

(See also **Steina and Woody Vasulka**, **Woody Vasulka**)

Since the mid-1970s, Steina has explored intricate transformations of vision, space and sound, through a dynamic confluence of digital technologies, mechanical devices and natural landscape. After producing a pioneering body of work with Woody Vasulka in the early 1970s, Steina has pursued several distinct inquiries in her more recent videotapes and installations: the electronic interrelation of sound and image; the use of mechanized, pre-programmed image devices for phenomenological explorations of perception, space, and modes of seeing; and the textural fusion of digital and "real" imagery and sound to create layered spatial and temporal systems. In many of her works, the natural landscape of the American Southwest is integral visual material. In 1975, Steina began *Machine Vision*, a series of tapes and installations for which she devised mechanical systems with programmed functions — optical, motorized or rotating devices that include spherical mirrors, prisms, and cameras with lens mobility. Used with her signature electronic manipulation and landscape imagery, these devices resulted in exhilarating redefinitions of physical and representational space. In richly textured works such as *Voice Windows* (1986) and *Lilith* (1987), Steina manipulates digital and camera-generated images, "real" and altered sound with haunting effect, constructing dense layers and multiple perspectives that fuse the natural world and technology in space and time.

Steina was born in Reykjavik, Iceland in 1940. She studied at the Music Conservatory in Prague, 1959-63, and emigrated to the United States in 1965. With Woody Vasulka, she has won numerous awards; their collaborative works have been widely exhibited internationally (see *Steina and Woody Vasulka*). Exhibitions of her individual works have been seen at festivals and institutions including Centre Georges Pompidou, Paris; The Kitchen, New York; Museum of Art, Carnegie Institute, Pittsburgh; The Jonson Gallery, University of New Mexico Art Museum, Albuquerque; and the Whitney Museum of American Art Biennial, New York, among many others. Steina lives in Santa Fe, New Mexico.

Violin Power

Steina: Selected Works

Violin Power

by Steina.

1970-78, 10:04 min, b&w, sound.

Steina terms this procedural work "a demo tape on how to play video on the violin." Her background as a violinist and her evolution from musician to visual artist is referenced through an analogy of video camera to musical instrument. Steina is first seen in footage from the early 1970s, playing the violin and singing to The Beatles' *Let It Be*. As succeeding segments trace a chronological progression, Steina layers imagery and time. The violin itself ultimately becomes an image-generating tool, as she connects it to imaging devices, creating abstract visual transpositions of sounds and vibrations. This unconventional self-portrait is a study of the relationship of music to electronic image.

Steina: Selected Works

by Steina.

Bad

1979, 2:14 min.

Urban Episodes

1980, 8:50 min. *Optical Instrumentation*: Josef Krames. Produced by KTCA-TV, Minneapolis.

Summer Salt

1982, 18:48 min. (*Sky High* 2:42 min;

Low Ride 2:59 min; *Somersault*

5:14 min; *Rest* 2:16 min; *Photographic*

Memory 5:10 min.)

Total program: 1979-82, 29:52 min, color, sound.

Steina's works from the late 1970s and early 1980s are exercises in the phenomenology of vision and the redefinition of space and landscape, as articulated through mechanized, optical and electronic devices. *Bad* is a technical exploration of several commands in the Vasulkas' Buffer Oriented Digital Device, which controls digital imaging functions such as up/down and right/left movement, as well as the



Bad

stretching and squeezing of the image. Steina uses her own face as visual material, rhythmically dismantling and reconstructing her self-image. *Urban Episodes* is a striking phenomenological study in an urban landscape, an exhilarating restructuring of physical space that defies expected modes of seeing and the laws of gravity and reflection. In a public plaza in Minneapolis, Steina set up a motorized, rotating *Machine Vision* device, which includes mirrors and two cameras that pan, tilt and zoom. *Summer Salt* is a dramatic exploration of the phenomenology of space and vision, as Steina uses mechanical and electronic devices to physically investigate the Southwestern landscape. This artificial vision allows the viewer altered perceptions and spatial perspectives. The five segments include dynamic exercises with Steina's mirrored globe, the physicality of unexpected camera placement, and electronic manipulation of the textures and colors of the landscape.

Selected Treecuts

by Steina.

1980, 8:11 min, color, sound.

