



## electronic art and animation catalog



SIGGRAPH 98

celebrating 25 years of discovery





## electronic art and animation catalog

Edited by:

**Joan Truckenbrod**

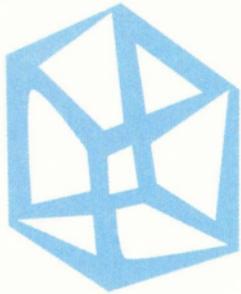
*Chair*

The Art Gallery: Touchware

**Ines Hardtke**

*Chair*

Computer Animation Festival



SIGGRAPH 98

celebrating 25 years of discovery

Computer Graphics Annual Conference Series, 1998

A Publication of ACM SIGGRAPH

Electronic Art and Animation Catalog

COMPUTER GRAPHICS

Annual Conference Series, 1998

The Association for Computing Machinery, Inc.  
1515 Broadway  
New York, New York 10036 USA

ISBN 1-58113-045-7  
ISSN 1098-6154  
ACM Order No. 435981

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## Art Gallery: Touchware

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As cyberspace with its virtuality races towards the future, there is a cry for the hand. In linking to cyberspace, where is the touch, the tactility, the physicality of experience? Touchware is the lens through which we envision the future. This exhibition embraces the interface between computing and user as the territory of art. Issues of the physicality of touch vs. the psychology of keeping in touch, natural versus machine, and substance versus virtual are concerns of these artists.

The reach-out-and-touch mythology of the telephone has become the banner of the World Wide Web. Email and the Internet provide the long-distance touch with an immediacy and multiplicity of connection within simultaneous individual and community matrices.

"This network is an ideological image, with a profusion of spaces and identities and the permeability of boundaries - in the personal body and in the body politic."<sup>1</sup> This rhizomatic world of cyberspace is an electronic totemism. Totemism, as described in Aboriginal art, involves animating lines of identification flowing from the origin through all things ... forming an invisible web of reciprocal processes linking humanity, nature, and spirituality.<sup>2</sup> Central to Aboriginal art, totemism describes the linking of humanity, nature, and the gods. Electronic totems, as Aboriginal totems, enrich a person's interrelatedness to the world.

But the behavior and feel of this linking is flat - a projected world connected through a flat light screen. In this flatland, the visual is dominant over the other perceptual senses. Other sensory experiences like touch are diminished. McLuhan viewed the printing press as an invention that segmented sensory experiences, preventing kinaesthetic thought and feeling in which there is a synthesis of hearing, seeing, tasting, and touching. The Internet is an exten-

sion of the printing press. Thus when an individual perceptual sense becomes locked in a technology, it becomes separated from the other senses. This portion of one's self closes, as if it were locked in steel. Prior to such separation, there is complete interplay among the senses. Virtual experience "overthrows the sensorial and organic architecture of the human body by disembodiment and reformatting its sensorium in powerful, computer generated, digitized spaces."<sup>3</sup> Cyberspace disengages from physical reality. Sensory experience is reduced to a monomedium of digital coding.

The artwork in this exhibition links us to the mythology and spirituality of the digital world. We create convergence mythologies as a connective tissue between the physical and the world of the virtual spirit. African art embraces the differences between the world of matter and that of spirit through convergence mythologies. Each African culture has a specific explanation for the convergence of spirit and matter. For example, the Yoruba people conceive of the cosmos in terms of two distinct yet inseparable components. Aye is the visible, tangible world of the living, while Orun is the invisible, spiritual realm of the ancestors, gods, and spirits. In some societies, dreams and the dreaming person are the point of intersection between the human and the spirit realms. The dreaming person is the intermediary of communication. The artist mediates the territory between real and virtual, between spirit and matter.

#### **Electroforming: New Materials/ New Forms of Art**

This artwork rematerializes the digitized experience, using physical and conceptual aspects of touch to mediate between the real and the cyber-mythical. Subverting the disembodiment of cyberspace, electroforming embodies an engagement with materials. The

grammar of crafting in cyberspace usurps the vocabulary of hand materials and processes: cut and paste, layering, modeling. But the process of creating art in the electronic arena is electroforming with light, time, movement, communication, and transmission. Tangibility and substance cross over materiality and virtuality. The same is true for music composition. The material of composition is sound having no object or visible physicality. Composer Pierre Boulez states that "perhaps material seems a rather coarse and ill-suited term when it comes to an art such as music, which, more often than not, is perceived as something immaterial. Sonority, potential expressivity, range and color form the musician's basic working material."<sup>4</sup> Sound and light are emotionally tangible materials, however ephemeral.

In the electronic arts, materials are created in the mind's eye of the artist. The psychological effect of material is real. The physiological effect of material is real. Artmaking as electroforming involves a complex conceptualization of materiality. The kinaesthetics of experience are embedded in the mental constructs of art-making processes as powerful as that of forming clay by hand. "Significant art no longer has an outward relationship to material elements that formed it."<sup>5</sup>

#### **References**

1. Haraway, Donna J. *Simian, Cyborgs and Women, The Reinvention of Nature*. Routledge, New York, 1991, p. 170.
2. Lawlor, Robert. *Voices of the first Day, Awakening in the Aboriginal Dreamtime*. Inner Traditions Press, Rochester, Vermont, 1991, p. 279.
3. David Tomas, quoted by Jim Elkins in *There are No Philosophic Problems Raised by Virtual Reality*. *Computer Graphics*, Vol. 28, No. 4, Nov. 1994, p. 251.
4. Boulez, Pierre. *passport pour le XXe siecle*, translated by Margaret Tunstill. *Auvidis*, Montaigne, 1989, p. 24.
5. Moholy-Nagy, Sibyl. *Moholy-Nagy, Experiment in Totality*. MIT Press, 1969.

## Acknowledgments

This milestone exhibition of electronic art was made possible by the talent and hard work of the SIGGRAPH 98 Conference team. The talented people at Capstone Management, Smith Bucklin, AVW, Freeman and Q LTD. have provided invaluable contributions to the success of the 98 Art Show. Walt Bransford, SIGGRAPH 98 Conference Chair, has provided leadership and vision, creating an energized, future-looking arena for the entire conference including the art show.

The key person who brought the Art Gallery to fruition is Heather Elliott, the Art Gallery Administrator. Her talented leadership, unending energy, and unwavering commitment to this exhibition are greatly appreciated. Her significant contribution is applauded by all of the artists.

The vitality of Jessica Westbrook, the Art Gallery Student Volunteer coordinator was a major contribution to the Gallery's success.

Thanks also go to the hard working Art Show Jurors Steve Benson, Annick Bureaud, Deanna Morse, and Jane Stevens; the ARTSITE jurors Annick Bureaud, and Judy Malloy; and the Art Show Committee members Jane Stevens, Valerie Sullivan-Fuchs, John Grimes, and Ron Hutt. A special thanks to past SIGGRAPH Art Show Chairs, Lynn Pocock, Deanna Morse, John Grimes, Jean Ippolito, and Ken O'Connell for their insights and support.

The Art and Technology Department and The School of the Art Institute of Chicago have been very supportive of this project. A special thank you to Carol Becker, Dean and Vice President and Peter Gena, Chair of the Art and Technology Department, The School of the Art Institute of Chicago.

## Art Gallery: Touchware Committee

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The School of the Art Institute of Chicago

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*Administrative Assistant*  
The School of the Art Institute of Chicago

### **Jessica Westbrook**

*Art Gallery: Touchware Assistant*  
The School of the Art Institute of Chicago

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Illinois Institute of Technology

### **Ron Hutt**

The School of the Art Institute of Chicago

### **Deanna Morse**

Grand Valley State University

### **Jane Stevens**

Illinois Art Gallery

### **Valerie Sullivan-Fuchs**

The School of the Art Institute of Chicago





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### **Juror's Statement**

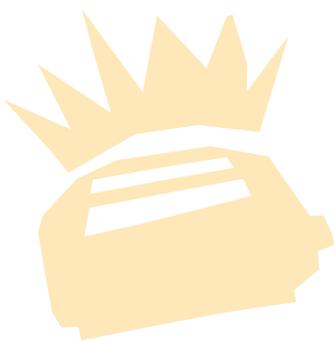
How do you select artworks for the SIGGRAPH 98 Art Gallery? The first criterion is, of course, the strength, the power of the work by itself, but then? The Call for Participation was open, but it requested strategies for engaging the viewer through ideas of touch. Artists were encouraged to explore the tactility of materials in the electronic or printed image, touch-based responsive processes of the interface, or extension of our experience of physicality to the ephemeral emotional touch of being linked to someone across the globe via the Internet or telecommunications.

"Where is the computer?" is a question that arose many times in the jury's discussions. And it is an important one. SIGGRAPH is a high-tech show, the state of the art in computer imagery. Does the art have to match the technical requirements you expect in the technical and scientific papers or demos, using the last technological innovation? This question was particularly crucial for the two-dimensional works. Computer-manipulated images are everywhere. We have learned to "read" them, and they have become common to us. If a work is challenging but uses basic functions of Photoshop that students learn in the first class, should we dismiss it for this single reason? The answer was no. But then we

asked another question: "Could the work been done without a computer, with the old and well-known photographic manipulations?" If the answer was yes, then I rejected it, because this is an electronic art show. Sometimes, this question was not so easy to answer.

With the installations, this question was even harder. When every kitchen device has a microchip, when navigating Sojourner on the surface of Mars looks like a piece of cake (even if it was not), where is the computer? And where/what is electronic art today? In a way, there are experimental works focusing on exploration of a technique, for which the message is the medium. The Vasulkas and Myron Krueger are important names in this respect. Then there are works that deal with other issues, using the technology at its best, but where the technology itself is not the central part. If the work is experimental in some way, then the question is relevant, otherwise the computer does not need to be "evident" to be used in a subtle and challenging way. We do not remember works of art for their technical achievements but for their aesthetic qualities. When oil painting or enamels were high tech, they drew attention, but that is not the primary reason they are kept in our museums today (and why they were appreciated in their time either). Furthermore, as the "computerized" world becomes second nature, we are encountering a "disappearance" of the computer, which is reflected in the art. We might just be entering post-computer, post-electronic art.

The third question that I asked myself during the selection process was: "Can the work face SIGGRAPH – this huge, noisy, busy place where hundreds of computer screens compete to attract 40,000 people rushing from one meet-



ing to another panel? Right or wrong, it was clear to me that some works, although I think they are very good, could not survive the show because they just need another kind of environment.

In the end, we chose artworks that we felt were good art. This is an especially difficult task when you have to evaluate the work as slides, video, and written descriptions. To my surprise, some of the documentation presented to the jury did not describe the artwork in a clear manner, and we just could not figure out what was going on! Maybe this is something to put on the agenda of the art schools: teach the students how to document and write about their work...

### Deanna Morse

**Deanna Morse is an independent filmmaker specializing in animation and personal short films and videos. Her works have been screened internationally, have won awards at festivals, and are represented in permanent collections including the Metropolitan Museum of Art. Her films for children have been broadcast on Sesame Street and Romper Room. Her experimental films have been shown on PBS and cable TV. She has been cited in several articles and books on contemporary animators, including *Experimental Animation* by Cecile Starr and Robert Russett and *Women in Animation*, edited by Jayne Pilling.**

**Morse has served as President of ASIFA/Central, the midwest chapter of the international animated film association. She was recently elected to the Executive Board of ASIFA International. She was chair of the Art and Design Show for SIGGRAPH 94.**

**Morse is presently a professor in the School of Communications at Grand**

**Valley State University (Michigan), where she teaches interactive multimedia, computer animation, media production, and film theory and history. She has been a visiting artist at many schools and universities. She was an artist in residence for four years with the South Carolina Arts Commission, and she led animation workshops at the Sinking Creek Film and Video Festival in Nashville for over a dozen years.**

**Morse has produced over thirty independent films and videos. She has received numerous grants to support her films and videos, including three Creative Artist Grants from the Michigan Council for the Arts, and four NEA regional film grants through the Center for New Television.**

#### Juror's Statement

In the jury process, we looked for work that was visually exciting and had strong emotional content. I evaluated artworks with "traditional fine arts" criteria, including composition, form, color, texture, and surface. I looked for work that was innovative, that would challenge our perspectives, that would engage the viewer.

Several of the pieces we selected elegantly consider the issue of the human-computer interface. In a classical garden setting, *Stream of Consciousness* allows us to play with visual language as we grab floating words and build new poems. With *The Winds That Wash the Seas*, we get up close and personal with a TV monitor and use our breath to blow away an image, revealing other surface layers.

Other pieces challenge us to reconsider the human-computer interface and our comfortable roles as passive observers. *Items 1-2000* forces us to use the bar-code reader as a virtual scalpel. In *Project Paradise*, we control a distant human. And *Case Study 309* challenges us to take presumed risk as

we recline under a precariously suspended television set.

Other artworks make a political statement or comment on the times we live in. The viewer/tourist/photojournalist participant in *World Skin* finds the act of snapping the camera shutter a charged activity - not neutral, not benign. The large murals *No Man's Land* and *Oral History* employ visual codes from advertising to comment on our obsession with the body. *The Doll Floated By*, *ReGrowth from the Wreckage*, *Is it Really Over?*, and *To Bury Recollection...* are quiet statements, the artists' response to tragic events.

Several installations create their own world-spaces, their own fanciful environments. In *KAGE*, our perceptions of the physical reality of light and shadow are questioned in a playful manner. *Iconica* devises a new symbol system for its universe, building a self-contained artificial life environment.

Touchware is one of the few places at SIGGRAPH 98 where the computer is used to comment on the role of technology in society today. In a field that is primarily collaborative, Touchware provides an opportunity to consider statements by individual artists.

### Jane Stevens

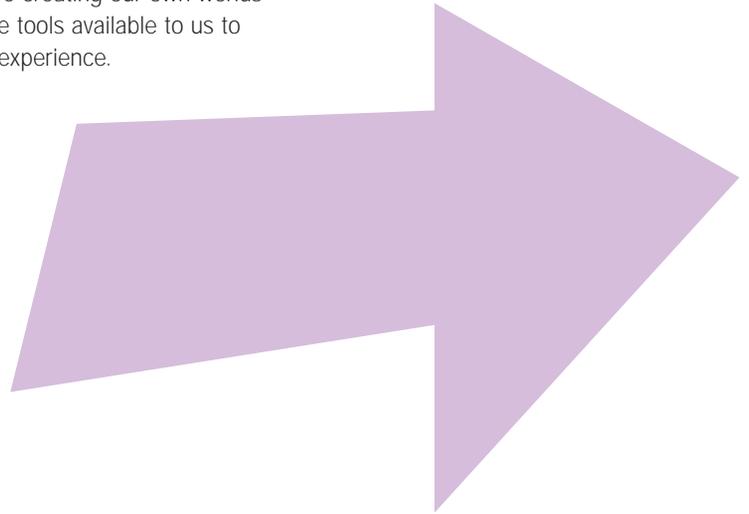
**Jane Stevens is the Curator at the Illinois Art Gallery in Chicago. She has curated electronic art shows for the Illinois Art Gallery since 1992, and recently she initiated a new electronic art installation series entitled "Electronic Fields," which is supported by the Sony Gallery of Consumer Electronics. She also teaches at Morton College and exhibits her own work internationally.**

#### Juror's Statement

The new technologies hold a tremendous amount of wonder, excitement, and possibilities. I was very encouraged and impressed to see how these new technological forms of artistic expression are expanding the boundaries of the art experience. They are bringing the world together in cyberspace for many purposes, including: greater communication, efficiency, education, and artistic expression. But is this at the loss of human contact? It certainly does expand the possibilities of contacting others globally. But how does technology contribute to our understanding and enrichment of the human experience?

The art work we saw during the two-day jurying process showed me that there are many people around the world using these new tools to expand and enrich the creative process and human experience. Some of the work showed great creativity and sensitivity to the process. Some included more traditional concepts of beauty. Some pieces were incredibly beautiful and delicate, while others questioned the very use of technology. Some of the work showed humor, some pain and harshness. Some looked at the new technologies as harsh controlling agents and others as user-friendly tools for creative exploration and celebration.

I feel very optimistic about the artistic avenues being explored by the founders and current generation of artists. We are creating our own worlds and using the tools available to us to expand that experience.



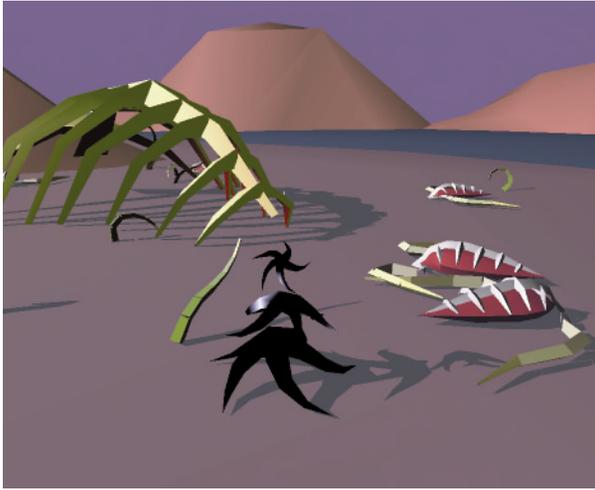


**The Lacemaker** 1997, Iris ink jet print on deckled-edge Somerset water color paper, 12" x 19.25"

*The Lacemaker* is an homage to the famous same-titled 17th Century painting by Johannes Vermeer. The original photograph, taken on New Year's Eve 1995, was not consciously posed. Acevedo caught his subject emulating the posture of the Lacemaker simply by happenstance. This synchronicity underscores his interest in everyday life as seen, recorded, and then digitally revised into a kind of metaphysical photographic archive.

This is a figurative image about turning up the non-anthropomorphic channel. As to metaphor: energetic flux outside the polarities of complementary opposites. In effect depicting a subject's local electromagnetic, structurally resonant field. This depiction also doubles as a device that subdivides and interpenetrates the traditional photographic space with non-cubist spatial arrays. The corresponding ray-traced vertexial spheres provide an additional non-Euclidean mapping of the pseudo-molecular-model aggregate. This

pictorial artifact facilitates the act of seeing in the present combined with flashback phenomena – remnants apprehended in an act of coding constellations of sensorial data. Nothingness in the interstitial space between figure and ground is effect given structure.



**The Bush Soul** 1998, Interactive installation with 3D virtual environments, 4' x 8'

*The Bush Soul* is an interactive art work that explores the role of avatars in a world of artificial life. In a virtual world, the avatar becomes our other body. But what part of “us” is in our avatar?

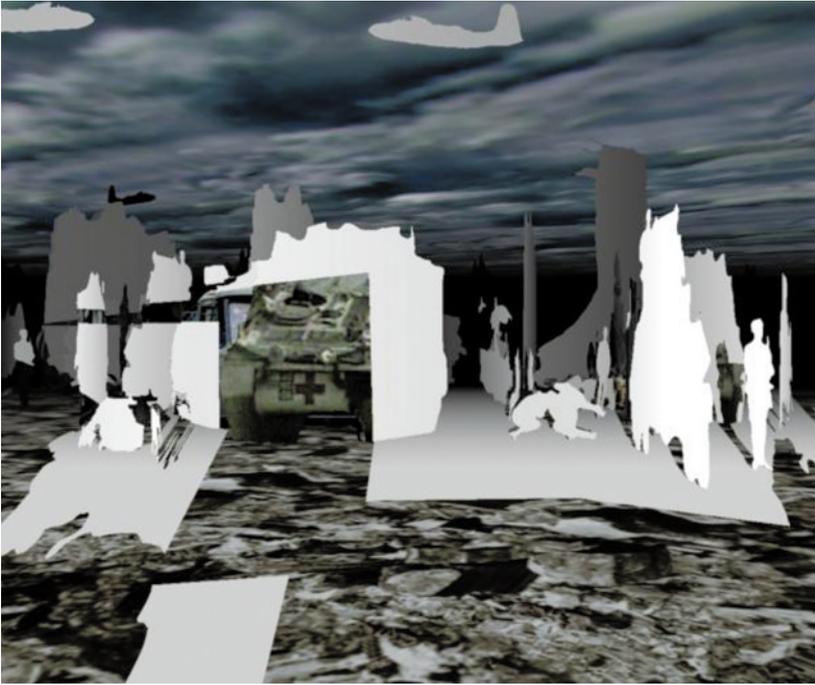
Certain West Africans believe that a person has more than one soul, and that there is a certain type of soul, called the “bush soul,” that dwells within a wild animal of the bush. A person’s bush soul resides in an animal, though that animal also has a life of its own.

An avatar can serve as a place for the bush soul, following the guidance of the person attached to it, but “alive” with its own set of behaviors. In this work, every object in the environment, including the avatar, is instilled with some form of artificial life.

Relationships can be formed between all elements. Activities and events emerge depending on relationships and interactions: nonlinear, experimental performances, narratives, and music.

*The Bush Soul* experiments with forms of communication that rely on symbolic gestures and movements. With a focus on the “life” of the virtual environment, this work examines the role of artificial life and human presence in an art form that includes the interactive experience.

*Emergence Team*  
**Loren McQuade**  
**Eitan Mendelowitz**  
**Daniel Shiplacoff**  
**Jino Ok**  
**John Northan**  
**Jack Lin**



**World Skin** 1997, CAVE 3D VR Installation, 10' x 10' x 10'

Armed with cameras, like so many tourists, we traverse a three-dimensional space. The landscape is scarred by war-demolished buildings, armed men, tanks and artillery, piles of rubble, the wounded and the maimed. This arrangement of images from different zones and theaters of war depicts a universe filled with mute violence. Audio represents the sound of a world in which to breathe is to suffer. Special effects? Hardly. We, the visitors, feel as though our presence could disturb this chaotic equilibrium, but it is precisely our intervention that stirs up the pain. We are taking pictures, and here, photography is a weapon of extinguishment.

The images we record exist for no one any more. Each photographed fragment disappears from the screen and is replaced by a black silhouette. With each click of the shutter, a part of the world is extinguished. Each exposure is printed out. As soon as an image is printed to paper, it is no longer visible on the projection screen. All that remains is its eerie shadow, cast according to the viewer's perspective and concealing fragments of future photographs. The world falls victim to the viewer's glance, and everyone is involved in its disappearance. The farther we penetrate into this universe, the more strongly aware we become of its infinite nature. And the chaotic elements renew themselves, so that as soon as we recognize them, they recompose themselves once again in a tragedy without end.

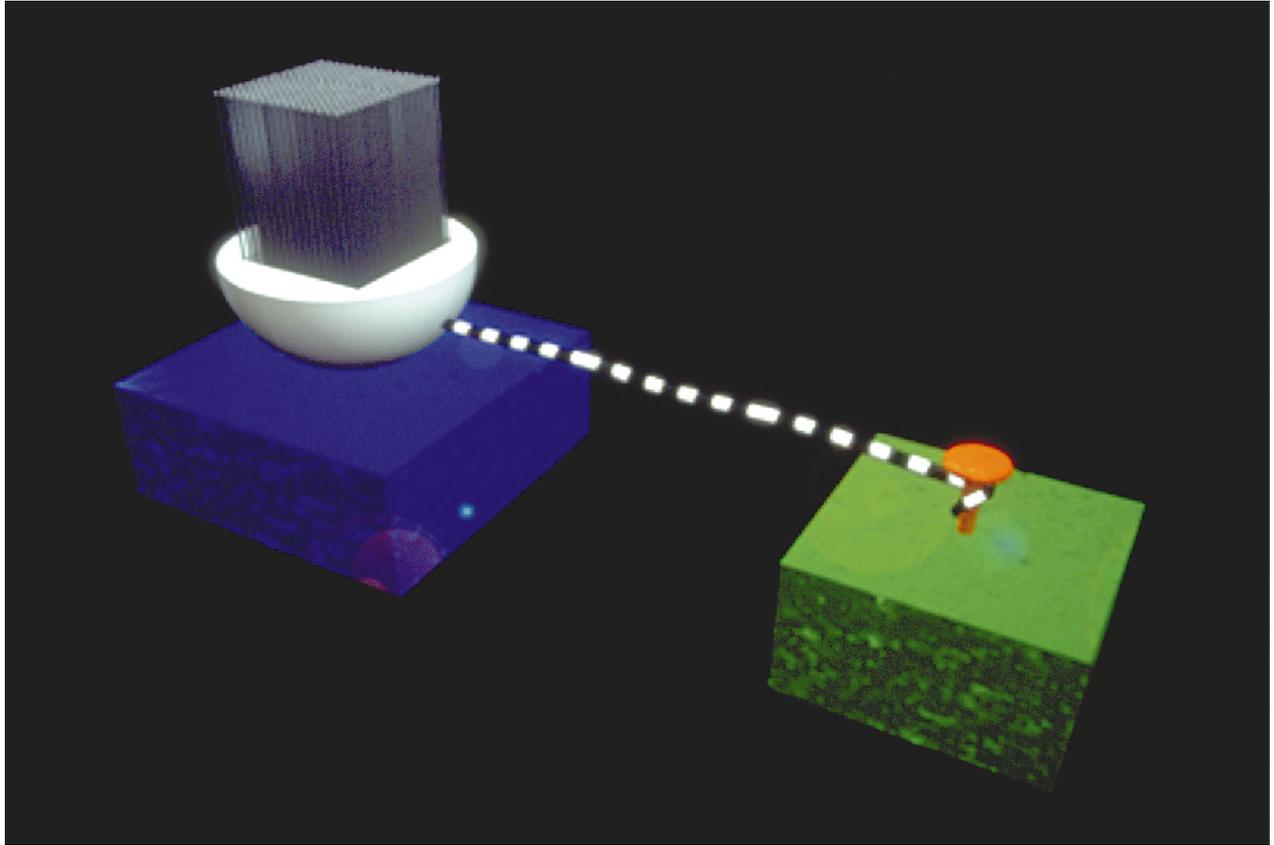
*CAVE interactive installation*  
**Maurice Benayoun**

*Interactive music*  
**Jean-Baptiste Barrière**

*Software*  
**Patrick Bouchaud, Kimi Bishop, David Nahon (S.G.I. Europe/Z.A Production)**

*Graphic preparation*  
**Raphaël Melki**

*Production*  
**Z.A Production, Ars Electronica Center, Silicon Graphics Europe**



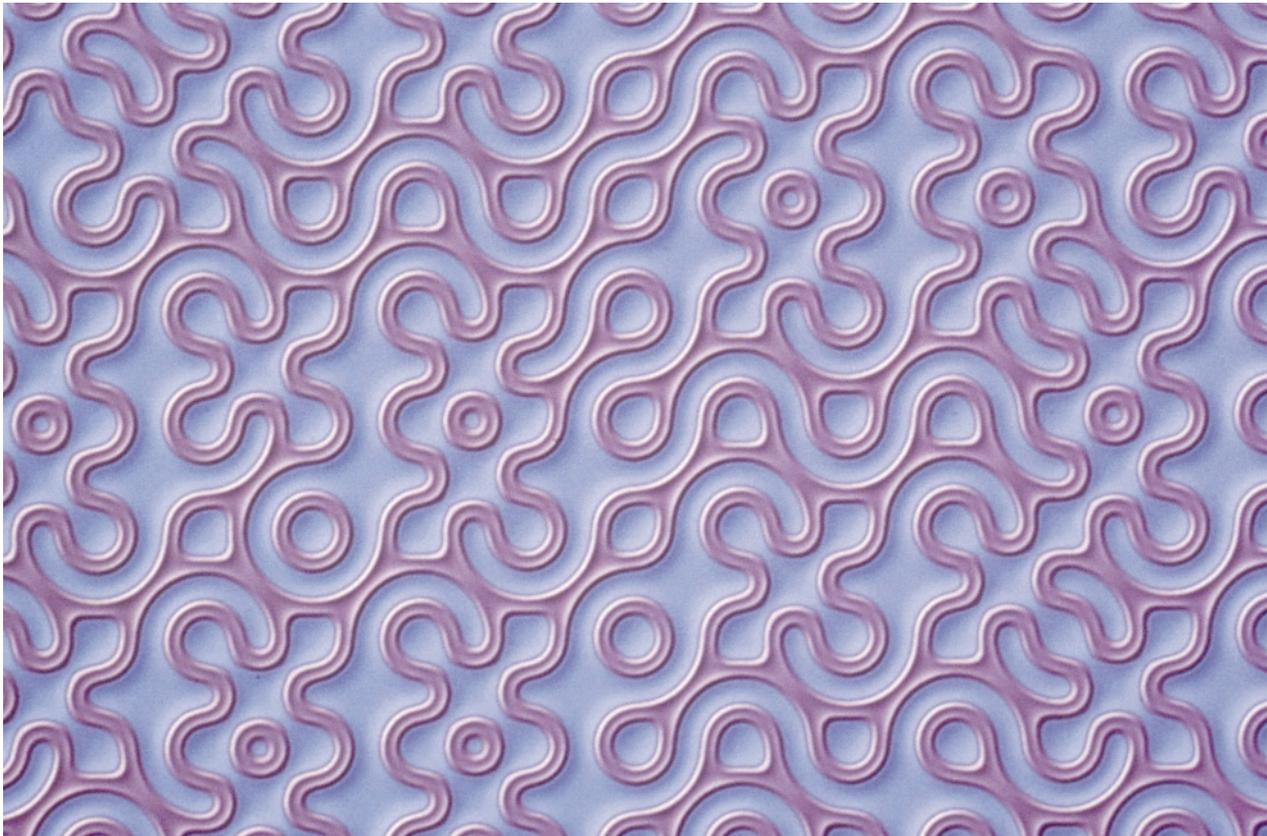
**Windgrass** 1998, Interactive Installation, 20" x 18" x 18"

*Windgrass* explores the contrast between natural forces and computational processes, between human intimacy and technology that creates distance. Computational technology often leads us further away from the physical world, particularly when the interaction it supports is channeled through the narrow bandwidth provided by the keyboard, mouse, and screen. *Windgrass* seeks to address this problem by bringing more intimate

physicality into the play between human and machine.

Lightly blowing across the surface of *Windgrass* sets off an undulating visual display on a field of 768 tiny incandescent lights. In addition, *Windgrass* amplifies the users' soft blowing. This movement makes the object pull against its tether in the same way a dog pulls against its chain.

*Windgrass* evokes the emotional closeness we associate with our relationships to domestic animals. It suggests a domesticated piece of technology with a dependency on intimate human input. The user is compelled to bend down closer to the tethered object to interact with it in an intimate way. This recreates a sense of familiarity in the interaction the object requires.



**Swimming Pool** 1997, Iris print on Deckle edge Arches Watercolour paper, 22" x 32"

*Swimming Pool* was created from simple tiling elements that are permuted together. Each tile is a cell in an automaton which develops over time according to some simple rules. The resulting image was a vector graphic, or line artwork, that was subjected to a number of continuous tone raster graphics filters to create the coloured and textured surface that composes the final print.

Rather than being constructed or designed, these works “evolve.” I look forward to a future where computational processes like the ones I build will themselves make artworks without the need for human intervention. The creation of such processes is something that has always fascinated me. *Swimming Pool* is just one route marker from the journey so far.

*Printing*

**Pasi Ihalainen**

Spectrum Photographic Colour Services Pty. Ltd.



**Untitled 67** 1995, Fujix pictography print on glossy paper, 10" x 8"



**Untitled 76** 1995, Fujix pictography print on glossy paper, 10" x 8"

This group of images has evolved from photographic works that emphasize the artificial nature of that medium and draw on its capacity to project idealized environments.

Throughout this evolution, I have developed an increased interest in objects and how we perceive them in photographs. The images include elements such as miniature toys, dia-

grams, cursive and gestural marks, industrial debris, and photographs themselves combined with synthetically generated, three-dimensional digital objects.

Within the artificial framework of a digitized photograph, I can easily juxtapose these found and virtual objects and lead the viewer to new associations among them. I find this new

arrangement to be a more flexible extension of traditionally constructed photographic tableaux, one in which the camera may isolate and scrutinize objects for comparison. Through this process of controlled fragmentation and reassembly, I hope to create a representation that reflects my interest in photographic observation and illusion.

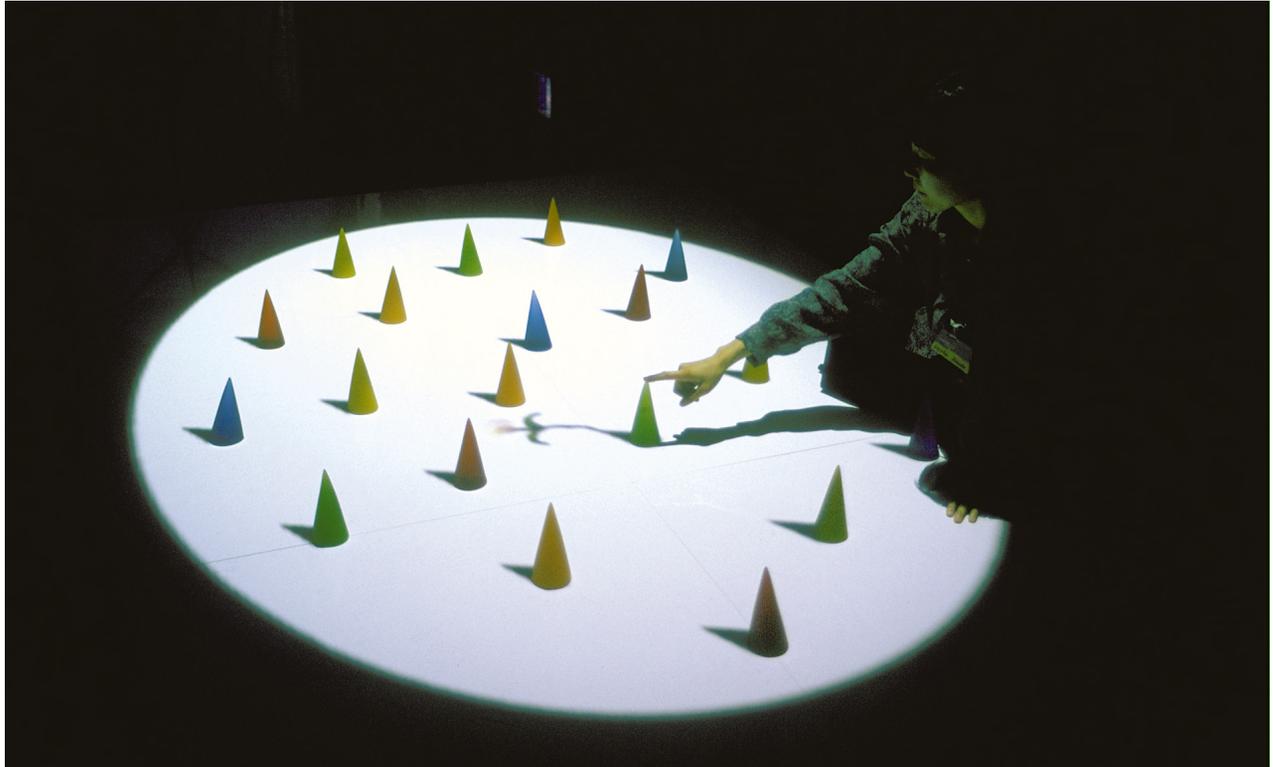


**Artist Block 2** 1997, Photographic R print on matte finish paper, 31.5" x 47"



**Indecision** 1996, Photographic R print on matte finish paper, cut clean, 15" x 21"

My art is like a playground for my soul, a place where I can be spontaneous and try out new ideas and thoughts. It's a place where I can run free and forget all the worries and responsibilities of being a grownup. On this playground, I toy around with imagery and ideas about psychology, spirits, lots of emotion, and I ask questions that I would love to know the answers to: Does the mind belong to the body or the soul? What really happens after death? Where do ideas come from? Is my intuition simply my guardian angel whispering in my ear? My approach is simple. Most of the time I will sit down with no preconceived notion of what I expect the piece to be. That frame of mind leaves a lot of room for spontaneity and irrational thought, which leads to happy accidents. I think happy accidents are the doorway to the subconscious mind, which I believe to be a direct link to the soul.



**KAGE** 1997, Interactive Installation, 160" x 100" x 72"

Since the earliest times, the shadow has proved existence – the ghost has no shadow. However, like the “virtual” image projected on a TV monitor, the shadow itself has no substance. And at the same time, the shadow, or the silhouette, appears as the basis of the image.

In *KAGE*, computer-graphics shadows of cone-shaped objects explore this shadow-substance characteristic. The computerized shadows projected toward the floor are motionless, like all shadows, but as time passes, some of them begin to tremble. When the objects are touched, various kinds of patterns appear on the computerized shadow images.

The ceiling-mounted projector also illuminates the viewers, so their shadows join the shadows of the objects on the floor. When the false shadows created by computer graphics and the viewers’ true shadows are both projected on the same plane, viewers recognize the shadow-existence dilemma.



**In Conversation** 1997, Live installation and Web site

*In Conversation* aims to examine the boundaries and social customs of two distinctly different kinds of public space, the street and the Internet, each with its own established rules of engagement.

On the street, passersby encounter an animated mouth projected onto the pavement and hear voices triggered by Internet users trying to strike up a conversation. Should anyone choose to reply, a concealed microphone and surveillance camera document and

transmit the responses. Through the Web site, Internet users can view the surveillance camera image and sounds. They can type "live" messages, which are converted into speech and broadcast on the street.

In the gallery, *In Conversation* is a large-scale "live" installation. The surveillance camera image is relayed to a large projection screen. The conversation between the street user and the net user, together with amplified sounds from the street and an original

soundtrack by Tim Clarke, creates a live film noir, unfolding in real time.

*In Conversation* introduces two kinds of public space to each other, along with the etiquette that governs them and the people who frequent them. This project is an experimental exploration into how different environments and means of interaction affect not only our willingness to communicate, but the way and manner in which we do so.



**Why Water Always Scares Me** 1997, Digital collage, iris ink-jet print on watercolor paper, deckle edge, 16" x 20"



**Wolf** 1997, Digital collage, iris ink-jet print on watercolor paper, deckle edge, 16" x 20" on 17" x 22" paper

These works explore some of the rough edges of relationships in which such issues as control, fear, self-determination, and identity collide. Beneath the surface decorum, darker forces are at play. The controlled environment may be a trap; the beast is within. "Water" also concerns the struggle with beastly forces. Conflicting needs and desires, fears and wishes, roles and identities, and the testing of boundaries threaten to unbalance the relationship of mother and child.



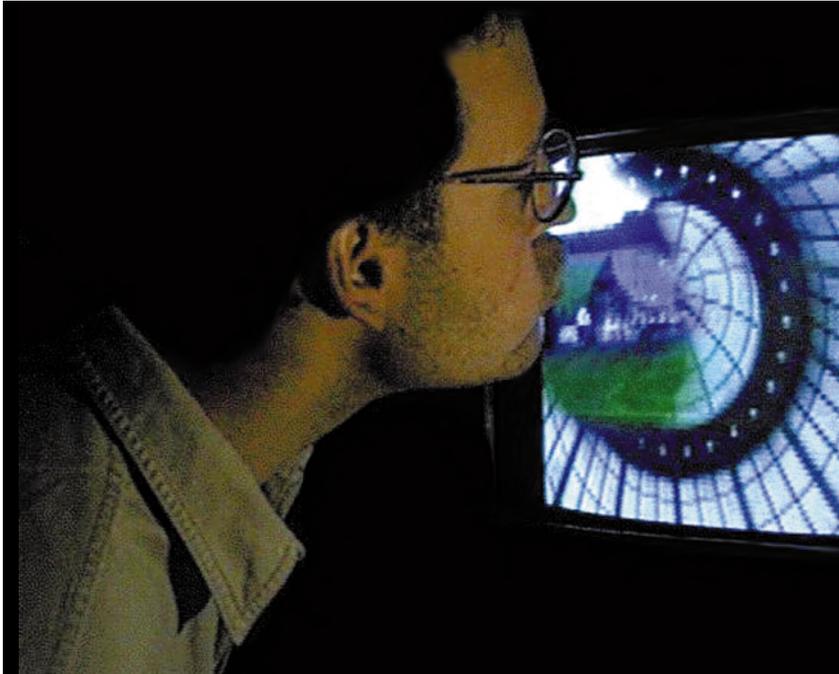
**b97.9.3** 1997, Chinese ink on paper, 50.5" x 35.2"



**with left and right boundary** 1997, Pencil on paper, 50.5" x 35.2"

Touching is a very broad concept. In these images, lines are playing a game of touching, of near-touching, of avoiding, of seeking, of crossing and intermingling: a manifestation of the purity of the line and an invitation to meditate.

Algorithmically generated drawings, drawn on a pen plotter, constitute a very small segment within the area of computer artwork. It is this small segment, however, which I find most fascinating. This has to do with the archaic notion of a mechanical extension to the drawing hand, unlocking a universe of machine-generated drawings utterly different from hand drawings.



**The Winds that Wash the Seas** 1995, Interactive Installation

With this installation, I was interested in developing alternative “soft” computer interfaces based on natural media. These devices, compared to traditional interfaces, are imprecise and vague, capturing only the gestural essences of the user’s interactions. Air and water, with their innately ethereal properties, suit the thematic exploration of the installation’s content, where the viewer creates, via real-time

image processing software, a dialectic between the icons of societal identities – architecture – and the fleeting first-person experiences contained within these structures. Through the non-linear dynamics of these two fluid media, viewers can only provide impulses, via stirring water in the tub or blowing air onto the monitor, to a complex natural system that propagates beyond their control. The futility

of the human intervention is compounded by the fact that there are neither goals nor states in the system; the viewer’s presence is as transient as the visual content and interface media. A final irony: not only do we perturb the system, the work leaves traces of itself: wet hands and shortness of breath.



The more personal the issues you deal with in your art, the more universal they become. I often address human issues in my work: beauty, life, aging, and death. I also deal with social issues such as poverty, class, alienation, and violence. I find that by incorporating humor into my work such as photomontages created from my own photographs, I gain a release and an escape from the horror of the injustice that takes place in the world.

**Synthesis: A Dream** 1996, Giclee print on deckle-edge Somerset satin watercolor paper, 22" x 30"



**Footnote to the Millenium II** 1996, Color print on glossy Konica A6E paper, 12" x 18"



**untitled** 1997, Iris print, 30" x 40"

Conflicts and dualities created between culture and the free-flowing spirit are the forces that drive my artwork. On one level, I am referring to life patterns I create under the influence of technology. On a deeper level, I am referring to a transcendence. David Salle said in a 1997 issue of *Art In America*, "one of the impulses in new art is the desire to get outside the self and the desire to transcend

one's place." I use the computer to transcend, to portray different levels of awareness: the interior spiritual, natural, and the exterior cultural. What can bring such complexities to the table can also be very calming because it can also be ultra-focused.

Using the computer is a fluid way of expressing these dualities. My landscapes and still-lives are created using

common textures: the sole of a gym shoe, a window, or cement. I integrate my current artwork with many works I've done in the past. Using the computer to work backward and forward, I juxtapose disparate elements, creating an impossible coherence. Interestingly, what separates the elements also joins them.



**Liquid Views - Rigid Waves** 1993/1997 Interactive Installation

*Liquid Views* and *Rigid Waves* tells the story of Narcissus in simulated environments with a combination of computer, video, and sensory interfaces. Its main purpose is to make visible the communication between the individual person and virtual selves. Touch and movement serve as interfaces into a spatial experience.

#### **Liquid Views**

Narcissism in the mirror of society deals with self-reflection and self-knowledge. In the virtual mirror, viewers are confronted with their images as reflected in the water of the spring and representations of themselves. As they allow themselves to be seduced and interact with their images on the water mirror, the images disintegrate and are transformed into a simulation

until they finally merge into the algorithmic hybridism of the water. *Liquid Views* is understood, in turn, as a metaphor for the act of being "online;" that is to say, in our "second nature" as "navigators" immersed in the telecommunication world. Over the "high seas" of cyberspace, the identity of each individual is transformed into a flow of variable and interchangeable data, in which viewers are completely free to change or redefine their identities, and all they have to do is alter their own sources of information.

#### **Rigid Waves**

*Rigid Waves* transforms the acoustic mirroring of Narcissus and Echo into a visual form. As observers approach a mirror, they are confronted with a mirror image that does not correspond to

their normal perception of things. They see themselves as impressions, as bodies with strangely displaced movement sequences and, ultimately, as images in the mirror that smash as soon as they come too close. They are unable to grasp themselves. This is an attempt to see oneself from the outside, to stand side-by-side with oneself and to discover other, "hidden selves." In this fractured mirror, we find ourselves shattered and splintered. Our selves are liberated and broken down into multiple selves. The presence of space in coordinating one's own interaction plays a key role in this work. It explores dynamic gestures of different cultures and gender in order to study the concept of inter-/action for global communication.



**Heading Out** 1997, Mixed media, 24" x 30" x 6"

One day, while rummaging through boxes being thrown out by a neighbor, I found a stack of old discarded computer boards. I was intrigued by the detail, shapes, and forms of the circuitry. In my mind, circuits and wires became a city in motion. This is where the basic concept for *Heading Out* was formed. Not only would the circuit boards add interesting features and textures to the canvas, but would also help to incorporate three-dimensionality.

As in all of my paintings, *Heading Out* was an experiment into the realms of my imagination. With this particular piece, I took my basic skill as an impressionistic artist and combined surrealism and animation. But like real functioning computers, I wanted to obtain a sense of kinetic flow and movement that would give the painting life. I combined cartoon-like features with city life, then brought the highway from the city itself, first descending and then forwarding, with an auto-

mobile actually coming up and off the canvas.

When I work on a piece, I try to capture a certain mood or feeling, and I want more than painterly strokes on the canvas. The combination of texture and three-dimensionality in mixed media painting helps me to achieve this.



**Stroke** 1996, Ink and acrylic on hardboard, mounted on a 1.5" wooden frame, 40" x 40" x 1.5"

Old illustrational photographs are digitally manipulated then richly glazed with coloured paint to suggest: skin, touch, sensuality, and emotion. Those human elements are of particular interest, not only because science's knowledge hierarchy assigns data acquired through the mind and eye the highest credibility, and data acquired through the sensual body, the least, but also because the latter have historically been devalued as "feminine" ways of knowing the world.

Together, the photos and paint create dialectic montages of human/photo-mechanical, soft/hard, subject/object, etc. Despite their technological mediation and their dry, didactic origin, the reified figures reveal human complexity and the transient nature of thought.

