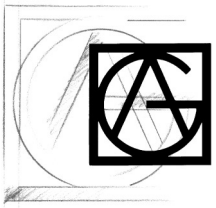

Grantmakers in the Arts
2001 Conference

Culture Influencing Community Change

Proceedings from the Conference

November 5-7, 2001
Mohonk Mountain House
New Paltz, New York

Digital Workshop

Session Designers:	Kevin Duggan Consultant
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Panelists:	Kevin Duggan Consultant
	Karen Helmerson New York State Council on the Arts
	Joan Shigekawa The Rockefeller Foundation
Artists:	Toni Dove Leah Gilliam Yael Kanarek

November 6, 2001, 2:30 p.m.

[Transcription begins after start of session]

Goodman: Digital media, new media, interactive media. Any others? Any new titles abounding?

Audience: Variable media.

Goodman: Variable media? Okay, I'll mention that. Actually, that knowledge, if there is any, comes empirically out of just seeing a lot of things. Over time, getting a sense of how to describe what it is – both that the artist is intending to express and also what the underlying technologies are that make the work do what it does.

What are the set of givens that the artist is working with, and what is it that the artist has created with those givens? Oftentimes, I show something to somebody, they say, "What is it exactly that I'm seeing here? What did the artist do versus what is the computer just doing by itself, anyway?" Again, it comes from seeing a lot of material and asking a lot of questions, and knowing that there are no stupid questions; the stupidity comes from not asking them.

This is a visual arts panel, I noticed in the materials. One thing that's happening because of all this digital technology is that individual arts disciplines and ways of characterizing those disciplines and separating them from one another are being impacted greatly from within by these new technologies, digital technologies.

When I talk about "digital," usually that means pertaining to the use of computers, computing systems, microprocessors. The digital media itself is information that's encoded as zeroes and ones. "Encoded" means it's possibly converted into digital form from some other manifestation. It can also be synthesized, i.e., created from scratch. Once it's in there, it's digital.

The systems that traffic in this information are themselves digital as well, and it's a word that has stuck, and unfortunately has come to mean, in the consumer electronics industry, high-quality. I remember seeing ads for devices saying, "Digital quality!" but there's nothing inherently better about something that's digital. In fact, it's oftentimes just an echo of an original if it's not encoded very well.

The music industry converted to digital media ten years ago with the CD. There you have the output of musical acts recorded and encoded into digital form. At that point it can be stored in a container, in this case a CD, that can be created extremely efficiently and played in machines that we have, CD players.

When people talk about digital media today, they tend to be less focused on the idea of translating traditional media into digital form and making it more accessible and efficient, but more on all the amazing things that one can do with this material once it is in digital form.

I often use a culinary analogy that traditional media arrived to the recipient precooked. I guess it's like, if you're at a restaurant, it arrives at your table cooked and you get to consume it. With digital media, you have very flexible protean recombinant possibilities. That is, it can arrive as a recipe and a set of ingredients, and the computer that it arrives in can assemble that right before your eyes into the meal. Because it arrives in these components and not yet fully formed and put together at that moment when you experience it, it can be open-ended and allow, via some kind of input – let's say, the click of a mouse – it can do something based on probability or possibility. In other words, the recipient can have some role in completing the work. This is where the term "interactive" comes into play, usually.

There are many levels of interactivity. I've had the experience in grant panels where people tend to say, "Is it interactive or isn't it?" Actually, there are many levels, many ways that whatever you call the person who is experiencing the work, the audience, the patron, the participant, the inter-actor, that's another one where people have yet to find a good word for them. There are many ways for them to enter into it.

A very simple way of entering into something is what I call "selectivity," rather than interactivity. How many of you have a DVD player, or know someone who has one? You stick the movie in, and instead of the movie playing like it does on a video tape, there's an interface that shows up on the screen. The interface is what sits in between you and, in this case, the moving image, the encoded digital media that's in there. By selecting the options on the screen, you tell the machine where to go and what to play. That is a very limited level of interactivity, and again, I like to think of it as selective.

The arts realm is where people are really experimenting with deeper forms of interactivity, but also, of course on the World Wide Web, where the software,

the system, the digital media, acts as an intermediary between people. The interactivity is not between a user and a computer and whatever's in it, but it is in a sense a hub that connects different people interacting with one another, and that's certainly a different sort of interactivity.

Have people heard of the term "multi-user environments" often? When you talk about many people being able to use a piece of software at the same time… There are computer games that do this, but there are also artworks that do this.

What's interesting is that the artist loses a little bit of control over the final product, looking at it one way. But in another way, they're instigating a process which then other people get to partake in and rather than thinking of it as losing some sense of authorship, it's a new kind of authorship. It's allowing audiences to enter into the work. We'll see a lot of that with pieces.

Because what the artists create is flexible and can be cooked on the other side, there are also possibilities to pass on a certain level of creativity to the user audience participant. We can go back to the 1960s, let's say, early seventies, as an example when in the music and electronic music world a lot of this stuff was arrived at before others.

In addition to being able to store text and animation and sound and images inside a computer, something very, very important about interactive software is that it is able to control things – you have controlled data. A good example of this is, I put my hand up here, I put my hand over here, I put my hand over there. And now I create a setting which duplicates those three motions at the press of a button. Rather than having to do all of these things, I have a piece of data, which is a very small bit of information, that says, "Do this." Now, I am not digitized. What is digitized is the controlled data, telling me to do these things. Before computers were able to store images and sounds and all of that stuff, they were used for process automation and control; machine control is another way of thinking of it.

My first interaction with a piece of interactive art was something called Music Mouse, that was created by Laurie Spiegel, then at Bell Labs. It was a piece of algorithmic composition software. Don't worry about what any of that means. What was interesting about it was that this was before computers could generate and store sounds on their own. It was a software program in a computer connected to a synthesizer. The program told the synthesizer what to do based on the user's own movements of the mouse. By moving the mouse along on a table in various directions, you created this incredible music.

Who was the author there? The idea was that the artist was simply a toolmaker, and that I, the user of the software, am the artist. The artist is an artist of a new kind of artistic entity that is as much like a tool as it is an object of contemplation. You're seeing this a lot today. Some of the better work that I see involves artists not merely using other tools, other software tools, to create what they make, but to be involved in the creation of tools themselves. It's a tricky proposition.

The other thing that I'm finding they're doing is subverting and finding uses for existing tools and systems that the makers never foresaw, to delightful results. Thinking of the Internet as a huge instrument, you have these artists who are doing things with it, and with the underlying technological systems of the Internet, that were never imagined.

Let me actually widen the scope a little bit, and then we'll go into discussing funding issues.

Are there any terms that people want to discuss, or does everyone know what "new media" means? Because I don't. There is a certain relativity to the term "new media." This is a bad time to bring up the Museum of Modern Art, but there was a quote from Kirk Varnedoe in the recent *New Yorker*, where he was talking about how the events of September 11th will "cause those whose truck is in contemporary art and novelty to be brought up short." But I was thinking about the notion of novelty and its relation to digital media, and its obvious connection to the term "new media."

Our culture is getting used to new media, getting used to digital technologies. Having it become part of the landscape in the world around us will cause us to more easily separate the appeal of a work that comes from the pure novelty of the experience and a deeper meaning. It has been a big issue for us in the past, which is an immediate, almost fetishization of the new and the slick, without the critical element that is needed to give us some perspective on it. I do think that "new media," at best, should be a shifting definition that will describe that which is new at any given moment; at worst, probably will be relegated to a certain period of work done, perhaps, from the

eighties to today, similar with what happened with the term "modern art."

There's some reading that I think is… and I put it on a Web page. If you go to www.ammi.org/more.htm, I just put up links to some books and some writings of what one could call media theory. Lev Manovich's book, *The Language of New Media*, is a very good and clear book in terms of dealing with the aesthetic issues surrounding new media and digital media. Randall Packer and Ken Jordan's book, *Multimedia: from Wagner to Virtual Reality* is a great way to get a grounding in the historical threads of all of this. Both books are similar in one way, which is, rather than proposing that this is a new medium apart from all other media and all other practices, and even from the world, they're beginning to synthesize what's going on with artists and computers with existing media, and the history of media, and seeing how it causes us to even reinterpret media history and the history of film and video. Unfortunately, Lev Manovich has gone so far that he just put on the Internet a recommendation that we do away with the word "media" and "medium" altogether. But he actually offers a fairly convincing argument for why that's the case.

I don't want people to overlook the fact that computers are changing existing disciplines in almost incremental ways that aren't nearly as, on the face of it, sexy and exciting and self-consciously digital as some other work. I'm thinking of how digital technology has revolutionized printmaking, photography, music, within each practice, really. The fact that a video camera is now encoding imagery in digital form… It's still the same stuff, and it's still filmmakers who are doing it, and you can still show them in film festivals. But there are changes that occur that over time will result in changes to the texture and the aesthetics of film.

On the other side, you have these radical re-imaginings of media, which the makers often propose as being part of some new medium. There's a movement today in seeing new media and digital media within the histories of existing media.

