

Athens Center for Film and Video

presents

THE WEST

a video installation

by STEINA

Seigfred Gallery

February 7-14, 1985

Steina will open her installation

on Thursday, February 7 at 8:00pm

and will conduct a workshop

on Friday, February 8

(location to be announced)

This event is being sponsored by the Ohio Arts Council, the National Endowment for the Arts and the Ohio University College of Fine Arts.

STEINA

Steina, with her husband Woody Vasulka, created "The Kitchen" in New York City in 1971. Since then "The Kitchen" has become a major force in the development of independent film and video. Steina has subsequently worked in Buffalo, New York, and now works with Woody in Sante Fe, New Mexico.

Steina was born and raised in Reykjavik, Iceland, where she studied violin and music theory. While studying in Prague in 1959, she met and married Woody an engineer turned filmmaker. The two emigrated back to Iceland, where Steina became a member of the Icelandic Symphony Orchestra.

Steina and Woody came to the United States in 1965. Woody worked as a freelance filmmaker and editor and the two became interested in the medium of video. Although they were first interested in video in its traditional mode as a "window on the world," they achieved prominence when they explored video as an electronic tool, manipulating the video signal.

Steina has become a major contributor to the exploration of the possibilities for the generation and manipulation of the electronic image through a broad range of technological tools and aesthetics concerns. Her tapes have broadcast on television stations and video festivals throughout the world. She was a Guggenheim fellow in 1976 and has received grants from the New York State Council on the Arts, the National Endowment for the Arts, and the Corporation for Public Broadcasting.

THE WEST

by Steina
sound by Woody Vasulka

- Concept: Layers of multi-directionally scanned images of landscapes and artifacts of landscape proportions are presented through an enclosed circular environment of monitors. A four corner speaker system delivers a low frequency sound textures.
- Software: Two 30 minute video tapes (played in auto repeating synchronous/play/rewind mode, with an aid of custom built synchronizer).
- Hardware: 10 color monitors
2 video tape recorder/players
2 channel video tape synchronizer (custom built)
2 stereo preamp/amplifiers with 4 channels of equilization
4 speakers

Any action of man on land, stays recorded for long in the South-West. In no other region of this country does the presence of the sun play such significant role in the ecology of land, arid and eroded, with an exceptional clarity of the night skies, forming notions of extra terrestrial importance in the minds of its inhabitants. The landscape, by its dimension and by its geometric and textual variety, inspires man to create harmonious structures, dwellings and other earth works. Significantly, the exercise of one of the most advanced scientific disciplines, the Very Large Array (VLA) radio telescope system, utilizes these conditions and has also inspired creations of profoundly meditative pieces of land art based upon geo-observations and other events related to the position of stars.

"The West" is a video environment, involving situations where human expression results in the marking of earth by building dwellings and ceremonial structures, creating works of art and developing scientific instruments of landscape proportions.

The Vasulkas

THE WEST

"Steina and Woody Vasulka's THE WEST used video (Steina's) and sound (Woody's) to address and replicate the vast, arid clear Southwestern landscape as a site for the making of signs: ceremonial Indian dwellings, the arrays of scientific instruments New Mexico hosts, even artworks. Though more conventionally reliant on imagery than PRIMARILY SPEAKING, THE WEST is just as demanding in the precision of the Vasulka's use of video and sound to generate a phenomenological experience of space.

"Austerly minimal in conception, the piece used a circle of six monitors suspended at eye level in a darkened room, thus mitigating all aspects of the standard carpeted museum room but size and emptiness. The eerie tones of the audiotrack, low-frequency sound reproduced at a high amplification, heightened the emptiness by surrounding the viewer sitting in the center of the circle of monitors, watching the imagery from below. On the screens - generally used as three pairs in this two-channel work - the structure invoked circles (the Vasulkas' mirrored, rotating globe), as well as mirror imagery. Using highly saturated reds, pinks, and blues (the color manipulation hardly seemed to intrude on the 'natural' appearance of the landscaper), the imagery was in constant, stately motion; from the spinning mirrored sphere reflecting a blue sky against the red New Mexico land to the Anasazi's Casa Rinconada in Chaco Canyon, where the camera probed, in parallel but off-sync images, the passages of the ruin; from superimposed reverse pans over mesas to the mirrored sphere reflecting, and framed by, the giant silver disks of New Mexico's VLA (Very Large Array) radio-telescope system, which itself, of course turns slowly to scan the sky.