I am interested in textbook illustrations and the scientific rhetorical strategies they employ to make distant, to universalize, and to dehumanize their subjects – all in the name of

objective truths. The subjects in this series are unnamed women demonstrating various swimming techniques in an old swimming manual. When I first saw these illustrations, I was struck with what they did not address: individuality, the sensual body in water, sensations of temperature, fear, etc. In response, my mixed-media work undermines the conceit of scientific representation by re-investing human qualities and individual narratives.



**Moving Towards the Event Horizon** 1997, Electrostatic print on canvas, 50" x 142"

*Moving Towards the Event Horizon* is a continuum. This work, like its ancestors, has evolved in an organic manner. The work has moved, mutated, cloned, and condensed the works that have come before.

Issues referenced within the work highlight several concepts: the universe containing reversible and irreversible processes, biological/geological structure, the corporeal, diverse belief systems, and self-generating matter that is

inherently dynamic, active, and relational. Together, these concepts can be viewed as manifestations of potential environmental scenarios in relation to theoretical new physics.

The work plays with multiple views of the subject. The mutated fish have slightly different perspectives and lighting conditions – Cubism meets quantum mechanics. Each fish is seen as a gateway into another dimension/space. It should be noted that this

image and its subjects also exist as a nonlinear interactive CD-ROM.

Doubling or cloning is seen as the final stage in the history of the modeling of the body – the body destined to serial propagation, a cybernetic prosthesis altering the whole and eventually replacing it. What was, what is the original has transformed, and the image is seen as just another point in time.



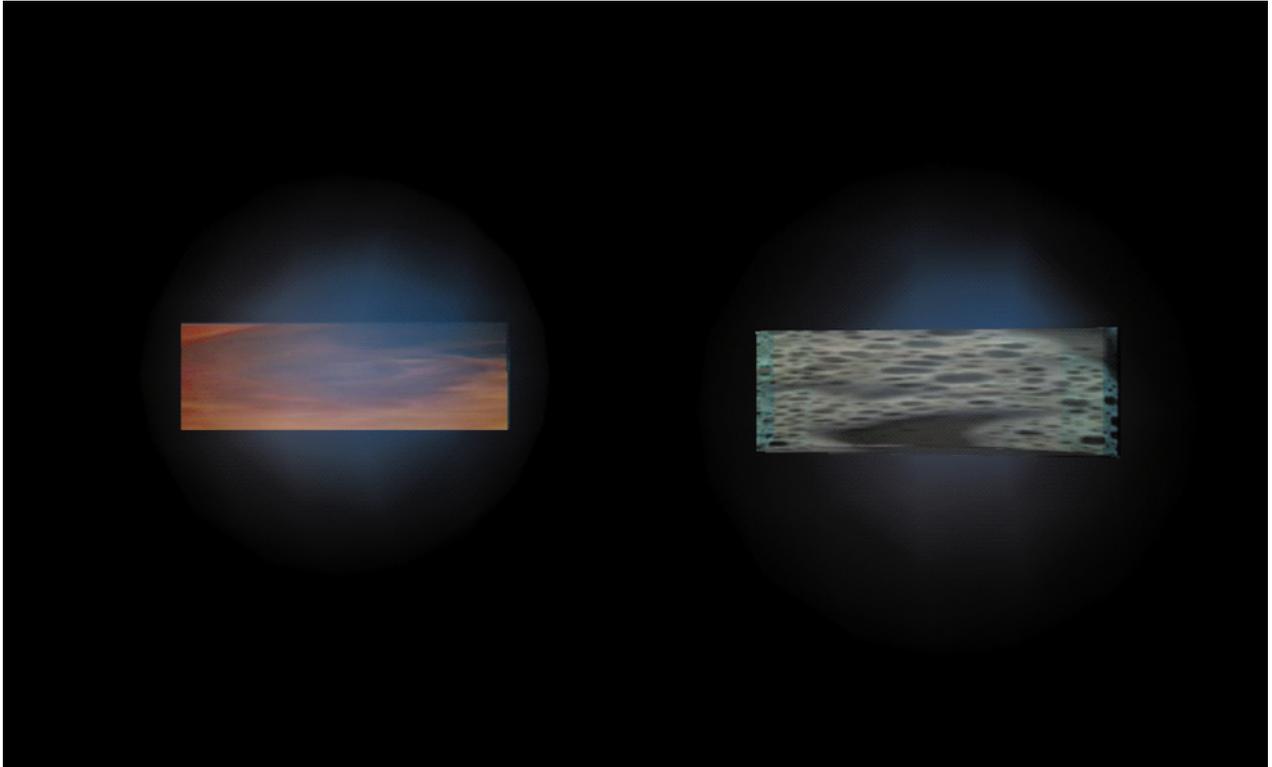
**Replica** 1997, Mixed media, 48" x 65" x 8"

*Replica* is a spoof on the notion of authenticity in the digital environment. In this work, the contemporary still life of edible and fake pears nested in a plastic bag is directly captured in larger-than-life detail by the scanner. The humble plastic pear, which is one of the "sitters" for the piece, is almost forgotten as an intruder in the picture plane of the smallest frame. In the printed output, both edible and plastic pears are strikingly similar in visual

appeal, and both are branded with stickers. Two modified eye-like quotation marks are used to add the artist's brand to the still life and thereby to claim and append the content and history of still life to the piece. Lights mounted to the top of the larger image mock a form of museum display associated with value. They also reinforce the microscopic examination of subject. The smaller image is symbolically dependent on the larger for

its illumination, just as all three elements are physically linked by hardware.

Special thanks to the SIGGRAPH 97 Guerilla Gallery for printing this piece.

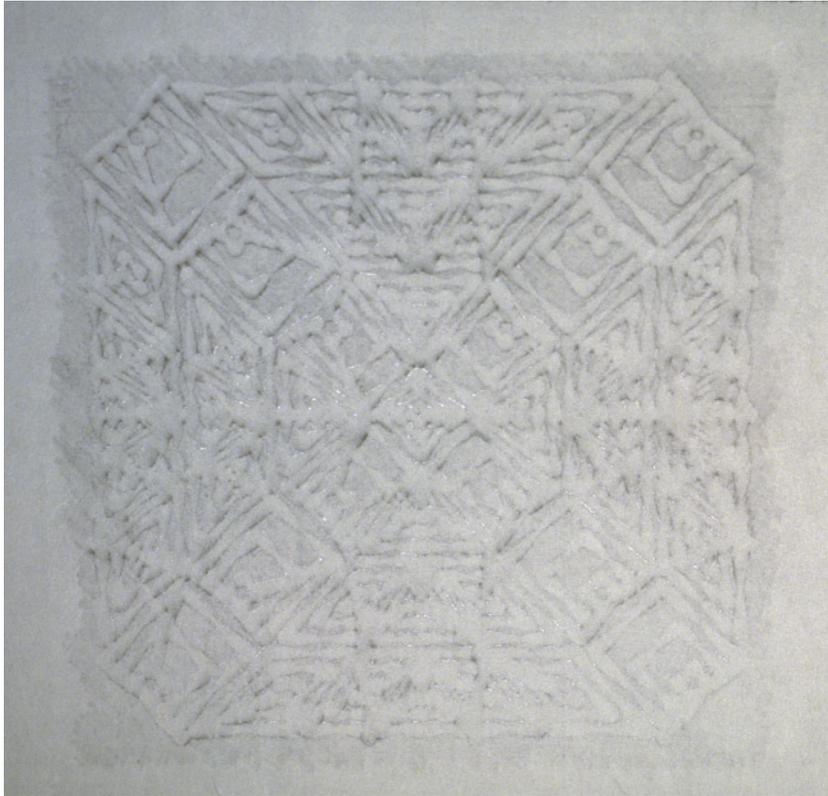


**Streaming** 1997, Interactive Installation, 16' x 13'

The work of Stardog Interactive explores the interface between the tangible world we live in and the intangible digital world of new technology where we are increasingly asked to spend our time.

This project is an interactive multimedia installation that examines movement in nature and compares it to movement of information in the digital world. Through drawing in a bed of sand, the audience explores video, animation,

and sounds that portray "physical streaming" in a VRML world. The sand interface represents the transient area between land and sea, between tangible and intangible environments.



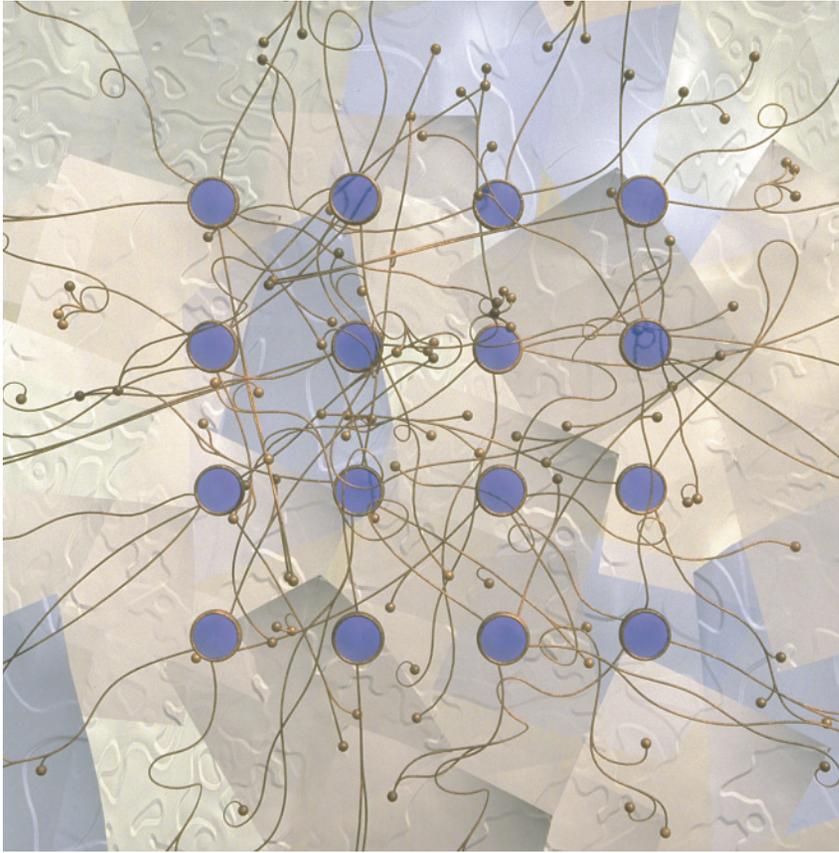
**A Digital Frottage** 1997, Rubbing over a digitally produced wood block: graphite on handmade Japanese paper , 7.75" X 7.75"

Moving from digital output to traditional art media and permanent, pleasing output raises several issues. In this piece, a homemade, three-axis milling machine and a plotter were used to generate the third depth. With a cone-shaped bit, the depth was translated into line width, then a plane was defined, covering a fractal line, and attached to a depth/width pattern, which is repeated along its course.

This was all done in a few lines of code. Fractals can be beautiful, yet simple.

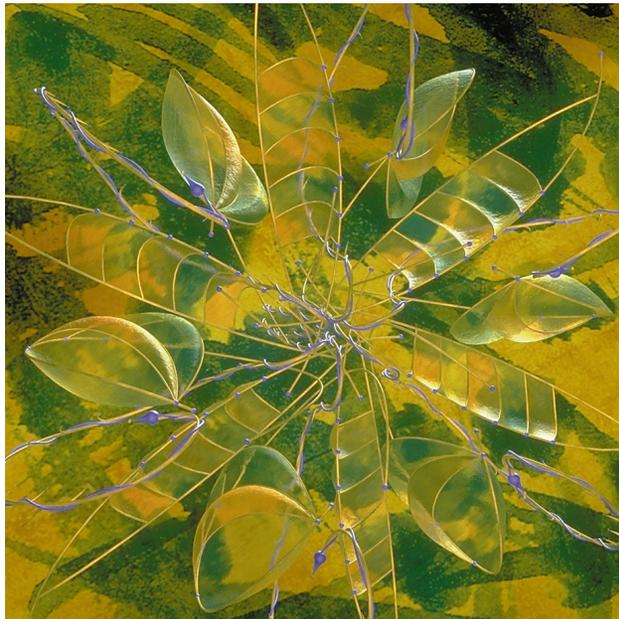
The resulting coordinates, translated into step-motor input, direct the bit into the maple in one single path from start to end – an elegant process, adapted to the tools at hand. The resulting carved woodblock can be the source of many pleasing experiments.

This piece is but one of many possibilities: a frottage or rubbing, as done by petrographers, archeologists, Chinese scholars, and artists. Max Ernst in particular was fond of the medium: "Histoires Naturelles." The graphite lead rubbed on the sheet laid over the block marks only where wood was not removed.

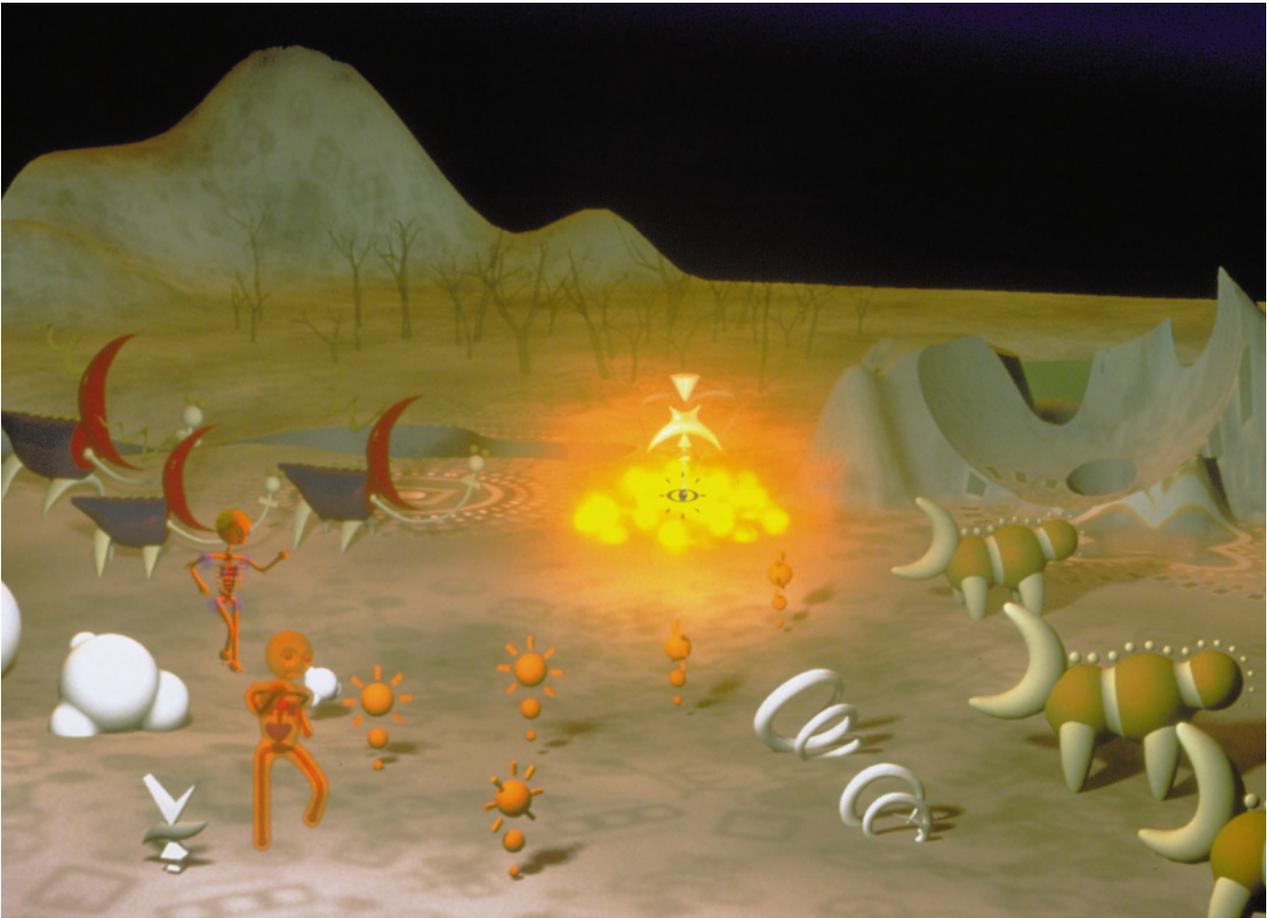


My images recreate the surreal and abstract visions of my dreams, which, along with the minute details and grand expanses of nature, serve as inspiration for my work. While creating objects that defy the laws of physics, I maintain an organic quality by following the random, yet structured beauty of nature. The shapes I use are often simple, but through a deliberate and controlled use of texture, lighting, and color, I create a unified consistency of depth, dimension, and detail.

960810\_01 1996, Iris Giclee Print on Somerset Velvet paper, 22" x 22"



970717\_03 1997, Iris Giclee Print on Somerset Velvet paper, 22" x 22"



**Iconica** 1997, Interactive Installation, 16' x 16'

Iconic elements are the basic building blocks of a world literally made of language. These elements are the core of an artificial-life model that runs the world, and the behavior of the life-forms and objects within it. Described as the elemental forces of "reality," "identity," "information," "abstraction," the "subconscious," and the "meta-physical," they each relate to unique

pictorial styles and soundscapes used to represent the world. The result is a fusion of plastic knowbots, surreal iconography, electronic abstraction, and real-world dirt.

The work has the capacity to evolve, change, and mutate through human interaction and its own evolutionary process. Visitors to the world can cre-

ate, construct, and manipulate objects, influence the evolution of societies, and discover new language elements. Communication with the resident life-forms occurs via the iconic language on which the world is based. The multiplicity of Iconica is experienced through this interaction – simultaneously a cyberspace, a mindspace, an abstract world, and a stylized reality.



**Case Study 309** 1996, Video kinetic sculpture installation, 12' x 3' x 3'

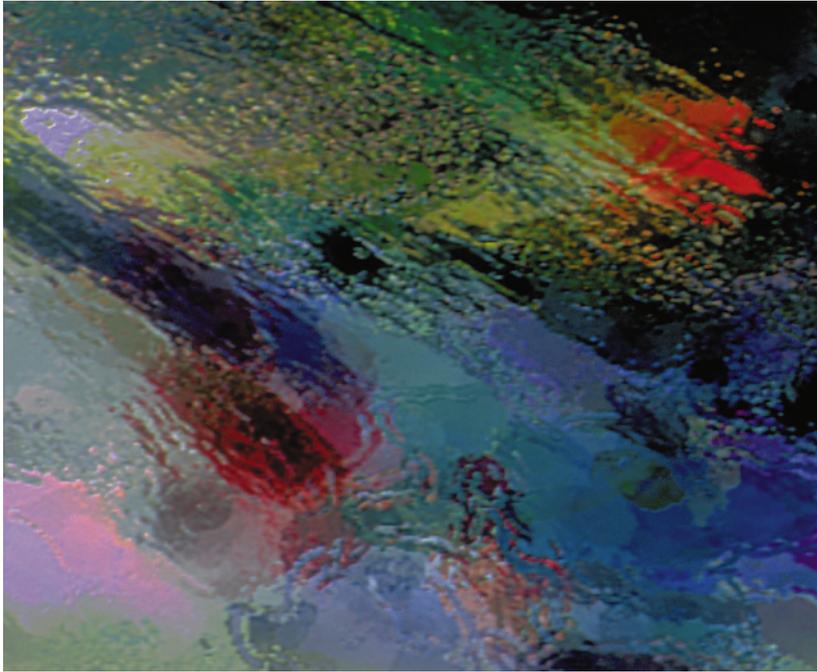
Through the interdisciplinary medium of computer-aided video/kinetic sculptures, I create interactive performative installations. Both visual and audio elements are simultaneously experienced in the physical domain (kines-thesia), challenging perceptions of reality through illusion.

These sculptural installations are assigned a *Case Study* number. Each *Case Study* facilitates and instigates a “social happening,” inducing elements of play and humor as humanis-

tic models for interactivity with enticing traits of risk and danger. Participants and viewers become guileless subjects from an observational perspective, a view whereby human behavior, social interaction, body language, and physiognomic characteristics can be analyzed in real time.

My work is based on the language and methods used by the haptic learner. It transforms this language and understanding into a three-dimensional

tactile/kinetic platform. Each *Case Study* provides an experiential embodiment of both body and mind, which I call “hapticism.” Hapticism is akin to the somatic, in which we learn principally through the physical body itself. With the aid of technology, these interactive works of art utilize kinetic methods to produce a reality virtually perceived by the haptic learner. Hapticism may be a model for integrating art, culture, and technology – for stimulating our senses while engaging our intellect.



**Image to Touch** 1998, Interactive Installation, 40" x 40" x 32"

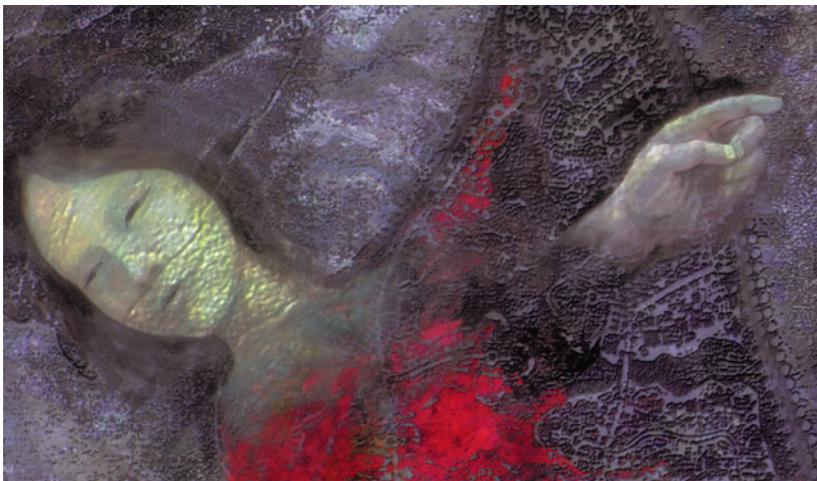
This work is, precisely, a "picture to touch." The print, which uses expressions of principal color constituents, is installed in a frame with sensors. When a person touches the print, the sensors perceive which location has been touched; make elements vibrate through data available on the hue, chroma, and value of the related elements; and give information to the fingertip of the person. The actual roughness of the unrefined paper and the vibration of the image data are mixed with the fingertip data, and the viewer experiences a remarkable fusion of sense through sight and sense of reality.

*Collaborators*

**Haruo Noma**

**Kazuyuki Ebihara**

**Jun Ohya**



**TO BURY RECOLLECTION IN...**

1996, Pictorico original print on Wirgman clean cut paper, 23.5" x 39.5"

This work was created with a high-level coating technology. Important objectives were to achieve sufficient water-resistance, light-resistance, and coloring, and to obtain the multiplicative effect that is equivalent to that for the ground material. The work achieves an original representation that consists of not only the image but also integration of the real material and sensations of materials created by computers.

The theme of this work is the relationship between layers of abstracted and accumulated memories, and shapes that are actually represented. This is the basic concept of the works I produce with computers, where abstracted memories and the individual (myself) influence each other, and represented memories and the society influence each other. I think artists should step forward and propose technologies that satisfy these conditions.



**TOKEN CITY: SUBWAY WALL** 1997, Still from 3D animation video

*TOKEN CITY: SUBWAY WALL* is part of a larger body of work entitled *Token City*. Here, viewers become an integral part of the action and emotions of a New York subway excursion via manipulation of 3D animation, computer graphics, real-time video, and a mixed soundtrack of electronic music and digital sound effects. The installation focuses on the tactile quality of the subway experience, for instance:

- Passing through the miles of tile-walled tunnels, plastered with a gallery of garish billboards, contrasting with elegant, 1930's Art Deco ceramic mosaics.
- Packing into the subway car and standing shoulder to shoulder with people you don't know and will never see again.

The "trompe l'oeil" presentation of the wall draws the viewer to its surface, demanding to be touched! The presence of the *Token City* 3D animation enhances the experience through movement and sound.

*Collaborators*  
**Michael Udow**  
Soundtrack

**Gene Cooper**  
Animation Associate



**Digital Fukuwarai** 1997, Interactive Installation, 10' x 7' x 10'

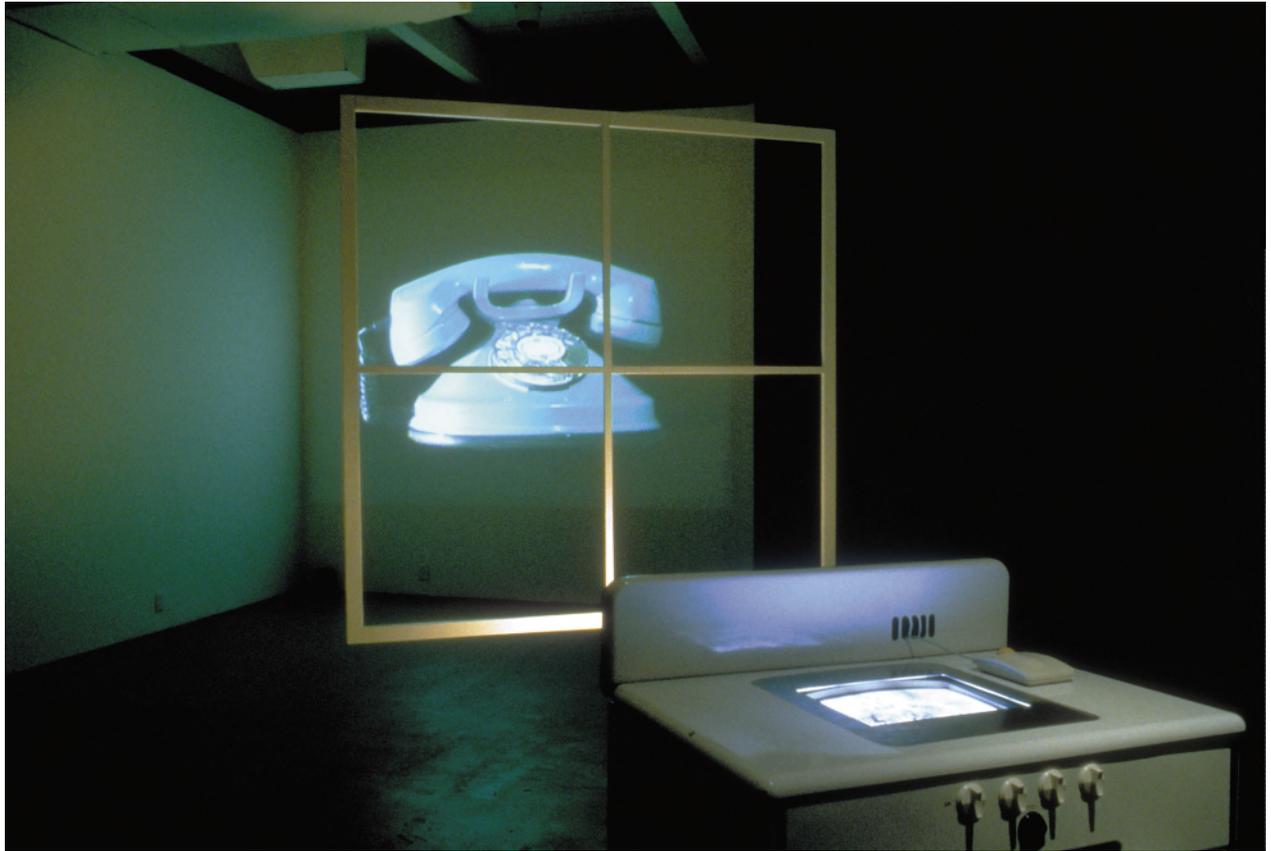


Fukuwarai is a classical Japanese game in which a paper face is cut into pieces and a player tries to place the pieces onto a model face while blindfolded. It was a popular family game and a tradition that helped maintain family ties, until video games took over the home.

In *Digital Fukuwarai*, two video cameras capture the images of two partic-

ipants' faces. The images are then decomposed into many jigsaw-shaped pieces, which are presented in random arrangements on a screen. The pieces are dynamically updated from the real-time video images and are never still, even while both participants are moving them simultaneously. The participants compete to assemble the pieces into their respective faces. Changing one's facial expression and

moving one's head is helpful in identifying the connectivity among the pieces. Alternatively, they can simply mix parts of their faces in collaboration. Reorganized versions of their faces, or faces mixed with other faces, may be more attractive than the original faces. In either case, facial expressiveness and head movement are key components of this interactive art.



**Small Appliances** 1997, Interactive digital video installation, 120" x 240"

*Small Appliances* is a two-channel interactive digital video project that employs issues of domesticity to probe women's use and control of technology. The narrative consists of 10 short stories told by 10 different women.

Viewers control the narrative flow of the video stories, visually moving from subjective to objective points of view by interacting with a kitchen sink filled with animated bubbles. Sculpturally,

viewers look out from the vantage point of a 1940's environment to witness the present complex commingling of subjective experience with technological processes.

Formally, this narrative material is delivered in three different forms: as an interactive video installation, as a stand-alone CD-ROM, and as an Internet project. In each case, the viewer moves through a graphical representation of the domestic environ-

ment, with the chosen path determining a specific thread for organizing the narrative and visual segments.

Technically, the gallery installation runs from a single Power Mac 8500 equipped with 8 gigabytes of hard-drive storage. All the video material is digital, which provides maximum flexibility to scale the video data and simultaneously present the work through a variety of channels: gallery, CD-ROM, or Internet.



**Regrowth from the Wreckage** 1997, Digital art and mixed media, 24" x 22"



**The Doll Floated by (Quilt for Flight 800)** 1997, Digital art and mixed media (quilt), 37" x 49"

These works document autobiographical events, just as "album" quilts and photographic journals did for yesterday's (anonymous) women artists. Relationships, self-image, and life-cycle effects on family and community are represented. The textile, aptly commenting on the historical status of women's art, adds warmth and tactility to electronic art, merging tradition with technology for deeper insights.

The once-obvious pixel is represented here by larger units, or patches, of output. I reflect here on the issue of security - especially for the child - in light of AIDS, terrorism, abuse, etc. I metaphorically explore the interpersonal subject of connectivity, or bonding, versus separation and detachment through visual combinations/layers of elements. Imagery formulated through (digital) painting, scanning, and manipulation is transfer-printed onto fiber substrates, then tiled and reworked with borders, utilizing historical, personally symbolic motifs. While much is accomplished efficiently, even magically, with my Macintosh, artwork production is slow hand labor. Using fibers, dyes, and threads to connect the digital patches together, this work juxtaposes nature with technology. Using this manifold process of I must focus on the linking of technologies/media and vignettes (or patches) to form a cohesive whole. Does the viewer locate a personal "big picture" from its interwoven parts?



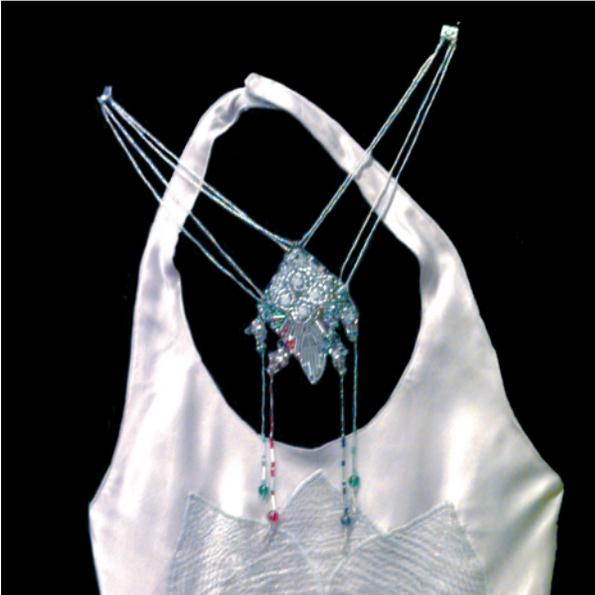
**Vise from Vise Versa Series** 1998, Digital photography, 24" x 36"

This Vise is half of a set called *Vise Versa* from a picture series called Handy Tools. The other *Vise* (*Versa*, missing here) is a tool made from two middle and two index fingers joined at their "top" to form an arch. The *Versa* arch contains the energy of the tool within its core, or "body;" the tool can pull in or out from the center. In *Vise*, (the picture presented here), the tool

is split in the center, creating an active energy field between its jaws, in the empty space. *Vise* seems to be either reaching towards the middle or pulling apart.

This idea of attraction and tension between two poles is inherent in most of my work. I came to the idea while exploring a nearly abandoned research

center in Tokyo. One building was filled with machine tools from the 1920s, all somehow still in working condition, shiny with oil. The center had been used to develop airplane technology in the 1920s and 1930s (another building nearby had a wooden windtunnel). This gave a slight modernist accent to this specific series.



Creators of computational art are beginning to dream of changing not only the software inside computers, but also of changing the physical form and place of computers in the world. Such artistic practice has usually been limited to reshaping a plastic shell, or perhaps covering it with wood or fur. But for computers to truly transform from mundane office machines, creators of computational objects must (as architects do with buildings) control, understand, and influence the electronic materials from which such devices are constructed.

The *Firefly Dress* uses unusual electronic materials to radically change the form and image of computational devices. The dress and necklace use conductive fabric, beads, and Velcro to distribute power throughout the dress. As the wearer moves, LED's attached to fuzzy conductive pads, (the electrical contacts) brush lightly against the conductive fabric layers, creating a dynamic lighting effect. The necklace (having no power supply of its own) creates dynamic light effects in multicolored LEDs when its conducting beads and tassels brush against the surface of the dress. These brush-like connections distribute power without hard connectors and wires, allowing the dress to flow and move with the motions of the wearer.



**Firefly Dress and Necklace** 1997, Electronic costume

Maggie Orth  
J.R. Smith  
E.R. Post

J.A. Strickon  
E.B. Cooper



**Musical Jacket** 1997, Electronic textiles, 30" x 30" x 6"

The *Musical Jacket* is the first "wearable" hyperinstrument developed at the MIT Media Lab under the direction of composer Tod Machover. As an interactive instrument, it allows players with very little musical experience to play not only different individual notes, but also to manipulate and control entire rhythmic tunes. As a computational object, it demonstrates how familiar objects can be transformed through microprocessor technology

and new electronic materials. It also demonstrates how the function of such objects, both socially and practically, can be transformed through such technology.

The jacket incorporates an original, embroidered fabric keypad, a sewn conducting fabric bus, a battery pack, a pair of commercial speakers and an original miniature MIDI synthesizer pin. The entirely new keypad is embroi-

dered from a resistive thread and uses a capacitive sensing technique to recognize touch. When the fabric keypad is touched, it communicates through the fabric bus to the MIDI synthesizer, which generates notes. The synthesizer sends audio to the speakers over the fabric bus. The embroidered keypad and fabric bus allow elimination of most of the wires, connectors, and plastic insets that would make the jacket stiff, heavy and uncomfortable.

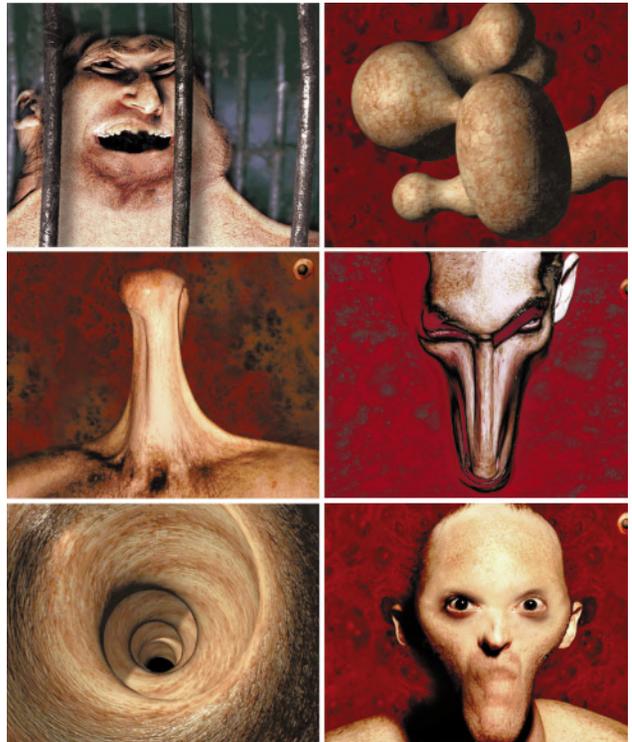


**Pages From a Diary: Leaving** 1998, Digital Monotype Print, 8" X 17"

*Pages From a Diary* is a series of digital monotypes that explores personal thoughts in the form of a visual diary. The imagery presents an intimate look at the places and events that create a person. The juxtaposition of visual elements conveys the emotional content of our everyday lives, expressing an interpretation of the way things were.

The series began with a collection of photographs, drawings, and objects, which were digitized and then digitally modified and reconstructed to emphasize their emotional content. The images were printed directly onto plates and then transferred to paper; the transfer process was done entirely by hand. The ink was pressed into the paper by "touching" the printing plate.

The resulting images are soft, beckoning one to touch their surface. Hands, a recurring theme throughout the series, are used to reinforce the touch of the process, the touch of the surface, and the expressiveness of touch.



**Manicomlo Judciario** 1997, Ink jet on canvas, iron bars and plates, computer with touchscreen monitor, 63cm x 44cm x 8cm

Although they are complementary, these six ink-jet prints on canvas mounted on metal plates behind bars and a touch screen monitor (also framed by a rusted metal plate with bars) are independent. The printed part and the interactive part can be exhibited separately. Visitors can interact with several "inmates" that react to the touch of fingers on the screen.

The "inmates" are distorted self-portraits of the artist. The distortions, as well as some of the inmate's "thoughts", can be viewed and to some extent controlled by the visitors. The set, with rusted bars, poor lighting, and industrial noises, helps to create an insane ambiance. Some of the interactive animation sequences are so realistic that touching them can be quite

repulsive. But the more the visitors do it, the deeper they get into the twisted psyches of the "inmates."

*Contributors*

Programming **Caio Barra Costa**

Audio Effects **Julio Hungria**

Photo Studio **Hamdan**



**If These Walls Could Talk: The Fiddler's Story** 1998, Iris print on wrinkled, torn, collaged rice paper, 27.5" x 32.25"

*If These Walls Could Talk* explores the passage of time, particularly the power of places and artifacts to trigger memory of [real and fictitious] moments in time. My work is based upon my travel through the ruins of abandoned buildings in ghost towns in the western U.S. and periodic trips to the dusty, memory-laden, artifact-filled house of my childhood. I find myself drawn to richly textured products of decay: layers of peeling wallpaper and fabric, dust, debris, and scattered artifacts.

I have always liked to "read" my work with my fingertips, a kind of Braille. In order to achieve a built-up surface in my digital work, I mix the illusory textures of inkjet prints with the tactile qualities of drawing, printmaking, and collage in a multi-layered process. Typically, the bottom-most layer is a heavily embossed collograph print or a collage of torn paper, overprinted with the inkjet print. Subsequent layers are achieved with additional overprinting

(lithograph or serigraph) and/or direct drawing with pastel, charcoal, or graphite.

The method and the message are one and the same. The layered digital collographs and collages emulate those time-beaten wall surfaces, the peeling wallpaper a metaphor for digging back through layers of time and memory.



**Litt'l havoc** 1998, Interactive Sculpture, 4' x 4' x 2.5'

Participants use a computer interface to interact with *Litt'l havoc* by physically moving the shopping cart that contains it. Pushing the shopping cart propels the semi-nude artist as he pushes his own cart through absurd environments of old postcards, NASA space imagery, and historic street scenes of Florida.

Interacting with *Litt'l havoc*, participants symbolically become the artist, transgressing cheesy landscapes of abandoned and fragmented memory. Constructed of found, borrowed, abandoned, and confiscated components, *Litt'l havoc* is a pathetic new breed of hack/junk/found interactive art.



**Thirteen Sketches for an Incompetent User Interface** 1998, Interactive Installation,  
75" x 24" x 34"

My work is concerned with human beings and their uneasy relationships with the machines that inhabit the world, especially the computer. The computer is the central metaphor for our "Information Age" and its most characteristic artifact. I use it as both the medium and subject of my work. I am interested in creating work that questions the boundaries between what is "human" and what is "technological," poking fun at the illusions of empowerment and control we enjoy if we acquire the newest, fastest, and most costly devices available. The computer promoter's utopian promises of seamless perfection and ever-enhanced productivity and leisure may be contrasted with crashes, lost data, the "millennium bug," and a host of other less-than-perfect facts of daily life.

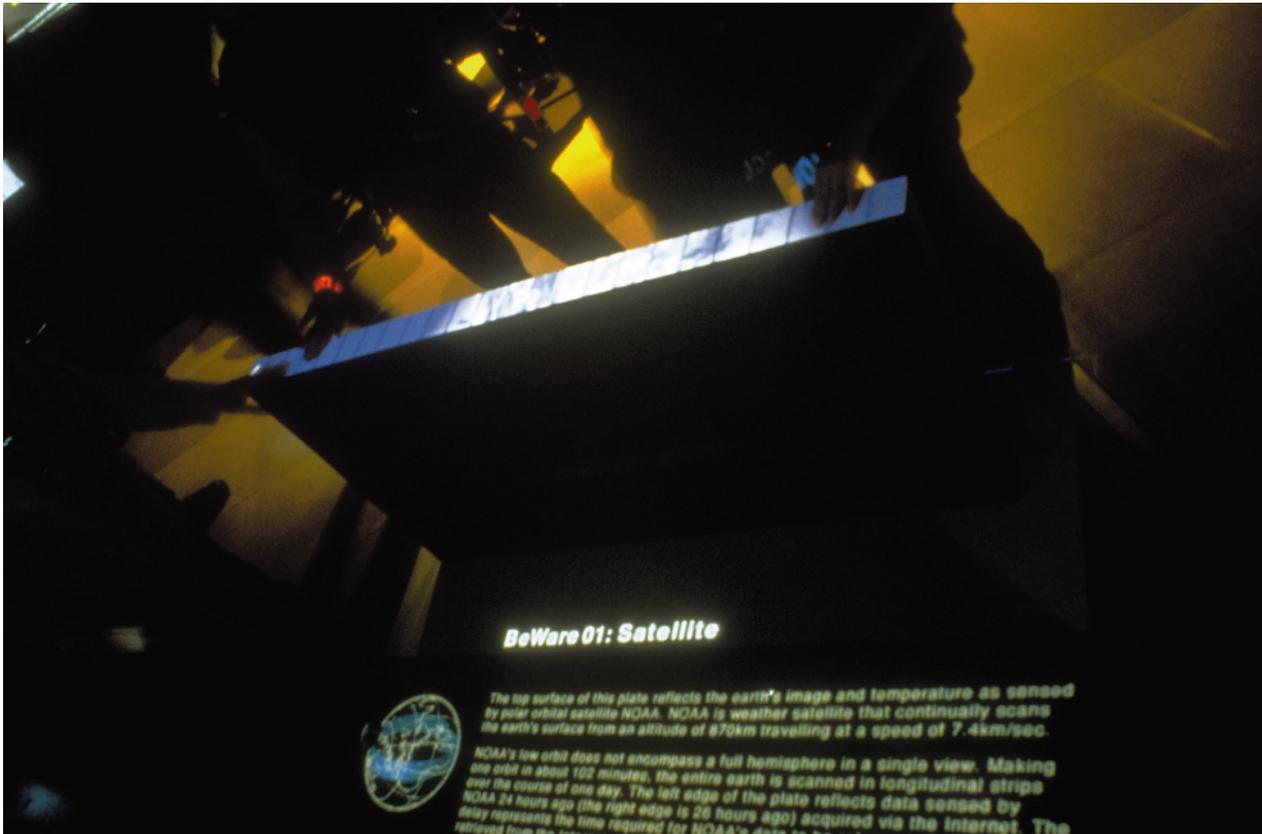
In this work, common computer user interface objects have been programmed to be humorously dysfunctional. There is, to me, a special, perverse irony in using computer programming, an activity constantly perceived as practical and helpful, to produce faulty, incompetent behavior in the command and control devices we expect to do our bidding.



**Is it really Over?** 1997, Giclee Print on Summerset Velvet, 11" x 14"

This image reflects my doubts and fears regarding not only the threat of nuclear world destruction but also passive acceptance of a new and friendly relationship with Russia and other ex-communist countries. As a member of the baby boomer generation, I have been concerned for most of my life about the threat of total destruction. Now the slate is clean. Why would I accept such a notion quickly and respectfully when the people who created the fear also created the solution?

The child in the center is my son, Jimmy, and the older man to the right is my father. They symbolize the passing of time. I also illustrate the ongoing existence of humanity with the subtle image of a prehistoric cave drawing and the hard shape of a pocket watch, a wedding gift. I am reminded of war with images I photographed in 1969 in a Vietnamese orphanage. I still ask myself: "Is it really over?"



**BeWare02:satellite** 1997, Interactive Installation, 10' x 9' x 9'

*BeWare* is a "living" object by which observers can touch and feel the actual temperature of the Earth based on data transmitted from the National Oceanic & Atmospheric Administration's polar orbital satellite. The object shows a projection of the Earth's image on a 9 cm by 160 cm plate, which changes in accordance with the speed of the satellite as it orbits the Earth. The infrared image is analyzed as temperature data, which are used to control Peltier devices attached to the underside of the plate. The data transmission is conducted through the Internet, however the interface is not necessarily limited to the abilities of the Web browser or of the computer.

*BeWare* is an attempt to expand means of expression using the Internet as well as to stimulate our perception of the living Earth.

*BeWare01* was originally planned and created by the Web site project "sensorium" ([www.sensorium.org/](http://www.sensorium.org/)).

*BeWare* was planned, designed and developed by the founding members of sensorium in collaboration with members of GK TECK Inc. and the International Media Research Foundation, Japan.

Producer **Shin'ichi Takemura**  
 Director **Ichiro Higashiizumi**  
 Co-Director **Yoshiaki Nishimura**  
 Main Programmer **Takuya Shimada**  
 Main Engineer **Shu-ichi Ono**  
 Translations **Pamela Virgilio**



**Telematic Vision** 1993/1994/1995, Telepresence Interactive Installation, 3.4' x 16.7' x 11.7'

Two identical blue sofas are located in remote locations. In front of each sofa stands a video monitor and camera. The camera images are relayed between the sites via an ISDN line, chroma-keyed together, and displayed on monitors in front of each sofa simultaneously. Viewers in both locations assume the function of the installation and sit down to watch television, to experience a live image of themselves sitting on a sofa next to a telepresent person. They start to explore the space and understand they are now in complete physical control of a telepresent body that can interact with the other user. The more intimate and sophisticated the interac-

tion becomes, the further they enter into the telematic space. The division between the remote telepresent body and the actual physical body disappears, leaving only one body that exists in and between both locations.