One thing that happens is, all of these practices, whether it's the visual arts, the performing arts, or even outside of the arts, architecture, design: they're all sharing a common underlying technological framework for production, for distribution/access, for presentation. It's beginning to cause the boundaries that we've established between them to get all fuzzy. It's a very interesting development, and it causes a crisis, and it causes confusion.

Someone showed something to me recently and said, "This is a cinematic game." And I said, "No, this is an interactive movie." It was actually the same thing. But the terminology shifted based on which discipline you saw it from. If you can imagine all of these different disciplines as windows onto the same event, but each of the windows are arrayed differently, in a different space, you get what's going on.

I mentioned the technological framework, and I'm going to be very specific about it. It's the use of the computer and computer software. Computer software is necessarily interactive, as far as I'm concerned, in some ways, so I don't say "interactive software." But software is extremely important. Again, software is the stuff that is flexible and can take these inputs. It's the use of common interface devices.

The interface is often divided into two subcategories. There's the hardware interface, which is physical stuff. The hardware interface is divided into input and output. Input is how you talk to the computer: the mouse, the keyboard. Artists are doing wonderful things; they always have, in trying to re-envision those sorts of interfaces, by the way, because they can't be all there is. The problem with re-envisioning hardware interfaces is that work often has to be installation art because you can't distribute that re-envisioning to someone with a computer and a mouse and a keyboard.

The other part of the hardware interface is the screen display, which is why people are lumping all of these things that are going on with digital technology into "the Visual Arts." That's something that's going to be changing as computers as objects and the interfaces that allow us to talk to them begin to disappear into the everyday objects and environments around us, or into our bodies, for that matter. You already have artists devising strategies for creating work for, whether it's mobile devices, or one artist calls the things he creates "art appliances." The idea that you could only make one a piece of installation art, and it had to travel around, and then the idea of a mass-produced art object that is intelligent.

In the old days, you created a hard copy output of computer-based art. You create an image inside the computer, you print it out, and you hang it on a wall,

and it becomes something physical, and not digital. It's inert, and it's not an intelligent object. The idea of the artists in the future may be creating objects with intelligence in them.

The software interface they often call the Graphical User Interface, or the GUI. That is something that we talked about before, that sits between the user and the program, and artists have also been doing amazing things in re-envisioning how the software interfaces can behave and look. Sometimes people use the term "front end," to describe this part of the program.

The database is a kind of "back end," and is also a cultural form that artists are now playing with and thinking about the aesthetics of. The idea that a collection of information – people always use the example of the phone book as a collection of information – can itself have its own biases in terms of what is collected. The front end becomes how it's accessed. Lev Manovich wrote an essay on the aesthetics of the database, which is pretty interesting.

Let me finish up with the yin and yang of all this. The yin, in a way, is how these new technologies have changed the way artists make art; how it reaches an audience; how it's experienced by an audience; how the audience relates to the artist in turn. It's a cycle.

The yang of it is the fact that we live in a world that is itself understood through and rendered by these new technologies. We are interfaced and data-based. An understanding of how these technologies are affecting the arts cannot be complete without looking outside of that at how other forms of culture and culture itself is being transformed by these technologies at the same time. Those developments themselves often become the object of artistic exploration, the subject of art.

A lot of art that is digitally produced and delivered also is often about these broader changes. That's not to say that it has to be, and other work that you'll be seeing wants the digital technology to disappear, and has maybe a story to tell; you're still allowed to tell stories. It might be a re-imagining of a documentary form on the Web; that is, take what would otherwise be an edited film and put it up in component elements and let the person looking at it put it together in new ways. I've seen that also, and that's merging the documentary film with the database.

The hard thing to get around is the issue that as we get habituated to the digital technology in our culture, it becomes harder and harder to see it as apart from culture. Whereas people posited the term "virtual reality" before, to describe this other world of computer-generated stimuli, you don't hear that term that much anymore. I've heard people talking instead about "real virtuality." We have Manuel Castells to blame for that. Sorry about that. Wait until we get to the space of flows.

The turn of phrase is appropriate because it's talking about the world we have here, and how it is a mix of computer-based and physical elements where at a certain point it becomes nonsensical to talk about them as separate worlds. That's where we are today, and that's what funders have to deal with.

Sato: I hope that Carl's presentation has engendered some sympathy in your breast for those of us who are up here who are funders.

Goodman: I've found a lot of organizations out there who try to chase digital windmills by trying to be something they're not and trying to get in with this new game. They felt that they had to do something digital to be cool. I think what's great is that that's less of the case now. What funders will find is more and more will be approached by projects that emerge organically out of the mission of the organization or of the needs of the artists. I've spoken to artists before who have said, "I have to do something digital now, because otherwise it won't be shown at this thing or that thing."

There's a big collective societal exhalation and a couple of steps back that's going on, and it will not be as difficult because the projects will emerge again organically rather than superficially out of these artists and organizations.

I'm going to introduce the funder panel, but I think I would like each person to speak for about nine minutes and forty-three seconds.

After each person introduces how they're entering into this, we'll have a discussion. We're very lucky in having people who, in their entirely different ways, have created effective strategies for funding digital, or new, or interactive media. Also we talk about this hybridization and cross-fertilization that occurs as a result of these new technologies, finding ways to bring in industries and communities, outside of the sometimes hermetically sealed fine arts world, to

participate in collaborative projects. The first is Joan Shigekawa, from the Rockefeller Foundation.

Shigekawa: Before I start my prepared remarks, I want to pick up on a couple of points that Carl made in his remarks.

One is a comment about the underlying technological framework. This is a kind of a first. Because they're all speaking the same language, which is the digital language, we're now seeing international and global artistic collaborations, experiments, and partnerships across borders, between Mexico and the US, between Europe and here, between Asia and here and Europe, in a way which those of us who fund media had not seen with quite the level of intensity and ease. This is one of the places where the globalization of art is happening, and artists are finding each other in a variety of ways. They're not all digital media artists. Sometimes they're musicians, sometimes they're theater artists. They share in common this platform, which enables creativity to happen across cultures, which is, in fact, new.

Carl used a phrase about "things never imagined." That is the challenge that confronts funders who want to go onto this territory, because that's the middle name of a lot of this work. These artists are trying to go to places that weren't imagined, with tools that we didn't used to have. So for me, working at the Rockefeller Foundation, I realized that I was lucky to be there, because Rockefeller has a precedent.

In the seventies and eighties, under the leadership of Howard Klein, the Foundation played a real role in the development of video art. In that time, I myself, being a media artist, served for the New York State Council for the Arts on the video/other media panel. The high prestige panel was the film panel, and those of us on the video panel had everything else, including audio, and these new emerging forms.

I remember the fights that we used to have. The people from television would say of the early video artists, "This is disgusting, we shouldn't fund this. This isn't television." People like John Hanhardt from the Whitney would say, "Don't you understand, that's the point? It's not television, it's video art. It's a new form, it's an emerging form."

It went fairly fast, because if you think about it, it took two decades, maybe pushing three decades, for Bill Viola to be at the Venice Biennale, for people not to anymore say, "Oh, what is video art? That's neither video nor art. That's not TV, that's not art."

So, that's the arc. At Rockefeller, Howard Klein took some very early bets with such artists as Nam June Paik and others. No one knew exactly what it was, no one could say answer the "What is it?" question. Rockefeller was supporting this new form of art and new forms of documentary, also using small-format video.

So that gave us as funders a little window into trying to think proactively, when I said to myself, Woo, we're in a similar moment. It's a what-is-it moment. No one can quite say what it is. We don't even know the name of it. The practice of it is changing and evolving.

We convened at the Foundation a group of practitioners to show their work. Suzanne was there, and I was there. A brilliant artist named John Simon, whose work is really based on code, came up. He did a piece called *Show Every Icon*. It was an image of every single object in the world. It's supposed to run for hundreds of years or more, millions of years. Suzanne and I were looking at this code. Finally Suzanne, who has more courage than I do, said, "What is it? Where are the objects?" The computer people in the room whipped around, and they realized that half the other people in the room, the artist people, actually did not know. We didn't know what we were looking at. So they explained it to us, and then we saw several other things from wonderful artists that we didn't know what we were looking at.

Suffice it to say, it's extremely challenging if you aren't twenty-three and younger. They know what they're looking at, very often, much more than we do.

We have a guideline called Creativity in the Digital Age. It was established by our president in recognition that technology is changing a lot of the ways that everything is happening in the world. I was lucky, or unlucky, enough to be given it to try to shape. Let me say that it is still in formation. Bear in mind that we are an arts division, but we're also a humanities division within the Foundation. So I'll give you some types and sort of topology of what we're exploring. Don't have big answers, but I do have a lot of questions.

The first thing we did was to have a category called Film Media, and then Multimedia Fellowships. Multi-

media was added to embrace installation art using video and other kinds of work.

Goodman: The old kind of multimedia.

Shigekawa: That's right. And then we expanded it to include new media.

