

Animating personalised networking in a student apartment complex through participatory design

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ABSTRACT

This paper describes the research design of an ongoing case study in an apartment complex comprising approximately 160 international students in Brisbane, Australia. The objective of the study involves the design and development of an online community network to facilitate the creation and growth of a sustainable residential neighbourhood community. The study is informed by the PAD methodology which combines principles of participatory design with sociocultural animation. Preliminary research findings led to a new design strategy which takes Wellman's theory of networked individualism into account. The new community building strategy allows for the diversity and individualism of tenants by working towards providing easy and convenient ways for tenants to identify birds of a feather and to conduct personalised networking. What may emerge from this process is an intricate web of social networks that span the anonymous void of the apartment complex itself, a web of "urban tribes".

Categories and Subject Descriptors

H.5.3 [Information Interfaces and Presentation]: Group and Organization Interfaces – *collaborative computing, web-based interaction.*

General Terms

Design, Human Factors.

Keywords

Community Informatics, Community Networks, Neighbourhoods, Networked Individualism, Social Capital, Participatory Design, Sociocultural Animation, Urban Tribes.

1. INTRODUCTION

Wellman argues that the occurrence of communities has been transformed from solitary groups to individualised networks. His concept of "networked individualism" [28-30] and Castell's description of "portfolio's of sociability" [5] challenge the conventional understanding of "community" and thus "society" with direct implications for the design and development of residential community networks.

On this background, this paper describes the research design, fieldwork to date and preliminary research findings of an ongoing case study that investigates what importance expressions of place have in an online environment designed for residential communities and how neighbourhood identity building can be facilitated by place-based online community networks. The study also seeks to compare Tönnies' ubiquitous but rather utopian notion of 'Gemeinschaft' with more contemporary interpretations of community inherent in Castells' and Wellman's theories of the network society and networked individualism.

The unique selling proposition that could give online community networks for residential communities a competitive advantage over conventional, that is, dispersed online communities is proximity, cf. [26]. Community networks allow residents to interact online and to take and continue online interaction offline, in real life and face to face. This offline and place-based dimension introduces challenges to the design, development and rollout of online community networks. Reaching a critical mass of users is considered to be one of the key criteria of success [1, 19] and has been reported as one of the most common stumbling blocks: "If you build it, they will not necessarily come" [18].

However, other studies, e.g. [4], have shown that a critical mass of interconnected users alone is not sufficient for a community network to live up to higher expectations such as increasing social capital in the community, fostering sociability and establishing community identity: "Those geographic communities already rich in social capital may become richer thanks to community networks, and those communities poor in social capital may remain poor" [14], or simply put, "connectivity does not ensure community" [2, 6]. Much hope rests on user-centred methods such as participatory design to initiate and sustain engagement and involvement of community members.

Uslaner [25] claims that "the Internet neither destroys nor creates social capital", people do, and Putnam [21] argues "that the Internet will not *automatically* offset the decline in more conventional forms of social capital, but that it has that poten

tial". So how can this potential be realised with community networks in the face of networked individualism?

The study intends to build a theoretical understanding of these issues to inform the development of a methodology to design sustainable place-based online community networks. Following Wellman's work, it is assumed that such networks have to cater for and serve the needs of individual residents and their social ties, so the network can become part of the toolbox that individuals access to conduct personalised networking, alongside and interconnected with other media such as email, phone, SMS and face-to-face communication.

The study's objective is to understand

- the continued purpose and relevance of neighbourhoods;
- how a residential "community" – which may be solely characterised by a common suburb, street or building – can become a neighbourhood and how online community networks can facilitate this process;
- how instances of personalised networking conducted within a defined geographical area can contribute to the creation of neighbourhood identity; and
- whether this will assist attempts to revive forms of civic engagement and social capital in society.

2. SOUTHBANK CAMPUS APARTMENTS

The research is driven by a case study approach to evaluate these questions. The first case study is a residential building complex called "Southbank Campus Apartments" (www.campusapartments.com/southbank) which comprises of 94 one, two and three bedroom units with a total of approximately 160 tenants in South Brisbane, Australia. This case study has been running since late 2002.

Every apartment is fully furnished and includes one or more bathrooms and a kitchenette, so there is no need for students to leave their unit and use shared facilities which is a common factor contributing to the emergence of community identity in shared accommodation and college-style dormitories. The only shared public spaces at Southbank Campus Apartments are the reception area, the common room, the gym, the outdoor swimming pool and two barbecue sites. However, typical usage of these spaces is mainly limited to individuals or small groups of tenants and their friends.