Selected Treecuts is a formal examination of the distinction between camera-generated and digital images, and a layered juxtaposition of contrasting representations of reality. The methodology of the tape is simple: a zoom lens moves slowly in and out on a group of trees, alternating between digitized and camera-generated, "real" images. The movement in the tape is produced by the automated zoom lens and rotating prism; the images switch rhythmically between camera images and digital images held briefly in computer memory. The contrast between the "real" camera images of trees and the frozen, digital computer images forms an essay in motion and stillness, the organic and the synthetic, tracing a trajectory from the photographic to the electronic.



Lilith

Cantaloup

by Steina in cooperation with Jeffrey Schier and Woody Vasulka. A production of the TV Lab at WNET/Thirteen.

1980, 27:54 min, b&w and color, sound.

Cantaloup is an informal documentary on the Vasulkas' Digital Image Articulator, a sophisticated imaging device they designed with Jeffrey Schier. Using a cantaloup and the three artist/designers as image material, Steina explains the capabilities of the machine, including its real-time imaging ability and the articulation of images in a digital code. She describes the varying sizes of pixels (picture elements), the layers (or slices) of color and tone that can be derived from one image, and techniques such as "grabbing" the image and multiplying it. This document offers a highly informative, spontaneous demonstration of a complex imaging device.

Voice Windows

by Steina in collaboration with Joan La Barbara. Music: Joan La Barbara.

1986, 8:10 min, color, stereo sound.

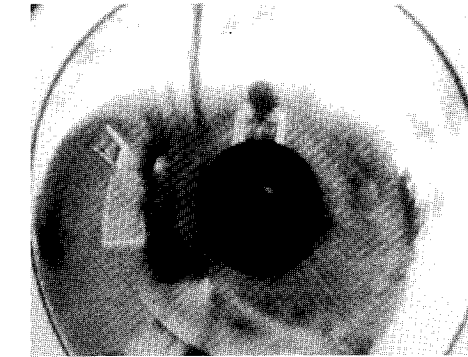
Sound, as visually manifested through electronic imaging, becomes a spatial component in this exquisitely rendered confluence of landscape, music and digital manipulation. Singer/composer Joan La Barbara performs a series of voice chants and intonations, creating energized patterns on a grid of horizontal lines that recalls a musical scale. This animated line pattern, vibrating and dancing to the energy generated by La Barbara's voice, is inscribed onto moving imagery of the Southwest landscape. Through electronic imaging, the energized patterns themselves act as "windows" that reveal yet another layer of landscape imagery, creating intricate fields of illusory spatial transformations.

Selected Treecuts

Cantaloup

Voice Windows

Lilith



Summer Salt

Lilith

by Steina in collaboration with Doris Cross. 1987, 9:12 min, color, stereo sound.

In *Lilith* — a name that evokes biblical and mystical references — Steina alters and manipulates the face of a woman (painter Doris Cross) so that it is submerged within a natural and technological landscape. Employing the imaging techniques of focal plane shift (altering the depth of field) and frame "grabbing" (a succession of frozen images), she creates a constantly shifting visual field in which an image appears to exist in a constant flux of temporal and spatial planes. The woman's electronically distorted speech adds a further haunting dimension to this almost sculptural fusion of human figure and landscape.

(See also **Steina, Woody Vasulka**)

Steina and Woody Vasulka are major figures in video history, technical pioneers who have contributed enormously to the evolution of the medium and who continue to be important practitioners of video as art. The Vasulkas' technological investigations into analog and digital processes and their development of electronic imaging tools, which began in the early 1970s, place them among the primary architects of an expressive electronic vocabulary of image-making. Applying an informal, real-time spontaneity to their formalist, often didactic technical research, they chart the evolving formulation of a grammar and syntax of electronic imaging as they articulate a processual dialogue between artist and technology. The Vasulkas' early collaborative efforts, produced from 1970 to 1974, include phenomenological explorations that deconstruct the materiality of the electronic signal and analyze the imaging capabilities of video tools. Central to these increasingly complex exercises are explorations of the malleability of the image, the manipulation of electronic energy, and the interrelation of sound and image. In the mid-1970s, working with such engineer/designers as Eric Siegel, George Brown, Steve Rutt and Bill Etra, the Vasulkas developed electronic tools specifically for use by artists. With Jeffrey Schier they developed the Digital Image Articulator, a device that allows the digital processing of video imagery in real time. Steina's training as a violinist, and Woody Vasulka's background as an engineer and filmmaker, informed their invention of electronic devices to transform sound, image, space and time — themes that they have pursued independently in their later works. Though the Vasulkas continue to collaborate, since 1975 they have produced much of their work individually.

