

Multimedia Software as Culture: Towards Critical Interaction Design

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m-cult

Creative multimedia content and software development are increasingly driven by social, artistic, and local cultural concepts and needs. Instead of discussing generic tools and models, we can analyze the relationship between multimedia content, location, and culture, as well as how we interact with multimedia under the auspices of critical interaction design. The implications go beyond creative development (software as art and software for art): understanding the relationship between new technologies and actual lived experiences can result in new perspectives on software as a cultural artifact, which challenges our conceptions about how multimedia is developed and used across applications. Within this context I will discuss topics related to the central themes of ISEA 2004: software as culture and critical interaction design.

Zoom in on location-based media

One of the thriving areas of creative development currently deals with location-based media. Artists and researchers are developing shareware and proprietary systems for mobile authoring that uses either GPS or cell location data. These projects are particularly interesting when they

map different layers of urban life (such as collaborative cartography, mapping/positioning technologies, and mobile networking).

At ISEA 2004, Andrew Paterson et al. hosted a location-based mobile authoring workshop called "Rengo." *Renga*, a practice originating from medieval Japan, is based on collective activity and linked verse: each person contributes a poetic fragment that, when combined, creates a whole poem. Related workshops were also organized where children authored mobile content. In one of *The Phone Book* projects, for example, mobile phones are used as a means of distributing poetry and short prose.

Networked interactions

These days it seems like many people in contemporary creative technology development are looking at mobile—Wireless Fidelity (WiFi) and radio—as well as peer-to-peer networks as interfaces. In other words, interaction and interfaces are seen as complex and participatory phenomena, and questions are raised not only about the interaction with multimedia content, but about the relationship between networked spaces and their physical counterparts.

Jonah Brucker-Cohen discussed several of his projects, which share a design methodology he calls *subversive networks*. He attempts to deconstruct accepted and practiced forms of human-networked interaction through the introduction of interference, shifted rule sets, and disruptive interactive experiences. His Wi-Fi Hog project, for instance, runs on a laptop or a handheld PC and enables people to gain complete control over a public access wireless network.

As designers work between the technologically literate and various user cultures, one key act of design is to create a transparency of interactive and networked technologies. This view goes in some ways against the classical user-friendly prin-

Editor's Note

The Symposium on Electronic Art (ISEA 2004) was held in Helsinki, Finland, and Tallinn, Estonia, in August 2004. In this article, Finnish new media researcher and program chair of ISEA 2004 Tapio Mäkelä invites us to question our assumptions about multimedia interaction design, highlighting four important aspects of the future of multimedia: the relationship between location and media, networked interaction, wearable crafts, and diversity. While all of these aspects encompass software as culture and have become active areas of research and in creating software as art, we are still left to ponder the implications and impact that new interaction design practices will have on the future of multimedia.

—Alexander Jaimes

ciple, where transparency means disappearance of the technological.

While several wireless projects take the technological frame of reference as a starting point, Heidi Tikka's *4x Situations* project is based both on the content and the relationship with the technology used to create it. The project involved four different families publishing a multimedia messaging service (MMS) diary of their everyday lives and of their relationships with mobile media.

Wearable crafts

A central theme of the ISEA 2004 conference in Tallin was the wearable experience. Kathryn Mori-waki's handbags react to air pollution by changing color. *Seven Mile Boots* (see Figure 1), a collaboration between Laura Beloff, Erich Berger, and Martin Pichlmair, is a project that consists of a pair of interactive boots with audio capabilities where the user/walker can browse a chat room with the boots. The user can decide to stop for closer observation and the boots log into the chat rooms automatically under the name "sevenmileboots."

Several projects in the wearable tradition also take video and still images as materials for jewelry or clothing. *Medulla Intimata* by Tina Gon-salves and Tom Donaldson are jewelry that stream video that alternates according to changes in conversation.

Façade by Michael Mateas and Andrew Stern shows how artificial intelligence-driven narratives can give depth to interaction in narrative-based systems. Working with dynamic as well as static metadata is one of the more interesting research areas that push the often boring boundaries of traditional multimedia metadata.

This tangible aspect of interaction design is fascinating. It's obvious that most of these projects will become objects for future media archeologists to discover, but also among them are the beginnings of successful art pieces—or products.

User diversity

Anne Nigten from V2_lab in the Netherlands calls creative technology and software development *Art&D* (artistic research and development). This process is driven by cultural and social motives, but it's often nonteleological and open ended. This doesn't mean that the research is without methods—on the contrary, workshops, fast prototyping, and user interaction feedback often result in several iterations before an exhibited project is realized.

Another interesting aspect of Art&D is that



Figure 1. These boots were made for browsing: these Seven Mile Boots are interactive and log into chat rooms automatically as the user walks.

the driving motivation is often based on an artistic search for a new aesthetic or for better control of the tools used. Miller Puckette and Casey Reas, for example, ask Who owns our software? Intellectual property rights are often seen narrowly as an economic factor, while they also importantly deal with artistic integrity as well as the ability to codevelop and share. *ProSessing* by Casey Reas and *Max & Pure Data* by Miller Puckette are excellent examples of such software environments. It seems that larger corporate software developers can't harness this kind of creativity, which stems from the open-source traditions and a particular artistic vision.

In these Art&D models, the original concept is taken further by other artists in the form of patches, and often later through entirely new software concepts. With a growing library of shared resources it's possible to impact the development of multimedia from the ground up by applying open-source software and shareware from the classroom to project development. This software also offers a great transparency to the way code works—a key aspect for educating or fostering self-learning in new generations of creative code writers. In this way, what's traditionally user friendly can in fact be about *not* empowering users of software and hardware to participate in current and future designs of our increasingly technocultural lives.

In the end, many examples at ISEA 2004 addressed the complexity of experience as well as geographical and historical diversity. Perhaps we're finally entering an era of multimedia design that's driven by user and network diversity. **MM**