Urban Overlay

Some preliminary remarks on technical solutions for nontechnical problems**

Martin Kohler (HCU), Kai von Luck (HAW), Jens Wille (Ubilabs)

Abstract

The restructuring of global cities big urban developments like the HafenCity in Hamburg, the Ørestad in Copenhagen or the Abandoibarra in Bilbao have been faced by a special challenge: Usually these projects are realized by private enterprises as developers that extinguish after a certain lifespan leaving a working urban area as social and physical neighbourhood. The emergence of an active community becomes the crucial part in such projects in quite a short time. To initiate and establish these social bonds with the people next door and the urban environment technical solutions as playful and communicate tools will become a major role.

Inspired by Scott Snibbe and his social immersive media (Snibbe, 2010) as well as by the Danish Digital Urban Living projects (DigitalUrbanLiving, 2010) we propose technical installations like media facades and social interaction installations for provoking village like settings in high density urban environment.

In this paper we use the urban background of these projects exemplified in a case study of the HafenCity with a focus on the typical and special needs of the pioneering residents to reflect on thoughts about playful, seemless integrated digital communication solutions to frame the emerging social networks (typically based on blogs, mailing lists and websites). In this we hope to raise questions more than provide answers.

Background

Development of computer aided socially close relationships appears to be common practise regarding established virtual communities by systems classified as social software (e.g. Facebook, among others).

At the same time development of emerging neighborhoods and dedicated groups of residents is of special value for successful urban development and urban regeneration projects. The commonly observed shift in perception of communes as representatives of an "activating state" (Harvey, 2000) renders processes of local adaptation and regeneration by its citizens necessary. Thereby their capacity to build neighbourhoods and structures of communication and knowledge accordingly become the center of focus. ,Chaskin, 2001).

Supporting these processes of acquisition and self organisation by social networking systems as location based applications, could be of vital importance for urban development projects as well as improving residents' contentedness and quality of life. Feeding such virtual information back into (urban) real world spaces is usually is described as Augmented Reality. Big displays lacking of special interactive abilities already are implemented in public spaces (e.g. Points of Sale as well as ticket machines or interactive information boards) and already are a common part of our cityscapes.

Besides commercial advertising and business services, experimental civic participation projects (e-

^{**} Presented at the MediaCity Conference Weimar Oct 2010

Participation) enter public spaces engaging transparent dialogues with residents by embedding relevant information in his/her neighbourhood. Thus improving social communication, civil engagement as well as access to local knowledge (Kingston, 2005).

This way a close involvement of residents and visitors to a certain location is based on emotional engagement, which not only results from individual internal processes but is also established from external social processes (Emotion (Riger, Lacrakas, 1981)). Insights from the fields of Environmental Psychology reinforce the value of emotional engagement: "Local identity, sense of community and social capital are critical aspects/parts surrounding individuals, promoting development of communities and their physical, social, political and economical aspects. Especially affective binding to locations are capable of inspiring action, since individuals feel motivated to visit, linger, to protect and to improve locations of individual relevance."(Manzo, Perkins, 2006).

For this paper the question of how immersive social media strategies can provide solutions to connect complex interactions (movement, distance, gestures) with public space to support community communication as emotionally relevant experience in urban large scale project.

Case HafenCity, Hamburg

Hamburg's HafenCity, one of Europe's most unique urban development projects on an area of 157 ha for 12.000 inhabitants and 40.000 work places until 2025. Housing, offices, retail businesses, and dining and entertainment fuse together with cultural and tourism oriented uses within a close-knit neighborhood. Different small-scale urban functions coexist and are associated with the diverse needs of various user groups. This creates a new everyday metropolitan culture that is neither characterized exclusively by consumption nor limited to providing a platform for orchestrated urbanity; instead, it produces complex sites of urban encounter.



Picture 1: Staged uses and art festivals are important strategic elements in the developing the HafenCity

Commissioned by HafenCity Hamburg GmbH, a research project explored use and function of public places within the HafenCity. Following ethnographic research methodology the survey resulted in book of photographs complied by six photographers and urban researchers working under the supervision of Martin Kohler during the summer of 2008. The objective of the research project was to track which patterns relating to use, encounters and visitor stopovers emerged on the streets, squares and promenades of HafenCity. To this end, the researchers observed and photographed the locations around the clock on workdays as well as weekends, documenting what they saw in 17,000 photographs and detailed field journals.

According to social qualitative interviews of residents in the HafenCity the most prominent reason for the decision to move to the HafenCity can be found in starting a new phase of life in a new environment. The starting of a family, retirement or a new relationship are among the mentioned reasons. Also, most of the residents are embedded in globally spread relations to working partners, family members and friends. The pioneering motive means a loss of physical interaction and adds to the need of supporting social relations within virtual communities like facebook, linkedin, xing and else.