The Vasulkas emigrated to the United States in 1965, and began their collaborative exploration of electronic media in 1969. In 1971, they co-founded The Kitchen, a major alternative exhibition and media arts center in New York. From 1973 to 1979, the Vasulkas lived and worked in Buffalo, New York, where they were faculty members at the Center for Media Study, State University of New York. The Vasulkas have received numerous awards for their work in the media arts, including grants and fellowships from the National Endowment for the Arts, the New York State Council on the Arts, and the Corporation for Public Broadcasting. In 1989, they received a United States/Japan Exchange Fellowship from the National Endowment for the Arts. The Vasulkas have broadcast and exhibited their collaborative works extensively throughout the United States, Europe and Japan, at institutions including The Institute of Contemporary Art, Boston; Everson Museum of Art, Syracuse; Institute of Contemporary Art, Philadelphia; Albright-Knox Gallery, Buffalo; and The Museum of Modern Art, New York, among many others. Steina and Woody Vasulka live in Santa Fe, New Mexico.

Home

by Steina and Woody Vasulka. *Dual Colorizer*: Eric Siegel. *Video Sequencer/Video Keyer*: George Brown. *Line-locked Strobe*: Steve Rutt. 1973, 16:47 min, color, sound.

Home is an early experiment in which the Vasulkas transform ordinary household objects through analog imaging devices. With humor and a sense of spontaneous discovery, they animate everyday objects through the application of electronic effects which serve as a primer of early imaging techniques: horizontal drift of layered image planes, colorizing, keying. Apples, shoes, bottles, teapots come to life in surreal tableaux that suggest psychedelic Magritte paintings, as the Vasulkas transform still lifes through the inner dynamic of electronic image processing.

Golden Voyage

by Steina and Woody Vasulka. *6 Input Keyer-Mixer/Gen-Lock System*: George Brown. *Dual Colorizer*: Eric Siegel. 1973, 27:36 min, color, sound.

In this early work, an electronic homage to Magritte, the Vasulkas demonstrate fundamental imaging techniques. Inspired by Magritte's painting *The Golden Legend*, this exercise employs a three-camera set-up, with images layered through a multikeyer, to create the illusion of objects moving through spatial planes. Loaves of French bread embark on a surreal video journey through electronic landscapes, finally arriving in an abstract space. The spectacle of the animated loaves adds a playful spontaneity to this early articulation of illusory space and three-dimensionality in video.

(See also **Steina, Woody Vasulka**)

Steina and Woody Vasulka: Selected Works I
 by Steina and Woody Vasulka.

Solo For 3

4:15 min. Programmer/Multikeyer/H.D.
 Variable Clock: George Brown. Dual
 Colorizer: Eric Siegel.

Reminiscence

4:48 min. Scan Processor: Rutt/Etra. Col-
 orizer: Eric Siegel.

Soundgated Images

9:22 min. Programmer/Multikeyer/H.D.
 Variable Clock: George Brown. Wave-
 form Generators: Steven Rutt. Scan Pro-
 cessor: Rutt/Etra. Dual Colorizer: Eric
 Siegel.

Noisefields

12:05 min. Sequencer/Multikeyer:
 George Brown. Dual Colorizer: Eric
 Siegel.

Total program: 1974, 30:30 min, color, sound.

This program presents the Vasulkas' early formal experimentations with analog image processing and their investigations of multiple camera set-ups and keyers to articulate spatial, temporal and sound/image manipulation. *Solo For 3* is a didactic yet playful exercise in which three cameras were trained on three different images of the number three. Image planes are layered, arranged and sequenced; the result is a multifaceted choreography of numbers. *Reminiscence* is an otherworldly record of a Portapak walk through a farmhouse in Moravia, the site of Woody Vasulka's youth, as seen through the transformative effects of the Rutt/Etra Scan Processor. Images become eerily sculptural, fading in and out of abstraction, as if in evocation of memory. *Soundgated Images* is an early example of the Vasulkas' ongoing explorations of interfacing modes of simultaneously generated sound and image, in which abstract, processed images are transposed as electronic sounds. *Noisefields* is an important example of these early experiments, a visualization of the materiality of the electronic signal and its energy. Colorized video noise (or snow) is keyed through a circle, producing a rich static sound that is modulated by the energy content of the video.



