Unleashing Creative Writers: Situated Engagement with Mobile Narratives

Kevin Wiesner, Marcus Foth
Queensland University of Technology
130 Victoria Park Road
Kelvin Grove QLD 4059, Australia
{k.wiesner, m.foth}@qut.edu.au
+61 7 3138 8772

Mark Bilandzic
Center for Digital Technology and Management
Technische Universität München
Arcisstraße 21, 80333 München, Germany
mark.bilandzic@in.tum.de
+49 89 289 28483

ABSTRACT
The emergence of sophisticated multimedia phones in combination with improvements to the mobile Internet provides the possibility to read texts and stories on mobile handsets. However, the question is, how to adapt stories in order to take advantage of the user's mobility and create an engaging and appealing experience. To address these new conditions, a *Mobile Narrative* was created and access to individual chapters of the story was restricted. Authors can specify constraints, such as a location or time, which need to be met by the reader if they want to read the story. This concept allows creative writers of the story to exploit the fact that the reader's context is known, by intensifying the user experience and integrating this knowledge into the writing process. Interviews with authors and creative writers and two user studies explored the effects of this way of writing on both parties. The paper presents our preliminary research findings discussing this new experience that was found to be exciting and interesting by both sides.

Author Keywords
Restrictions, constraints, mobile media, locative media, placed-based community engagement, mobile interaction, urban informatics.

ACM Classification Keywords
H5.m. Information interfaces and presentation: Miscellaneous.

INTRODUCTION
In recent years, the usage of the mobile Internet increased tremendously. One of the success factors is the emergence of sophisticated and user-friendly mobile devices, which are nowadays equipped with large displays, intuitive user-interfaces, and broadband functionality, such as 3G or WLAN. Oftentimes, these devices are used in conjunction with flat-rate data plans, allowing users to access almost any information at any time from anywhere. The larger displays of these new handsets also facilitate the reading of longer texts more comfortably, and thereby turn mobile phones into e-book readers. Devices such as the Apple iPhone are especially popular in this area, providing book reading applications that are more widely spread than the Amazon Kindle (Greenberg & Abels, 2008). As mobile phones are typically a constant companion, they resemble *anytime, anywhere* e-book readers.

In our study, we question the *anytime, anywhere* paradigm in the context of mobile narratives. Restrictions and limitations are not always objectionable, but may indeed have positive effects as well. In Brock's commodity theory (Brock, 1968) the psychological effects of scarcity are explored, and it is stated that "any commodity will be valued to the extent that it is unavailable." Lynn (1992) extends this theory and explains the "scarcity's enhancement of desirability" by people's naïve economic theories. People believe scarce products to be "expensive, of high quality and/or good investments."

In this study the idea of enhancement of desirability through limitations or restrictions was borrowed and expanded to mobile narratives in order to explore whether it is also beneficial for the creation of engaging reading experiences. Stories or texts that are only available at a certain time and at a certain place might be more exciting and engaging than static ones that could be accessed all the time, and would incorporate the fact of the user's mobility. Hence, a *Mobile Narrative* was created and access to the chapters of the story was restricted. Authors were able to specify constraints, such as a location or time, which need to be met by the reader if they want to retrieve the chapter. This concept allows creative writers of the story to exploit the fact that the reader's context is known, by intensifying the user experience and integrating this knowledge into the writing process.

In order to explore the effects and impacts of this way of reading we conducted user studies and interviews with authors and readers. In user requirement meetings with authors, the implications on creative writing and its potential were investigated. The user studies were conducted in two different settings: at the Kelvin Grove Urban Village, an inner-city development, as well as at the Cooroy Lower Mill Site, a redeveloped community precinct. The user studies were carried out to explore the user acceptance and the newly gained features for authors and readers through this way of writing and readings.

In the following section, related work is presented and differences to previous projects are pointed out. Subsequently, our approach is outlined and the settings of

OZCHI 2009, November 23-27, 2009, Melbourne, Australia.

OZCHI 2009 Proceedings ISBN: 978-1-60558-854-4

our studies are described. In the discussion, results from the interviews and user studies are presented and inspected, followed by the conclusion.