"In its representation not just of 'landscape', but of efforts to mark that landscape, to plot points in that landscape against the system of moving space - a process in which the individual is necessarily the focal point - THE WEST served as an uncanny embodiment of Clancy's thesis. It elegantly demonstrated how imagery and sound, pared down to the barest possible elements, could constitute a complex mapping of space and time."

Cathrine Lord
AFTERIMAGE

STEINA--A SELECTED TAPE BIBLIOGRAPHY 1970-1984

STEINA AND WOODY VASULKA

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|------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 1970 | SKETCHES (27 min. b&w) | Early experiments in image processing. |
| | JACKIE CURTIS' FIRST
TELEVISION SPECIAL
(45 min. b&w) | Television by NY counter-culture. |
| | DIARY #2 (6 min. b&w) | Audio generated shape to video
playback with image decay. |
| 1971 | SHAPES (12 min. b&w) | Audio waves in video producing
permutations. |
| 1972 | SPACES (15 min. b&w) | Multi-screen single channel work in
segments reminiscent of artists
Escher, Magritte, Dali, and Tanguy. |
| 1973 | HOME (16 min. color) | Still life transformed through image
processing. |
| | GOLDEN VOYAGE
(28 min. color) | Homage to Magritte. |
| 1974 | 1-2-3-4 (7 min. color) | Exercise for four cameras and digitally
controlled six input keyer. |
| | TELC (5 min. color) | Portapak video tape of a renaissance
town in Southern Bohemia is displayed
on a scan processor. |

Steina

- | | | |
|-----------|--------------------------------------------|---------------------------------------------------------------------------------------------------|
| 1975-1977 | MACHINE VISION | Series of tapes and installations
involving mechanized modes of camera
movement. |
| 1976-1983 | ALLVISION | Series of installations with
surveillance cameras mounted on
turntables. |
| 1980 | CATALOUP (24 min. color) | Defines the basis for computer control
of a digital image device. |
| 1981 | IN SEARCH OF THE CASTLE
(11 min. color) | Images through a wide angle lens which
are processed through the "Vasulka
Image Articular." |
| 1983 | THE CONDITION | An installation with cameras mounted
on turntables which alter perspective. |

Camera Eye: The Vasulkas

Artists who explore the camera instead of the world.

Robert A. Haller



Steina's self-portrait alters the image, challenging our preconceptions.

Most people approach video like films: Cameras—film or video—are windows on the world. Steina and Woody Vasulka took this traditional stance when they began taping arts performances in New York lofts and clubs in the mid-sixties. But soon their frame of reference changed. They became more interested in how the camera worked than in what was in front of it. They covered the lens and constructed images, playing with pixels (the smallest unit of a video image), altering raster lines (the 525 lines that form the image on the screen), making pictures from inside instead of outside the camera.

"Ordinarily the camera view is associated with a human point of view, paying attention to the human conditions around," Steina Vasulka explains. Tall, dark-haired, in her early forties, Steina dresses casually in blue jeans and warm sweaters from her native Iceland. She is anything but casual about her work.

"In this series [her "Machine Vision" project]," she continues in her peculiar brand of technospeak, "the camera conforms to a mechanized decision making of instruments, with the movements and attention directed toward their own machine-to-machine observations."

Steina and her husband Woody create a form of television totally unlike what

through it. They become almost inseparable from the tools of their work, intertwining art and technology, human vision and machine vision.

Using computers and electronic synthesizers, often without cameras, the Vasulkas have extended the expressive range of the medium. By demoting the camera-and-lens combination to a secondary role, they make organization more important than observation. The television signal is much more malleable—and controllable—than most of us think. In the new realms of Vasulka video, we can see:

- television "snow" randomly falling across the screen, and then suddenly becoming "ordered," so that in the center of the screen a disc of different snow ap-



pears—frozen or moving against the direction of the original snow;

- the raster lines of the image retreating from the edges of the screen, folding over on themselves, and forming baffling configurations;

- a recognizable image molded into a topographical surface that soon turns into a terrain different from (but born of) the initial image.

