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# **Participation, animation, design: A tripartite approach to urban community networking**

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## **Abstract**

Theories of networked individualism and forms of urban alienation challenge the continued purpose and relevance of conventional community tools in urban neighbourhood. However, the majority of urban residents surveyed in this research still believe that there are people living in their immediate neighbourhood who may share their interests or who are at least personally compatible, but they do not know them. Web-based community networking systems have the potential to facilitate intra-neighbourhood interaction and support community building efforts. Community networking studies have shown that technical connectivity alone does not ensure community, and that new and weak communities do not benefit from community networking systems as much as existing and strong communities do. This paper builds on these findings to present a methodology combining principles of participation, animation and design. This approach builds on intrinsic motivation in residents to find out about and meet one another in a private and inobtrusive way. It encourages residents to take social ownership of the community building process and the community network. The approach recognises the network qualities in the communicative ecology of urban residents and supplements collective approaches towards community building with personalised networking strategies.

## Introduction

Web-based community networks are being developed and deployed to add ways for urban residents to interact with each other in an effort to revitalise and grow a sense of community in urban neighbourhoods. Wellman (2001) argues that the availability of modern forms of transportation and the ubiquity of the internet and mobile phones in developed countries enable and encourage people to pursue personalised networking, that is, to create and maintain both strong and weak ties with people who can be met easily face-to-face, but who do not necessarily live around the corner. Instead of traditional 'door-to-door' and 'place-to-place' relationships, Wellman finds that more and more social ties are 'person-to-person' and 'role-to-role' types of relationships. The continued purpose and relevance of 'community' in urban neighbourhoods in times of networked individualism needs to be re-assessed. These types of community networks compete with potentially more attractive, globally dispersed but increasingly localised Web 2.0 services and applications that can provide a more specialised, on-demand, interest-based, current, dynamic and comprehensive pool of users, knowledge and interaction.

The main goal of this paper is to re-assess notions of 'community' in urban neighbourhoods with a view to formulate a best practice approach to the design of urban community networking systems. Defining what one means by the term 'community' at the outset of the design process is critical, as 'community' means different things to different people. The unique quality that sets residential community networking systems apart from their dispersed, place-independent and primarily interest-based virtual counterparts is proximity (cf. Walmsley, 2000). Community networking systems can be part of the toolbox which residents access to manage their private social networks, alongside and possibly interconnected with email, phone, SMS and face-to-face interaction. The objective is to design a community networking system that includes two sets of features: One set that allow residents to take advantage of and link with the communication services the internet and Web 2.0 can offer in order to conduct personalised networking (Wellman, 2002). And another set that provides collective communication features and place-related services. The goal is for such a community networking system to supplement the communicative ecology (Foth & Hearn, 2007) of urban residents and to provide voluntary and tiered access to *proximate* communication and interaction partners – compared with other global communication tools, this is a unique advantage.

Community networking systems allow residents to meet and interact online, but also to translate and continue the online interaction into offline, real life, collocated and face-to-face interaction. This offline and place-based dimension introduces challenges to the design, development and deployment of such systems. In particular, reaching a critical mass of users is crucial, for residents expect the system to present them with choices of who to contact or which group to communicate with. Thus, many consider critical mass to be a key criterion of success (e.g.,

Patterson & Kavanaugh, 2001), but reaching critical mass requires purpose and motivation: “If you build it, they will not necessarily come” (Maloney-Krichmar et al., 2002, p. 19).

Other studies (Arnold et al., 2003; Carroll & Rosson, 2003; Foth, 2006a, 2006b) argue that a critical mass of interconnected users alone is not sufficient for these systems to live up to typical expectations such as increasing social capital in the community, fostering sociability and establishing community identity. A community networking system has the potential to support neighbourhood community building efforts, but it does not drive these efforts per se, as the following citations illustrate:

*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. (Jankowski et al., 2001, p. 113)*

*Connectivity seems to go to the connected: greater social benefit from the Internet accrues to those already well situated socially. (Hampton & Wellman, 2003, p. 283)*

*Connectivity does not ensure community. (Blanchard & Horan, 1998, p. 302)*

With these considerations in mind, this paper discusses a participatory neighbourhood community networking methodology. Grounded in an action research framework (Hearn et al., 2008, in press), the methodology combines principles of participation, animation and design.

