

Using a NeXT computer, art historians and computer software researchers at The University of Iowa created an electronic representation of Fluxus art objects which accompanies the traveling exhibition, *Fluxus: A Conceptual Country*. The computer program gives exhibition attendees an opportunity to experience the Flux objects in the spirit in which they were originally created.

Viewers can, for example, open a Flux box, select an object inside, view the components and move them around. Since the value of the original art objects has increased, they are normally exhibited under glass; the computer program provides a virtual approximation to the original without damaging it.

FluxBase: An Interactive Art Exhibition

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Introduction: The Fantasy

Imagine yourself in a room at a traditional art museum. The lighting is soft, the high ceilings and walls are an unassertive off-white. Visitors stroll about, peering at tiny identifying cards. They nod and murmur reverently before the creations of the great masters. The works themselves are thoughtfully displayed, as befits their status as high expressions of their culture. The mood is quiet yet somehow charged as you ponder each image and object; they evoke feelings familiar and unfamiliar, personal and universal. As you leave the room, you notice the security guard, whose presence silently reminds you of the parental edict “do not touch.”

Now imagine yourself in another room. The lights are a bit brighter and the decor more suited to contemporary tastes and budgets. “Fluxus: A Conceptual Country,” reads the banner over head. Then there are the creative works themselves: George Maciunas’, *Prototype for Robert Watts’ Fluxrock*, looks like a rock glued to a small tray; Milan Knizak’s *Killed Book* is shot full of holes. George Brecht’s various *Games and Puzzles* kits do seem as if they would be fun to play with; the dice could have been lifted from a *Monopoly* set and their little plastic boxes are identical to those containing the assorted bolts you bought yesterday at the hardware store. And what could be on an 8mm film loop by Yoko Ono? But never mind, you cannot touch them, even though the mood is more K-Mart than *kunstwerk*, and even though the artists had intended that you play. As befits their new status, the objects are now protected from you by plexiglass cases.

You turn and discover a cyberspace, an artificial reality, and find yourself looking at a large computer screen with those Fluxus things in front of you; reproduced in realistic color and grayscale images. You discover that the objects on the screen are not static. You can interact with them.

Using a “mouse,” you “touch” the latch on the wooden box and the box opens. It is filled with cards, plastic and paper boxes, envelopes, and who knows what else.

You continue “playing” and choose an object. A window opens on the screen as you select a menu option. The window tells you that the object you are playing with is the *Total Art Matchbox* by Ben Vautier. You can read about the piece or see a biography of the artist, annotated with graphics and sound. The matchbox’s label instructs you to “USE THESE MATCHES TO DESTROY ALL ART.” You open the box – yes, there are matches inside; you strike one and it bursts into (artificial) flame. The French Impressionists in another gallery briefly cross your mind in a rather wicked context, but you decide you have done enough for one fantasy, and return to the subject at hand.

Origins of the FluxBase Project

As suggested in the little fantasy, there can be problems with the presentation of Fluxus objects in traditional exhibition formats. These prob-

lems arise from the forms of the works themselves and the avant-garde context in which they were created. Fluxus art has strong roots in the Dada movement of the early part of this century. Estera Milman, Director of The University of Iowa's Alternative Traditions in the Contemporary Arts, notes that "Dada was Fluxus' self-professed great-grandparent."¹ Discussing parallels between Fluxus and Dada, she writes:

Fluxus, also, quickly united a generation of artists who, although scattered throughout the world, collectively questioned the myth of artistic privilege and shared the conviction that art activity must be withdrawn from its special status as rarefied experience and be resituated within the larger realm of the everyday experience of everyman. Fluxus has come to be identifiable through its language works, its minimalist performance pieces, its street events, its concentration on the everyday activity, its publications, object games and event kits, its relics, and through its personae, *die Fluxus Leute* (the Fluxus people). Fluxus was (is) a fusion of all of these things but, perhaps more importantly, Fluxus was the coalition of an international "constellation of individuals" into a conceptual community, a country whose geography was a figment of the communal imagination, whose citizenry was transient and, by definition, cosmopolitan.²

