

A Brief History of SIGGRAPH Art Exhibitions: Brave New Worlds

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In 1981, the Association for Computing Machinery's Special Interest Group on Computer Graphics (ACM/SIGGRAPH) sponsored its first exhibition of computer art in conjunction with the annual conference on computer graphics. The 1989 Art Show will be the ninth SIGGRAPH exhibition of computer-aided art. The present effort can not be understood fully without examining the background and scope of previous exhibitions. During this short history SIGGRAPH Art Shows have become important to computer artists since they are the major sites for the exhibition of new work.

The relationship between the visual research produced by artists and that produced by scientists has always been acknowledged by the computer graphics community. Even before the first SIGGRAPH conference in 1974, artworks were exhibited occasionally at ACM conferences. For example, the 1970 ACM conference held in New York included an exhibition of computer-aided works. Some of these early computer pieces were reviewed by John Canaday in the *The New York Times*. He found them interesting but not satisfying, as indicated by the title of his article: "Less Art, More Computer, Please" [1]. Animation festivals were held regularly at the conferences. The dynamics of motion, as exemplified by computer-generated animation, has always been admired and supported by the association. Animation was regarded as the most viable use of both the technology (the medium) and the synergy (the changes in perception due to use of the machine.)

Several art-related events preceded the organized art exhibitions at the SIGGRAPH conferences. In 1977 and 1978, Joseph Scala produced fashion shows of garments created from computer-printed fabric. The design and production of the garments were a collaborative effort among a surface pattern designer, a fashion designer and computer graphics students from Scala's art department at Syracuse University. The 1981 conference included a frame-buffer demonstration using AED frame buffers and Barco monitors to display art and research from the New York Institute of Technology (NYIT), and works by artist David Em. It was programmed and managed by Julian Gomez. Artworks have been displayed as photographs on the equipment, or alongside it, at various conferences to highlight technical innovations.

In 1980 the idea for a formal art exhibition for SIGGRAPH conferences was conceived. After observing photographs and a printed fabric installation in a manufacturer's booth, artist Darcy Gerbarg suggested to SIGGRAPH officers that an art exhibition be created for the next conference. Her proposal to the 1981 conference chairs resulted in the first formal SIGGRAPH art show, Computer Culture Art Show '81. Consistent with SIGGRAPH policy on all new projects, the first art show was intentionally limited in scope

and budget. However, Darcy Gerbarg was able to obtain part of the High Art Technology show exhibited at the Library of Congress in April of 1981. It traveled from Washington to the Electro Arts Gallery in San Francisco, where Ray Lauzana directed the installation. A version of the High Art Technology exhibition was then scheduled for the July 1981 SIGGRAPH conference. Darcy Gerbarg and J. J. Larrea put together the entire show, framing all of the pieces and hanging the works. The works shown were flat, two-dimensional pieces that were easily transportable from site to site. The exhibition was mounted in the new city hall close to the SIGGRAPH conference site in Dallas, Texas. The general consensus among SIGGRAPH Conference attendees was that show the was an excellent idea. From Dallas the show traveled to the Flavio Belli Gallery in Toronto, Canada. A black-and-white catalog listing the artists and titles was printed, sponsored by the Canadian Ministry of Culture and Recreation and by the Photo/Electric Arts Foundation.

The artists and scientists represented in the 1981 show included Rebecca Allen, Will Anielewicz, Bill Apgar, Michael Assante, Colette and Jeff Bangert, James Blinn, Loren Carpenter, Ephraim Cohen, David Cox, Joanne Culver, Robert Dewar, Frank Dietrich, David DiFrancisco, Tom Duff, John Dunn, David Em, Herbert Franke, Richard Frankel, Dan Franzblau, Darcy Gerbarg, Copper Giloth, Paul Heckbert, James Hockenhull, Jim Hoffman, KEEN (Fred Gaysek and John Tucker), Scott Kim, Ken Knowlton, Raymond Lauzana, Ruth Leavitt, Mark Lindquist, Dick Lundin, Ron Mackneil, Robert Mallary, Aaron Marcus, Mike Marshall, Nelson Max, Robert McDermott, Leslie Mezei, Zsuzsa Molnar, Tom Moxon, Duane Palyka, Ronald Resch, John Roy, Laura Scholl, Lillian Schwartz, Alvy Ray Smith, Joan Truckenbrod, Ralph Turner, Stan Vanderbeek, Norman White, Turner Whitted, Lance Williams, Edvard Zajec and Steven D. Zins.