The Vasulkas' imagery is fascinating because the transformations we witness are mathematical, rigorous, *our own*—in that they are made by machines made by people—yet also *not our own*—because these electronic images cannot be made without machines. Woody Vasulka often speaks of "a dialogue between the tool and the image," a phrase that conspicuously fails to emphasize or even acknowledge the human presence.

Woody and Steina design and construct their equipment with the intention of learning from it during and after the programming process. Their tools are not that extraordinary, although they are custom-built: a Rutt/Etra scan processor, a dual colorizer, a programmer, a multikeyer, a variable clock, and a switcher (the last four made by technician George Brown in the early seventies). With these instruments, the Vasulkas have become electronic pioneers charting the digital and analogue space of the microcircuit, the time duration of "instant" information exchanges, the implications of infinite extrapolations.

The Vasulkas' adventures in videoland are paralleled by the cross-cultural, multidisciplinary histories of their personal lives. Born and raised in Reykjavik, Iceland, Steina studied violin, harmony, and music theory in her youth. In 1957 she traveled to Denmark; she spent the next year in Germany, moving to Czechoslovakia in 1959 to continue her study of music. In Prague she met and married Woody; they returned to Iceland together, and Steina joined the Icelandic Symphony Orchestra. Steina's video work benefits from the abstract, mathematical grounding of her career in classical music.

Woody was born in Brno, Czechoslovakia, in 1937. In 1945 he developed an interest in technology. "Europe was a junkyard, where we could find great dumps of war equipment," he recalls. His junkyard scavenging continued through the fifties, and he legitimized this obsession by earning a degree in industrial engineering. Growing a bushy goatee, Woody typecast himself for the work he did in the fifties as jazz critic, poet, and photographer before turning to filmmaking in 1960. When he moved to Iceland with Steina that year, he began a metamorpho-

In 1971, Woody and Steina opened New York's Kitchen, an arts exhibition space for videomakers.

In 1965, Woody and Steina moved to the United States and quickly took up residence in New York's alternative television scene. Video impressed Woody as "an energy system"—a system he and Steina soon set out to explore on an electronic rather than a photographic basis. The industrial engineer and the violinist became video artists, fascinated by feedback and the flexibility of the half-inch tape on the Sony portapak. In 1971, Woody and Steina founded the Kitchen, an electronic arts exhibition space that would soon become a Mecca for experimental videomakers. The Vasulkas' early documentary work evolved into more adventurous projects; they made scores of tapes in the early seventies exploring the manipulation of the video signal.

In 1973 the Vasulkas moved again—to Buffalo this time. That year they made *Golden Voyage*, a work that illuminates some of their creative interests. The tape is based partly on a work from another medium, René Magritte's painting "Golden Legend." The Belgian surrealist had long fascinated Steina and Woody. "Magritte's work anticipated the possibilities of many electronic-imaging concepts," Steina says. *Golden Voyage's*

weightless loaves of bread drifting through the space beyond the window frame recall Magritte's locomotive emerging from a fireplace, downpour of bowler-hatted gentlemen, and boulder serenely floating above the ocean.

Golden Voyage begins as an homage to Magritte, but it rapidly becomes much more. The framing window vanishes, the screen space expands with sudden depth, and the loaves cease to be just bread, now suggesting images of the human body. The background and foreground also change, moving the loaves over the ocean, drifting them over rock-strewn plains, and along an electronically colored coast. At times the screen "pans" and "tracks forward" with a flexibility noticed only after the fact. False perspective, contradictory illumination, improbable juxtaposition, and poetic harmonies punctuate *Golden Voyage* and other Vasulka tapes (just as they do Magritte's paintings).

In Buffalo, where Woody taught at SUNY's Center for Media Study and invested years of his time building a "Digital Image Articulator" (with techni-

cian Jeffrey Schier), Steina plunged anew into her "Machine Vision" project, a series of tapes and installations that broke ground conceptually and aesthetically.