RELATED WORK

A lot of related research has been done in the area of mobile information systems and location-based services. Various museum and exhibition systems focussing on location-based or context aware information provision have been developed, such as *Cyberguide* (Abowd, et al., 1997) or *Hippie* (Oppermann & Specht, 2000). The general focus of these systems lies on presenting relevant information taking into account the user's context. Mobile tourist guides (e.g. Simcock, Hillenbrand, & Thomas, 2003), generally focus even more on the user's location, and display information about geographically nearby places or dwellings. A different approach for this can be found in the study by MacColl et al. (2008). Instead of relying on special software on the user's mobile phone, the presented *Infopoint* prototype pushes location-specific content to nearby mobile phones using Bluetooth.

In contrast to the mentioned mobile guides, whose main task is to deliver information, mobile games aim to provide a more active user engagement. *REXplorer* (Ballagas, et al., 2007) is a mobile game designed for tourists that guides the users through the city. Users can interact with "spirits" at historical buildings, whereby historical information is conveyed in a fun way. In *Gopher* (Casey, Kirman, & Rowland, 2007), another locative game, players have to solve tasks in the city by creating and sharing images and textual content. *Pirates!* (Bjork, Falk, Hansson, & Ljungstrand, 2001) is a mobile multi-player game, where each player takes on the role of a captain of a ship. The game objectives are to solve missions, explore the environment, trade and fight with other players. A game with the focus of storytelling, is the so called *Manhattan Story Mashup* (Tuulos, Scheible, & Nyholm, 2007). Web users create stories, which are then illustrated by mobile players using their camera phones. Paay et al. (2008) present a system for location-based storytelling. Users experience the story interactively as the content responds dynamically to the user's movements through the city. Epstein describes these kinds of stories as "Terratives" or "Terrestrial narratives," and presents several projects that also combine stories on mobile devices that are connected to the real world (Epstein, 2009). A concept that works the other way around by taking the city into the story, is a work that can be read online, called *The 21 Steps* by Charles Cumming (2008). In addition to the normal story, a map is used to interactively visualise the sites where the action takes place, whereby the reader is able to follow the local course of the plot.

Our *Mobile Narrative* is in many ways similar to the aforementioned mobile fiction projects, as it is a location-based story as well. However, previous projects mainly focused on creating an interactive and engaging experience that may be situated but is often still following the *anytime, anywhere* principle. Our work explores the novel aspect that allows creative writers to have more control over where and when their stories are read, and what impact that has on the creative writing process, as well as on the reader's perception and experience.

METHODOLOGY

Inspired by *The 21 Steps* (Cumming, 2008), we created our *Mobile Narrative* and turned this concept 'upside down.' Instead of displaying the sites of a story on a map, the story unfolds its chapter only when the reader is at the location the action takes place at. As soon as the reader approaches the location that is associated with the chapter, s/he is able to request this chapter and read it on the mobile phone *in situ*. Moreover, the author is able to specify further restrictions, such as time constraints, and thereby only allow the chapter to be read at certain times that, for instance, correspond to specific story times. The specification of constraints is done via an online upload form for authors, in which the position (latitude / longitude), radius, as well as start and end times can be entered together with the text for the associated chapter. In order to provide a direct feedback channel, readers were also allowed to comment on each chapter. This concept was implemented as an iPhone application (see Figure 1), which consists of three parts: (1) The *Reader* tab shows instructions for the user on where to read the chapter, as well as any other specified constraints; (2) the *Map* tap displays the user's current position as well as the one of the next chapter in order to facilitate navigation; (3) the *Comment* tab provides a feedback form for comments, reviews, or suggestions.

To explore the effects and implication of our *Mobile Narrative* on the creative writers, the writing process, and the reader's perception, two user studies as well as interviews were conducted. The latter was done with authors and readers to provide an insight into both sides.

