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Cultural Theory and Real World Design - Dystopian and Utopian Outcomes

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ABSTRACT

When exploring a topic as intangible as the construction of mobile social networks it is necessary to look at how relationships are formed and at the way users identify themselves through their interactions. The theoretically informed discourses within cultural theory make an ideal lens for understanding these subtle nuances of use in terms of design. This paper describes a case study where the application of abstract cultural theory concepts to the practical act of analysing qualitative data from a user study resulted in the development of The Swarm mobile phone prototypes. By signposting the intersection of cultural theory within HCI, the value of a philosophically grounded mobile phone design space is highlighted. To uncover reactions to the design we explored the blogs that sprung up critiquing an online version of The Swarm and in doing so, discovered the at times subversive values (such as the need to lie) that users place on their mobile mediated interactions.

Author Keywords

Cultural theory, user studies, mobile phones.

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI):
Miscellaneous

INTRODUCTION

What is it about the social and cultural conditions surrounding mobile phone use and indeed, about the mobile phone itself, that has elevated the device from a communication tool to a celebrated artifact? What are the implications for the design of future technology? These questions pose a considerable challenge for human computer interaction practitioners who must look beyond

‘efficiency’ and ‘function’ [7] to such abstract notions as ‘identity’ and ‘friendship’. We argue that the integration of cultural theory within HCI provides a critically informed perspective at the intersection of use, technology and design, contributing to techniques that can leverage philosophical insights into practical future mobile phone design concepts.

The first section of this paper examines the emerging body of work within HCI that recognizes cultural theory’s inherent applicability to not only comment on, but also inform and affect users’ relationships with technology. The second section introduces The Swarm study and maps four key cultural theory concepts onto the qualitative data. They are: (1) Looking to the Periphery, (2) Eroding the Boundaries between the Producer and Consumer, (3) Digital Identity and (4) Utopian and Dystopian Outcomes. Building on our previous work [34] the third section of this paper describes the application of these concepts to the development of the emerging themes, user needs and design implications that led to The Swarm mobile phone prototypes. Finally, we reflect on the blogs, reviews and online discussion threads generated by an online version of the prototype. http://www.pixelshifter.net/client_login/swarm_2007 Although they reveal few clues about usability issues, these critiques provide unique insights into what users want and highlight the often unstated values that underpin our use of technology.

Cultural Theory and HCI

Cultural theory emerges from many different disciplines and philosophies including social theory, anthropology, Marxism, feminism and language theory. It produces a rich social commentary that positions phenomena in light of the complex conditions in which they are embedded. In doing so, new ways of thinking about culture and what our interactions with it means are uncovered [16].

A growing body of critically informed HCI research illustrates that cultural theory is relevant beyond theoretical analysis and social commentary and has the potential to extend beyond passive criticism of what it is observing, to the active re-contextualization of design and design approaches. The research conducted by Blythe et al., [6] is informed by a background in literary and cultural studies.

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These perspectives come to the fore in the development of new methodological approaches for design in sensitive settings such as ‘domestic environments’. On a more specific level, there is use of the individual components of cultural theory within HCI such as Marxism [35], feminism [8], semiotics [10] and hermeneutics [45].

Agre [1] in his book *Computation and Human Experience* argues for the introduction of critical reflection to help understand the metaphors within computer science. He calls this ‘critical technical practice’ (CTP). The notion of CTP was further extended by Dourish et al. [14]; Sengers et al., [38] and Boehner et al., [7] who use CTP to recognize the values embedded in technology and in doing so provide a vital ‘social embeddedness’.

As technology literally surrounds us – wireless networks saturating the ether, computers crawling off the desktop and into our living spaces and our bodies, technology shaping the way we communicate, think and reproduce – recognizing the values designed into technology becomes an acute issue [7] (p.1).

Sengers [36] notes that the merging of cultural theory with computer science is problematic; yet, her research demonstrates that the convergence of the two disciplines is fruitful. The outcome is a design process where the development of new technology is embedded with an understanding of the culture from whence it came and where it will be deployed.

A further extension of CTP is Reflective Design [38] which encompasses critical reflection on the social implication of technologies. This approach is not centered around post design usability analysis but rather aims to bring about a sensitivity in HCI which allows both designers and users to incorporate ongoing critical reflection.

