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Digital Artists:
Reinventing Electronic Media

MIT Media Lab symposium looks to the future of entertainment and expression.

by Frank Beacham

A major challenge facing creative artists using interactive digital technology is to break down traditional information structures and create new works that redefine the relationship between performers and their audience.

This and other opinions about interactive media came from a wide range of creative and technical leaders assembled for a day-long symposium (Oct. 20) on "Digital Expression" at the Media Laboratory at the Massachusetts Institute of Technology in Cambridge, MA.

Tod Machover, a composer and associate professor in the Opera of the Future Group at the Media Lab, said, "To make this revolution in digital expression, we need to bring together a much larger group of people than has ever been connected before.

"We finally have technology that is cheap enough to be available to everybody and technology that is easy enough to use so that one does not need to be an expert as an artist or member of the public to explore or make things," said Machover. "That's a fundamental change."

Peter Sellars, a director of theater, opera and film, said artists "must break out of the official information structure" to find new ways to express important subjects that mainstream media refuses to address.

Photo by Webb Chappell, courtesy of MIT Media Lab

"You get the feeling that huge parts of human experience are going undocumented and unrecognized," said Sellars. "Aristotle wrote about the attempts to touch the totality of an experience. As human beings, we are complex, divided and multilayered. Therefore, what satisfies us is complex, multilayered and has all these built-in conflicts just as we do. How do we set up [new media] structures that show how we really feel?"

Current mass media, said Sellars, reflects only a single voice and "a very narrow group of people are creating this insane gridlock" on information

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about human experience. "We are aware that there are many, many voices that we don't hear today at all. The *CBS Evening News* represents only one voice," the director said.

Performance artist Laurie Anderson said it is important that creators for the new media don't make the mistake of accepting the same ratings and income standards as today's mass media. "We don't have to use the same model as media," she said. "Don't begin to think 'the more people who like it, the better it is.'" She said CD-ROM producers are inventing a special and intimate relationship with their audiences.

Director Peter Sellars offers a mirthful bon mot about the benefits of future technology, to the delight of his fellow panelists at the MIT symposium: performance artist Laurie Anderson, ABC News correspondent and panel moderator John Hockenberry, performer/ composer Peter Gabriel and composer/Media Lab associate professor Tod Machover.

Performer and composer Peter Gabriel, who earlier this year released a critically acclaimed CD-ROM titled *Xplora*, said he considered himself "a designer of experiences." Gabriel said he is encouraged that the technology is moving communications from broadcasting to narrowcasting and envisions a day when average people will use interactive media to enhance their own creativity.

ABC News correspondent John Hockenberry, moderator for the event, offered some personal insight about interactive CD-ROMs. "A CD-ROM is kind of a vast house, and when you explore it you find that people have been in there before, and that most of those people were technicians and engineers," said Hockenberry. "When you are in a CD-ROM you get the impression you are in a haunted house, but can never talk to the ghost. And in the end it's not as satisfying and not as direct an experience as it purports to be. That's the wall designers are up against."

There was some disagreement among the artists as to how much context audiences need when navigating a virtual sea of information.

The ability to wander and discover information through personal experience gives the new technology an "untamed quality," argued Sellars. "To just meander is one of the pleasures of life."

To have the audience making wrong turns through the information "is exactly the point," Sellars continued. "That's where the juice is."

Hundreds of years ago, he said, people in search of knowledge went on personal pilgrimages for information. The process, he said, could take years. By not having the information at their fingertips, there was experience attached to the search that made the finding of the information far more meaningful. "The actual act of finding something

had value," he said. "It was a beautiful thing because when you found something, it meant something.

"Now we are getting all this information with no experience attached to it," said Sellars. "Where there is no pilgrimage, the information itself is debased, devalued and dehumanized. In a sense, the ratio of experience to information content is radically altered. What's irritating about the age of information is that it creates this yuppie denial of experience. We have everything at our fingertips, but we don't value anything."

Machover challenged Sellars' view that the artist can let the audience find its own way through the new media thicket. "The role of the artist is to set up environments to force people to learn something important," Machover retorted. If context is not set for the audience, he said, the audience will get lost.

Machover used the term "active meaning" to describe the intimate relationship between content and tools used by the audience. He noted that the clear boundary between artist and audience blurs when the same device can be used to perform, entertain or instruct.

In a section on new technology, Neil Gershenfeld, an assistant professor in the Physics and Media Group at the Lab, said electronic musical instrument technology is nearing the point where it will soon be possible to build a digital Stradivarius violin. In a live stage performance later in the day, Penn & Teller, the magic/comedy act, used a musical chair designed at the Media Lab to demonstrate some advanced new interactive musical interfaces.

Nolan Bushnell, chairman of OCTus, founder of Atari and a video game pioneer, predicted that the next wave in the video game business will be "millions of people, playing and cooperating with millions of people" on a global scale. He said

there will be "cyberspace teams" competing on global networks.

