteijn, W.A., (eds.), Being There - Concepts, Effects and Measurements of User Presence in Synthetic Environments, Amsterdam: IOS Press. 3-16. 2003.

[4] Relph, E. Place and Placelessness. Pion Books, London. 1976

[5] Benyon, D. Smyth, M., O'Neill, S., McCall, R. and Carrol, F. The Place Probe: Exploring a Sense of Place in Real and Virtual Environments. Journal of Presence: Tele-operators and Virtual Environments. 15, 6, (2006) 668-687.

[6] Osgood, E.C., Suci, G.J. & Tannenbaum, P.H. The Measurement of Meaning. Urbana, University of Illinois Press. 1957

[7] Frölich, P., Simon, R., Baillie, L., and Anegg, H. Comparing Conceptual Designs for Mobile Access to Geo-Spatial Information. In Proceedings of MobileHCI'06. ACM Press. (2006) 109-112