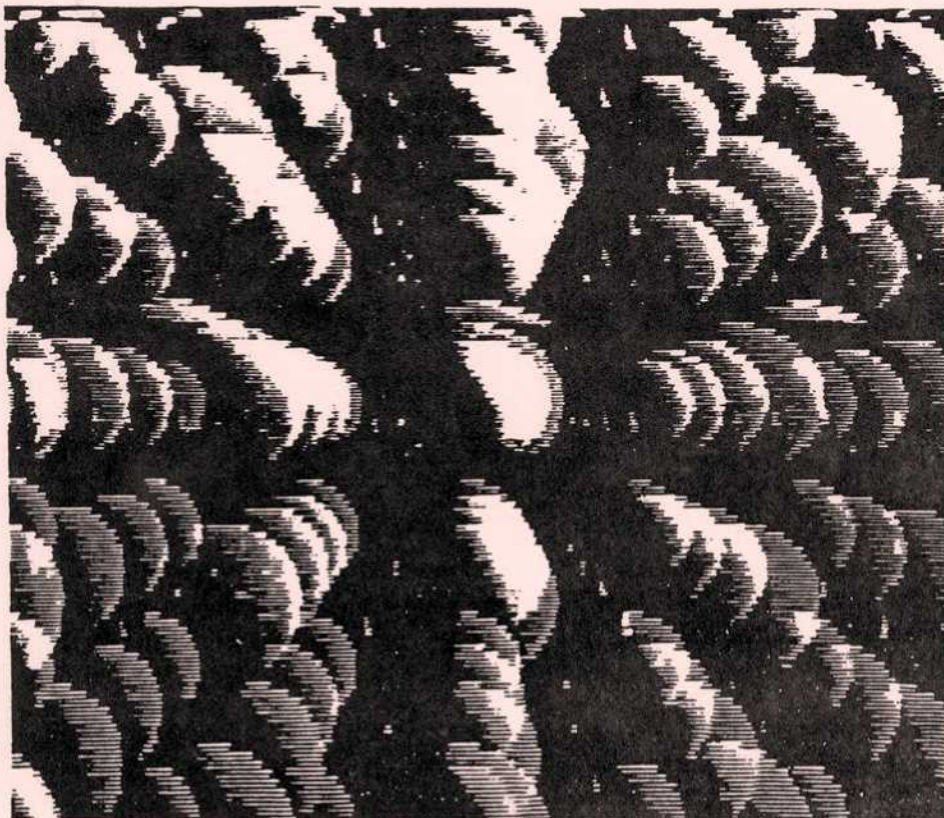
From 1975 to 1977, she produced five tapes whose mechanical aspect lay not in image formation but in alternation of photographed views (somewhat like a surveillance camera system). In some of these tapes, and then more spectacularly in her installation series "Allvision," two or more cameras simultaneously regard each other and the external world. Displayed on side-by-side monitors (in the installation) or rapidly alternating (on the generated tapes), these works provide an encyclopedic perspective, a kind of omniscience that slips in and out of our grasp.

Marshall McLuhan's maxims about the impact of media on perception are reaffirmed by the experience of watching the Vasulkas' video work. One comes away from it with an enhanced recognition of how much we do not see, and how much effort must be expended to gain a wider vision.

In 1978, shortly before they left Buffalo for Santa Fe, where they continue to work, the Vasulkas assembled a remarkable series of programs for broadcast. Initially shown on WNED in Buffalo, the six half-hour programs (funded by the National Endowment for the Arts and the Corporation for Public Broadcasting) survey ten years of the Vasulkas' work. Excerpts from many of their tapes are included with explanations of how they were made.

Today, thirty years after the beginning of the massive growth of network television, and after more than a decade of widespread experimentation by video artists, all network and most individual video construction is based on the aesthetic of film. But there is no necessary relation between the two—in practice, films convert into videotapes with difficulty and transferring video to films causes even greater problems. Had video been invented fifty years earlier, or film fifty years later, the two media would surely have evolved differently.

The potential of video technology for personal expression and discovery—in broadcast and in the art gallery—is a great, largely unexplored terrain across which the Vasulkas are traveling. That they are discovering exciting new imagery should be no more surprising than the very recent discovery (in the early sixties) of the "hidden" side of the moon. We knew that side of the moon was there, but didn't know what it looked like. The Vasulkas know that something they don't know is waiting for them in the circuits of their computers and behind the screens of their video monitors. They have accepted their mission to find it. ■



WORKING PAPERS

THE ROCKEFELLER FOUNDATION

VIDEO: STATE OF THE ART

BY JOHANNA GILL

The Vasulkas are probably among the most thoughtful, intelligent people working in video, and their work is central to the basic concerns of the medium. Steina is a violinist from Iceland and Woody is a film-maker from Czechoslovakia; both have been interested in electronic arts of all kinds for a long time. They lived for several years in New York City, where they set up The Kitchen, a kind of free-form gallery and electronic-arts performance center, in the summer of 1971, and showed much early video there as well as helping to organize some of the first video tape festivals.