Characteristics of Fluxus Objects

1. Multitude of forms
2. Relationships among artists and objects important for understanding Fluxus art

In 1989 Milman mounted the conference, *Art Networks and Information Systems*, in collaboration with Franklin Furnace Archives. The project was funded by the National Endowment for the Arts and The University of Iowa. Attendees included librarians, museum conservators, artists and technologists from the Museum of Modern Art, the Art Institute of Chicago, the Research Libraries Group, the Library of Congress, the J. Paul Getty Art History Information Program and the Stanford University Libraries among others. Milman's motivation in organizing the conference was to seek better ways of sharing information about non-traditional art forms which did not conform easily to traditional cataloging methods. Because such art works were located in museums, libraries, galleries and private collections – each of which had its own organizational mechanism – it was important that representatives from these various worlds meet together to consensually address the problem.

Earlier we developed a visual database supporting computer-based retrieval of 35,000 videodisc images for the School of Art and Art History. This application evolved from a Prime mini-computer to its current form as a Macintosh Hypercard stack, *Pieta Resistance*. Based on this earlier work, we were asked to share our concept of how technology might be used to ameliorate the problems in indexing, retrieving and sharing information about alternative art forms.

After several meetings with Milman, we decided to concentrate on Fluxus as a movement and *Flux Year Box 2* as the work of art. Our charge was to address bibliographic problems. But it seemed that the ultimate motive for indexing was to help people get more information about the works of art so that they could better understand them. We therefore proposed a system to include multi-media representations and opportunities for users to experience the essence of the art through computer-based encounters.

