

Experiments in Art and Technology

Chronology

1965 Robert Rauschenberg and Billy Klüver organizes a project for ten artists - John Cage, Lucinda Childs, Öyvind Fahlström, Alex Hay, Deborah Hay, Steve Paxton, Yvonne Rainer, Robert Rauschenberg, David Tudor, and Robert Whitman - to collaborate with a group of 30 engineers and scientists from Bell Telephone Laboratories to develop technical equipment to be used as an integral part of their performances.

1966 In September Rauschenberg, Klüver, Whitman, and Fred Waldhauer decide to found Experiments in Art and Technology (E.A.T.), a not-for-profit organization to promote artist-engineer collaborations.

October 13 to 23: *9 Evenings: Theatre & Engineering* takes place at the 69th Regiment Armory at 25th Street and Lexington Avenue in New York City, where ten artists present their performances over nine evenings. More than 10,000 people attends the performances.

In November, E.A.T. opens membership to all artists and engineers, and an office set up in a loft at 9 East 16th Street in New York.

1967 Technical Services Program is launched to match artists with technical request with engineers or scientists for information assistance or longer one-to-one collaborations on the artist's specific projects. Various projects were initiated to encourage engineers to collaborate with artists.

1968 E.A.T. organizes a series of lectures by engineers and scientists for artists held at the E.A.T. loft on technical subjects like lasers and holography; computer generated sound and images; television; new Hexcel materials. Speakers came from academic, industrial and government laboratories: Bell Laboratories, MIT, National Bureau of Standards, etc.

Pontus Hulten, director of Moderna Museet in Stockholm, asks E.A.T. to participate in "The Machine as Seen at the End of the Mechanical Age", an exhibition curated by him at The Museum of Modern Art, New York. E.A.T. announces a call for works and a competition for the best contribution by an engineer to a work made in collaboration with an artist. The competition generated more than 140 submissions and the decision was made to show all these works at an exhibition titled "Some More Beginnings," at the Brooklyn Museum. This was one of the first major international art and technology exhibitions.

BROADWAY 1602

UPTOWN HARLEM

- 1969 E.A.T. reaches more than 2000 artists members and more than 2000 engineer members. People were encouraged to start E.A.T. Local Groups and about 15-20 were formed.
- E.A.T. organizes *Anand Project* its first in many Projects Outside Art. E.A.T. assembles a group of Indians and Americans with specialities related to instruction and television and includes artists and engineers. The group meets in India during December and develops a proposal for local input into the development of instructional software for satellite television broadcast.
- 1970 E.A.T. is invited to design, build and program the Pepsi Pavilion at Expo '70, Osaka, Japan. The project was conceived by a core group, including Robert Breer, Forrest Myers, David Tudor, and Robert Whitman. All in all twenty artists and fifty engineers and scientists contributed to the design of the Pavilion. Outside the Pavilion the dome is covered by a water vapor cloud sculpture, by Fujiko Nakaya. And on the plaza, seven of Robert Breer's *Floats*, six-foot high white sculptures, moves around slowly at less than 2 feet per minute, emitting sound. Four tall triangular towers hold the lights for Myers' *Light Frame* sculpture. Visitors enter the Pavilion through a tunnel and descended into a dark clam-shaped room. A sound-activated laser deflection system designed by Lowell Cross with David Tudor showers the floor and visitors with large moving patterns of laser light. Climbing the stairs, they come into Mirror Dome, which was a 90-foot diameter 210-degree spherical mirror made of aluminized mylar in which the real image of the floor and the visitors on it hung upside down in space over their heads. David Tudor designs the sound system as an "instrument" with 32 input channels and 37 speakers arranged in a rhombic grid on the surface of the dome behind the mirror.
- 1971 *ARTCASH*: In December, E.A.T. held an ARTCASH gambling night benefit party at Automation House to raise money for E.A.T.'s project "Artists and Television" and for the Community Television Center at Automation House. This was a project to show videotapes by contemporary artists on the newly opened cable television channels in New York City and to produce video at the Community Television Center at Automation House, where E.A.T. had its offices.
- Billy Klüver, President of E.A.T. asked artist friends to make bills that people could purchase and then use to gamble with at the event. The bills, which were called ARTCASH, were made in non-traditional denominations and the artists were: Andy Warhol (\$1); Robert Whitman (\$3); Robert Rauschenberg (\$12); Tom Gormley (\$24); Red Grooms (\$51); Marisol (\$88)

BROADWAY 1602

UPTOWN HARLEM

E.A.T. board member, the labor lawyer Theodore W. Kheel, arranged to have the bills printed at American Banknote Company, who printed money for foreign countries that couldn't trust their own people to do the printing. Although the denominations were different, the artists decided to try to get as close to 'real' money as possible. For the bills they used 100% Rag Cranes Bond, which is the stock the U.S. Treasury uses; the bills had the same size and shape as U.S. currency, and were printed black on one side and green on the other. The difference was that ARTCASH used white, not off-green, paper and it did not have the silk fibers used in U.S. bills. However, Tom Gormley, who oversaw the printing, had to observe the same security the Banknote Company used in printing other currency: the paper was delivered sealed to the premises, and each sheet of printed bills was counted before and after it came off the press, so that all 15,000 sheets were accounted for. Gormley organized the printing layout so that each sheet contained all six bills: seven \$1's four \$3's, four \$12's three 24's, three \$51's and two \$88's. We printed 5,640,000 in ARTCASH. The cut bills were delivered to us bound in bundles of 500 bills each.