Woody remembers how they felt when they first began to use video:

Our context was not really artistic when we started to work with video. It was very far from what I would recognize as art....There are various motives for people who stumble into video. In some cases, it was pure accident; in some cases, it was hope. In my case, I had been in things I couldn't work with. I was in film, and I couldn't do anything with it. It was absolutely a closed medium to me. I was educated in film at a film school. I was exposed to all the narrative structures of film, but they weren't real to me and I couldn't understand what independent film was. I was totally locked into this inability to cope with the medium I was trained in. So for me, video represented being able to disregard all that and find new material which had no esthetic content or context. When I first saw video feedback, I knew I had seen the cave fire. It had nothing to do with anything, just a perpetuation of some kind of energy....

The Vasulkas have done both "documentary" and "abstract" video over the years: this discussion will cover only the latter. They stuck to their guns - there is no dramatic structure in their work; the tapes have fast-moving rhythms, but shifts occur according to per-

mutations in the way the image is structured, not according to any dramatic plan.

Their early work pursued two themes, according to Steina:

We approached the art material, meaning that we dealt with voltages and frequencies. We are dealing with the signal, that is the audio signal and the video signal....

Woody:

What was really, truly significant to us at that time was something nobody really detected. That was to make pictures by audio frequencies, and to get audio frequencies out of pictures.

The first tool the Vasulkas got was a portapak; the second was an audio synthesizer. They hooked the two up and sometimes could use the audio signal to generate video images, and sometimes use the video signal to generate sounds.

Steina:

That was the first approach we had. Secondly, another characteristic of our work has been a consistent traveling of the frame, horizontal traveling.

Much abstract video imagery has the tendency to move vertically. The Vasulkas insisted on moving theirs horizontally, often along lines of monitors so it looked as if the image was traveling down the line from one monitor to the next. Woody explains:

At that time I was totally obsessed with this idea that there was no single frame anymore. I come from the movies, where the frame was extremely rigid, and I understood that electronic material has no limitation within its existence. It only has limitation when it reaches the screen because the screen itself is a rigid time structure. But the electro-magnetic spectrum itself exists, organized or unorganized, totally in space. Confining it in a single monitor is like a view through a camera, or a single projection frame.

All this gave us the idea that there was no truly rigid frame, just particular organizations of time and energy. The image is fed into a sound synthesizer...the organizational mark itself is electronic. That's what we in video call horizontal and vertical pulse - it paces the image. These are the sync marks which are usually hidden behind the frame. It's all on the images, just as film has sprocket holes which are normally hidden. Electronically, there are also frames. What this does is disregard the reference of being locked into a single frame. It travels; there are two time layers. One is static, and the other is dynamic and all this is exposed....

All this means that one is often watching a horizontally drifting image, and that the sound and the image are directly related in some way. The total effect is of a totally integrated work that is nevertheless dynamic, always energetic, always moving.

The Vasulkas' work has tended to evolve with their equipment. Woody says:

Our work is a dialogue between the tool and the image, so we would not preconceive an image, separately make a conscious model of it, and then try to match it, as other people do. We would rather make a tool and dialogue with it; that's how we belong with the family of people who would find images like found objects. But it is more complex, because we sometimes design the tools, and so do conceptual work as well.

During the years 1972-1973, they went through a surrealist period. They had been going through picture books of Magritte's work, figuring out how natural it would be to do some of his works with video special effects. One work, The Golden Voyage, is directly based on Magritte's painting The Golden Legend - a loaf of bread travels like a finger, opening up certain areas of the image to special effects. Even in these works, where there is no horizontal drift, there are at least two kinds of motion going on in each image; motion, rates of change, are always present in their work.

Their latest work involves raster manipulation; each line of the video image becomes a carrier of energy through time. Some-

times the images are sketches of simple wave patterns. Sometimes a portapak tape of a street scene is used, and the raster is altered according to the brightness or energy in the image. So what one is seeing is a topographical map of the brightness of an image; where the image is bright, it lifts the lines; where it is black, they fall. The Vasulkas call this recoding, and indeed it does make one recode the way the image is looked at because new kinds of information are being given.