Figure 1. Screenshots of our *Mobile Narrative* app

Figure 2. User studies at the Kelvin Grove Urban Village (left), and at the Cooroy Lower Mill Site (right)

Requirement Meetings & Author Interviews

In a first step, the concept and required features were discussed in several requirement meetings, attended by creative writers and urban informatics researchers. In the following step, three authors were interviewed. One of them was asked to write a story for our *Mobile Narrative* study, before the interview was held, and thereby had the chance to directly experience the implications of this new approach on the writing process. The other two were introduced to the concept by a short demonstration with our prototype. The interviews were conducted one-on-one with the focus on the effects and implications of these new kinds of stories on the reading and writing experience. Furthermore, interviewees were asked about their opinion about the changes to the author-reader relationship due to the direct feedback channel, and about their expectations for a suitable implementation.

User Studies

To explore the impact on the perception and quality of the reading process, two user studies were conducted (see Figure 2): at Kelvin Grove Urban Village, a master-planned inner-city community in Brisbane, Australia, and at the Cooroy Lower Mill Site, formerly the area of Queensland's largest hardwood mill, which is now redesigned into a landmark civic precinct with historical, cultural, and educational facilities.

Kelvin Grove Urban Village

For this study, a story, written for this purpose, was used, which was set in the early 1940s and is built around the Australian and American military stations in Kelvin Grove. The story consists of four chapters, and thereby four different locations in Kelvin Grove. The study was conducted with nine participants (6 female, 3 male; 20-68 years old). First, the participants were familiarised with the iPhones and with the usage of our *Mobile Narrative*. Then, they were asked to walk around and read the story followed by one-on-one interviews. The interviews included questions regarding the reading experience, the effects of the restrictions, as well as personal preferences, reading behaviour, and previous knowledge.

Cooroy Lower Mill Site

For the user study at Cooroy, a story was used that was set partly at the Lower Mill Site and partly at Cooroy's town centre. The study was conducted with 11 local Grade 8 students (3 female, 8 male; 13-14 years old). The participants were divided in three groups, in which they completed the trial, which also consisted of four locations. The groups, accompanied by teachers, followed the story's path and also had the possibility to submit feedback on the spot by using the comment function. Subsequently, the groups were interviewed about their experience.

DISCUSSION

In this section we present preliminary findings from our studies from both the author's and the reader's perspective.

Author's Perspective

The interviewed authors all described this way of writing and reading as exciting but also challenging. However, the writing process was seen as "less creative, but more considerate," as authors do not have to describe the whole story world, but need to focus on what is at the specified location. In order to achieve this, all authors would write their stories on the spot, which would lead to "a real engagement with the landscape rather than a reflective one," comparable with how "impressionist […] forced people out of the studio." The authors were excited by knowing where and when the story is read, and suggested several ways of exploiting this. They could reduce their description of setting, as certain knowledge could be assumed from knowing the reader's position. Or authors could directly relate to the reader, and even use second person description, such as "Look to your right!" One author envisioned integrating visual and audio effects, by using predictable events in the environment. In this way, a train passing by at a certain time, or the ringing bell of a clock tower could become part of the story.

Disadvantages with this way of reading were seen in the accessibility, as stories cannot be read e.g. in bed, but the reader has to make a special effort to be able to read them. Moreover, concerns were raised that the free flow of the imagination may be interrupted. Advantages were seen in the more intense reading experience. One author summarised it the following way: "Your senses are being aroused, in all kinds of ways, rather than just through the reading experience. You are in the place, you're seeing the world the author saw, you are almost feeling as

though you are having a conversation with the author, about the place you are in. I think that is exciting and pleasurable." The feedback regarding the direct channel between author and reader was generally positive. Authors like the idea to get more and immediate feedback about their work, but a moderated way of doing this was suggested to filter offensive and inappropriate comments.

User's Perspective

In both user studies, the participants experienced reading on the spot as an enhancing feature that makes the story more vivid. Reading the story and walking around also contributed to a better understanding of the place and its history. Most participants were able to relate the descriptions of place and time in the story with how the area looks today. One participant responded that she "really got the feeling of the place"; another stated that it "feels like you are exactly in the story itself and you are seeing what the character is seeing." One student at Cooroy said that this concept helps to "visualise what it was actually like," even though a lot of things have changed and are more modern, you "could visualise the old."