In the Land of the Elevator Girls

Steina and Woody Vasulka: Selected Works II

by Steina and Woody Vasulka.

Heraldic View

4:21 min. Multikeyer: George Brown.
 Waveform Generators: Steven Rutt. Dual
 Colorizer: Eric Siegel.

1-2-3-4

7:46 min. Programmer/Multikeyer/H.D.
 Variable Clock: George Brown. Dual
 Colorizer: Eric Siegel.

Soundsize

4:40 min. Scan Processor: Rutt/Etra.

Telc

5:10 min. Scan Processor: Rutt/Etra.
 Colorizer: Eric Siegel.

Total program: 1974, 21:57 min, color, sound.

Here the Vasulkas continue to develop the imaging potential of artist-designed electronic devices, as they formally analyze and deconstruct the inherent materiality of video. In *Heraldic View*, an oscillator-generated pattern drifts over a camera image of bricks and stone, the patterns modulated by sharp bursts of voltage generated by an audio synthesizer.

1-2-3-4 is an exercise in animating numbers, using four cameras and a multikeyer to re-order and layer the image planes. *Soundsize* continues the Vasulkas' investigation into the relationship of sound and image. Here a pattern of dots is modulated by sounds generated from a synthesizer, changing size and shape in a visual manifestation of electronic sound. In *Telc*, a Rutt/Etra Scan Processor is used to transform portapak images from a trip to a town in Southern Bohemia. Like faded memories, images of the landscape and people are sculpted and abstracted, as the energy of the image is translated into electronic scan lines.

Progeny and In Search of the Castle

by Steina and Woody Vasulka.

Progeny

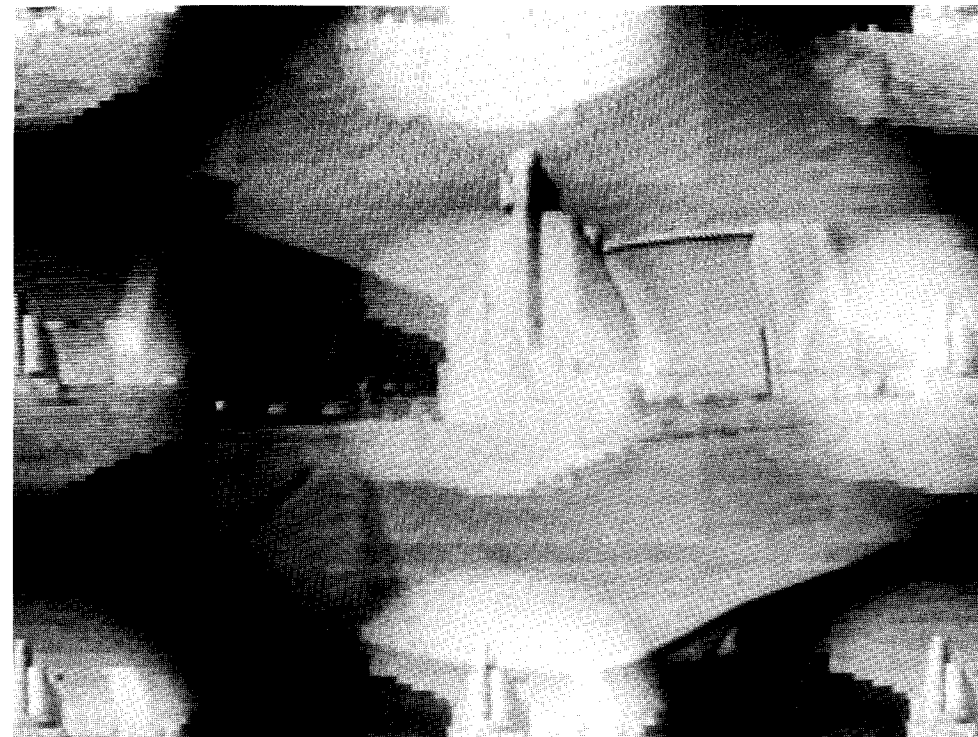
18:28 min. In collaboration with Brad-
 ford Smith.