This paper focusses on the approach itself, its rationale, process and analysis in order to introduce and illustrate a research and design methodology. Due to constraints of time and space, empirical findings of applying this approach are reported elsewhere (Foth & Hearn, 2007; Hearn et al., 2008, in press). The development of the methodology is guided by two key objectives:

- Urban residents have the opportunity to participate, influence and be integrated into the design and development of the community networking system in order to take social ownership of and drive the community building process and the associated technical systems.
- The community networking system has to be designed to support urban residents to find out about and meet each other in a private, unobtrusive and voluntary way in order to initiate and maintain intra-neighbourhood interaction in networked social formations.

## **A tripartite approach: Participation, animation, design**

Conventional community networking systems are only successful and can only live up to typical expectations if a critical mass of active users is reached and sustained. A critical mass of users can only be reached if residents appreciate the potential of the system to improve their quality of life, and they should not regard their involvement and participation in the system as additional work that is forced upon them by external stakeholders. Instead, the aim is to create intrinsic motivation for residents themselves to realise from the bottom up that the system can be a social, engaging and fun way to communicate and interact with other residents of their choice – integrating with their existing communication mix.

Moreover, many conventional community networking systems solely rely on collective communication features such as discussion boards and mailing lists which require a considerable number of active users who contribute content on a regular basis in the form of message postings and responses. Reaching and sustaining a critical mass of users in this context is challenging if shared interests or common ground on the basis of demographics and support needs cannot be found easily. Other emerging applications such as instant messengers and Web 2.0 services and applications (Beer & Burrows, 2007; Kolbitsch & Maurer, 2006) such as blogs and social networking sites (eg., facebook, MySpace) afford a networked, participatory, personalised and peer-to-peer approach to communication that is more congruent with contemporary notions of community which – for the purpose of sociability – resemble more a meshwork of social networks and less a group of ‘little boxes’ (Wellman, 2002). In this model, reaching a critical mass of active users is crucial initially so users can make connections, but then the number of entries in, for example, a user’s instant messengers buddy list is a matter of personal choice and social saturation and independent of the total number of users registered with the system. In this context, ongoing interaction is required to drive the user’s personal social network, but not to maintain traffic and interest on a system-wide level.

Community networking systems that aspire to be relevant to the context of residents living in urban neighbourhoods will ultimately have to be hybrids that facilitate both collective (that is, place-related), and network (that is, social) communication and interaction. In line with the tenor of the works presented in the special issue of the *Journal of Community Informatics* on ‘Systems Design’ (Vol. 3, No. 1, 2007), it is essential that the system is designed in a way that allows residents to take social ownership of the project and its results, that is, to participate in and influence the design process, to actively engage with other residents in decision making during and after the project, to share responsibilities, and to represent their explicit and tacit experience, attitudes, interests and support needs online and offline. Thus, the project has to be owned and driven by the residents themselves. Within an academic framework, action research (Hearn & Foth, 2005; Hearn et al., 2008, in press) lends itself to the task of conducting a rigorous study while encouraging residents to participate in the project and to become co-investigators who inform the community building efforts.

In our work we found that community building efforts in urban neighbourhoods require an interdisciplinary approach in order to account for the many variables involved, such as the swarming social behaviour of urban dwellers, the systems design of the technical infrastructure, the generation of informative, useful and creative content, etc. Therefore, a range of conceptual influences have been integrated and customised to develop the approach presented here. Embedded in the participatory and human-centred nature of action research, it builds on aspects of several best practice research approaches towards community development and community networking which will be discussed further within each stage below. They include:

- Asset-Based Community Development (Kretzmann & McKnight, 1993)
- Community Technology and Community Building (Pinkett, 2003)
- Participatory Design (Foth & Axup, 2006; Schuler & Namioka, 1993)
- Action Research in New Media and ICT Design (Hearn & Foth, 2005; Hearn et al., 2008, in press)
- Sociocultural Animation (Foth, 2006d; Grosjean & Ingberg, 1974)
- A networking approach to community development (Gilchrist, 2004)

The approach is also informed by studies that examine community networks in residential environments (Day, 2002; Hampton & Wellman, 2003; Hopkins, 2005; Purcell, 2006; Wilcox et al., 2002). The common ground that these methodological influences provide advocates a dual approach that integrates the technical task of designing and implementing a community networking system with the social task of animating and sustaining the human aspect of community networking among residents of the neighbourhood.

