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WITHOUT A SPECIAL OBJECT OF WORSHIP
An Interactive Book Arts Computer Installation

SUMMARY:

The author discusses WITHOUT A SPECIAL
OBJECT OF WORSHIP. This interactive
installation is inspired by the Veneto-
Byzantine architecture of Venice, Italy. A
traditional artist's book acts as the input
device that allows participant control of digi-
tal 2D and 3D animations. The imagery pre-
sented in the artist's book and in the anima-
tions is complemented by an original sound
track inspired by chants and religious litur-
gy. The integration of image and sound in
the dimly lit installation space creates a
sacred, meditative space for interaction.

KEYWORDS:
book arts, multimedia, interactive, installation, Venice,
Byzantine, meditation, digital media, computer graphics

This paper briefly describes the stages involved in the making
of Without A Special Object of Worship. Without A Special
Object of Worship is an interactive installation inspired by the
salt-beaten Veneto-Byzantine port city of Venice, Italy   In this
installation, a traditional artist's book acts as the input device
that allows the participant to control 2D and 3D digital imagery
in a sacred, meditative space. This unique model of interac-
tion coupled with the creation of an installation space proved
to be quite challenging. What follows relates some of my aes-
thetic and technical discoveries during the development of this
piece.

The first phase of the project was devoted to a variety of
experiments with materials and concepts   The project began
with a six week stay in Venice, Italy. During this period I deve-
loped a series of Polaroid transfer prints mainly of Venetian
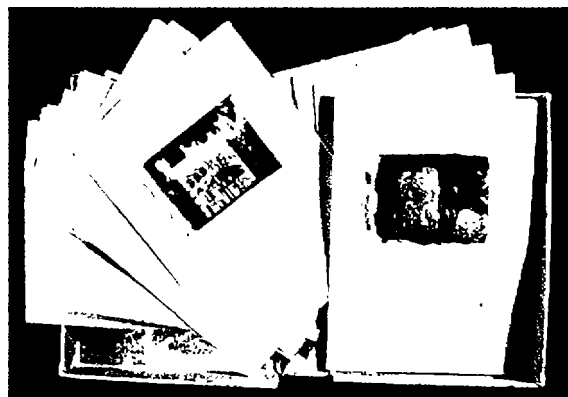architectural structures as seen in Figure 1.

**Figure 1. Polaroid transfers prints of Venice, Italy. A
series of 34 images presented in a handmade portfolio
case.** (Photo by Pat Swain)

Shortly after this period, I became interested in book arts and
began making my first small artists' books. Initially the books
did not deal with a specific subject matter, but soon they

began to take on the shape, color and texture of Venice (Figure 2)

While exploring book forms, I was also experimenting with combining digital painting with programmed imagery. Through this work, I became interested in developing methods for low-cost archival quality output of digital imagery. Essentially, I was making digital images–painted and programmed–and outputting them to the laser printer on a variety of substrates. Printing multiple images on single sheets of paper, at first by accident and then by design, provided break through realizations about the potential of layered imagery I continued to work on still digital images in series, but it was some time before I began to incorporate them in book structures. The first books were simply a series of digital images bound at the left, without serious consideration for the book as a form. Later books, however, proved to be more interesting. The final area of experimentation involved 3D computer animation where I was concentrating on creating textural animations of tearing paper. In all of my work–both digital and traditional–torn paper became the metaphor for expressing the constantly changing face of Venice, particularly her churches.

Slowly I discovered that all facets of my work were concerned with the constantly changing states of an object. This notion gives way nicely to the structures and forms found in book structures, animation and interactivity because all the forms allow for changes over time to be visualized. The non-tactile animation carries a far away dream quality while the book structure provides a tangible physical representation of change and movement over time. The interactivity allows the participant to control the timing of the experience and produces a constantly varied aspect to the work. I realized that I could combine my seemingly disparate works into a single interactive exploration of Venice with an artist's book as the vehicle for interaction.

Having decided on the content and method of interaction for the piece, the next phase of development was devoted to more technical concerns. My challenge was to design and develop an artist's book that could indeed communicate with the computer and allow a participant to control the digital imagery. The idea was realized by incorporating an electrical circuit in the book. The circuit outputs an analog signal corresponding to the individual pages of the book. This analog signal is then converted to a digital signal through an analog to digital converter (ATD). A simple program interprets the received signal and displays corresponding digital imagery on a computer monitor.

I quickly created a book prototype in order to test the theories behind the idea. Although the prototype, Figure 3, was neither beautiful nor elegant from an aesthetic stand point, it did provide the confirmation required to move ahead with production. Many book forms were explored on the journey to finding a book that would perform reliably.

While I was exploring viable book forms, I was simultaneously creating the digital content in the form of 2D and 3D animations as seen in Figure 4.

The goal of the installation was to create a meditative space for reflection through the exploration of Venetian imagery. At times it was very difficult to mentally maintain this goal as I was working on such varied tasks. The requirements for addressing the technical issues of the book did not always blend with the requirements for creating imagery. At times I felt as though I were working on many separate projects– technical discovery, 2D imagery, 3D animation–rather than a single installation piece. Once I finished the 2D imagery, however, the work flowed more intuitively. At that point I had a reference for color, scale and texture for all of the imagery and the remaining parts followed quickly.