On a meta level the influence of cultural theory is evident in a new design ideology and philosophical shift occurring within HCI. It is characterized by the need to seek out and understand user needs in light of the complex cultural formations that are produced through interactions. Gaver et al., [17] Sengers [36] and Dourish [15] achieve these sorts of insights through the use of non-conventional methods that include theoretical perspectives borrowed from the Da Da art movement, postmodern theory and postcolonialism respectively. In doing so they provide philosophically informed perspectives of user needs and draw attention to the potential benefits of critically informed HCI methodologies. This providing support for the case study presented in this paper.

CASE STUDY: THE SWARM

The Swarm study was conducted as part of a PhD program for the User Environment arm of The Smart Internet Technology Cooperative Research Centre (SITCRC). The SITCRC is a research body that includes academic institutions, government funding bodies and industry partners and is engaged in a seven-year project to develop

new digital technologies for the year 2010. The aim of The Swarm study was to explore the needs of young users in relation to their use of new digital technologies, specifically mobile phones, so their needs could inform the design process. A major focus was on how users interacted with new technologies in order to create a sense of identity, both for themselves and the world they lived in.

Thirty-five technologically competent users, 18-30 years old, living in Melbourne, Australia participated. The open-ended interview technique [27] was employed to conduct the initial user study. This interview technique provided insights into the culture that was being studied by allowing the researcher and the user to engage with each other. The dialogue helped produce a result where the participants revealed in-depth accounts of their ideas, opinions and experiences. The implementation of this method encouraged participants to share narratives that revealed their uses of new technologies in their everyday lives by focusing on the moment of interaction rather than the adoption of technology to fulfill social and cultural goals. Later, seven of these users would be engaged in the testing of The Swarm prototypes.

Due to the mix of stakeholders within the SITCRC that included private sector funding, quick results were needed to provide the rest of the design team with a rapid but informed sense of the users and settings they were designing for. Therefore, although Grounded Theory [42] techniques were used for the initial analysis, the data was not scrutinized in minute, line-by-line detail, or with the strict theoretical agnosticism as specified by Glaser [20] rather; it was treated as a means of gathering initial user requirements.

Once the emerging themes had been identified [32] a matrix was developed to map the main observations. The data showed that the themes were not about technology; they were about culture, style, fashion, identity, friendship and deceit. Translating such complex yet subtle user needs into design called for a philosophical framework to contextualize these nuances of mobile driven culture. Cultural theory, with its emphasis on the meanings that interactions produce, was ideally aligned to perform this function and four key constructs were selected to provide greater insights into the data.

MAPPING THE CULTURAL THEORY CONCEPTS ONTO THE DATA

The study revealed that for a new generation the mobile phone was integral in the formation of fluid social interactions and had accelerated urban mobility. Users once restrained by pre-made plans were able to spontaneously traverse the city and suburbs, swarming between friendship groups and activities. A distinct user archetype was emerging from these mobile phone driven sub-cultures – ‘the nomad’ [32]. Cultural theory discourses that ‘looked to the action in the periphery’ were engaged as a framework

for understanding how the practices of these urban nomads might be absorbed by mainstream culture.

The need for critically informed theories about the construction of 'digital identity' arose when 24 of 35 users revealed that interpreting other peoples' digital identities provided a means of discerning what the other person was like. As one participant stated, "The synthesized persona is quite revealing".

Twenty six participants in the study reported that they derived pleasure from documenting, circulating and consuming digital accounts of day-to-day experiences. They were active content producers rather than passive consumers of technology and used their own experiences to create new consensual meaning within their social networks. A participant noted, "I find that a picture of a pot of beer, sent to my mates at about 5pm on a Friday communicates volumes." This highlighted the need to engage cultural theory discourses that explored the process through which the 'boundaries between the producer and the consumer became eroded'.

Finally, the need for a framework to explore potentially 'utopian and dystopian outcomes' was evident when it was revealed that although connectivity provided mobile phone users with a sense of reassurance, for 18 participants, this brought with it the consequence of vulnerability due to unwanted calls, creating a generation of conflicted users trying to balance the need for connectivity with the desire to be at times, uncontactable.