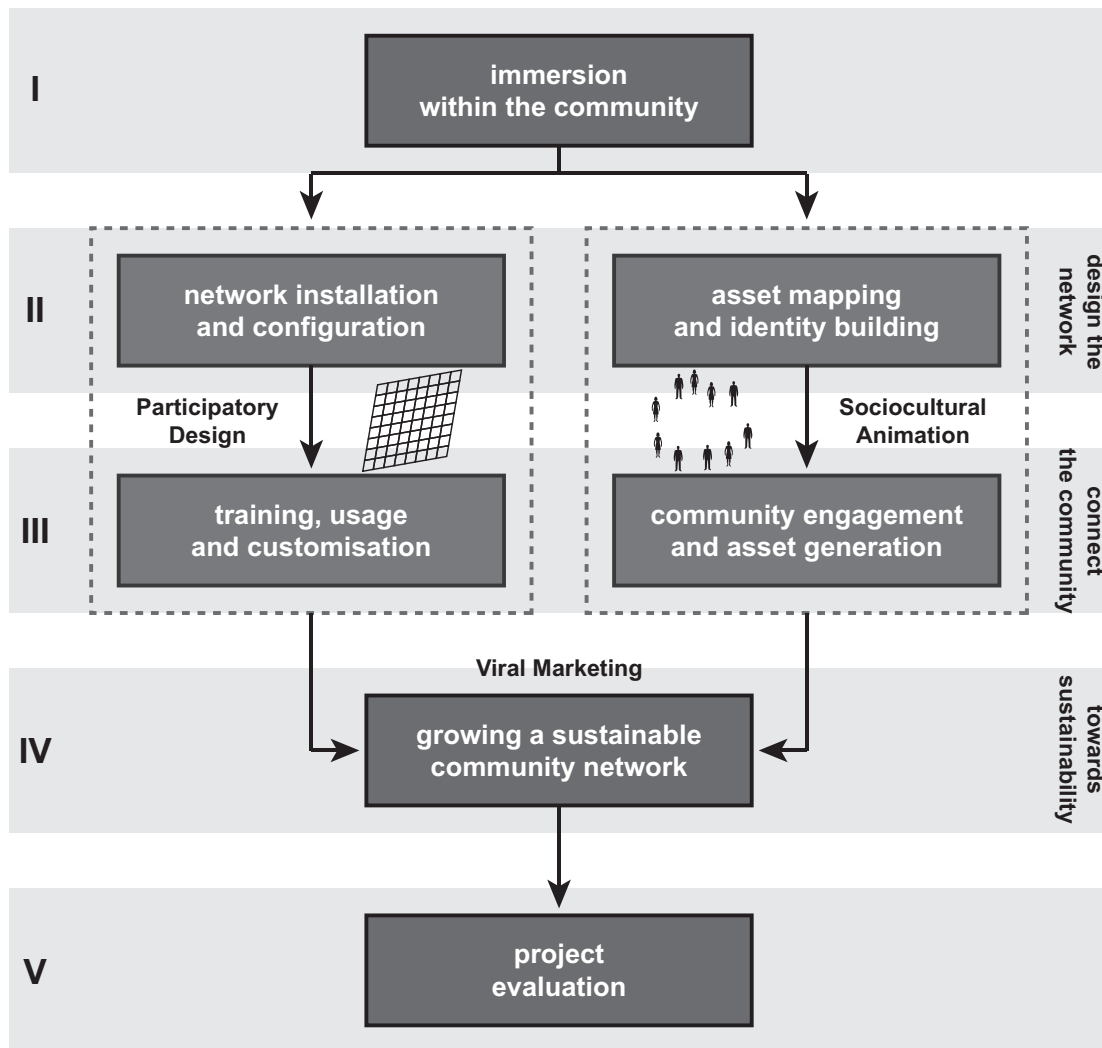


Figure 1: Project stages of the methodology

Figure 1 illustrates the project stages involved in the methodology. After the initial phase of immersion in Stage I, the model integrates systems design (indicated on the left) with community development efforts (on the right) in Stages II and III. Participatory design methods are utilised to create the technical infrastructure, to provide access to information and to ensure usability within the context of human-computer interaction and human-centred systems design, whereas sociocultural animation is employed to populate the network, make effective use of information and to improve sociability within the context of social ties and human peer-to-peer networks. Stage IV adapts principles of viral marketing (explained below) to maintain and build upon a critical mass of active users and to establish a neighbourhood culture that strengthens the system, so “it becomes an institutional actor with relationships to other community institutions, as well as to individuals and their groups” (Carroll & Rosson, 2003, p. 384). Although the ongoing process of critical inquiry, reflection and action within the action research framework already incorporates an ongoing commitment to evaluation within each stage, the research aspect of the model closes with a final project evaluation in Stage V.

Each stage of the methodology and individual conceptual influences as used and applied in our research work will now be discussed in turn.

### **Stage I: Immersion**

To initiate the project, an ethnographic approach lends itself effectively to the immersive phases of the project where the goal is to establish an awareness for and knowledge of the existing communicative ecology of residents by identifying stakeholders and leaders, mapping and establishing relationships, contextualising information needs and building trust with participants. Howard (2002, p. 569) points out that “qualitative methods tend to be best for generating theory and quantitative methods tend to be best for testing theory”. In this sense, the qualitative nature of ethnography has proven to be very appropriate for generating a rich understanding of the characteristics of the local site during the initial project start-up phase which is necessary to prepare for and inform the forthcoming systems design and community development phases that happen simultaneously in Stages II and III.