Douglas Trumbull, vice chairman of Imax Corp. and president and CEO of Ridefilm Corp. said that a new generation of interactive theme park simulators allows the violation of space and time to create an imaginary experience for participants. "Using this technology we can absolutely overcome any individual's ability to deny what's going on. It's very powerful. I'm not just talking about physically, but emotionally and intellectually," Trumbull said of the realistic simulations.

In recent months, Trumbull said, his company has acquired the ability to seamlessly blend computer graphics, miniatures and live action into the imagery of a simulator. He showed models of how three compact simulators can be placed into the space of one small multiplex movie theater.

"The movie industry is not as good as it's made out to be," said Trumbull. "Movie houses are looking to expand the experience with an interactive experience." He said the first 3-D Imax film with 3-D sound will open early next year at the new Sony Imax theater in New York City.

Trumbull told the audience that his ultimate dream in filmmaking is now coming true. "It's having at the disposal of filmmakers and creative people worldwide the ability to make movie experiences that are absolutely overwhelming," Trumbull said. "It's much bigger, much better, much higher quality than we ever had with *2001: A Space Odyssey*. Now it's time for some creative talent to step forward and figure out what to do with this technology.

"I don't think we want to make *Indiana Jones* or *Star Wars* in the new medium," he continued. "We have to actually create a whole new genre of film entertainment that is based upon the issues of immersion and virtuality."

Composer/producer Quincy Jones echoed the recurring notion during the symposium that nobody really knows the future of interactive digital technology. "I've met most of the players and they are all as healthily confused as they should be," Jones said. "This is a revolutionary time. Our juices are coming back."

However, Jones expressed concern for those not included in the information elite. "We must find a way for kids in the inner city to share in the computer revolution," Jones said. "We must not have a segment of society that does not function in this new era." He said the new technology will not make a difference unless there is an attitude and philosophy behind it.

"The information highway should help people tell their own stories and not just make them consumers," he said. "The information highway should help the 'have nots' find their voices, and it should not be used to shut them out. This technology can help bring magic to their own communities."

Jane Alexander, chairman of the National Endowment for the Arts, echoed Jones' ideas about fair and equitable access for all citizens.

"Everybody thinks that will be easy," she said. "But check out the demographics in this room. This is not the face of America. Without access we could divide into subcultures of the elite and the unschooled."

Alexander called for free access sites on the information network that would resemble the libraries, schools and museums of today. "What we advocate is a mixed economy with libraries and bookstores, radio (stations) and music stores, free concerts in the park and concerts at symphony hall," Alexander said.

The NEA chairman said new information technologies can play a major role in public education. "The new technologies are teaching tools," she said,

but warned that information without context is meaningless. "Educators, businesses and the arts should team up to ensure that content on the information highway has real meaning," she said.

Alexander warned the computer technologists in the audience not to confuse the new technology with what's real and what's not. "Seeing the Mona Lisa on a compact disc is not the same as seeing the real thing," she said. "Hearing *If I Had A Hammer* on your computer speakers is not the same as hearing Pete Seeger singing it. There is no way to actually create live theater in a box or a game.

"The whole point about virtual reality is that it is virtually real, not really real," Alexander said. "Technology cannot replace the seeing, the hearing and the experiencing of art. It doesn't replicate the doing of art. There's a big difference between a paintbrush and a canvas and a mouse and a screen."

She called for more "divine discontents" whose tools are symbol and metaphor to work with interactive technology. "Content is everything," Alexander said. "As much as we hear about the information superhighway, it doesn't mean a thing unless we have good content running on top of it."

Bell Atlantic Chairman Ray Smith tried to dispel any doubts that an information superhighway is going to be built in the near future. "It will be built quickly," he said. "The underlying economics of it are overwhelming. It's not just the telcos but the satellite companies and the terrestrial and the wireless companies.

"We've tested it, we've

seen it and we know the demand is there," said Smith. "The demand for choice and control is banging at our door."

Bell Atlantic, Smith said, has already invested $11 billion in its broadband network over the past five years and has laid two million miles of fiberoptic cable. "Construction is proceeding," he said. "The backbone is already in place."

Smith drew laughs when he used the "field of dreams" analogy to describe Bell Atlantic's new enterprise. "It's not a field of dreams, it's a field of nightmares," Smith quipped. "If we don't build it, THEY will."

Smith predicted an explosion of creative activity in the upcoming months as producers try to create new programming forms for the interactive technology. The network, he said, will "demolish the last proprietary roadblocks that have been stifling digital creativity."

Smith offered a video tour of his company's new "digital factory," the center in Reston, Virginia, where program material will be integrated into the interactive network. He called the digital factory "a new kind of creative unit and a new concoction of engineers and artists."

He urged large and small program creators to take a close look at the new media. "The digital distribution pipeline is on its way," he said, "but that pipeline will remain empty if it doesn't have content."

Sony America CEO Michael Schulhof said Sony will introduce a new five-inch CD format with "motion-picture-quality" video and CD-quality audio in early 1996. He said the new format will hold two hours and 15 minutes of program material. "To me, the digital videodisc will be to video what that Walkman was to recorded audio," Schulhof said.

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