APPLICATION OF THEORY TO DESIGN

The use of these four cultural theory concepts added value to the research by providing insights into what happens when users, technology and culture intersect. However, it was becoming evident that these constructs should be valued as more than a body of work that could be dipped into in order to illustrate a particular point. Cultural theory had the potential to become a star performer in the design process itself and in order to map its methodological value, each instance where 'theory' and 'design' intersected was signposted.

Pinpointing precisely how abstract philosophical concepts could be drawn into the practical act of analyzing user study data in terms of design was problematic. Synthesizing the complexities of intermingled tropes and competing dialogues that characterize cultural studies discourses into ideas that would be consumable and portable across disciplines within HCI that includes social science, usability, computer science and engineering was a major challenge. Nevertheless, the following section will summarize the four concepts, examine how they influenced the analysis of the data and then describe how they contributed to an understanding of user needs in terms of design which in turn, led to the development of The Swarm prototypes. The screen shots are from the online version built by Pixelshifter and Smurfo.

Cultural Theory Concept: Focusing on the Action in the Periphery

Cultural theory looks beyond mainstream culture and focuses on activities occurring on the 'periphery'. This means that previously un-represented groups and practices come to the fore. Eagleton [16] argues, "In retrieving what orthodox culture has pushed to the margins, cultural studies has done vital work" (p.13).

One of the peripheral groups that have been of most interest to cultural theorists is 'youth'. Significantly, cultural theory provides a holistic critique of everyday social behaviors of youth cultures, not as some sort of novelty or 'other' but as unique, meaningful cultural formations. This is important because innovation is often occurring within the subcultures of youth cultures such as hackers and gamers. By understanding the activities of these fringe users new designs can successfully be brought into the mainstream [41]. The process through which illegal underground peer-to-peer file sharing culminated in the development of the iPod is a classic example of this [40].

When taking this view, the focus of attention is not what properties youth have as a class of users, but rather by what mechanisms youth is constituted as a cultural category. Not so much 'what youth is doing' but 'how youth is done'? This highlights the contrasts between what the HCI usability specialist would say and what the cultural theorist would say.

Influence on the analysis of the data: Identifying the signifying features of youth culture

Cultural theory provided a useful lens for understanding the needs of young people in the user study revealing 'youth culture' as a social construction as opposed to a biological category [24]. In doing so, the signifying features, as distinct to those of 'mainstream' society, were revealed. In this way, a cultural theory critique of the data from the user study directed the analyses of the data to uncover what, if anything, was unique to the subculture of young mobile phone users? What signifying features set them apart from other users?

Application to design: The phone as a virtual home base

The focus on the distinguishing features of participants revealed a subculture of nomadic users who were disconnected physically but connected digitally. They responded to increasingly fragmented lifestyles by turning the mobile artefact itself into a kind of virtual home base. This enabled them to continually express and maintain their identity, albeit a digital representation of it.

Looking at the signifying elements of 'youth culture' itself provided insights that shaped the development of The Swarm phone which has at its core a virtual lounge room where through the use of avatars, users could maintain a virtual presence where they could always be found (see figure 1). For a more detailed description see [32]. Unlike Internet chat that rests on the assumption that the user is in

one spot, The Swarm is a response to mobility. As such, it facilitates the creation of activity based avatars that can be mapped onto ever-changing locations and everyday events. The user can provide their chosen friends with a continual account of their activities. Ultimately, this gives serendipity a nudge in the form of facilitating interactions with individuals or groups who may be in the same vicinity.



Figure 1: The Swarm main screen. The main avatar represents the user of the phone and what activity they are engaged in, for example, in this case the user is driving. The small, colour-coded avatars at the bottom of the screen represent the user's friends.

Cultural Theory Concept: Digital Identity

A central concern for cultural theorists is the reconstruction of identity in digital environments. Goffman [21] describes the way our interactions drive us to become 'actors', presenting our desired face to the world depending on the context of the situation and in doing so, highlights the multiplicitious nature of identity. He finds the construction of our identity evolves through a series of 'performances' shaped by the environment, the audience and the impression we want to make. Yet, in the disembodied world of digital space, the cues to identity that we have in the real world are absent. The result, as noted by Haraway [23]; Poster [29] and Turkle [44] is that digital identities are lent greater fluidity. For example, Turkle finds that digital environments allow users to shed the human qualities of age, gender, race, disability and even, as in the case of an HIV positive man who had promiscuous online sex, disease.

