

Street Museum

Explore Your Neighborhood with the Smartphone

Nanna Westergaard-Nielsen¹, Martin Christian Nørgaard²

^{1,2}Viden til Vækst Consult, Mosegarden, Mosedraget 6, DK 3230 Græsted, Denmark

¹nanna@videntil.dk; ²martinnorgaard@hotmail.com

Abstract- This paper describes a case, which demonstrates how a new media, the smartphone, can be used in the creation of Open Air Museums, called Street Museums. The main goal of the project is to demonstrate how a guided tour, based on a historic survey, in a local area with the participation of local people, can be created. The subject leads to a discussion on how a user-oriented study of place can be used in context-aware computing for location-based services.

Keywords- *Interaction Design; Augmented Reality; Contextual Design; Street Museum; Memory Lane; Ethnographic Methods; Human Computer Interfaces; Context Aware Computing; Local History; City Planning*

I. INTRODUCTION

The project – Street Museum in Farum City Center was supported by the “KAB Fond” and Furesø Cooperative Housing Society (Furesø Boligselskab). Furesø is a suburban municipality, north of Copenhagen. Street Museum is an open air museum. The name Street Museum is inter alia, used by the Museum of London.

The project was going on in the second part of 2012. The Street Museum guide was produced by Nanna Westergaard-Nielsen (Archaeologist), Charlotte Birch-Jessen (Anthropologist), Viden til Vækst Consult and Martin Christian Nørgaard (Historian) with inputs from the local museum, Furesø Museum, and local inhabitants.

The project is a learning project with the purpose to demonstrate in practice how smartphones can be used in the creation of Open Air Museums, or Street Museums. Another goal is to evaluate the value of smartphones for the reconstruction of the past, based on local inhabitants’ memories, here called Memory Lane.

The main goal of the project is to demonstrate how a guided tour in a local area with the participation of locals can be developed into a Street Museum Guide, telling about memories, using multimedia.

A goal of this article is also to invite other developers and content producers to a discussion forum about how to use the smartphones and to manage serious contents, produced by users, in different sectors.

This paper gives an introduction to the phenomenon Street Museum, and presents a manual of how to produce a Street Museum, in collaboration with the locals on basis of their memories.

II. THE TOURS

To involve the locals, we decided to establish a working group. It consisted of two locals from the Farum City Center, one person from the local Museum, and two young people from the area with knowledge of sound and music produced on the new media, and one person with specific It-knowledge.

The working group decided to produce two tours, one for adults, with special focus on architecture and city planning, and another for school children, with special focus on old day’s life and playing in the City Center.

The tours are produced on the App, Lovemyguide (www.lovemyguide.com). Lovemyguide is available on Iphones (search for Farum). Based on Google Maps Lovemyguide makes it possible to integrate texts, photos, videos and sound to every point you pin out on the map of the area you are interested in.

III. THE METHODOLOGY

The creation phase and the production phase build upon the experiences from a former project NWN has been the leader of Culture and Nature Moving, and is described in a paper, produced for E-challenges 2010 (www.eChallenges.org) [1].

The platform we worked on is the Contextual Design (CD). CD is a design method involving the users from start to the very end. The CD is a technological design method combined with the anthropological supervision methods. Contextual Design (CD) is a user-centered design process developed by Hugh Beyer and Karen Holtzblatt [2].

CD incorporates ethnographic methods for gathering data relevant to the product, field studies, rationalizing work flows, system and designing human-computer interfaces.

We translated and implemented the CD method into a Design Brief, which was followed by a creative brainstorm process.

Design Brief

1. The name of the tour
2. The theme of the tour
3. What is it about – a short summary and the idea
4. Which is the target group
5. The mission of the tour
6. Where is the tour – draw it on a map
7. How many infopoints do we want
8. The history – facts/drama
9. The content of the stories
10. Who is cicerone?
11. Multimedia effects: pictures, videos, music, texts

The output of the Design Brief and the Brainstorm was two scripts for two tours:

- Street Museum, Farum City Center
- Being a Child in Old Days' Farum

IV. STREET MUSEUM, FARUM CITY CENTER TOUR

In the following, the Farum City Center Tour is presented, and its value as a Memory Lane Tour is discussed:

The target group is families interested in architecture and city planning.

The tour has 14 info-points and will take 45 minutes to walk. It starts at the train station, and you walk through the city center and investigate the buildings from the 1940's until the 1970's.