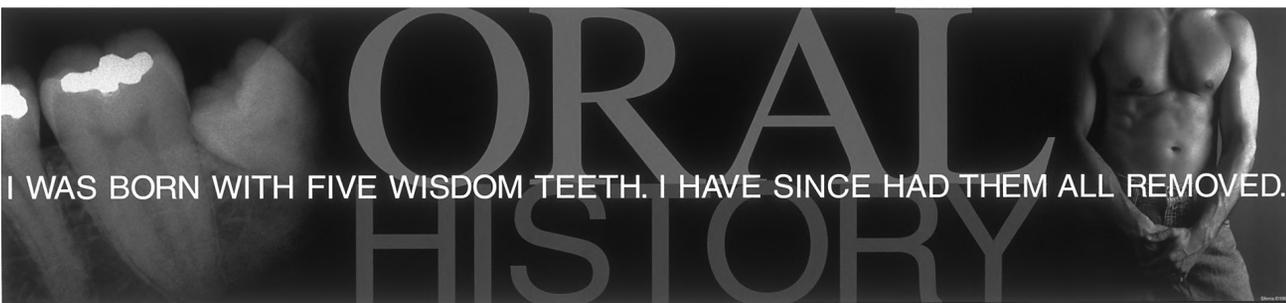
Assisted by the semiology of the sofa and the scenario of the television, consciousness is extended and resides within the interaction of the user. *Telematic Vision* is a vacant space of potentiality. It is nothing without the presence of the users who create their own television program by becoming voyeurs of their own spectacle.

*Telematic Vision* was originally produced at the ZKM Center for Art and Media Technology Karlsruhe, whilst Paul Sermon worked as an artist in residence at the ZKM Institute for Visual Media under the Directorship of Jeffrey Shaw. *Telematic Vision* premiered at the ZKM Multimediale 3 in October 1993 in Karlsruhe, Germany.

Special thanks to the ZKM Institute for Visual Media for supporting the presentation of this project.



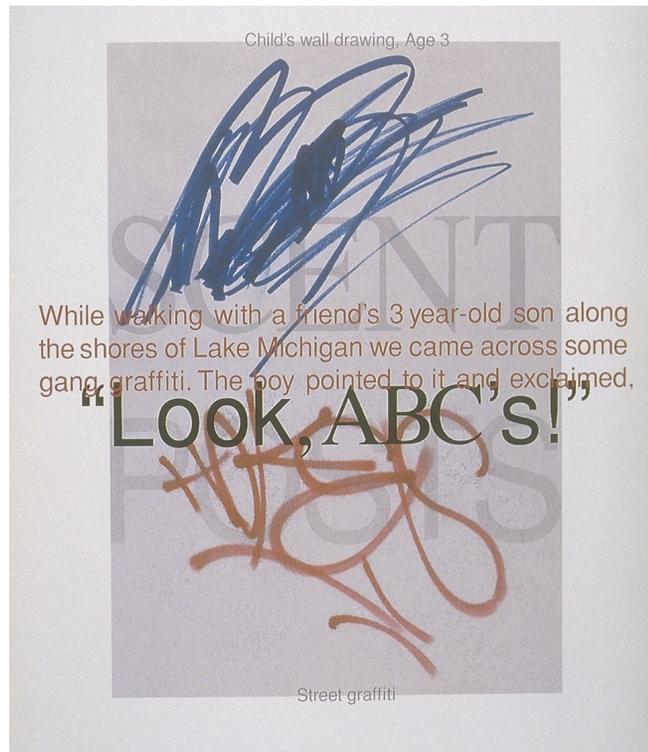
**Noman'sland** 1996, Ink jet print, 36" x 120"



**Oral History** 1995, Ink jet print, 36" x 144"

**Scent Posts** 1993, Inkjet print, 36" x 30"

My heart and my head are in a constant struggle with one another. This struggle determines much of my behavior. These photo/text pieces are manifestations of the thoughts I have about human behavior based on this struggle. Using advertising communications styles as a model, they rely on an ironic juxtaposition of image and text, a laconic writing style, and text deconstruction to interpret social, political, and cultural behavior. An underlying theme or basis for many of my ideas is what behavior psychologists call cognitive dissonance. This condition refers to the moral and ethical paralysis that occurs in our thoughts and actions when we are confronted by overwhelming amounts of seemingly contradictory information and experiences. As a frequent "participant" in this state of being, I've come to refer to these circumstances as "situational oxymorons."



While walking with a friend's 3 year-old son along the shores of Lake Michigan we came across some gang graffiti. The boy pointed to it and exclaimed,

"Look, ABC's!"



**Escape Velocity** Teleperformance

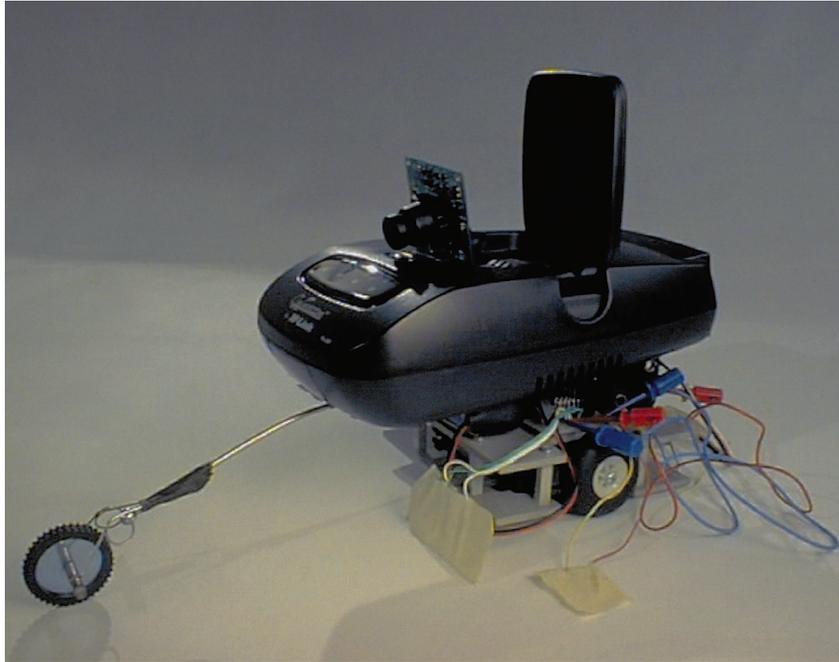
As technology revolutionises our public, private and interstitial spaces, shrinking the globe, compressing time and expanding horizons, the reach of an arm, the length of a stride is distorted and confused. Where do flesh, fragile bone, senses and perceptions fit into the new geographies of the late 20th century?

The contemporary desire to escape the physical through technology is a version of the ancient quest to evade the body's mortality and access "other" existences in spiritual or metaphysical realms. The complex ethical and artistic implications which this contemporary quest embodies are enmeshed in the multiple perspectives on the body incorporated in the work.



*Escape Velocity* raises questions, without answers, presenting a range of perspectives upon the nakedly physical real body, the technologically mediated body, the absent body, and the disembodied emanations of the mind.

*Escape Velocity* is movement driven mirroring the complex nature of the body's relationship to space, time and place at a moment in history when these parameters are starting to shift under our feet.



**C5** 1998, Interactive Installation

A site specific experiment in social interactions: disruption, innovation, evolution, subversion.

C5= [disruption/information analysis (strategy 2E)]  
if...(coordinated entanglement) mesh,  
M++;

C5 performs, or rather acts out, through choreographed demonstrations involving radio-controlled surveillance probes – a means to infiltrate, disrupt, view, map, and record human interactions. An extensive Web site supports remote audience interaction, event analysis, live telepresence, and an exhaustive public relations campaign mirroring the dynamics of corporate culture. For C5, strategy and theory are information products, surveillance technology is a marketing

vehicle, and the shaping of corporate identity is art.

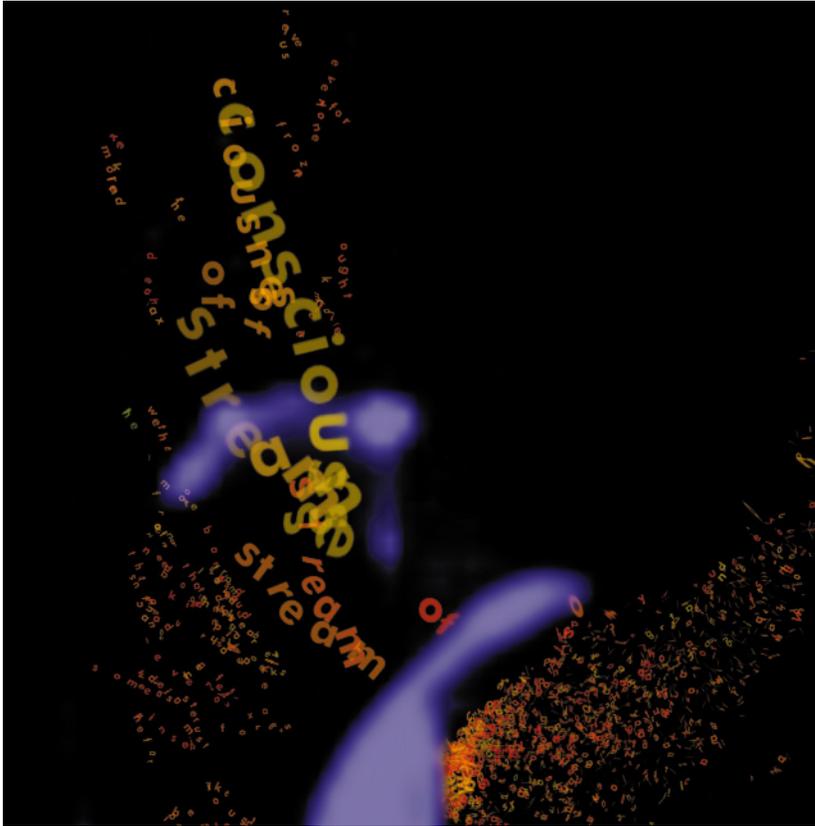
Members of the C5 team engineer miniature radio-controlled surveillance probes for collection of wireless transmitted audio/video and data involving SIGGRAPH 98 programs, events, people, architectural spaces, and social environments. The C5 demonstration team performs choreographed information stunts, infiltrations, and site/event specific surveillance maneuvers throughout the conference.

C5 is an “information product.” The C5 Web site is devoted exclusively to establishing C5’s corporate identity through constructed cyborgian personas of team members and presents live demonstrations, event documentations. and analysis. Interaction over the

Web site offers remote viewers an opportunity to interact directly with the members of C5, suggest specific activities, acquire information about C5 products and services, and download artifacts.

*Collaborators*

**Joel Slayton**  
**Steve Durie**  
**Geri Wittig**  
**Jack Toolin**  
**Bruce Gardner**  
**Vernonic Rameriz**  
**Eddo Stern**  
**Ben Eakins**  
**Ann-Marie Schleiner**  
**Lisa Jevbratt**  
**Jan Ekenberg**  
**Kristin Cully**



**Stream of Consciousness** 1997, Water, stone, copper, bamboo, liquid-haptic interface, projector, 10' x 6' x 6'

The interactive poetic garden is literally a fountain of words. Water flows briskly down a series of cascades into a glowing pool. A tangle of words projected on the surface of the pool floats like leaves in a stream. The computer drives a video projector, creating the illusion of text floating on the surface of the water as it flows through the garden. A person sitting on the wooden bench that faces the garden can stop the word flow, push and pull words, block or stir them up, change the content of the words themselves, and cause them to grow and divide into new words that are eventually pulled into the drain then

pumped back to the head of the stream, only to tumble down again.

This project attempts to bring the computer into the garden in harmony with stone, water, and plant materials. It is one of the experiments underway in the MIT Media Lab's Aesthetics and Computation Group, which is sculpting computational media into new expressive forms.



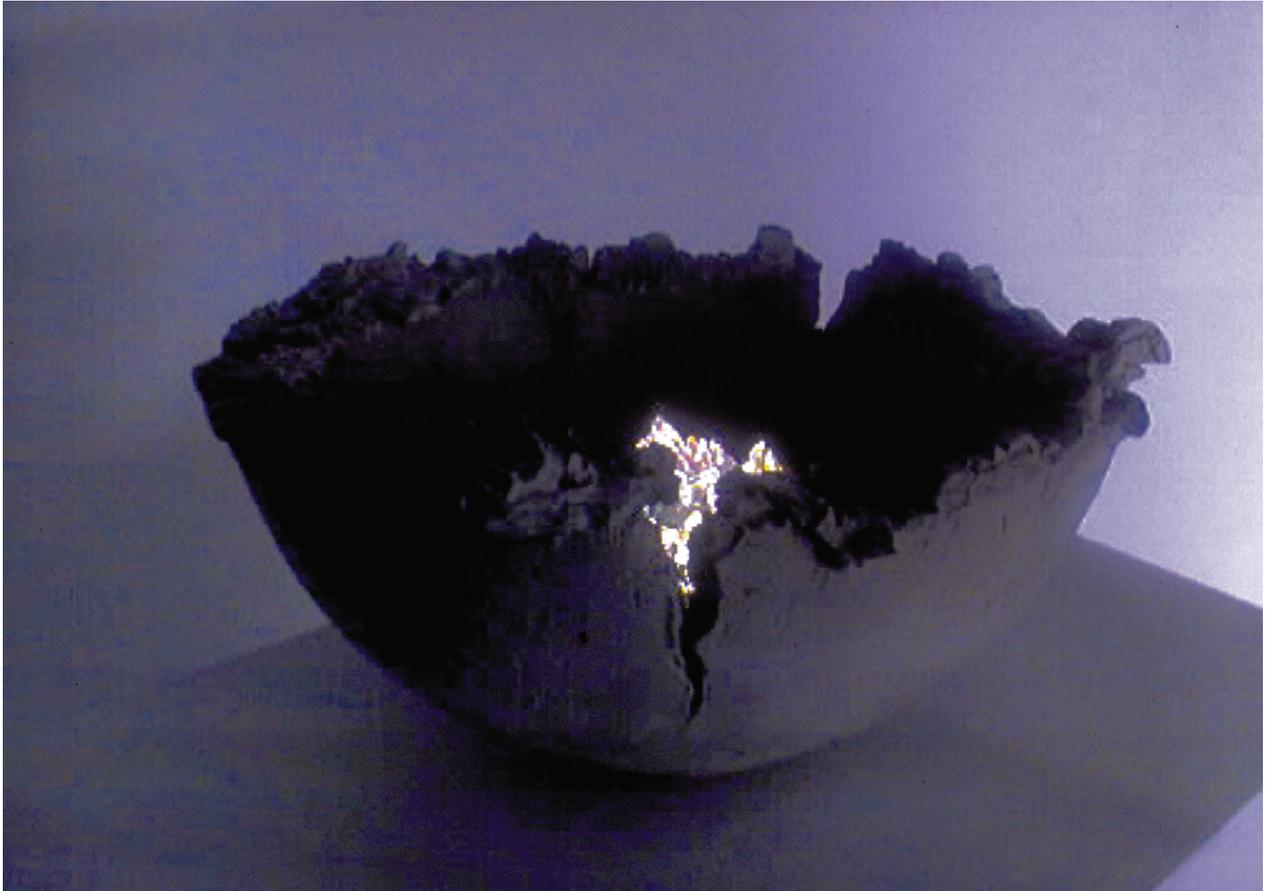
**The Sky is Always Blue** 1997, Interactive Installation, 10" x 25" x 31"

Truth is stranger than fiction. This interactive touchscreen work includes visuals and explanations of some of the more peculiar aspects of light and vision phenomena that have fascinated me since I was a child. I think everyone has spent time rubbing their eyelids and staring at the resulting phosphene patterns.

The original idea for this piece came from seeing startling inverse parallels

in Aboriginal and Native American cave painting. A rock outcropping in Arizona has an imprint of a hand on it in pigment, while a cliff face in the outback of Australia has the outline of a hand surrounded by pigment. This observation seems obvious and elementary at first, as the human hand is the seminal tool we first use to make sense of and manipulate the world, but in a larger sense it speaks of the interconnectedness of all things.

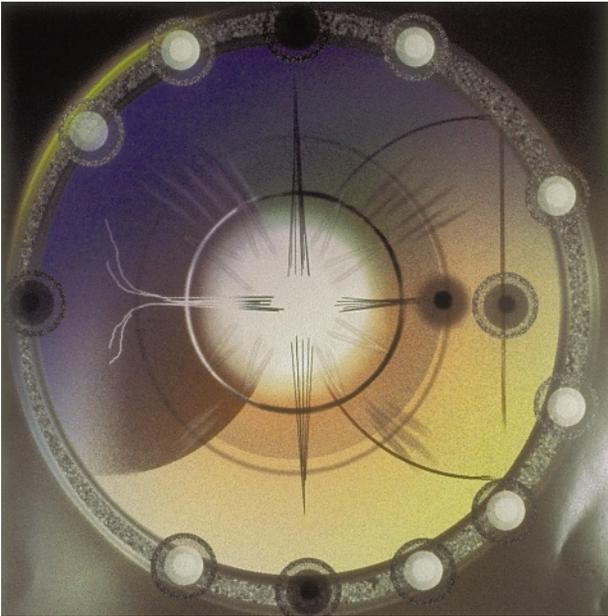
In *The Sky is Always Blue*, a hand is used as the main interface metaphor, and in conjunction with the touchscreen monitor, it gives the user a more direct and personal experience than a mouse-driven interface. With this piece, I am experimenting with new ways of conveying interrelated memories, explanations, and experiences to others.



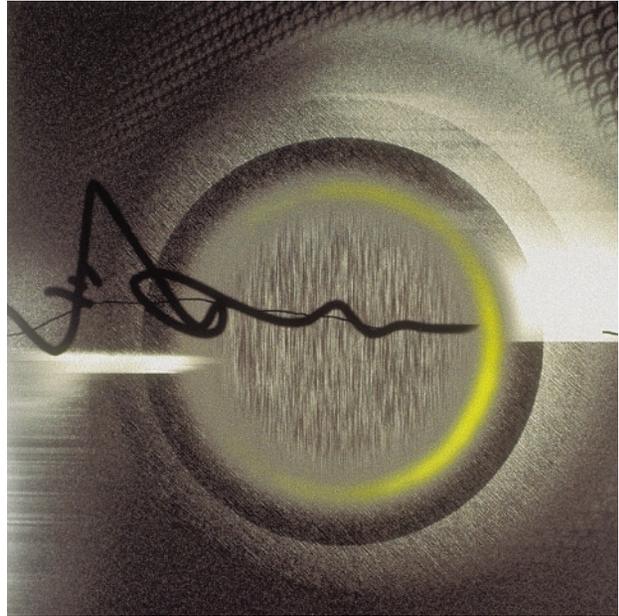
**Lost Worlds: Micro/Macro World, River World, City, Dwelling** 1998, Video projections on clay

This installation of miniature clay worlds and digital video projections combines organic shape and digital imagery to examine the intersection between the heavily mediated construct of mass communication and the physical world. It is part of an exploration of how these realities, imagined and actual, redefine our sense of and direct relationship to community, place, and identity with the environment.

This installation is supported by The Sony Gallery of Consumer Electronics, Chicago.



From "Landscape in Circle" 1998, Inkjet print, 10" x 10"



From "Landscape in Circle" 1998, Inkjet print, 10" x 10"

This image series is an ongoing project inspired by the work of legendary filmmaker Jordan Belson. The spiritual and sensual experience of viewing Belson's profound abstract films and images, touched me with the kind of cosmic sense that a person of Chinese descent grows up with, bringing out my own inner image of a connected universe in various forms, ancient and modern.

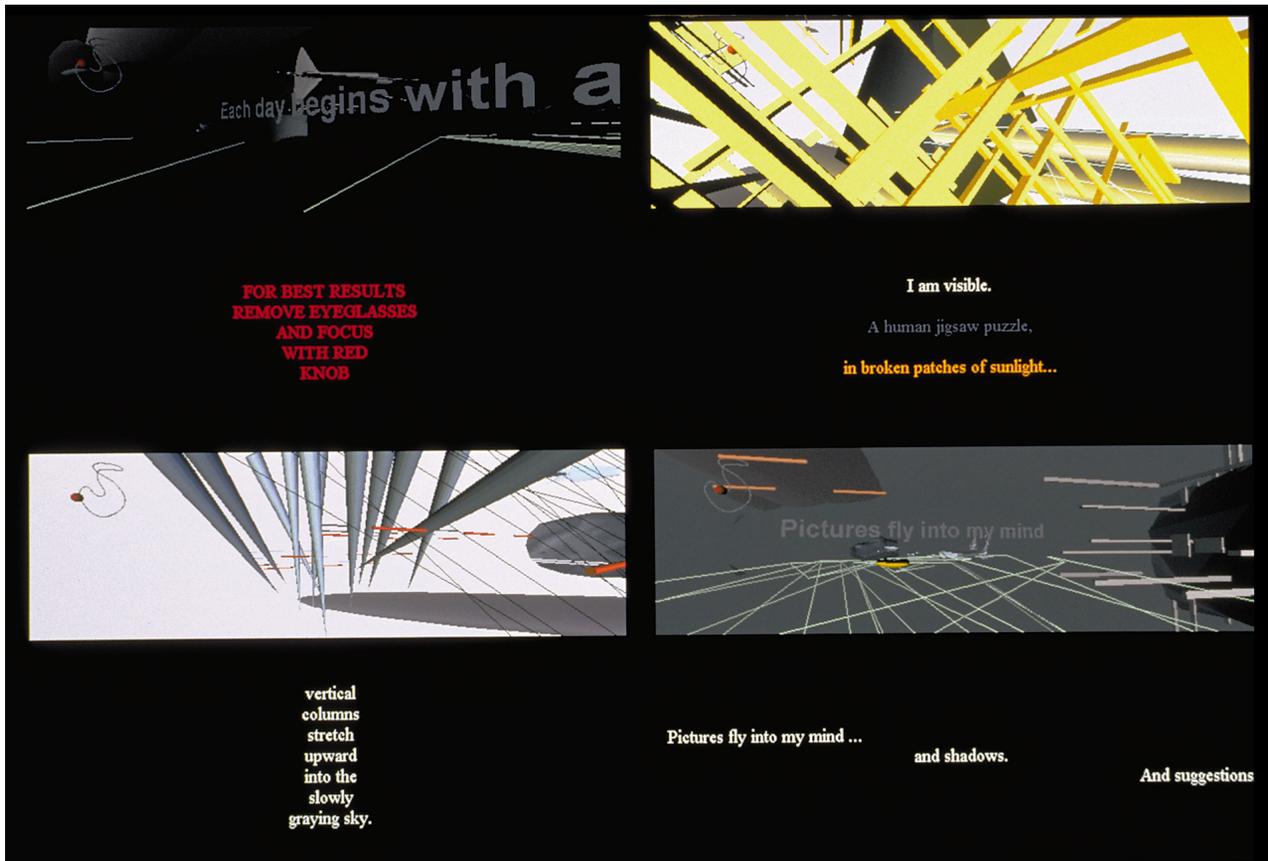
After making realistic 3D modeling animation work with high-tech computer systems for quite a few years, I find myself eager to pursue work of more aesthetic and spiritual experience, to explore the power of abstract expression in visual art.



**Project Paradise** 1997, Interactive Telepresence Installation

In *Project Paradise*, a telepresence installation that enables two isolated participants to interact with each other by projecting themselves into a remote "paradise," participants "inhabit" the bodies of remote human avatars to engage in "physical" interaction. The interaction occurs through telerobotics, live video, and audio conversation between participants. Visitors control the mechanically augmented human avatars as live video returns first-person perspectives of the environment. Through the empathy invoked by the human avatars, *Project Paradise* extends traditional telepresence to engage in sending and receiving human will and emotion.





**ADRIFT** Ongoing, Internet

*Adrift* is an evolving performance work that is streamed live from multiple locations to audiences on the Internet and in distinct geographical locations.

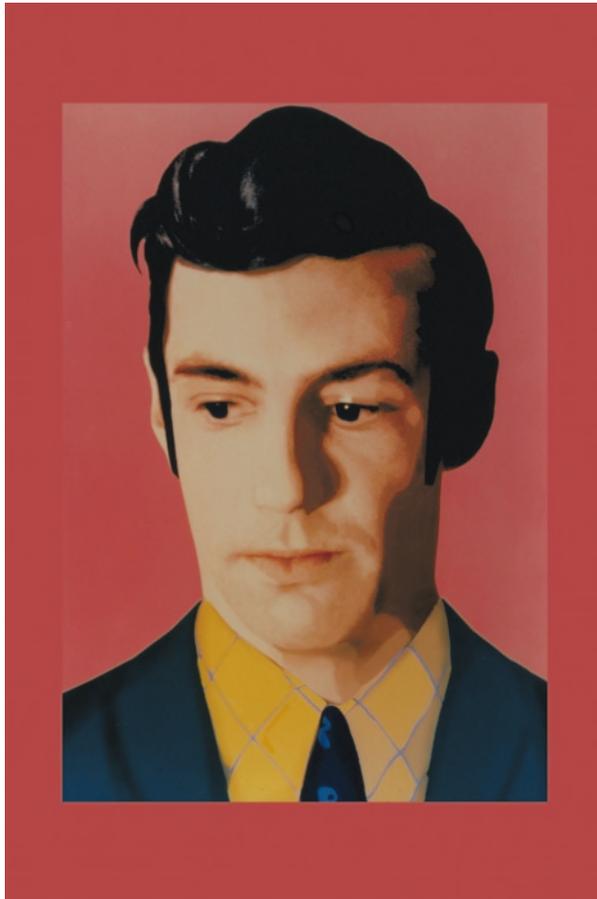
A collaborative work by three artists (writer and composer Helen Thorington, composer Jesse Gilbert, and architect Marek Walczak), *Adrift* involves an interplay among three environments: text, sound, and VRML 3D, where borders are permeated, new relationships are developed, and the expressive power of the networked medium is made visible and audible.

The content focuses on a harbor, a city, and the human body. As the three artists and their computers pass information back and forth in real time, an interaction among the senses, and among the geographies, scales, and narratives represented in the work is created. The fluid perceptions and the multiple intersecting journeys they suggest lie at the heart of this networked performance.

Premiered at the Ars Electronica Festival in Linz, Austria in September 1997, *Adrift* has been performed monthly since, including a simultane-

ous performance in Vienna and Brooklyn. Future performances will include other artists, additional audience locations, and the extended possibilities of new programming and new perceptions.

Archives of earlier performances, including full performances and slide shows with sound, are available on the Web site ([www.turbulence.org/Adrift](http://www.turbulence.org/Adrift)).



**Family Portrait: Father** 1997, Digital Photography, 59" x 42.5"



**Family Portrait: Mother** 1997, Digital Photography, 59" x 44"

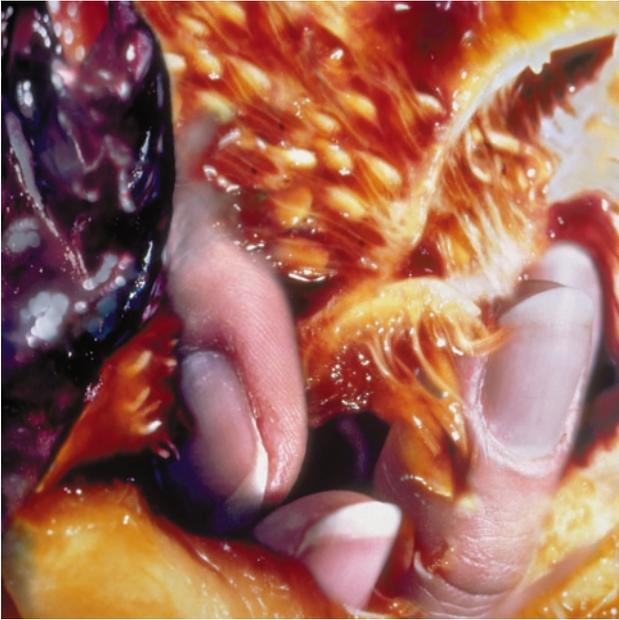
**Family Portrait in an Interior Scene from European History**

St. Petersburg's late-20th-century neoacademicism is a direct continuation of the classical style of ancient times and of every manifestation of that style in European classicism. The classical style has proved so stable and persistent over the centuries that it makes sense to consider all other European styles as mere deviations from that basic form. From this point of view, classicism/academicism seems an internal and inalienable feature of our racial consciousness.

Having little understanding of the great tasks set them by their parents, the children of this age saw themselves as belonging to the lost generation of the existential European past. The relative calm that settled upon their lives shattered their internal unity. Moreover, they were tired of history and all its wars and were anxious to "erase" everything from their memories and "become like everyone else." They tried to present themselves as a generation apart from the heroic victory at Hanko, and as a result made themselves even more tired.

This portrait of a man and a woman is bereft of any connection, and even of any appearance of a connection, with the world and kin. Only the couple's faces themselves preserve an inexorable link with the biological kin of which they are the latest representatives; but with this commences the rebirth of the broken link whose full restoration will come only with the couple's grandchildren and great-grandchildren.

**Alena Spitsyna**  
From the SCARP project catalog



**Juicy Details from Embrasure Series** 1993, Digital Ilfochrome Print, 19" x 22"



**Precious Pink from Embrasure Series** 1993, Digital Ilfochrome Print, 11" x 14"

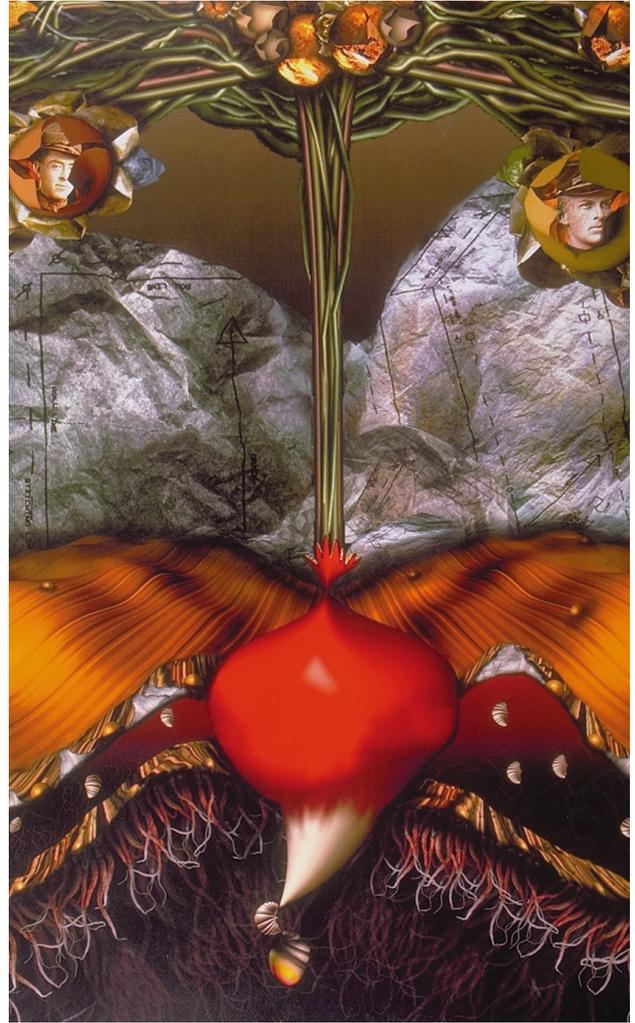
In these sensuous images, I embrace the body with curiosity as nightmarish visions, physical recollections, and fantasies inform the perception of myself. In close-up, my body emerges as mysterious and alien, yet familiar and intimate. Horror and pleasure, the fruits of my imagination, incessantly merge and dissolve.

This series examines the possibilities and the uncomfortable qualities of female sexuality. The individual titles for the images emerged from names of cosmetic products such as lipstick and rouge, which publicly manifest our desire to be desired.

Embrasure is an architectural term for the recess of an opening in a door or a window and refers to this space in-between. Much like the orifices in the human body, these vulnerable spaces represent neither the inside nor the outside. They are both public and private, as they simultaneously reveal and conceal.



**Catherine Courier** 1997, Cibachrome print, 30" x 27.8"



**Taut Turnip** 1997, Cibachrome print, 24" x 15.4"

I use the computer to create seamless environments out of incongruous elements, including flatbed-scanned images of objects, appropriated photography, and three-dimensional imagery. My digital montage process is analogous to the activity of sewing.

I use fabrics and other materials to redress and transform figures, and to create an illusory narrative space. I'm inspired to use a lot of my imagery for the texture it brings to my compositions. Images of fabric, papers, and organic materials create a sensuous tactileness in my prints. I stitch together disparate elements to create a rich embroidered tapestry whose decorative qualities I sometimes use to make subversive content more palatable.



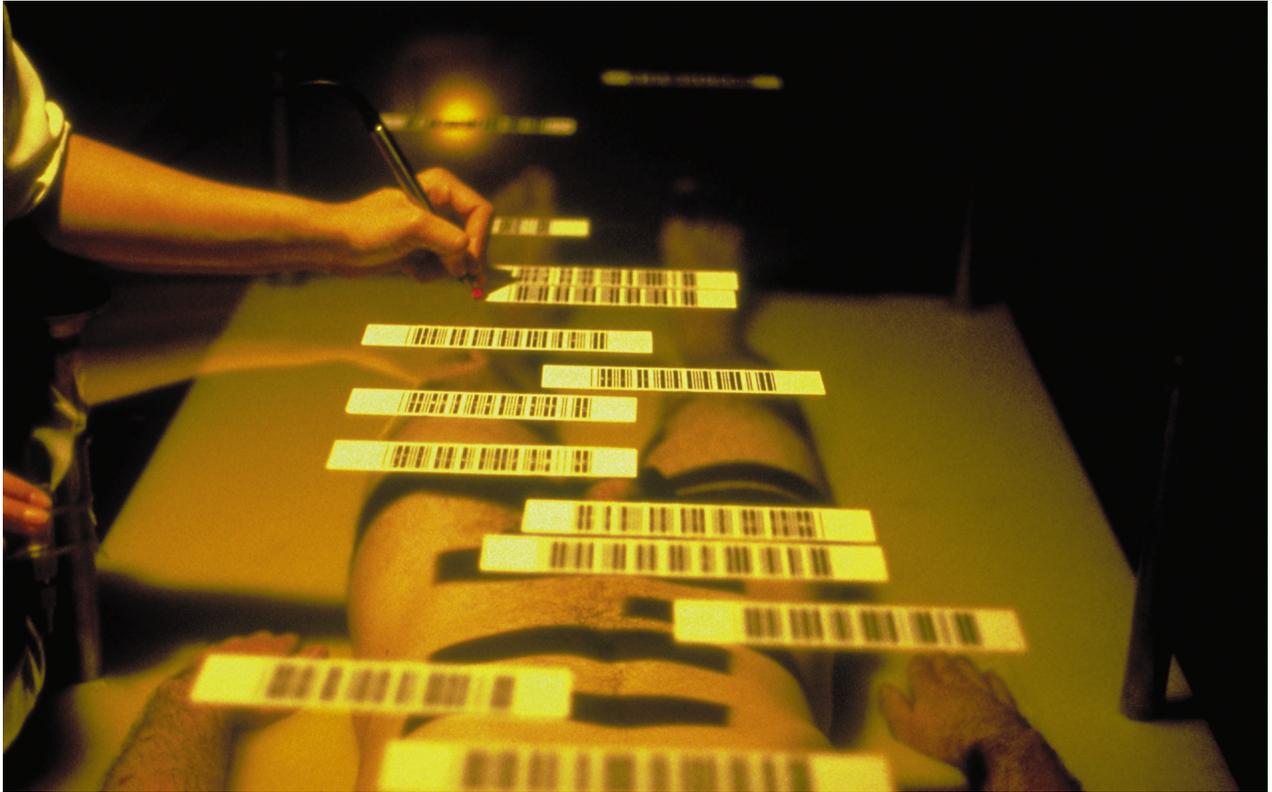
**No Man No Shadow** 1989, Plotter Drawing, 37" x 61" x 2"

*No Man No Shadow* is an account of conquering distance, with an experience described by T. S. Eliot in "Little Gidding:" Either you had no purpose, or the purpose is beyond the end you figured and is altered in fulfillment. At the same time, what is seen in the surroundings brings an association to mind: rhythmic patterns in nature

remind us of a perfection of computer algorithms.

In my work, I use the computer on different levels. I have been programming in FORTRAN 77 using a VAX mainframe. I have been setting color combinations, transforming light intensity, applying grid patterns and moiré

effects in order to gain composition. I find computer graphics to be a very useful medium to convey order and regularity of forms in landscape. I draw inspiration from processes and events in nature and in science while working on my computer-generated images.



**Items 1-2,000** 1997, Interactive Installation, 3' x 3' x 6.5'

*Items 1-2,000* is an interactive multimedia installation with a performative component. The work collapses Western medicine's fracturing of the body with industrial itemization techniques into a strange rationalization apparatus. A live human specimen is half submerged in a block of wax in a manner reminiscent of how biological specimens are fixed in a "microtome" (a machine that cuts specimens into thin slices). A sheet of glass hangs several inches above the figure. Bar codes affixed to this glass correspond

to internal organ locations of the figure underneath.

Participants interact with the coded form as anatomy students would a cadaver. A stainless steel bar code scanner is employed much like a scalpel, slicing horizontally across the figure to reveal the body's interior on video monitors in the installation space. However, the more familiar uses of bar codes and scanning procedures, for example, groceries and books, are not lost, and this surgical

role blurs with that of the cashier, commodifying and extracting value through denial of the body as whole. Certain scans access recollections of my own experience as a student in the anatomy morgue. These interleaved video clips, in their attempt to discover a point of empathy with the subject, address the de-humanization of the corpse as it is de-constructed and subsequently re-configured through dissection.



**Undecided 2: Market Research in the Narrow Way** 1997, Inkjet Print, 43" x 40"

I like the idea of capturing inconsequential slices of life and weaving them into the fabric of a picture: shoppers carrying bags, the cup of coffee to avoid doing the work. As an abstract painter, I needed this extra dimension, this extra texture of the ordinary: pigeons on the pavement like touches of the brush. I have been wondering whether the confusion I feel as a painter working both physi-

cally and digitally couldn't be a creative starting point. Sometimes there's a point in making pieces that are about being aimless, just absorbing whatever you come across walking down the street.

*Undecided*, a mix of digital snapshots and drawing, feels its way round the surface. In *Market Research*, I happened to record in a sequence of

eight shots a young mother of two being stopped by a market researcher. I was impressed by the children's patience. *The Narrow Way* is the name of the street in Hackney, London, in the picture. Now I think about it, I suppose it's also a narrow kind of improvisation, as everything stems from those eight shots from the digital camera.

The Digital Giraffe Series



**Battered** 1998, Mixed media, 25" x 28" x 8"

BATTERED

By a fist, a weapon, a cruel threat.  
Beaten down in body.  
Shattered in spirit.

Just as a boxer's fists are considered lethal weapons outside of the ring,  
so the superior physical strength of men should be acknowledged and reined in.

Any man, anywhere, who threatens a woman or child with physical violence  
should be guilty of a crime.

Any man, anywhere, who uses his physical strength against a woman or child  
should be guilty of a crime.

No code to crack.  
No politicospeak to decipher.  
No excuses. Ever.  
HURT A WOMAN. HURT A CHILD. GO TO PRISON.

No need for spin control, or independent counsels.  
Just a law, so simple that it cannot be misconstrued.

HURT A WOMAN. HURT A CHILD. GO TO JAIL.

So that no woman, ever again, will ever be...

Battered.

Corinne Whitaker, 1998



**A Bear of a Man** 1997, Digital painting on archival watercolor paper, Iris print, 20" x 20"

"Touch-Me-Not"

There is a space inside the human heart that cannot be touched, that holds itself aloof and deigns to be seen. Perhaps it is the space where I stop and you begin, where the boundaries of being stand firm, the soft sculpture of our souls. In that inviolate place, we hide our terrors and our tears, close the door to inquiry, and touch only a deep sense of isolation. Somewhere in that inner space jungle lies the essence of being human, and that is the quest that these images undertake. Out of the formless void, Nature's paintbrush yielded us. Something from nothing, beings differentiated from infinite space by boundaries of skin and bone, hair and nails. And set apart from each other by centuries of polite convention.

The soul in its insanity crouches in that wild terrain. It is the artist who dares to embark on a perilous journey into the Amazon of identity, daring to touch what we would forever hide.

Corinne Whitaker 1998



**The Other Woman** 1998, Digital painting on archival watercolor paper, Iris print, 22" x 22"



SIGGRAPH 98 initiated a Web site for Web artwork. The objective of ARTSITE is to stimulate creation of new forms of artistic expression in the Web context. This site is available online in the Art Gallery and via the Internet before, during, and after the conference. These projects illustrate innovative thinking about Web sites: artwork that absorbs and creatively utilizes the indigenous nature of the Web, its capabilities and its artifacts. Artists have created new forms of artistic expression that wrap around and extend beyond the Web. Jurying for ARTSITE was done on the Web by jurors in remote locations.



ARTSITE Jury

#### Judy Malloy

Judy Malloy is a writer of hyper-narrative and an information artist. Her hyper-narratives, including *Its name was Penelope*, *Forward Anywhere* (with Cathy Marshall); *IOveOne*, and the *Roar of Destiny*, have been published, shown, and reviewed internationally.

In a recent issue of *Modern Fiction Studies* (MFS), Jaishree K. Odin writes that "Malloy uses the fluidity of the hypertextual medium to create a poetic text, which, in spite of its fragmentation and discontinuity, leads to a reading experience that is very satisfying because it allows the reader greater creativity as to the form the reading will take... In Malloy's text, the visual is transformed into the verbal. The border between text and image dissolves, and image becomes the text."

Judy Malloy has been Editor of *Leonardo Electronic News* and an artist in residence at Xerox PARC. She has taught Web design at the San Francisco Art Institute, and she currently works on the Internet as Arts Wire's Network Coordinator.

#### Statement

I looked for an understanding of the Internet as a public art space, an understanding of the Web's hypertextual capabilities, content, depth, innovation, and impact, both visual and verbal. I viewed the sites on three separate computers: my home laptop, my local library's Internet access machine, and a college media lab. Since I believe that Web sites are a form of public art that should be accessible, if submitted projects did not run on any of these platforms, I voted no.

#### Annick Bureaud

Annick Bureaud, works and lives in Paris. Consultant in electronic art. Editor of the *IDEA/International Directory of Electronic Arts* and *IDEA online* (nunc.com). Freelance art critic. Member of the Editorial Board of *Leonardo*, adviser and collaborator to *OLATS/Leonardo Observatory for the Arts and the Techno-Sciences* ([www.cyberworkers.com/Leonardo](http://www.cyberworkers.com/Leonardo)). Independent curator. Lecturer at the art school of Aix-en-Provence.

## ARTSITE Artists

### Mark Amerika

GRAMMATRON 1.0  
[www.grammatron.com](http://www.grammatron.com)

### Robert Fabricant

Cathedral  
[fargo.itp.tsoa.nyu.edu/~robert/cathedral/cathedral.html](http://fargo.itp.tsoa.nyu.edu/~robert/cathedral/cathedral.html)



Rob Fabricant  
Cathedral

### Gregory P. Garvey

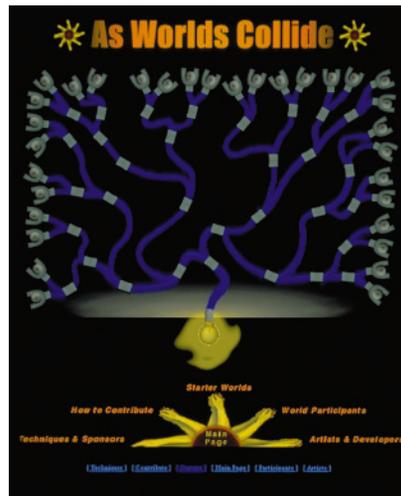
Genderbender  
[142.232.132.45/dedocs/ggarvey/indexGB.html](http://142.232.132.45/dedocs/ggarvey/indexGB.html)

### Juliet Martin

Please Stay on the Line  
[www.rsub.com/thenvelope/pstol](http://www.rsub.com/thenvelope/pstol)

### Bonnie Mitchell

As Worlds Collide  
[creativity.syr.edu/~worlds](http://creativity.syr.edu/~worlds)



Bonnie Mitchell  
As Worlds Collide

### Sonya Rapoport

ARBOR ERECTA  
[www.lanminds.com/local/sr/srapoport.html](http://www.lanminds.com/local/sr/srapoport.html)

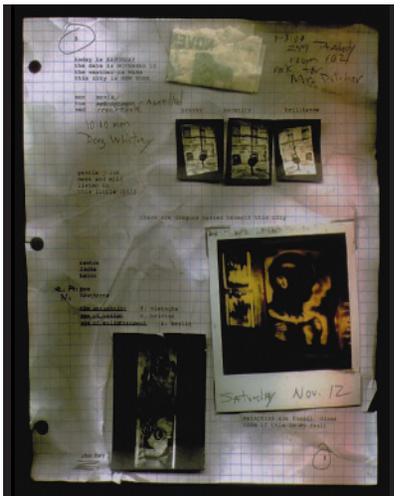
### Jacques Servin

Beast  
[www.quake.net/~jacq/Beast](http://www.quake.net/~jacq/Beast)  
[www.exo.net/url](http://www.exo.net/url)

## Joseph Squier

Urban Diary

[www.art.uiuc.edu/ludgate/the/place/urban\\_diary/intro.html](http://www.art.uiuc.edu/ludgate/the/place/urban_diary/intro.html)

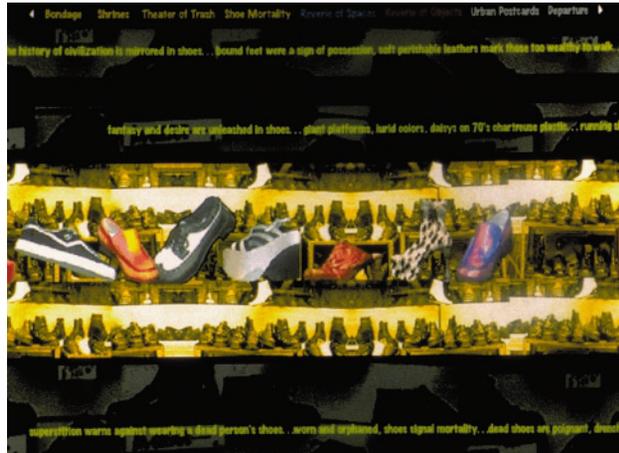


Joseph Squier  
Urban Diary

## Annette Weintraub

Pedestrian: Walking as Meditation and  
the Lure of Everyday Objects

[www.turbulence.org/Works/pedestrian/intro.html](http://www.turbulence.org/Works/pedestrian/intro.html)



Annette Weintraub  
Pedestrian: Walking as Meditation and  
the Lure of Everyday Objects

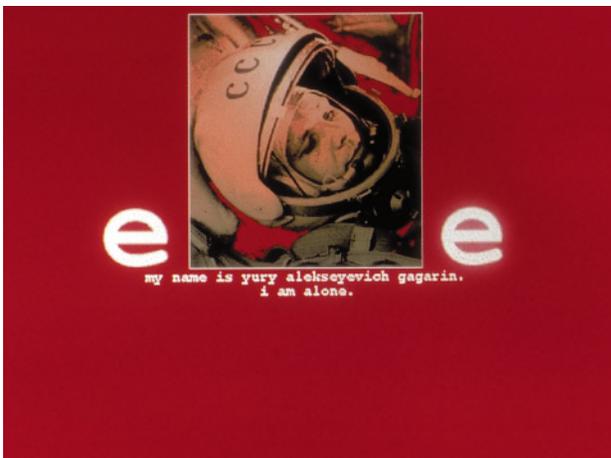
## Igor Stromajer

re:volution

[www2.arnes.si/~ljintima3/revolution](http://www2.arnes.si/~ljintima3/revolution)

e/motion HELP - is there anybody out there?