Influence on the analysis of the data: Identity as disclosure rather than anonymity

At a time when designers are theorizing about the nature of user experiences in digital environments and asking as Laurel does, "Can we create real social depth?" [26] (p.196), these perspectives provide more than academic insights into the ideology of identity politics. They have a practical application, encouraging us to critically consider the implications as a new generation extends their identity into an increasingly pervasive digital sphere. Exploring the pleasure users in the study derived from playing and experimenting with digital identity challenged the often held notion that digital identity should be thought of in terms of the restriction of information or anonymity. Our focus is directed onto how users want to reconstruct their identity in these spaces. What qualities do they want to include? What do they want to leave out? As Giddens' asks, "What to do? How to act? Who to be?" [19] (p.70)

Design Implication: Facilitating simultaneous representations

Unlike notions of identity held within ubiquitous computing that aim to reveal where a user is located and what their activity is, the use of culturally informed perspectives into digital identity presents the challenge of allowing different identities to be expressed simultaneously in a range of contexts. In order to facilitate this, The Swarm supports multiple avatars that represent the users' multiple identities. As figures 2 and 3 demonstrate, a user can set a social avatar for friends to see while simultaneously projecting work mode to colleagues.



Figure 2: The user projects leisure mode to four people.



Figure 3. The same user simultaneously conveys work mode to seven contacts.

Cultural Theory Concept: Eroding the Boundaries Between the User and the Producer

A central theme of cultural theory is that individuals will create meaning according to their own experiences. This concept was developed by Barthes, who, in his later work *Image-Music-Text* [3] examined the process through which signifiers produce multiple representations. For Barthes, this brings about a culture so saturated by multiple meanings that the signifier floats free from the signified and shared understandings are pushed away as interpretation becomes the domain of the individual. The result is the 'death of the author' and the awakening of the 'pleasure of the reader' who seeks to contextualize the text in light of their own experiences.

Theorists examining the changing nature of communication models draw attention to the erosion of the traditional broadcast model. In the broadcast model the message is sent from the top down and the viewer is the passive receiver. However, cultural theory brings about a more complex reading of the process through which messages are consumed in that the message is read through each individual's unique set of experiences [9]. This is especially true as new digital technologies emerge that, unlike the passivity of television, are more interactive, providing users with the opportunity to challenge the one way hierarchy of the broadcast model. The result is users becoming more active producers. This

shift is important as was noted by Lie and Sorenson, cited in [22]:

In fact, one should be careful about the a priori distinction made between use and design, between user and designer. This distinction implicitly inscribes assumptions that the one is passive (user) and the other is active (designer)... (p.8)

Influence on the analysis of the data: Encouraging creativity

Cultural theory highlighted a problem that could be addressed by designers. It suggested a series of design implications and demonstrated how dynamic artefacts created and managed on 3G phones could afford users with the ability to broadcast their own personal experiences. This meant that users could move past the limits of current technologies that have the potential to render them as passive consumers. For example, it could be seen that participants used their mobile phones to document and circulate their own experiences. While the initial interviews in the study showed participants doing this through the use of text and images, as 3G capabilities came in towards the end of the interviews, users were becoming increasingly creative - cutting, pasting and 'mashing' together both home produced and commercial video, sound bytes and texts to broadcast their experiences to their friends.

Design Implication: Facilitating user produced content production

In order to encourage the consumption of content that extends beyond downloading novelty ring-tones and Britney Spears wallpaper, The Swarm provides users with the ability to capture and display 'up to the minute pictures', allowing the user to create a virtual presence that reflects a continual digital representation of their real life. Additionally, the user can embed their avatars with digital content that will be revealed when another person clicks on it. In this way the avatars become a wrapper for the digital content. As was discussed by Jacucci [25] the use of digital content in this way can act as an incentive for those not present to join them or allows for those who cannot be there to 'get the picture'.

In figure 3 it can be seen that Darren's avatar has appeared on the user's phone. The user clicks on it, which brings up Darren's virtual lounge room (figure 4). Darren has added a message on the screen stating that he is in Hawaii. The user can tell by the presence of the thumbnail image that Darren has enhanced his digital presence with content and clicks on it to check out the surf (figure 5).