Woody explains what he is attempting to do with this new imagery, which can look quite stark and unaesthetic, because it is so new:

You should be precise about your pleasures, and communicate those to the audience, rather than those which are widely shared. That's what I have against any dramatic structures. They already appeal to an experience which is built through the centuries...I walk somewhere, and I see something which is art, and I agree with it. But then I question it. I say "Why did I like this? Because it is art?" And then after all, I feel frustrated that I really enjoyed it, because there were other qualities that were missing...Right now I am interested in knowing, in knowledge, than in the esthetic end of it. So then I must say, "Did it say anything towards my own process?" And often I have to say it didn't, it just extended what is called art, in its beauty, or its accomplishments, but it didn't say anything to my personal problems. Sometimes when I watch people's work, I tend to underestimate it because it's not beautiful. But then I have to re-evaluate it and change my preference, because in the long run, that work which was not so beautiful, might have been more important....

Basically art provides a continuous stream of models of consciousness. There are always certain historical periods when new consciousness is created, for example, when Freud reached a new understanding of the relationship between people. Eventually there is a construct of consciousness which has art as a model...Now, what I am interested in is if there is the possibility of actual, total redesign of con-

sciousness in the sense of its model. During the early part of my life, I was looking into myself for an alternate model of consciousness, and I didn't find it. Now turning more and more towards material, I'm trying to find this new model of consciousness within the material....

Since we look at reality mostly through our eyes, the reality has total dependence on perception, on how images are formed in the eye.... But through an electronically-generated image, I found non-lens, non-eye possibilities of restructuring the image....I am not totally dependent on reality as we know it through the lens or eye....Through electronics, I think there is a way of interacting with real models, with models taken from nature, and a new concept of nature can be synthesized.

...The closest thing to all this is radio astronomy. The universe as we knew it until now was constructed on information of light, which reached our eyes and provided a model of the conscious universe. But now, with radio astronomy, we are getting a very different notion of our universe. First of all, we receive information which is not visible. It's not points or spheres anymore. It's energy which is not in a permanent state; it is permutating, as a matter of fact, all the time. So that suddenly, through the instruments we have, we are reconstructing the universe in some visual sense, because eventually we translate radio waves into some visual model. We are now trying to visualize space which exists only as electro-magnetic forces....It's the notion of the organization of energy in time that for me is the key to all sorts of changes within life.

Video Art Review — Anthology Film Archives/Electronic Arts Intermix

AN INTERVIEW WITH STEINA

By Robert A. Haller

RH You and Woody have been involved in video for...

SV Ten years.

RH In that time you have made three major moves, from the Kitchen in New York, to Buffalo, and now to Santa Fe, New Mexico. What are you looking for, or escaping from, or trying to find?

SV We have never lived permanently anywhere. I have been on the move since I was seventeen. When I lived in New York that was the longest stable period in my life. I was here [in New York] seven years; Buffalo was six years—it was admirable! It was time to move. I think people do that regularly. It doesn't directly have to do with the making, but—to go from place to place—it certainly changes it.

RH In New York you created your environment at the Kitchen; in Buffalo there was already a supportive structure at the University; and now in Santa Fe you are creating from scratch again.

SV I guess we have to create our own [environment] but this time we are interested in creating a more private environment. Although we are already being approached by different elements in the city to coproduce and work on projects.

RH What you and Woody work in is called "video." What that word means is not the same thing to many people. What does it mean to you?

SV Video has a common denominator: the signal of video. It is what film is to film. But otherwise, video artists have found various creative spaces within video. Let me suggest a few categories where I think most video is being practiced. Some artists work with space that is given in front of the camera (obscura), where the creative effort is in the arrangement of space, and the main concern of the artist who works in this area could be a performance, conceptual thought or an installation. Then there is another concern; the use of the extended eye through camera, and as you know, that principle has been thoroughly explored in film. If you go the other way, you get to people who modify or modulate images, either gathered through camera or generated internally without any optical or external input. If you think about image generation and manipulation, you get very involved in the control part. In analog video it consists of waveform controls, and is almost never repeatable. It is like a musical improvisation. At first, the motivation to get a computer was to program the waveforms

RH But you still wanted—

SV No. After we got the computer the concerns became totally different. Before we could even perfect the control of analog tools, we plunged into digital ones, where in fact everything is a product of control. It is in "interactive real time" where I feel video becomes a category apart from the others (film on one side and computer graphics on the other). Everybody who works in video insists on it. In fact, there is no other, let us say, "time lapse mode" of video—unless you go beyond personal gear. Film "real time," as real as it can be, can never be interactive

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in sense of its feedback loop to its image forming process, and and in this context it has always its lapse. I would terribly miss this exciting control mode

RH But all video artists don't work in real time.

