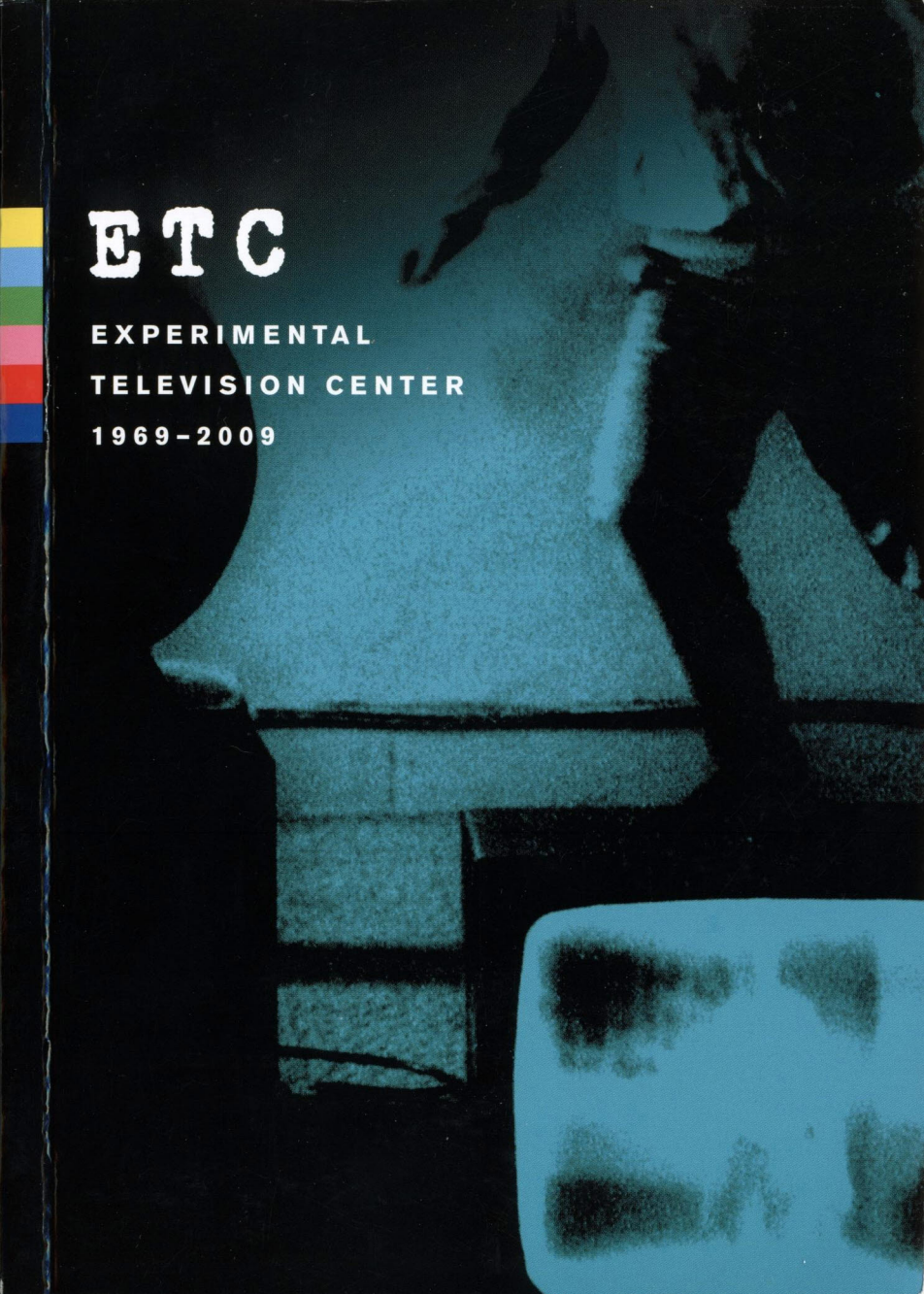




ETC

EXPERIMENTAL
TELEVISION CENTER

1969-2009





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Construction of Nam June Paik's *Video Cello*. L. Shuya Abe, Bob Diamond, Paik and Ralph Hocking. 1972.