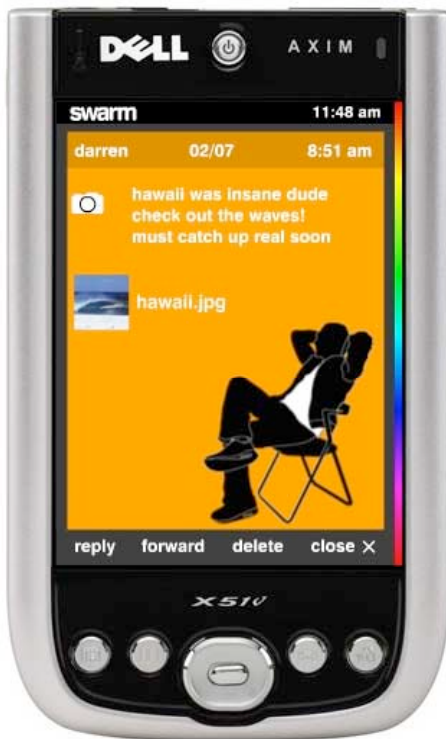


Figure 4: The thumbnail jpg indicates that presence has been enhanced with digital content.



Figure 5: The addition of digital content allows for the sharing of experiences with those that cannot physically be there.

Cultural Theory Concept: Utopian and Dystopian Outcomes

There is a shared agreement amongst cultural theorists that ‘technology’ itself is one of the defining discourses of our time; however, there are widely differing views as to what the implications of this are.

On one hand, is the utopian view of technology that can be seen in the work of Haraway [23], who, in the *Cyborg Manifesto*, paints a post-feminist utopian view of the Internet as a space where a woman is free to create her own identity and lose the shackles of modern constraints by reconstructing her identity free from the constructs of race, gender, and aesthetics. Plant [28] too, looks at how users are empowered by technology. Rheingold [30] sees digital communities as a new political utopia - constituted around the sheer pleasures of connections in the free space of the Internet. Poster [29] also sees technology as enabling users to redefine themselves within a new political paradigm.

On the other hand, is the dystopian perspective, most notably, the view of Baudrillard [4], where Western society is reduced to a series of digitized ‘hyper real’ images that have little purpose other than to seduce us into the endless consumption of consumer goods which once purchased, cease to satisfy.

While many cultural theorists are polarized, it is possible to simultaneously view the tensions between the utopian and dystopian possibilities that new digital technologies present. For this, it is helpful to use the rhizome/arboreal paradigm provided by Deleuze and Guatarri [11]. In *A Thousand Plateaus*, Deleuze and Guatarri describe the rhizome as a space where social and cultural liberation is achieved, where the erosion of hierarchy frees individuals, groups and societies from the confinements and rigidity of traditional social and political order.

The concept of utopian freedom of movement supplied by Deleuze and Guatarri is employed by cyber theorists such as Wray [46] as a means of explaining how users freely traverse digital space. However, an essential part of the model is that utopian elements can only exist in tension with dystopian forces. This reminds us that for every nomadic user who freely traverses smooth mobile phone space, or seamlessly creates and distributes content on the fly, there exists another user struggling with the dystopian aspects of design. This user battles limits such as handsets that provide so little control over the management of incoming calls that the nature of mobile facilitated digital environments changes from a smooth, utopian space to a straightened, dystopian stranglehold.

Influence on the analysis of the data: Exploring potential outcomes

When analyzing the data and translating the findings into design, the exploration of the abstract utopian and dystopian outcomes provided by cultural theory proved helpful, providing insights into how technological design can either liberate or disenfranchise users. Examples of

utopian experiences were tagged as potential leverages for new design, while dystopian outcomes provided invaluable insights into what particular aspects of design could inhibit the user from reaching their desired outcomes. It could be seen that although connectivity and the consequent sharing of experiences provided participants with a sense of reassurance within their social networks this practice generated new problems.

Participants reported that they struggled to maintain the balance between the need for connectivity and the desire to be at times, uncontactable. These users resented the incursion the artefact brought into their lives. The most common example of this was incoming phone calls; however, even asynchronous communications such as text and multi-media messages, which prior research found to reduce commitment [47] could be intrusive as they generally required some sort of response. The framework of utopian and dystopian outcomes indicated a tension where although users wanted to maintain a virtual presence in each other's lives, paradoxically they desired a way to exert more control over their mobile connectivity, ideally, by reducing unnecessary contact.