[www2.arnes.si/~ljintima1/help](http://www2.arnes.si/~ljintima1/help)



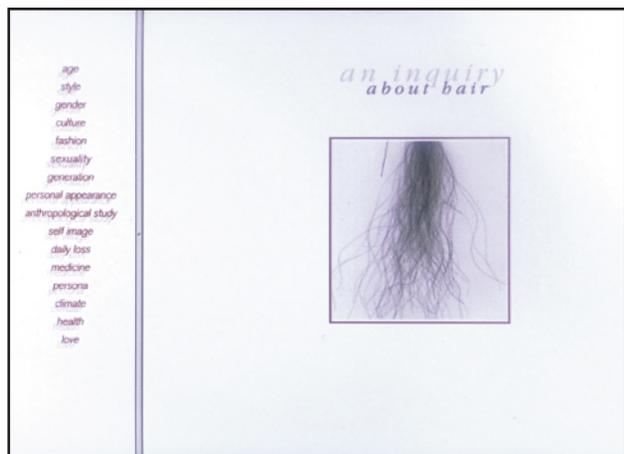
Igor Stromajer

e/motion HELP - is there anybody out there?

## Anne Wilson

an inquiry about hair

[www.anu.edu.au/ITA/CSA/textiles/hairinquiry/](http://www.anu.edu.au/ITA/CSA/textiles/hairinquiry/)



Ann Wilson

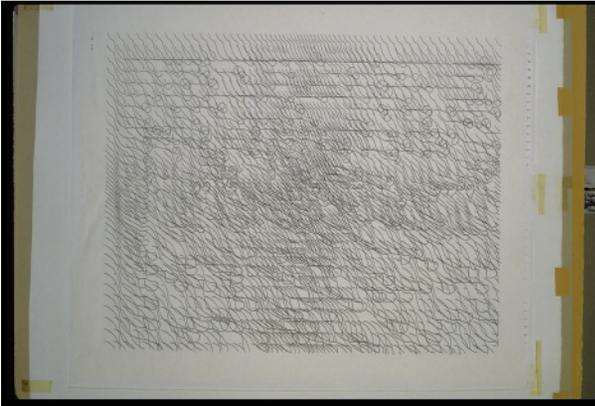
an inquiry about hair

# 25th Anniversary Celebration of Pioneering Computer Artists

This exhibition chronicles 25 years of computer art, from early algorithmic drawings and paintings to modeled figures and “pebble drawings” by pioneering computer artists. These artists have participated in and contributed to a number of SIGGRAPH art shows and are currently practicing artists. This section documents their early work together with their current artwork.

Jane Stevens  
Curator





**Large Landscape: Curved and Coiled, 1970**  
Computer plotter, black ink on paper, 23.5" x 28"



**The Rose's Own Garden: Its View, 1997**  
Watercolor, colored pencil, ink on BFK paper, 36" x 42"

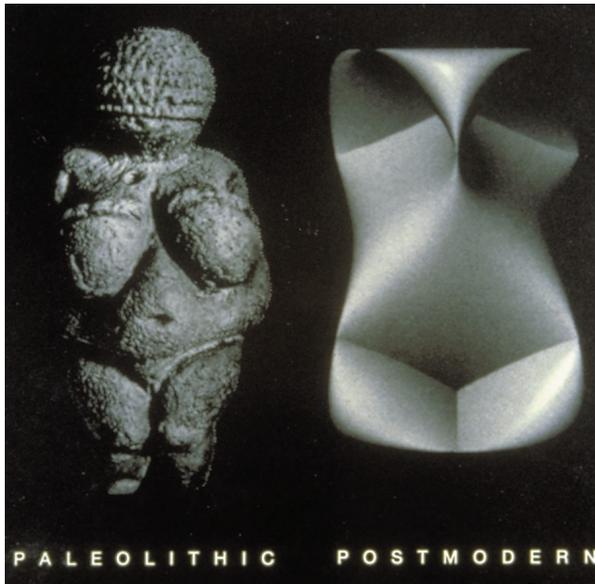
*The Garden That Was: Garden Letters*

The subject of all this work is landscape. The mode is a conversation about seeing and pictures. Colette paints pictures every day. Jeff writes algorithms. Over many years, the discussion has grown to encompass computers, software, plotters, and printers. Living with the Midwest landscape as our center, nature becomes a whole experience. Colette's painting series, *The Garden That Was*, is the source for new computer art.

Although the images function as stationary, they are part of our computer art feedback loop, which extends and transforms what drawings can be. Each element is important: algorithmic ideas, handmade picture, computer-processed images, as well as a friend who sees and read the letters.

**Colette and Charles Bangert**

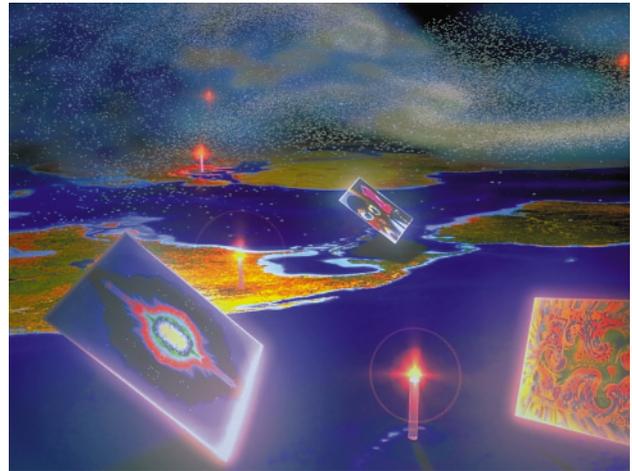
Lawrence, Kansas,  
23 November 1995



**Paleolithic Postmodern Venus, 1987**

Cover image from *Computer Graphics*, Jan. 1987, 18.5" x 26.5"

The convergence of art and science through computer graphics has been my obsession for 17 years and has culminated in a variety of artistic and scientific endeavors that include visualization and virtual reality. Technology is an extension of nature and a collaborative assistant as I mediate between scientific data and artistic expression. My insatiable curiosity with science relates to a desire to understand the universe and our place within it, and to make the invisible visible. Illness and death in the family have inspired my recent poetry, which informs much of this contemporary artwork. The underlying theme is the evolution of consciousness through recycled realities of human experience. If the universe is becoming more conscious, then it gropes and grows through our experiential being.

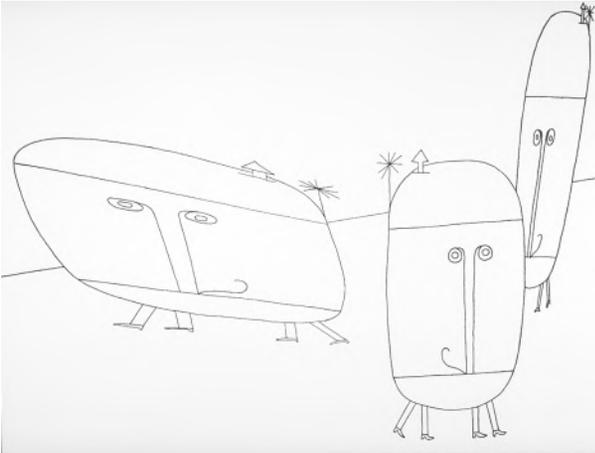


**Familiar Is-ness, 1998** Cibachrome Print, 24" x 20"

Old familiar is-ness,  
You've been everything to me:  
anchors of laughing candles,  
intermingling crests of regret,  
revealing memories unborn,  
confessing tearful forgiveness.

Glowing recycled images fall like cards to an earthly panorama from a galactic merger. Time may be infinite, matter may be conserved, life may be recycled, yet the here and now is our truest experience.

Beyond all appearances of  
evolving atomic finesse,  
Discovering no slice is better to claim, ...  
No-thing. No-time. Than This.



After Paul Klee, 1963 Pen and ink on paper, 20" x 24"



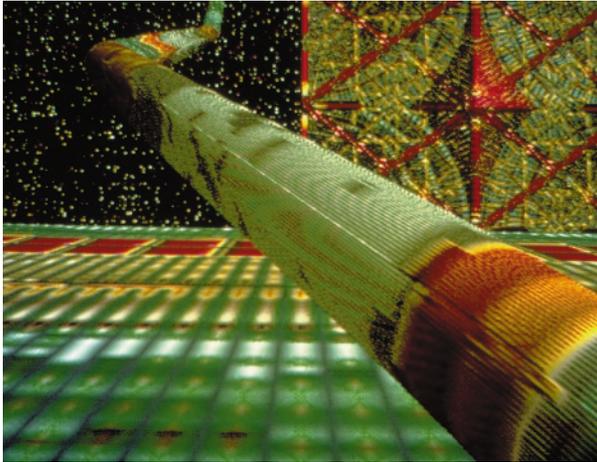
The Past Casts Shadows, 1997 36" x 47"

In 1963, I used an analog computer to make transformations on my line drawings. It could represent directly measurable quantities, and the results could be replicated. I discovered digital computer graphics in 1964, and my world was changed, forever.

Thirty-four years later, I find the problem of art is still the same, which is to create a meaningful structure to reveal aesthetic content. However, I have been affected by computer processes and procedures. I came from a traditional background as an artist, with a relatively simplistic viewpoint about structure and nature. My conception of nature and an object has been expanded by science and computer graphics. I better understand how computer procedures can affect one's definition of an object. An object is not simply a geom-

etry. My object has built-in procedures that affect its behavior. Also, when I touch it, my object can make sounds or change its form. It can send messages to other objects.

I see and feel a single object from many points of view. When I make copies of an object, they become captured instances of time representing inner agents and different psychological states. Symbolically, it represents past, present, and future states and becomes a character within a virtual space. The surrounding atmosphere is symbolic of distance and a time past. Shadows are like an echo of what was once another reality. I try to define a mythological space to express a range of feelings, inner problems, and mysteries.



**Transjovian Pipeline, 1979** Cibachrome Print, 30" x 40"



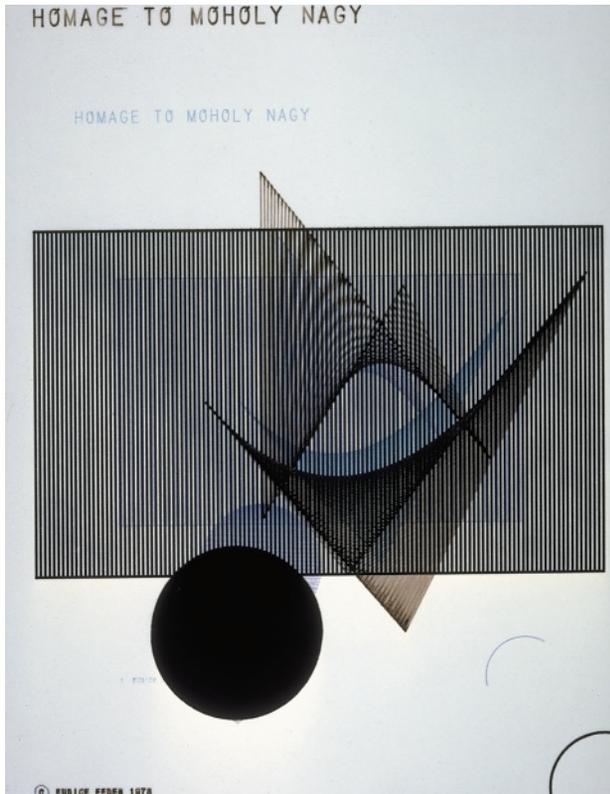
**Aoxoamoxoa 7, 1997** Inkjet print, 34" x 76"

The making of *Aoxoamoxoa 7* tells a lot about the evolution of digital imaging over the last 25 years.

All my early computer art was done in big labs with hardware that cost hundreds of thousands of dollars. The machines were scotch-taped together and required a full-time team of programmers and managers to run. The software was one-of-a-kind, completely undocumented, and definitely not designed for artists. Trying to print digital artwork accurately was a nightmare.

By contrast, I created *Aoxoamoxoa 7* on an Intergraph desktop PC with 3D Studio Max, an affordable off-the-shelf software program, then printed it on a Hewlett Packard 2500CP inkjet printer, all in my own studio.

That's progress.



**Homage to Moholy-Nagy, 1979** 14" x 11"



**The Clearing, 1988** 5 1/2" x 9"

### From Zero to One

The landscapes of the world that I saw from an airplane window flying in the sky; the feel under my feet of the living land itself; the fragrance of air, from the Sinai to California, and in-between; and the legacy of painters, especially the 19th Century Luminist painters – all these have all instructed me.

Through the maze of the brain, earthvisions are restructured into a universal code of zeroes and ones that only a computer can understand and obey.

The gifted painter's hand then can be bypassed, diverted to another track, faithfully driven by a robot with instructions of which, what, where, and how to deliver the loaded train of earthscapes, transposed, transmitted and transferred to pen, paper, and ink such as *The Clearing*.



**Osaka-Skyharp, 1986**

Stainless steel and painted aluminum, Osaka Hilton International Hotel Lobby, Osaka, Japan, 15' x 15' x 40'



**Full Circle - Continuum Series, 1998**

Stainless steel, brass, copper, painted aluminum, Philip Services Corporation, US Headquarters, Pittsburgh, 6' x 5' x 1.5'

*Full Circle* (1998) is an aptly titled artwork representing my approach to computer-assisted sculpture. Prior to 1979, my sculpture was designed in my studio using traditional constructivist techniques. In that year, I began collaborating with expert programmers. Using an Adage mini-computer, I created an 86-foot-high suspended sculpture, *Northern Lights*, that established the revolutionary opportunities computer graphics visualization presents for design of large-scale sculpture. During the past two decades, dozens of computer-assisted sculptures followed, each one driven by my desire to see what new forms the computer-assisted process would engender.

*Galaxy* (1982) evolved on an Evans & Sutherland MPS, where a galactic object was floated in an architectural space. *Osaka-Skyharp* (1986) utilized architectural walk-throughs and sculpture-building software emulating my studio approach. *A Page from the Book of Skies* (1989), a 100-foot-long suspended sculpture in Saudi Arabia, was a three-dimensional translation of Arabic calligraphy. *Wave Form* (1990) evoked shifting reflections of light on water. *Fandango* (1990) incorporated architectural engineering studies of enormous 75-foot-wide cantilevered objects. *Symphony of the Air* (1991) used computer techniques to

compose an artwork over 1000 feet in length. *Dance of the Cybernauts* (1992) pushed into new directions in which scientific applications merged with engineering and architectural software to generate hybrid art/science forms. Olympos, the light-sculpture illumination of Atlanta's tallest skyscraper commissioned for the 1996 Olympic Games, employed photometrically accurate light simulations and computer-assisted lighting.

In my latest artwork, I have in some ways come "full circle" and returned to traditional studio techniques, augmented, however, by the use of the computer. One should use the computer when it is appropriate: to save time or to permit development of forms that would otherwise be difficult by virtue of their complexity, engineering, or scale. In *Full Circle*, I chose to use PC 3D Studio software guided by engineering analysis to envision the form and its sensitive proportions from varying views and to lay out the spacing of delicate suspension cables. But for the interior composition of colored metal elements, I chose to work directly with real materials in real space. The working artist must base decisions on the appropriate use of technology and not be caught up by the persistent lure of computer visualization.



**Oszillogramm, 1961-1962**

18mm x 24mm (created with an analogue system)

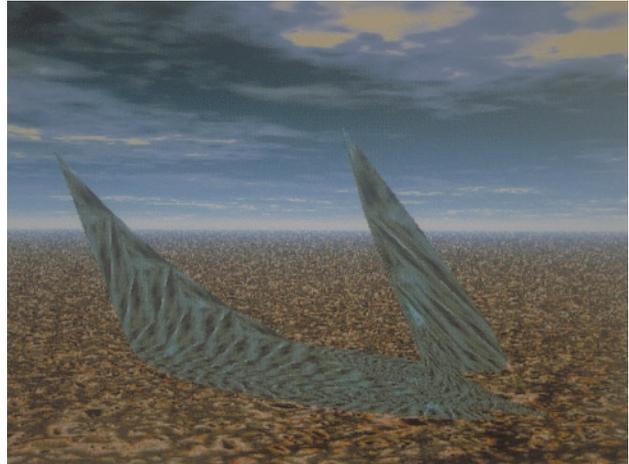
### *Oszillogramm*

This little system is a simple analogue computer, specially built by Franz Raimann to help me make pictures. It is called *Oszillogramm* because, in principle, the result is the superposition of two electronic oscillation components. The real picture is in motion, for viewing an old cathode tube oscilloscope. The photo is a slide made from the screen.

### *Desert*

This picture was made with Mathematica, a special software tool for all types of mathematical calculations, research, and visualisation, and the graphic software Bryce. The computer is a Pentium Siemens-Nixdorf PCD-5H. Beginning with mathematical experimentation, I developed interesting forms, one of which was imported in a desert landscape I made with Bryce.

Even in my youngest days, I was impressed with unusual pictures of an aesthetic point of view. This interest was



**Desert, 1997** any size

never passive. It was an active challenge, to develop different methods for producing pictures. During my study of physics, I learned the strange results of scientific photography, and I asked if it would be possible to use the microscopes, x-ray-equipment, and oscilloscopes for free visual experiments. Some years later, when the first computer graphic systems appeared, it was clear that this was the best approach for my intentions, and I began with my first explorations in this new and fascinating region.

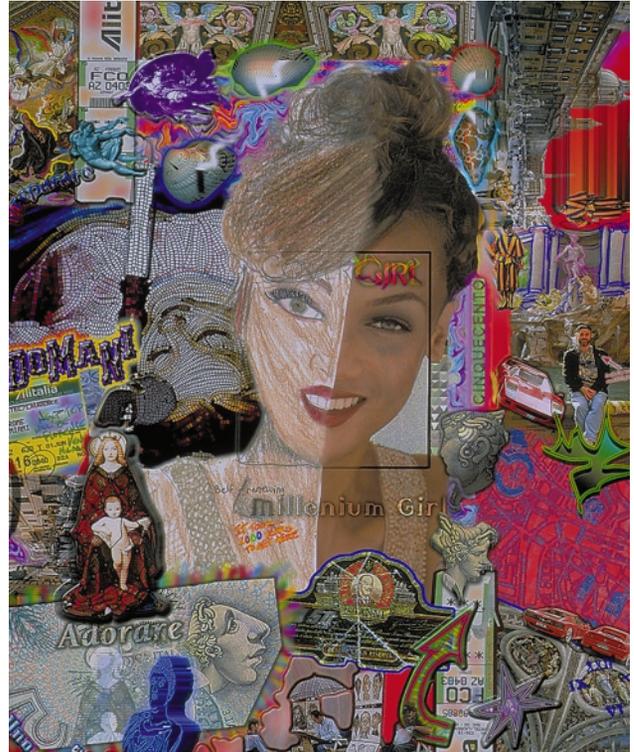
After my first period of generative photography, I began to use computers and mechanical plotters. Since then, I have found more and more interesting possibilities for producing new types of pictures, in 2D and 3D, and also in motion, or interactive, or in connection with music. In one of my last series, I returned to my interest in the future and science fiction, so the content of these pictures was phantastic planetoid landscapes with fragments of a strange technology.



**Dual Personality, 1979**  
Cibachrome Print, 16" x 20"

At first, I created works using a proprietary system at the Media Study/Buffalo Center in Buffalo, New York in the middle to late 1970s. Experimentation on the system was as much of a challenge as creating aesthetic images. "Media and message" were hard to combine.

*Dual Personality* (1979) posed the question of positive and negative, fusing two images from different angles. Color, too, had to be "stripped" in by use of a colorizer unit called the Paik-Abe Colorizer. The input devices only allowed black-and-white input using big television cameras and one-inch reel-to-reel video tape. The resultant image had to be photographed directly off the monitor, as there was no other way to capture the image to print it.



**Millennium Girl, 1997**  
Giclee Print (Edition of 25), 40" x 50"

Recent work continues to be auto-biographical. I create collages, as I am telling stories with my work. These are little vignettes of life. I always take my own photographs and include people who I come in contact with as well as the architecture and culture from the region. Now that the technology is no longer a "wrestling process," it is much more content-oriented. The final image is then printed digitally direct onto watercolor paper at 40 inches x 50 inches.

*Millennium Girl*, for example, is about my recent travels to Italy, the Italian people, and their history. The "Millennium Girl" herself stands to represent all women of the future, their power and their strength. All great works of art should represent their time, and I hope this work gives future viewers a window of our communicative age at the commencement of the 21st century.

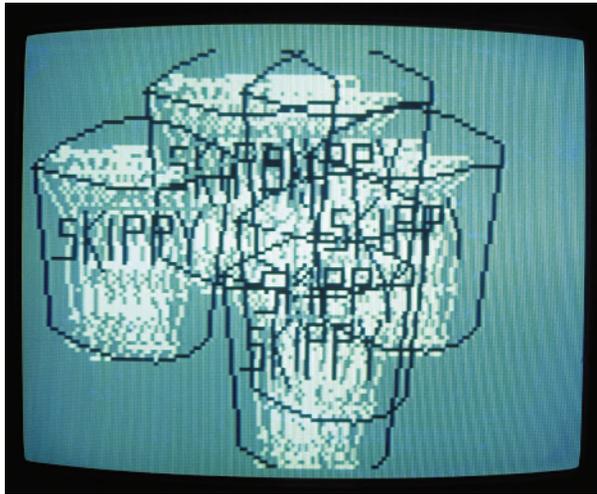


*Computer Graphics World Magazine Cover, 1981*



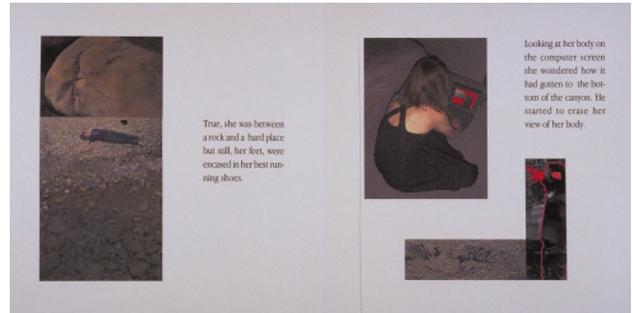
**Iceclif, 1990** Acrylic on canvas, 56" x 56"

The technology may be interesting,  
but it's what you do with it that's important.



Skippy Peanut Butter Jars, 1980 Screen Display

In the summer of 1979, a Bally Arcade Home Video game, converted to Zgrass Home Computer, moved into my tiny Chicago apartment. No longer was I making art in the computer lab in the engineering building. Instead, I was at home in my eight-by-six-foot studio pounding on a keyboard. On this little computer, which used audio tape as its storage medium, I wrote programs that made pictures and animations. From the excitement of being home and alone with my computer came the comical autobiographical computer animation *Skippy Peanut Butter Jars* - my life in 320-by-200 resolution at two bits per pixel.

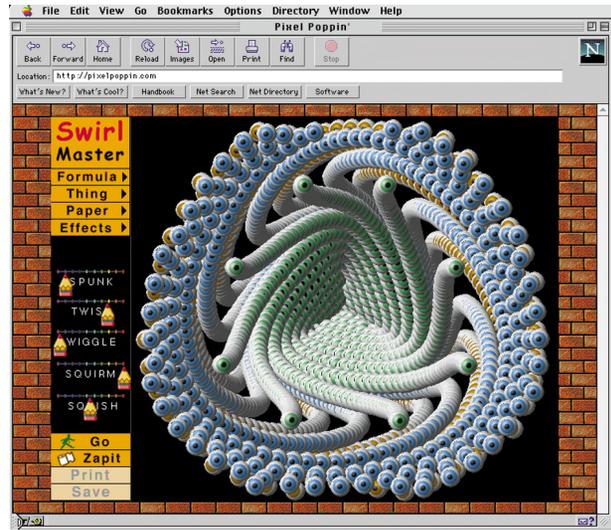


Thirdperson, 1994 Artist Book

Over the years, many other computers and their peripherals moved in and then out of my house or up to my attic. From these ever-changing configurations of technology, stories have emerged as computer animations, video installations, artist books, plotter drawings, and Web sites. In 1995, the arrival of a Mac Powerbook, digital camera, scanner and ink jet printer enabled me to make *Thirdperson: A Computer Life in Which She Poses*. The story is structured around a word/architectural motif stolen from Frank Lloyd Wright's Larkin building. It takes the physical form of an accordion-style artist book, rambling and revealing that period of my life when computers visually punctuated daily existence.



Inductive Reasoning, 1989



Pixel poppin' Dot Com, 1998 Web site

The first time I used a computer was in 1972. Up to that time, my attention focused exclusively on photography, but I knew the moment I used the computer that there was something absolutely "right" about it for me. Although you could, in a sense, "plug" other media into it, it was totally different from other media. For me, it was mostly an aesthetic research tool that could explore and materialize ideas that otherwise would never become real. Most of this required programming, which I loved.

Much of my early computer work used database word search and a certain degree of "tamed" randomness. This produced two artist books and a series of works on paper. I became absorbed with user interface and program design, where I pursued maximum functionality and ultra-simplicity. If functionality and simplicity ever conflicted, simplicity always won.

With this in mind, I produced *Kid Pix*, which is used around the world and won the 1991 Software Publishers Association award for the best user interface. *Kid Pix* reflects my interest both in the computer as a visual research tool and in ultra-simple program design.

Today, I am focusing my attention more on the Web, developing small visual gadgets. Once I was having a discussion with a very serious designer. He strenuously made the point that the computer was nothing special but was simply a tool. My response was: "The computer is not a tool; as everyone knows, it's a toy."

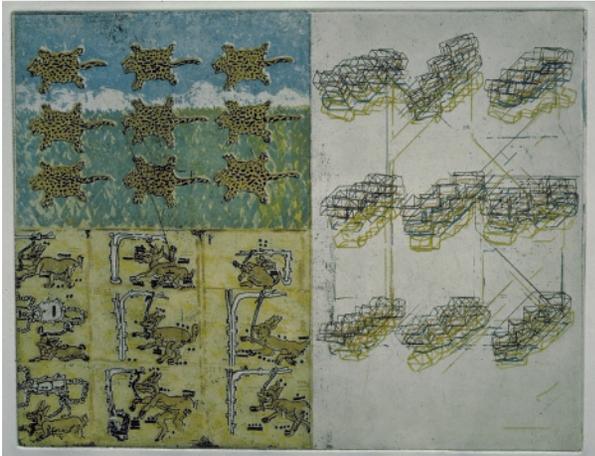


**EGGY, 1990** Digital Print from HDTV animation, 1452mm x 1032mm

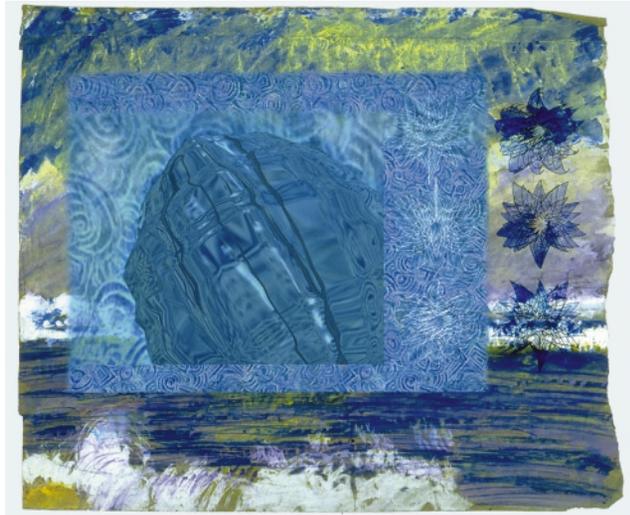


**NEURAR, 1996** Digital Print from HDTV animation, 1452mm x 1032mm

My pieces are being carried out on a paradigm that "growth model is created by the recursive structure of the self-organization, thus being the fruit of complexed form of evolutionary cells."



**Freedom and Imprisonment, 1985** Etching, 19" x 26 1/4"



**Blue Pearl, 1998** Digital printout, 13 1/2" x 11"

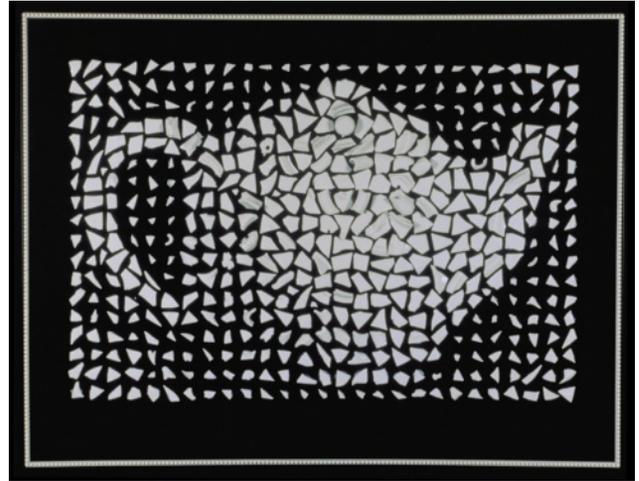
Most of my artistic work from the 1980s consisted of etchings, silkscreens, and paintings based on elements that I created with 3D computer software and imagery that I drew or painted by hand. During that period, I developed and refined techniques for transferring high-resolution 3D computer images onto traditional printmaking media, in particular extremely fine aquatint photo-etching techniques and computer-controlled engraving. In *Freedom and Imprisonment* (1985), the right half of the work was engraved directly onto four copper plates by a computer-controlled flatbed plotter that had the pen replaced with a steel needle.

I have continued to combine 3D computer-generated images with hand-drawn and hand-painted elements, and in the early 1990s, I started to use digital printers to edition my work. *Blue Pearl* (1998) combines paintings that were scanned into the system with 3D computer renderings that apply some of the paintings as environmental maps to the geometry in the scene. I am interested in using computers to generate emotional works with a gestural and unpolished quality to them. I am less interested in the computer's ability to create perfect geometry or aseptic simulations of reality.



**Nude (Study in Perception), 1966**

Alphanumeric Print, 60" x 144"  
with Leon Harmon



**Retrieved Icon, 1998** 19" x 25"

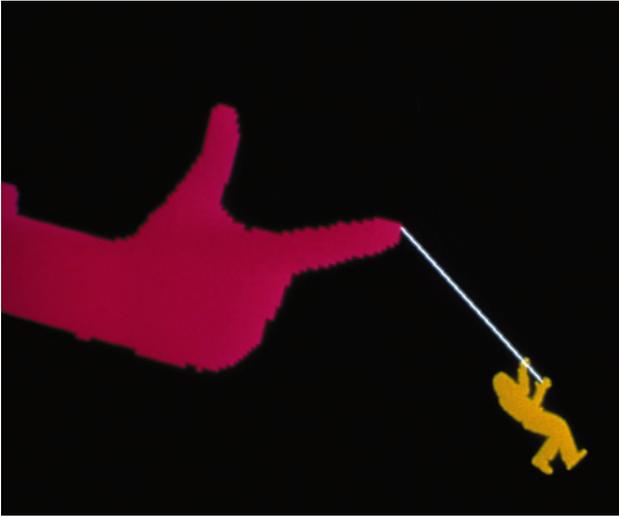
### Computer-Assisted Mosaics

Many kinds of art (abstract, cubist, minimalist) demand serious effort from the viewer, first of all to "see" various things, then to find some personal or shared meanings. To me, mosaics and similarly fragmented pictures are superb examples. They offer a variety of visual games and need to be viewed in many ways so that the viewer, building on past and present experience, asks: "Why do I see what I think I see?" Perhaps at least this question will then carry over to life in general.

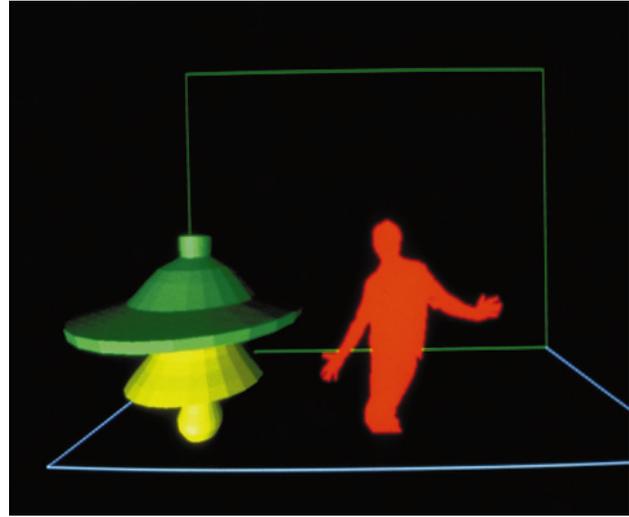
It's not always that grimly serious. If I portray a teapot, using pieces of a smashed teapot, it's obviously an in-joke for a group who are looking back on, among other things, many

years of teapot picturemaking. But, as with all other art, there should be more to enjoy and think about than the first and most obvious interpretation.

Exactly how and when (and even if) a computer was used is as irrelevant as the details of paint and glue. Except for performance art, which mine work is not, the finished works alone should convey whatever meaning there is. (Ideally, you would not want or need to read this.)



**Hanging by a Thread, 1988** Interactive Installation



**I-Met-A-Morph** Interactive Installation

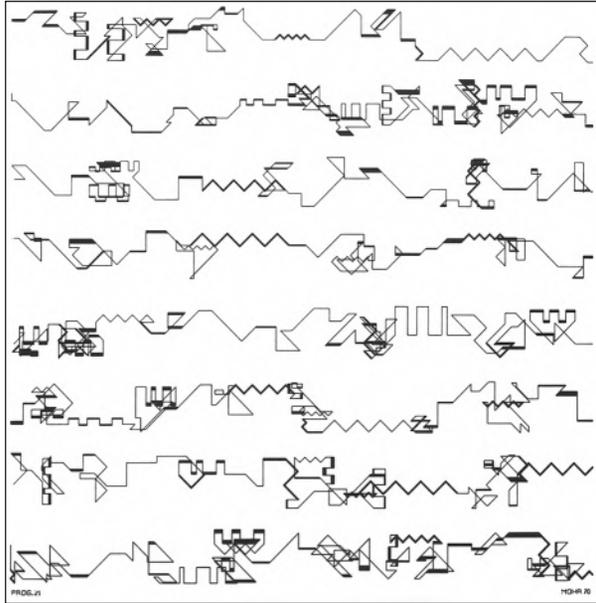
Since 1969, I have been trying to raise interactivity to the level of an art form as opposed to making art work that happened to be interactive.

From the beginning, I reasoned that interactivity would be limited by what the computer knew about the participant's behavior, and I developed specialized computers for perceiving the human body. I have also incorporated the image of the person's body into the computer graphic images.

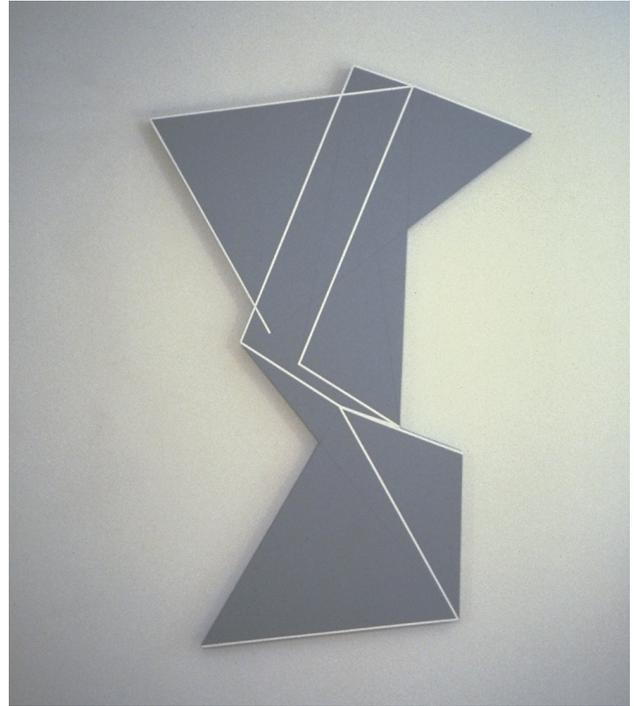
In general, I have stuck to the premise that everything that happens should be a direct response to the participant's actions. However, within that discipline a number of different

kinds of pieces can be developed. One family of interactions I think of as two- or three-dimensional "mini-media," which visitors can use to create their own dynamic artistic expressions. Others involve two or more participants in different locations who interact with each other in the same virtual space either as a spontaneous interaction or as a live performance.

Although 30 years have passed, interactivity is still beginning. Many of the preliminary ideas I started out with are still unrealized, and more advanced concepts are waiting to be invented.



**P-021-Band Structure, 1969-1970** Ink on paper, 19.5" x 19.5"



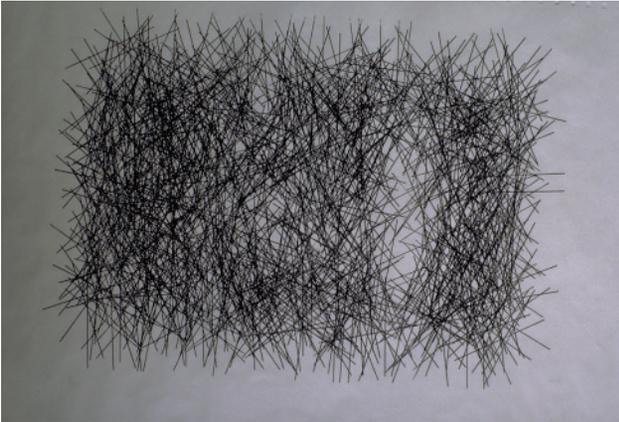
**Half Planes, 1996** Construction, 60.5" x 40"

In my artistic development, I did not have the typical constructivist background. I was an action painter and jazz musician. Through a development of consciousness, I detached myself from spontaneous expressions and turned in the mid 1960s, to a more systematic and, therefore, geometric expression. It was mainly the writings of the German philosopher Max Bense and the French composer Pierre Barbaud that radically changed my thinking, pointing to a rational construction of art.

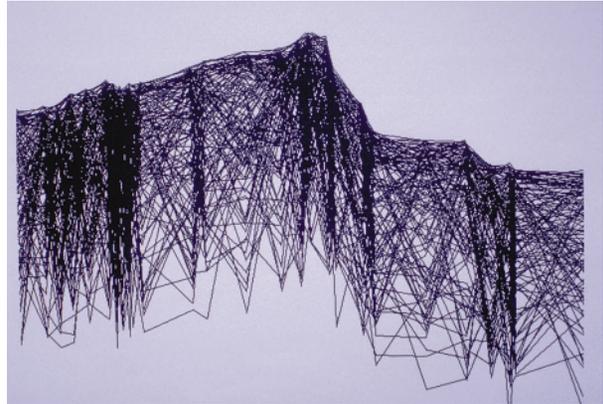
Since 1973, I have been concentrating on fracturing the symmetry of a cube (including since 1978, n-dimensional hypercubes), using the structure of the cube as a "system" and "alphabet." The disturbance or disintegration of symmetry is the basic generator of new constructions and relationships.

The computer became a physical and intellectual extension in the process of creating my art. I write computer algorithms: rules that calculate and then generate the work, which could not be realized in any other way. It is not necessarily the system or the logic I want to present in my work, but the visual invention that results from it. My artistic goal is reached when a finished work can visually dissociate itself from its logical content and convincingly stand as an independent abstract entity.

Over the past two decades I have had many solo and group shows in galleries and museums worldwide. In 1994, the first comprehensive monograph on my work was published by Waser-Verlag (ISBN 3-908080-39-8) in Zuzwil.



**Interruptions, 1968** 16.5" x 12"



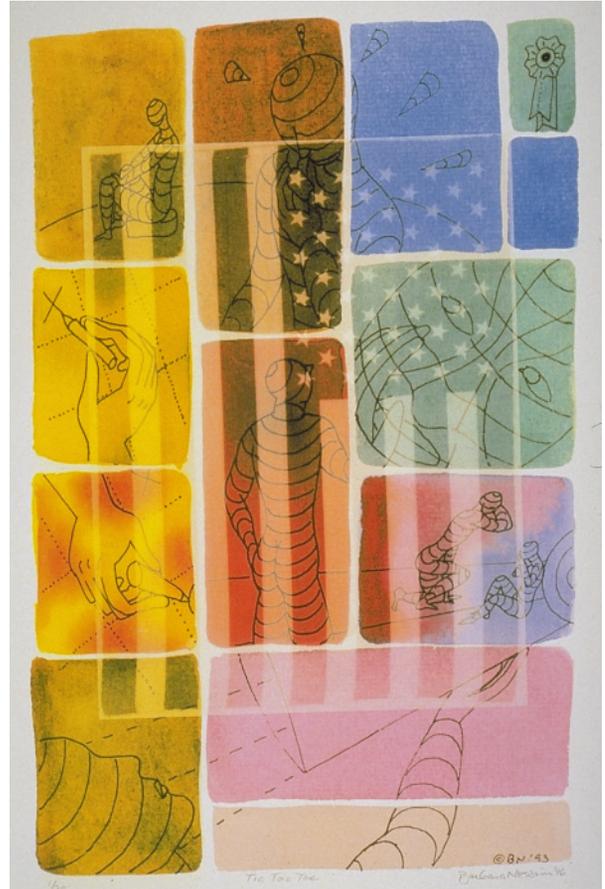
**Variations Sainte-Victoire, 1996** 16.5" x 12"

The image obtained by a painter using a computer stops being an accumulation of unknown badly defined forms and colours. It becomes instead a pattern of thousands of distinct, intermittent, and quantified points. The position in space, the colourimetric values of these thousands of points, are perfectly defined and numerically accountable. In this way, the painter controls each one of these points. At any moment, the artist is able to modify the value of one or several points, or even the total number of them. As a result, innumerable successive approaches (many sketches, to use

the accepted history-of-art term) can be shown on the screen. Proceeding by small steps, the painter is in a position to delicately pinpoint the image of dreams. Without the aid of a computer, it would not be possible to materialize quite so faithfully an image that previously existed only in the artist's mind. This may sound paradoxical, but the machine, which is thought to be cold and inhuman, can help to realize what is most subjective, unattainable, and profound in a human being.



**Face #111 from Face Series 1982**  
Computer Image, 20" x 24"



**Tic Tac Toe from American Favorite Series 1996**  
Iris print, 23.5" x 31.5"

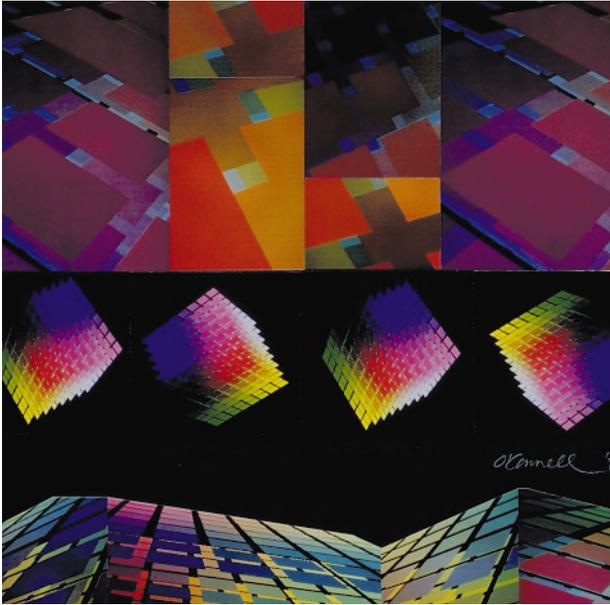
### Beginnings and Now

At first, I was fascinated by the idea that a computer could be used as a tool to create art. As I quickly learned the many aspects and power of this machine, I started to focus on the computer's specific attributes. These attributes, such as a database, answered some of my long term "what-if" art goals and inspired me to explore. That was in 1980.

One of those "what-if" wishes was to show the hundreds of line drawings tucked away in 71, completed-to-date, visual journals. Creating an ongoing database of the many drawings in these visual journals parallels the growing population.

Communication among people, diverse and alike, are at the root of my work. With migration, immigration, integration, and population growth increasing daily, understanding among people of the same and diverse backgrounds becomes paramount. Placing drawings under different transparent national flags puts them in a global context.

The two examples shown span two decades of digital work. The patterned face was created around 1982 on a Norpak IPS 2 computer, the first computer I used and the one I learned on. The Iris print, *Tic Tac Toe*, is from my *American Favorites* series. This drawing from my journals is incorporated with a ghost of the American Flag.



**Chips in Space, 1984** 20" x 20"

In 1978, I began to work with computers with David Foster, then head of the University of Oregon Art department. In 1980, Larry Cuba expanded my introduction to the new technology with his two-week workshop in Eugene. Gene Bressler and I organized and directed the 1st Pacific NW Computer Graphics Conference, and we were off and running.