However, especially in the study with the students, several disadvantages and suggestions for improvements were mentioned. The majority of the students would have preferred an audio version of the story, instead of simple text they had to read. One group of students also mentioned that this way of reading "disjoints it a little bit." They complained about the interruptions caused by the walks, and suggested to have a continuous text while walking around. An interesting incident related to the aforementioned idea of integrating events in the environment happened during the trial: While one student group in Cooroy was reading a chapter about a dance in front of the Memorial Hall, some music started to be played from inside. The students were excited, as this intensified their experience.

In the Kelvin Grove user study, we also explored the usage of time constraints. As the story was set in the morning, some participants were forced to read the story at specified times. However, here the people's opinion was divided. Related to the morning sun mentioned in the story, one participant said: "I think it's good, because I actually felt the sun." Another participant emphasised that for his experience it was really good, because the weather was described as in the story, but obviously that could easily change. Others stated that there was "no relation" to the time, or that there was no real "reason why to read it at 9am."

CONCLUSION

In this paper we presented our preliminary research findings discussing our experiences with *Mobile Narratives*. The results from the interviews and user studies showed that this concept is found to be exciting and interesting by readers as well as authors. It leads to a strong engagement of authors with the places during the writing process, as well as to engaging experiences for the readers. The author's determination of the user's context unleashes "enlivening, interesting and exciting" (author interview) potentials in the field of creative writing, and points to open aspects and possibilities for future research projects.

ACKNOWLEDGMENTS

This research was supported by the Australian Research Council (Linkage LP0882274), the Sunshine Coast Regional Council and Noosa District State High School. The authors would like to thank Susan Carson, Sam Martin, Luise Toma, Ruth Greenaway, Louise Francis, and all study participants and supporting teachers.

REFERENCES

Abowd, G., Atkeson, C., Hong, J., Long, S., Kooper, R., & Pinkerton, M. (1997). Cyberguide: A mobile context aware tour guide. *Wireless Networks, 3*(5), 421-433.

Ballagas, R. A., Kratz, S. G., Borchers, J., Yu, E., Walz, S. P., Fuhr, C. O., et al. (2007). *REXplorer: a mobile, pervasive spell-casting game for tourists.* Ext. Abstracts CHI '07 San Jose, CA, USA.

Bjork, S., Falk, J., Hansson, R., & Ljungstrand, P. (2001). *Pirates! using the physical world as a game board*.

Brock, T. (1968). Implications of commodity theory for value change. *Psychological foundations of attitudes*, 243-275.

Casey, S., Kirman, B., & Rowland, D. (2007). *The gopher game: a social, mobile, locative game with user generated content and peer review*. Proceedings of the international conference on Advances in computer entertainment technology.

Cumming, J. (2008). The 21 steps Retrieved 07-May-2009, from http://wetellstories.co.uk/stories/week1/

Epstein, M. (2009, April 24-26, 2009). *Moving Story.* Media in Transition 6: Stone and Papyrus, Cambridge, USA.

Greenberg, A., & Abels, J. E. (2008). IPhone Steals Lead Over Kindle Retrieved 01-Sep-2009, from http://www.forbes.com/2008/10/02/stanza-kindle-iphone-tech-personal-cx_ag_ja_1002stanza.html

Lynn, M. (1992). Scarcity s Enhancement of Desirability: The Role of Naive Economic Theories. *Basic and Applied Social Psychology, 13*(1), 67-78.

MacColl, I., Billinghurst, M., Brereton, M., D'Souza, M., Dekker, A., Postula, A., et al. (2008). *Urban Interfaces.* CHI 2008, Florence, Italy.

Oppermann, R., & Specht, M. (2000). A context-sensitive nomadic exhibition guide. *Lecture notes in computer science*, 127-142.

Paay, J., Kjeldskov, J., Christensen, A., Ibsen, A., Jensen, D., Nielsen, G., et al. (2008). *Location-based storytelling in the urban environment*. Proc. OZCHI 2008: Designing for Habitus and Habitat.

Simcock, T., Hillenbrand, S., & Thomas, B. (2003). *Developing a location based tourist guide application*.

Tuulos, V., Scheible, J., & Nyholm, H. (2007). Combining web, mobile phones and public displays in large-scale: Manhattan story mashup. *Lecture notes in computer science, 4480*, 37.