In Search of the Castle

9:29 min.

Total program: 1981, 27:57 min, color, sound.

In these two works, the Vasulkas employ imaging tools to transform physical space and alter perception. *Progeny* is a collaboration with sculptor Bradford Smith. Smith's organic and sensual sculptural forms are transformed by the merging of one of Steina's *Machine Vision* devices — a rotating, mirrored sphere with pre-programmed camera movements and



In Search of the Castle

optical transpositions — with Woody's digital processing. *In Search of the Castle* is a journey of personal, perceptual and technical transformations. Driving from a city through Southwestern landscapes, taping through Steina's mirrored globe, the Vasulkas develop the central metaphor of a search. This work traces their odyssey from naturalistic to increasingly complex, image-processed landscapes, until they arrive at an abstract electronic environment, a synthetic space transformed by technology.

In the Land of the Elevator Girls

by Steina and Woody Vasulka. Assistance:
 Hirofumi Mora, Japan-United States Friend-
 ship Commission. Produced by IMATCO/
 ATANOR for Television Española S.A. El Arte
 del Video.

1989, 4 min, color, stereo sound.

In the Land of the Elevator Girls uses the elevator as a metaphorical vehicle to reveal an outsider's gaze into contemporary Japanese culture. The continual opening and closing of elevator doors serves as a succinct formal device, as the viewer is offered brief glimpses of a series of landscapes — natural, urban, cultural and domestic. Doors open onto doors to reveal layers of public and private vision, transporting the viewer from theatrical performances and street scenes to an elevator surveillance camera's recording of everyday life.

(See also **Steina, Steina and Woody Vasulka**)

Since the mid-1970s, Woody Vasulka's work has focused on a rich articulation of the syntactical potential of electronic imaging. After producing a pioneering body of tapes in collaboration with Steina in the early 1970s, he has since undertaken a sophisticated exploration of the narrative and metaphorical meaning of technological images. Vasulka's development of an expressive image-language has evolved from a rigorous deconstruction of the materiality of the electronic signal, through experiments with new technologies of digital manipulation, to the application of these imaging codes to narrative strategies. The remarkable culmination of this investigation, *Art of Memory* (1987), is one of the major works in video. In this lushly textured, haunting essay, Vasulka applies a highly evolved imaging grammar to a metaphorical discourse of collective memory, history, and the meaning of recorded images — envisioned as a spectacular memory-theater inscribed upon the landscape of the American Southwest. In his early investigations of the vocabulary of such devices as the Digital Image Articulator, Vasulka emphasized the dialogue between artist and machine, as manifested in real-time creativity and process-oriented experimentation. Through digital manipulation, he continues to explore the malleability and objectification of the electronic image as a means of rendering a complex inventory of rhetorical devices. With the fantastical "electronic opera" *The Commission* (1983), Vasulka began to apply these codes to the development of narrative and metaphorical strategies, an inquiry that has dominated his later work.

Vasulka was born in Brno, Czechoslovakia in 1937. He studied at the School of Industrial Engineering in Brno and the Academy of Performing Arts Faculty of Film and Television in Prague. With Steina, he has won numerous awards and grants; their collaborative works have been exhibited internationally (see *Steina and Woody Vasulka*). His individual works have been shown in numerous exhibitions, at festivals and institutions including the International Center of Photography, New York; Los Angeles Contemporary Exhibitions (LACE); Carnegie Museum of Art, Pittsburgh; and the Whitney Museum of American Art Biennial, New York. He lives in Santa Fe, New Mexico.



The Commission

Woody Vasulka: Selected Works
by Woody Vasulka.

Vocabulary

1973, 4:17 min, stereo sound. Multikeyer: George Brown. Scan Processor: Rutt/Etra. Dual Colorizer: Eric Siegel.

The Matter

1974, 3:56 min, sound. Scan Processor: Rutt/Etra. Multikeyer: George Brown.

C-Trend

1974, 9:03 min, stereo sound. Multikeyer/H.D. Variable Clock: George Brown. Scan Processor: Rutt/Etra. Dual Colorizer: Eric Siegel.