Radical Learning, Radical Perception: The History of the Experimental Television Center

**By Ralph Hocking and Sherry Miller Hocking
in conversation with Kathy High**


Senses and the physical world have always been my main directors. The theoretical has not been of much interest to me.

– RALPH HOCKING

ETC was created by an artist for other artists, and is guided by that spirit. If the artwork is experimental, the process, the discourse and the practice should also be experimental. While many early organizations operated as collectives in order to produce collaboratively and share the cost and use of then-expensive tools, the Center was organized as an egalitarian assembly of individuals – artists, educators and technologists – working together to help define electronic media art and the programs which sustain it.

– SHERRY MILLER HOCKING

In the early 1970s artists were moving outside existing organizational structures in attempts to create more utopian systems, in critique of television and even the art world and the economic engines they serviced. Artists struggled to access the new media tools of production, as well as the



system of distribution. As personal video tools were introduced, independent video was seen by some as an alternative to the one-way production and delivery system of broadcast television. Video art evolved alongside the centralized one-way communications system of TV, then the dominant entertainment and information system. The instruments of TV were redefined from an institution of social and economic control into a system for creative activity, and a means of self-determination within a two-way interactive communications system. Video was introduced within the countercultural milieu of the 1960s – a political and social climate marked by concerns for democratic process, a critique of the capitalist economic system, radical questioning of existing power structures, and collective or collaborative organizing principles.

In the early 1970s the Experimental Television Center (ETC) became a center for video engineering and artistic activity – first in Binghamton, and relocating to Owego, NY in 1980. In this small quiet upstate town a vital center of activity was established that would significantly affect video art history in New York State and beyond.

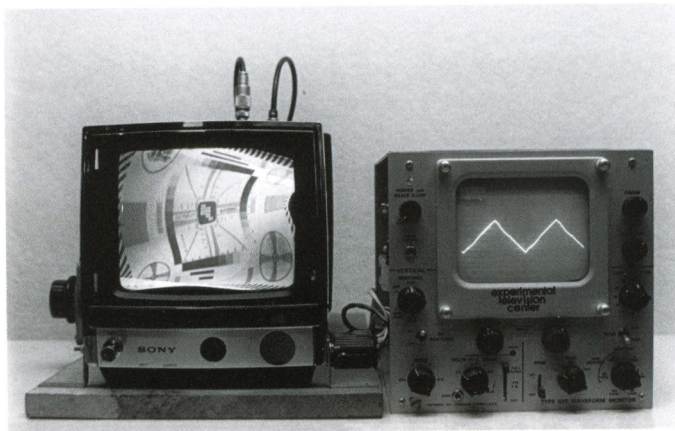
Founder Ralph Hocking and the artists at ETC created machines and tools to manipulate sound and image. These experiments were often pursued with little training and an amateur's attitude towards invention. To this day ETC remains a site for numerous artist/engineer developments. What might now be called a "hacker" model of re-working video and video systems, in the early 1970s this work emerged from an interest in exploring uses of the tools of television to create a new genre of visual arts and performance – an art created in dialogue with the machine.


While ETC shared much with others active in the

Raster Processing Unit or Wobbulator ▶
at ETC, demonstrating the image
distortion of the input signal. 1972.

initial explorations of independent media in the late 1960s and early 1970s, instrument building, the design and creation of unique image processing tools and systems, coupled with a conviction towards experimentation in electronic moving image and sound and performance media art have been constant goals of ETC.

Ralph Hocking is the Founder and Director of ETC. Today he works with Assistant Director Sherry Miller Hocking to provide various services to the media arts community including: an artist-in-residency program, a sponsorship program for artists' projects, a range of grant programs, a vital video history web database (collecting ongoing contributions), and a variety of workshops. In Ralph's words he created the Center as "a learning place and not a production house." It was not a place where engineers provided technical services to artists (as seen in broadcast television studios), but rather a place where artists and technicians worked in tandem. Ralph built the Center as a model encouraging artists to emulate it for





themselves: "As we developed machines, mostly through David [Jones]'s efforts, for the express purpose of trying to make visual art, I tried to encourage individuals to set up their own studios." In ways that statement was prophetic, Ralph and Sherry anticipated a future where artists might own their own portable video gear, could build their own studios, systems and processing tools – until it became more and more common. ETC's history is one that predicted our own present. And this model of tinkering, experimenting and building is one that is worth examining and encouraging.