At the casino evening, guests purchased ARTCASH and gambled with it. Winners could redeem their ARTCASH for any of more than 350 fine art prints, graphics, multiples, and art books, that had been made available to the benefit evening from more than 20 galleries and fine art publishers and were exhibited on the ground floor of Automation House.

Artists and Television: In the winter of 1971 E.A.T. organized the cablecast of artists' videotapes over the newly opened cable television channels in New York City.

New York Collection for Stockholm (1971-1973): Beginning in January, E.A.T. undertakes a large-scale effort to assemble a major collection of 30 works by New York Artists of the 1960s and to raise funds for the purchase of the collection to be donated to Moderna Museet, Stockholm. Thirty artists donated prints to a portfolio to support the project. The collection opened at Moderna Museet in October 1973 with 105 American guests attending the opening.

Projects Outside Art / Children and Communication: Working with educational specialists from New York University, two indoor environments, designed by Robert Whitman, were set up at 9 East 16 Street and 49 East 68th Street. They were linked by 14 dedicated telephone lines; and terminal equipment included Xerox and Magnavox facsimile machines, Electro-writers, telex and telephones. From February through May, more than 500 children, ages 6-13, visited the two locations and used the equipment to communicate with each other.

BROADWAY 1602

UPTOWN HARLEM

Projects Outside Art / *City Agriculture, Rooftop Gardening*: In collaboration with the Environmental Research Laboratory of the University of Arizona and Automation House, a closed-environment nutrient-feeding vegetable greenhouse is designed for the roof of Automation House.

Telex: Q&A: This project was organized in conjunction with an exhibition "Utopia & Visions 1871 - 1981" held at Moderna Museet, Stockholm. During August 1971, telex terminals were established at Automation House, New York; Moderna Museet; The Design Institute, Ahmedabad, India; Sony Building, Tokyo. The public in all four countries was invited to submit question about 1981 to the other countries. Scientists, artists, subject experts, students, and members of the general public were asked to formulate answers which were then telexed to the originator.

- 1974 *Island Eye Island Ear*: David Tudor conceives a collaborative project/concert to be held on an island, which would both utilize and reveal the nature of the island. Parabolic antennas were to be placed in configurations around the island to create sound beams and sound reflections. The sound input would be sounds of the island recorded over the course of one year. Fujiko Nakaya would install cloud sculptures and Jacqueline Matisse fly the kites she designs. In the 1974 extensive tests were made on an island, Knavelskär, in the Swedish archipelago. In 1978-79 Bluff Island in the Adirondacks in New York State and Yohe island in the St. Lawrence River, are visited and studied as possible sites for the concert. This project remains unrealized.
- 1980 *Opal Loop*: E.A.T. supervised the testing and installation of a Cloud Sculpture by Fujiko Nakaya as a set for the dance *Opal Loop*, for Trisha Brown Dance Company, first performed at 55 Crosby Street, June 10, 1980, and performed later that year at The Brooklyn Academy of Music
- 1989 *Astral Convertible*: Billy Klüver and engineer Per Biorn collaborats with Robert Rauschenberg for an interactive set for the dance *Astral Convertible* for the Trisha Brown Dance Company. The idea is for a set that could provide light and sound for the dance in any environment, in particular outdoor environments. The final set is a series of movable towers which carried tape recorders and lights that were activated off and on by the movement of the dicers. The first performance is held June 22, 1989, in Montpellier France.
- 1994 *Ocean*: In the spring of 1994 E.A.T. develops a research effort to locate and collect sounds from the oceans all over the world to be used by the composer David Tudor in an electronic composition that become part of *Ocean*, John Cage's last work for the Merce Cunningham Dance Company. The work premiered in Brussels May 18, 1994.

BROADWAY 1602

UPTOWN HARLEM

E.A.T. helps to organize the project *Greenland Glacial Stone Project* by the artist Fujiko Nakaya, an environmental artist who works with pure-water fog to create sculptures and installations in natural settings.

1996 E.A.T. beings production on a series of ten films documenting artist performances at the 9 evenings by filmmark Barbro Schultz Lundestam.

2001 *The Story of E.A.T.:* Klüver's last project was to produce an exhibition "The Story of E.A.T. 50 panels of photos and text which hung in a single row along a wall or around a room. It occupied about 75 linear fee and travelled in three large suitcases. It was first shown in Rome in Summer 2001 and has traveled to venues at museums and schools and universities in the US and Europe.