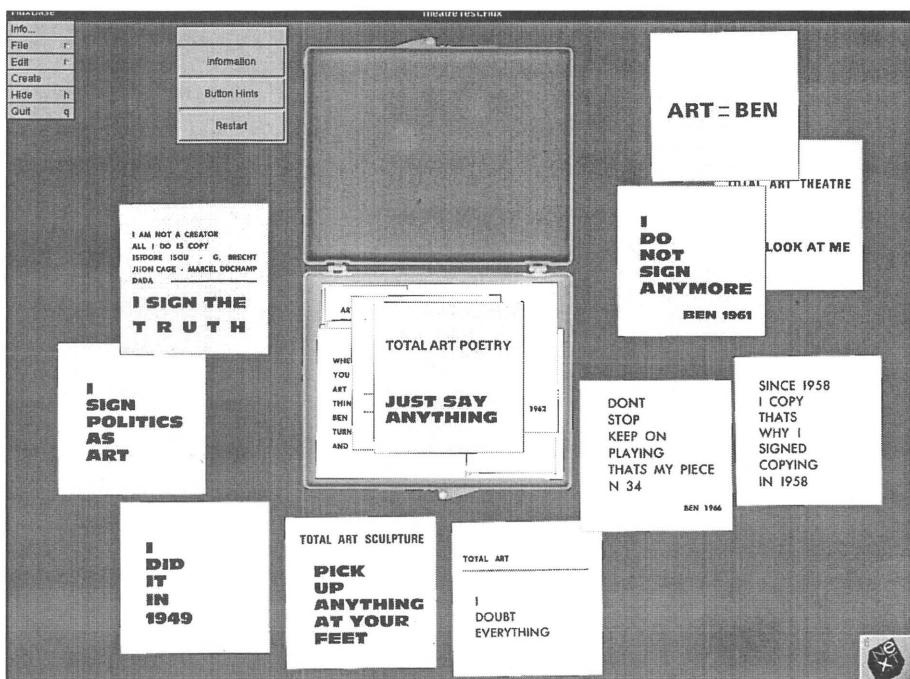
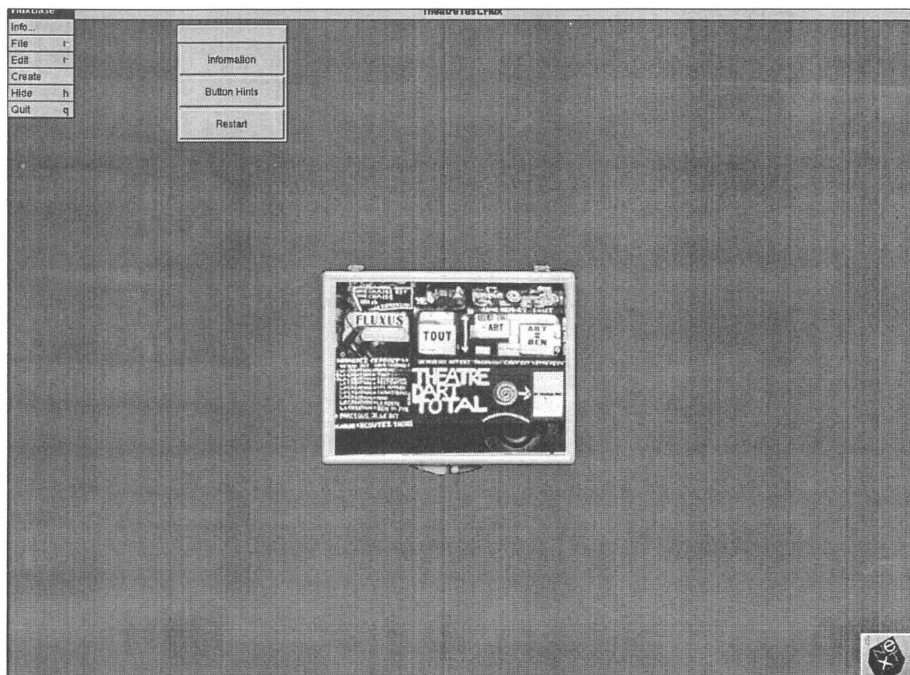
We envisioned a system which would expand the information normally associated in a bibliographic database. For example, we desired an environment where users could learn about the lineage and offspring of Fluxus – branch out to read about alternative educational systems and Zen Buddhism, watch an interview with and listen to music by John Cage and view examples of correspondence art and book art. Besides traditional keyword based access, we envisioned access through graphical representations – tree structures as it were – of the information contained in the system. We sought access by timelines and geography to give users a sense of being able to travel in time and place and view the Fluxus movement as it existed then. We envisioned representing the life-cycle of a work of art, traveling in its perspective as it went from creation to collection to exhibition etc. We wanted to be able to see the objects' life size, not just a predetermined view size. To instill the sense of community and the notion of evolving art, we want the users themselves to create works and annotate and leave their mark, making an organic rather than closed creation. And finally we wanted to give users the sense of physicality, of actually touching and using the objects – of experiencing – not just observing.

For the April 1989 conference, we presented the conceptual schematic for the system. By September, we developed an actual working prototype on the NeXT computer which we presented at the *Optical Information Systems* conference in Washington D.C. The prototype focussed on the direct manipulation aspects of the conceptual model.

There are currently two FluxBase applications: the *FluxBase Prototype* which was developed in response to certain issues surrounding the *Art Networks and Information Systems* conference in 1989, and the new *FluxBase* displayed as part of the exhibition, *FLUXUS: A Conceptual Country*. Each application functions in two capacities:

1. As an interactive exhibition, presenting the art objects on the computer screen to the primary users who could optimally experience the exhibition "on-site" (i.e., in a traditional gallery space) or "remotely," by connecting to the exhibition computer via an electronic network, from a location almost anywhere in the world.
2. As a tool for constructing such exhibits from a given collection of digital media (images, sounds, text, etc.). The curators and designers responsible for creating the exhibits would use the program in this mode.