In the late sixties Ralph Hocking began working with television. At the time he was teaching at Binghamton University, a part of the State University system. Ralph taught the only photography class on the Binghamton University campus, and was not associated with any particular department. He was committed to developing new models for teaching technology and the arts.

"My charge was to make something happen that related to visual understanding and education. I remembered several experiences with 'Educational Television' in the early sixties. One was to observe a group of college students in [Pennsylvania] as they viewed several monitors in a classroom that had no proctor. They reacted in the most amazing ways to the information being given to them. Much of the reaction was childish but some seemed to come from the frustration of not being able to believe what they were watching and certainly they had no control over their situation. I guess in some ways that incident and just generally thinking about technology and education was how I became interested in working with Video. It seemed to me that there must be better ways to use television as a tool for expression but I really didn't have any answers as to

what those ways might be. I knew then and know now that technology is not going to go away and that unless there is some way to temper technology with human sensibilities, technology will not serve the culture in general, just those who are in control of it... In 1969 I was able to convince the administration at Binghamton University to purchase several portable television systems. With some difficulty we then convinced the administration in Albany that it was ok to buy these things even if they were made in Japan. I was told that this was the first purchase of anything other than American made television equipment by the SUNY system."

Ralph continues:

"In 1969, my first approach to video was to lend the portapaks to the students and faculty to see what they would do. The only stipulation was that they would have to give the equipment back to me. A year later I proposed to do the same thing in the community and received support from NYSCA to begin ETC. We continued to lend portapaks and at the same time began to develop the tools necessary for the artistic exploration of electronic imaging. This led to an artist in residence program that eventually became our primary involvement with video."

Getting video tools into hands of the users was an initial goal of many videomakers and non-profit video groups at this time. ETC and others were interested in creating a new paradigm, an "anti-tv paradigm of 'producer.'" Especially in New York State where there was a burst of video collectives, artist-run organizations and art production was evolving¹. This was in large part thanks to the development of the funding structures that supported this growth. In 1961 the New York State Legislature created the New York State Council on the

Arts (NYSCA) which received initial funding of \$450,000. In 1969, NYSCA's Film and Television Program began accepting applications for electronic media projects. In 1965 Rockefeller Foundation began to fund artists for experimentation with video, and helped establish artists' laboratories at Public Broadcasting studios such as WGBH, KQED and WNET. And in 1967, the National Endowment for the Arts (NEA was created by Congress in 1965) established the Public Media Program.

Excerpt from Ralph Hocking, presented at Society for Photographic Education National Conference: Photography Within the New Technology/Defining a New Philosophy of Education, 1983:

"I think of ETC as a learning place and not a production house. With very few exceptions the artists in residence at the center accept and I think agree with that definition. The people who work at the Center have to learn the systems because we will not act as a production crew. We help if help is needed only in the understanding of concepts and not in the production itself. My goal is to develop individual artistic expression using electronic technology as the tools. All of my efforts and those of the people connected to the center are aimed toward getting individual studios constructed in order for individuals to create. In essence, we are trying to put ourselves out of business, at least the access business. This position is of course contrary to the traditions of television but absolutely necessary if video is to mature as an art form. I find team videomaking about as interesting as team painting or team drawing. The visual expressions that seem the strongest to me have come from one mind and in general have been

Ralph Hocking (l) and Charlotte Moorman discuss the construction of Nam June Paik's Video Bed. 1972.





realized by that individual. My concerns in art and in education are with the individual differences in thinking and not in trying to fit ideas or people into their designated place. In order for individuals to develop their own studio, the cost of construction must be reasonable. We have our own research and development program aimed at making available tools at low cost. Dave Jones and Paul Davis have been developing analog and digital devices and software for use by artists and we are close to a point of offering colorizers, keys, switchers, output amplifiers, oscillators, and other devices. The cost of good 1/2" recorders are within a reasonable range, even editing is not too expensive, I just bought some black and white cameras for less than \$100 apiece. Computers are cheap – and on and on. My point is that we


▲ Portions of Nam June Paik's *Selling of New York* were created on the Video Synthesizer at ETC, featuring host Russell Connor. 1972.

are quickly coming to a time that the tools are easily available and the major problem will be what to do with them.