Tenants can enjoy a broadband internet connection through a local area network with access points in every bedroom. They use the internet to communicate with friends at home and at school via email, chat and instant messenger, to conduct study and research for assignments and exams, as well as for entertainment and leisure. However, the building's local area network, which would provide a convenient means to talk to other tenants in the building, is not used in that way, and no facility has been put in place which could give rise to a neighbourhood community identity.

Thus, Southbank Campus Apartments provides a suitable case study to research the issues outlined above. The specific objectives of the case study are to analyse and understand how information and communication technology, especially internet based tools and applications, can be used to facilitate neighbourhood connections between tenants. The study also looks at (a) the process of installing and customising existing, mostly open source tools to facilitate community building and to establish an online community network, and – in a more

advanced stage – at (b) the design and development process, both online and offline, to create purpose-built solutions that take the specific requirements of a place-based community, as opposed to a virtual community, into account.

The tenants in the building are mostly international students between 17 to 24 years of age who study at nearby tertiary institutions. They come from a variety of national and cultural backgrounds including Asia (mostly Singapore, Japan, China, Taiwan, Korea, India, Saudi Arabia, Oman), North America, and Europe (mostly Scandinavia, Germany, UK). The majority of tenants only stays for one or two semesters of study which is usually supplemented by a period of traveling Australia either during the study breaks or after they finish their study program before they return to their home country. However, about a fifth of tenants come to Australia to study a full degree program which usually lasts three to four years.

Southbank Campus Apartments was opened in November 2000 and since then has seen a continuously high demand in furnished high-quality student accommodation. This means that the building is usually fully occupied throughout the year and booked out well in advance. The high turnover rate of tenants impacts upon various sustainability aspects of the residential community network such as community capacity building, neighbourhood identity and the actual continuity of the online community network itself, cf. [8].

3. THE PAD METHODOLOGY

The study is informed by the PAD (Participation, Animation, Design) methodology which consists of five cyclic stages that operate under a paradigm of participatory action research [13, 22, 23]. For a more detailed description of PAD, see [7].

PAD starts off with an initial phase of immersion with the community of place. The model then attempts to integrate systems design with community development: Participatory design principles [3, 15, 16, 20] are utilised to *create* the network, to provide *access* to information and to ensure *usability* within the context of human-computer interaction. Simultaneously, sociocultural animation [9] is employed to *populate* the network, make *use* of information [12] and to improve *sociability* within the context of social ties and human networks.

This is followed by a growth phase which adapts principles of viral marketing [10, 11] to maintain and build upon a critical mass of active users and to establish a neighbourhood culture that strengthens the online community network, so "it becomes an institutional actor with relationships to other community institutions, as well as to individuals and their groups" [4].

The action research paradigm applied throughout the previous project stages requires an ongoing dedication towards evaluation and testing results which are fed back into the ongoing project lifecycle. Nevertheless, to finalise the research aspect of the project a final and holistic evaluation is called upon in the last stage [17].

4. PRELIMINARY RESEARCH RESULTS

The author stayed in the building as a regular tenant from November 2000 to February 2001 and has since the start of the case study itself been able to establish a healthy and very supportive working relationship with the property development and on-site management of Southbank Campus Apartments. Their motivation to support this research project is twofold:

First and foremost, they see the potential emergence of a thriving residential community neighbourhood as adding significant value to the capacity of the building as a property investment. The community aspect may appear to new tenants as an enticing quality of the building, and tenants returning to their home country are more likely to recommend Southbank Campus Apartments on that basis to the next generation of international students. Secondly, the prospect of tenants knowing each other socially is welcomed by the on-site management because of the potential to increase levels of trust and security within the building.

After initial project start-up meetings with the management, the research commenced by sending a flyer and personally addressed information letter via email to all 164 tenants in March 2003. The letter invited students to register their interest through an online consent form which was combined with a baseline survey to collect demographic data. Subsequent research methods applied to this case study involve a combination of qualitative and quantitative research methods such as online surveys, convergent interviews, focus groups and participant observation.

Common themes and ideas that emerged during the initial stages of research include security, lack of local friends, travel, study support groups, local transport/ car pooling, trade of used items ("buy & sell"), and social activities and events. All participating tenants agreed at the time that

- an online community network would be of benefit to them in one area or another, depending on their personal needs and interests;
- it would reduce the anonymity and isolation currently experienced by some and improve the quality of life at Southbank Campus Apartments; and
- it would also contribute to forming a Southbank Campus Apartments neighbourhood community identity and a sense of belonging.