Coming off of a panel about a year and a half ago, I realized that even though everyone in the room was a media person – a filmmaker, a curator, a video artist; when it came time for the new media work to be looked at, it wasn't really getting a fair shake. There was a conversation that was happening around that work which was different, for the moment. It's all going to come together in the end, but for the moment, it was different.

We are going to convene this year for the first time a new media, digital media panel. One of the artists on that panel was Pamela Jennings, who is now teaching at Carnegie Mellon; she was then at SRI. We said, "Look, would you please go out and see how other people are doing it? We need to learn, before we change our methodology, what the practice in the field is for funding new media."

You all are sitting on this green report. It's called "New Media Arts, New Funding Models," and it grew out of our realization that some people, such as the Langlois Foundation in Montreal and others, were moving out further ahead than we were, and what could we learn from the ways that they were looking at this funding of new media? The report is a little dated, it's about a year old. For example, the interval research is in there, and interval research has since tanked.

As funders, we've added this category, and we have already added the category and we had funded some new media artists, some of which you're going to see today. But we've decided this year to really experiment at a whole new area of funding.

By the way, I should say that this area of funding is active in the partnership that we have with the Ford Foundation, which is funding artists from Mexico as well.

While I'm on the subject of Mexico, I should say that within North America, there are two publicly-funded, high-end, experimental digital media labs for artists. One is in Canada, in Banff, and the other is in Mexico City. We do not have such an institution in the United States. We have many, many things, but we do not have that publicly-funded kind of art space yet. We have emerging experimental spaces in the C3 sector, but we do not have this kind of official space where the hardware is updated all the time.

What are we looking at when we look at this guideline of creativity in the digital age? First of all, we're looking at artists, the makers, and ways to support them. We're looking to identify places for creative experimentation, where experimentation is encouraged to happen.

Five years ago, if you asked what was going on in the universities, you would be told that independent outside artists would have no access to any of the equipment or facilities within universities. The pecking order was, a paying customer first – that is, the students and the graduate students. The second level was for the faculty artists to do their own work. The idea of having visiting artists also in those facilities was just not on the horizon. That is changing.

Examples of some recent developments at the University of New Mexico: a liaison between the Arts Department and the high-performance computing center. There are only seven high-performance computing centers in the country. The University of New Mexico happens to have one. The HPCC is in this old Cadillac dealership on one side, and in the part where the garage used to be, the university is building a black-box theater. It will be totally interactive. It will be on the grid; it will be on the Internet too. We will be able to interface with the other universities that are on Internet too; be able to do dance, music, performance, theater, live, a little lag, but live on the Internet.

Goodman: Do people know what Internet2 is, Son of Internet? It's essentially high, high performance, very fast. A tremendous amount of bandwidth, the speed with which data can move through the conduits of the Internet. It allows for all sorts of things that people aren't quite sure of.

Shigekawa: Right, right. What happened was, the scientists realized that the Internet they had originally invented has become so clogged up with all of us, that they can't actually do their highly experimental and scientific work, and so they set up another grid. That's one example at the high end.

Also in New Mexico, in a much more folksy way, Steina and Woody Vasulka, famous video artists living in Santa Fe, working with David Dunn, a composer. Partnering with the Santa Fe Institute, which many of you know as an advanced science facility looking at complexity and chaos theory with leading physicists and biochemists, and all kinds of really hard scientists answering tough questions. There you have a convergence of science, technology and art, working together in an experimental mode. Those are just two examples, those happen to be in the University of New Mexico; there are others.

The UC system in California is ramping up fast, building out facilities. So we watch that with interest. They're ramping up on two sides. One is the creative and arts side. The other is, how do we think about what are the effects of all of this digital technology on our lives and on our society?

The Foundation has supported a series of three colloquia that will happen in the spring of next year, looking at issues of creativity, society, and digital technology. There you'll find the communications faculties, the film and media faculties, the arts faculties, the theorists like Lev Manovich, all coming together in a conversation within the UC system, pulling from many disciplines to try to think together about this.

Also, a lot of this is happening on the Internet. For example, www.rhizome.org, which many of you know, presents and saves and curates Web-based art, and is another grant that the Foundation has made. The commission instructor has started to ramp up, and we have in process a report looking at museum commissioning of all of this new media art, which will be available shortly. So those are some of the areas that we've been working.

We've also been supporting conferences. For example, two weeks ago in New York was Orchestra Tech. That was MIT Media Lab in collaboration with the American Composers Orchestra, and they're asking the question, "What's going to be the effect of new technology and new kinds of instruments, new ways of making music, on the symphony orchestra? How is that going to work?" Of course, they have a big comparative advantage, because composers have been working with computer-mediated media for a long time. Electronic music has its roots in this. There's something about music notes and code; it may come from a similar place in the brain, because they seem very much more comfortable with it than some of the other art forms.

Goodman: Yet, it's an anathema to many orchestras and to their audiences. It's seen as a threatening element to some, so it's a wonderful thing to show that these new technologies don't displace the old practices, but can fit in with them and help transform them.

Shigekawa: The other report that you're sitting on is this yellow one, and this was done in 1999. This was a look at places where innovation happens in digital culture. There's a description of a lot of this stuff in Europe, for example, and a lot of the sites where innovation is being pursued globally. It's not as strong on Asia as I would have liked. With that, I'm going to stop. I'll be around for questions. There's lots and lots more to say, but we need to move on.

Goodman: This is Karen Helmerson, who is from the New York State Council on the Arts, and focusing on funding individual artists through an organization to sponsor them, and organizations with digital projects. There are some tremendous large-scale collaborations in scientific communities and so on that you've heard about, but also it's possible that a woman with a Macintosh would do something just amazing. It's important that there be support for them. Karen?

Helmerson: Thanks. Suzanne is taking a moment to pass out my presentation notes. It's a little unusual that I do this, but I thought in this case what's written here, what I'm going to be talking about, might be useful as ticklers later, or just some language to give you a framework to take back with you. Since these are notes, there are some verbs missing, there are some adjectives missing, so that's your participatory interactive role here. You have to listen.

First of all, I do want to thank Suzanne Sato for this opportunity. I'm terribly sorry that the Ellen Wathen Foundation isn't here, because I really would like to have listened to what they have to say. But one reason I want to thank Suzanne is because it does allow me to do two things, especially to this group.

One is to underscore the New York State Council on the Arts support for electronic media as an art form. I just can't underestimate how important it is to say that. It is an art form, we support it as an art form, we are discipline-based. So my program, Electronic Media and Film, focuses on that. It is not visual arts.

I couldn't help but pick up on that when Carl was speaking earlier.

Secondly, to emphasize the importance of leadership within the funding community. I can't emphasize that enough. We need to provide this leadership through our guidelines, initiatives, and policies to assist the development of media art. It is critical.

Just a little background, a quick frame and orientation. EMF, the acronym for the program, serves the entire state of New York. We support in my program alone between two hundred fifty and three hundred organizations a year. That includes galleries and museums. I have a budget of $2.4 million that's dispersed annually throughout the state. Sometimes a little more, hopefully, just to give you a sense of the size of what we do. There's direct funding through applications by organizations, and there's indirect funding through re-grants and to individual artists.

The challenge here is not what are the new standards. The real challenge here is educating funders. Program officers, board of directors and councils, need to be educated to what this media is. Education is huge. We need to learn about it, we need to understand it. We need to take time out of our lives, in our conferences, and share more information on it.

Just skipping to multidisciplinary work for a moment, as one more challenge before returning to leadership. What we are also experiencing, and was again mentioned, is the crossover factor. The intersection of new technology and other disciplines. When is it theater, and when it is performance? When is it a media artwork? Again, we say that if it's born digital, that's of and by and for. If it's moving in real time or cyberspace.

Now, back to leadership. Rather than fall into the inertia of convergence, where you've heard the phrase at some point, you know new technology is everywhere and can be used by anybody with any discipline of any age. Kids are way out ahead of us. To me, this is the inertia of convergence. We confuse ourselves, or just get so lost that we forget we can make distinctions. We forget we can be analytical about this and go in and pull out the pieces, and make sense of this. We need to really develop those clear standards of excellence based on the principles that we've always known that have been driving us for years in terms of seeking really progressive aesthetics, high-quality excellence in art.

We need to develop clear standards of excellence that allow for new thinking. This is the twist on it. And that is a challenge. How do you have standards that allow for new thinking? That's a big one. Based on knowledge of the medium and the history of the work, which goes back now to educating ourselves and educating funders, we begin to understand what those standards are, by again not getting lost in convergence. Our leadership is essential in this new culture of the nonlinear process, and we are in a culture of nonlinear process. That's where we are.

I have a very, very smart panel. As an example, the Museum of Modern Art is on that panel. The Film Society of Lincoln Center is on that panel. Third World Newsreel, and the Guggenheim are on that panel. When I get these hundred and nine applications, and I've read them all, and I present my argument for the recommended funding level, these are the people that I'm talking to in light of all of these challenges.

