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3G Content Production and Distribution as Social Communication

Mobile phone ownership presents users with the opportunity to regularly update others of their actions through the digital documentation and circulation of their experiences. There is a sense that an event is not complete until it is shared through text, voice or images. A study of 35 users aged 18- 30, conducted for the Smart Internet Technology CRC revealed that when members of a social group cannot be together physically, circulating digitised accounts of an activity becomes an authentic way to share the event. Furthermore, the study indicated that with the convergence of 3G mobile phones, digital cameras and the Internet, users are taking advantage of the best of all three communication channels to create, circulate, distribute and archive content in new and dynamic ways. Through this process users are creating the 'ideal digital self' by which to communicate. However, the effectiveness of these new practices is eroded by specific design and technological limitations, thus a distinct set of user problems emerged. This paper illustrates how the Trophy Room scenario, which is a 3G phone and web application was developed to address the user needs identified in the study.

Creating the 'Ideal Digital Self'

A central theme in recent studies by Taylor and Harper (2002) and Howard et al (Howard et al., 2002) is that the importance young users place on expressing their social identity in the real world extends into the digital world. For 24 users in the study, interpreting or reading other peoples' digital identities provided a means of identifying what the other person was like. As one user stated, "*Their synthesized persona is quite revealing.*" Furthermore, users indicated that they derive pleasure from creating a digital identity that reveals the persona they wish to convey. This indicates that creating a digital identity is not only about how much information can be restricted but also rather, what is revealed. This is important for design because it illustrates that identity should not just be thought of in terms of how anonymity can be enforced. Rather, it should be thought of in terms of the new dynamic ways that mobile phones allow users to express themselves.

The user study found that young people are taking advantage of 3G telephone systems and the Internet to produce and merge bits of data to create their 'ideal digital self' through which they communicate socially. This means that instead of voice or text, users are communicating through a hybrid of still and moving images, sound-bytes, symbols and logos. This is in keeping with Counts and Fellheimer (Counts & Fellheimer, 2004) who found that "Lightweight photo sharing, particularly via mobile devices, is fast becoming a common communication medium used for maintaining a presence in the lives of friends and family". A user described how he wanted his online identity to be a pastiche pictures text and sound:

I merge lots of different pieces of data to create the one single identity for a specific purpose. That is what is good about doing things on the Internet, why just be text when you can be multi-media. I have just started becoming multi-medium too because I have got a picture phone and I email from it. The way in which I come across is really important to me and I don't want to be represented by some daggy font.

The study revealed that for young people their choice of how they send and receive a communication message is one of the most potent means by which they can express their identity to their peers. Furthermore, the choice of technology could convey as much as the content of the message itself. For 24 participants in the study the choice of different modes of technological communication is not just to facilitate different activities; their choice of the technology is an expression of their identity. Furthermore, because identity is multiplicitous and shifting rather than singular and static, the way in which the users want to express themselves relates to the context of the exchange, the environment they are in and the nature of the relationship with the person they are communicating with. As one user stated, "the type of message you send says as much as what's in the message." This was supported by another user who described not only how he placed a lot of importance on how he constructed his own digital identity but also on the way he judged others by their 'digital appearance'.

If I meet someone and get their email address and then get an email from them and they have a really bad email address or the set of their email looks really bad or if they are full of emoticons – than I will actually think less of them. I think that if you can't get your digital identity right than you are not going to be much in real life.

As users are spending more time in virtual environments they are beginning to put more effort into how they appear in digital space. The introduction of 3G phones and the increasing convergence of mobile phones and the Internet has increased the pleasure users get in mapping their real life identity into digital environments. However, with these technological advances comes a new emerging set of user problems.

User Problem: Design Implication

Protecting Content

User Problem: Capturing, creating and distributing content, such as digital pictures plays an integral role in users social interaction. However, a major concern with sharing content is making sure that only the intended people see it. This meant that while users wanted to communicate through home produced content, they were often reluctant to just send a picture or video out because once you do that you loose control over its distribution.

Design Solution: The Trophy Room provides an 'art gallery' features for content archiving and display, so visitors can come and browse selected images/sounds/text without being able to copy and re-distribute them. It resides on the user's mobile phone, although can be accessed via the Internet.