Through focus groups and the help of the on-site managers, it was possible to identify and encourage a selected number of tenants to participate and take over certain aspects of the project and the endeavour of growing a residential community, according to their personal motivations and interests. At this stage, there are individuals or small groups of tenants who organise social activities such as barbecue dinner parties, movie nights, soccer games, etc. However, since the proposed online community network is not completely set up yet, the event organisers have to rely on conventional means of email and word of mouth communication combined with distributing flyers and posters to promote their initiatives. The attendance at these events is low which is surprising considering the overall number of tenants in the building and especially the high level of interest initially expressed by participating tenants. It remains to be analysed if this is due to the lack of convenient communication channels, lack of interest, or whether other reasons need to be considered.

The end of the study semester and the examination period as well as ongoing discussions over the technical requirements of hosting the online community network on-site significantly delayed progress. A particular tenant of the building has been working on installing and customising an online community portal based on the open source software Post Nuke. Yet, concerns on behalf of the management and IT consultant in regards to the security of the system and possible abuse of the SMTP function which may allow unsolicited

spam mails to be sent, have meant that the site is not yet accessible from outside the building itself and that emails, such as registrations and notifications, cannot be sent out by the system. Until these issues are sorted out, the launch of the online community network is on hold.

In the meantime, a more detailed online survey conducted to further inform the design and development of the online community network brought results with possibly far reaching implications. The survey attracted a response rate of 20%. It asked tenants how interested they are in participating in a range of community activities such as movie nights, barbeques, team sports, social outings, study groups, and buying groceries together. The responses are very evenly spread in that some tenants are very interested in certain activities but indifferent about or not interested at all in other activities. No clear majority could be found for any particular activity nor group of tenants.

Another question asked tenants how interested they would be in discussing a range of topics using an online discussion board, and again, the results are mixed: Some respondents prefer discussions around studies and study support, others dislike this topic and prefer to exchange travel reports, or talk about recent and upcoming social events, or post used items to buy and sell.

The survey data indicates that the body of tenants at Southbank Campus Apartments, which initially appears to be quite coherent, does not share any particular interests or support needs at large. Some like to travel, some like to cook. Some like to study, some like to tan. It is thus impossible to animate the tenants with conventional community building efforts that operate on the basis of common location, occupation and age and that follow a 'community as collective' approach [1].

5. CONCLUSIONS

A new community building strategy is required that allows for the diversity and individualism of tenants at Southbank Campus Apartments. This strategy will be designed to (a) work towards providing easy and convenient ways for tenants to identify birds of a feather, that is, to find like-minded people of their choice with common interests or support needs, and to (b) conduct personalised networking [29], that is to voluntarily initiate contact and build social ties with those people. What may emerge from this process is an intricate web of social networks that span the anonymous void of the apartment complex itself, a web of what Watters calls "urban tribes" [27].

Participatory design will play a crucial role in constructing a successful prototype of an online community network which inherently affords personalised networking. The participation of tenants in the design and development will be essential to determine the right range of possible communication channels they can access and the sets of personal information they feel comfortable sharing with others online in order for personalised networking to occur.

The study contributes towards substantiating a new zeitgeist of designing residential community networks which combines a new understanding of social networks inherent in Wellman's theory of networked individualism with the affordances of ubiquitous communication devices and applications for personalised networking such as the internet, instant messengers, and mobile phones, cf. [24]. The study will document and analyse this process in an effort to contribute towards an understanding of the factors involved in growing a sustain

able neighbourhood community identity at Southbank Campus Apartments.