The SIGGRAPH '82 Art Show, proposed by Copper Giloth, was the first art show organized exclusively for SIGGRAPH. Copper Giloth chaired the 1982 Art Show Committee, along with Joanne Culver, Louise Etra, Darcy Gerbarg and Aaron Marcus. The exhibition at the Sheraton conference center in Boston, Massachusetts, consisted of 88 pieces. A "Frame Buffer Show" was also included.

With greater resources available for the project, it was possible to publish the first Art Show Catalog. This color catalog contained a complete listing of the artworks, 22 images and introductory essays by Cynthia Goodman, A. Michael Noll and Gene Youngblood. The exhibition was described as "an exhibition highlighting the recent achievements of artists working with computers . . . the SIGGRAPH '82 Art Show celebrates the increasing access to electronic technology

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available to artists today and the growing aesthetic awareness in computer graphics" [2]. A separate set of art show slides was also created.

Copper Giloth again chaired the art show for the 1983 conference at Cobo Hall in Detroit, Michigan. This show, entitled SIGGRAPH '83 Exhibition of Computer Art, was juried by Gene Youngblood, David Morris, Joanne Culver, Copper Giloth and Jessie Reid. Before the works were selected, arrangements were made for the show to travel, and the contracts for exhibition sites in Europe and Japan were complete. The work selected by the jury reflected a broader scope since it was chosen for an international audience. In 1983, the Art Show Committee included Joanne Culver and Jessie Reid. Cynthia Neal was the Art Show administrator. The exhibition of 91 works was divided into 'hardcopy', 'installations' and 'video' categories. The full-color catalog included essays by Lucinda Furlong, Gene Youngblood and Catherine Richards [3]. A slide set, postcard set and Japanese/English catalog were also produced.

Under the direction of Joanne Culver the 1983 Traveling Art Show was exhibited at 33 sites in America, Europe and Asia over the next 2 years.

The 1984 SIGGRAPH conference was held in Minneapolis, Minnesota. An exhibition devoted to design, entitled Computer Supported Design Exhibition, was organized. Patrick Whitney chaired the design show. The curatorial committee included Patrick Whitney, Del Coates, Muriel Cooper and William Mitchell. An advisory board, an editor, and several designers were appointed to work on the project. The exhibition, located at the Minneapolis College of Art and Design, consisted of graphic information reproduced in the catalog and a number of architectural and product exhibits. The catalog contained essays on design-related issues by Patrick Whitney, William Mitchell and Del Coates [4]. A design show slide set was also produced.

The 1985 conference art exhibition was chaired by Louise Etra with Rachel Carpenter as the Art Show administrator. The SIGGRAPH '85 Art Show jury consisted of Kathy Rae Huffman, Robin King, Margot Lovejoy, Beau Takahara and Woody Vasulka. The committee was larger, as the scope of the exhibition had become more complex. Stephen Beck, Marc Canter, Loren Carpenter, Donna Cohen, Jo-

anne Culver, Darcy Gerbarg, Copper Giloth, Lucia Grossberger, Howard Gutstadt, Laurin Herr, Bob Holzman, Gen Katz, Joanne Kelly, Sherman Kennedy, Constance Lawrence, David Ledeen, Diane Leyland, Tony Longson, Ann Marion, Barbara Mones and Patric Prince contributed as members of the committee.