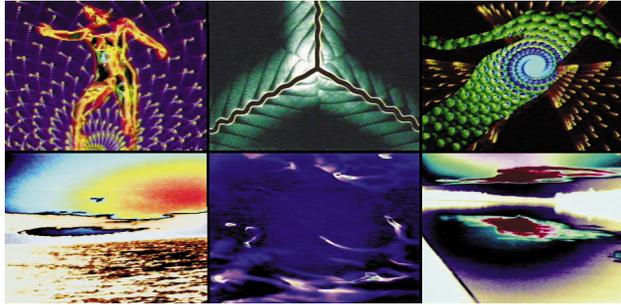
My animation and ceramics background helped me understand the process nature of the computer. Terry Beyer and I



**From our Imagination, 1998** 8 1/2" x 7"

made *Chips in Space* in 1984, and since then computers have been a solid part of our fine arts program at the University of Oregon.

The challenge for me has always been to explore ideas and concepts that can best be presented or explored through interactive computer graphics. I am working internationally on a number of multimedia projects and hope to make a contribution in this area. One of the products I helped develop is ALPHAPLANET, which is on sale in Japan.



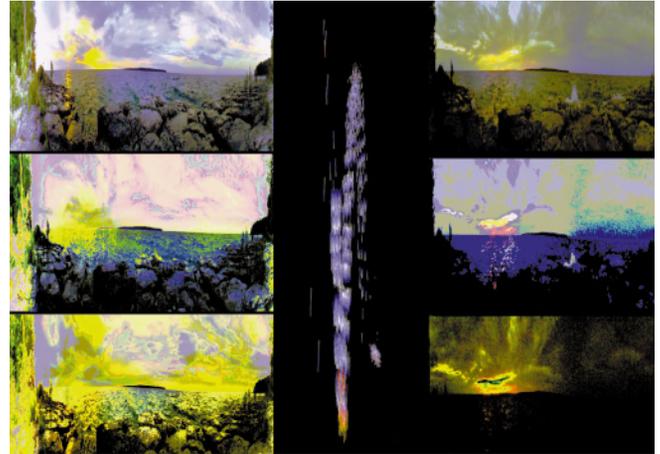
**On the North Pole Looking East, 1990** Inkjet print, 24" x 36"

*On the North Pole Looking East*

A frame from the stereo animation *A Volume of 2-Dimensional Julia Sets*

This animation (like most computer animations) took up to 30 minutes per frame to render, 54,000 times slower than real time. In the early 1980s (with the exception of space roaches in video games), computer graphics stopped moving in real time. Frame buffers gave us photographic realism, but computers could not move enough bits fast enough to animate in real time.

*Algorithm Development* **John Hart**  
*Mathematics* **Louis Kauffman**  
*Computer Graphics* **Daniel Sandin**  
*Sound* **Laurie Spiegel**  
*Fused Vision* **Tom Defanti**



**Poverty Island with Video Skies, 1997** Composite, 18" x 24"

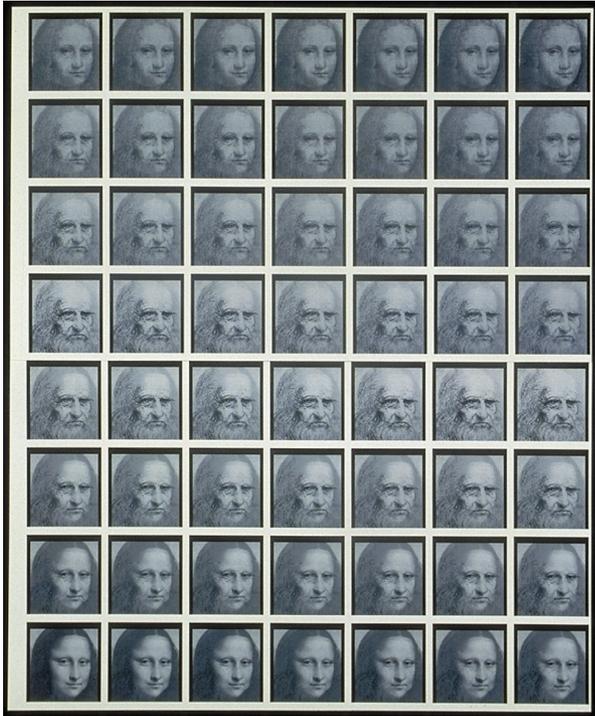
*Poverty Island with Video Skies*

These images are from a Virtual Reality Installation in the CAVE. In this work, participants interact with a time-lapse, 360-degree, 3D panorama based on video images captured on Poverty Island, an island in the archipelago from Death's Door to the Garden Peninsula in Lake Michigan.

In the late 1980s and through the 1990s, real-time computer graphics and interactivity were back (largely thanks to Silicon Graphics). I now have real-time computation, real-time computer graphics, and real-time interaction combined with a stunning display that surrounds the participant and matches well the two-eyed, two-eared moving human.

The CAVE was developed by the students and faculty (scientists and artists) of the Electronic Visualization Laboratory, the School of Art and Design, and the Department of Electrical Engineering and Computer Science at The University of Illinois at Chicago.

*Computer Graphics and Video* **Dan Sandin**  
*Sound* **Laurie Spiegel**  
*Future Vision and Leadership* **Tom Defanti**



The Morphing of Mona, 1986-1997 57.5" x 36"



AZ300, 1998 36" x 48"

The morphing of Leonardo to Mona Lisa, 1987, could only have been realized with a computer. Lillian Schwartz split the faces of the Mona Lisa and Leonardo's self-portrait down the middle, adjusting the sizes and juxtaposing them so that one side of Mona Lisa's face matched Leonardo's. Schwartz chronicles the evolution of the split-face from a study in composition to a convincing argument that the Mona Lisa is based on Leonardo's self-portrait. Leonardo is still with us, uniting science and art.

Excerpted with permission by Barbara London, Lyon Biennial Exhibition Catalogue, The Museum of Contemporary Art, Lyon, France, December 1995

From the collection of Don Peterson, Lucent Technologies Bell Labs Innovations.



**Construction E5, 1975** Plotter drawing, 10" x 10"

#### Construction E5

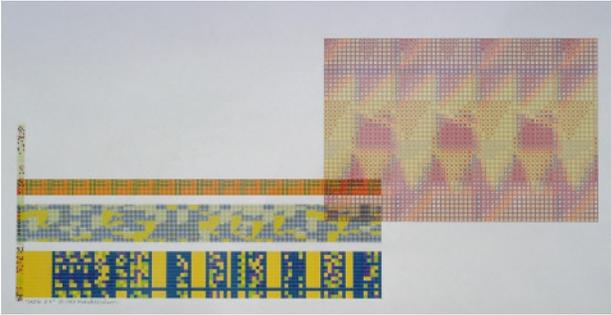
In my early work, I created a sense of presence of invisible forces in nature. For me, these forces in nature are metaphors for the interpersonal dynamics between people. I created algorithmic images, using mathematical descriptions of phenomena such as light reflecting off of irregular surfaces, that embodied these dynamic forces. In these drawings, environmental phenomena that we sense, like the wind, were visualized and given a physical presence. Algorithmic patterns were also created on fabric using heat-transfer xerography. This mapping of environmental behaviors onto cloth propelled this algorithmic representation back into the natural world.



**Torn Touch, 1997** Lambda print, 24" x 44"

#### Torn Touch

This interactive installation brings the architecture of the human body into the virtual ecology. My objective is to re-materialize the digitized experience by creating a community ritual. Participants are given large gold pins and asked to pin a personal item onto cloth that is caught in the rusty barbed wire in an old fence. As viewers approach the cloth, they step on a path in front of the fence that triggers computer movies. This is a look inside at the hand struggling with the net through digital processing. Images are triggered on one of three monitors as the viewer moves along the path. The monitors are in black cages, so the viewer cannot touch the images - the can't touch, don't touch of cyberspace. The cloth becomes laden with treasures as participants share the ritual of depositing personal items on the cloth.



**SKEW E9, 1983** Color plot on paper, 20" x 38"



**Vectors:Textures, 1997** Laser print, 11" x 17"

Prior to 1980, my work as an abstract painter was involved with complex geometric imagery. In 1980, I bought a TI 99/4A home computer and had a marvelous time learning to write simple programs in BASIC. Then, as now, output devices had questionable archival qualities. However, a pen plotter using proper inks and paper, could make lovely – and permanent – drawings.

My software was constantly evolving in a trial and error process, and I hit on a technique of mapping pixels onto a planar surface. Unlike the prevailing concern in the computer graphics community with realistic 3D images, my interests

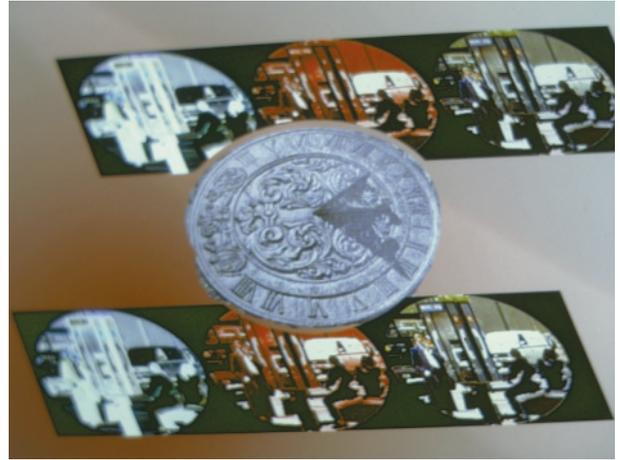
lay in abstraction, intricacy, and textures. These visual preoccupations were nurtured by the interactive process of making images while constantly tinkering with my software.

*SKEW E9* was plotted in 1983 using the original IBM PC with a Color Graphics Adapter and a Tektronix 4663 pen plotter.

To illustrate the continuity – or, perhaps the obstinacy – of my visual notions, the recent work comes from a 1997 edition of laser prints called *Vectors:Textures*.



**Demon Seed, 1987** Interactive Installation



**Is Anyone There?, 1993** Interactive Installation

Stephen Wilson is a San Francisco author, artist, and professor who explores the cultural implications of new technologies. His interactive installations have been shown internationally in galleries and SIGGRAPH, CHI, NCGA, Ars Electronica, and V2 art shows. His computer mediated art works probe issues such as World Wide Web & telecommunications; artificial intelligence and robotics; hypermedia and the structure of information; synthetic voice; and environmental and body sensing. His works explore the roles of artist as researcher/inventor and commentator on emerging technologies. He won the Prize of Distinction in Ars Electronica's international competitions for interactive art. He is Head of the Conceptual/ Information Ars program at San Francisco State University.

He has published extensively including articles such as "The Aesthetics and Practice of Designing Interactive Events," "Interactive Art and Cultural Change," and "Noise on the Line: Emerging Issues in Telecommunications Art." He has published three books, *Using Computers to Create Art* (Prentice Hall, 1986), *Multimedia Design with HyperCard* (Prentice Hall, 1991), and *World Wide Design Guide* (Hayden, 1995), which promotes an experimental, culturally aware approach to Web design. He is currently working on a book called *Information Arts* for MIT Press on the relationship of art to science and technology

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# Computer Animation Festival

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138	The Hidden Truth	159	playground Zero
138	Homage to Hilbert	160	Pole Network
139	The Hungry One	161	Polygon Family
139	Identity 9	161	Pong
140	il		
140	Indiscriminate Killer		
141	Invisible Ocean		

162	Pooh	182	Virtual Bill Highlights
162	Progression In-Between	183	Virus
162	Quest for Camelot	183	WAL*ART
163	Race For Atlantis - in Imax 3D	184	Walk This Way
164	Red Corner - Making of	185	Whose Hat is That?
165	Reflect	185	Wild River – motion ride
165	Rein Check	186	Wireless Witchcraft
166	Rendering with Natural Light	186	Yellow No. 9
166	Rice Vévés	187	Zaijian
167	rockpaperscissors		
167	Rondeau		
168	SIGGRAPH 98 Interactive Experience		
169	SIGGRAPH In-Between		
169	The Sitter		
170	Small Soldiers		
171	The Smell of Horror		
171	Sony Playstation - Jet Moto II/Old Lady		
172	Southeastern United States Fly-By		
172	Spacetime Swing		
173	Sphere		
173	Spirit Dance		
174	Stà Calando II Soul		
175	Starship Troopers-Visual Effects		
176	Still Life		
176	Sweet Extreme		
177	Switch		
177	Synthetic Speech		
178	Tequila Rescue		
178	Tierras		
179	Tomorrow Never Dies		
179	Trade Secrets of the Violin Masters		
180	UN Convention on the Rights of the Child		
180	Underwater Sunbeams		
181	Untitled		
181	Urban Metis		
182	VHX / CarrHot		



**In an industry that is young enough to still be its own history, yet old enough to have reached a place of maturity rich in its depth of experience; in a place (the SIGGRAPH conference) that at the best of times celebrates its own eclectic nature; in a context full of the technical, the artistic, the technically artistic, the artistically technical; amidst and from the whole of an industry that has a hard time defining and describing itself due to its own nature... from this industry, to this industry, in this conference context, we present the SIGGRAPH 98 Computer Animation Festival.**

Chairing this program has been an extraordinary experience with two recurring "themes" surfacing throughout. The first is the notion of the whole being greater than the sum of the parts. The second is the fact that we are, as an industry, continually reaching and going beyond ourselves. Perhaps, in reality, these two things are aspects of the same one thing - the fact that we, the SIGGRAPH community, are both the container and the content (to borrow Walt Bransford's words), that we continually evolve in that manifestation. The "parts" themselves are excellent, and the "whole" is extraordinary. This is certainly true of the body of work that I had the privilege of seeing, for the continuum that I feel I am part of, as well as for the people I had the pleasure of working with: the contributors, the SIGGRAPH committees and sub-committees, the jury members, the contractors, the volunteers - each a member of the community that has, does, and hopefully will continue to contribute in his or her own right. That there is excellence (of idea, of technique, of intent, and/or of manifestation) remains the underlying, unchanging premise. Seeing what that excellence is, presenting what that means, how that changes, remains the challenge.

As such, this year's Computer Animation Festival began with a not-very-well-understood wish and hope on my part: the "unflattening" of this program. Each stage of the process brought with it a clearer understanding

of that hope as the reality that was defining it took form. I learned that what I meant was indeed a far cry from a criticism of past festivals, that due exactly to that history I was able to take all that that meant and venture out just a bit "farther," that in the context of this conference, and in particular with this 25th anniversary year, there was and is both an opportunity and a responsibility to step back and see where it is that we have come from, where it is that we are going and, above all, where it is that we are.

Well, we are certainly "out there," in all kinds of amazing and surprising places. And, as I have learned and re-learned, we are an incredibly passionate, caring, proud, and, at the best of times, a very "respect-full" community. We like what we do. We want to show others what we do. It seems very important to us that others understand exactly what it is that we have done (more important, what we are now doing and, sometimes most important, what it is that we will do next). And we do all of this in a way that crosses gender, cultural, national, age, level of experience, expertise and sophistication, areas of interest, and ability "boundaries." And, yes, we are doing some exceptional things.

The computer graphics industry has reached a point of maturity that now sees us exploding into a truly new world, a place where computer graphics is simultaneously a medium, a process, and a product, a place where the line between these three separate "things"

is actually unclear. This is extraordinary. It is mind changing.

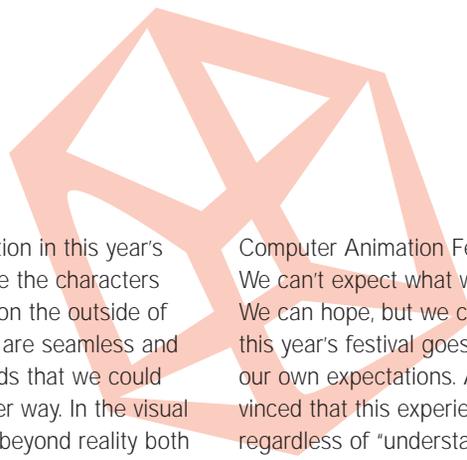
For the longest time, we were discovering, learning about, inventing, and developing the tools (the algorithms, hardware, and interaction/interface techniques) that made doing anything possible. This was in itself incredibly exciting. And we did somehow "master" this stage when it became necessary for people in the industry to say to each other: "that was computer graphics."

From my point of view, this was and remains a measure of the sophistication of the tools, the readiness of the medium to now really be "used". And, yes, now, I believe, we are at a point where it, the medium, is exploding. We are at a point where not only our way of doing but our actual way of being, of thinking is being changed.

This is what I hope is reflected in this year's Computer Animation Festival.

We did receive a record-breaking number of submissions this year. We did select less overall content than has been historically true. The overriding criterion for this year's festival was and remains excellence. Where the Electronic Theater presents the breadth of the computer animation industry, the Animation Theaters hold its depth; where the Classics Theater showcases our past, the sigKIDS Theater looks toward our future. We present the excellence of our "parts" in a context that shows that the whole is indeed much greater than the sum of these. This truly is a pause, a celebration, a convergence, a reflection, an experiencing of our ideas, methods, media, processes, our trials and tribulations, our evolution, our art, our work, our community.

We are still discovering tools and techniques, but/and we are going "beyond".



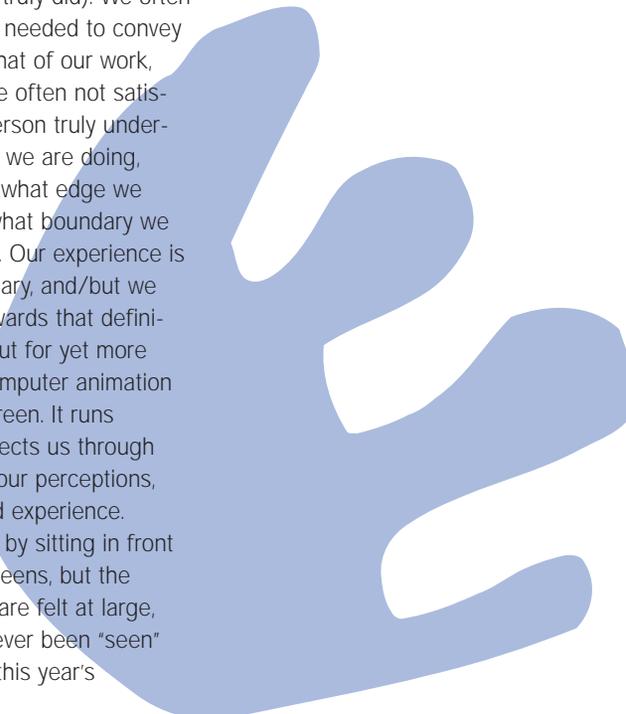
The character animation in this year's festival sees us inside the characters and no longer stuck on the outside of their models. Effects are seamless and are taking us to worlds that we could not get to in any other way. In the visual sense, we are going beyond reality both in the imaginary realm (by being able to realistically present that which can only be imagined) and in the physical realm (where we are now able to visualize things that in reality we can only perceive). We are reaching out to integrate other senses in our experience. We present soundscapes, we present algorithms that, in the aural sense, do what we have done in the visual sense. We present research and works that affect and change our sense of space. In the "but why?" "sense," answers are being offered. We present the excellence of the parts of our industry in a way that it is impossible to not see the "wholeness" of our experience. We are, in so many ways, going beyond ourselves.

Yes. Computer animation is no longer "flat." Classifying it as two- or three-dimensional no longer suffices as a description (if ever it truly did). We often search for the words needed to convey the how or why or what of our work, and even then we are often not satisfied that the other person truly understands what it is that we are doing, where we are going, what edge we have gone beyond, what boundary we have broken through. Our experience is ahead of our vocabulary, and/but we continue to strive towards that definition while reaching out for yet more new experiences. Computer animation is jumping off the screen. It runs through us and connects us through our senses, through our perceptions, through meaning and experience. People generate this by sitting in front of their computer screens, but the results of that effort are felt at large, in a way that hasn't ever been "seen" before. That is what this year's

Computer Animation Festival is about. We can't expect what we don't know. We can hope, but we can't expect. Yes, this year's festival goes beyond even our own expectations. And I am convinced that this experience is wonderful regardless of "understanding."

The Call for Participation in this year's Computer Animation Festival asked "Who are we?". It is with great pride of community that we present your response to that at the SIGGRAPH 98 conference. I am grateful to have had this opportunity, to have lived this experience. It was a true honor and privilege.

**Ines Hardtke**  
National Film Board of Canada  
Computer Animation Festival Chair



## Computer Animation Festival Committee

*Computer Animation Festival Chair*  
**Ines Hardtke**  
National Film Board of Canada  
St-Laurent, Quebec, Canada

*Animation Theater Producer*  
**Susan Gourley**  
National Film Board of Canada  
St-Laurent, Quebec, Canada

*Computer Animation Festival Director*  
**Johnie Hugh Horn**  
big Research  
Tuscon, Arizona, USA

*sigKIDS Theater Co-Producer*  
**Scott Lang**  
The Academy for the Advancement of Science and Technology  
Hackensack, New Jersey, USA

*Animation Theater Co-Producer*  
**John Matthias**  
National Film Board of Canada  
St-Laurent, Quebec, Canada

*Computer Animation Festival Film Editor*  
**Ladd McPartland**  
Digital Dharma  
San Anselmo, California, USA

*Computer Animation Festival Coordinator*  
**Sue McTavish**  
National Film Board of Canada  
St-Laurent, Quebec, Canada

*sigKIDS Theater Co-Producer*  
**Kathy Tanaka**  
Independent  
Chicago, Illinois, USA

## Computer Animation Festival Jury

**Dr. Thomas Linehan**  
Ringling School of Art and Design  
Sarasota, Florida, USA

**Dr. Christine Schöpf**  
Ars Electronica / ORF  
Linz, Austria

**Kathy Tanaka**  
Independent  
Chicago, Illinois, USA

**Dr. Marcell Wein**  
National Research Council of Canada  
Ottawa, Ontario, Canada  
University of Waterloo  
Waterloo, Ontario, Canada





## Christine Schöpf

*Jury Member*

Sitting in the airplane on the way to Montreal from Linz, Austria by way of Zurich, I asked myself why in the world, once again, I hadn't been able to bring myself to say NO! From morning to night for four long days, I will be sitting in darkened rooms. And for this I had to reschedule an important appointment, work is piling up on my desk at home, the answering machine will never finish, and email messages are overflowing my mailbox!

I suppose it must be this tremendous enjoyment of the images, that I never seem to get enough of. The curiosity to see new ones – and to realize once again that the only limit is the imagination. And of course there is Ines' gentle power of persuasion allowing us, Kathy, Marcell, Tom, and me, complete liberty and inviting us to contribute our own individual ideas and opinions. And there is something else as well: it is naturally an honor to provide a creative contribution to the 25th (!) year of SIGGRAPH.

It is my conviction that there is no other area in which the cultural transformation of our time is more apparent than in computer graphics. Digital media are the common platform for artistic concepts and products from the field of entertainment, as well as for the visualization of economic correlations, military strategies, social processes and scientific hypotheses. It is the same, whether it involves mega-films like "Titanic," the homage to the brilliant mathematician David Hilbert, the captivatingly beautiful Bjork video, or exciting, amusing, or touching short stories like "Geri's Game," or impressive commercials like "Perrier," or the many works by highly creative young people from universities all over the world, or... The list could be endless.

On the whole, these were highly stimulating discussions, exciting days that I would not have wanted to miss. It is with great anticipation that I look forward to the show and Animation Theaters – I am certain that Johnie Horn has done a fantastic job putting it together again.

Four days later and it is back to Linz from Montreal by way of Zurich. And once again I know: THE ONLY LIMIT IS THE IMAGINATION!

## Kathy Tanaka

*Jury Member*

The jurying process has a life of its own. As a juror, I came into the meeting with a vision of what I hoped the Electronic Theater would be, but it was not until all the work was seen that we really had a sense of what this particular theater could be. Each year's Electronic Theater is unique, the timbre defined by its contributors and their work. It is not until the pieces are viewed as a group that the show begins to coalesce, the sum being greater than, and dependent upon, each individual piece.

This year's Electronic Theater is distinguished by the breadth of the work presented. The content of the film and video portion of the show is indicative of how the field of computer graphics has matured. Alongside the commercial work, the technical and the visualization pieces, we also have pieces that explore the themes of what makes us human. From humorous to quirky to poignant, from the most intense heightened colors to subtle shades of black, white, and grey, from highly rendered to seamless compositing to hand-drawn, this show covers the spectrum.

In addition, there are a number of works that are being presented live, on-site, truly making this an event that can only be experienced in person. We are seeing the lines between computer graphics and the performing arts dissolve. The presentation of discovery and exploration is what keeps SIGGRAPH and the Electronic Theater truly alive.

I am privileged to have participated in the coming together of such extraordinary elements. It is the culmination of the hard work of the Computer Animation Festival committee, of the effort my fellow jurors, and most importantly, the vision of Ines. It is my hope that you, the audience, will laugh and cry and ponder, and ultimately be inspired to reach for new horizons in your own work.

## Marceli Wein

*Jury Member*

As a member of the Computer Animation Festival jury, I found the number of excellent submissions almost numbing. It was a far cry from the early days of SIGGRAPH, when we brought reels of film to the conference and made informal arrangements to show them. There were many submissions this year that were just terrific. The three types that got me excited were:

- Whimsical and funny short films
- Examples of stunning facial animation that suggest human, expressive animation is not far in the future.
- Powerful stories presented as strong films.

This year's Electronic Theater hopefully will leave an impression on you as it did on me that the examples of new work in the show are truly innovative and exciting.



## Susan Gourley

*Animation Theater Producer*

Overworked? Underpaid? No time for life's little necessities like family and friends? Sound familiar? When I volunteered to produce the Animation Theaters, all of the above was true. Yes. I was in a rut.

Ines pulled me out of it, offering quite a challenge. "So let me get this straight. You want me to make a program I would like to watch? You want me to ask my boss for time in order to do this? You want me to watch six hundred films in a row?"

I accepted.

And I found the student work stupendous.

And I found it heart-wrenching to choose only a very few of the total number of films submitted, to choose which of all of them were to be shown in the Animation Theaters.

I wanted the audience to be charmed, disturbed, and entertained. I wanted the films to be seen and appreciated by as large a SIGGRAPH audience as possible. I wanted the overall program to reflect that, were it only up to me, we would all "have to" look at all 591 juried pieces. This gave me an overview of our industry that you can find in no other way.

## John Matthias

*Animation Theater Co-Producer*

When Sue asked me to help with the Animation Theaters, I was flattered. And, being new to this, as the sheer scope of the undertaking became clear to me, that sentiment soon changed to one of awe. Ines and Sue were very patient and coached me

through the procedure, and I was pleasantly surprised by how open and invigorating the selection process was. It has been a wonderful and unique experience, well worth losing a bit of sleep.

The entries were a humbling collection of riches, and choosing among them was very difficult. Sue and I wanted a program that respected tradition but introduced new categories we felt would be of interest to the audience. We also wanted to ensure that chosen pieces would be afforded the best possible chance of being seen.

The most rewarding part of this was having the chance to see the current student and independent work. The selected pieces from this very promising body of submissions not only exemplify excellence within the medium, but often transcend it and take us to places we could not otherwise know. A pleasure.

## Kathy Tanaka

*sigKIDS Theater Co-Producer*

This is the first year the sigKIDS Theater is being presented at SIGGRAPH. We present these works to educators and parents, to those who produce works for kids, and of course, to the kids themselves. The overall theme is one of "inspiration." The sigKIDS Theater draws from many facets of computer graphics, providing a sampling of what is possible in this rapidly changing field. Each piece has something unique to offer – where some are humorous, some are educational, some are insightful, and some are simply wonderful fun. Each piece in the sigKIDS Theater, in its own way, brings with it a broader view of the world.

Our children are growing up in a world much different from the one of our own youth. Computer graphics are an integral part of their daily life. We not only want kids to be computer literate, but also to be aware of the myriad of potentialities in the field. It is they who will create that which we cannot yet envision.

It has been educational for me to watch my own boys view this material. Sometimes I was surprised by their responses, other times we shared laughter. Some pieces provided common ground for dialogue. With this in mind, I hope others too will share this work with the kids in their lives, as an opening perhaps to unexpected places.

## Scott Lang

*sigKIDS Theater Co-Producer*

The central themes of the sigKIDS venue for SIGGRAPH 98 were inspiration, motivation, and participation. These were the driving factors in helping us to craft the sigKIDS area in Hall C. When we chose our selections for the sigKIDS Theater program, we selected pieces that would inspire not only a child of seven but an adult of seventy. We hoped both young and old would be moved to participate in coming years so the sigKIDS Theater becomes an annual event.

I believe that we met these goals with the work that's been selected. We have pieces that will make you laugh, that will make you think, that will educate you, that will make you wonder "Why?" Much as life is a story, many of the pieces in the sigKIDS Theater were chosen for the wonderful stories they tell. In the final analysis, a tale is only as good as the story it tells and the effect it has on you. We hope we've inspired and motivated you to participate in the future.



## Advancing Captured Motion



The blue heron animation in "Advancing Captured Motion" was created with LambSoft Pro Motion software for filtering, applying, editing, blending, and compositing captured motion data with keyframe animation. Pro Motion enables animators to apply captured motion to characters whose shape, size, proportion, and structure are different from the performer's.

Director: Susan Van Baerle  
Producer: Larry Lamb  
Performer: Julie Sutton  
Motion/animation: Susan Van Baerle  
Modeling: Kelly Schrandt  
Software: Jeff Thingvold  
Flame Compositor: Rex Carter

### Contact

Pat Hunter  
LambSoft  
650 3rd Avenue South, 17th Floor  
Minneapolis, Minnesota 55402 USA  
+1.612.337.3739  
+1.612.333.9173 fax  
phunter@lambsoft.com



## The Adventures of Mighty Guy



The first in a series of misadventures featuring an inept superhero who unknowingly does more harm than good.

Director: Jeff Draheim  
Producer: Jeff Draheim  
All visual elements created, animated, edited,  
and composited by Jeff Draheim  
Music: Eric Dapkewicz

### Contact

Jeff Draheim  
12012 Dunmore Court  
Orlando, Florida 32821 USA  
+1.407.238.1397  
draheim@iag.net

## Aerobot



"Aerobot" is a team of four athlete robots whose muscles and joints move freely as they perform an aerobic dance.

Director: Jun Asakawa  
Producer: Takashi Fukumoto, Yukio Kotanaka  
Produced by Polygon Pictures Inc.  
Executive Producer: Toshifumi Kawahara  
Designer: Kouichi Yamagishi  
Technical Directors: Kouichi Yamagishi,  
Yuichi Nakamura, Hiroshi Kumakiri  
Music: Fumiyasu Tatsumi, Akio Adachi  
(Seven notes)  
Motion picture: IMAGICA STUDIO  
Dancers: Tomoko Yoshida, Hidetomo Arai  
Editor: Katsuro Watanabe  
Technical support: Tamotsu Maruyama,  
Keiichi Kameda  
Production Assistant: Akihiko Sakyu

### Contact

Akihiko Nakajima  
Polygon Pictures  
Bond Street T-11 6F, 2-2-43 Higashi-shinagawa  
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+81.3.3474.4321  
+81.3.3474.4322 fax  
nakaji@ppi.co.jp



**Alèthéia**

 Animation Theater

"Alèthéia" is a metaphorical drowning, a multilayered journey into the hall of mirrors of mind and memory where the self longs for wholeness. Computer animation is used to create the subjective space where mental chemistry catalyzes the forces taking part in the process of self-discovery and self-disclosure.

Concept and Images: Mariela Cadiz and  
Denis Lelong  
Music: Kent Clelland

*Contact*

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Mariela Cádiz Poppema  
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Spain  
+34.1.889.11.97  
aletheia@film.calarts.edu



"Antics" is a 90-second CGI short subject for Nickelodeon. It uses ant characters as an entertaining metaphor to teach kids about taking turns. The emphasis is on entertainment. "Antics" boasts Disneyesque characters motion rendered with a highly illustrative look that demonstrates a compelling alternative to photo-realism.

Executive Producer: Agi Fodor  
 Executive Producer and Co-Creator: Sharon Ngoi  
 Writer: Karen Kuflik  
 Pitch:  
 Director: Chris Gilligan  
 Digital Supervisor: Steve Katz  
 Technical Director: Brendan Gallagher  
 Art Director: Max Ehrlich  
 Animators: Brendan Gallagher, David Figliola,  
 Galen Chu, Joseph Yoo  
 Concept Artist: Polly Powell  
 Original Score: Black Market Music/Marc Black  
 Production Coordinator: Cassandra Del Viscio  
 Post Production: Edgeworx  
 Executive Producer: Russ Dubé



#### Contact

Cassandra Del Viscio/Russ Dubé  
 Pitch, Inc.  
 304 Hudson Street, 6th Floor  
 New York, New York 10013 USA  
 +1.212.584.5840  
 +1.212.334.3521 fax  
 equuscld@aol.com  
 kanadienbakend@msn.com

"Antz" tells the story of a disillusioned ant whose personal struggles force him to become a reluctant leader. In this excerpt, the hero, Z, unwittingly joins legions of army ants destined for battle. "Antz," an all computer-animated feature film, is the first release resulting from a co-production pact between PDI and DreamWorks.

#### Contributors

DreamWorks  
 Pacific Data Images

#### Contact

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 Palo Alto, California 94306 USA  
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 +1.650.846.8101 fax  
 info@pdi.com

## "The Ark" as seen through the eyes of a child

 sigKIDS Theater

 SIGGRAPH TV

When telling stories to our children, we sometimes bend the truth. Often, the truth of a situation may be too much for a child to handle. Catastrophic events, such as those found in the Bible, have not always been told to children accurately. "The Ark" illustrates the contrast between what is told to children and the harsh reality.

Software: Alias PowerAnimator v8.2, Composer, Photoshop  
Hardware: SGI O2, Macintosh  
Director: Daniel Dean Borwick  
Producer: Ringling School of Art and Design  
Concept, animation, music, audio mix:  
Daniel Dean Borwick  
Faculty Advisor: Ed Cheetham  
Video/audio support: Phil Chiochio

### Contact

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strovas@rsad.edu



## Arthur

 Animation Theater

Arthur is lost, all alone, and his horse has escaped. How could it get worse? His surroundings, as if by some evil trick, could come to life and start to conspire against him. Or... maybe not?

Technique: Clay animation, digital grabbing and shooting, digital post production  
Producer: K.E.E.N.  
Director/Animator: Guionne Leroy  
Additional animation: Tim Hittle  
Lighting: Kommer Kleijn, assisted by Ella Vandenhove, Helen Van Roey  
Motion control and digital shooting: Vincent Gillot, PF Fontigny  
Design: Guionne Leroy, Kim Keukeleire, Tim Hittle, Thierry Sablon  
Music: Henry Purcell Opera "King Arthur"  
Sound and mix: Yves Renard  
Post production: Stephane Simal, Guionne Leroy, Kim Keukeleire  
Shooting: LBO  
Studio: ANIWAY



### Contact

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K.E.E.N.  
120 Rue Defacqz  
1060 Brussels, BELGIUM  
+32.2.349.02.80  
+32.2.343.32.79 fax  
steph@keen.arc.be

## Atlantis 'Royal Towers Preview'



An architectural ride film to show a designed expansion to the Atlantis resort in the Bahamas.

Director: Ralph Guardiano  
Producer: Conrad Piccirillo  
Contributors: Bhavesh Patel, Gates Councilor,  
Jay Nilsen, Eric Paynter, Craig Foster,  
Gerardo Orioli

*Contact*  
Jay Nilsen  
Sonalysts Studios  
221 Parkway North  
Waterford, Connecticut 06385-1209 USA  
800.752.1946  
+1.860.447.0669 fax  
jnilsen@sonalysts.com

## Baby Elephants Day Out



Baby elephants riding pushbikes around a city.

Director: John Francis  
Producer: John Francis

*Contact*  
John Francis  
Surreal World  
Level 1 - 230 Burwood Road Hawthorn  
Melbourne, Australia  
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What happens when you transform a theatrical play into an animation? "Bingo," an animation based on the short play "Disregard This Play" by Chicago's Neo-Futurist Theatre Company, explores one answer. The story deals with the age-old question: "What if a lie is told long enough and loud enough?" "Bingo" is the first animation to be fully produced with Alias | Wavefront's Maya animation software.

An Alias | Wavefront Production

Directed by Chris Landreth

Based on the play "Disregard This Play" by Greg Kotis from "Too Much Light Makes the Baby Go Blind," a production by the Neo-Futurists, Chicago, IL created by Greg Allen

#### *The Cast*

Seated Man: David Kodeski  
 Pinhead: Phil Ridarelli  
 Money Guy: Dave Awl  
 Dr. Pinhead: Greg Allen  
 Harlequin: Diana Slickman  
 Balloon Girl: Stephanie Shaw

Recorded at Post Effects, Chicago, IL  
 Animated by Chris Landreth, David Baas,  
 Joan Staveley  
 Shading, Lighting, Rendering and Compositing:  
 Owen Demers  
 Set Design and Modeling: Ian Hayden  
 Character Modeling and Texturing: Mark Forbes,  
 Daniel Hornick, Ted Charlton, Doug Law,  
 Gerry van Ommen Kloeke  
 Animators / Technical Directors: Daniel Roizman,  
 Jeff Bell, Tim Rowlandson, Karan Singh,  
 Rick Kogucki, Jon Tojek, Martin Werner  
 Hairstyles by Duncan Brinsmead  
 Additional Modeling: Tim Hanson, Robert Magee,  
 Paul Roy  
 Storyboard and Character Sketches: Mike Kitchen  
 Motion Capture and Stock Video Editing:  
 Rob Aitchison, Scott Albert  
 Edited by Craig Clark and Matt Lyon  
 Music Arranged and Performed by Jim LaMarche  
 Musicians: Jeremy Edwardes, Jeff Burke,  
 Ron Ruhe  
 Sound Effects and Editing: Simon Edwards  
 Sound Edited at ICE Inc., Toronto, Canada  
 Music Recorded and Mixed at Cherry Beach  
 Sound, Toronto, Canada  
 Producers: Kevin Tureski, Andy Jones  
 Executive Producer: Penny Wilson  
 Modeled, Animated and Rendered with  
 Alias|Wavefront Maya 1.0  
 Big thank yous to the Maya 1.0 Team and to  
 Chris Tome and Jeff Benrey

#### *Contact*

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 +1.416.369.6156 fax  
 landreth@aw.sgi.com



Realization of 3D environments.

Director: Michel Gondry  
Producer: Partizan Midi-Minuit  
Contributors: Geoffrey Niquet, Pierre Buffin,  
Pascale Croce, J. Michel Ponzio,  
Francesco Grisi, Christophe Dupuis,  
Olivier Gondry, Julien Villanueva,  
Bettina Slatkine, Constantin Chamsky,  
Samuel Tourneaux, Jean François D'Izarni,  
Laurent Briet

**Contact**

Arnaud Lamorette  
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+33.1.42.68.18.29 fax  
arnaud@buf.imagnet.fr

**Bob's Body Parts**

"Bob's Body Parts" tells the story of the trials and tribulations of a simple man dealing with communication barriers. Even though we live in the "communication age," many people still have problems communicating. The many barriers built by our species eventually lead to the frustration we feel when we are unable to get past these roadblocks in communication.

Director: Jason Bravo  
Producer: Ringling School of Art and Design  
Concept, animation, music composition, audio mix:  
J. Bravo  
Faculty Advisor: Ed Cheetham  
Video/audio support: Phil Chiochio  
Software: Alias PowerAnimator, Composer  
Hardware: SGI O2

**Contact**

Jason Bravo  
c/o S. Trovas  
Ringling School of Art and Design  
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+1.941.359.7536  
+1.941.359.7517 fax  
strovas@rsad.edu

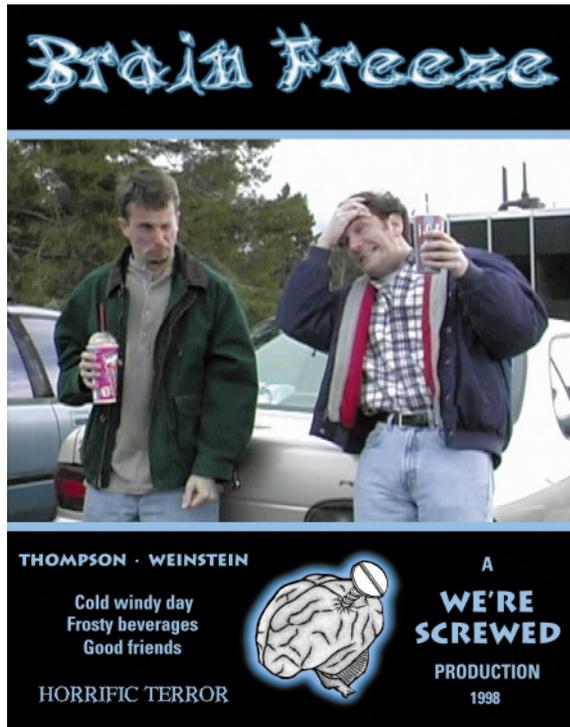


An entertaining and partially scientific look at what happens to the brain after its owner drinks a frosty beverage.

Director: Thomas V. Thompson II, Dave Weinstein  
Producer: Dave Weinstein, Thomas V. Thompson II

Contact

Thomas V. Thompson II  
Department of Computer Science  
University of Utah  
50 South Central Campus Drive , Room 3190  
Salt Lake City, Utah 84112-9205 USA  
+1.801.581.5642  
+1.801.581.5843 fax  
tthomps@cs.utah.edu

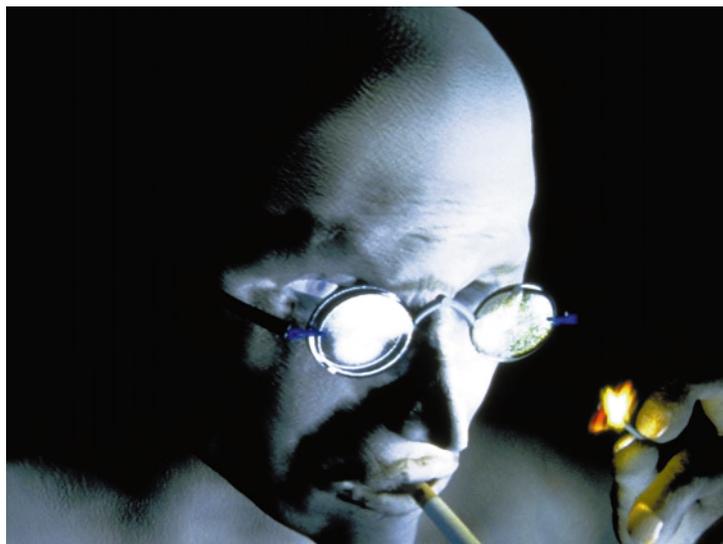


This story about a bug and a man recalls the relationship between normal people and a dictator. Metaball facial expression is used for grotesque environments.

Director: Jin Wan Park  
Producer: Jin Wan Park  
Music: Seung Jun Chang

Contact

Jin Wan Park  
219-04 43rd Avenue, 2nd Floor  
Bayside, New York 11361 USA  
+1.718.281.1406  
jpark3@ix.netcom.com



## Building and Sailing the Titanic



Highlighting the myriad of digital tools used to bring the Titanic back to life, this montage demonstrates the unprecedented digital achievements of this Academy Award-winning film.

Director: James Cameron  
Producer: James Cameron and Jon Landau  
Thank you to the more than 400 crew members and Digital Domain staff who built, sailed and sank the Titanic.

### Contact

Bob Hoffman  
Digital Domain, Inc.  
300 Rose Avenue  
Venice, California 90291 USA  
+1.310.314.2981  
+1.310.664.2701 fax  
bhoffman@d2.com



## Bunkie & BooBoo



2D and 3D flour sacks have an adventure at the beach.

Director: Terrence Masson  
Producer: Terrence Masson  
Animators: Tom St.Amand, Scott Wirtz  
Technical Director: Todd Fulford

### Contact

Terrence Masson  
818 Greenberry Lane  
San Rafael, California 94903 USA  
+1.415.507.0274  
+1.415.454.4768 fax  
tman@lucasdigital.com



## Celebration



Director: Geoffrey Moehl  
Producer: Geoffrey Moehl

*Contact*  
Geoffrey Moehl  
c/o S. Trovas  
Ringling School of Art and Design  
2700 North Tamiami Trail  
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+1.941.351.5100  
+1.941.359.7517 fax  
ca@rsad.edu

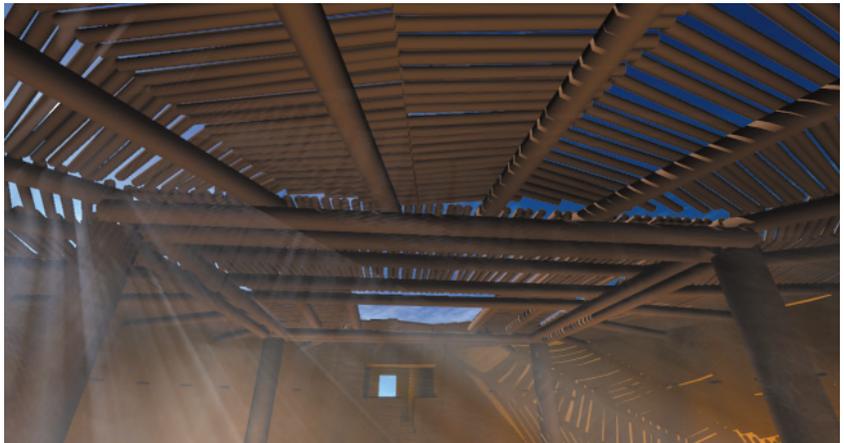
## Chaco: A Sacred Center - Excerpt



In these excerpts from a documentary in progress, Anna Sofaer explores the archaeoastronomy of the ancient Chacoan "Great Houses" of Chaco Canyon, New Mexico.

Director: Alan Price  
Producer: Anna Sofaer  
Contributors: Tim Best, Martine Barnaby-Sawyer,  
Aleksy Zolotaryov

*Contact*  
Alan Price  
Imaging Research Center  
University of Maryland Baltimore County  
FA111 1000 Hilltop Road  
Baltimore, Maryland 21250 USA  
+1.410.455.3373  
+1.410.455.1035 fax  
alan@irc.umbc.edu



Director: Lionel Moujin  
 Producer: Telema  
 Inferno Artists: Eve Ramboz/MediaLab

*Contact*

Joulia Pierre-Jean  
 Media Lab  
 104 avenue du President Kennedy  
 75016 Paris, France  
 +33.44304422  
 +33.44304460 fax  
 medialab3d.com



"Clear Cut" is about the destruction of forests in the Pacific Northwest, and how the loss is felt in spirit as well as body. It illustrates how human consumption for material greed has no heart or soul. This short animation shows how land that has been untouched and loved by Native Indians for centuries becomes nothing but wasteland, unable to sustain life.