Immersion prepares for subsequent community participation in order to capture a maximum of both explicit and tacit knowledge sources (Hearn & Foth, 2005; Polanyi, 1966; Rust, 2004) which is a strategic advantage in designing a suitable system. In return, the initial ethnographic immersion in the community also eases the system introduction at the end of the development phase, for the local support from the community through intrinsic motivation, experience from previous engagement and participation, and the joint definition of the project’s objectives support a simplified process of rollout and acceptance. If the project facilitator is recognised as ‘one of us’, it is less likely that the community feels as if the technical network is imposed upon them, rather it is seen as an initiative that grows out of their own ranks.

We found that the initial contact with obvious community stakeholders, such as on-site managers, body corporate committee members, paves the way to meet a range of less obvious residents in the neighbourhood, from the ‘hubs’ of existing social networks to less well-connected residents (cf. Foth, 2006c). The more informal and intricate communicative structures are significant in later stages of the project, because the nature of the interaction within the social networks informs the design of the technical infrastructure that is to support them. At this early stage, goals and objectives are yet to be defined by the community – possibly on top of and complementary to the research-oriented aims of the project facilitators. Thus, it is important to introduce the project in a manner that does not evoke thoughts like ‘this looks like extra work’, but instead highlights the opportunities and the potential the project offers to the community but especially to individual residents (Hornecker *et al.*, 2006). The first impression is essential and should thus be personal but not frightening or overwhelming. In any communication that is sent out to the community, the project should be described in lay terms and in a flexible open-ended manner, so creative space is left for community members to create their own vision of the project for themselves. The project’s aim is to facilitate the creation and realisation of the vision, not to prescribe it. A community networking system can include a

variety of features and functions. However, at this stage it is too early to decide upon concrete interactive tools that will be developed from scratch, from open-source software tools, or adopted from existing Web 2.0 services as part of the project.