Now one reason it's a great panel is because they've gone along with the charge of debate. I had to laugh earlier, too, when Joan said, remembering history in the big arguments. We don't really quite argue as hard, but we do work pretty hard, and we do disagree on a lot of issues. The practice of the EMF panel is to provide input from the community. It is their charge to inform NYSCA and EMF for effective decision-making in these review sessions, and to create policy that is representative of the field.

When we have these new little twists, and we're just not sure how to fund something, I look at the panel and say, "Well, what do you think?" We debate it and we say, "Yes, it is this category, no, it's not," or whatever. The usual conversations that go on.

There's one example that goes back again in regard to leadership, of distribution. We had a distribution application that just blew everything out of the water, and that's this thing of, do we or do we not fund a server or support a server for an artist's work? Now, this is a long conversation that we had, but the upshot is that when I turned to the panel and said, "Okay, this is obviously very thorny. What do you think we should do here? Where does this fall? Where does this lie? What do you want to do with it? Do you want to fund it? Do you not want to fund it? And by what criteria?" Because we have to be very, very specific and articulate with the state, because it's taxpay-

ers' dollars, you know. So we always have to justify everything we do.

They turned and they looked at me, and for the first time, they said, "No." They said, "We don't want that responsibility this time. That's your responsibility as a funder. This is new, we've not seen it, we've given you our expertise and our input, but we want your guidance on this one. We want your leadership on this particular issue."

It was a tough moment, because I hadn't seen this either. I had never seen an application like this, I had no precedence for it. There wasn't any precedence for it. It was breaking all the rules.

We did settle it, and they voted me out, eight to one, in terms of my opinion. They were unanimous because they decided that it should be funded because I couldn't provide the guidance or the leadership on the issues that were coming to table.

I learned a big lesson from that one. This is one of my main points today with you, that we really do need to take this seriously and educate ourselves; provide time within these conferences to have larger forums of a variety of levels. And to make sure that this becomes as much a part of the funding conversations that you have for any other discipline or any other issue for any other policy. It is massive, it is prevalent, and the kids are out front. Otherwise, we're going to be running and chasing and chasing and running and catching up, and we're going to lose our leadership in the new culture of nonlinear process. Because this tool is going to keep changing.

On a higher note, I really am optimistic that we will do this. But I am a little passionate about it. I am a bit serious about it. Because I see so much of media art over the years just simply not having been recognized through a lack of understanding.

My last comment is about my interest in promoting a better understanding of electronic media as an art form. That's our responsibility, to do that. So I'm going to give it to Kevin.

Goodman: Thank you. Kevin is an advisor and consultant. He helped to put together New York Foundation on the Arts, NYFA's Computer Arts category, it seems like a century ago.

Duggan: Probably about five years ago now.

Goodman: In digital years, about a century ago. Kevin?

Duggan: Yeah, I'm sort of a ringer, because I'm not a funder at the moment, I'm actually a consultant. As such, I work with artists in small organizations that are using technology in creative ways. I'm often an advocate on their behalf when they try and seek funds. But I am going to talk mostly about my experience at NYFA.

Carl touched on it earlier, that one of the things that the technology is doing is that it really makes us question the idea of discipline, and how we define art by assigning it to a discipline. When Karen was talking about leadership and criteria, when we talk about funding individual artists, we're almost always talking about a peer panel process. How many people here actually fund the creation of new work by artists?

I'd like to focus a little bit on this idea of the peer panel, and if you start questioning what a discipline is, or what disciplines are, well then who are the peers? This is one of the things that we grappled with at NYFA when we created this new category.

I'm going to assume that most of you are familiar with the New York Foundation for the Arts, and I don't need to give you the big picture?

I think one of the things that really makes NYFA, especially in my mind, is how strongly NYFA is behind the idea of supporting the work of living creative artists. One of the principal ways they do that is through a fellowship program. The fellowship program is there to give money to artists, to buy them creative time is one way that we've put it. It's a $7,500 award. Awards are made in sixteen discipline categories. It's an alternating year process; eight categories one year, eight categories the next year.

One of the other things that makes the fellowship program at NYFA special is that policy is helped set by artists themselves. There's an advisory group of artists with representatives in each of the sixteen disciplines, two artists in each of the discipline areas. They're a very important part of how NYFA manages the fellowship program.

In the nineties, the issue of the impact of the computer on the work that was being made came up within the context of the artist advisory committee, and how to address this. It was a lengthy discussion:

Was there a body of work out there? Was the work any good? What kind of work was it? If there were artists that were worthy of being considered for fellowships, where did they belong? This was a lengthy, years-long discussion.

Out of that conversation, NYFA tried to do a couple of different things. One cycle, we said, you can submit your work sample in digital format in any discipline category.

After that was relegated to the "Other" category, then there was the "Emerging Forms" category. Neither of those really worked. The reason that they didn't work, or the reason that they didn't make sense, was that work was coming before panels where the panel didn't really know what they were seeing. It was like what Joan was saying earlier, "What am I looking at?" It defeated what was at the heart of NYFA's process, which is the peer panel process.

Somewhere along the line, one of the artist advisors, a woman by the name of Maureen Nappi, really took hold of this and said, "Look, we have to create a new category for this work." One of the ways that she advocated on behalf of this category was, she got artists to write letters saying, "What we really need as practitioners using this technology is a panel of our peers." To NYFA's credit, and to this advisor group's credit, what they decided was, we're going to create a new category, even though we don't have extra money for this. We're going to carve out a space for it out of our existing funding, because we think it is important that this be acknowledged as its own category.

We called the category the Computer Arts category. We could talk about the semantics of that, and Maureen had her own very cogent argument as to why that was better than Digital Media or the Digital category. But at the heart of it, and one of the reasons we call it that, was because it recognized that there had been artists who had been making art with computers for thirty years, and we really wanted to reject the kind of more contemporary nomenclature – New Media or Digital – because we felt it was important that this category actually embrace work that artists had been making for decades.

So we create this category, the Computer Arts category, and we open up the floodgates.

Goodman: Arts or Art? Computer Art?

Duggan: That's a really good question, Carl.

Goodman: It doesn't really matter, of course.

Duggan: I think we called it the Computer Art category.

So we create this opportunity. How do you define this category? So we said, there's this work out there that is computer art, and we're going to create this panel that's going to be appropriate for looking at this. What work do you allow in this category?

We felt strongly that we should try and embrace as much work as possible. The salient part of our guideline said that this category was for artists for whom the computer was intrinsic to their work's creation, presentation, or understanding. The most critical word in that sentence is the word "or." In retrospect, we might have done it differently, but I think the reason that we wanted to be so all-embracing is because we knew that there are artists for whom the computer was intrinsic to the creation of their work, but it didn't end up on a computer. A lot of 2-D work that we see now could not be made without a computer, and yet it doesn't need to be seen on the computer.

We wanted this to be as overarching as possible. We also made it clear that this was not a category for work where the computer was merely an expeditious tool that facilitated something that could be done with traditional means, like if you're a filmmaker, using the Avid versus a flatbed. The category was not appropriate for that. It had to be something where, based on the artist's judgment, the computer was intrinsic to the work's creation, and to the aesthetic outcome.

By making the category so overarching, it created great pragmatic difficulties for us in terms of presenting the work to a panel, and for composing the panel. Our strategy was that we tried to create panels that, in their aggregate form, collectively would have enough experience to deal with the work that we were seeing. Not every panelist was going to be able to effectively judge every piece of work that they saw. That's a slight difference from other NYFA panels, and the concept of peer panels in general.

We also made a commitment to the idea that we wanted the panel to see the best approximation of the work possible. Now we know that in a panel setting you're almost never actually looking at the thing

itself. In fact, maybe you're never looking at the thing itself. You're looking at a slide of a painting, you're looking at a videotape of a performance, you're looking at a selection of the film. You're never actually experiencing the whole thing. When you throw in interactive work, this brings a whole other variable into the picture.

Again, understand that you're always going to be looking at the approximation of something. We tried to do the best that we could to actually reflect the work and its interactivity.

This ended up not being about hardware. It's not that hard to bring a computer into a room. It's really about time and labor. Presenting this kind of work to a panel is very labor-intensive to do effectively. If you do put that time and effort into it, it's a very rewarding experience.

So we previewed extensively every piece of interactive media, whether it was a Web site or a CD-ROM, or whatever. I would go through the piece so I could be knowledgeable about it, and present it to the panel. We did bring computers into the panel room, and I would navigate through these interactive pieces.

We asked artists also to talk to us about the interactivity, and also if they wish to give us navigational directions, which we would follow if they did. Most didn't, for whatever reason.

This proved to be a fairly effective approach. The panel were not able to do it themselves, to navigate through work, because we really wanted for everyone to have the same experience. We were able to suggest some of the depth or the dimensions of an interactive work. Keep in mind, like with a film, if you see ten minutes of a film that's a half-hour, you know what part of the film that you've seen. If you interact with a CD-ROM or something else for ten minutes, well, how much more is there? It's a really difficult thing. But we try to suggest that.

The other thing that I want to touch on here is that we, as funders, assume that we're well-known to artists out there that are doing this work, and I'm not so sure that that's the case here. When we initiated this category at NYFA, we actually did outreach, if you can believe such a thing, to make sure that artists out there doing this work knew that we existed.