Director: Rob Millar  
 Producer: Ringling School of Art and Design  
 Concept, Animation, Audio Mix: Rob Millar  
 Native Music: Marina Raye  
 Faculty Advisor: Ed Cheetham  
 Video/Audio Support: Phil Chiochio  
 Software: Alias PowerAnimator, Composer,  
 Adobe Premiere  
 Hardware: SGI O2, Power Macintosh

*Contact*

Rob Millar  
 c/o S. Trovas  
 Ringling School of Art and Design  
 2700 North Tamiami Trail  
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 +1.941.359.7517 fax  
 strovas@rsad.edu



## Cloison (Partitions)

 Electronic Theater

"Partitions" is the story of a man and a woman who dance through walls and partitions in a city made of cells, boxes, rooms, and recesses that are explored from the inside, layer after layer. It is the story of a vision, which at times is unique and coherent, and other times gears down, leaving one eye after another in every room of the city. Still, beyond the explosive transformation of bodies, identities, forms, places, and glances, the sinuous choreography of the human couple remains in the spectator's mind, one and primeval.

Director: Bériou  
Producer: Agave-Canal+  
Music: Gilles Fournier

### *Contact*

Christine Chatel  
Agave  
Rue Haute  
41800 Troo, France  
+33.2.54.72.52.83  
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beriou@club-internet.fr



## The Cornell Box - Up in Smoke

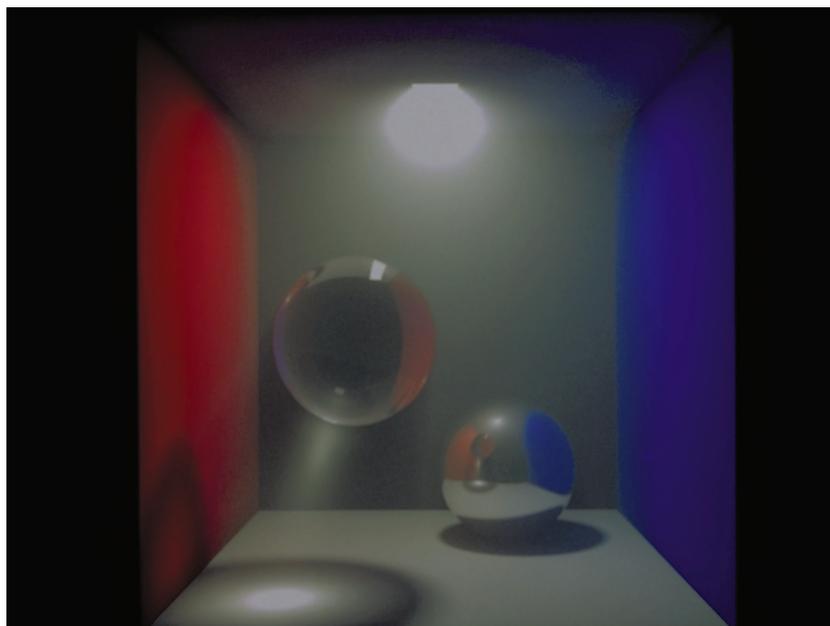


Simulation of light transport in a participating homogeneous and non-homogeneous medium (smoke). Isotropic and anisotropic reflection.

Director: Per H. Christensen  
Producer: mental images GmbH & Co. KG  
Contributors: Henrik Wann Jensen, Steffen Volz

### Contact

Per H. Christensen  
mental images GmbH & Co. KG  
Fasanenstrasse 81  
D-10623 Berlin, Germany  
+49.30.315.99712  
+49.30.315.99733 fax  
per@mental.com



CPU

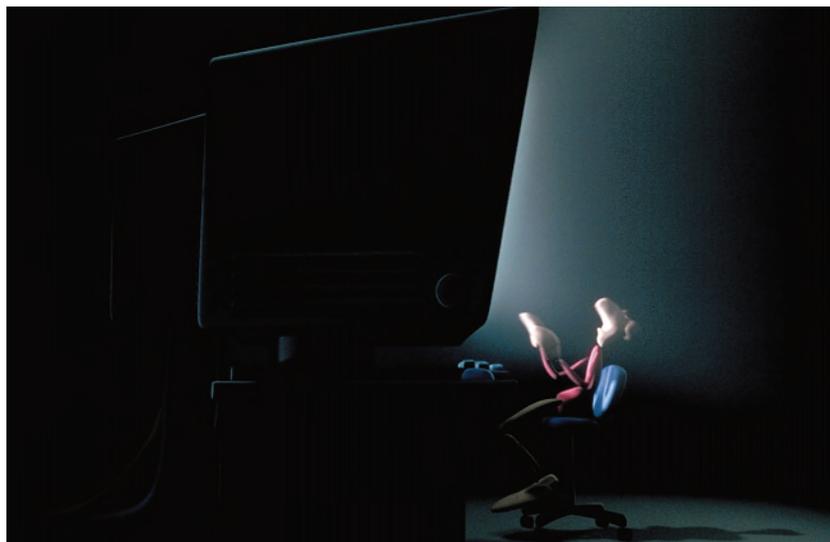


The absolutely frustrating transition from traditional to CG art is explored.

Director: Wayne Gilbert  
Producer: Wayne Gilbert

### Contact

Wayne Gilbert  
Gallahad Associates  
48 Magnolia Avenue  
San Anselmo, California 94960 USA  
+1.415.721.3252  
wayne@lucasdigital.com



## Crayoland



Highlights from a real-time recording of Crayoland, an interactive virtual environment that is expressly non-photorealistic. Because it is constructed entirely of flat, child-like crayon drawings, it contradicts the stereotypical complex, high-tech image of virtual reality.

Director: Dave Pape

Contributors: Jim Costigan, Jeremy Hollister

### *Contact*

Dave Pape

Electronic Visualization Laboratory

University of Illinois at Chicago, M/C 154

851 South Morgan Street, Room 1120

Chicago, Illinois 60607 USA

+1.312.996.3002

+1.312.413.7585 fax

pape@evl.uic.edu



## Dancing



Director: Abdullah Alothman

Producer: Ringling School of Art and Design  
(Maria Palazzi)

### *Contact*

Abdullah Alothman

c/o S. Trovas

Ringling School of Art and Design

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ca@rsad.edu

This demonstration film is an effort by MIT scholars to visualize sensations in great unbuilt architecture through the use of radiosity-based computer graphics tools. In 1938, two Italian architects designed the Danteum in Rome, a monument dedicated to Dante, the great Italian poet.

Director: Takehiko Nagakura  
Producer: Takehiko Nagakura  
Contributors: Haldane Liew, Ben Black

### Contact

Takehiko Nagakura  
MIT ARC Group  
77 Mass Avenue, Room 10-472m  
Cambridge, Massachusetts 02139 USA  
+1.617.253.0781  
+1.617.253.9407 fax  
takehiko@mit.edu



In this love fantasy, a character born in the shape of chrysalis gives life to stone figures.

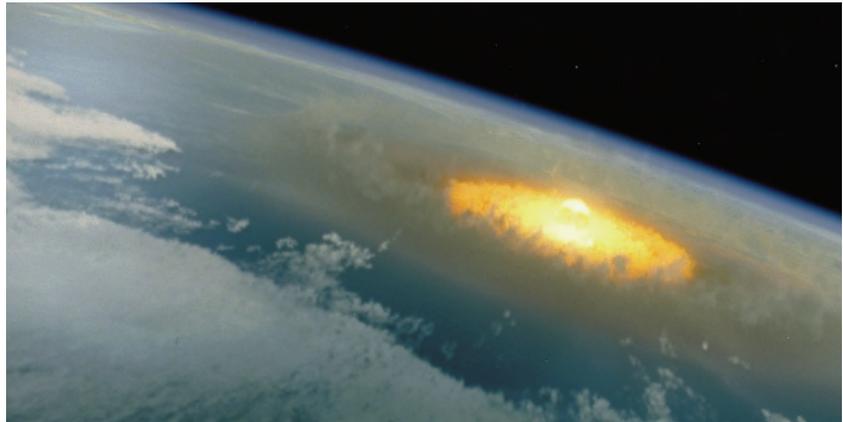
Director: Suma Noji  
Producer: Suma Noji  
CG: Yoshiyuki Omata, Yasuyuki Takahashi,  
Keita Takagi  
Sound and audio mix: Megumi Takei  
Editing: Satoshi Kikuchi

### Contact

Suma Noji  
Nippon Electronics College  
Digital Academic Research Institute  
1-25-4, Hyakunin-Cho, Shinjuku  
Tokyo 169-8522, Japan  
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+81.3.3369.0344 fax  
noji@dari.ac.jp



CG tidal waves, water sprays, comets, and gas effects are featured to show a comet impacting the Earth. Fluid and gas simulations driving particle systems and geometry are used with traditional CG techniques to create massive water and destruction imagery, including collapsing buildings, flying cabs, and drowned stockbrokers.



Visual Effects Supervisor: Scott Farrar  
 Visual Effects Co-Supervisor: Bill George  
 Visual Effects Producer: Denise Ream  
 Visual Effects Associate Producer: Jill Brooks  
 Computer Graphics Supervisors: Ben Snow, Michael Bauer  
 Visual Effects Art Director: Alex Jaeger  
 Computer Graphics Sequence Supervisors: Joel Aron, Greg Killmaster, Tom Martinek, Erik Mattson, Henry Preston  
 Director of Miniature Photography: Patrick Sweeney  
 Model Project Supervisor: Brian Gernand  
 Sabre Supervisor: Pablo Helman  
 Computer Graphics Wave Development: Mitch Deoudes, Ken McGaugh, Doug Sutton  
 Digital Effects Artists: Leah Anton, Eran Barnea, Jeffrey Benedict, Barbara Brennan, Billy Brooks, Don Butler, Amelia Chenoweth, Ian Christie, Marc Cooper, Russell Earl, Ra'1 Essig, Jeremy Goldman, David Hisanaga, David Horsley, Christopher Horvath, Peg Hunter, Samson Kao, Sandra Karpman, Ed Kramer, Hayden Landis, Janice Lew, Greg Maloney, Stu Maschwitz, Daryl Munton, Patrick Neary, Khatsho Orfall, Eddie Pasquarello, Bruce Powell, Scott Prior, Amanda Ronai, Frederic Schmidt, Christopher Townsend, Hans Uhlig, John Walker, Andy Wang, Andy White, Lindy Wilson  
 Sabre Artists: Caitlin Content, Brian Conlon, Okan Ataman, Catherine Tate, Rita Zimmerman  
 Computer Graphics Pre-Production Supervisor: Kevin Rafferty  
 Digital Timing Supervisor: Kenneth Smith  
 Visual Effects Coordinators: Adrienne Anderson, Janet Lewin  
 Digital Matte Artists: Bill Mather, Rick Rische  
 Digital Modeller: Craig Lyn, Paul Theren  
 Viewpainter Artists: Donna Beard, Catherine Craig, Tony Sommers  
 Lead Matchmove Artist: Michael Halsted  
 3D Camera Matchmove Artists: Alia Agha, Lanny Cermak, Terry Chostner, Selwyn Eddy III, Marla Selhorn  
 Lead Digital Paint & Roto: Terry Molatore

Digital Paint & Roto: Al Bailey, Katharine Baird, Lisa Drostova, Kate Elsen, Jiri Jacknowitz, Patrick Jarvis, Katie Morris, Sandy Ritts, Elsa Rodriguez, Erin West  
 Technical Animators: Phillip Alexy, Jason Ivey, Steve Nichols  
 Animatic Artist: Louis Katz  
 Software Development: David Benson, Rod Bogart, Florian Kainz, Vincent Toscano  
 ILM Gaffers: Michael Olague, Tim Morgan  
 Visual Effects Camera Assistants: Carl Miller, Rich McKay  
 Chief Model Maker: Carol Bauman  
 Model Makers: Phillip Brotherton, Jeff Brewer, Fon Davis, John J. Duncan, Robert M. Edwards, Jon Foreman, John Goodson, Ira Keeler, Scott McNamara, Lauren Page, Alan Peterson, Tony Preciado, R. Kim Smith, Michael Steffe  
 Practical Effects Supervisor: Geoff Heron  
 Visual Effects Editor: Tim Eaton  
 Video Editor: Angela Leaper  
 Visual Effects Production Assistant: Paula Nederman  
 Film Scanning/Recording Supervisor: Joshua Pines  
 Film Scanning: Randall Bean, George Gambetta, Todd Mitchell  
 Negative Cutter: Doug Jones  
 Negative Line-Up: Andrea Biklian, James Lim  
 Digital Plate Restoration Technicians: Lydia Greenfield, Jason Snell  
 Projectionist: Tim Greenwood  
 Computer Graphics Resource Assistant: Kimberly Lashbrook  
 Computer Graphics Technical Support: Nic Anastassiou, Michael Baltazar, Brian Gee, Kristen Millette, Jonathan Litt  
 Production Engineering: Ken Beyer, Greg Dunn, Jeff King  
 Camera and Video Engineering: Kipp Alridch, Bill Grinder, Gary Meyer, Vince Tilker  
 Computer Graphics Staff: Brian Brecht, Shannon Henry, Cliff Plumer  
 Production Accountant: Pamela Kaye

Senior Staff: Chrissie England, Jeff Mann, Jim Morris, H.B. Siegel

**Contact**

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 San Rafael, California 94901 USA  
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## Dick and Jane Do Math



These animated sequences for the "Making A Difference" episode of the PBS series "Life By The Numbers" look at the different problems associated with teaching mathematics to boys and girls. Crayon-colored children's drawings come to life to illustrate the issues.

Director: Dawn Lohmeyer  
Producer: Home Run Pictures  
Animation: Dawn Lohmeyer

### Contact

Tom Casey  
Home Run Pictures  
100 First Avenue, Suite 450  
Pittsburgh, Pennsylvania 15222 USA  
+1.412.391.8200  
+1.412.391.1772 fax  
tom@hrpictures.com



## Different Eyes

 sigKIDS Theater

Only a portion of the hundreds of species that were forced into extinction in the 20th century appear in this film. Nature should have been our master in the arts and sciences. Although we cannot grasp most of its secrets, so many living things continue to disappear from the earth.

Director: Akiko Tohma  
(Nara Institute of Science and Technology)  
Producer: Akiko Tohma  
Animation: Akiko Tohma  
Texture Programming: Tadao Maekawa  
(ATR Media Integration & Communications Res. Labs.)  
Composer: Shoji Yamashiro  
Musician: Geinoh Yamashirogumi  
Supervisor: Naokazu Yokoya  
(Nara Institute of Science and Technology),  
Yoh'ich Tohkura and Tsutomu Oohashi  
(ATR Human Information Processing Res. Labs.)  
Coordinator: Emi Nishina  
(National Institute of Multimedia Education)  
Visual Materials: Project Team Co., Ltd.

### *Contact*

Akiko Tohma  
Division Operated Jointly with  
ATR Human Information Processing Res. Labs  
Nara Institute of Science and Technology  
2-2 Hikaridai, Seika-cho  
Soraku-gun, Kyoto 619-0288  
Japan  
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+81.774.95.1008 fax  
xakiko@hip.atr.co.jp



For the "The Truman Show" and "Great Expectations," Matte World Digital used digital backlot techniques to complete partially built locations and interior sets. CG architectural renderings were combined with live action photography to create the final scene.

Producer: Matte World Digital

Contributors: Craig Baron, Krystyna Demkowicz, Paul Rivera, Todd R. Smith, Morgan Trotter, Brett Northcutt, Chris Evans, Caroleen Green, Ken Rogerson, Brian Ringseis, Ben Barron, Lori Casler, Martin Matzinger

### Contact

Craig Baron  
Matte World Digital  
24 Digital Drive, Suite 6  
Novato, California 94949 USA  
+1.415.382.1929  
+1.415.382.1999 fax  
cbarron@matteworld.com



## A Dirge for a Digirati

My thesis project fully describes the time I've spent in college. Animation also shows the relationship between the human being and the computer equipment. Digital graphics is really the "industry of broken computers". My project tells the story about "the

day" of any digital person-"digirati". The character is ME, and at the same time it's any person, who is involved in the computer graphics industry.

Director: Ilya Polnarev  
Producer: Ilya Polnarev

### Contact

Ilya Polnarev  
School of Visual Arts  
1201 Avenue K, Apartment 2A  
Brooklyn, New York 11230 USA  
+1.212.414.0881  
+1.212.414.0013 fax  
ilyadesign@aol.com

## Discovery Channel - Super Discovery



"Super Discovery" takes the viewer on a ride from space to the bowels of the earth and back again, through air, earth, fire, and water. A CG planet, elephant, spider, helicopter, storm, and lightning are used in combination with live-action plants and people, and extensive digital compositing techniques.

Director: Michael Brunsfeld

Producer: Shari Hanson

Visual Effects Supervisor: Alex Seiden

CG Supervisor: Doug MacMillan

Technical Directors: Will Anielewicz, Aron Onar,

Billy Brooks, Leandro Estebecorena, Bijan

Forutanpour, Indira Guerreri, Ed Kramer, Brian

LaFrance, Alan Rosenfeld, Kevin Sprout

Animator / Technical Director: Tim Stevenson

Animator: Jamy Wheless

Modeler: Izzy Acar

Viewpainter: Derek Gillingham

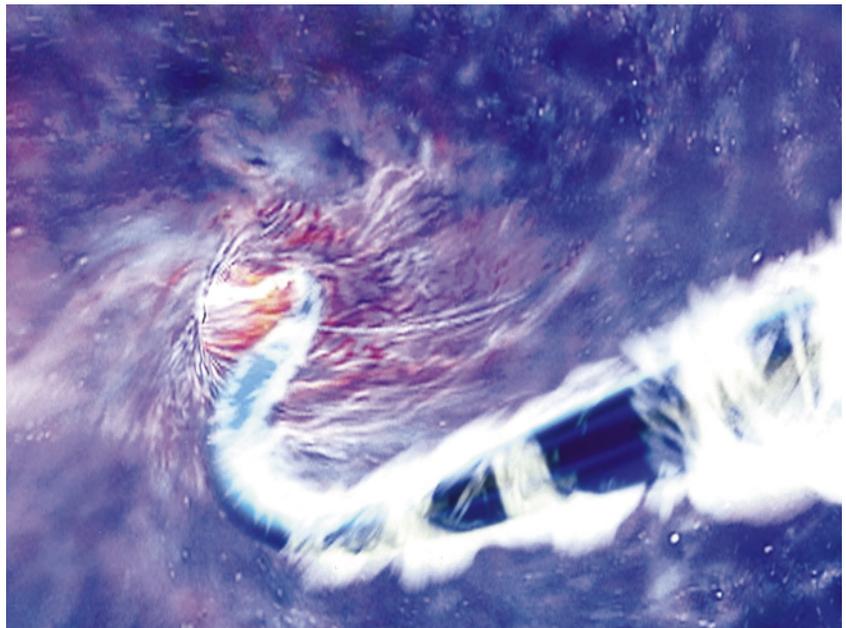
Matchmovers: Guy Hudson, David Manos Morris

Head of CG Commercials: John R. A. Benson

CGC Producer: Kay Rough

CGC Production Manager: Danielle Dubay

CGC Production Coordinator: Eric Schroeder



### *Contact*

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## Dolly à la Plage

 Electronic Theater

Dolly plays at the beach.

Director: Christophe Delamare, Nicolas Kalbache  
Producer: Olivier Emery  
Contributors: Olivier Modr, Patrice Vila

### Contact

Olivier Emery  
Trimaran  
97 rue Jean Jaures  
92300 Levallois-Perret, France  
+33.142.702116  
+33.142.702123 fax  
emery@trimaran.fr



## Drummm RooooooIIIII

 In-Between Animation

Director: William Sheffler  
Producer: William Sheffler

### Contact

William Sheffler  
Texas A&M Visualization Laboratory  
216 Langford Architecture Center  
College Station, Texas 77843-3137 USA  
+1.409.845.3465  
sheffler@viz.tamu.edu

## The Eccentric Circle

 Electronic Theater

 SIGGRAPH TV

All CG blending of eastern and western imagery.

Director: Dun Zhao

### Contact

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795 La Playa Street, #3  
San Francisco, California 94121 USA  
+1.415.668.4009  
+1.415.668.0927 fax  
dunzhao@wenet.net



## Ellipsoid

 Electronic Theater

The objects in this film are metaphors for people who live and work in the Tokyo area. These people are extremely busy, due to daily, tedious, exhausting tasks. A sudden explosion sets them free for a while, but succeeding days are as oppressive as ever.

Director: Nobuo Takahashi  
Producer: Nobuo Takahashi  
Contributor: Hiroto Sasaki

### Contact

Nobuo Takahashi  
Namco Limited  
VS Development Department, 1-1-32  
Shin-Urashima-Cho, Kanagawa-Ku,  
Yokohama, Kanagawa 211-0031, Japan  
+81.45.461.8071  
+81.45.461.8077 fax  
nobuo@vs.namco.co.jp



Medieval CG animation about a knight going back to the castle after a fight.

Director: Roberto Ziche  
 Producer: Roberto Ziche  
 Music: Mike Crowley

*Contact*

Roberto Ziche  
 45 Boardman Place  
 San Francisco, California 94103 USA  
 +1.415.547.2220  
 +1.415.547.2222 fax  
 ziche@computer.org



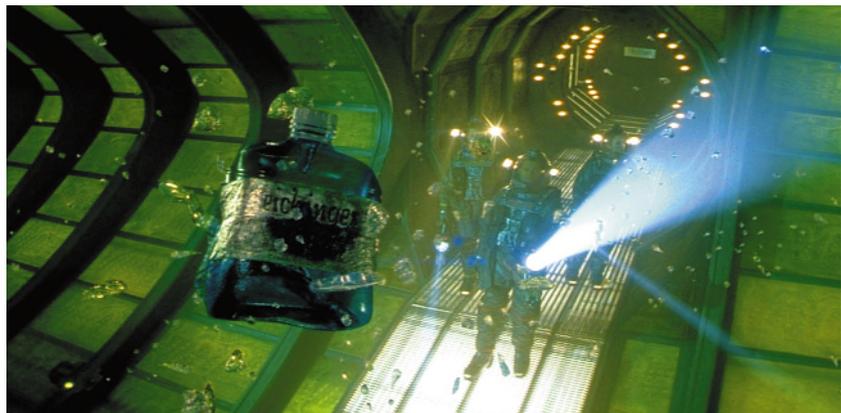
## Event Horizon

Integrating models shot with motion control cameras, digital models built in Alias PowerAnimator, proprietary volume rendering software (for clouds, mist and fog), high resolution scans straight from NASA, animated digital matte paintings, and advanced compositing techniques, these sequences for "Event Horizon" show how we can use technology to create worlds we can only imagine.

Director: Paul Anderson  
 Producer: Cinesite Digital Studios  
 Visual Effects Supervisor: Richard Yuricich  
 Digital Effects Producer: Alex Bicknell  
 Model composites: Sue Rowe  
 Model composites: Niki Wakefield  
 Burning Man: Ed Hawkins  
 Cooper's Chunk: Tom Wood  
 3D: Pat Conran, Chas Cash, Lubo Christov,  
 Dave Child

*Contact*

Jill Smolin  
 Cinesite Digital Studios  
 1017 North Las Palmas Avenue, Suite 300  
 Hollywood, California 90038 USA  
 +1.213.468.2102  
 +1.213.468.4485 fax  
 jill@cinesite.com



## Evolution



Director: Scott Dace  
Producer: Scott Dace

### *Contact*

Scott Dace  
c/o S. Trovas  
Ringling School of Art and Design  
2700 North Tamiami Trail  
Sarasota, Florida 34234 USA  
+1.941.351.5100  
+1.941.359.7517 fax  
ca@rsad.edu

## Family



A micro/macro study of the human condition and the finite situation in which it exists.

Director: Andy Marchal, Aaron Skillman  
Producer: Andy Marchal, Aaron Skillman

### *Contact*

Andy Marchal and Aaron Skillman  
2021 Grove Avenue, Apt. 2  
Richmond, Virginia 23220 USA  
+1.804.353.5384  
s0apmarc@atlas.vcu.edu

## The Fish



Director: Scott Roberts  
Producer: Scott Roberts

### *Contact*

Scott Roberts  
710 East Johnson Street, #2  
Madison, Wisconsin 53703 USA  
+1.608.286.1866  
scaatt@execpc.com



"Flubber" was an entirely new kind of challenge for ILM. The oozing, gelatinous quality of the title character dictated that he be animated using Metaclay. To our knowledge, this is the first time Metaclay has been used to achieve major-character acting in a feature film.

Flubber Character Animation & Visual Effects Supervisor: Tom Bertino

Visual Effects Producer: Roni McKinley

Visual Effects Co-Supervisor:

Sandra Ford Karpman

Computer Graphics Supervisor: Steve Braggs

Lead Technical Animator: Philip Edward Alexy

Visual Effects Art Director: Scott Leberecht

Digital Artists: Felix Balbas, Jeffrey Bennedit, Barbara Brennan, Marc Cooper,

Natasha Devaud, Raul Essig, Howard Gersh,

John Helms, Peg Hunter, Hayden Landis,

Tia Marshall, Hiromi Ono, Ricardo, Ramos,

Linda Siegel, Dan Shumaker, Doug Sutton,

Chris Townsend

Digital Effects Animators: Chris Armstrong, David Byers Brown, Andy Doucette, Tony Hudson, Paul Kavanagh, David Latour, Steve Lee, Neil Michka, Magali Rigaudias, Glenn Sylvester, Kim Thompson, Tim Waddy, Andy Wong

Visual Effects Coordinator: Luke O'Byrne

Digital Camera Movement Supervisor: Keith Johnson

Digital Camera Matchovers: Jodie Baird,

Randy Jonsson, Marla Selhom, John Whisnant

Digital Rotoscope Artists: Katherine C. Baird,

Patrick Jarvis, Heidi Zabit

Visual Effects Editor: Mike McGovern

Avid Editor: Heidi Schmidt

Digital Color Timing Supervisor: Bruce Vecchitto

Film Scanning Supervisor: Josh Pines

Motion Control Camera: Ray Gilber

Motion Control Assistant: Caarl Miller

Set Construction: Randy Ottenburg

Model Supervisor: Mark Anderson

Stage Technicians: Dave Murphy, Berny Demolski

Visual Effects Production Assistants:

Julie Creighton, Amanda K. Montgomery

Computer Graphics Resource Coordinator:

Dani Morrow

Technical Assistants: Carole Johnson, Nic Anastassiou, Matthew T. Bouchard, Jean Paul Beaulieu

Digital Plate Restoration: Nancy Jencks, Melissa Monterossa

Software Development: Florian Kainz,

Zoran Kacic-Alesic, Stewart Bimam,

Jai Natarajan, John Schlag

Computer Systems Engineer: Arnold Lee

Scanner Operator: George Gambetta

Negative Cutter: Doug Jones

Projectionist: Tim Greenwood

Optical line-up: Andrea Biklian

Computer Graphics Support Staff:

Ken Maruyama, Suzy Vissotzky Tooley

ILM Senior Staff: Gail Currey, Chrissie England,

Jeff Mann, Jim Morris

#### Contact

Vicki Dobbs Beck

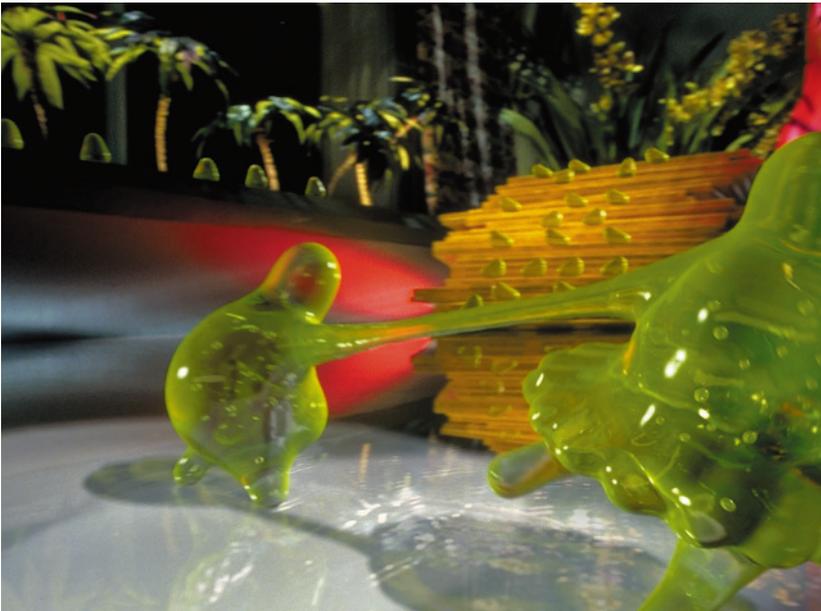
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## The Fly Band!

 Animation Theater

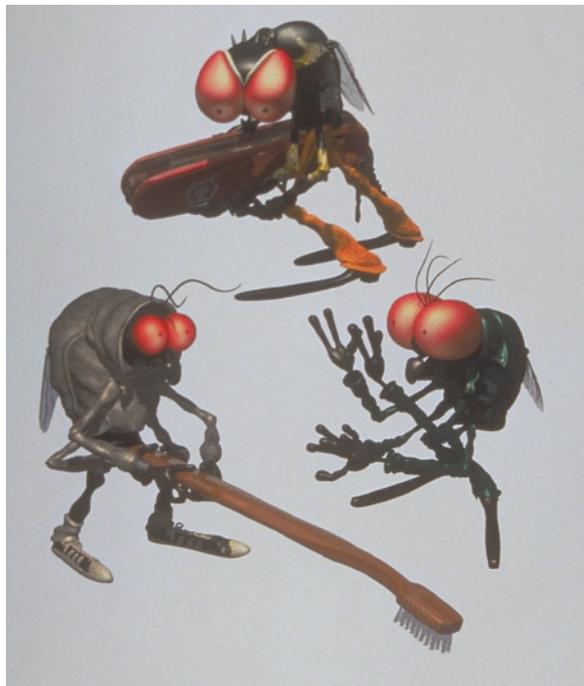
 sigKIDS Theater

"The Fly Band" is a funky music group from New York. With the distinguished feelings of rhythm and groove, they make great sounds using everyday products as musical instruments.

Director: Seiji Shiota, Tohru Patrick Awa  
Producer: Takashi Fukumoto, Yukio Kotanaka  
Produced by: Polygon Pictures Inc.  
Executive Producer: Toshifumi Kawahara  
Designer: Tohru Patrick Awa  
Technical Directors: Seiji Shiota, Shoji Sakata,  
Yuji Sakamoto  
Music: Kuniaki Haishima, Akio Adachi  
(Seven notes)  
Sound effects: Masahiko Ueda  
Editor: Kazuhisa Takahashi  
Technical support: Tamotsu Maruyama,  
Keiichi Kameda  
Production Assistant: Akihiko Sakyu  
Supervising Director: Jun Asakawa

### *Contact*

Akihiko Nakajima  
Polygon Pictures  
Bond Street T-11 6F, 2-2-43 Higashi-shinagawa  
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+81.3.3474.4322 fax  
nakaji@ppi.co.jp



## Flying Fish Toby Who Aimed for the Stars

 sigKIDS Theater

Tobby is a young and mischievous fish. His mother used to tell him that "up there in the sky there are a lot of friends, and when the sky scintillates it's because they are jumping and diving in the sea of stars." Tobby's deepest wish is to fly to the sea of stars. Thanks to his courage and willpower, his dream comes true.

Director: Keiko Yamaguchi and Phillippe Billion  
Production: Dentsu, Tokyo  
Executive Producer: Masao Shimizu  
Producer: Shinobu Nakanishi  
Show Production: Dentsu Tec, Tokyo  
Executive Producer: Tetsuo Irisawa  
Producer: Ken Kobayashi  
Film Production: ExMachina Paris, Tokyo  
Art Direction: Yerant  
Music Composer: Franck Schmidt

### Contact

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22 rue Hegesippe Moreau  
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## Frisk Fish

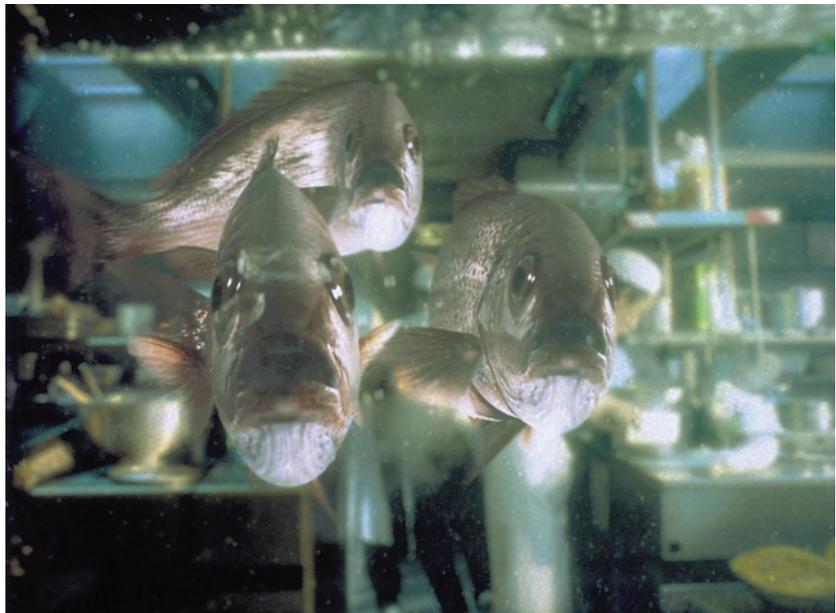
 Electronic Theater

Fish takes pill, goes mad.

Director: Harald Zwart  
Producer: Bash Robertson  
Animation: Alastair Hearsum  
Flame: Rachel Mills  
Post Producer: Sean Feeney

### Contact

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Director: Wilson Smith  
Nelson Max: "Carla's Island"  
James Blinn: "Mima's Day"  
Charles Kessler: "Wag the Flag"  
Don Stredney: "Cranston Csuri"

### Contact

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## George of the Jungle

### Electronic Theater

For Walt Disney Pictures' "George of the Jungle," Dream Quest Images produced extensive character animation to bring to life the computer-generated version of Shep, George's pet elephant who doggedly believes himself to be a dog. Dream Quest also enhanced live footage of a real-life elephant with expressive dog-like eyes, drooling tongue, and wagging tail, and matched that manipulated footage seamlessly with their impossibly canine CG Shep.

### Contact

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+1.805.583.4673 fax  
mreardon@dqimages.com

Director: Sam Weisman  
Producer: David Hoberman, Jordan Kerner,  
Jon Avnet  
Visual Effects Supervisor: Tim Landry  
Visual Effects Producer: David McCullough  
DQI Executive Producer: Keith Shartle  
3D Animation Supervisor: Paul Jordan  
3D Character Animators: Stewart Burris,  
Bruce Wright  
3D Animator: R. Christopher Biggs  
3D Effects Artists: Muqueem Khan,  
Michael Ramirez  
2D Compositing Supervisor: David Lauer  
Digital Compositors: John Huikku,  
Frank Maurer, Tony Noel, Tim Sassoon  
3D texturing and paint: Mark Siegel  
3D Modeler: Hal Lewis



"Geri," an old man, plays chess in the park, against himself. Somehow, he manages to win every time, even if it means cheating. The film opens in the morning of a sunny autumn day. Geri sets up the chess pieces and begins to play. He is a kindly looking old man, but when he walks around the table to make moves for the black side he becomes his nasty alter-ego: a faster, younger, man who loves to humiliate his opponent. We follow the game in Geri's imagination as nasty Geri drives nice Geri to the brink of defeat. Nice Geri finally wins by cheating outrageously and demands his winnings from a bet on the game. The film ends with Geri, on his own, enjoying the spoils of battle at the end of the day. Age and treachery will overcome youth and skill.



Director: Jan Pinkava  
 Producer: Karen Dufilho  
 Written and directed by: Jan Pinkava  
 Produced by: Karen Dufilho  
 Executive Producers: John Lasseter,  
 Edwin Catmull  
 Lead Technical Director: David R. Haumann  
 Supervising Technical Director: Leo Hourvitz  
 Human character R&D: Studio Tools  
 Cloth dynamics: Michael Kass  
 Surface modeling: Tony DeRose  
 Production Manager: Holly Lloyd

#### *Technical Directors*

Hair & hacks: Quintin King  
 Facial articulation: Paul Aichele  
 Modeling: Jason Bickerstaff  
 Shaders: Daniel McCoy

Lighting: Jean-Claude Kalache, Jason Bickerstaff,  
 Ana Lacaze, Ken Lao  
 Additional modeling: Michael Lorenzen,  
 Mark Sanford  
 Render Wrangler: Steve Kani

#### *Animation*

Bankole Lasekan, Sandy Christensen,  
 Ross Stevenson, Michelle Meeker,  
 Ben Catmull, Jeff Pratt, Valerie Mih,  
 Doug Sheppeck, Angus MacLane,  
 Jan Pinkava, Karen Prell, Stephen Barnes,  
 Michael Berenstein, Pete Docter,  
 Michael Parks, Steve Segal, Scott Clark,  
 Karyn Metlen, Adam Wood

Digital Painter: David Valdez  
 Sculptor: Jerome Ranft  
 Production Artist: David Skelly  
 Animation Coordinator: Troy Sutton  
 Post Production Supervisor: Julie McDonald  
 Film output: Louis Rivera, Hunter Kelly,  
 Matthew Martin  
 Sound design: Tom Myers, Skywalker Sound  
 Dialogue Editor: Dennis Leonard  
 Foley Editor: Sandina Bailo- Lape  
 Music: Flambée Montalbanaise,  
 Gus Viseur et son Orchestre  
 Voice of Geri: Bob Peterson  
 Storyreel Editors: Joe Wenkoff, Tom Freeman,  
 Steven Liu  
 Film Editor: Jim Kallett  
 Music Editor: Alex Stahl  
 Editorial Assistant: Christian Hill  
 Animation software: Darwyn Peachey, Arun Rao,  
 James W. Williams, Dirk Van Gelder,  
 Kitt Hirasaki and the entire Studio Tools team  
 RenderMan software: Larry Gritz, Tien Truong,  
 Mark VandeWettering and the entire  
 RenderMan team  
 Excellent Fellows: Sharon Calahan,  
 Galyn Susman, Damir Frkovic, Robin Cooper,  
 Ewan Johnson, Rick Sayre, Luke Putnam,  
 Jeff Pidgeon, Tom Hahn, Mitch Prater,  
 Brad West, Michael Fong, Ninon Pallavicini,  
 James Burgess, Rachel Hannah,  
 Tony Apodaca, Ben Jordan and the  
 Computer Systems Support Group

Very special thanks to: Steve Jobs,  
 Darla Anderson, and Andrew Stanton,  
 Joe Ranft, Lawrence Levy, Sarah McArthur,  
 Kevin Reher, Jenny Head.

*A Pixar Shorts Film*

#### *Contact*

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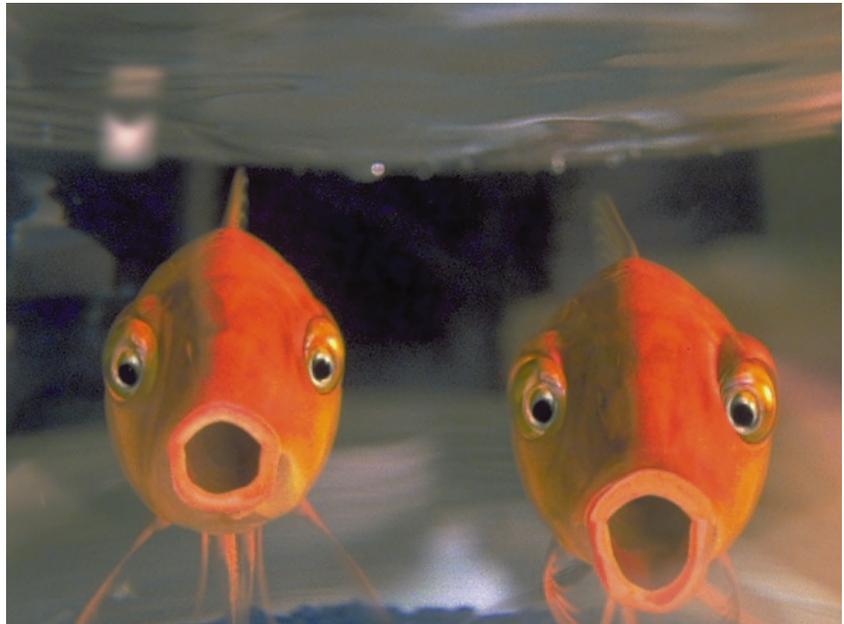
## Goldies



This commercial features two goldfish tortured by the platter of cheese outside their bowl. Just as they leap to land on it, the platter is moved. Technique: CG and Inferno work as well as live action.

Producer: Diane Fazio  
CGI Director: Kerry Colonna  
Live Action Director: David Kellogg  
Head of Production, Commercial Digital:  
Ken Roupenian  
CGI/Inferno Producers: Diane Fazio,  
Karey Maltzahn  
CGI/Assistant Inferno Producer: Jenny Groener  
Inferno FX Supervisor: Theresa Ellis  
Inferno Artist: Betsy Paterson  
Flint Artist: Tristan Tang  
Inferno I/O and Avid Editing: Tony Barraza  
Animation Set-up: Hans Rijpkema  
Technical Support: Eric Tsai  
Choreographer/Animator: Lyndon Barrois  
Animator: Glenn Ramos  
Head Technical Director: Robert Lurye  
Technical Directors: Sandra Voekler, Todd Harvey,  
Young Joo Paik, Jae Wook Chang,  
Chris Sjolholm, Theodore Bialek  
Technical Consultants: Steve Sullivan,  
Jerome Solomon  
Modelling Manager: Keith Hunter  
Modellers: Chien-Hsiung Wang, Nancy Klimley,  
Bradley Sick  
Animation Manager: Kristina Reed  
Director of Digital Production: David Weinberg

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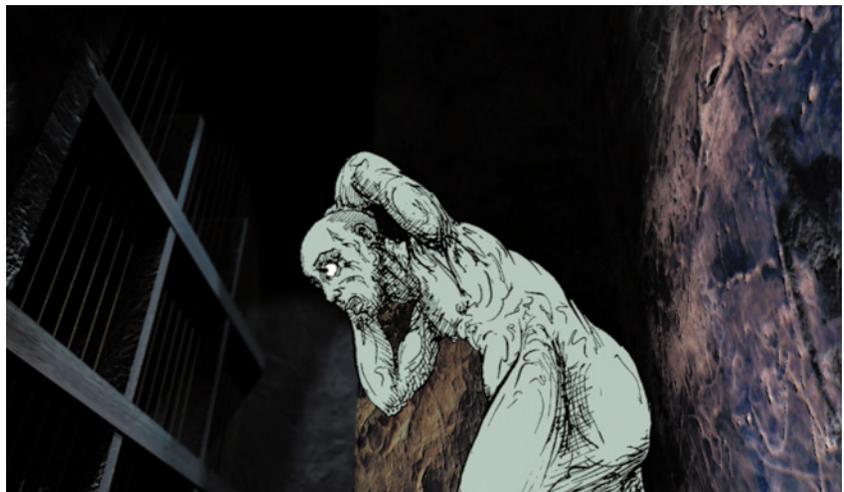
## The Goner



...and the mercy seat is waiting..

Director: Peter Kaboth  
Producer: HFF - Badelsberg  
Contributors: Mik Simrock, Chez Bertucci

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A dramatic and mythical story of crime and corruption set in a surreal world inspired by Casa Blanca meets Mexican folklore come to life in "Grim Fandango." "Grim Fandango," a graphic adventure from LucasArts Entertainment company, features more than 50 mysterious characters and 90 locations, rendered in stunning 3D animation.

Lead Artist: Peter Tsacle

Project Leader/Dialogue: Tim Schafer

Background Artists: Paul Topolos, Sara Simon,

Paul Zinnes, John McLaughlin, Japeth Pieper

Animators: David Bogan, Mark Hamer,

Eric Ingerson, Vam Maduro, Chris Schultz

Music: Peter McConnell

Conceptual Design: Peter Chan

Voices: Tony Plana, Maria Canals,

Patrick Dollaghan, Michael Sorich, Jack Angel,

Milton James, Sal Lopez, Kay Kuter,

Barbara Goodson

Technical Support: Jessica Forsys, Richard Trott,

John Torrijos

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## Guy with Wacom Pen

 In-Between Animation

Director: Jason Wen

Producer: Jason Wen

### Contact

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## Hamlet Glow Worm



Cinema commercial for Hamlet cigars.