Design Implications: The need for connectivity versus the need to control contactability

A major challenge in developing the prototype was facilitating presence, while at the same time, reducing unnecessary interactions. To meet this contradictory need The Swarm provides a series of avatars that act as digital representations of the user. The avatars depict the user's current activity and can be programmed to appear on the user's friends' mobile phones. As the activity changes, the avatars can be updated accordingly. This allows individuals to see at glance what the other members of their friendship networks are doing at any particular time. By providing users with this contextual information about what other members of their social group are doing, presence and intimacy are maintained. In turn, this allows users to draw on their sense of social and cultural etiquette and depending on the nature of the activity, decide if they should contact each other or not. For example, in figure 1, it can be seen that there is a heart embedded in Maria's avatar. This indicates that she is on a date and we can infer that it might not be an appropriate time to call.

DEVELOPING THE ARTEFACT

A design solution specific 'scenario prototype' was developed [31] to encompass the user needs and design implications. It formed the basis of a series of Swarm mobile phone prototypes.

The SITCRC Architecture Project developed two digital architectures that allowed for the construction of a dynamic, shifting, personalized, digital identity. The first was *Pre Swam*, built by Justin Lipman and John Zic that allowed users to apply contextual rules that would determine which information embedded in the multiple avatars incoming callers could see. *Swarm++* built by Chris Johnson and

Sam Holden focused on setting up protocols such as 'ripple down rules' [39] to deal with instances where incoming callers were members of two different contact groups such as work and leisure.

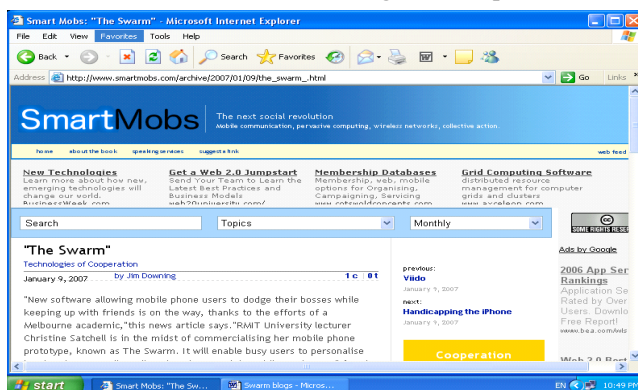
Malleable-Swarm [43] was developed in conjunction with a research project at Sony CSL, Paris. It demonstrated a future convergence device merging Walkman and avatar-driven mobile phones. Communications happened via *sonic avatars* with users embedding music in their virtual representations. This meant the social interactions drove the production of user generated digital content allowing the music to provide the person with the 'face' of their digital identity

Ideally, we would (1) report on the usability studies that examined these and other Swarm prototypes not mentioned here and (2) contrast the design with other similar systems that were not influenced by cultural theory (eg. Twitter, Jaiku and Facebook Mobile). However, due to page limit requirements there is space for only one form of reflection. We have decided to present a critique that examines the responses to the online version of The Swarm that generated around 50 web sites and blogs. Representative samples and selected extracts are presented below.

CRITIQUING THE DESIGN THROUGH MEDIA BLOGS

The process of analyzing the reviews, blogs and discussion threads provided limited insights into the potential usability of The Swarm; however, despite the numerous functionalities offered by the device, the way in which one particular facet became a central focus of the Internet chatter provided insights into the deeply embedded social and cultural values surrounding our interaction with technology. From *New Scientist's* observation, "sneaking off from work just became easier", to *Yahoo's* comment "a cell phone system that shows you are at work while being at a party", to *The Australian* newspaper's observation "life's a beach with mobile phone fibs", one re-occurring theme emerged. The Swarm was being embraced primarily as a technology that facilitates lying.

Site: Smart Mobs. 'Technologies of Cooperation'



"Human identity is a bit more complex than just one representation, so we need to be able to represent multiple things at once."

Site: The Australian. ‘Mobile Phone Fibs Make Life A Beach’



Mobile phone fibs make life a beach

Lisa Macnamara | January 10, 2007

NEW software allowing mobile phone users to dodge their bosses while keeping up with friends is on the way, thanks to the efforts of a Melbourne academic.