"The news tells us that industry as we have known it is dead, information exchange is the coming economic base, the military are sucking up all of the research resources so the economic base will not be able to compete with foreign development, and the concept of cottage industry, working at home is the future. I have discussed with my students the ideas of communicating by computer over long distances at our leisure, sort of the way people use telephone answering services, and they are aghast that I would even consider that approach to teaching. Combined with Video that approach seems to me to be tailor-made for the pursuit of electronic art teaching and if anyone out there has some money and wants to support an educational experiment of this kind this might be my last public appearance."

Ralph Hocking began the Student Experiments in Television (SET) project on the campus of Binghamton University in 1968-69. Along with students, community members were introduced to portable video production tools and techniques. In 1969 Angel Nunez taped "Bedford Stuyvesant Kids", a street-tape which documented neighborhood kids arrested by police after stealing from a factory. This tape was shown widely throughout the State and proved instrumental in obtaining funding for a number of drug-related and inner city improvement projects. Parts of the tape were eventually broadcast by WNET-TV. Equipment was used by many community-based organizations.

The Experimental Television Center began as an outgrowth of the Student Experiments in Television (SET) program. Ralph recounts the origins of the program at ETC: "Nam June [Paik]



told me to talk to Russ Conner who was the person in charge of NYSCA's new video attempt. I was encouraged to apply for a grant but couldn't apply through the university because one state agency cannot give money to another state agency. My premise was more of the same: Give people machines and see what happens. Arts, Education, and other interested people were the definition. It translates to everyone."

Ralph Hocking wanted to set up a program to invite artists into a studio to create work. He also wanted to encourage not just artists, but all interested parties to participate. He was setting up a studio to support non-exclusive, non-hierarchical practices. Using collectivist principles of resource sharing, ETC instituted programs providing tools for artistic production, sharing the studio and video instruments with the media arts community, along with educational programs for those unaware of the possibilities of the new technology – thus providing free access for all.


With support from the New York State Council on the Arts, Hocking incorporated SET in 1970-71 as the Community Center for TV Production (later the Experimental Television Center), a non-profit media center in order to facilitate the uses of the new technology by three major constituencies: artists; community organizations; and interested citizens. The primary programs were designed to help artists explore this new art form; ETC offered a residency program for artists, sponsorship to various foundations in support of artists' projects, and the design of media arts tools.

Excerpt from Ralph Hocking in interview with Kathy High, 2005:

"Since I had no organization the first money [from NYSCA] went to the local [television] station WSKG and they wrote

me a check for \$50,000.00. I opened a studio above a drug store in Binghamton, bought some equipment, hired three people. I had no problem finding people who were interested on many levels. This was all about using the machines, experimentation, and unquestioned trust but not about collectivizing, directed outcomes, or other business, educational, or tribal goals. My approach was passionate but not judgmental. My history as a student in our educational schemes is one of miserable failure. I didn't want the traditional approach to dominate my efforts. It didn't and doesn't. As an educational experiment the Experimental Television Center was and is a resounding success. It is ignored by the traditional academia. While we were handing out portapak's we were also supporting Nam June's efforts to build video synthesizers²."