We went to organizations like SIGGRAPH, which is a membership organization of computer graphics folks, both from academia and from research labs, and a whole bunch of artists, to make sure that they were aware that NYFA existed and that this award existed, and that this was a place where they could show their work. I don't know if you've ever gone to one, but SIGGRAPH has an annual conference where they have a curated gallery show. They also have, usually next to the curated gallery show, work that's coming out of the research community, MIT, Carnegie Mellon, and places like that. In fact, lots of times, you can forget where you are. The line is very blurry between the curated gallery work and the research work.

So we did outreach. I think that it's important for funders and for service organizations to also recognize that this younger generation, the twenty-somethings, a lot of them aren't aware that there is a whole funding community, and a nonprofit support community for artists doing this work. I also think we have a certain obligation to make ourselves known to them, to really make sure that we are seeing the universe of work that's out there.

I think we'll stop there, because we're getting short on time. Thanks.

Goodman: I'm so glad you mentioned outreach, because I feel there are creative communities who are doing amazing things with computers, perhaps in a very raw way. For instance, there's something called Demo Scene; a bunch of probably all-male Scandinavian people who take over hockey rinks and create computer animation for each other. They have categories, like Under 64k. They write in machine language, which is the underlying language of computers. The point being that I wish there was some interface between those sorts of creative communities and foundations, not because we'd just go and fund exactly what they're doing now, but it's a goad to try to create something that may be a little more thoughtful using the obvious talents and skills that they have.

Let me ask the panel about something that comes up here and there, the issue of when a work is complete or not. I always say that being digital means never having to say you're finished. The idea that a work is constantly evolving and never ends up in some fixed state. Rather than say, "Well, that doesn't fit into our categories," my feeling is that should be considered

as one of the ways that digital work is different from other work.

Shigekawa: I think that's really more of a challenge for the curators than it is for the funders. I mean, we don't have any problem funding process. It's the curators who are collecting this who have a terrible problem wanting to know at which point do they freeze the work? We didn't talk about the problems of preservation and presentation, and the fact that platforms disappear from under you. So we have very famous computer animation artists, for example, who can't even look at their own early work because the platforms are gone, the software and hardware platforms are gone, and we probably need a hardware museum.

Kevin, we had a different experience with our panels looking at interactive work. We finally came down on the side of renting laptops for everybody. Because without the experience yourself, unmediated by an expert, of struggling with the piece, and having your own experience, you sometimes can't get what the artist is trying to give you.

Julia Hayward is an artist who comes to mind for that reason. Everyone's experience is different depending on what your emotional and psychological response to these things that she's telling you about, which are very loaded. How you navigate that and how you go through it, fast or slow, is in fact part of the interaction. Unless you can do it yourself, you actually don't understand the work.

We had her on a panel; she was rejected by the panel. I had the experience in another setting in London, working with the work myself, and I realized that none of us had gotten it when we looked at the panel. The next year, she happened to be nominated again, and it was the year that every panelist had laptops, and we set aside a time and said, "All right, this is the interactive work. This is the amount of time you have." There were coaches there to help you so you didn't get stuck in the same corner of a piece. But that year, she got funded. So it's just really interesting about the experience of the thing itself when it's really meant to be interactive.

Duggan: Also, it became less alienating to the panelists, because they were personally involved in it and had a sense of figuring it out. I was recently asked to perform something interactive for a panel as a solution, and it didn't quite work.

Goodman: The panel was all together when they did this? Or were they able to do it at their own time?

Duggan: This was for the laptops? Sounds like it was on their own.

Shigekawa: No, no, they were all together.

Duggan: They were?

Shigekawa: They actually looked like a class of kids. They all had their laptops, we dimmed the lights, and we said, "Okay, we have these five pieces. Go, you have ninety minutes." And they did.

Duggan: I think for us they came up more when talking about Web sites, and the idea, "Well, can we give people URLs before the panel?" I think that's where you may end up with people coming to the work differently. Some people are spending more time, some people are spending less. As long as the ground rules are the same for everyone, I think it's fine.

Goodman: Let's see if anybody has any questions. We want to hear from you. Yes?

Audience: I am very interested in talking a little more about conservation and preservation of these works, because I feel like there are layers and layers of issues involved, not only with the actual hardware and machines on which you can view these works becoming obsolete, but then there's the constant having to migrate these things to whatever is current and new, so it's not a single-time process. It's an infinite kind of process, which is a little different than most kinds of conservation.

The other aspect of it that I would like to talk about is, who are those organizations that should be preserving the history of this new medium? Because I think it's being left to museums right now, and I don't think that they recognize fully the implications of what they're taking on in terms of those conservation issues, and also, how comprehensive they're being in terms of the collections they're building.

Goodman: I feel tempted to give you an advertisement for the Museum of the Moving Image now, but I won't. It's not fair.

The Langlois Foundation has a category, and there are conferences devoted to these issues you so clearly talked about. Not only preserving the hardware, but

emulation, migration, refreshing, documentation – paper works really well – and how these are not either/ors, but have to be undertaken together.

These are also not issues that only relate to the digital arts, but preserving other types of software and systems. My proposal was always to get those hackers who get arrested for various infractions to be sentenced to create emulations of obscure operating systems that artists used. Better than license plates.

It's amazing what people have on analog tape, certainly a tape backup of digital files from, oh, the New York Institute of Technology, and all of the computer graphics work that was done in the seventies, just slowly dissolving. Even if it didn't dissolve, the problem is that you wouldn't have a system to read it in.

So what's the way out of this particular mess? Have another conference.

Helmerson: Just a quick note. I'm sure Joan's dealt with this heavily, and Kevin, but another entry point is through the museums, the Guggenheim, John Hanhardt, Mark Tribe and Rhizome, and John Ippolito. There are some people that are beginning to open up a whole package for us of research and study and initiative. So those would be some good resources for you to follow in some of these questions.

Another one is locally here in New York State, IMAP. I cannot tell you what it means, I'm sorry. I apologize. But again, it's another resource, and if you send me an e-mail, I can get you all the contact numbers.

There's a lot of work being done. Preservation as a funding category for us in EMF is another one of those slippery slopes that's all of a sudden exploded in the last year. Very quickly, very simply, what's happening is that we're going to have to rewrite that category too. Not that the category is inadequate in terms of supporting organizations that have these requests, but because the list of things to support has gotten so long. It's huge. It's just gone from a couple of things, like dubbing and copying, to pages of steps that can be taken, and probably should be taken. So that's why I'm just giving you some references to follow through.

Duggan: Just one last thing. You know, obviously, the issue of preservation is not just restricted to the arts. It's a broader cultural issue. It's in humanities; it's an important issue. There are organizations like NINCH, the National Initiative for Network Culture and Humanities, which is doing a lot of work collecting information and networking among the major cultural institutions and humanities around issues of standards, and that also relates to preservation.

Goodman: An organization called the Internet Archive, run out of the Presidio in San Francisco, is attempting to cache or store the Web in every state that it is every day.

As a museum, we are not an archive. We became advocates for this issue long ago because it's such an important issue. We want to serve as a front end to provide access to this preserved stuff to the public, to scholars, and we want to work with those who do archive on the access side.

Audience: I've just finished being the CEO and Executive Director for the Audio-Visual Preservation Trust of Canada. That's a private and public sector consortium, and it's really interesting to have this issue raised right now, because we are trying to grapple with the changes in moving image and sound preservation, and some of the more traditional media. A thirty-five millimeter or silver nitrate format is still the best, because it can be retained in a cold storage facility; however, when you move to a digital encryption, as has been suggested, it really does raise all kinds of concerns, and you only have to visit the National Archives of Canada to witness the equipment graveyard that you're talking about, and how the technicians…

Goodman: Is the equipment working?

Hurley: Yes.

Goodman: Then it's not a graveyard, thankfully.

Hurley: Well, it's getting to the point, though, where things are bind-or-twined together, and the technicians get older and leave, and Joe, Bill, or whatever can't fix the sprocket.

So I think what's interesting is that there's a global discussion that's happening. You have a wonderful organization in the States called the Association of Moving Image Archivists. They're based in Los Angeles, but a quarter of the membership is Canadian, because we look at it as a North American professional association. There are also archival institutions in Europe.

What people are starting to look at through WIPO, through the intellectual standards committees, is developing an audio-visual encryption code that will be a universal platform that you can develop against. So as the equipment and process changes, if all countries can agree upon a standard, like an ISO for manufacturing, there will be an AVSO for audio-visual. That's a really exciting development, and I just raise it as a more recent development that's happening internationally.

Goodman: Digital technologies can also become an archiving medium for more traditional electronic audio-visual media. Then there's a set of problems when dealing with unstable media, which is another term people sometimes use for interactive. The problems of having to put Humpty together again when you're left with just a plethora of files and images… Web pages, especially, are delivered in just these little components. I'm hoping that this universal emulator type of thing would also encompass interaction, interactivity, and unstable information.