RMIT University lecturer Christine Satchell is in the midst of commercialising her mobile phone prototype, known as The Swarm. It will enable busy users to personalise handset icons to tell a caller what they are doing while on the go.

"If you're in a meeting, callers will see a meeting icon that will come up, or if you've gone to the beach they'll see you're at the beach," said Ms Satchell, who teaches new digital media.

But the new model will also lend itself to the occasional white lie.

“Life is a beach with a new direction in mobile phone design.”

Site: New Scientist. ‘Cell Phone Tells What Mode You Are In’



Cellphone tells the world what mode you're in

12:00 26 December 2006
From New Scientist Print Edition. [Subscribe](#) and get 4 free issues

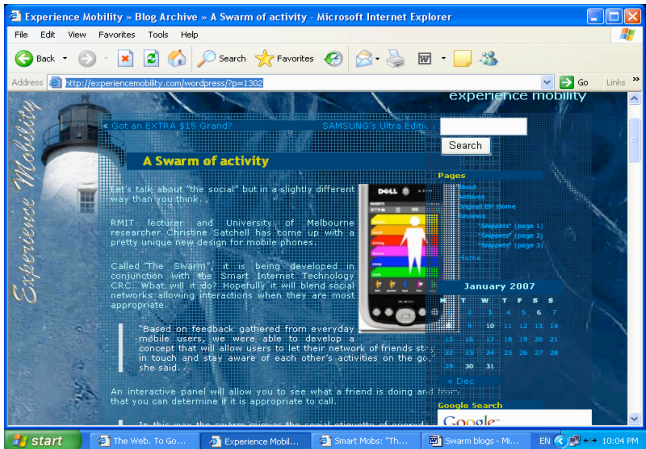
Sneaking off work early for Friday afternoon drinks will soon be made easier by a mobile phone system that will tell your boss you're still at work while letting your friends know you're on your way.

The Swarm system, being developed by Christine Satchell at the University of Melbourne, Australia, connects groups of users, allowing people to keep track of what their friends and colleagues are up to, and whether it's a good time to call them. A colour-coded icon allows users to tell people which of six activities they are engaged in: holiday, social, driving, leisure, sleep or work. Adding icons such as a cocktail glass to indicate a bar can provide extra information.

Swarm also enables people to put contacts in different groups, such as "work" or "friend", allowing different information to be given to each.

“Sneaking off work for afternoon drinks will be made easier by a mobile phone system that will tell your boss you're still at work while letting your friends know you're on your way.”

Site: Experience Mobility. ‘A Swarm of Activity’



A Swarm of Activity

Let's talk about "the social" but in a slightly different way than you think...

RMIT lecturer and University of Melbourne researcher Christine Satchell has come up with a pretty unique new design for mobile phones.

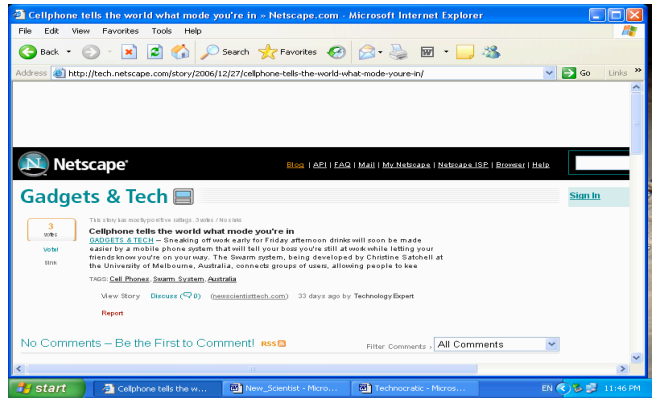
Called "The Swarm", it is being developed in conjunction with the Smart Internet Technology CRC. What will it do? Hopefully it will blend social networks allowing interactions when they are most appropriate.

"Based on feedback gathered from everyday mobile users, we were able to develop a concept that will allow users to let their network of friends see in touch and stay aware of each other's activities on the go," she said.

An interactive panel will allow you to see what a friend is doing and that you can determine if it is appropriate to call.

“Let’s talk about “the social” but in a slightly different way than you think... Hopefully it (the Swarm) will blend social networks allowing interactions when they are most appropriate.”