In the U.S. video was introduced within the countercultural milieu of the 1960s - a political and social climate marked by a critique of the capitalist economic system, and radical questioning of existing power structures. In the 60s and 70s collaboration flourished in music and performative arts, and was adopted by media artists in the late 1960s and early 70s, as they struggled to create new working models for the then-new medium of video. Collaboration was partly an economic strategy: some video instruments were beyond the reach of individual ownership. In 1969 a video recording system that recorded monophonic sound with black and white images and lacked the ability to play back the tape, would cost about \$6000 today. Group ownership was also a way to address the rapid advances in technology. "Production units" - co-ops, collectives, and media arts groups - also reflected the social and political Zeitgeist of the times. ETC initially loaned equipment to "democratize" the tools of the medium. But



another focus of the Center was the development of tools. ETC was and is a unique program because of an emphasis on developing “thinking systems” – artists-designed instruments.

“My intention was to support as much unconventional machinery as possible while urging the usage of whatever we had for the development of video art. This led to many people in the arts community becoming aware that we were open to loans and usage in studio in addition to use of our space for presentations of arts based ventures. Joan Jonas drove from NYC in a snowstorm to borrow a video projector that I had liberated from the campus. Bill Jones and Arnie Zane performed a time delay dance. Woody and Steina [Vasulka] broadcast within the space. Nam June watched student videotapes and told them not to worry because he could see them while he was asleep [Nam June Paik had a propensity to sleep through many meetings]. The first Gay Video Festival ever (queers all over the place). And on and on. Bob Diamond was the first fix-it guy I hired and David Jones was the second (and last). Both of them wanted to invent and were bored with the day-to-day upkeep of machines. They were influenced by Nam June and Shuya Abe during the time of synthesizer development and they both went on to develop their own machines. We were in constant revision with existing equipment, trying to make them do things they were not supposed to do. This was the interesting part of the studio structure that eventually won out over the lending to the community and having a space to show and tell [The community-lending program was dropped in 1979, and the exhibition programming a few years later.³]. This was a


Movements for Video, Dance and Music, Everson Museum of Art. Peer Bode & Meryl Blackman. Dancers Cara Brownell, Bill T. Jones, Charlie Seltzer, Bob Warren and Arnie Zane. 1976. ▶

deliberate push by me since it was obvious that we could not do all for everyone. It also became a situation where other organizations purchased available portable stuff and didn't need to borrow from us. Invention ruled and the artist in residence program was defined."

Supporting artists interested in investigating video as a contemporary art-making medium has always been the most important aspect of the Center's activities, reflecting Hocking's own background in the visual arts and his commitment to the individual artist. Initiated to provide a more flexible set of imaging tools to artists, the Research Program facilitated the design and construction of new video tools.

"As we developed, mostly through David [Jones]'s efforts, machines for the express purpose of trying to make visual art I tried to encourage individuals to set up their own studio. The norms had been and for the most part still are for artists

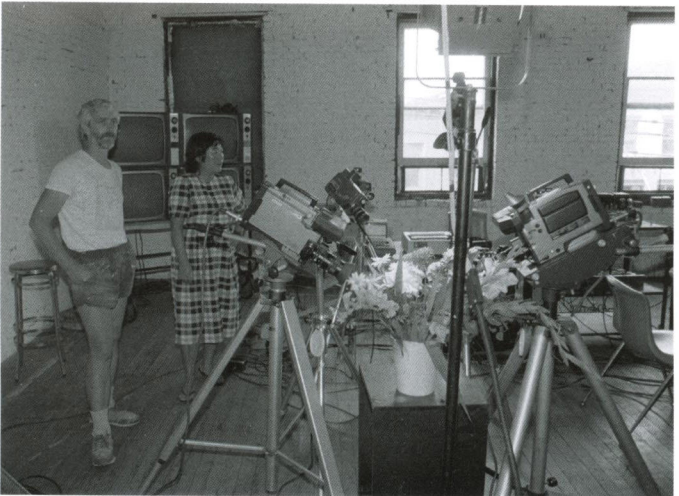




to book time at studios that satisfy their current needs. My interest was for people to wake up in the morning and practice their art making as painters, sculptors others in the visual arts, musicians, dancers and others in performing arts also do. It seemed not enough to occasionally visit the stuff of the art making. It would be like a painter having access to paint a few times a year... I feel the basis for my approach is the history of visual art and not theater that seems so dominate in the arts and television in general."