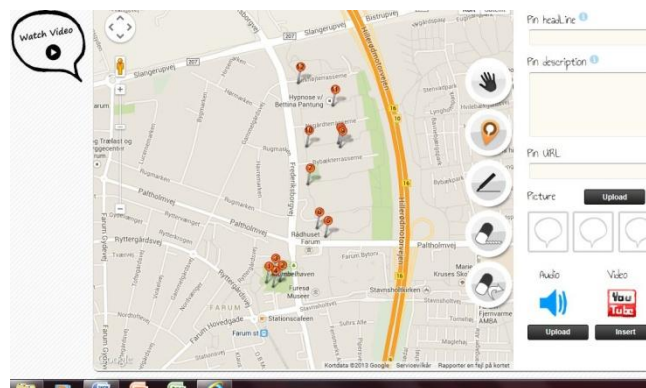


Fig. 1 Street Museum, Farum City Center, Tour on Lovemyguide.com

Once you reach the different info-points you listen to recited texts, relevant music and video. At some of the points you can also listen to locals talking about their memories from old days in the suburban area, about the history of the houses and center construction, about the transformation from agrarian area to public housings, etc.

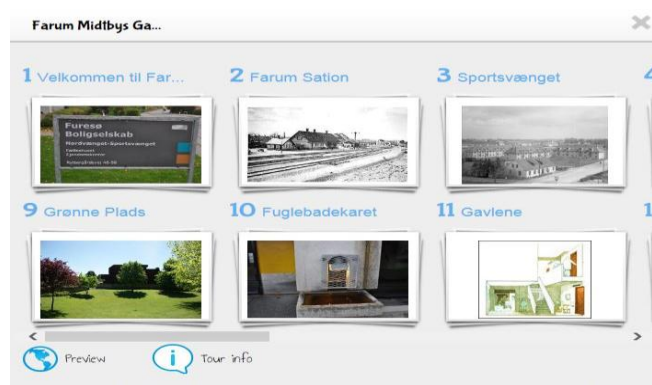


Fig. 2 Street Museum, Farum City Center. Info-points' pictures and texts, tour info on: Lovemyguide.com



Fig. 3 Street Museum, Farum City Center. Infopoint, seen on your smartphone, press for sound or video

While you are walking along the guided route, you see the modern houses, and at the same time on your smartphone, you see the photos of old days' scenery. In that way, we created a sort of an Augmented Reality.

On the test tour in our working group, we discovered that the shift between decades supported the participants' memory in a very creative way – they started telling each other stories from the past, and we used these stories in the final version.

We can conclude that the Augmented Reality effect is an excellent memory supporter.

V. BEING A CHILD IN OLD DAYS' FARUM

The goal of the second tour we created is to give children an idea of how life was in the City Center of Farum two or three generations ago. This tour is designed like the former tour, but at the info-points the children "meet" people who tell them about their childhood memories. The children are shown pictures about games and plays, and asked to try the plays themselves.

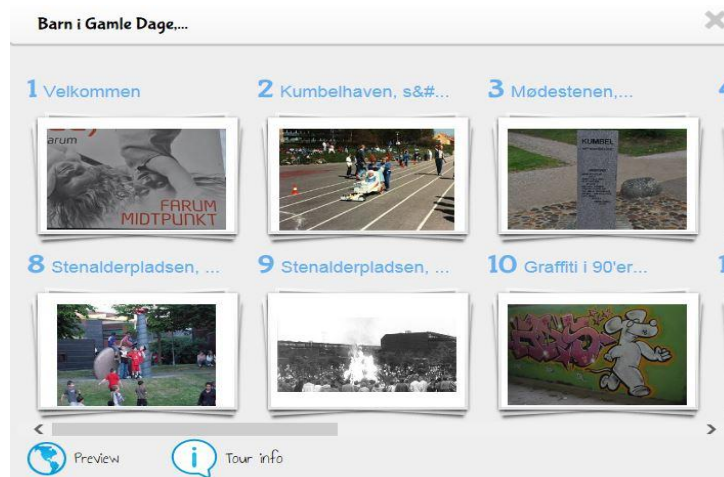


Fig. 4 Being a child in Old Days' Farum. On the tour we have 12 info-points with speak, animation, music and sounds

The working group also tested this tour, and many memories came up, especially about the many outdoor games from the 1950s.

We made small animations of the games, so the children could learn about them, and try them by themselves, on the spot. We observed, that the media is excellent for remembering and reconstructing the old games for children.

VI. DEVELOPMENTS

After the tours were tested in the working groups, we changed a lot, and finally we arranged an introduction event for the inhabitants in Farum. From both the tests and the introduction event, we noticed that people were initially afraid of the new media, but when they discovered how easy it was to follow the route on the display and to open the infopoints, they relaxed and enjoyed the tour, and began talking to each other about their own memories from old days in the suburban area. The tours worked as facilitators for Memory Lanes.

The software and the tours are now given over to the local cooperative housing society (Furesø Boligselskab), and they have some plans for using it as a guide tool for the interest groups in the area, ex. The Birds Society, The Film Club, etc.

And they plan to invite the local school to use it, as an excursion tool.

The developers are working on ideas for new projects. There are several possibilities. According to the experiences from this project, we will concentrate on the media's potential for illuminating Memories and Storytelling based on the value of the spot [3].

In computer related literature, the value of the spot is described as "Sense of Place". *The expression is linked to the formation of deep emotional connections with specific locations, and the feelings of attachment that results from familiarity, memory and association* [4].