In our work, immersion within the case study site comprised of regular meetings with the project committees, a baseline survey to gather preliminary demographic and statistical data as well as to invite participants to leave any first comments and feedback, and follow-up interviews to map the social networks within the communicative ecology of each apartment complex. For this purpose, we found that convergent interviews (Dick, 1998) are a suitable method to elicit a deeper insight into the inner workings of the community, its problems, challenges and opportunities. Depending on the number of participants, potential interviewees were selected using maximum variation sampling (Patton, 2001) which ensures that a variety of views and opinions are considered (Foth, 2006c). The initial contact with a selected number of residents beyond the formal leaders is essential not only to identify common issues and themes in the community that will guide and inform the next phase of targeted research, but also to discover those residents who have the long-term motivation and social leadership skills to become the 'keeper of the vision'. They will also be employed later in the process (Stage IV) to spread the project idea further.

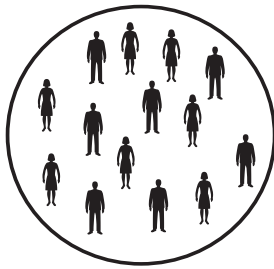
The knowledge generated thus far, a map of the communicative ecology consisting of research themes and social relationships, can be incorporated into a rich picture (Monk & Howard, 1998) which informs the design of the system in Stage II.

## **Stage II: Designing the system**

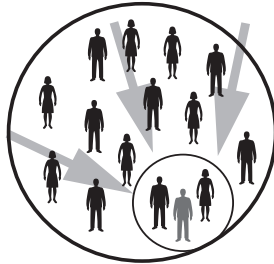
Community identity in residential neighbourhoods may stem from places and sites that "evoke memories, help members reinterpret their memories, and come to signify the values, achievements, and social richness of the community" (Carroll & Rosson, 2003, p. 384). However, initially, the common ground established by a shared address or locality per se is usually insufficient to give rise to community identity and a sense of belonging – especially in the case of master-planned residential precincts as a response to urban renewal pressures, as well as urban neighbourhoods characterised by a high turnover of residents. In the absence of an established community culture and history, neighbourhood community building efforts have to focus on cultivating the assets, skills and values which lay dormant in individual residents. Stage II of the methodology seeks to identify and build community capacity, that is, the awareness and ability of a community to effectively use resources, knowledge and skills (community assets) available to members of a community. The approach builds upon aspects of the Asset-Based Community Development (ABCD) approach (Kretzmann & McKnight, 1993; Pinkett, 2003) to identify, map and mobilise community assets.

In the network society, community assets are not only the formal skills of individuals and the tangible associations and institutions in a given locality, but increasingly the informal social clusters and intangible networks of weak tie relationships that people build and maintain. The approach broadens the scope of community asset mapping and calls for an exploration of how these soft and weak assets can be elicited, connected, networked and harnessed to become strong and smart assets in the service of the individual and the neighbourhood community. In the context of how members of a social network 'connect' a city, Watters argues that "social capital comes from much more fluid and informal (yet potentially quite close and intricate) connections between people. [...], social capital could as easily accrue among a tight group of friends yet still have an effect on the community at large." (Watters, 2003, p. 116). Community assets can be both tangible and intangible such as associations, businesses and institutions (e.g., kindergartens and schools) as well as the diversity of formal and informal skills, explicit and tacit knowledge, memories and histories of residents (Klaebe & Foth, 2007).


Figure 2 illustrates the development process that is initiated in Stage II. To establish a symbiotic relationship between the technical design and the community development, the asset mapping and community capacity building effort is accompanied by a participatory design process to develop the technical and interface aspects of the community networking system. This phase also engages residents in sociocultural animation to map existing and potentially create new social networks between residents based on their individual interests and support needs and to allow for freedom of creative expression within them. The community networking system's premise is to enable personalised networking with proximate residents of choice. It must afford a flowing, cellular, organic lifecycle of social network formations and the interest-based clusters within them: they are born, they grow, they connect, they disconnect, they pause, they merge, they split, they die.