Site: Netscape. ‘Gadgets and Tech’



Cellphone tells the world what mode you're in

3 users

12:00 26 December 2006

Sneaking off work early for Friday afternoon drinks will soon be made easier by a mobile phone system that will tell your boss you're still at work while letting your friends know you're on your way. The Swarm system, being developed by Christine Satchell at the University of Melbourne, Australia, connects groups of users, allowing people to see...

Tags: Cell Phones, Swarm System, Australia

View Story | Discuss (7) | (msacatell@tech.com) 23 days ago by TechnologyExpert

“Swarm enables people to put contacts in different groups, such as "work" or "friend", allowing different information to be given to each.”

Site: Tech it Easy. ‘The Swarm: A software for mobile phones soon to revolutionize relationships between people’



"Tech IT Easy" - Jeremy Fain's Blog

January 22, 2007

The Swarm: a software for mobile devices soon to revolutionize relationships between people

Filed under: Cell, entrepreneurship, innovation, Apple, Entertainment, Software, Friends, Education, Day, Socialization, Telecommunications, Business, intelligence, Socioeconomics, electronics - Jeremy Fain @ 11:53 pm

People relationships have been evolving quite rapidly recently. If the e-mail has, despite its many flaws, changed the way people communicate, other disruptive new uses like online dating, social networking (professional: LinkedIn, friends on Facebook; hobby: etc.), instant messengers (allowing you to let people know whether you're

“By screening (smartly) you might come up with interesting ideas.”

Site: Yahoo. ‘A Cell Phone System That Shows You Are At Work While Being At A Party!’



A cell phone system that shows you are at work while binging at a party!

By ANI
Wednesday December 27, 01:35 PM

“It just became easier to beguile your already gullible boss, for now you can slink off for an afternoon drink or go on a shopping spree, and a new mobile phone system will tell him/her that you're still at work.”

Critiquing the Critiques

What should be made of these responses? On one level, it could be seen that the research approach led to a design that crystallised what users really want - an artefact whose primary function was to avoid a truthful digital representation of one's own identity. However, as was discussed throughout this paper, cultural theory provided a useful framework within HCI because it brought with it an understanding of the technology itself *and* the context from where it arose which positions the design within the truly complex cultural formations that characterize social interactions. From this critical perspective, the glee with which The Swarm was embraced as a subversive device that could provide an alibi for users while they drank at the pub, went shopping, or sat on the beach, revealed much about the way information technologies are caught up in regimes of surveillance and control.

The convergence of mobile technologies, intelligent environments and ubiquitous computing, coupled with post 9/11 measures such as the Patriot Act, have resulted in a heightened culture of technological surveillance. This generates a fear that technology is taking away our ability to control what our digital identity is revealing about us. From this perspective, The Swarm's appeal lies not so much in its ability to deceive, but in its capacity to provide users' with control over digital presence, what information they are revealing and to whom. Furthermore, particularly in post 9/11 contexts, where information technologies are framed as the solution to the problems of unmanageable people, The Swarm appears subversive, which is exactly the point of the attraction to youth communities, whose subculture is positioned oppositionally to mainstream expectations.

CONCLUSION

In the early 21st century mobile technologies are creating sites where social and cultural meanings are produced and a new generation of users are re-creating their everyday experiences in these increasingly pervasive digital spheres. This presents a unique set of challenges for HCI practitioners, as Beyer and Holtzblatt [5] note, studies of use do not necessarily lead to viable design concepts. In this case, the application of cultural theory to interpret the data helped address the problem by bringing in a level of theoretical abstraction that allowed the necessary 'creative leap' between user needs and design implications to be made. The data revealed what participants were doing and the additional cultural theory analysis provided insights into why they were doing it and what the implications for future interaction might be. The result was a mobile phone prototype that extended to the user multiple avatars that allowed individuals to define and manage their own virtual identity, provided contextualization and personalized information, and allowed users to maintain a constant digital presence without the intrusion that continuous connectivity could bring.

It remains to be seen if the rich social and cultural commentary provided by cultural theory can be recontextualised as a key for successful innovation. Future work hopes to explore other contexts of real world interaction – for example, HCI in developing countries, technology and surveillance, Web 2.0 and user generated content, media convergence and other instances where the integration of cultural theory within HCI might benefit from a philosophically grounded design space.

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