The Results from the former mentioned ethnographic survey on the use of public places in the HafenCity support this and suggests a distinctive need of exposition the private in public by the residents as part of a bigger play to present themselves and stage a "public privacy" in this highly popular place (Bruns-Berentelg, et al, 2010).

The findings of this survey propose spatial clusters of public exposed behaviour and spaces for the everyday activities in which visitors and residents seamlessly mix. The public places (promenades and waterfront plazas) are used to a high degree by sports and consumption activities, photographing and chatting with more or less known people. All of the observed people show a strong sense of being watched and posing for the public within an air of playful leisure time, communicating with different aspects of the provided architecture.

Another result was the high degree of work in the public spaces that is usually meant to happen in office buildings. Business meetings, working on Notebooks and Smartphone and official phone calls influence the public life in a stronger impact than as observed in comparable neighbourhoods.

So we can find a type of resident and employees that is mastering digital communication as everyday activity and is in a need of new social encounters. To bring these existing virtual communication into the public sphere will be a strong supporter in the creation of a public sphere where there was none at the beginning.

Social software and digital social media

Social software installations well known in private, virtual settings like facebook, twitter, blogs, flickr etc bringing the shift from publish/consume to participation as mentions by O'Reilly (O'Reilly, 2005) as the WEB 2.0 phenomenon become more and more established in relative small, relatively well understood environments like companies (cf. (McAfee, 2006)) and are discussed under the term enterprise 2.0. These activities are supported by results from the computer supported collaborative work (CSCW) approach, resulting amount many others in large interactive displays (e.g. BlueBoard von IBM Research) (IBM Blueboard, 2010), (Russell, Gossweiler, 2001)) for sharing company and work related information . Displays for highlighting social activities are recently presented e.g. by the Community Mirror project of the UdBW Munich (Ott, 2010), (Koch, 2010). The software company SUN presented specialized social software systems for he work related interaction of their knowledge workers. (SunSpace, 2010). The needs for digital social media and the research questions in this area are recently discussed in (Bry et al., 2010).



Picture 2: Stills from "Three Drops", digital installation by Scott Snibbe (Snibbe, 2009)

Localized information and participation systems (e.g. the e-participation system DEMOS of the TUTech Hamburg) have proven the usefulness of these approaches. All these system are based on a top down oriented information based approach, many of them as extensions of geographical information and decision systems or forum based discussion platforms. This observation is almost true for innovative examples like the citizen information system, prototypical implemented at Municipality of Bowen Island (Journeay et al., 2004) or the platform NextHamburg (NextHamburg, 2010) as well.

Immersive technologies developed in the arts like the social immersive media experiments of Scott Snibbe (Snibbe, 2010) or the tangible bits proposals by Hiroshi Ishii (Ishii, 2010) show the potential of interactive immersive installations for urban neighborhoods. Elements of the ambient assisted living research (e.g. (AAL, 2010)), especial the context aware systems, could be cornerstones of new installations as well.

First steps of converting these proposals into everyday situations were already developed among others at the HAW with the hamburg cubical (Gregor, 2009). In the Ambient Intelligence research lab at the HAW including a 140 qm smart apartment with an integrated usability new gesture based interaction techniques with context aware components are developed. Beside tangible interaction experiments and multitouch installations are camera based gesture detection in the research focus (Roßberger, 2008), (Stegelmeier, 2009), (Roßberger, 2009), (HAW Ambient Intelligence, 2010). Interactive information and esp. participation systems based on these results should be installed and evaluated in local neighborhood settings as well.

The implementation of social software approaches inside an urban neighborhood is in the moment in the starting phase. Especially the specific conditions of interactive technologies in outside areas, confronting digital less educated people with ubiquitous computing environment pose new challenges on user centered design methods und community centered installations.

Conclusion

Summarizing we do not believe that these technical solutions compensate for a lack of serious urban development in a all its aspects. But by the relocalization of virtual communities into the public sphere a boostering and intensifying effect for the emergence of social bonds is highly assumable. These effects will prove to be more long-lasting and sustainable than a sheer city marketing of any kind.

The new types of urban atmospheres and self constructions of the residents beyond the classical private/public dichotomy in the big urban development projects of our time are perfectly suited for playful and less meaningful digital solutions in the public sphere seducing people to act with these interfaces.