SV They do.

RH Well ... Nam June Paik, for instance, edits.

SV We can say that editing as inherited from film may analyze, or rather, criticize the "real time" of a scene, but in our context where video and computer are side by side, we must discuss a quite different aspect of "real time." The tools we use, video tape recorders, cameras, etc., operate in "real time" as a time in which signals propagate from input to output. You must realize that this term is the technological one, yet it is placed in the competitive context with our momentary perception as a tool of single frame composition. One result of real time system performance is that you can continuously modify the sequence, which in a process resembles [the] playing of a musical instrument, which also gives you a great amount of variations and immense capacity to discard unnecessary themes. So "real time" in our context does not mean the "infinite take," but the observation of image forming processes, which look to us as perceptually continuous, yet interactive in all modes, including the image forming.

RH Many people have problems with the lower levels of information content in video. For you this is not an issue?

SV The aesthetic and the industrial drive is toward higher and higher resolution. Obviously, video wants to get even with film to begin with. Our personal need tends to be the opposite—we have to break down the video image to much less elements than a television camera offers. We must take this road to work with our digital tools meaningfully. We must sacrifice the resolution for speed (necessary in digital imaging). We are working with [the] moving image, and the pressure of time is immense. It is hard to imagine, but in microprogramming our device, a range of nano-seconds is the area of our practical work.

RH The low field rate, and low resolution then, aren't crucial to video aesthetics?

SV There are two ways to answer the topic of "field" or "frame" in television. The usual and most complete descriptive terminology is purely technological, referring to elements of television frame as a succession of two video fields, each containing $\frac{1}{2}$ of the information in relationship to each other, called "interlace." However, no aesthetic account of the technologies we use has been accomplished—not even attempted. So before we get into a discussion about the performance of the medium on the level of its elements, we would have to devise a specific language for it. I guess film had to do the same.

RH Recently you have discussed making your own "chips," which are miniature electronic circuits.

SV In our system, we have encountered chip manufacturing on one level in a device called "Field Programmable Logic Array" which is a programmable multipurpose circuit. You open particular pathways within the chip to achieve a particular function of that circuit. But now we could get together, say, ten individuals with very different needs. All our needs could be designed on just one chip. It can then be sent for photo reduction and on to the chip manufacturers. You can have your own custom-designed chip, operating at far greater speed than the industry is interested in at the moment.

RH You have made an installation, Machine Vision, with cameras rotating around a sphere, taking images reflected on the metal sphere. Is it—

SV All my installation pieces have involved rotating cameras, explorations of space/time. I do not like to arrange my spaces. If there happens to be a chair, even a knocked-over chair in the room, it stays that way. My pieces are an analysis of a space, or even a surveillance of a space.

RH Machine Vision was very elusive and involving.

SV Habitually, by looking, we keep selecting, subjectively "zooming" and "framing" the space around us. I wanted to create a vision that can see the whole space all the time. It took two cameras looking into the sphere. I have done more variations with more moving elements surveilling space by tilt, pan, zoom and rotation.

RH In Machine Vision there is no tape (the work is "live"); but you have also made a tape called Switch! Monitor! Drift! (1976) where the camera is also rotating, but pointed outwards. Is that work another form of "machine-vision?"

SV Yes. And it too derived from my watching so many videotapes, watching an individual behind a camera "delivering you" space. You are not in charge of the space; it is not your choice—it is somebody else's. It was a challenge to me to create a space that would not deal with the idiosyncracies of human vision.

Interview conducted at Anthology Film Archives, Oct. 28, 1980, and revised by Steina, Feb. 18, 1981. Interview published by Anthology Film Archives and Electronic Arts Intermix, March 1981.