The prototype modeled the work, *Flux Year Box 2*, a Fluxus "collaborative multiple." Literally a small wooden box, *Flux Year Box 2* contains a



FluxBase: A Virtual Exhibition, NeXT computer prototype. Two print-outs of Ben Vautier's *Fluxus/Theatre D'Art Total*. Boxed concept works, New York, Fluxus Edition, 12 x 9.3 x 1.2 cm., ca. 1967. *Alternative Traditions in the Contemporary Arts*, The University of Iowa, Fluxus West Collection.

number of objects contributed by twenty-one artists. The primary goal of the prototype was to give the user a sense of exploring the contents of the box and handling its objects, as intended by the artists who created the actual work. A secondary goal was making information about each object available to the user upon request.

The new *FluxBase* is conceptually similar to the prototype. Its enhancements are mainly in the areas of added function and much greater scope of content, with emphasis on these extensions:

1. Many more art objects

While the work modeled by the prototype contained a number of objects, it still represented only one work. We have included a variety of additional Fluxus works from the Alternative Traditions in the Contemporary Arts collection at The University of Iowa and a select few from other institutions. These works were chosen to represent additional forms, artists and relationships not present in *Flux Year Box 2*.

2. More data on the objects and artists

James Lewes, a research assistant from Alternative Traditions in the Contemporary Arts was assigned to the *FluxBase* project and provided scholarly information about the objects and artists.

3. Support for multimedia information

Some forms of Fluxus art such as performances and events which feature live participation can be presented more effectively through sound and motion pictures. Material such as audio/video interviews can be presented in near "native" form. The NeXT currently provides excellent support for sound (up to CD quality) and graphics (thousands to millions of colors on screen at high resolutions). The new *FluxBase* was designed to make immediate use of sound and color graphics and to incorporate motion video.

Implementation of the FluxBase Applications

The *FluxBase* applications are implemented on a NeXT computer. The NeXT was chosen for its object-oriented software development environment, its hardware and software support for high quality graphics and sound, and its large standard monitor. The object-oriented programming environment proved critical to the successful development of the prototype.

The desire to treat the computer representations of the art objects in *Flux Year Box 2* as separate entities with similar behaviors lent itself naturally to implementation with object-oriented methodologies as did the construction of the graphic user interface.

NeXT computers come with a rich set of software tools to support object-oriented programming. Central to the system is the *AppKit*, a class library which provides most of the typical objects (e.g., windows, buttons, menus) which are used to build an application with a graphic user interface.

In an abstract sense, producing a computer program which met the “visitor” goals, noted above, involved implementing the following functions:

1. Displaying images of the objects on the screen
2. Dragging images around the screen under user control
3. Displaying other such images in response to user input
4. Displaying information about an object in response to user input

Meeting the “creator” goals required adding the following functions for constructing the exhibit:

1. Incorporating the digitized image files into the exhibit
2. Defining areas on the image which produce a response when clicked
3. Providing an interface to enter text with associated graphics and sounds

Summary

The current *FluxBase* project embodies many of the desirable aspects we proposed at the 1989 conference. We expanded the media forms represented and extended the number of artworks accessible to the participant. Most importantly, *FluxBase* is now in a form in which new Fluxus objects can be easily added by non-technical people, thus inviting collaborative work among Fluxus scholars. The program is designed so that – with time and funding – our other goals – time and space access, real size representation and giving viewers the opportunity to create their own electronic Flux creations – can be readily added to our program. With time and participation among the community, we hope *FluxBase* – like the original artworks themselves – will challenge and inspire, provoke and perpetuate the spirit of the Fluxus movement.

NOTES

¹ Estera Milman, *Fluxus and Friends: Selections from the Alternative Traditions in the Contemporary Arts Collection* (Iowa City, 1988), n.p.

² Ibid.



Carla Liss, *Untitled*. Bottle of river water, dried mosses and flowers sealed in a plexiglass box, 22.9 x 17.8 x 3.2 cm., n.d. Jonas Mekas and Hollis Melton Collection. Photograph by Hollis Melton.