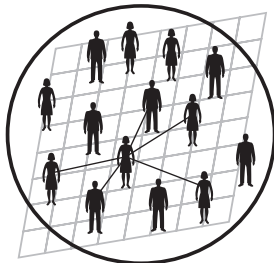


**Residential 'community',  
offline. Immersion.**

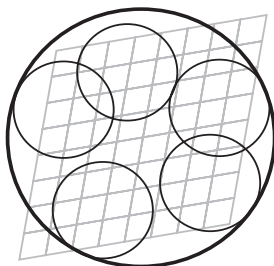


**Participatory design and  
sociocultural animation:  
Building the community  
and the network.  
The 'keeper of the vision'**

 = Animator



**The community network  
enables personalised  
networking with proximate  
members of choice.**



**Communities of interest  
and support evolve which  
interconnect by means  
of content syndication.**

*Figure 2: The approach enables personalised networking and local communities of interest to evolve*

The system itself may take the form of an intranet or portal that includes a variety of tools such as chat, instant messaging, web blogs, discussion boards, file sharing areas, and so forth. However, in our work we recognised an emerging trend for glocalisation (Robertson, 1995; Wellman, 2002), that is, to adopt globally available Web 2.0 services and applications and reappropriate and personalise them for locally meaningful use. This option has the advantage of allowing users to create cross-linkages with other communication systems they may already be using. We then analyse the interaction afforded by each tool and customise the level of functionality to the communicative ecology found in the community. A particular tool that affords a certain style of interaction may be suitable for one type of social network, but may be inappropriate for another. It is desirable for the system to provide consistency, but also flexibility, scalability and permeability.

The two most important aspects of Stage II are community asset mapping and capacity building. Design and content creation workshops provide opportunities for avid participants to gather as a group, to discuss ideas, share stories, and report their experiences back to their friends and other residents. They also establish new relations with members they have not met before. They are encouraged to accumulate a library of community assets and resources and flag areas in need of improvement and expansion. Overall, the participatory design of the system (or suite of localised Web 2.0 services) has the welcome side-effect of potentially activating and increasing social capital even before the community networking system itself is operational by forming a 'community of creators'.

### **Stage III: Connecting the community**

At this stage, the infrastructure for the community networking system is set up. The next step is to fill it with content relevant to the neighbourhood and to populate it with resident users. Similar to Stage II, we utilise methods based on in-depth interviews, workshops and design studios but also social events (Ball-Rokeach et al., 2001; Klæbe & Foth, 2007; Lambert, 2002) in order to connect the community with the network. This process shows community members how to use the system to connect with members of the community who share similar interests or support needs or who are like-minded.

At this stage, we also work towards promoting the system, attracting more users and spreading the word. We found this process to be less daunting if the set of communication tools is not limited to features that require a large number of users to regularly communicate with everyone else, but that afford peer-to-peer personalised networking with a selected number of users. Yet, even the latter strategy requires some sort of online directory for residents to find out about who is living in their neighbourhood and how to connect with them. Thus, this is the time to start taking the project idea from the initial pool of volunteers to a wider section of the neighbourhood. Already starting at Stage II, the researcher takes on the role of a sociocultural animator who encourages and trains community members in how to use the system to conduct personalised networking, how to communicate with other members and how to benefit from it personally. According to the ongoing usage and the input from residents, the system will further evolve and be customised to reflect the needs of the individuals and their social networks.

The findings of the asset mapping exercise from Stage II are fed into the systems design to publish information about existing resources and facilities that are available to residents of the neighbourhood, thus creating additional value online in the form of helpful content. This step can also be used to identify assets which have not yet been identified, but which could be generated by residents. The animator works to engage and network other residents to use and contribute to this pool of assets in an effort to introduce norms of reciprocity towards continuity and sustainability of the community networking system and the neighbourhood.

#### **Stage IV: Towards sustainability**

By now, the sociocultural animator holds a range of responsibilities such as training new users, engaging the community to contribute content, encouraging discussion and social activity within sub-nets, and so forth. If a state of ongoing sustainability is to be reached, the animator must aim at retreating from the systems design and the community by rendering his or her role progressively redundant.

