Ellen Sandor (art)\textsuperscript{n}
Multi-Dimensional Imagery: 3D Pixels Realized

Kemper Room Art Gallery
Paul V. Galvin Library
November 9 - January 20, 2007
opening reception:
Thursday, November 16, 4:30 - 7:30 pm
exhibition hours:
Monday - Thursday: 12 noon - 6 pm
Friday: 12 noon - 5 pm
Saturday: 8:30 am - 5 pm
Sunday: 2 - 6 pm
art.iit.edu

For over twenty-five years, PHSColograms, the integration of photography, holography, sculpture, and computer graphics, have created a post-canvas three-dimensional medium that has expanded the visual imagery of the work of a variety of scientists, mathematicians, engineers, architects, and artists.

curator:
Robert J. Krawczyk, Associate Professor,
College of Architecture

exhibition coordinator:
Caroline Morais, College of Architecture

gallery assistants:
Amithossein Ghereishi, College of Architecture
Ayman Al-Musharaf, College of Architecture

sponsored by:
IIT Office of the President, Lew Collins, President
IIT Art Board, Judith Carr, Chair
IIT College of Architecture, Donna Robertson, Dean

Image: FIT Study II: Man Boy/Naked Umbilical Ribbon, 2002 (blood cancer).
FIT Study II: Man Boy/Naked Umbilical Ribbon, 2002 (lung cancer).
Ellen Sandor, Keith Miller, Joanne Peer and Jack Ludder, (left): Jim Bionanese,
Digital Media Group, Department of Molecular and Medical Pharmacology,
IUPUI School of Medicine. Copyright, Ellen Sandor (art)\textsuperscript{n}, 2002.

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RT Stude / Man Ray / Electric Light, 2003 (Beast concept)
RT Stude II, Man Ray / Electric Light, 2003 (Lunatic concept)
Ben Sandor, Keith Miller, Jamie Ison and Jack Lublin (art) / Jim Stromme, Digital Media Group,
Department of Molecular and Medical Pharmacology, IIT School of Medicine
Copyright Ben Sandor (art), 2003
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The PHSCologram term, coined in 1983 by Ellen Sandor, is an acronym for photography, holography, sculpture and computer graphics. A PHSCologram, pronounced skol-o-gram, is made by dividing slightly different views of one subject into thousands of very thin vertical columns. These columns are interleaved to make a single image, which is then laminated onto the back of a Plexiglas panel. A black film with thin clear vertical lines called a barrier screen is laminated onto the front of the panel. The slits in the barriers screen allow the columns from only one of the original views to be seen from a particular angle. Each eye sees a slightly different view of the subject, and the brain condenses these two views into a three-dimensional image. As you scan across the image, the changing views from each column of the image further enhance the three-dimensional effect.

The (art)³ group Sandor formed with her peers from The School of the Art Institute in 1983 created PHSColograms that were based on photographs of hand-built models. The camera was large enough to hold a negative at least 48 inches square. A barrier screen was placed on top of the film, and multiple exposures, usually nine, were taken of the subject. After each exposure, the camera and the subject were each moved so that light would pass thorough the barrier screen at a different angle onto the film; thus the film was exposed in strips corresponding to the ones on the barrier screen. Each exposure took 45 minutes and each PHSCologram took almost 7 hours to photograph.

By 1990, PHSColograms became a digital photographic process, by simulating the early darkroom technique with other features common to the computer graphics industry. PHSCologram imagery is constructed from sculpting objects with a computer graphics software application. These objects are textured, and placed in a scene with lighting and other special effects. Once the digital scene is complete, a series of as many as 65 images are photographed in (art)³'s proprietary art software. These snapshots are captured at slightly different positions across a horizontal plane, and combined on the computer for final output to transparent film. (art)³'s software also generates a matching linescreen to interpret the final mounted photograph as a three dimensional sculpture.

The PHSColograms in this exhibit represent all the methods and techniques developed over the years. The subject matter involves artistic and technical collaborations with scientists, mathematicians, engineers, architects, and artists. Each collaboration attempts to expand our visual experience; to better understand a technical aspect of the original imagery or to enhance the communication of the content and the artistic intent of the image.

Collaborators include: Janine Fron, Stephan Meyers, Dan Sandin, Tom DeFanti, Donna Cox, Charles Couri, Bob Lostutter, Keith Miller, T. J. McLeish, Jim Zanzi, Stephanie Barish, Miroslaw Rogala, Michael Dunbar, Sabrina Raaf, Nick Gaul, Fernando Orellana, Arthur Olson, Martyl, Karl Wirsum, Mr. Imagination, Chris Landreth, and Ed Paschke; and organizations such as NASA, UCLA School of Medicine, and Johnson and Johnson Pharmaceutical Research and Development.

Ellen Sandor is an internationally recognized multimedia artist and pioneer in digital media. Throughout the 1970s, she created mixed media environments and sculptures, and received an MFA from The School of the Art Institute of Chicago. Her passion for photography, technology, and outsider art inspired her to invent a new methodology for producing art, and a new medium of expression for the digital age. Since the early 1980s, a large body of work has been produced under Sandor’s direction by the (art)³ collective and numerous collaborators, with works in the permanent collection of museums and private patrons.

The studio of Ellen Sandor (art)³ can be reached at: www.artn.com, ellen@artn.com, or 312-617-7066.

Special thanks to Chris Kemp (art)³ for leading the installation team; and Michel Ségard and Janine Fron for the design, editing, and essays in the exhibition catalog.