Shigekawa: The WIPO thing is interesting. There's evidently a Congressional mandate to the Library of Congress, along with a budget of $10 million, to address some of these issues. They're supposed to deliver themselves of a report shortly, and they're flailing around and doing ascertainment right now, searching out opinions from the field and having a series of meetings. This is a really big issue about intellectual property and the preservation of knowledge that looms for all of us. We're losing the history of the sixties video, and the seventies video. It's eroding, and there's not funding to preserve it. We've been able to make a few small grants, but we don't have a budget line for it. Some of the really early and seminal history of tactical media in the country is disappearing.

Helmerson: In concert with this concern, what's come up with the issue of variable media is how long is forever? In your preservation interests, is it ten, fifteen years, fifty years, five thousand years?

Because of that, and in our challenge of funding this area, we're also looking at parallel preservation, because we don't really know how to tackle the technology that's required, and those issues.

But what we do know in a very simple way is to catalog. When an application comes in, or a request for support comes in, we look to see what kind of a plan surrounds the preservation of the medium itself. Is there going to be some other way of identifying what it is? Is there a catalog? Not a printed brochure, but we're talking about an index of what the work is, if it's multiple. Is there a record of what they want to preserve? Is there the history, as Joan was just mentioning, in text somewhere, somehow, that provides context for what it is that you're trying to preserve? Is there some sort of story that wraps around what these efforts are about? Because it could just happen that one day there isn't the next step, there isn't the next migration, and then what happens, and it's gone? What else is there?

What we're beginning to look at, again, for organizations that are not really able to take advantage of these higher-end processes… Are they coming to us to preserve their video collections with a plan? How else are they documenting what it is, or what kind of a document parallel do they want? It really is, I think, a good way to begin preservation steps.

Goodman: Though we were off on a very productive tangent, I want to see if anyone else wants to bring us back, or do we want to keep going? We have room for two more questions.

Audience: I'm probably going to muddle things a little bit, because I'm going backwards and forwards as regards the remarks that the panel has made. I'm here in two capacities. One, representing a museum in New York, and their goal for technology and digital media. And also the local arts council, and their goals for technology and digital media.

One of the things that I've heard the panel go by, but I wanted to just ask about it again for your thoughts, is in the infrastructure. A lot of times, not only does it deal with the preservation and conservation of work that's being created, but also just in terms of the grantees who need a wide array of funding and funding services. Everything from bringing basic computer systems up to speed so that they can participate in the digital media arena, to funding deeper archive-based initiatives, or working, for example, with the Botanical Garden on digitizing parts of their collection and making that available to the international community. It's the whole range of things, and I find that we go through, on a board level and then on a panel level, a lot of the quandaries that have come up in terms of the display of that medium and having organizations be able to display artists' works.

But there are basic infrastructural inconsistencies, I think I'm trying to say, where, like I said, from needing a computer. So we started by helping the organizations to get the capacity so that they could be there, to getting artists acquainted with computer software so that they can incorporate that as a part of the media that they use to create artwork. A lot of artists are saying, "If I'm not going digital, I can't be there," and so they're looking to learn more about that. We're doing a lot of things to try to support those types of efforts. I just wanted to know if you had any thoughts on that.

Goodman: Yes, very briefly. The topic also of seeding the community with technology to explore, not necessarily with expectations of creating this or that work. Bundled into that were issues having to do with presentation, and not just the rarified environments of certain museum galleries, and so on.

Helmerson: A quick response, and you should give me a call and we can talk further at length, because we're in essentially the same neighborhood. We have two things, very quickly, to address these issues.

One is technical assistance, and we have Equipment Purchase that you can apply to, but we should talk a little bit more about that, then.

Goodman: We've really only scratched the surface here, but luckily I think they may have convinced us all to stay for dinner, and you can talk about the funding issues. But you're in for a real treat. We're going to take a quick break, and then you're going to get to actually see some work and meet with the artists who made the work. Thank you very much.

[break]

The artists are going to make a presentation, about fifteen to twenty minutes each, and then you'll have an opportunity to interact with some of the work. We have two breakout rooms next door with computers in them. One of the artists will stay here, the other two in the other rooms, and so we'll be able to spend some time with the work, talk more informally with the artists.

Anyway, without further ado, or with a little bit of ado, I'm going to turn this over to the artists.

I'll say one thing briefly. I think one of the things that unites these three artists is a real thoughtfulness around the issues of interactivity. We talked about that a little bit earlier, and how interactivity impacts the artist's relationship to their audience, and also a thoughtfulness about narrative. About how interactivity and the involvement of the audience impacts the telling of the story.

On that note, I'm going to turn it over to our first artist, who is Toni Dove.

Dove: Hi, my name is Toni Dove. I make interactive movies. I write, produce, direct, and do interactive architecture design on responsive narrative products. By interactive architecture, I mean the combination of designing behaviors and creating interfaces that access them.

I'm particularly interested in embodied interfaces; in other words, interfaces that are physically generated by the user. The pieces that I do tend to use motion sensing, or speech recognition, or pitch and amplitude tracking, so that the user's body or the performer's body is engaged in the process of causing the video performance essentially to unfold.

In reference to the earlier panel, I would like to say that I don't think that this work could really exist without funding from government agencies and private foundations. I spend a good deal of time writing grant proposals. I hope that they're intelligent, critical entertainment that basically is engaged in research in the evolving syntax of digital media. I would say that that was part of my mission, to participate in the evolution of that syntax, in an interesting way.

It's really critical for the culture that this arena is not left to commercial interests entirely, because these vehicles for telling stories are going to be basically the propaganda organ of our culture, and it's how we tell ourselves who we are. I think it's profoundly important for a broad sector of the culture to be deeply engaged in it. Artists are a terrific research resource for the culture in this way, and I don't think it can be underestimated.

So, from that soapbox, I'm going to show you a video demo tape of an interactive installation called *Artificial Changelings*. It uses video motion-sensing to sense viewers' body movements standing in front of a screen, and a series of floor pads, so that you would navigate back and forth over floor pads that trigger different zones of video, and physical movement which would move a character's body,

generate speech, alter the soundtrack, all through physical movement.

After I show you this video, I'll show you a couple of work-in-progress demos from the interactive feature length project that I'm working on now, that have added vocal triggers, speech recognition and synthesis, and pitch and amplitude tracking to the mix, so that you can talk to characters that talk back, sing to characters and make them dance.

This first piece is primarily about physical motion and physical movement generating a responsive and immersive environment.

[video]

I've built a piano that has a number of octaves, and I'm gradually adding on to it. I'm beginning to work with some different kinds of interfaces, adding to physical motion the notion of speech recognition and pitch tracking.

I always work with time travel dramas. They allow me the possibility for a kind of non-linearity of a spatialized drama. They also give me the opportunity to use different points in history as glasses to examine the present as seen as the future.

This current piece that I'm working on is called *Spectropia*, and it's about a young woman in the future who lives in a culture where there's no recorded history, and saving anything is punishable by law. She's built a scanning machine that scans garbage. She lives in the informal sector of an urban center, where all the garbage collects, and it's compacted to lift the island above sea level, because the water's rising. There's a whole black market economy that's sprung up in retro objects. Spectropia has built a scanning machine that scans garbage and creates historical simulations from the period of time of the garbage.

This is one example of the first simulation that she runs into. She scans an old piece of garbage, and it turns out to be a piece of a costume that belonged to Sally Rand, the fan and bubble dancer. The piece takes place in the future, and in 1931 in New York City right after the stock market crash. Sally's not used to being on this computer; she might be a little hanky. This is a work in progress. So we'll see.

[exchange]

I'm going to stop her now. Anyway, she goes on. Afterwards, if you want to come and play with her, you can, and also I have a version that you can sing to that makes her dance.

This is an aspect of a particular scene in a movie. Two players will be performing the movie for an audience, and then I'm gradually working on taking these different projects and porting them to DVD or DVD and Internet, so that people can have them at home as well. Initially, that was a little bit like pushing an elephant through a straw, but now it's starting to be possible.

Duggan: Thanks Toni. So our next artist is Leah Gilliam.

Gilliam: My name is Leah Gilliam, and the project that Kevin asked me to present is a CD-ROM from 1998. If you make those distinctions between real time and net time, this was a very, very long time ago. What's interesting to me about this project is what's in this larger context about how artists work with tools and get access to technology and fund the practice of artmaking. This was a wild-child piece, it was this piece that I made completely on my own. I'd seen a lot of computer art before I made this, but during the year that I was working on it, I didn't really look at anything at all. So this is what I was thinking about at the time. This is a piece that's called *Split*, and I'm going to walk through a couple of screens, and then talk about what my approach was, and try to bring up some other relationships.

This is a self-running application. It runs off of a CD-ROM. Programming I did myself, movies I made myself, sound clips I stole, that kind of thing. But what was interesting to me, as someone who comes primarily from an experimental film background, was trying to port what I knew how to do already, which was to make meaning and experience through time into a completely different medium. This was the first project that I did where I tried to think about the fact that people would be looking at what I was making within the screen of their own screen, this idea of multiple screens breaking down.