Designing the Tools

The instruments and systems at ETC share certain traits. They are flexible and open-ended; they support a branching architecture, and allow artists to create unique combinations of image and sound; they are immediately responsive, and usable by amateurs without a specialized knowledge-



base; they help expand the vision and function of television tools; they require thought and engagement, and challenge presumptions; they are performative and generative; they encourage individual ownership.⁴


The collaboration between artist and technologist had precedents and origins in the art of the early 20th century. Those working in the area of “experimental” video, “image processing” or “video art” in the 1960s and 70s engaged in tool design because the commercially available tools were limited. Rejecting the restrictive definitions of what was “permissible” with image and sound, ETC began making tools to discover what might be possible.

In the early 1970s the existing commercially available video tools for individual use were on the one hand astounding in their power and immediacy, but modeled after broadcast capabilities, and designed to meet specific television and educational requirements. In the hands of artists these tools soon seemed unimaginative, expensive, and restrictive. In rejecting the definition of function as determined by commercial toolmakers, ETC engaged in a subversive and radical act. By creating tools artists could make their own marks and mix their own colors, could parse the language of the electronic image, and indeed define it.

Some of the first tools ETC put into the hands of artists were deconstructed and re-purposed, or altered from their original design. ETC technicians began with modifications to existing tools – bringing out the controls on a portable camera to let artists manipulate gain and pedestal, reverse the field vertically

or horizontally, or allow constant vertical or horizontal drift by altering the sync. In

◀ ETC studio Residency of Shigeo Kubota (r), who worked at ETC during the 1970s and early 80s.



1971 funding was received from the New York State Council on the Arts for construction of the Paik/Abe Video Synthesizer. One system was designed and built in 1972 at the Center by Shuya Abe and Nam June Paik, for eventual placement at the TV Lab at WNET-TV. This system was used while still at the Center by the TV Lab to produce a portion of Paik's "The Selling of New York". A second Paik/Abe was completed for use in the Artist in Residency program at the Center.

During the decade of the 1970s ETC supported additional tool developments of the Paik/Abe VS, as well as a host of other devices by artists and designers. David Jones designed colorizers, keyers, sequencers and interface and control systems for use in the studio. In the mid-1970s, recognizing the importance of digital technologies, the Center began to research the interface an LSI-11 computer with a video processing system, a collaborative project with the Vasulkas and supported by the NEA. Ultimately two different approaches were developed because the systems were to be used in very different environments. ETC's goal was to permit artists without extensive experiences to use the digital imaging system in what at the time was extremely complex software programming; to achieve this ETC developed familiar interfaces such as keyboards, joysticks and knobs.

ETC approached electronic technology as a medium of art-making and looked to the inherent properties of the medium: color, light, sound, motion. "Image processing" became the name of the "genre", and the techniques were also applied in various works. ETC shared a dedication to these systems with individual artists like the Vasulkas, Gary Hill and Dan Sandin, and designers and technologists like Bill Etra, Steve Rutt, Bill Hearn, David Jones, and Public Broadcasting efforts including the National Center for Experiments in Television

at KQED and the Artists Television Lab at WNET.

Fulfilling the mandate of sharing resources, making video tools and systems accessible to all, ETC viewed their research as open-source. They shared information – from the operators' manuals, to texts they wrote about the concepts of image processing, to information about how to construct processing devices. Sherry Miller Hocking states that “we were committed to disseminating the tools – to help put them in the hands of individual artists; essentially we were trying to put ourselves out of business. Once all artists could have in their individual studios these creative tools, there would be no more need for ‘media centers’ like ETC, and the art form would flourish. We envisioned desk-top video synthesizers which artists could assemble themselves.” ETC was designed to put itself out of business when all artists had equal and reasonable access to the tools of electronic cinema production, exhibition and distribution.