References

3. Deutscher AAL-Kongress, 2010, Berlin

Bry et al., 2010. 10041 Manifesto -- Perspectives Workshop: Digital Social Media, Dagstuhl Seminar Proceedings, 2010 Bruns-Berentelg, Jürgen, Eisinger, Angelus, Kohler, Martin, Menzl, Marcus, 2010. HafenCity Hamburg – Neue Begegnungsorte zwischen Nachbarschaft und Metropole, Berlin

Chaskin, R.J., Brown, P., Venkathes, S. h, Vidal, A., 2010. Building Community Capacity. New York: Walter de Gruyter CommunityMirror, 2010. [online]. <u>wiki.informatik.unibw-muenchen.de/Main/CommunityMirror</u>

DigitalUrbanLiving 2010. [online]. www.digitalurbanliving.dk

Gregor, Sebastian et al., 2009. Tangible Computing revisited: Anfassbare Computer in intelligenten Umgebungen, Kongress Multimediatechnik, Wismar

Harrison, Beverly, Gossweiler, Rich, 2001. Distributed and Disappearing User Interfaces in Ubiquitous Computing, SIGCHI 2001 Workshop

Harvey, David, 2000 Possible Urban Worlds. The Fourth Megacities Lectures, The Hague

HAW Ambient Intelligence, 2010. [online]. www.informatik.haw-hamburg.de/~ubicomp tangible.media.mit.edu

Hwang, J., 2008. U-city: The next paradigm of urban development. In: M. Foth, (ed.), Urban Informatics: Community Integration and Implementation, Hershey, PA: IGI Global

IBM Blueboard, 2010. [online]. http://www.richgossweiler.com/projects/BlueBoard/index.html

Ishii, 2010. [online]. tangible.media.mit.edu

Journeay, M., MacKinnon, C., Dunster, J., 2004. [online]. Community forum and review of the Snug Cove village plan (Version 5): in search of common ground.

Kingston, R., 2002. The role of e-government and public participation in the planning process, in Proceedings of XVI AESOP Congress, Volos, Greece, July 10–14

Kingston, R., Babicki, D., Ravetz, J., 2005. Urban Regeneration in the Intelligent City, Nineth Conference on Computers in Urban Planning and Urban Management, CASA, London, 29th June–1st July

Koch, M., Ott, F., Richter, A., 2009. Community Mirrors - Using public shared displays to move information out of the box, Suppl. Proceedings European Conference on Computer Supported Cooperative Work, pp. 17-18

Manzo, Lynne, Perkins, Douglas, 2006. Finding Common Ground: The Importance of Place – Attachment to Community Participation and Planning, Journal of Planning Literature, Vol. 20, No.4, pp.335-350

McAfee, 2006. Enterprise 2.0: The Dawn of Emergent Collaboration. In: MIT Sloan Management Review, Jg. 47, H. 3, S. 20–28 Ministry of Information and Communication, 2006. u-Korea Master Plan, Seoul

Ministry of Construction and Transportation, 2006. Ubiquitous City and Infrastructure Planning.Seoul

NextHamburg, 2010. [online]. www.nexthamburg.de

O'Reilly, Tim, 2005. What Is Web 2.0: Design Patterns and Business Models for the Next Generation of Software

Ott, F., A. Richter, M. Koch, 2010. SocialNetworkingMirrorTM Einsatz halböffentlicher Touchscreens als ubiquitäre

Benutzungsschnittstellen für Social Networking Services, In: Tagungsband der Multikonferenz Wirtschaftsinformatik

Overmeyer, Klaus, 2010. Kreative Milieus und offene Räume - Bericht an die Stadt Hamburg, Hamburg

Raasch, Jörg, 2006. Usability von Anwendungssystemen - didaktische Aspekte, Lecture Notes in Informatics, pp. 23-35

Roßberger, Philipp, Luck, Kai von, 2008. Seamless interaction in interactive rooms - some preliminary remarks, World Usability Day, Hamburg

Roßberger, Philipp, Luck, Kai von, 2009. Iterative design of tabletop GUIs using physics simulation, Mensch und Computer, Berlin Russell Daniel M., Gossweiler, Rich 2001. On the Design of Personal & Communal Large Information Scale Appliances, Russell Daniel M., Gossweiler, Rich 2001. UbiCom '01, October

Snibbe, 2010. [online]. <u>www.snibbeinteractive.com</u>

Snibbe, 2009. [online]. http://www.flickr.com/photos/arkansasdiscoverynetwork/3483504277/

Stegelmeier, Sven et al. 2009. iFlat - Eine dienstorientierte Architektur für intelligente Räume, AAL, Berlin

SunSpace, 2010. Peter H. Raiser: Introduction slides to SunSpace, [online]. http://www.slideshare.net/peterreiser/atlassian-webinar-sunspace

Talen, E. 2000. Bottom-up GIS: a new tool for individual and group expression in participatory planning, Journal of the American Planning Association 66, pp. 279–294.