The SIGGRAPH '85 Art Show was based at the Moscone Convention Center in San Francisco, but held events at several San Francisco locations. Over 100 works were exhibited at the Moscone Center. These included environmental, interactive, on-line, and traditional works. The Student Poster Animation Competition and Exhibition (SPACE) took place at the Academy of Art College Gallery. A computer graphics festival entitled "Input/Output" was held in the North Gallery of the San Francisco Museum of Modern Art. Two installations were mounted at the Exploratorium, and a performance was staged at the Palace of Fine Arts.

The 1985 Traveling Art Show visited sites in Japan, Spain and the United States. The video component of the show traveled extensively. A full-color, 44-page catalog [5], a Japanese version of the catalog for the traveling show and an art show slide set were produced.

The Convention Center in Dallas, Texas was the site for the 1986 conference. The ACM SIGGRAPH '86 Art Show was chaired by Patric Prince, who curated the two-dimensional and three-dimensional works and the installations. Paul Allen Newell curated the animated works. Professional assistance was provided by Deborah Sokolove Colman. The 1986 Art Show Committee included Maxine D. Brown, Donna J. Cox, Paul Allen Newell, Sylvie Rueff, Gary Walker and Gayle Westrate. The SPACE Committee was made up of Darcy Gerbarg, Barbara Mones and John Olvera.

The 1986 Art Show was an international retrospective of computer art that covered over 20 years. It featured 6 hours of animation, two projected installations, and 18 interactive or on-line works. A total of 450 pieces were exhibited. A display of printed material covered the period from 1960-1986 and a 'Technical Gallery' exhibited milestones in technical achievement. A lecture entitled "Computer Art in the Mainstream" was presented by Patric Prince and artists Tony Longson and Barbara Nessim at

the Dallas Museum of Art. A companion exhibition of computer art was held in conjunction with the SIGGRAPH Art Show at the Sheraton Gallery, at the Sheraton Hotel in Dallas. A smaller version of the exhibition, the 1986 Traveling Show, was shown at three other sites in the United States.

The 52-page catalog included essays by Herbert W. Franke, John Whitney, Ken Knowlton, Frank Dietrich and Patric Prince [6]. Computer typesetting was used, for the first time, in the production of the catalog. The 1986 catalog also received an ISBN number from ACM. An art show slide set that demonstrated the development and history of the medium was produced.

In 1987, the SIGGRAPH Art Show was chaired by Joanne Culver with Crimson Indigo as the administrative assistant. The 1987 jurors were Joanne Culver, Jeffrey Murray, Larry Shaw and Louise Ledeen. The Art Show Committee that year was composed of Joanne Culver, Crimson Indigo, Jeffrey Murray, Larry Shaw, Gay Graves, Laurin Herr, Louise Etra-Ledeen, Frank Dietrich, Terry Dowd, Darcy Gerbarg, Barbara Mones-Hittal and Patric Prince. The exhibition site was the Convention Center in Anaheim, California.

Artworks were exhibited in five categories: Abstract, Visual Research, Human Image, Graphic Design, and Landscape. An educational program that provided informative explanations and artists' statements was added. The 1986 Art Show was the first to have a live performance (held twice each day in the gallery), made possible by a corporate sponsor. The exhibition also incorporated a 3-D laser projector.

The 1987 Art Show catalog featured the first computer-generated and computer-animated "smooth, phong-shaded embossed reflection" hologram on its cover. Joanne Culver stated in the catalog, "The SIGGRAPH conference Art Show provides the opportunity to present ideas, images, and explorations not necessarily acceptable to a traditional museum environment. The scientific alongside the fine art. Interactive, static and performance works all investigating the development of the computer as an imaging aid to the mind" [7].