Controlling Access

User Problem: The study indicates the importance of providing a space where users can display their content on their own network however users indicated that it would be undesirable for visitors to access all the content. For example, there would be different groups of people with whom users would want to share different photos and it emerged the idea of just providing free access for all would be highly undesirable because photos were often specific to events and only people that were at the events should have access to the photos.

Design Solution: An important part of the Trophy Room sceario is that 'selected' others would have access to it or parts of it and amongst these selected others different visitors would be granted different levels of access. A set of hierarchical rules is put in place for users to manage what content they reveal to different groups of visitors.

Wrapping the Message in Content (Digital Tokens)

User Problem: User in the study were employing content as a form of social communication, for example embedding a picture in the bottom of every email instead of a signature. Furthermore, users indicated a desire for this paradigm to be turned around – so that the dominant part of the message is the picture itself embedded with the social message. "What I like about my new (3G) phone is that I can send a picture that I have taken and that's the message. I can add text too if I want." Essentially, the content becomes the 'wrapper' for the message. It can be seen how for the users in the studies, digital communication can now be more dynamic, so instead of traditional voice or text a message can be a combination of multimedia data embed in a single message or 'token'. However, with this increase in the use of multimedia content comes the difficulty in managing all the bits of data. Users reported that they are mixing more and more bits of multimedia content together in a single message, reminiscent of the way a DJ mixes music samples together into a single track. However, there is a distinct problem arising in that users are finding it increasingly difficult to manage the bits of data that constitute their digital content collection. "The problem is I can't find things when I need them. Where did I put that photo, or keep that song, or the last thing that I mixed together." This indicates that users' need a more centralised place to keep their multimedia content from which they can gather together the desired elements into a single message or 'token'. Furthermore, digital content can be quite sentimental and users in the studies report that content stored on 3G phones are particularly vulnerable to loss. Three users reported that their phones crashed resulting in content being lost, while the handsets themselves are vulnerable to loss or theft. This indicates a need for a remote backup archive, and although users can currently back up content from 3G phones on their computer, this content it is not easily retrievable remotely via 3G phones.

Design Solution: The Trophy Room provides a place to archive and display images that makes it a logical site for content distribution. User can then 'cut and paste' the desired bits of content into a central token which they can then be SMS/MMS or emailed to selected friends. Furthermore, users would be able to have a choice over what the tokens looked like. For example, the token could be a text message embedded with pictures, or a picture embedded with sound bytes.

Content Production across Channels

User Problem: The convergence of 3G phones, digital cameras and the Internet provide users with new opportunities for capturing and sharing experiences. For example, taking photos with their phone, downloading them to their computers, editing them on their desktop and then distributing them for free via group email. This is significant because as Counts and Fellheimer (Counts & Fellheimer, 2004) point out, both channels have advantages and disadvantages. Users in the study reported that there were many instances when spontaneity was of the utmost importance and that instantaneous sharing was key. A major user problem emerged in that the ability to share experiences that they have produced themselves via text, images and sound bytes is limited by technical problems such as the incompatibility of handsets. For example, a homemade multimedia message produced on a NEC phone cannot be transmitted to a Nokia handset. These limitations forced them to resort to channels where they can download, for a fee, commercially produced content. This is significant because for the users in the studies, there were times when the fun of producing their own content was sharing it instantaneously with friends. If users have to wait until they get to their computer to share their content the moment may be lost. This does not mean that users don't still consume content rather they resort to downloading commercially produced content instead. Thus the ability for users to be creative content producers is limited.

Design Solution: For multimedia content sharing as social communication to be successful content has to be seamlessly distributed across platforms so that experiences can be shared instantaneously. Ways in which content could be carried across platforms included the use of MPEG21 and the use of instant messaging and peer-to-peer systems such as Jabber and JXTA.

Conclusion

3G phones provide users with the opportunity to become creative content producers, however this practice is restricted by fears that the privacy of home produced content cannot be protected, archiving difficulties and finally limitations such as the incompatibility of handsets. Users reported that these fears and limitations force them to resort to channels where they can download, for a fee, commercially produced content. The study revealed a series of user problems that if not addressed have the potential to render users as passive consumers of commercialized ring tones and celebrity pictures. However, if these needs are met by design solutions such as those indicated in the Trophy Room scenario, users can move past the limits of current technologies. 3G mobile phones are dynamic artifacts created which if implemented in the right way will afford users with the ability to broadcast their own personal experiences beyond current technology.

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