Few empirical studies have been carried out to define this concept and to convey its applicability in understanding and explaining places.

In the following, we will try to describe three areas, where "Sense of Place" can be transformed into a Guided Tour, which can be useful in development of context-aware computing for location based services.

A. Local History

The guided tour is an excellent instrument for museums and archives to facilitate collection of memories and lost buildings. For example, the museum can ask a group of locals to produce a Memory Lane tour, in which they talk about their childhood in a particular area of the town. In this way, we can create more interesting lives in especially suburban areas, which often suffer from desertion, and lack of history.

By creating tours you can encourage people to go out and spend time in otherwise often deserted suburbs, and thereby create a more lively and safer environment.

The Museum of London has introduced a useful App. called Street Museum of London [5].

M-Learning Games (the combination of e-learning with mobile technologies) have also been introduced as historic guides based on context-aware computing, e.g. in Archaeological Parks [6].

B. City Planning

Another field, which interests us, is cooperation with architects and authorities like local governments. We have experienced, that the guided tour on smartphones can be used for better city planning.

The planning authority could ask a group of locals to create their dream town, with photos and texts on Lovemyguide. A guided tour could easily illustrate different users' wishes for a new town or city area, which other groups could then comment on.

The method is known in neighbourhood or city planning, as cognitive or mental maps [7].

C. Lost Memories

Projects in cooperation with psychologists would also be interesting. We have already noticed, that the guide tool is very effective to facilitate memories about the past. This could be further developed and used in therapy fields as help for people suffering from memory problems, e.g. from Post Traumatic Stress Syndroms and other disorders, where supporting memories with places on maps and creation of text and pictures, could be a part of the cure.

Already Freud shows how a commitment to archaeology may reflect the repression of one's own past, and how "bringing the past back to life" replaces conscious childhood memory [8].

VII. CONCLUSIONS

By working with the new media in a systematic way, involving specialists and people in general, we have learned a lot. We have first of all learned, that Street Museums, or simply guided tours with smartphones are excellent facilitators for memory production. The spot on a map, where you have had your childhood, or your first flat, is an excellent catalyst for your brain to recall hidden thoughts and memories.

The media, Lovemyguide allows you to add your own photos, music or simple text to the spot in a very simple way, and in this way you can produce your own Memory Lane.

We also have to realize, that there is still a long way to go, before it becomes "normal" to use the smartphone as a guide. And a much longer way to go, before other sectors will start working with this tool, for specific purposes, ex. for health care and cures, involving the users.

- We still have to develop the technology, so that it is more user-friendly;
- The technology should be only a hidden facility for an interesting content;
- The quality and originality of the story to be told or other types of content should be very high, and concentrated in shorter frequencies;
- Further development of methods for collaboration between technical experts and the subject experts as well as users, is

needed;

- Finally, the smartphone as a tool for specific purposes, has to be further communicated to other sectors.

Have you any experiences of using smartphones for learning, health or inclusion purposes, please contact the author on: nanna@videntil.dk

REFERENCES

- [1] Nanna Westergaard-Nielsen, Culture and Nature Moving – Learn with the Mobile Phone, Conference paper, produced for *eChallenges e-2010 Conference Proceedings*.
- [2] The Contextual Design methodology is developed by Karen Holtzblatt and Hugh Beyer, *Contextual Design – defining customer-centered systems*, 1998.
- [3] The spot's potential for storytelling, and visualizing soci-economic relations is described by Erland Porsmose, Kulturlandskabet, *Kulturmiljø*, Museum Tusculanum, 2003, p. 79.
- [4] Pragya Agarwal, Operationalising Sense of Place as a Cognitive Operator for Semantics in Place-Based Ontologies, *Cosit 2005, LNCS 3693*, Springer-Verlag Berlin Heidelberg 2005, p. 98.
- [5] Google: The Street Museum of London gives you a unique perspective of old and new London, through your mobile phone camera.
- [6] Carmelo Ardito, et al. Experiencing the Past through the Senses: An M-Learning Game at Archaeological Parks, *Multimedia at Work*, 2008 IEEE Computer Society, p. 1-5.
- [7] Greg Halseth and Joanne Doddridge, Childrens's cognitive mapping: a potential tool for neighbourhood planning, *Environment and Planning B: Planning and Design* 2000, vol. 27, p. 567.
- [8] Sigmund Freud, *Delusion and Dream and other Essays*, 1907.

Nanna Westergaard-Nielsen, was born in Copenhagen, Denmark, in 1953. NWN was mag.art. in Classical Archaeology, 1982, from University of Århus, DK and University of Oxford, UK.

NWN has been a university teacher at the University of Copenhagen, and in the last few years she has been working with culture communication, and learning on new media's.

Martin Christian Nørgaard, was born in Copenhagen, Denmark, in 1984. MCN was Master of History and Religious Studies, 2011, from the University of Copenhagen, DK and University of Oregon, USA.

MCN is working with local history and IT.