Towards a Suite of Tools for Re-imagining Online Social Phenomena

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Introduction: why Re-imagine Online Social Phenomena?

A great variety of communication technologies are in day-to-day use: these include more traditional tools such as email and landline phones, fully established technologies such as mobile phones and instant messaging (IM), and newer items including social networking sites and blogs. These media can be a source of fun (Hart, 2008) and emotional support (Wright, 2002), yet a large chunk of society is excluded from this arena of social interaction. For example, in general elderly people face a range of obstacles to the uptake of technology (Namazi, 2003).

This issue is increasingly important, especially given the trend for ageing populations across the western world, and the geographical dispersion faced by many families. Technologies built without due consideration can exclude users considered 'non-standard', whether due to impairments, economic considerations or cultural aspects. Meeting these considerations when building any system requires a holistic outlook and an inclusive approach to design (Newell, 2004).

Our goal is to connect these offline people through technology with which they are familiar. Opening up fresh communication channels for these people could help improve their general wellbeing. For example, contact with family might become easier (children could email grandparents regardless of whether the grandparents own a PC), and access to online content could be gained without requiring ownership of expensive computers or mobile phones, and knowledge of how to use web browsers. People may view weekly printed bulletins of updates about friends and family, and daily bulletins with important social updates and prompts about the day ahead (appointments or jobs to do). In summary, many more people would be able to access the online content and communications facilities which so many of us take for granted.

The authors' focus in connecting these offline people is in enabling access to social networking functionality, as provided by websites such as Facebook, MySpace and Bebo. Our goal is to enable the realization of visions such as this:

> *Gerald is an elderly man, who lives alone in a flat. He has no interest in computers, but is happy to benefit from services enabled by technology. For example, he is very interested in seeing photographs from his grandchildren's sports day. A digital photo frame is installed on his wall; when Gerald's son Matt uploads photographs from the sports day to a social networking website, the pictures are displayed in turn on the display.*
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> *Later that day, Gerald's grandson Billy writes him an email about the sports day. Gerald doesn't access his email account on a PC. Instead, the email is translated into an audio file and read to him via his telephone; an alternative way, which Gerald does not prefer, would be a paper copy via a microprinter. Gerald listens to Billy's message late in the day, when Billy is probably asleep. Gerald records a reply, a voice message for Billy to receive in the morning.*
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> *Gerald is also particularly interested in a small community of ex-pat friends of his, who live in Spain. He plans to travel to visit them one day, but meanwhile he follows updates about their day-to-day lives online. Gerald accesses these updates via a teletext[1]-style display on his television.*

In order to effectively build such a system, it is necessary to understand and re-imagine the experiences offered by social sites. This paper describes our plans to use methods from a wide range of disciplines to better understand online social phenomena, towards achieving scenarios such as that above: by producing a suite of analysis tools for re-imagining web-based social systems in new contexts, we can improve our understanding of those systems. This allows us to more effectively provide social functions via new communication channels.

[1] Teletext is a text-based television information retrieval service, which runs in the UK.

Towards the Suite of Tools

The authors intend to analyse and evaluate various methodologies which can be used to understand web-based social phenomena. These methodologies are drawn from various domains, and include Experience Deconstruction (from HCI) and Actor-Network Theory (from social theory). The authors have chosen to draw upon a diverse range of domains so as to gain holistic insights. We plan to understand, order and apply the methodologies so as to maximise their strengths and minimise their weaknesses.

Applying these methodologies to web-based social networking will allow the re-imagining of this experience. It will be recreated such that although the presentation may differ, the underlying motivations and experiences remain the same. We hope to make currently web-based social phenomena more manifest in the pervasive world, in a fashion which may be ludic and novel.

We have begun to investigate two tools, experience deconstruction and actor-network theory:

Experience Deconstruction is a HCI technique that facilitates an in-depth understanding of a particular interaction or tool within a social site (for example, items of functionality such as 'photo sharing' or 'microblogging'). The deconstruction process, developed by Dix (Dix, 2003), involves teasing apart the strands which make an experience what it is, and which make it 'work'. Distilling the underlying experience of social networking simplifies the task of translating it to new communication channels. Dix used his deconstruction process to translate the physical experience of pulling Christmas crackers onto a website. Rather than trying to directly emulate real crackers, Dix captured aspects of the experience of pulling crackers through deconstruction, and translated those to the medium of the web. We describe the deconstruction methodology, and demonstrate its use - along with reconstruction - with aspects of the social networking experience.

Actor-Network Theory (ANT) is a sociological approach to understanding social networks that provides a process-based perspective on interactions between users across the network, and gives an insight into how the network is formed and evolves (Callon, 1986). ANT models the flow of interactions and processes between 'actors' (which may be people, artefacts, text or graphics). We apply ANT to aspects of social

networking functionality, and demonstrate its relevance to social networking sites overall, and to the achievement of specific goals within these.

Conclusions

Our aim is to use these techniques in order to deconstruct a digital experience so that it can be reconstructed into a new digital context, for example, taking the experience offered by a social networking site and reconstructing it using novel pervasive channels.

In parallel to this work, the authors have prototyped a messaging infrastructure which could carry this social data. This system decouples information from its original modality, for example allowing an email to be displayed on a screen, printed or vocalized on a phone.

It is hoped that this work will facilitate the re-imagination of social systems in novel or unusual contexts, perhaps in a ludic fashion such as that of digital family portraits (Mynatt, 2001) and table-based devices such as the TeleTable (Donaldson, 2005) and the Drift Table (Gaver 2004). Additionally, it is hoped that as a result of this work, people will be able to use individual methodologies more effectively, and apply the re-imagining framework to experiences from other domains. The re-imagined social networking experience itself may act as a starting point for work on enabling access to social technologies, or investigating the ways in which people use these in different contexts.

Our hope is that by re-imagining and rebuilding social systems in this way, we can provide the basis for a fully-fledged *Social Fabric* to improve technology access, and help a wider range of people benefit from social technologies.

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