To achieve this goal, ETC hosted informal groups of artists interested in building their own systems. The Tuesday Afternoon Club included Barbara Buckner, Sara Hornbacher, Matt Schlanger, Peer Bode, David Jones and others. The Center participated in the Tele-Techno conferences in 1973-74, organized by the Video Freex and supported by NYSCA; the goal of this regularly scheduled phone conference linking NYS media groups –including ETC, Portable Channel, Media Study and others, was to share technical information. ETC authored equipment manuals were widely disseminated to Media Study/Buffalo and other university-based and independent media groups. With support from the NEA in 1978, Hocking, Hocking & Jones wrote a manual concerning the construction of a raster scan manipulation system that was also widely and freely distributed, and is



now posted on the Center's Video History Web.⁵

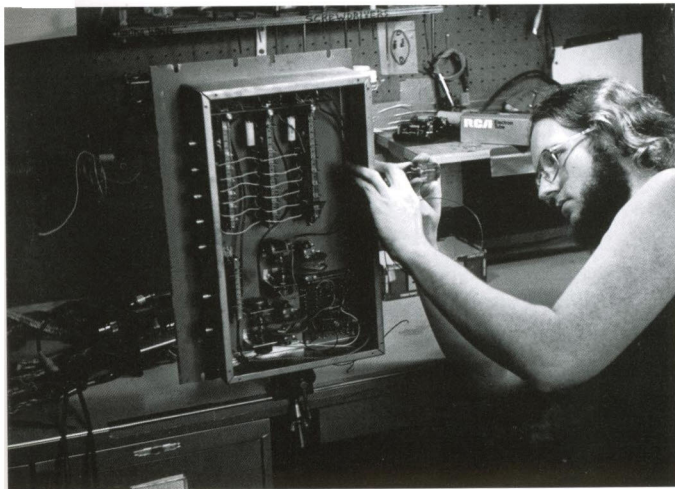
In the 1980s, as the costs fell and capabilities increased dramatically, and as more community groups acquired their own video systems, access programs became unnecessary, or shifted focus to other emerging, expensive tools such as computers. As a result of these technological changes, by the late 1970s and early 1980s the Center chose to refine its focus on artists' video, maintaining the Residency and sponsorship programs, offering a grants program for artists and arts' organizations in the State, and encouraging the exhibition of works. The research program began to shift from the building of hardware to the development of software, the re-purposing of commercial systems to make them more artist friendly, and the integration of old and new tools and systems. One software initiative provided control over image elements in still-images of video that could then be printed. A natural extension of moving image processing, this became an electronic darkroom for artists, and a conceptual ancestor to Photoshop and other graphics programs. The Center continued to refine the relationship between artist and computer. The General Purpose Interface Board interfaced analog imaging equipment with an 8-bit computer, allowing manually-changed knob settings to be "remembered" and repeated digitally. ETC employed existing digital systems from the CAT Buffer to the Amiga computer, which offered a glimpse into the future of digital moving image works.

The Center is known to this day for its Artist-in-Residency Program, providing artists with a unique tool set and an open-ended environment for exploration and creative growth. The image processing system is today a hybrid tool set, permitting the artist to create

David Jones has been technician, designer and consultant at ETC since the 1970s. c 1974. ▶

interactive relationships between older historically analog instruments and new digital technologies. The tools are integrated into a system, a system built over the years that speaks to the very philosophy of ETC. The emphasis is on interrelationships, and not discrete components. To this day there are such devices as an analog Sandin Image Processor (using voltage controls for regulators) interconnected with a G5 MacIntosh computer systems housing Max/MSP and Jitter programs, a synthesis of older and newer technologies, the digital and the analog. The Center continues to be primarily a center for testing and exploring processes, not necessarily a production center. Artists go there to experiment and learn the systems, to work in dialogue with the machine.

RH: *"I have said that I want to give the control of the imagery to the machine within limits. Using voltage control is a method of finding what you don't know."*





The Experimental Television Center is still today a media arts center situated in the same small town in upstate New York, in a raw loft space overlooking the Susquehanna River. Its studio is unpretentious, and the combination of tools housed there are open to a diverse public of users.

As a social space, a working space, ETC is rare these days because of this emphasis on experimentation and process. As a laboratory, ETC is being emulated in universities and in artist studios across the country. In this day of corporate monopoly and institutionalization, ETC remains singularly independent, with a keen interest in amateur invention. ETC's adaptive strategies, forward thinking, and dissemination of a unique tool set has allowed artists to develop their work, create a new vocabulary and build the field of media arts. And while they strive to put themselves out of business encouraging artists to develop and model their own working studios, ETC is not obsolete yet. ETC has been a key organization in the history of new media and in the history of media arts in New York State and the country.