Director: Alastair Hearsum  
Producer: Hector Macleod  
Animation: Alastair Hearsum  
Title animation: James Mann

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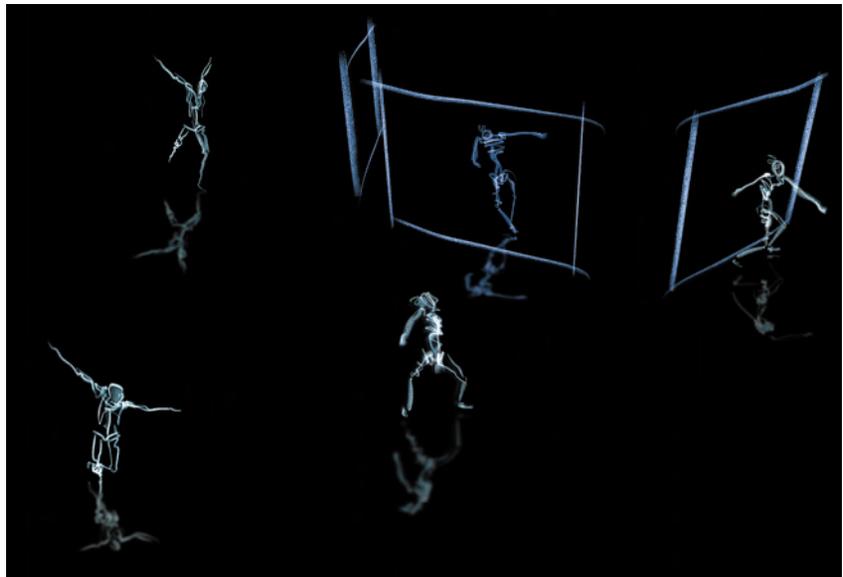


## Hand-Drawn Spaces



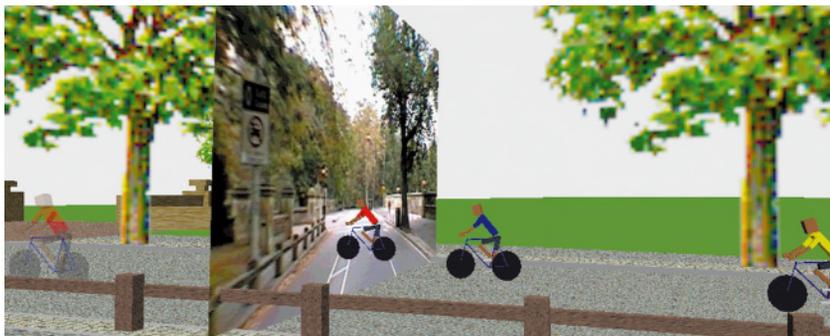
Hand-Drawn Spaces is a virtual performance in which dancers move across three projection screens and the spaces in between. The figures are modeled and rendered as three-dimensional sketches and animated by the intricate choreography of Merce Cunningham. The composition was created with motion fragments that were motion captured, key-frame reduced, footstep-extracted and then assembled into long-format sequences with motion-flow editing.

Choreography: Merce Cunningham  
Concept and visual design: Paul Kaiser and Shelley Eshkar  
Motion editing and composition software: Michael Girard and Susan Amkraut  
Sound design: Ron Kuivila  
Dancers: Jared Phillips and Jeannie Steele  
Motion capture: Biovision  
Software: Kinetix Character Studio and 3D Studio Max



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This video illustrates two of the effects introduced in the SIGGRAPH 98 paper "Techniques for Handling Video in Virtual Environments." It shows a way to represent objects as they move between 3D graphical spaces and video displays. It also shows how images and video displays can respond to user viewpoint changes.



Producer: J. Robert Ensor

Contributors: J. Robert Ensor, John T. Edmark,  
Gianpack U. Carraro

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## Hard Rain

At 4997 frames in length, this sequence from Hard Rain shows how computer graphics can add possibilities to film and jettison you into a story without knowing where the real ends and the fake begins... High end compositing was used to integrate 3D computer generated water, rain and fog (created in Arete, Dynamation, and proprietary code), farm equipment and birds, with live action film shots, miniatures, matte paintings and sky replacements — each with their own camera moves — to create one fluid journey.



Directo: Mikael Salomon  
Producer: Cinesite Digital Studios  
Visual Effects Supervisor: Brad Kuehn  
Visual Effects Producer: Aaron Dem

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## Hecklers

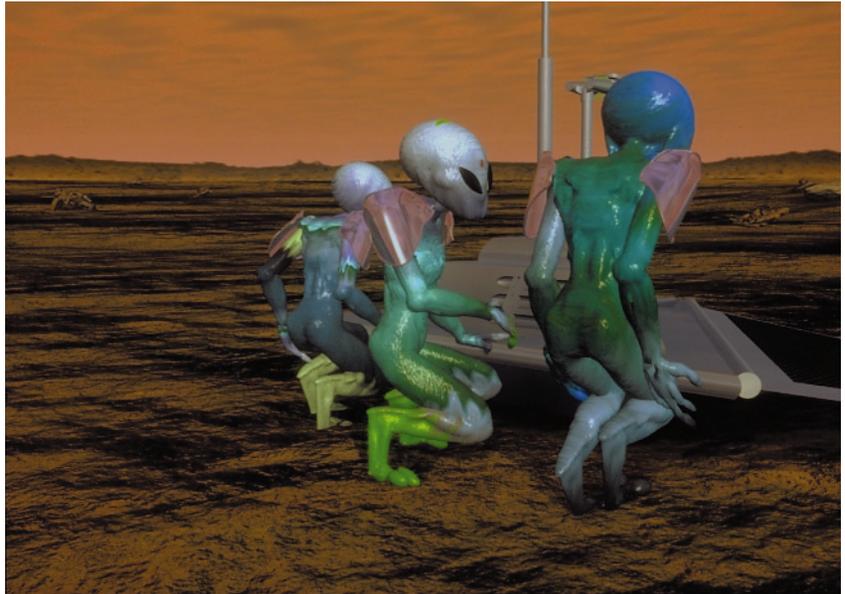


People tend to see the things they expect to see. What would happen if a Martian exploration vehicle set down in a "bad neighborhood" on Mars? How would the ensuing events be interpreted by earth-bound observers expecting to encounter only microbes, bacteria, and a photo opportunity?

Software: Alias PowerAnimator, Composer, Photoshop  
Hardware: SGI O2  
Director: Stephen Pavelski  
Producer: Ringling School of Art and Design  
Concept, Animation, Audio Mix: Stephen Pavelski  
Faculty Advisor: Ed Cheetham  
Video/Audio Support: Phil Chiocchio

### *Contact*

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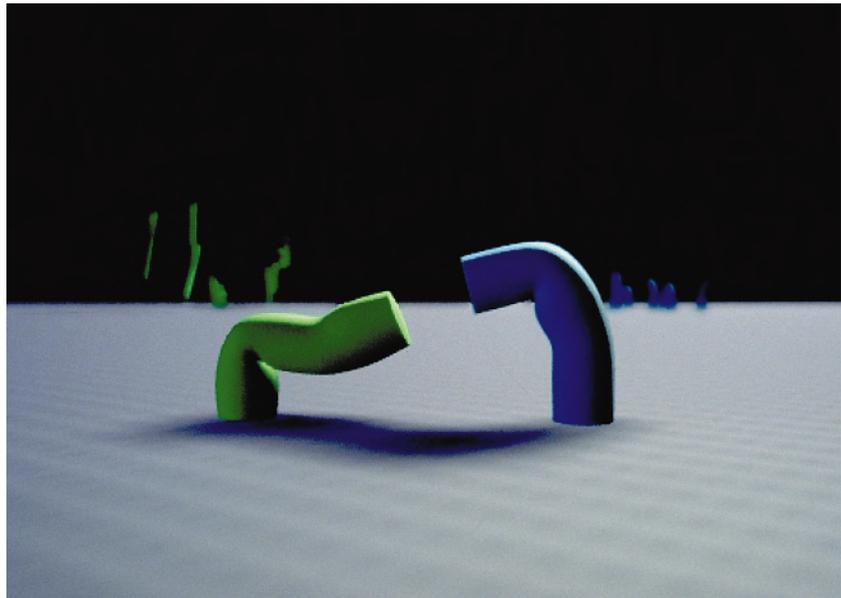


In a place ruled by the overwhelming pressure to conform, few creatures explore their own unique way of doing things.

Director: Jim Conrad  
 Producer: Jim Conrad

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 jeconrad@mailbox.syr.edu



## Hewlett-Packard - The Bee

Animation and realization of the bee in 3D.

Director: Eric Coignoux  
 Producer: Partizan Midi-Minuit  
 Contributors: Marie-Laure Laffitte, Olivier Gilbert,  
 Olivier Luffin, Samuel Tourneux

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## The Hidden Truth



Director: Michael Mao  
Producer: Michael Mao

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## Homage to Hilbert

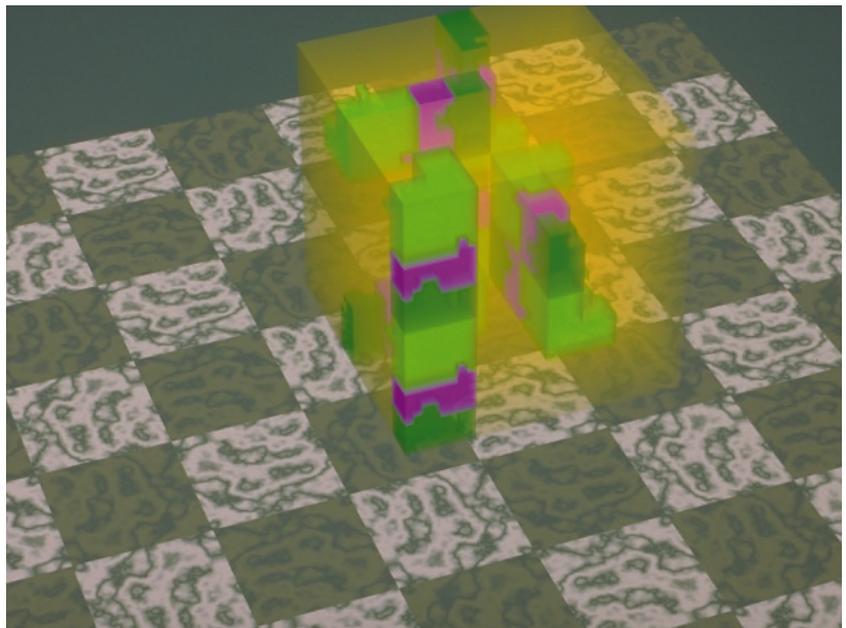


This film visualizes Hilbert's space filling curves in 2D and 3D, with the help of volume rendering.

Director: Nelson Max  
Contributors: Mark Duchaineau, Brett Keating,  
Brian Cabral, Dan Schikore, Dietmar Saupe,  
Jan Nunes, Eugene Cronshagen, Ross Gaunt

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## The Hungry One

Electronic Theater

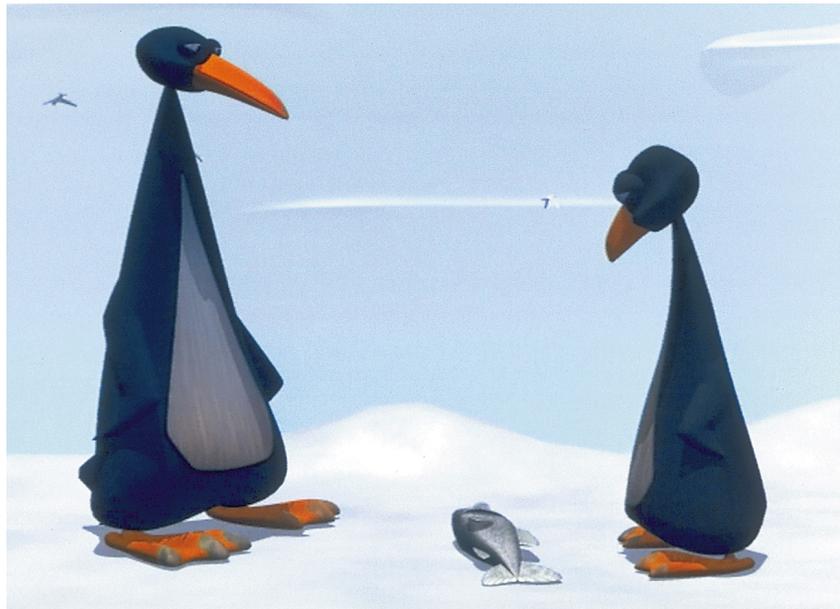
SIGGRAPH TV

A short about a baby penguin, a mommy penguin, and a couple of fish.

Director: Stephen Rawlins  
Sound Design: Mike McGovern

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## Identity 9

sigKIDS Theater

SIGGRAPH TV

Everyone has an identity, even though it may be difficult for them to find it. "Identity 9" is the story of Number 9, a frustrated clone searching for his true identity. His world is filled with endless identity jars, each one worse than the one before. He goes through a number of identities before reaching for the last jar on the shelf.

Software: Alias PowerAnimator, Composer  
Hardware: SGI O2 Indy  
Director: Steven Bender  
Producer: Ringling School of Art and Design  
Concept, animation, music composition,  
audio mix: Steven Bender  
Faculty Advisor: Claudia Cumbie-Jones  
Video/Audio Support: Phil Chiochio

### Contact

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Director: Tomisaburo Hashimoto  
Producer: Tomisaburo Hashimoto

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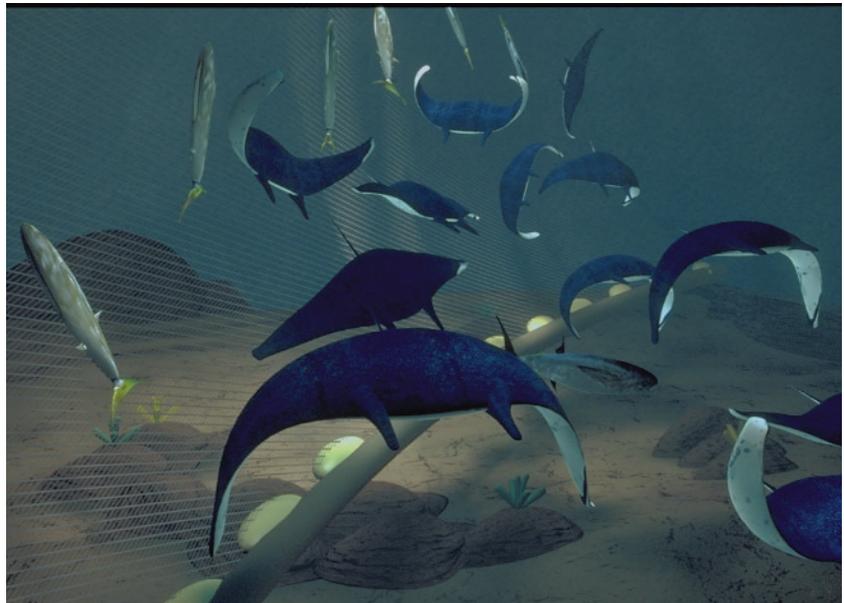
**Indiscriminate Killer**

Fishing nets are the assassins of the oceans. They kill everything that comes their way. The fishing nets have added the Giant Pacific Manta to the Endangered Species List.

Software: Alias PowerAnimator, Composer  
Hardware: SGI O2  
Director: Marimar Gonzalez  
Producer: Ringling School of Art and Design  
Concept, animation, audio mix: Marimar Gonzalez  
Faculty Advisor: Ed Cheetham  
Video/audio support: Phil Chiochio

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## Invisible Ocean

 Animation Theater

The main interest of "Invisible Ocean" is the scientific aspect: the whole film is based on the historic and scientific research programs of the Oceanographic Museum of Monaco. Here is your only chance to see plankton as it is in nature! In "Invisible Ocean," plankton and the process of photosynthesis (the ecological aim of the film) are shown as the foundation of life.

Director: François Garnier  
Producer: Monaco Interexpo  
Special thanks to the Oceanographic  
Museum of Monaco

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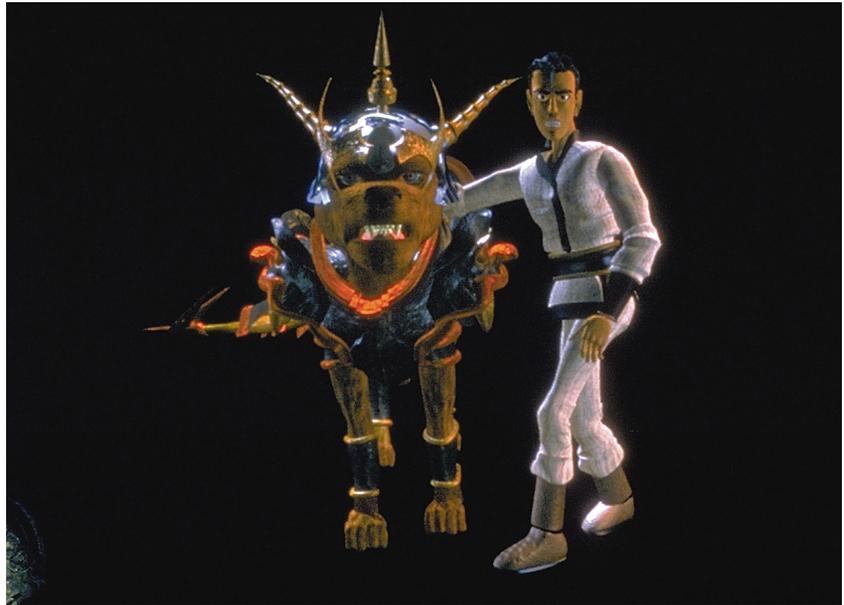


The way we deal with temptation defines us. In "Jakata," a young man travels to a remote temple in the jungle. Upon reaching the temple he faces many obstacles. Each obstacle challenges a particular aspect of the man's character.

Director: Jeff Baker  
Producer: Ringling School of Art and Design  
Story: Pete Choe, Jeff Baker, Dominick Cecere  
Lee animation: Jeff Baker, Dominick Cecere  
Guardian animation: Pete Choe  
Digital cinematography (lighting, textures, compositing): Neal Nellans  
Environment modeling: Neal Nellans  
Character modeling: Pete Choe  
Prop animation: Dominick Cecere  
Facial animation: Pete Choe  
Music composition: Niveus, Bruce Hoover  
Audio mix: Dominick Cecere  
Faculty Advisor: Jim McCampbell  
Video/audio support: Phil Chioocchio  
Software: Alias PowerAnimator, Composer, Premiere, After Effects, Photoshop, SoundEdit 16  
Hardware: SGI O2, Power Macintosh

#### *Contact*

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The focus is on the animation of the skateboarder and the complex movements that he performs. Being skateboarders ourselves, the project is all the more enjoyable and close to our hearts. Through "Jonas," we have taken our skateboarding to a higher level along with our understanding of character animation.

Director: Jeremy Butler and Joel Sevilla  
 Producer: Jeremy Butler and Joel Sevilla  
 Contributors: School of Visual Arts

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 j\_sevilla@hotmail.com



Many hiding creatures form a curling tower, and their motions seem to result in gentle breezes. The motif of this work is a festival, "Kazematsuri," that celebrates gentle breezes. The many and colorful creatures help the viewer imagine a joyful and bright "Kazematsuri."

Director: Yasuo Ohba  
 Producer: Yasuo Ohba  
 Music: Hiroto Sasaki  
 Video Engineer: Naohiro Saito  
 Special thanks to: Tetsuji Baba,  
 Akiko Wakabayashi, Yoko Akao, and  
 VT research staff  
 Software: Kazematsuri (original), Energie  
 Hardware: SGI Indigo2 Maximum Impact,  
 SGI Octane, Sony BVW-75, Pluto Space 212

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Kokopelli is a mythical flute player, dancer, and trickster. Indian legends say that when the desert wind howls, it is Kokopelli's flute foreshadowing his arrival. He wanders into the sown fields and plays, and magically the villagers awake to a healthy crop of corn.

Director: Jamie DeRuyter  
 Producer: The Pixel Factory

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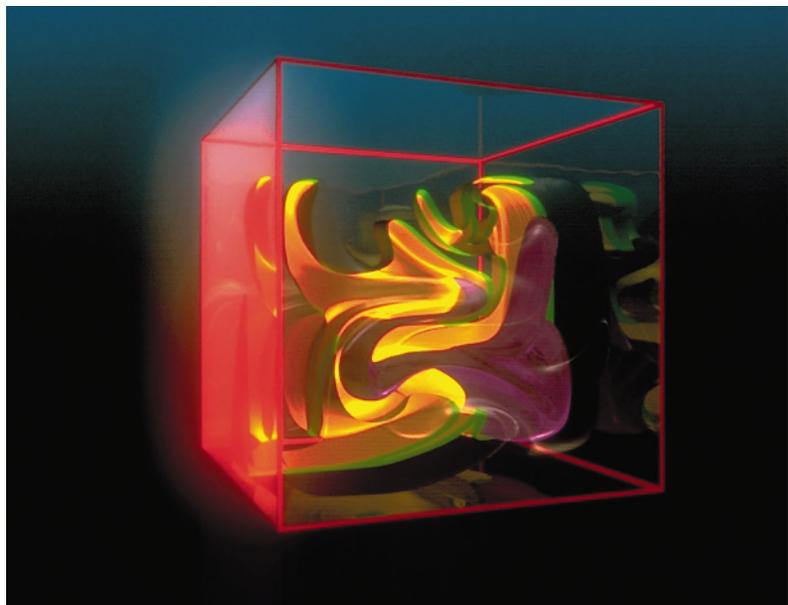
## Lagrangian Visualization of Natural Convection Mixing Flows

This video shows a new technique to visualize fluid flows. The technique consists of defining an initial surface inside a fluid as a set of points localized in convenient positions. Then the initial surface is deformed using particle tracking of each point of it. The simulation contains reflection and refraction effects, and texture mapping to give more realism. The sequence was created with Alias using RayTracing.

Director: Eduardo Ramos  
 Producer: Victor H. Godoy  
 Contributor: Luis M. de la Cruz

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 Circuito exterior s/n, Ciudad Universitaria  
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 +52.5.622.8043 fax



## Lights and Water



A first attempt to venture into the realism of light effects using Mental Ray.

Director: Satoshi Kitahara  
Producer: Satoshi Kitahara

### Contact

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## Loose and Sketchy Animation



Director: Cassidy Curtis  
Contributors: Bret Battey, Jud Holliday,  
Jason Ilano

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## Lost in Space



Time bubbles, Time Portals and Time Domes make up this sequence from Lost in Space. Effects were created by compositing a combination of digital set extensions, Dynamation particles, Alias models, elaborate texture maps and live action elements. Furthermore, Cinesite's research and development teams maximized efficiency by developing a 2D technique where a 3D tool would have been the obvious choice: Cinesite developed a glass and procedural pattern tool as a replacement for a more time intensive ray tracing with motion blur solution.

Director: Stephen Hopkins  
Producer: Cinesite Digital Studios  
Visual Effects Supervisor (New Line):  
Angus Bickerton  
Digital Effects Producer (Cinesite): Deanna Gould  
Production Technical Supervisor: Ken Dailey  
Digital Composite Supervisors: Ed Hawkins,  
Tom Wood  
CG Sequence Supervisors: Chris George,  
Jonathan Privett

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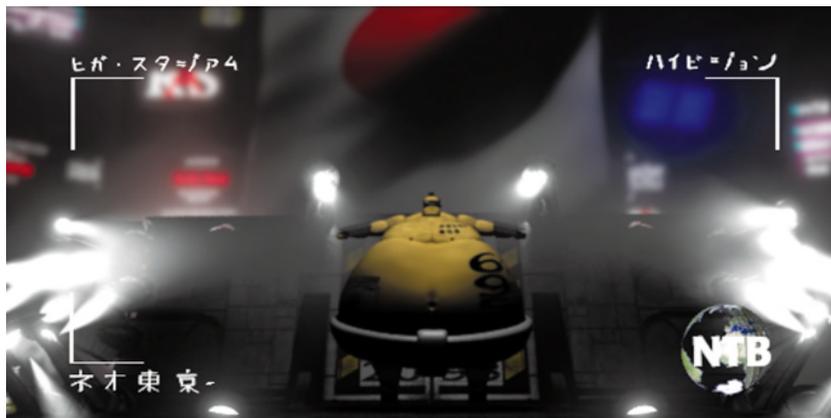
## Machsumo: Flaming Fat Men on Ice Skates



At last the question is answered: What is the sound of two sumos colliding at over 900mph.

Director: William F. Sheffler  
Producer: William F. Sheffler  
Contributors: Mitsutoshi Higa, Tom Moore

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## The Making of Nebula Clouds for the Motion Picture "Sphere," with Volumetric Rendering and the F-Rep of Solids

This fly-through sequence of a massive nebular gas cloud was created using volume rendering of implicit surfaces to represent solid gas clouds with stars.

Volumetric rendering in various forms is becoming a useful tool in motion picture visual effects, as computational and software resources improve. Volumetric ray tracing of the implicit-surface representation of solids seems to be an excellent solution for the problem. The major difficulties encountered include the large number of implicit primitives needed to construct detailed shapes, as well as the memory needed for sampling and texturing the volumetric data. The methods we developed kept the rendering time at approximately just the time needed to trace rays through the volumetric data, minimizing the evaluation time of the implicit representation of the primitives.

In the motion picture "Sphere," the gaseous nebula fly-through sequence required an average of 10,000 to 15,000 implicit primitives, and the total amount of memory required to store the evaluation of the f-rep was under 1GB of RAM. Rendering times for film-sized frames averaged approximately 10 to 15 cpu-hours per frame on Dec Alpha and SGI servers.

Technical Director: Gokhan Kisacikoglu  
Producer: Cinesite Digital Studios  
Visual Effects Supervisor: Carlos Arguello  
Digital Effects Producer: Aaron Dem

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"The Making of Sid and the Penguins" is a demonstration of current research in improvisational animation at the Media Research Laboratory. This film shows multiple actors performing and interacting in real time over the Web on a PC running Netscape Navigator 4.0 and the Cosmo Player plug-in from SGI.

Director: Ken Perlin, Athomas Goldberg  
Producer: Clilly Castiglia  
Technical and Artistic Directors: Ken Perlin, Athomas Goldberg  
Lead Programmer/Choreographer: Louella Dizon  
Animators: Courtney Armitage, Dan Kanemoto, Jeff Odel, Jesse R. Quinn, Jeff Robertson, Tatia Rosenthal  
Programmers: Jon Meyer, Wyatt Anderson, Ying Xu, Hui-wen Su, Koji Ashida  
Penguin Modeler / Alias Consultant: Jesse R. Quinn  
Video Editor: Virginie Danglades, Dan Kanemoto  
Systems Administrator: Duane Whitehurst  
Music: C music  
Equipment: Communication Specialties, Inc.  
Additional animation: Dsquared Inc., Dan Moss, Dan Schrecker  
Contributors: New York University Center for Advance Technology, Stuart Piltch, Steve Cooney



### Contact

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## La Mamie



It is always useful to sweep in front of one's door.

Director: Pascal Seguin  
Producer: CNBDI, Angoulême, France

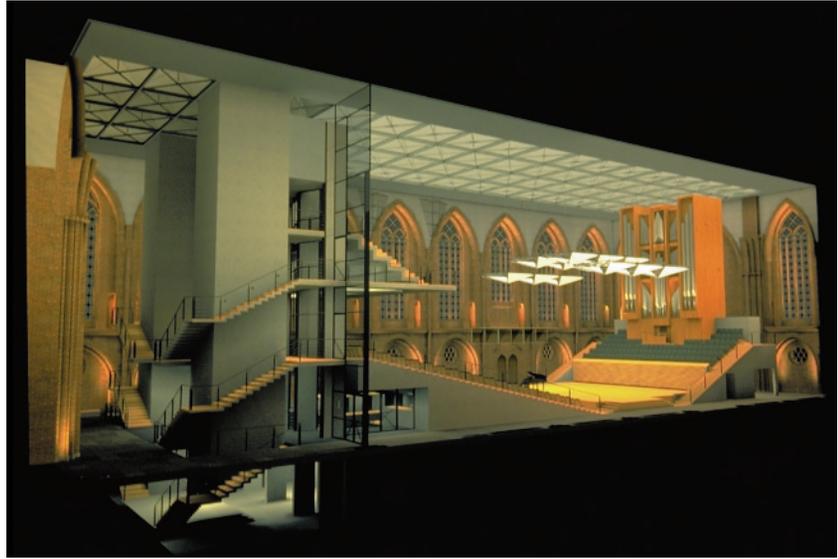
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This film demonstrates architectural design of a concert hall by visual and aural simulation. The beginning shows the current state of the Marienkirche building and demonstrates the computer model of its redesigned interior. Simultaneously, unechoic "dry" piano music is heard. As we enter the concert hall, we hear the music rendered according to the real hall acoustics. The simulated soundscape changes according to direction and distance of the grand piano and the position of the camera.

Marienkirche, located in Neubrandenburg, Germany is a 13th-century Gothic cathedral that was ruined at the end of World War II. Currently, it is being rebuilt as a concert hall. The first concerts will be presented in 2000.



Computer Model and Visualization: Erkki Rousku,  
Cadvance  
Sound Rendering: Tapio Lokki, Lauri Savioja,  
Jyri Huopaniemi, Riitta Vaananen, Ville Pulkki,  
Helsinki University of Technology  
Architectural Design: Pekka Salminen Architects

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## Modeling and Animation of Realistic Facial Expressions

A facial-animation system based on morphing between 3D models created from a collection of photographs.

Director: Jamie Hecker  
Producer: Frederic Pighin  
Contributors: Frederic Pighin, Jamie Hecker,  
David Salesin, Richard Szeliski

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Scenes of a photorealistic mouse with fur, a cat's legs with fur, photorealistic cherries, olives, and cheese, and smoke and fire effects composited over live action footage.

Director: Sylvia Wong - Animation & Lighting Director  
 Producer: Shannon Casey  
 FX Supervisor: Charlie Gibson  
 Animation & Lighting Supervisor: Sylvia Wong  
 Visual Effects Producer: Shannon Casey  
 Visual Effects Coordinator: Chad Merriam  
 CG Supervisor: Mary Lynn Machado  
 CG Lead Animators: Brian Dowrick,  
 Raffaella Filippini, Nancy Kato  
 CG Animators: Doug Gallery, Glenn Ramos,  
 Kent Yoshida  
 CG Lead Lighters: Raymond Chen, John Dietz,  
 Todd Shifflett  
 CG Lighters: Karl Herbst, Marc-Andre Samson,  
 Randy Wei, Brian Young, Jongo Yuk  
 Effects Animators: Peter Farson, Chris Sjöholm  
 R&D / Animation Setup: Daryl Munton,  
 Chris Perry, Hans Rijpkema  
 Lead Composer: Betsy Paterson  
 Compositing Artists: Sue Benko, Scott Seuss,  
 Colleen Smith  
 Digital Compositing Supervisor: Tom Leeser  
 Digital Painters: John Alex Lockwood,  
 Tristan Tang  
 CG Match Movers: Mark Hamilton, Julius Wang  
 CG Modellers: Tom Capizzi, Mark Cheng,  
 Chris Pulvino  
 Software: Perry Kass, Toshi Kato,  
 Charles Knowlton, Steve Sullivan, Harold Zatz  
 Technical Support: Juan-Luis Sanchez  
 Concept Artists: Ed Lee, Sei Nakashima  
 Visual Effects Editor: Josh Margolies  
 Visual Effects Assistant Editor: Dorre Street  
 Production Management: Prashant Buyyala,  
 John Hughes, David Weinberg  
 Post Production Manager: Michael Taylor  
 Scanning & Film Recording Engineer:  
 Will McCown  
 Film Recording Technicians: Eric Akutagawa,  
 Jeffrey Castel De Oro  
 Plate Coordinator: Stephanie Taylor  
 VFX Production Assistants: Wolf Amer,  
 Autumn Rivers  
 Render / IO: Tony Barraza, Joseph Benavidez,  
 Chris Haussler  
 Systems Administration: Brian Peterson,  
 Elias Rodriguez  
 Production Accountant: Daniel A. Rosenthal  
 Image © 1998 DreamWorks  
 SKG/Courtesy Rhythm & Hues Studios



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## Moving Forward

 In-Between Animation

Director: Bao Vu  
Producer: Bao Vu

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## Music For Unprepared Piano

 Electronic Theater

Data-driven, simulated, physically based synchronization of sounds and graphics performed by a particle system of tennis balls and golf balls fired from a firehose into a piano. Particle system collisions control all sounds. Homage to John Cage.

Director: Robin Bargar  
Producer: Robin Bargar  
Contributors: Alex Betts, Andrew Bedinni,  
Insook Choi

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## A Narrow Martian of Error

Animation Theater

SIGGRAPH TV

sigKIDS Theater

No matter how technologically advanced our unmanned space probes become, their findings will always be a distant second to the observations of actual human explorers. "A Narrow Martian of Error" is a satirical look at human attempts to study Mars. Even technologically advanced missions like the Mars Pathfinder can only contribute still pictures and raw data of the red planet. Only through sending human explorers to Mars can we truly unlock its secrets.

Director: Angela DiMeglio & Marcus Hart  
Producer: Ringling School of Art and Design  
Concept, animation: Marcus Alexander Hart,  
Angela Rose DiMeglio  
Music Composer: Mike Spring, Erik Winquist  
Audio mix: Marcus Alexander Hart  
Faculty Advisor: Claudia Cumbie-Jones  
Video/audio support: Phil Chiochio,  
Erik Winquist, Iva Lovell  
Software: Alias PowerAnimator v8.2, Composer,  
Studio 16  
Hardware: SGI O2, Amiga 4000

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## News from Hubble Space Telescope



Four Space Telescope Science Institute animations based on data from the Hubble Space Telescope. These animations, a major component of news releases about Hubble discoveries, illustrate how objects in space, detected at vast distances from us, move and change over time.

Director: Ginger French

Producer: Ginger French

Animator: Thomas Goertel

Editor: Brian Preston

Engineer: Ed Weibe

Music by: Jonn Serrie

Voices of investigators using Hubble:

David Leckrone (Hubble as a Black Hole Finder), Harold Weaver (Comet Hale-Bopp Nucleus), Mario Livio (Binary Star Planetary Nebula), Richard McCray (Shock Waves Hit the Ring of Supernova 1987A)

### Contact

Ginger French

The Space Telescope Science Institute

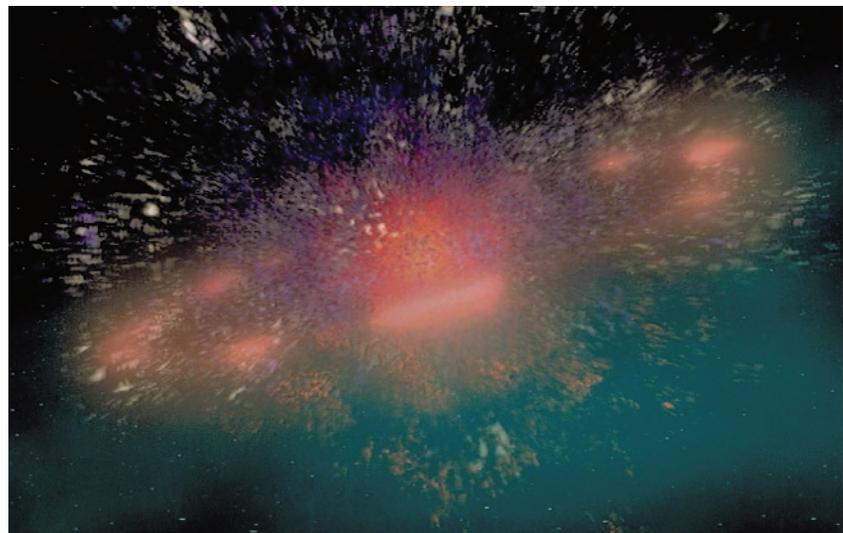
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## Noh Mask – Application of Image-based Rendering



Noh masks, which are used in Japanese traditional drama, reveal various expressions according to the movement of light and viewpoint. Here, this sensitive change is illustrated by using an image-based rendering technique.

Director: Makoto Kato

Producer: Toshiyuki Moritsu, Kazuya Hisaki and Akio Takahashi

Contributors: Michiko Nishi, Hiroko Nakagawa, Jun-ichi Miyajima, Manabu Yanagimoto, Kazuhide Honda, Yoshiki Sato, Shusaku Endo, Hanako Nishino

The Noh mask is provided by the Tokugawa Reimeikai Foundation, the Tokugawa Art Museum.

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## The Optiverse

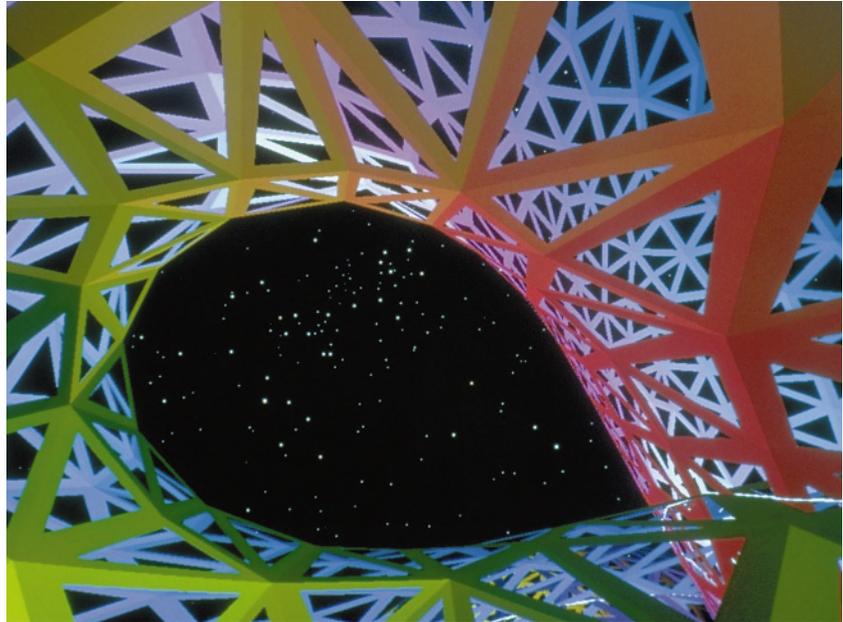


Computer graphics has evolved since Nelson Max's pioneering sphere inversion of the 1970s. We turn spheres inside out symmetrically, not by hand or with analytical formulas, but automatically, by minimizing the elastic bending energy of bilipid membranes. This video records what we can experience in the CaliforniaVE immersive virtual environment.

Director: George Francis  
Producer: George Francis, John Sullivan,  
Stuart Levy  
Original Score: Camille Goudeseune  
Post-Production: Jeff Carpenter, Dana Plepys

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## Orange Yellow Metaphor



In-between yellow and orange.

Director: Kristian ten Wolde  
Producer: Kristian ten Wolde

### Contact

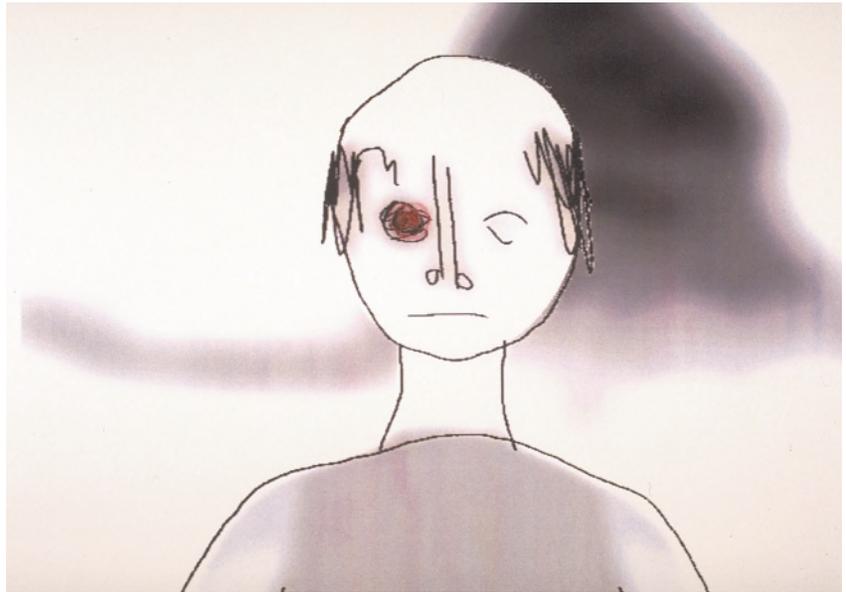
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Texas A&M Visualization Laboratory  
216 Langford Architecture Center  
College Station, Texas 77843-3137 USA  
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kristian@viz.tamu.edu

A sick man decides to face his own fears.

Director: Zak Margolis  
Producer: Zak Margolis

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+1.716.461.0523  
zom0972@RIT.edu



The Parachutist

Director: Patrick James  
Producer: Patrick James

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pjames@viz.tamu.edu

Original graphic style for a "politically incorrect" snack. Made on 3DsMax with "in-house" rendering software.

Director: Pierre Coffin  
Producer: Exmachina  
Agency: Euro RSCG BETC  
Illustrator: Jean-Christophe Saurel

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Due to the obvious limitations of photographing the average migrating goose in flight, Digital Domain was given the task of integrating fully CG geese with a sky diver shot practically. The refreshing beverage was also digitally animated to flow from sky diver to happy goose.

Director: Kinka Usher  
Producer: Gary Delemeester  
Visual Effects Producer: Julian Levi  
Animation Supervisor: Randall Rosa  
Visual Effects Supervisors: Andy MacDonald,  
Michael Gibson  
Compositing Supervisor: Scott Rader  
Visual Effects Coordinator: Kelly L'Estrange  
Digital Effects Coordinator: Lisa Spence Lissak  
Compositor: Rick Dunn  
Animators: Keith Smith, Vernon Wilbert, Keiji Yamaguchi, Bernd Angerer  
Digital Artists: Shannan Burkley, Christine Lo

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Realization of 3D environments.

Director: Bruno Aveillan  
 Producer: Quad Productions  
 Contributors: Yves LePeillet, Marie-Laure Laffitte,  
 Yann Blondel, Laurent Briet, Constantin Chamsky,  
 Julien Villanueva, Marianne Barcilon

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## The Physics of Cartoons Part I



"The Physics of Cartoons Part I" is a pseudo-scientific demonstration of the principles of cartoon physics featuring two clueless characters who are demonstrated to destruction. The 3D characters were created with proprietary rendering techniques with a mix of 2D and 3D backgrounds.

Director: Steph Greenberg  
 Producer: Kellie-Bea Rainey  
 Story: Sandra Frame, Mike Gasaway,  
 John Goodman, Steph Greenberg  
 Art Director: Gary Eggleston  
 Storyboard/Character Design: Sandra Frame  
 Lead Animator Act 1: Steph Greenberg  
 Lead Animator Act 2: Mike Gasaway  
 Lead Animator Act 3: Patrick Lowery  
 Character Animator: Josh Scherr  
 EFX Animator: Sean McLaughlin  
 Assistant Animator: Rachel Levine,  
 Blake Eggleston  
 Character Modeler: John Goodman  
 Prop Modelers: Mike Amron, Jamie Lloyd  
 Technical Director: Doug Cooper  
 Scene Planner: Christopher Janney  
 BG Artists: Paula Eggleston, Briar Lee Mitchell,  
 Melanie Okamura, Becca Ramos  
 Production Assistants: Connie Fong,  
 Heather Gasaway, Pam Kay



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 +1.310.398.2774 fax  
 shedevil@netcom.com

"Pings" is a pilot for a future series (26 x 1.5 minutes) featuring cute characters in "politically incorrect" situations with an original graphics style. The first episode, inspired by "Luxo Junior," was made with 3D Studio Max with in-house rendering software.

Director: Pierre Coffin  
 Producer: Exmachina, Lionel Fages  
 Contributor: Elizabeth Patte

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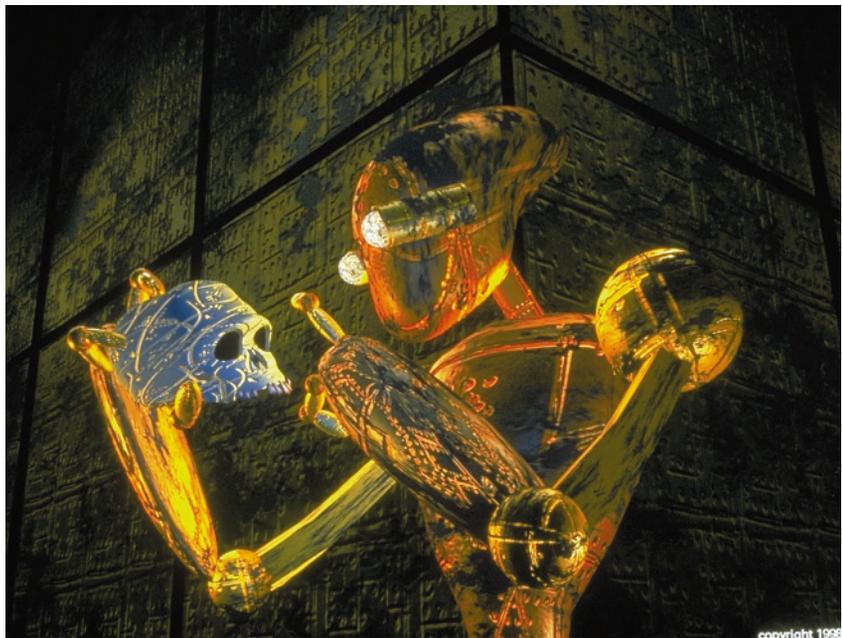
**playground Zero**

As man has toyed with science, science will play in man's image. A man-made robot observes and contemplates a human skull. Instinctively, it begins to play one of his creator's childhood games: hopscotch. With its creator's imperfections imbedded within his design, structure, and reasoning capabilities, the robot is resigned to follow the path of his creator.

Director: Mike Spring  
 Producer: Ringling School of Art and Design  
 Concept, animation, music composition,  
 audio mix: Mike Spring  
 Faculty Advisor: Claudia Cumbie-Jones  
 Video/audio support: Phil Chiocchio  
 Software: Alias PowerAnimator, Composer  
 Hardware: SGI O2

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## Pole Network

 sigKIDS Theater

"Pole Network" is a news station based at the North Pole. A caribou and a white polar bear, as anchor and reporter, report the news with a laugh.

Director: Jun Asakawa  
Producer: Takashi Fukumoto, Yukio Kotanaka  
Produced by Polygon Pictures Inc.  
Executive Producer: Toshifumi Kawahara  
Animation Director: Minoru Okamoto  
Technical Directors: Yuriko Amemiya,  
Tamotsu Maruyama  
Music: Tomoki Ookame  
Character Designers: Minoru Okamoto,  
Yuriko Amemiya, Sayuri Matsushita  
CG Painter: Kazuhisa Shimizu  
Sound effects: Masahiko Ueda  
Editor: Kazuhisa Takahashi  
Technical support: Tamotsu Maruyama,  
Keiichi Kameda  
Production Assistant: Kazuhiro Mishima

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+81.3.3474.4322 fax  
nakaji@ppi.co.jp



This family of four lives an ordinary life with delicate habits and gestures.

Director: Jun Asakawa  
Producer: Takashi Fukumoto, Yukio Kotanaka  
Produced by Polygon Pictures Inc.  
Executive Producer: Toshifumi Kawahara  
Technical Directors: Aya Salata, Akira Taguchi,  
Shinpei Murakami  
Music: Akira Senju, Akio Adachi (Seven notes)  
Sound effects: Masahiko Ueda  
Editors: Kazuhisa Takahashi, Katsuro Watanabe  
Production Assistant: Kazuhiro Mishima

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Director: David Elliott  
Producer: David Elliott

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Director: Ryan Swaim  
Producer: Ryan Swaim

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Progression In-Between

Director: Chris Chisholm  
Producer: Chris Chisholm

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Quest for Camelot

Synopsis of CGI elements incorporated into this 2D animated film.

