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Digital archivists look to porn, Flash for tips

By Stefanie Olsen
Staff Writer, CNET News

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BERKELEY, Calif.--How can society preserve digital art on the Internet the way brick-and-mortar museums can for Picassos and van Goghs?

Oddly enough, at least one preservationist believes the answer might be found in an expression that most curators don't consider art--online pornography.

"I guarantee that a wealth of pornography from the late 20th century will survive in digital distributed form (because) it's a social model that's working extremely well," said Kurt Bollacker, digital research manager at the Long Now Foundation, a nonprofit fostering several digital-works preservation projects. Bollacker spoke Thursday at a symposium called "New Media and Social Memory" at the University of California at Berkeley Art Museum and Pacific Film Archive.

He held up the adult industry--always the digital pioneer--as one example of a self-selected community on the Web that swaps images and videos so regularly and widely that that activity will ultimately help preserve an archive over years. Similarly, he pointed to successful niche archives like the Multi-Arcade Machine Emulator, or MAME, a collective of programmers who preserved video games from the 1980s with CPU and hardware emulators.

"Anyone interested in preserving digital art should evaluate ongoing distributed data efforts," said Bollacker, who has a background in artificial intelligence and previously worked with the Internet Archive, a Web preservation project.

Bollacker was among several technologists, academics and curators considering the question of digital art and how to preserve it in a fast-moving world of technological

change.

Challenges to preservation

Traditionally, preserving any art--books, music or paintings--has been highly controlled by skilled professionals, who often deal with tangible, long-lasting and, in the case of museum quality art, highly expensive materials. But in the digital world, that model is turned on its ear--just ask the record labels if controlling distribution of digital music is easy. On the Internet, moving data is cheap and easy, the media is ephemeral, and preservationists are amateurs.

And as Bollacker said, "Millions of people can make digital art, and maybe most of it is crap, so we don't know which to save."

The challenges to cataloging and preserving any work online are common to all fields of art. Those include the limits of human resources to track the body of work online--and those are only getting more finite. Another is the obsolescence of file formats: how can future generations access digital media if the formats and software they're recorded in are eventually replaced?

The digital realm does have its benefits, however. Costs of storage have dropped so low that Hitachi recently unveiled the first terabyte hard drive, opening up the possibility of storing all of the text of the Library of Congress on one server, for example. Low-cost bandwidth also makes it easy for people to move media relatively easily. And the Internet is not short on creativity or motivation from the millions of people it attracts.

Still, preservationists are asking themselves how best to record history.

Alexander Rose, executive director for the Long Now Foundation, which is working on a 10,000-year digital clock, said that the real killer app for archiving is in peer-to-peer applications like BitTorrent and Kazaa, which have long been used for music file-swapping. He believes that these two companies will play a crucial role in archiving new media. "What they don't have is memory. But if they get it, they can store media for archiving," Rose said during the symposium.

The Flash programming community has also been a boon to early Internet artists by preserving archives of animations (.swf archives and Gnash) and providing

open-source technology (the Open Source Flash Player) so people can watch animations in older formats. Other open-source digital art projects include Processing.org and Princeton's audio-programming language, Chuck.

The Long Now Foundation has also investigated how other groups around the world approach art preservation. The Vatican, for example, maintains a large room with long, thin drawers containing all of the original 16th-century artist tiles used in mosaics around Rome. "These are like pixels of the 16th century" said Rose, who has visited the room in the Vatican. "The (mosaics) haven't survived 5,000 years on their own."

Similarly, the Long Now Foundation has visited the Mormon Church's genealogical archive kept buried in a vault in Utah's Cottonwood Canyon. The church is building an archive of all the world's genealogical data on microfiche in a vault designed to last at least 1,000 years. Still, the data in the vault doesn't have an internal index, according to those at the Long Now Foundation who visited the site. "The index of where things are is in an Oracle database outside the vault. And without an index for the vault, (the data) is useless," one executive said.

For its part, the Long Now Foundation has developed a prototype of tools that let people search for and use file format converters. The tool is designed to solve the problem of losing works written in obsolete file formats.

Bollacker said he believes such software is key in preserving new media art, along with the collaboration of online communities. Archivists should also look at how they can move files around fluidly and insert them into diverse environments, where they can be copied like the DNA of a flower, he said.

"Data's got to continuously move to stay alive; and it's got to be frequently accessed by a lot of people. Open source, publicly documented formats and software will be the long-term survivors," he said.

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