Artists are risk-takers. They envision what hasn't been. In this process, they may "misuse" or "misapply" the instruments—whether aesthetic tools or organizations—deploying them in ways unforeseen and unpredictable. As an organization, ETC incorporates this thinking, and provides programs and resources to support, encourage and celebrate artists and their honesty and courage in the creative processes.

– SHERRY MILLER HOCKING

Dedication

This article is dedicated to Ralph Hocking and Sherry Miller Hocking, whose vision made all of this possible. And to the thousands of artists whom ETC has had the privilege of working with. – KH

Notes


- 1 In the media universe of the late 60s and early 70s, collaborations and other forms of working relationships were initiated by artists, by artists with technologists, and among media and other arts disciplines. Artists created collaborative working relationships to achieve projects that pushed the boundaries of conceptual and activist art works, including collectives such as Ant Farm, TVTV, Raindance, the Videofreex and Lanesville TV.

Alternate media centers were also being created throughout the U.S. to provide a means of production, supported by a gift economy with public and private funding. In NYS the New York State Council on the Arts recognized very early the import of media in the arts, and became one of the first funding agencies to support both new media organizations, and artists. The Experimental Television Center along with a number of other groups throughout NYS was among the first of those media organizations receiving grant support in 1970-71.

- 2 The Paik/Abe Video Synthesizer (PAVS) was developed in several places including in collaboration with students at Cal Arts and for the New Television Workshop at WGBH-TV in Boston. The first PAVS, built at ETC in 1970-71, was placed at the TV Lab at WNET in New York. The second system built at ETC was then placed in the ETC studio and made available through the Residency Program. This allowed artists and others an opportunity to explore PAVS's imaging possibilities, thus opening up the use of this instrument more broadly.

While artist-in-resident at WGBH, the necessity of such a device became acutely clear to Paik, who was frustrated by the production means of the large television studio:

"Big TV studio always scares me. Many layers of 'Machine Time' parallelly running, engulfs my identity. It always brings me the anxiety of Norbert



Wiener, seeing the delicate yet formidable dichotomy of Human Time and Machine Time In the heated atmosphere of TV control room, I yearn for the solitude of a Franz Schubert, humming a new song in the unheated attics in Vienna"

- 3 ETC had a regular exhibition series every spring for many years, the first video screening series in the Southern Tier, and brought many artists to Binghamton to show work and meet audiences. ETC saw the exhibition or work as integral to the making process. They offered regular exhibition series, which were formalized in 1976 as Video by Videomakers, and as well hosted many traveling series such as the Ithaca Video Project Festival and the Creative Artists Public Service Program Fellows for the regional community. The annual exhibition series brought to the Southern Tier video artists like Beryl Korot, Woody and Steina Vasulka, Harald Bode, Ernest Gusella, Gary Hill, Shigeko Kubota and Dickie Landry.
- 4 From "Some Thoughts on the Evolution of the Center," a presentation at the Munson Williams Proctor Institute, Utica, NY, 2000, by Sherry Miller Hocking.
- 5 Begun in 1994, ETC's "Video History Project" is a research initiative that reflects the complex evolution of the media arts field, and its many stories, and encourages a collective voice in the crafting of our histories. Mainly through the efforts of Sherry Miller Hocking and Mona Jimenez, ETC also organized Video History Making Connections a conference concerning the links between early media history and contemporary practice in 1998 at Syracuse University, and Looking Back/Looking Forward, a working symposium on media preservation in New York City in 2002. These projects and the Video History Project utilize the implementation of collaborative strategies for advancement of electronic moving image preservation resources and tools.

For a more detailed chronological history of ETC please visit ETC History at <http://www.experimentaltvcenter.org>

The back panel of the Paik/ Abe Video Synthesizer, first constructed at ETC in 1972. ▶