Explanation

1974, 11:45 min, sound. Multikeyer: George Brown. Dual Colorizer: Eric Siegel. Scan Processor: Rutt/Etra.

Total program: 1973-74, 29:01 min, color, mono and stereo sound.

This program of early works includes didactic explanations of Vasulka's image-making tools, and also charts his development of a grammar of these imaging techniques. *Vocabulary* is "designed to convey in a didactic form the basic energy laws in electronic imaging." Here a hand, as a metaphor for expression and gesture, and a sphere that symbolizes form, are processed with a keyer, colorizer and scan processor. *The Matter*, *C-Trend*, and *Explanation* are methodical, didactic works that deconstruct the essential elements of electronic imaging and then attempt to construct a syntax from those elements. In *The Matter*, a generated dot pattern is re-sculpted into myriad three-dimensional forms and shapes by waveforms, which also generate sound. In *C-Trend*, a view of traffic shot from a window is transformed and sculpted into permutations of abstract, three-dimensional forms. *Explanation* is a computer-generated cross-hatch of lines that becomes three-dimensional, defining shapes in a synthetic landscape of gradually shifting image position and size.



Art of Memory

Artifacts

by Woody Vasulka.

1980, 21:20 min, b&w and color, sound.

Artifacts is a didactic demonstration of the syntax and vocabulary of the digital image, via the electronic capabilities of the Digital Image Articulator. Vasulka's intent is to create a dialogue, a symbiotic relationship between artist and machine. "By artifacts," he states, "I mean that I have to share the creative process with the machine. It is responsible for too many elements in this work. These images come to you as they came to me — in a spirit of exploration." Initiated by basic algorithmical procedures, the images coalesce to form an overall conception of the electronic vocabulary made possible by this technology. Vasulka works with a spherical shape and, in an ironic reference to the "hand of the artist," studies his hand as transformed by the Imager.

The Commission

by Woody Vasulka. Camera: Steina. With: Robert Ashley, Ernest Gusella, Cosimo Corsano, Ben Harris, Andrea Harris, David Ossman. Set Design: Bradford Smith. Editor: Peter Kirby. Audio Mix: Baird Banner. Vocoder: Harald Bode. Scan Processor: Rutt/Etra. Digital Articulator: Jeffrey Schier.

1983, 44:55 min, color, stereo sound.

Applying his electronic imaging codes to narrative in *The Commission*, Vasulka develops a metaphorical image language to envision an epic electronic opera. The text, which is based on the relationship of violinist Niccolò Paganini (played by video artist Ernest Gusella) and composer Hector Berlioz (composer/performer Robert Ashley), confronts myths of Romanticism, history and art-making. Constructing a fantastic video theater, Vasulka stages a narrative of transformation, an intricately crafted blend of figuration and abstraction, in which imaging techniques serve as expressive visual syntax. Specific video effects are assigned interpretive meaning; reframed images proliferate within images in re-compositions that propel the narrative progression. *The Commission* is a pivotal work in the articulation of narrative strategies through an electronic image language.

Artifacts

The Commission

Art of Memory

Art of Memory

by Woody Vasulka. With: Daniel Nagrin, Klein. Voices: Doris Cross. Videotools: Rutt/Etra, Jeffrey Schier. Collaboration: Bradford Smith, Penelope Place, Steina, David Aubrey. 1987, 36 min, color, stereo sound.

Art of Memory is one of the major works in video, an astonishingly original and mature articulation of Vasulka's inquiry into the meaning of recorded images. Constructing a haunted theater of memory from a spectacle of filmic and electronic images, Vasulka collapses and transforms collective memory and history in an enigmatic space and time. The monumental landscape of the American Southwest is the mythic site onto which he inscribes newsreel footage of war — ghostly images that become malleable, sculptural forms through constant electronic transmutations. In this metaphorical vision, the recorded image becomes a monument to the past; history becomes cultural memory through photography and cinema. Vasulka locates the trauma of 20th-century history in filmic images of violent events, including the Spanish Civil War, the Russian Revolution, World War II and the advent of the nuclear bomb. Presided over by a winged creature of conscience, history and memory are seen to be manipulated by the history and memory of images. In a breathtaking conjunction of the apparatuses of war, history and the media, Vasulka achieves a poignant, ultimately tragic memory theater.