One of the things you'll notice as I go through is that a lot of the places that are live, that are interactive, are really quite small. I was interested in making something that could work on the slowest, funkiest computer. So this is programmed to work with the lowest common denominator element. I'm going to

walk through a few screens, and then keep talking. This is running off the CD, so it's a little slow.

The unfortunate thing about doing these kinds of walkthroughs is that, as the person who programmed it, you know what the tricks are, so you immediately go to the places where things happen. But it is programmed with the idea of someone who might explore and move around the different screens.

I don't know if you saw when I first opened it up that this is version six of this project. What was interesting to me about working in this medium was that it was something that I could make on my own. I could update every time I had new ideas, or new information, or new footage, or something that I wanted to incorporate into it, and so I just did. I started with version one, and then I just kept going until six, and then I was, like, "Okay, enough. Move on."

That was actually really fun about it, constantly burning new versions, and making new versions. Also trying to update it each time Macromedia made a new version of the application I was using, which was Director, which was probably a couple of times a year. I would update all of my movies and try to incorporate what I was working on into a newer version.

As a result, the application is completely buggy, and I'm usually just totally up-front with people about that. It just is. That's just the way that it works. It was nice to present this project at MIT and have it just crash on these guys constantly, and for me to say, "Sorry, I did it myself."

When shooting and creating experiences that are single-channel and projected, meaning film and video, I was relatively used to the kind of problems I could have if something went awry in film projection or video projection. But when it comes to something like this, you really hand it off and people see what they see. I'm going to keep walking through, and go through one specific link.

This is a project that I see as an archive of sorts. I was looking for a way to keep visual and keep working in the downtime between projects. My projects seem to extend forever, and they just end when I say like, "Enough. End it, already." So this is an example of that.

This project reads a number of different occurrences and moments. One is a science fiction film called *The Omega Man*, from, I think 1971. The other one is the 1997 Pathfinder Mission. What else does it read? It also looks at the ways that futuristic ideologies and backward-looking technologies interact.

As a result, I separated everything into two different large links, being Future Tense and Present Perfect. Depending on the version, and depending on what I was thinking about, different things are in different links at different times. Sometimes I have to have my own map just to walk through it and show something specific. I'm going to walk through Present Perfect, which is the link that deals with *Omega Man*.

[presentation]

This is a link within a link, and this is a whole kind of scenario that I created around one of the characters from *Omega Man*, and that is this person here, which is Rosalind Cash. I became really intrigued with her representation in that film, and then went from there and made a number of different links about her.

One of the things that developed was this six-dollar bill and this idea of a different kind of currency that would involve her as, I don't know, the President of the United States or something.

One thing that was interesting for me about working on this project was trying to map out a way to make sense that didn't depend upon a very particular kind of linear order. As you can see, we're already jumping all around.

Now we're in a link that's about the 1997 Pathfinder Mission, so we'll go through this little link. The text says, "I was broken up and looking for guidance, or at least a role model with a face. We couldn't have Lani Guinier or Jocelyn Elders, but we had a four-wheeled image rover." Around the same time, there was this ad on TV. "Harriet Tubman risked her life to guide slaves to freedom, when all she really needed to travel was the Discover Card."

One of the things that I was interested in doing with this project was literally just trying to come up with some way to create a relationship between the physical objects that I use and research in my work, and this computerized version that was somehow trying to track the project.

One thing I did for this project was to scan everything. This is my favorite copy of *I, Robot*, so I scanned that.

So more links about the Rosalind Cash character. I'll go through some fact-based stuff here. I was really interested in trying to research Rosalind Cash as an actress, because she was in this film with Charlton Heston and I was obsessed with the fact that she had this relationship with Charlton Heston in this 1971 kind of apocalyptic vampire movie. I took everything that I could find, and changed it into text format and dropped it into my CD. One of the most recent elements of a Rosalind Cash kind of bio was just these updates that were on the *General Hospital's* Web site, because she was a character on *General Hospital*.

I would take stuff that I could find and program it in. As part of my own frustration, I programmed in a lot of these little dialog boxes through into my own interface.

When I'm working on something, I write a lot, and this was a really nice way for me to take things that I'd written and drop them in. Here's a little section that I wrote about this film, *Omega Man*. I wrote this pretty early on in the project, but as I began to work on this idea of whiteness, of white skin becoming this symbol of death in this particular film, but also that these are different versions of whiteness that develop through the film.

If you can think back, this is a connection to the earlier six-dollar bill link. Let's see if we can move out of here. This is the good part, when you get caught in your own loops.

These are all of these links that analyze Rosalind Cash's representation in this film. This is my semiotics background coming out, but it's exactly what I like to do, to pull apart these things and do these shot-by-shot analyses. So this CD-ROM became a really fun way for me to do that.

Again, me just scanning stuff. This is just like Walgreens 101, right? You still find these old Fred Palmer skin-whitener products. I bought it, took the box, scanned it, and added it in.

More just like stuff I found. Summer of '98, right as I was finishing this, I took a trip to Johannesburg, and reading the newspaper found all these comics and colored it, scanned it, dropped it in. There's a version where I hadn't been to Johannesburg yet, so this isn't in, and then there's this later version where here it is.

It's interesting to look at this project and think about how I introduced it, which is something that happened in '98, and is such a long time ago. But in the projects that I'm working with now, a lot of these research elements are still coming out, and it's interesting just to look at this and think about it in that way.

This project became a very specific research tool, but at the same time, became a playful way for me to come home at the end of the day and make images and fool around and drop them together and try to make a screen out of them, and then to create these links.

So here's my *Planet of the Apes* obsession taking a strange turn into primatology. Again, really small screen size here. I think I imagined porting this stuff to the Web, which was kind of cute, seeing how huge the project ended up being. I wanted to keep everything small and bite-sized, so that as I worked on it, I could go wherever I wanted with it. It actually ended up staying as a CD-ROM project, but as I was doing it I kept that goal in mind. Thanks.

Duggan: Thank you, Leah. And our next artist is Yael Kanarek.

Kanarek: It's a long day, isn't it? But I'm the last presenter, so, I'm going to try and keep it concise.

My name is Yael Kanarek, and for the past six years, I've been developing a cross-media project called *World of Awe*. *World of Awe* is an umbrella schema that evolves multiple intrinsically connected projects using different artistic practices, but mainly centered around the digital realm and with a very strong presence of the Internet.

At the core of the project is a traveler's tale. It's an original narrative that I've been developing, and in essence, a traveler is searching for a lost treasure in the sunset/sunrise, which is a desert-like terrain. In certain situations, the traveler finds at excavation sites, treasure crumbs that resemble candy sprinkles.

The main presence of the journal at the moment is online in the form of a narraface, which is an environment that uses interface and narrative in a very connected way. That is what I'm going to show you at the moment.

This is the project I submitted to NYFA for the fellowship award. So we have in a seemingly application environment, and I'm utilizing the standards of

Graphical User Interface to bring into this environment the narrative.

The journal is made out of three textual contents, a series of love letters written by the traveler to a beloved. The general tone of writing of the journal is magical realism, and the letters have a little bit of infusion of nineteenth century romanticism.

You can also see, when you look at this interface, it resembles older operating systems. There's a constant nostalgic feeling about old computer components, old software, old hardware, because they have a very wonderful nostalgic potential. Like the old Atari consoles, things like that. It's really exciting stuff. I'm really attached to that kind of look. I also figured, in an environment that constantly renews itself, things are going to be old for much longer than they're going to be new. Not everything new even upgrades to old, so maybe I'll stick to that kind of old for a little bit? It may have a better chance of lasting for a little bit.

This is one of the love letters. They all open from the digital landscape that I create in a 3-D program. I also create these as digital prints in that more traditional form of hanging on the wall.

This is one of the navigation tools, the MoodRingBaby. It's a Tamagachi-like tool that the traveler purchased at Duane Reade for $1.99. By the way, the portal is on 419 6th Street in Manhattan. But the reason that the MoodRingBaby was purchased was because the traveler realized that if you stay on your own for too long, you practically can go crazy. So you have to have some kind of conversation. It's an advanced tech toy. It's a tech toy that you can have a dialog with, and it's supposed to make you feel good as you take care of it and negotiate with that.

It turned out that this particular one – and the traveler only found it upon using it the first time in the sunset/sunrise – had a defect, and it was behaving as if it had Tourette's syndrome, with very aggressive personality tendencies. It was making the traveler feel actually really, really bad, but since it still was the only way to form a conversation, the traveler became very dependent on it.

So the MoodRingBaby is the subject of a collaboration between me and bNote, an architecture team, and we're exploring ways to bring that into the physical world. What does it mean? We're looking into some exploring to going into some of the more advanced biosciences, things that the DARPA Symposium two years ago was looking into. That's how the project starts disseminating in different directions.

If you click here, you get the story parts, and there's a little module here, too. It follows a knock-knock joke sequence. It's a very playful environment, but it's not really an environment to be projected. It's an environment to experience one-on-one. When you have a little bit of time, you can spend an hour with it in a very personal way.