Thus, the key objective at this stage is to manifest a community culture or spirit within the cluster of each social network which nurtures a stable and robust neighbourhood identity and ensures the continuity of the system's purpose and benefits. Even if the neighbourhood experiences a high turnover of residents, procedures are to be in place which allow new residents to freely select from a range of sub-networks and to enter those they choose. Principles of viral marketing (Godin, 2001; Goldsmith, 2002) such as 'Email this page to a friend', 'Send this photo as an e-card', 'Recommend us', as well as content syndication and track-back components (Hammersley, 2003) can be adopted to encourage existing residents to recruit new residents as active system users.

Furthermore, the previous range of face-to-face project interactions in the form of interviews, content workshops and design studios, which also promote trust and identity building, should now evolve into less formal but regular social interactions face-to-face (e.g., group excursions, barbecues, games, chats over coffee, sports, birthdays, club meetings). The goal is not to engage all neighbourhood residents at once in any event, but to allow clusters and networks of residents to come together socially. This helps to establish an interconnected web of individual social networks. This 'meshwork' constitutes an appearance of urban neighbourhood community formation which adds a new understanding to conventional notions of 'community' seen as collectives only (Foth & Hearn, 2007).

During this stage, the animator has to ensure that any areas of responsibility and any continuing tasks that are left from the previous stages of the project are delegated or allocated to suitable members of the community, so the animator can finalise the research aspect of the project in Stage V without interfering with the ongoing activity within the community network and the neighbourhood.

#### **Stage V: Evaluation**

The action research framework applied throughout the previous project stages requires an ongoing dedication towards evaluation and testing. Nevertheless, the last stage of the research aspect of the project calls for a final and holistic evaluation. The applicable methods include the

analysis of online network usage statistics over the life time of the project and a qualitative comparison between the data from the pre-assessment in Stage I and the post-assessment of Stage V (Pinkett, 2003).

Network and membership statistics provide quantitative data on aspects of content growth, online traffic, levels of uptake, and frequency of use, and are helpful to determine whether:

- the online participation is in relation to the size of the neighbourhood, and how many residents prefer to remain 'lurkers' or not to participate online at all;
- certain online areas, services, functions are in higher demand than others; and,
- a critical mass of users has been reached or exceeded where required.

The results of this preliminary quantitative analysis can be verified and complemented with qualitative data collection that consists of questions which refer to the research themes elicited in Stages I and II, including themes such as:

- social capital;
- community capacity, community identity and social ownership of the network;
- formation of social clusters of interest and/ or support;
- awareness of neighbourhood assets, skills, knowledge and resources;
- resident engagement and involvement; and,
- ability of the community network to support and advance individual's private social networks.

As with any evaluation, it is crucial to undertake a critical assessment of the criteria and in this case, the conceptual understanding of 'community' underpinning the evaluation. The interpretation of results and findings could be flawed by a one-sided view of what constitutes 'community' or 'social capital' in a contemporary communicative ecology in urban neighbourhoods. The research needs to be open and unbiased to find other, less obvious types of social formations and social capital that are outside the conventional norm. Putnam's (2000) interpretation of community and social capital for example is controversial and met with just criticism (Fischer, 2005; Florida, 2003; Sobel, 2002; Watters, 2003), because it ignores other, more contemporary forms of social capital that are based on the strength of weak ties (Granovetter, 1973) and the impact of conducting social networking. Any kind of evaluation of community networks in urban neighbourhoods has to show an awareness of these issues.

## **Conclusion**

Interdisciplinary investigations of the communicative ecology in neighbourhoods and vertical real estate in urban capitals of the developed world are timely as they contribute to a better understanding of the changing facets of community in the intersection between people and place and the role technology plays to facilitate these changes. The approach presented here contributes to the knowledge base and direction of community informatics research.

The approach combines principles of ethnographic and network action research, participatory design, sociocultural animation and viral marketing in an effort to integrate community networking systems design with community development and community capacity building efforts. Although it is discussed here in an academic context, housing associations, landlords, body corporates, tenant associations or a group of individual residents may want to pursue the community networking and community building strategies associated with this approach for their personal benefit without adhering to strict academic conventions. In this sense, it is possible to re-purpose elements of the methodology as a guide for practical, non-research driven initiatives.

Further findings resulting from the application of this approach to a case study of urban neighbourhoods can be found in Foth & Hearn (2007).

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