The final element was the addition of sound. For this I worked with a sound artist and was able to create an original
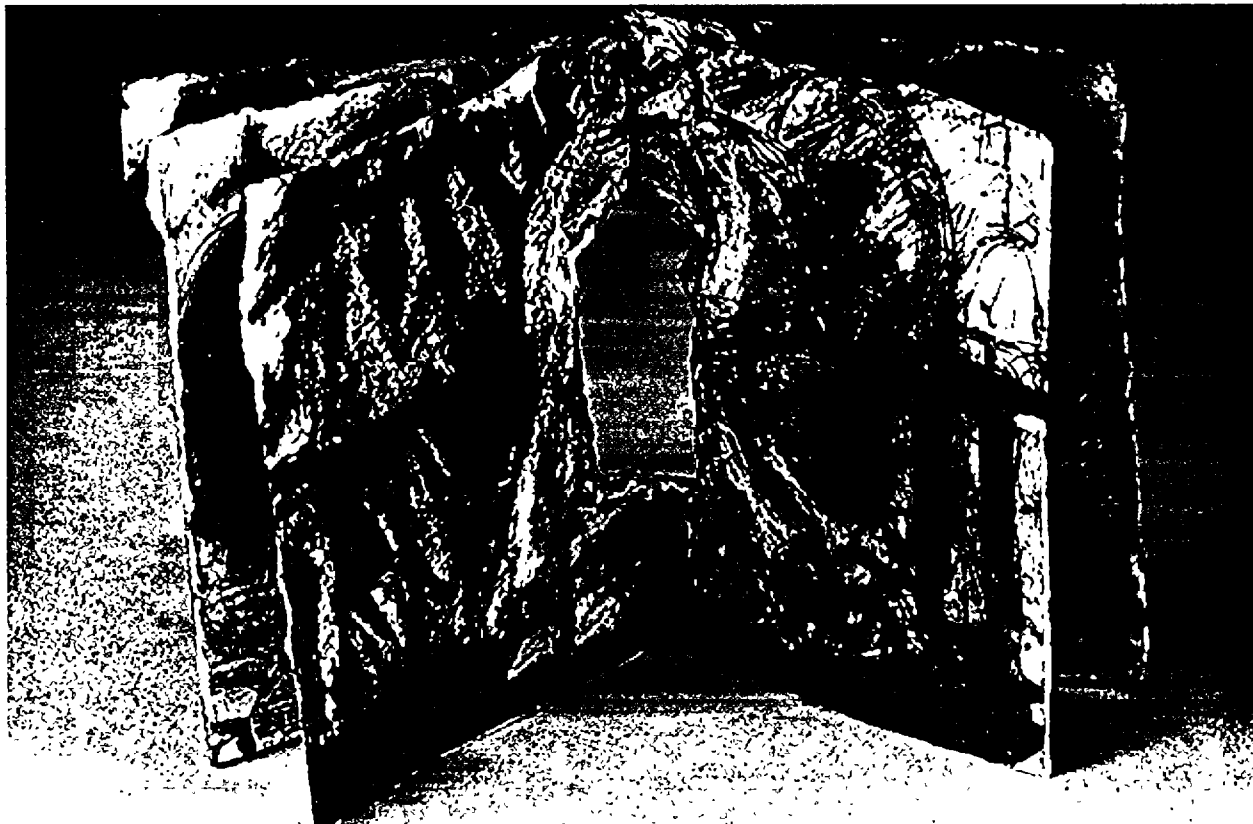

Figure 2. First Book Form Using Torn Holes. This book was one of the first to suggest a Venetian theme.
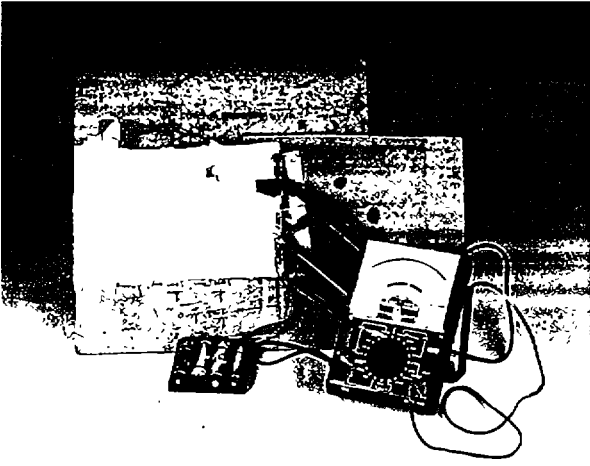(Photo by Pat Swain)

Figure 3. Original Book Prototype. The first version of the wired book using a voltage meter in place of the ATD.
(Photo by Pat Swain)

sound track in the Gregorian chant tradition that mimicked the layered, textural quality of the visual components. The result is an interactive book arts installation that allows the participant to control digital imagery by turning pages of an actual book.

Figure 4. 3D Digital Animation Still. This animation depicts the untraditional page turning of a digital book.