Director: Frederik Du Chau  
Producer: Dalisa Cooper-Cohen

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## Race For Atlantis - in Imax 3D



A 3.5-minute motion-base ride film that is entirely computer generated.

Director: Arish Fyzee  
Producer: Barry Kemper  
CG Producer: Ellen Coss Head  
Technical Director: Nik Titmarsh  
Technical Director: Liz Kupinski  
Image © 1998 Forum Ride Assoc.  
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Due to production constraints and the impracticality of location-photography, Digital Domain, under the supervision of Kevin Mack and Director John Avnet, brought the wonder and majesty of China's National Monument to life using 3D painting techniques, featuring CG kite animation and seamless compositing.

Director: Jon Avnet

Producer: Jon Avnet, Jordan Kerner,  
Rosalie Swedlin

Visual Effects Supervisor: Kevin Mack

Visual Effects Producer: Julian Levi

Digital Compositing Supervisor: Jammie Friday

Tracking Supervisor: Vernon R. Wilbert Jr.

Digital Compositors: Mimi Abers, Rick Dunn,  
Craig Halperin, Lawrence Hess, Jeff Olm,  
Hudson Shock, Sonja Burchard

Digital Matte Artists: Shannan Burkley,  
Roger Gibbon, David Bleich,  
Wayne John Haag

Digital Kite Animation: Eric Barba,  
Michael Fadollone

Digital Artists: Danny Braet, Swen Gillberg

Rotoscope Artists: Robert Andrew David Frick I,  
Tamara Nobles, Byron Werner

Visual Effects Coordinator: Kelly L'estrange

Digital Effects Coordinator: Lisa Spence Lissak

Disk Space Coordinators: Stephen Gurley,  
Allyse Manoff

Visual Effects Editors: Allen Cappuccilli,  
Debra Wolff

Projectionist: Jim Smith

Scan/Record Manager: Joseph Goldstone

Scan/Record Supervisor: Chris Holsey

Scan/Record Operator: Chad E. Collier

Color Grading Supervisor: Jeff Kalmus

Technical Assistants: Alan Precourt, Grant Viklund

Creative Supervisor: Price Pethel

Executive In Charge Of VFX Production:

Nancy Bernstein

Special thanks to all the Digital Domain  
support staff



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A sea lion dreams of swimming freely in the ocean, when it is awakened by the reality that it is time to perform its daily routine in a man-made facility, illustrating the cruelty of placing animals in captivity for the mere purpose of our entertainment.

Software: Alias PowerAnimator, Composer  
 Hardware: SGI O2  
 Director: Christina Garranchan  
 Producer: Ringling School of Art and Design  
 Concept, animation, audio mix:  
 Christina Garranchan  
 Faculty Advisor: Ed Cheetham  
 Video/audio support: Phil Chiochio

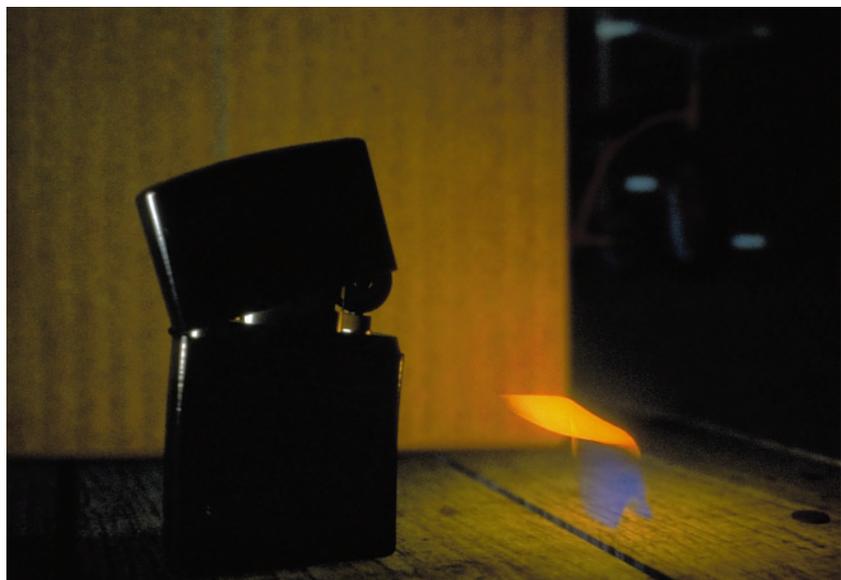
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"Rein Check" is a visual metaphor for the conflict in a young child between the desire for independence and the need to be nurtured and watched over. Children have an unquenchable urge to explore their surroundings, but sometimes this can be a dangerous quality. As a rambunctious little flame wants nothing more than to explore the attic that it calls home, its parent lighter is very aware of the dangers that lurk around every corner.

Software: Alias PowerAnimator, Composer,  
 Macromedia SoundEdit 16, Deck II,  
 Adobe Photoshop  
 Hardware: SGI O2 , Power Macintosh  
 Director: Erik Winquist  
 Producer: Ringling School of Art and Design  
 Concept, animation: Erik Winquist  
 Music Composer: Brian M. Kunnari  
 Audio mix: Erik Winquist  
 Faculty Advisor: Claudia Cumbie-Jones  
 Video/audio support: Phil Chiochio



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This technical/creative piece describes how a series of differently exposed photographs can be used to accurately record lighting information in a scene and how such lighting information can be used to illuminate synthetic objects with natural light.

Director: Paul Debevec

Producer: Paul Debevec

Contributors: Gregory Chew, Sami Khoury,  
Gregory Ward Larson, David Metzger, Kevin  
Deus, Jonathan Bach, Hal Wasserman, Tim  
Hawkins, Charles Ying

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## Rice Vévés

 Animation Theater  
 sigKIDS Theater

Technique: Explore, Composer, and Photoshop

Director: Stéphane Keller

Producer: ENSAD

Collaborator: Alexis Vovos

Music: Alexi Vovos, Stéphane Keller,  
Jean-François Bonneaud

### Contact

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Follow the zany antics of a rock, a piece of paper, and a pair of scissors fighting for survival. Inspired by the well-known hand duel.

Director: Matt Rhodes  
Producer: Matt Rhodes

*Contact*

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123 Oceano Avenue, #12  
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matt@sbst.com/wacky@silcom.com



Director: Gavin Miller  
Producer: Gavin Miller  
Post production: Charles Lassiter  
Color design: Elaine Brechin

*Contact*

Gavin Miller  
Interval Research Corporation  
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miller@interval.com



## SIGGRAPH 98 Interactive Experience



Come be a participant and pixel in the world's largest video game. Cinematrix\* returns to the SIGGRAPH Electronic Theater with new games and old favorites. Cinematrix has updated its system to run on the world's most popular computing platform: Intel and Windows NT.

Graphics acceleration is the cornerstone of interactivity and Evans & Sutherland has joined forces with Cinematrix to showcase REALimage, its extreme-performance OpenGL acceleration technology, the graphics power of a mainframe compressed into a single VLSI device.



\*Cinematrix Interactive Entertainment Systems featuring Kinoetic Adventure

Director: Loren Carpenter  
Producer: Dave Tubbs  
Contributors: Cinematrix and  
Evans & Sutherland

### *Contact*

Cinematrix  
Rachel Carpenter  
+1.415.662.2274  
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Evans & Sutherland  
Ken Donoghue  
600 Komas Drive  
Salt Lake City, Utah 84108 USA  
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## SIGGRAPH In-Between

### In-Between Animation

Director: Michael Sanborn  
Producer: Michael Sanborn  
Nelson Max, Don Stredney, James Blinn

#### *Contact*

Michael Sanborn  
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### In-Between Animation

Director: Daniel F. Lazarow  
Producer: Daniel F. Lazarow

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### In-Between Animation

Director: Matt Omernick  
Producer: Matt Omernick  
Maria Palazzi

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## The Sitter

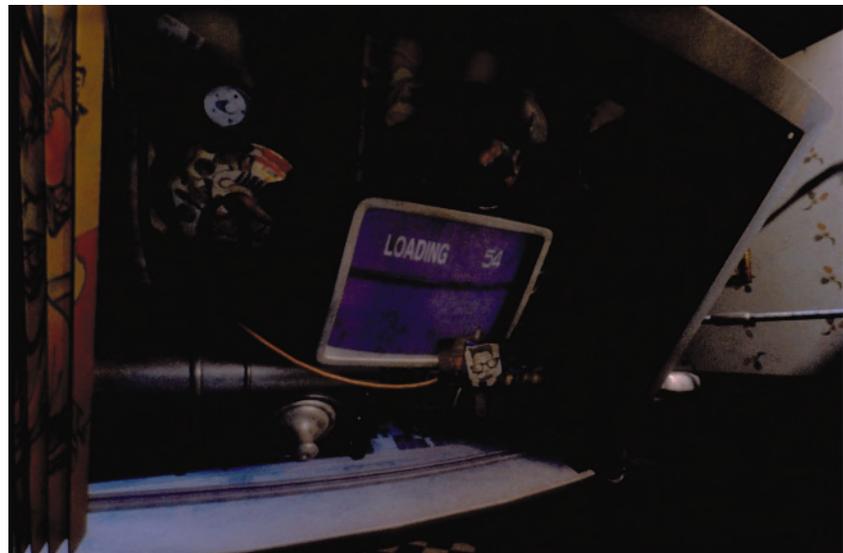


The story reveals an ironic relationship between humans and technology. The babysitter, a monitor-like appliance, is set up to take care of a baby when there is no one home. In the end, it reveals an intriguing riddle: "When technology is both our slave and master, how will the world be?"

Director: Liang-Yuan Wang  
Producer: Liang-Yuan Wang  
Special Thanks To: Li-Ling Yang  
Department of Computer Graphics &  
Interactive Media, School of Art and Design,  
Pratt Institute

#### *Contact*

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372 Dekalb Avenue, Apt. 4K  
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lwang@pratt.edu



"Small Soldiers" is an action-adventure extravaganza on a "small" scale. Thirteen highly detailed, animated characters and over 100 CG props were created for the film. These were closely integrated with the real puppets from principal photography, matching their unique look and stylized form of movement.

Visual Effects Supervisor: Stefen Fangmeier  
 Animation Supervisor: Dave Andrews  
 Visual Effects Producer: Kim Bromley  
 Visual Effects Co-Supervisor: Ellen Poon  
 Computer Graphics Supervisors: Gerald Gutschmidt, Erik Mattson  
 Digital Model Supervisor: Tony Hudson  
 Compositing Supervisor: Scott Frankel  
 Digital Color Timing Supervisor: Kenneth Smith  
 Lead Sequence Animators: David Byers Brown, Jenn Emberly  
 Animators: Scott Benza, Chuck Duke, Jason Ivimey, Heather Knight, Martin L'Heureux, David Latour, Julija Learie, Steve Lee, Neil Michka, Christopher Minos, Jacques Muller, David Parsons, Si Tran, Chi Chung Tse, Tim Waddy, Scott Wirtz, Michaela Zabranska, John Zdankiewicz  
 Computer Graphics Sequence Supervisors: Michael Di Como, David Meny, Sean Schur  
 Lead Computer Graphics Artist: Ken Wesley  
 Lead Composer: Marshall Krasser  
 Computer Graphics Artists: Joel Aron, Mimi Abers, Felix Balbas, Maurice Bastian, Kathleen Beeler, Patrick Brennan, Patrick Conran, David Deuber, Natasha Devaud, Jeff Doran, Gonzalo Escudero, Tom Fejes, Dean Foster, Todd Fulford, Jim Hagedorn, Mary Beth Haggerty, Christina Hills, Polly Ing, Mohen Leo, Terrence Masson, Mary McCulloch, Jennifer McKnew, Michael Min, Bruce Powell, Jason Rosson, Kevin Reuter, Jeffrey Shank, Daniel Shumaker, Christa Starr, John Stillman, Ken Ziegler  
 Visual Effects Art Director: George Hull  
 Visual Effects Coordinators: Alexandra Altrocchi, Amanda Montgomery, Michele Spina  
 Digital Modelers: Ken Bryan, Jim Doherty, Frank Gravatt, Alexander Pouchkarev, Larry Tan, Edward Taylor IV, Paul Theren, Omz Velasco  
 Viewpaint Supervisor: Susan Ross  
 Viewpaint Artists: Scott Bonnenfant, Bridget Goodman  
 3D Camera Matchmove Supervisor: Selwyn Eddy III

Location Matchmove Artists: Randy Jonsson, Lanny Cermak  
 3D Matchmove Artists: Terry Chostner, Wendy Hendrickson Ellis, Jodie Maier, Dani Morrow, Jeff Salzman, R.D. Wegener, John Whisnant, Alia Agha, Keith Johnson, Luke Longin  
 Lead Digital Paint Artist: Joanne Hafner  
 Digital Paint and Roto Artists: Deborah Fought, Patrick Jarvis, Sandy Ritts, Amy Shepard, Mike Van Eps, Matthew Wallin, Terry Molatore  
 Visual Effects Editors: Mike McGovern, Greg Hyman  
 Visual Effects Assistant Editor: Paul Vega  
 Assistant Concept Artist: Beth D'Amato  
 Visual Effects Production Assistants: Jodi Birdsong, C. John Benson  
 Film Scanning Supervisor: Joshua Pines  
 Film Scanning Operators: Randall Bean, George Gambetta  
 Negative Cutter: Andrea Biklian  
 Negative Line-up: James Lim  
 Projectionist: Kenn Moynihan  
 Digital Plate Restoration: Nancy Jencks, Jason Snell  
 Software Research and Development: Rod Bogart, John Horn, Zoran Kacic-Alesic, Cary Phillips, Jeff Yost  
 Production Engineering Supervisor: Joe Takai  
 Production Engineering Software: Eric Enderton, Tommy Burnette, Ari Rapkin  
 Computer Systems Engineering: Sandeep Casi, Marty Miramontez, Jim Smentowski

Information Systems: Lam Van To, Stewart Birnam, Michael Thompson  
 Video Engineering: Dana Barks, Dan Large  
 Visual Effects Director of Photography: Patrick Turner  
 Camera Assistant: John Gazdik  
 Lead Pyro Technician: Geoff Heron  
 Key Grip/Electric: Tim Morgan  
 Effects Technician: Matt Heron  
 CG Resource Assistant: Michelle Motta  
 Technical Support Staff: Jennifer Gonzalez, Dawn Martin, Kela Hicks, Douglas Applewhite, Matthew Blackwell  
 Computer Graphics Staff: Vicki Dobbs Beck, James Johnson  
 ILM Senior Staff: Patricia Blau, Gail Currey, Chrissie England, H.B. Siegel, Jim Morris

### Contact

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 Industrial Light & Magic  
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## The Smell of Horror



Flip, a good old southern boy, drives to a strange dark house to test for toxic fumes. An eager little man answers the door, starting Flip's unusual day.

Director: Mitch Butler  
Producer: Mitch Butler  
Contributors: Mitch Butler, David Alan Earnest,  
Jim Stoner, Flip Perkins

### Contact

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Mitch Butler Company, Inc.  
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mitch@mitchbutler.com



## Sony Playstation - Jet Moto II/Old Lady



Commercial.

Director: Mark Gustafson  
Producer: Leslie O'Connor  
Animation Director: Jeffrey Bost  
Executive Producer: David Altschul  
Senior Producer: Marilyn Zornado  
Production Assistant: Jeff Berback  
Storyboard Artist: Guy Burwell  
Character Design: Jeffrey Bost  
Animator: Kirby Atkins  
Technical Director: Steve Bailey  
Stage Manager: Octavia Hunter  
Editor: Doug Zabroskinus, Scott Sundholm  
Assistant Editor: Colin O'Neill, Justin Callaway  
Flint Operator: Rebecca Bowen  
Live Action: Food Chain Films  
Sound: Slappo, LA  
Post Production House: Downstream  
Agency: TBWA Chiat/Day  
Agency Creative: Jerry Gentile  
Agency Producer: Phillip Lopez  
Agency Art Director: John Payne  
Agency Writer: Gary Pascoe  
Completion Date: 23-Oct-97

### Contact

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## Southeastern United States Fly-By

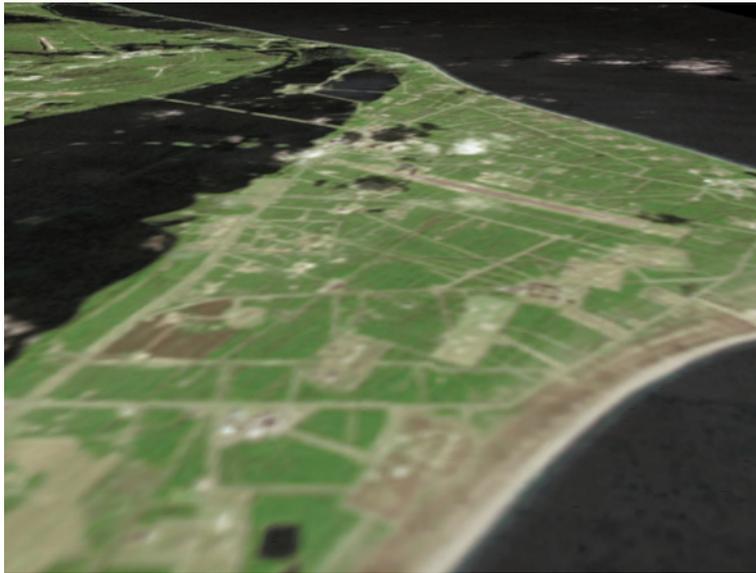


An animated flight through the southeastern United States created with computer-generated geographically accurate terrain.

Director: Vibeke Friis-Christensen  
Producer: Vibeke Friis-Christensen  
Software Engineering: Satish Annapureddy

### Contact

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Visual Insight / USURF &  
Utah State University Art Department  
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Logan, Utah 84341 USA  
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+1.435.797.4366 fax  
bconklin@rpark.sdl.usu.edu



## Spacetime Swing



"Spacetime Swing" illustrates a new technique for retargetting motion capture data to characters of different sizes.

Director: Michael Gleicher  
Producer: Michael Gleicher  
Rendering and Video Production Assistance:  
Yann Bertaud  
Video Production Assistance: Autodesk  
Marketing Support Team

### Contact

Michael Gleicher  
Autodesk  
2465 Latham Street, Suite 101  
Mountain View, California 94040 USA  
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+1.650.943.1830 fax  
gleicher@cs.cmu.edu



From the bottom of the ocean to infinite space, this segment shows how computer graphics can create and transcend worlds.

The sphere and all lighting (atmospheric and from divers' helmets) was computer generated. The jellyfish were modeled in Alias Power Animator, animated in Softimage, trained by our animators to intimidate and attack, given proprietary motion blur and rendered in Renderman. Underwater shots involved a combination of greenscreen, computer generated bubbles (created with Dynamation), set extensions and random, computer generated dust.

The shots of the nebulae utilized computer generated planets and starfields, and a host of proprietary tools including a proprietary volume renderer.

Director: Barry Levinson  
 Visual Effects Supervisor (WB): Jeff Okun  
 Producer: Cinesite Digital Studios  
 Visual Effects Supervisor: Carlos Arguello  
 Digital Effects Producer: Aaron Dem

*Contact*

Jill Smolin  
 Cinesite Digital Studios  
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 Los Angeles, California 90038 USA  
 +1.213.468.2102  
 +1.213.468.4404 fax  
 jill@cinesite.com

A 10-second animation showing art, technology, science, and education in a quick fly-through.

Director: C. Alan Crandall  
 Producer: C. Alan Crandall  
 Contributors: Sante Fe Community College

*Contact*

C. Alan Crandall  
 Sante Fe Community College  
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 +1.505.982.2661 fax  
 calannm8@ix.netcom.com

## Stà Calando Il Soul

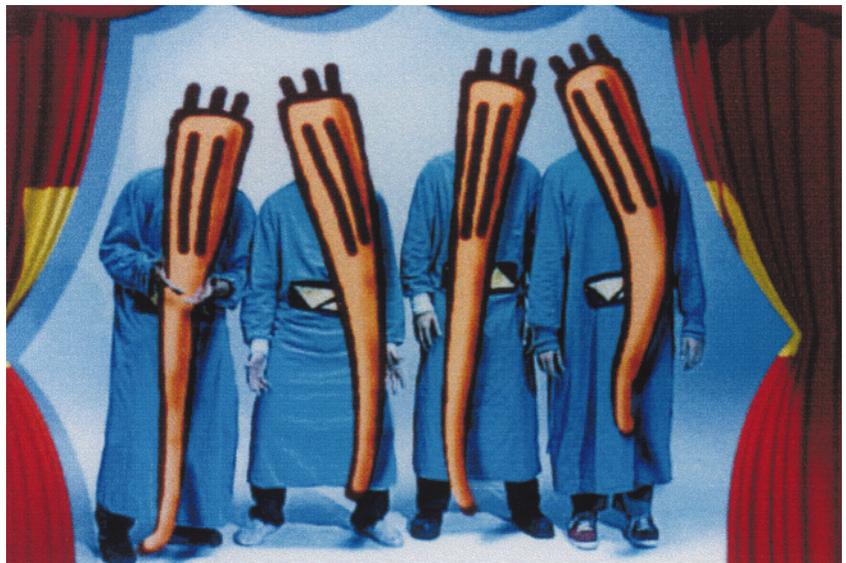
 Electronic Theater

This videoclip suggests an irriverent animated metaphor for the arrogance and audacity of power. Reality and fantasy follow each other frenetically after joining together, flowing on a river of collective madness that makes its own justice.

Director: Licio Esposito  
Producer: Declic-Digital Communication

### *Contact*

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"Starship Troopers" follows the adventures of its heroes as they battle the Arachnid Army, a vicious armada of insect warriors on planets across the Galaxy. Tippett Studio relied exclusively on computer graphic technologies to design, model, animate, light, and composite 225 digital bug shots, some with thousands of Bugs.

Creature Visual Effects Produced by:

Tippett Studio

Creature Visual Effects Supervisor: Phil Tippett

Design Vfx Supervisor: Craig Hayes

Vfx Producer: Jules Roman

Production Supervisor: Alonzo Ruvalcaba

Supervisor Character Animation Department:

Trey Stokes

Lead Character Animators: Blair Clark,

Pete Konig, Adam Valdez

Character Animators: Jeremy Cantor, Kirrie Edis,

Tom Gibbons, Randall Link, Mark Schreiber,

Tom Schelesny, Gary Siela, Tanya Spence,

Robin Watts, John Zdankiewicz

Supervisor Art Department: Paula Lucchesi

Lead Digital Painter: Belinda Van Valkenberg

Digital Painter: Joel Friesch

Digital Model Makers: Martin Meunier,

Merrick Cheney

Supervisor Digital Lighting: Julie Newdoll

Lead Digital Lighting: Larry Weiss, Greg Butler

Digital Lighting: James Flux, Dean Hadlock,

Joe Littlejohn, Sara Mathew, Desiree Mourad,

Steve Reding, Saba Rofchaei, Scott Souter,

Allison Torres, Bart Trickle

Match Movers: Andy Chen, Aaron Kohr,

David Woolsey

Digital Post Camera: Frank Petzold

Lead Digital Fx Animator: Darby Johnston

Digital Fx Animators: Eric Leven, Al Arthur

Supervising Compositor: Brennan Doyle

Lead Digital Compositor: Zoe Peck

Digital Compositors: Alan Boucek, Greg Derochie,

Colin Epstein, William Eyler, Charles Granich,

Jim Mcvay, Alfred Murrel, Jeff Sargent,

Russ Sueyoshi, Helen Verhoeven

Supervisor Digital Rotoscope: Joanne Ladolcetta

Digital rotoscope: Renee Binkowski, John Dunlap,

Grace Murphy, Betsy Nofsinger,

Sabrina Riegel, Cathy Waterman

Operations Manager: Jeff Stringer

Vfx Coordinators: Julie Garrard, Ken Kokka,

Suzanne Lowe, Chris Paizis

Production Accountant: Suzanne Niki Yoshii

Senior Software Developer: Doug Epps

Lead Software Developer: Josh Minor

Software Development Manager: Kim Jones

Software Developers: Adrienne Othon, Ian Reid,

Roger Rohrbach

Film I/O Supervisor: David Rosenthal

Digital Scanner Operator: Steve Stanton

Digital Camera Operator: Peter Juneau

Color Correction: Page Frakes, Haunt Rama

Film I/O Coordinator: Molly Lynch

Editor: Kevin Rose-Williams

Assistant Editors: Maia Veres, Tom Krebs

Sculptor: Ron Holthuysen

Fabricator: Natalie Lopez

Mold Maker: John Reed

Systems Manager: Thida Cornes

Systems Administrators: Christian Rice,

Hendrik Te Winkel

Data Wranglers: Mike Palmieri, Jeff Branion

Tech Support: Frank Cox, Jeshua Lacock

Systems Assistant: Seth Roberts

Purchasing Agent: Linda Landry-Nelson

Accounting Assistant: Sherry Wong-Kitamura

Foreman: Paul Silva

Assistant Foreman: Ben Harris

Production Assistants: Alexi Taylor, Neal Hoover,

Vicki Wong

Assistant to Supervisors: Kc Rosenberg

Intern: Katherine Aaron

### Contact

Jeff Stringer

Tippett Studio

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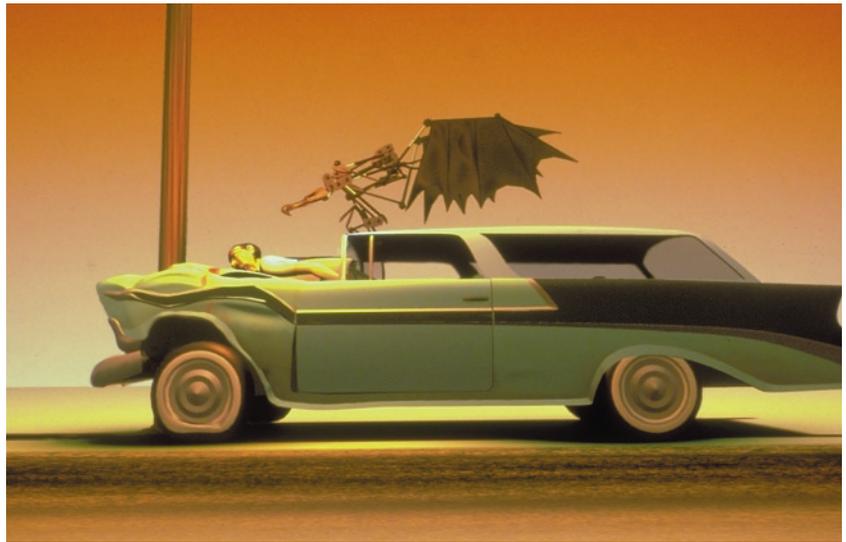


Destruction promotes evolution?  
A mechanical vulture violently enters  
the corpse of a car crash victim in an  
attempt to become human.

Software: Alias PowerAnimator, Composer  
Hardware: SGI O2  
Director: Scott Curtin  
Producer: Ringling School of Art and Design  
Concept, Animation, Audio Mix: Scott Curtin  
Music Composer: Timothy Kuder  
Faculty Advisor: Ed Cheatham  
Video/Audio Support: Phil Chiocchio

*Contact*

Scott Curtin  
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Extreme sports taken to a new level.

Director: Joey Lessard  
Producer: NAD Centre  
Music: Éric Larouche

*Contact*

Jean-François William  
NAD Centre  
335 de Maisonneuve East, Bell Mediasphere  
Montreal, Québec H2X 1K1 Canada  
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william@nad.qc.ca



Director: Sandra Singler  
 Producer: Sandra Singler

*Contact*

Sandra Singler  
 Texas A&M Visualization Laboratory  
 216 Langford Architecture Center  
 College Station, Texas 77843-3137 USA  
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 +1.409.845.4491 fax  
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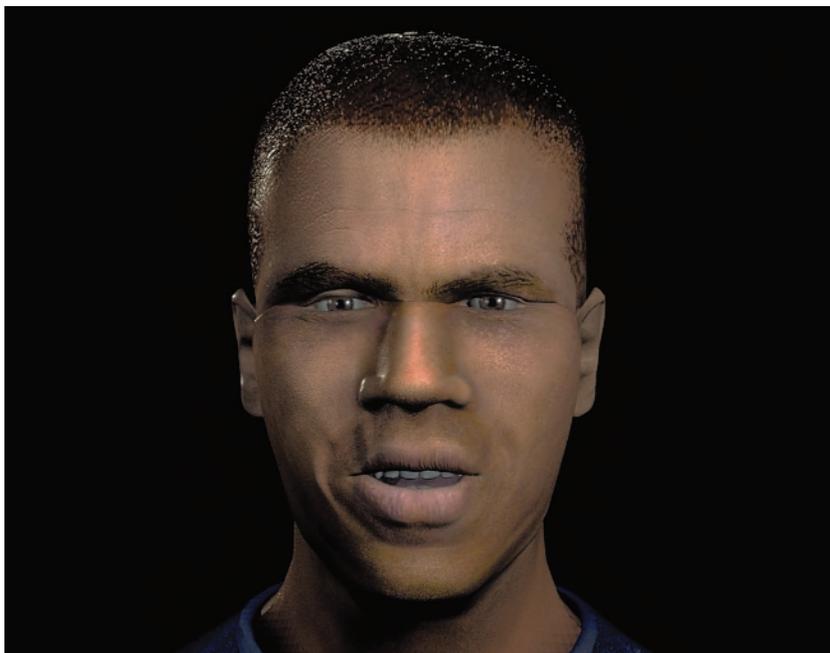
## Synthetic Speech

Creation of realistic, three-dimensional, synthetic human speech and animation is an ongoing R&D project at Autometric, Inc. Speech-acoustic and motion-capture data were gathered at Biomechanics Inc, analyzed with computer speech recognition techniques and Principal Component Analysis at Entropic Research Labs, and rendered using Maya software.

Director: Kim R-J Wallace, Gwenn Afton-Bird,  
 Michael Walsh  
 Producer: Gwenn Afton-Bird, Kim R-J Wallace,  
 Michael Walsh  
 Autometric, Inc.: Mike Darweesh, Thom Goertel,  
 Melissa Durley  
 The Creative Visualization Division: Entropic  
 Research Labs: David Talkin, Levent Arslan,  
 Francisco Gimenez de los Galanes,  
 Jack Unverferth  
 Special Thanks: Biomechanics, Inc.,  
 Greg Dismond, Tony Moraco, Mike

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 +1.703.923.4001 fax  
 mdurley@autometric.com



## Tequila Rescue



Chico saves the day. This is the story of Chico the Chihuahua rescuing a skier. He reaches for his "tequila" but is surprised to find it empty. He realizes he drank the tequila himself while partying with the St. Bernards! He brings the shotglass below camera level, and...does his business. "Another one saved!"

Director: Mikkel Caiafa  
Producer: Ringling School of Art and Design  
Music composition, audio mix: Mikkel Caiafa  
Faculty Advisor: Jim McCampbell  
Video/audio support: Phil Chiochio  
Software: Alias PowerAnimator  
Hardware: SGI O2

### Contact

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+1.941.359.7517 fax  
strovas@rsad.edu



## Tierras



Director: Pablo Santa Maria and Salud Gismera  
Producer: Pepe Jordana  
Contributors: Gabriel Ibañez, Ricardo Cortés,  
Angel Hernandez Zoido, José Antonio Gomez

### Contact

Salud Gismera  
Prosopopeya Producciones  
C/Rey Francisco,3 B/dcha  
28008 Madrid, Spain  
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+34.1.5413387 fax  
pixelcoop@pixelcoop.com



## Tomorrow Never Dies



This sample of 3D and compositing show how film can now depict the impossible in this sequence of Tomorrow Never Dies.

Director: Roger Spottiswoode  
Producer: Cinesite Digital Studios  
Visual Effects Producer (Eon): Mara Bryan  
Digital Effects Producer (Cinesite): Michael Elson  
3-D Animation: Jonathan Privett  
2-D Compositing: Matt Johnson  
2-D Compositing / 3-D Animation: Tom Wood  
2-D Compositing: Ed Hawkins

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Los Angeles, California 90038 USA  
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jill@cinesite.com

## Trade Secrets of the Violin Masters



This technological fusion unites various motion capture, scanning, and animation techniques as part of an initiative to capture and replicate the playing characteristics of the world's Master Violinists both for preservation of their legacy and for the study within an interactive educational program series.

Director: Laurence Leydier  
Producer: IMIT  
Contributors: Interactive Media Productions,  
Nothern Digital, Cyberware, MIT,  
Biomechanics, Waxworks

*Contact*  
Laurence Leydier  
Innovative Music Instructional Technology  
15 English Place  
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lleydier@total.net



## UN Convention on the Rights of the Child

 sigKIDS Theater

This kaleidoscope TVC presents children's rights through the eyes of a child's imaginative and fantasy world. From creative concept through to final product took less than six weeks. Custom-programmed applications and Softimage were utilised.

Director: Bobbie Wong  
Producer: Christina Yan  
Contributors: Centro's animators

### Contact

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Centro Digital Pictures Ltd.  
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## Underwater Sunbeams

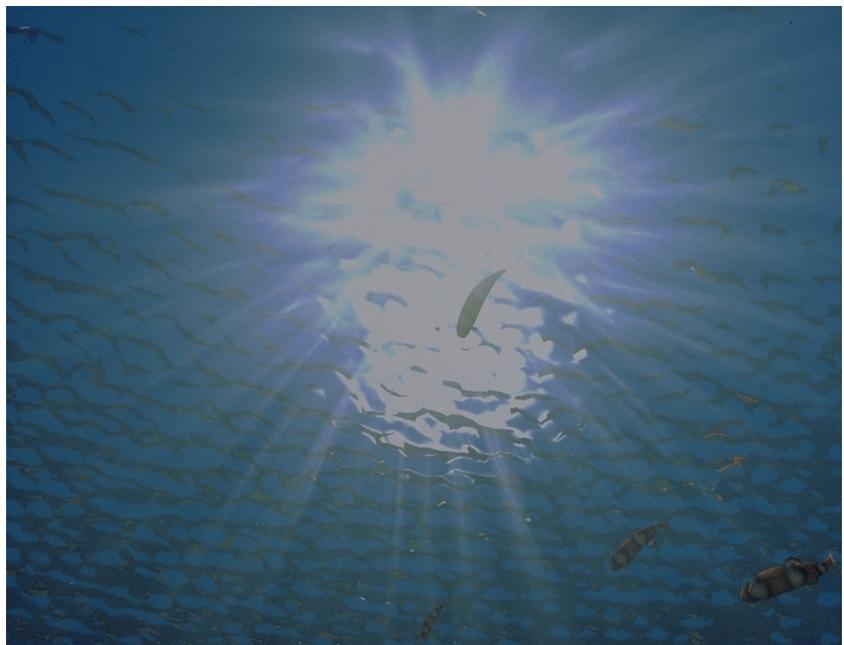
 Electronic Theater

Physically correct simulation of sunlight scattered in a participating medium.

Director: Henrik Wann Jensen  
Producer: mental images GmbH & Co. KG  
Per H. Christensen, Charlotte Manning,  
Steffen Volz

### Contact

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mental images GmbH & Co. KG  
Fasanenstrasse 81  
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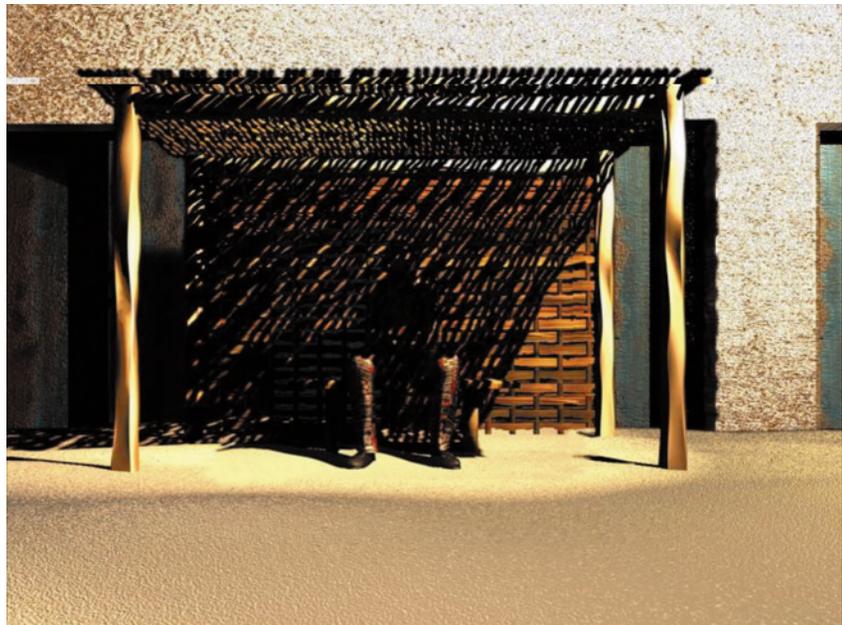
Director: Brian Burks  
Producer: Brian Burks

*Contact*  
Brian Burks  
c/o S. Trovas  
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It makes you remember that there are places where surfaces are not flat and angles are not straight.

Technique: Alias | Wavefront's Explore  
and Composer  
Director: Guy Brochard  
Producer: ENSAD

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"CarrHot," Olga's last star appearance is now available on video...

Director: Luc Otter  
 Producer: Paul Nightingale, Hans Van der Sluys  
 Director, Animation, Modeling: Luc Otter  
 Animation, Modeling: J. P. Boies  
 Lighting, 3D Paint: René Morel  
 Modeling, 3D Paint: Stephanie Combe  
 Modeling, Rendering: Guy Lampron  
 Plug'in/Tools, Rendering: Christophe Bernaud  
 Compositing & Special Effects: Patrick Bergeron  
 Soundtrack & Music: Normand Roger with  
 Denis Chartrand & Nathalie Sanguy  
 Production: Paul Nightingale  
 Production: Hans Van Der Sluys

*Contact*

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 +1.514.879.3362 fax  
 paul@behaviour.com



## Virtual Bill Highlights

Virtual Bill was performed and animated for MTV networks using Protozoa's proprietary, real-time software Alive!

Character modeling and performance: Steve Rein  
 Animator/Digital Puppeteer: Emre Yilmaz  
 Producer: Tom Laskawy  
 Executive Producer: Jane White  
 Head of Production: Marc Scaparro  
 Software development: Eric Gregory  
 Production Assistants: Jessica Anthony,  
 Benjamin Nygren

*Contact*

Jane White  
 Protozoa  
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 +1.415.522.6522 fax  
 jane@protozoa.com



This sequence shows further development and sophistication of Arete water, with the complexity of adding atmospheric and environmental variables. In addition, the clouds highlight Cinesite's proprietary volume renderer. Using a combination of Alias, Dynamation, Perlin noise, Renderman, proprietary code and the above-mentioned proprietary volume renderer, artists were able to use — and render efficiently — between 5 million and 10 million particles at any given time.

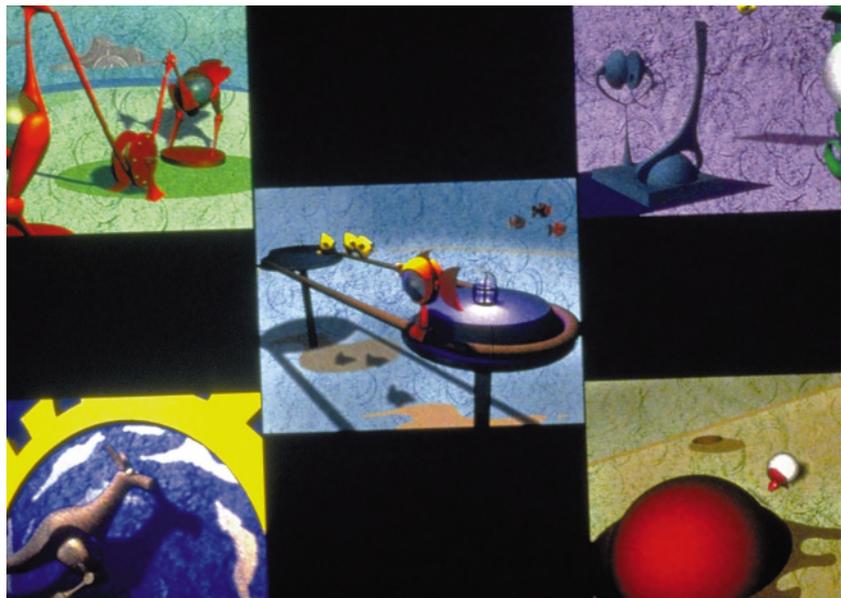
Director: John Bruno  
 Producer: Cinesite Digital Studios  
 Visual Effects Supervisor: Jay Riddle  
 Digital Effects Producer: Ariana Lingenfelter

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 Jill Smolin  
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Consumerism is a perpetual cycle, in the which the consumer is both the instigator and the victim. Mechanical creatures act out different aspects of consumerism in the form of five absurd cycles. Like the modern consumer, the creatures are trapped by their perpetual actions.

Software: Alias PowerAnimator,  
 Composer, Photoshop  
 Hardware: SGI O2, Macintosh  
 Director: Amanda Dague  
 Producer: Ringling School of Art and Design  
 Concept, animation, audio mix: Amanda Dague  
 Faculty Advisor: Ed Cheetham  
 Video/audio support: Phil Chiochio

*Contact*  
 Amanda Dague  
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## Walk This Way

 sigKIDS Theater

This sequence of animations forms the narrative path through "Walk This Way," a USA Network documentary on children and discrimination. On our trip, we witness the gnats, whose annoyances spark our animated journey from story to story. This project encompassed paintings, illustrations, and 2D digital artwork assembled and animated with 3D elements in Softimage.

Director: Jane C. Wagner, Tina DiFeliciano  
Producer: Jane C. Wagner, Tina DiFeliciano  
Executive Producers: Bonnie Hammer,  
Steven Feder  
Co-Producer: Lorna Thomas  
Animation Art Designer: Maria Pandolfi  
Digital Animation Produced by:  
Balsmeyer & Everett, Inc.  
Animation Producer: Kathy Kelehan  
Animation Supervisor: Daniel Leung  
Animators: Matt McDonald, Amit Sethi  
Digital Artists: Tomoko Shin, Lisa L. Lucas

### Contact

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## Whose Hat is That?

 Animation Theater

A clever hat shop manager saves the day.

Director: Cassidy Curtis  
Producer: David Salesin

### Contact

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Department of Computer Science and Engineering  
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## Wild River – motion ride

 Electronic Theater

“Wild River” is a motion-base ride in which 12 people experience the thrills of white-water rafting. The guests are encompassed by a 160-degree, wide-view vision seamlessly projected by three line-doubled video projectors on a cylindrical screen (3m x 11m).

Director: Shinji Torigoe  
Producer: Shingo Yasumaru  
Contributors: Haruyuki Sekikawa, Kazuhiko Nagai,  
Shinji Iei, Izumi Obata, Makoto Fukushima, Rui  
Sasaki, Toshinori Takata, Yumiko Takahashi,  
Ryo Takahashi, Yoshimi Saito, Yukiko Isobe,  
Takamasa Namiki, Toshiyuki Kuroiwa, Junichi  
Kanzaki, Mitsuhiro Toike

### Contact

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This story is about how different people react to technology in different ways. A present day witch just ran out of magic poisons, so she calls a 1-800 number for witches' supplies on her cordless phone. Of course, she is put on hold. Her whole day is wasted without any results. Therefore, she decides to do something about it.

Director: Maria Pavlou

Producer: Ringling School of Art and Design

Concept, Animation, Audio Mix: Maria Pavlou

Music Composer: The Mix Broadcast Music Library

Faculty Advisor: Jim McCampbell

Video/Audio Support: Phil Chiocchio

Software: Alias PowerAnimator 8.1,

Composer 4.5, Premiere 4.2

Hardware: SGI O2

### *Contact*

Maria Pavlou

c/o S. Trovas

Ringling School of Art and Design

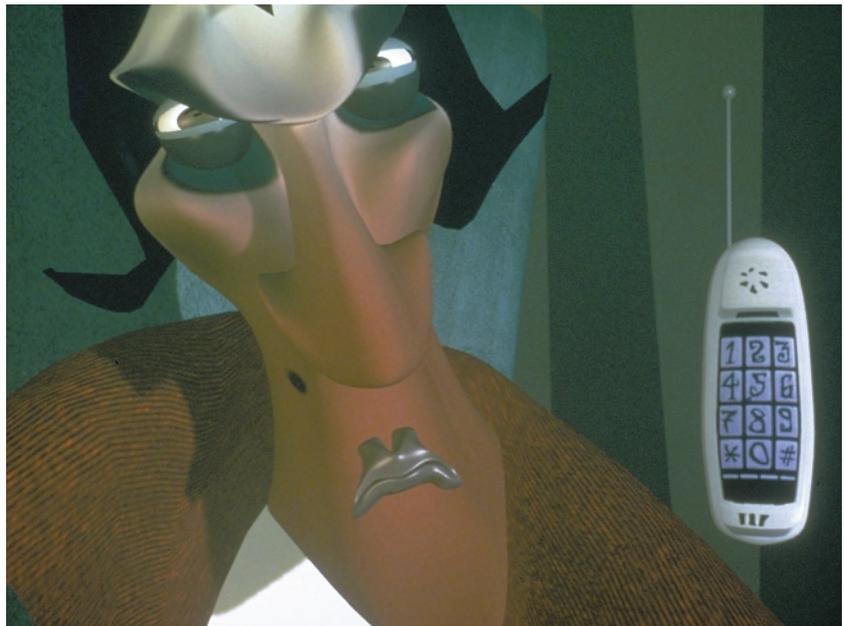
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This is an in-between with flowers and a spider.

Director: Scotty Sharp

Producer: Scotty Sharp

### *Contact*

Scotty Sharp

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## Zaijian

 Electronic Theater

Pilot film for an original full CG movie.  
Set in an imaginary Asian city in the  
near future, it tells the story of a child  
who is trying to survive in a city rav-  
aged by civil war.

Director: Nobuto Ochiai  
Producer: Nobuto Ochiai  
Character created by Hiromi Hayashi.  
Special thanks to Kensuke Yamamoto and  
Miwako Fukawa.

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