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7. REFERENCES

1. Arnold, M., Gibbs, M.R. and Wright, P., Intranets and Local Community: 'Yes, an intranet is all very well, but do we still get free beer and a barbecue?' in *Communities and Technologies (C&T 2003) Conference*, (Amsterdam, 2003), Kluwer Academic Publishers, 185-204.
2. Blanchard, A. and Horan, T. Virtual Communities and Social Capital. *Social Science Computer Review*, 16 (3). 263-298.
3. Botero Cabrera, A., Oilinki, I., Kommonen, K.-H. and Salgado, M., Digital tools for community building: Towards community-driven design. in *Participatory Design Conference*, (Malmö, Sweden, 2002).
4. Carroll, J.M. and Rosson, M.B. A Trajectory for Community Networks. *The Information Society*, 19 (5). 381-394.
5. Castells, M. Virtual Communities or Network Society? in *The Internet Galaxy: Reflections on the Internet, Business, and Society*, Oxford University Press, Oxford, 2001, 116-136.
6. Foth, M. Connectivity Does Not Ensure Community: On Social Capital, Networks and Communities of Place. in Marshall, S. and Taylor, W. eds. *Proceedings of the 5th International Information Technology in Regional Areas (ITiRA) Conference 2003*, Central Queensland University Press, Rockhampton, QLD, 2003, 31-39.
7. Foth, M., Encouraging residents to take social ownership of an online community network through Participation, Animation, Design. in *Building & Bridging Community Networks Conference: Knowledge, Innovation & Diversity through Communication*, (Brighton, UK, 2004).
8. Foth, M., Exploring Issues of Sustainability in a Residential Community Network: A Case Study of a Student Apartment Complex. in *Community Informatics Research Network (CIRN) Conference and Colloquium*, (Prato, Italy, 2004, forthcoming).
9. Foth, M. Sociocultural Animation: It takes a village to raise a child. in Marshall, S., Taylor, W. and Yu, X. eds. *Encyclopedia of Developing Regional Communities with Information and Communication Technology*, Idea Group Reference, Hershey, PA, 2005, forthcoming.
10. Godin, S. *Unleashing the ideavirus: Stop marketing at people! Turn your ideas into epidemics by helping your customers do the marketing for you*. Hyperion, New York, 2001.
11. Goldsmith, R. *Viral Marketing: Get your audience to do your marketing for you*. Pearson Education, London, 2002.
12. Gurstein, M. Effective use: A community informatics strategy beyond the digital divide. *First Monday*, 8 (12).
13. Hearn, G. and Foth, M. Action Research in the Design of New Media and ICT Systems. in Kwansah-Aidoo, K. ed. *Current Issues in Communications and Media Research*, Nova Science, New York, forthcoming.
14. Jankowski, N.W., Van Selms, M. and Hollander, E. On crafting a study of digital community networks: Theoretical and methodological considerations. in Keeble, L. and Loader, B.D. eds. *Community Informatics: Shaping Computer-Mediated Social Relations*, Routledge, New York, 2001, 101-117.
15. Kim, A.J. *Community Building on the Web: Secret Strategies for Successful Online Communities*. Peachpit, Berkeley, CA, 2000.
16. Lahiri-Dutt, K. 'I plan, you participate': A southern view of community participation in urban Australia. *Community Development Journal*, 39 (1). 13-27.
17. Lennie, J. and Hearn, G., The potential of PAR and participatory evaluation for increasing the sustainability and success of community development initiatives using new communication technologies. in *6th Conference of Action Learning, Action Research & Process Management (ALARPM) and the 10th Congress of Participatory Action Research (PAR)*, (Pretoria, South Africa, 2003).
18. Maloney-Krichmar, D., Abras, C. and Preece, J., Revitalizing an Online Community. in *International Symposium on Technology and Society (ISTAS) – Social Implications of Information and Communication Technology*, (Raleigh, NC, 2002).
19. Patterson, S.J. and Kavanaugh, A.L. Building a sustainable community network: An application of critical mass theory. *The Electronic Journal of Communication*, 11 (2).
20. Preece, J. *Online communities: designing usability, supporting sociability*. John Wiley, Chichester, 2000.
21. Putnam, R.D. *Bowling Alone: the Collapse and Revival of American Community*. Simon & Schuster, New York, 2000.
22. Reason, P. Political, Epistemological, Ecological and Spiritual Dimensions of Participation. *Studies in Cultures, Organizations and Societies*, 4 (2). 147-167.
23. Reason, P. and Bradbury, H. *Handbook of action research: participative inquiry and practice*. Sage, London, 2001.
24. Rheingold, H. *Smart Mobs: The Next Social Revolution*. Perseus, Cambridge, MA, 2002.
25. Uslander, E.M. Social Capital and the Net. *Communications of the ACM*, 43 (12). 60-65.
26. Walmsley, D.J. Community, Place and Cyberspace. *Australian Geographer*, 31 (1). 5-19.
27. Watters, E. *Urban Tribes: Are Friends the New Family?* Bloomsbury, London, 2003.
28. Wellman, B. Little Boxes, Glocalization, and Networked Individualism. in Tanabe, M., van den Besselaar, P. and Ishida, T. eds. *Digital Cities II: Second Kyoto Workshop on Digital Cities*, Springer, Heidelberg, Germany, 2002, 10-25.
29. Wellman, B. Physical Place and Cyberplace: The Rise of Personalized Networking. *International Journal of Urban and Regional Research*, 25 (2). 227-252.
30. Wellman, B., Quan-Haase, A., Boase, J., Chen, W., Hampton, K.N., Díaz de Isla Gómez, I. and Miyata, K. The Social Affordances of the Internet for Networked Individualism. *Journal of Computer-Mediated Communication*, 8 (3).