There's another tool that I would like to show you. It's the map. The map has two sides to it, high-tech side and a low-tech side. The high-tech side is blank when the expedition begins, and it writes itself as the expedition progresses, and also projects to the future. It makes assumptions of the area in three rings of perception. It also can operate in extreme situations, not recommended by the manufacturer, as a flying carpet. In here, there's an explanation why it's called Eep. Because Eep is a short name that the traveler actually gave the map, because it was easier to reference writing the journal parts. The wild Eep is one of the original alert sounds of the MacOS operating system. It's an alert sound, it's a sound with a home. It had a base. But Eep is a little different, the pitch is slightly different. So that's Eep and Wild Eep.

I'm through *Harvestworks*. I'm working with a composer on a full-length music CD based on the narratives of the journal. We're using a single soprano, and he manipulates her voice and creates many other textural voices. He also incorporates computer sounds into that. One of the songs is based on Eep. It's using a portion of the narrative that describes the rendering of the map. I actually have that one with me here, and maybe I'll be able to play it later. I'll be happy to do that for you. Next week, we're going to be mixing five more songs.

Mu is the old-fashioned treasure hunt map drawn on leather, it responds to weather. It was found in Grandma's attic in a shoe box with a few photos from the war. One thing that I would like to say about the traveler is that gender remains undefined. I go to great lengths to write it in a way that the user creates the gender and the vision of who the traveler is. In different reviews in different magazines, the traveler is either a female character or a male character, and I always find that very interesting. I think when people know that I'm a woman, that a woman wrote this, they tend to think it's a woman's journal. But when they don't, they assume, based on the history of

travelers' tales, because mostly they were men, they assume it's a male character.

One thing that happens in this environment is that users leave tracking code as they go through the journal. I collect this tracking code in a text file. In effect, what happens is, as a user, you're first of all modifying the environment, and unknowingly write your own traveler's tale in it. We tend to think of the Internet in terms of a geographic space that has no end, and we use references of that sort. Then I take this data and I draw it over the digital prints, and I also use it in installation. So that kind of activity comes back to the surface to modify the world.

I want to show you the schema, the whole schema of the project, so you get a sense of the whole thing. I have ten minutes, which I'm hoping to use effectively. Here we go.

Okay, so it's a pretty ambitious plan, but it's constructed very carefully over a decent period of time. In the center, you see the Web site, the journal. What you saw is going to become Chapter One. I'm going to start developing Chapter Two for a big institution. The manuscript is in the core of it. What you can see, the arrows indicate how the content flows from one collaboration to another. Here we have the MoodRingBaby with bNote. Also, I indicate what's physical and what's virtual, because I'm very interested in blending these environments, and thinking of it more from a network perspective, and how we move the networks, we *are* the networks. A Web is a representation of us as a network.

I'm exploring these different environments. Looking at this, I identified three types of users of *World of Awe*. One is the tourist user who comes in, modifies the world in a very slight manner, and then maybe will come back for a visit through one of the verticals here. The other one is the maker/user, which is a collaborator. These people extend the world into their artistic practice.

Working with a programmer, we're creating room. It's built in a software gaming environment, a desert terrain that constantly renders itself. bNote will bring it more into the architectural space. Yoav Gal, the composer, is bringing it to his discourse.

That way it can bring the work into new audiences that I personally do not have a reach for. It also extends the language of the world and, hopefully over time, people can gain a more synergetic experience that spans many different levels.

Also what happens is, one collaboration starts feeding other collaborations. For instance, one piece is going to be based on the music, and a collaboration with a dancer. She does dance video. We received a grant from Turbulence to do that.

I'm finding that for collaboration, it's very, very helpful to have a grantmaker or some kind of organization to create the framework for the dialog. For me, too, it expands the way I understand the work.

The last user I want to talk about was what I called the enabler user. That can be an organization, a patron, any kind of situation in which a space is created for this world to grow. That can be financial or physical. All these elements, all these people, become part of making this environment happen.

I don't want to exhaust you. But if anyone has questions about anything, I'll be really happy to answer. I'll be also present in the other room.

Audience: *[inaudible question]*

Kanarek: My background is in painting, for the longest time. Then I got a chance to get on computers when I was twenty-seven, I'm thirty-four now. It was just when the Web became available, and it really sucked me in. I love it! I think I also really loved it because it was the first time that I can maintain an environment that I'm not dependent on mediators to get access to audience. This is something that I always have that kind of freedom, which I still cherish greatly. That kind of space gives you more room for experimentation that is less dependent on expectations, because as you know, we're all modifying our perception of how to relate to this. So on some level, I don't want to be bugged by that process. I just want to keep it. I don't care if it doesn't last.

Audience: *[inaudible question]*

Dove: I'm very engaged with language, and so starting to work with time-based and narrative issues were really important to me, and it evolved into this.

Audience: You were talking about being able to find your own audience easily. Does that mean that you do your own marketing? If so, has that been easy? Have you had funding for marketing? I'm talking to all of you, but I'm just going off what you said.

Dove: For me, developing audiences is an interesting thing. It's both conscious and inadvertent. What's happening within the context of these new media is that they migrate across categories, and in the process of that happening, you're starting to develop new audiences. In the same way that you want to write a song and you have to build a piano, you also have to build a concert hall and proselytize for an audience.

I spend a lot of time doing grantwriting and fundraising, and doing those kinds of things which are the thing that funds my work and allows me to work on work for a period of time, so that it's not deadline-oriented to a commission. That's been very important to me for the evolution of the kinds of interactive syntax that I'm working on. I don't know how to say that further. My work mostly goes to festivals, museums, film festivals, arts centers, things like that.

Kanarek: The Web is a great way to maintain a relationship with an audience. I've been using that constantly now.

I've also developed a program, which you can see on the Web site, that sends the love letters portion of the journal via e-mail to subscribers. It's another way of disseminating the narrative. It also gets really eerie, because people forget that they signed up, and then they get these really personal, bizarre letters, and it's like, "Who's that?" Or sometimes other people subscribe other people. But there are about twenty-three hundred subscribers. A letter goes out every month, and it will go through 2003.

I do my share of work, of advancing the outreach. But also more and more stuff is happening through institutions, exhibitions, gallery spaces, other people are interested.

Audience: Is *World of Awe* Web-based, or is it a Web/CD-ROM hybrid?

Kanarek: It's on the Web. It's fully on the Web. Actually, I have goodies.

Audience: *[inaudible question]*

Kanarek: I have treasure card capsules, which I think are pretty good.

I really like the Web. The Web is a very important space to me. I also work on other levels, but the Web is the place where I can consolidate everything, all the activity, and have a constant exhibition.

Gilliam: There's this distinction that we all make in terms of presentation format, and audience. I mean when you're making work that's digital or electronic, and it's something that's a Web site that you can update constantly, or a CD-ROM that you can burn yourself, that ends up being very separate from creating something for a specific space, or in a gallery that runs for a month or two months, or being a part of a festival. In my own work, I'm forced to make those distinctions, and interested in those distinctions, and see physical space as something very separate from the kind of other spaces where you can make work.

Dove: And they put parallel existences for some projects as well.

Gilliam: Yes.

Audience: I never thought about the way in which you could use this medium to explore identities. That's one of the ways that I was looking at it, multiple identities. I was really struck by what all of you did.

I particularly, Leah, wanted to ask you about the ways in which you sort of free-associate, particularly around issues of race and gender and so-on. In fact, for all of you, it's a question. I wondered if you could just clarify for me how, if I were in your seat using this medium, this would allow me to make linkages and to create linkages. Or how would I, as a user, use this?

Gilliam: What Yael is doing right now, you would just move through the screen, and move the mouse around, click on things, go to different places.

Audience: I would have free choice?

Gilliam: You would have a choice of the options I gave you. It's just like what it really is. To that extent, it is quite interactive.

This is an interesting project for me, because it's a bit more denotative than most of my other work. There's a way in which I think this ability to free-associate, but also at the same time to make connections between all of these things that may or may not be connected, but end up being connected because they're all within the same project somehow, becomes really interesting.

As a weird art form, the CD-ROM is such a particular moment in technological history, when artists were making these and doing these, and when they were circulating. It is very much like a map of the person who made it, which is why it's intriguing to me as a particular form. People just hand them off to other people. You see what other people are up to, and it's a very personal investigation in a lot of ways of what someone's into or doing.

Sato: I think we're going to make that the last question, because I want you to have time to spend a little time with the interactives yourself. Is there any final word you'd like to add, the three speakers?

Kanarek: Check it out!

Duggan: If you want to talk to Sally Rand, you can stay in this room. Leah is in the room immediately adjoining us, and Yael will be in the Dogwood Room.

Sato: I want to take this opportunity the last time that we're together as a group, to thank Kevin and Yael and Toni and Leah, and also the earlier half of the program, Carl and Joan and Karen. Again, thank you Kevin. Thank you all for coming. Please stay and work with the artists. Thank you very much.

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