The Art Show Committee counted the number of visitors to the art exhibition at over 23,000 for the week-long conference. A traveling version of the

1987 SIGGRAPH Art show visited sites in North America and Europe.

The 1988 Art Show chair Lucy Petrovich and her committee were devoted to showing the best interactive works possible at the Conference held in Atlanta, Georgia. The ACM SIGGRAPH '88 committee members were Lisa Fremont (administrator), Kathleen Tanaka and Patricia Harrison. Two Art Show juries were formed in 1988. The jury for interactive works included Patricia Harrison, Sally Rosenthal, Sadowski, Kathleen Tanaka and Jane Veeder. The two-dimensional and three-dimensional works were juried by Frank Dietrich, Kenneth O'Connell and Edward Pope. The introduction to the artists list states, "The SIGGRAPH '88 exhibition of computer art highlights interactive computer installations, an artform unique and intimate to the digital medium. The viewer is transformed into a player, an explicit accomplice in creating the art work" [8].

The exhibition was designed around the interactive pieces and featured works from *The Interactive Image*, a group of installations directed by Tom DeFanti and Maxine Brown, designed by Vicki Putz and programmed by artists and faculty from the University of Illinois working at the Chicago College of Engineering and Electronic Visualization Laboratory. *The Interactive Image* incorporated 18 separate works by Sumit Das, Seton Coggeshall, Maurice Clifford, Fred Dech, Debra Herschmann, Stephan Meyers, Avrum Weinzwieg, Dan Sandin, Mary Rasmussen, and Louis Kauffman, Harriet Lurie, and Donna Cox. *The Interactive Image*, an important exhibition wholly designed for interactivity, is now on permanent display at the Computer Museum in Boston. The 1988 Art Show included seven interactive pieces, 12 installations and 12 video works. The design and installation of the 1988 exhibition was very elegant, reflecting the changes in conference planning procedures, the amount of space allocated to the Art Show and the committee's dedication to excellence.

The catalog format was changed to reflect contemporary media. The committee published a list of 1988

SIGGRAPH Art Show participants. The 2-D and 3-D works were recorded in the slide set and the interactive pieces were recorded on videotape.

Mark Resch was selected as Art Show Chair for the 1989 SIGGRAPH Art Show to be held in Boston, Massachusetts. This year marks the 16th annual SIGGRAPH Conference and the ninth Art Show. Aesthetic communication in a wide range of styles and techniques will be represented in the 1989 exhibition. Deborah Williams is providing professional assistance. The committee consists of Rachel Carpenter, Philip Getto, Copper Giloth, Kathy Huffman, Oliver Strimple and Jane Veeder. The Jury includes Lorne Falk, Copper Giloth, Patric Prince (Traveling Art Show Chair), Mark Resch, Christine Schöpf and Dorothy Spencer. The animated video works will be juried by and displayed in conjunction with the Computer Graphics Theater Committee. The exhibition focuses on the aesthetic quality of the individual artworks presented as a continuum of twentieth-century art. This select exhibit includes 86 works in a variety of media.

The exhibition will be held at the Hynes Convention Center and at the Computer Museum in Boston. The works will be seen at the Computer Museum from 28 June–5 September 1989 before the 1989 SIGGRAPH Traveling Art Show tours to other sites.

The 1989 Art Show Committee solicited written essays for the catalog published by *Leonardo*. The 1989 Art Show catalog will be distributed to the full SIGGRAPH membership. The Art Show Chair believes that it is important for "computer art to be placed in the larger art-critical, art-historical tradition" within the catalog.

ACM/SIGGRAPH draws its membership from professional managers, technical developers, artists, designers, computer scientists and educators, all having an interest in using computers to create visual works. The entire conference, including the art show, is conceived of and run by volunteers. Each SIGGRAPH art exhibition has taken the vision of art and technology further by providing a venue for new art forms and expres-

sion. There has been a commitment to exhibit multi-dimensional artworks in the best possible circumstances. The Art Show Chairs are prepared to break with traditional gallery practices by using low-light environments in unusual spaces. The history of these exhibitions demonstrates the development of the art form as well as the vision.

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