

## **InterPARES 2 and the Electronic Café International: Aging Records from Technology-based Artistic Activities**

**Howard Besser**

New York University

<http://besser.tsoa.nyu.edu/howard>

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### **Abstract**

This paper reports on the problems of preserving the work of the Electronic Café International (ECI). These multimedia artists have been employing technology in collaborative artistic works since the mid-1970s. Their mixed-media collection documents 30 years of the use of technology for artistic purposes, focusing on telecollaborative works. But much of their collection is *at risk* due to technological changes. This paper discusses general risks to the ECI collection, and introduces a study that has recently begun as part of the InterPARES 2 project.

The paper begins with a discussion of the ECI's pioneering work and its importance. It then discusses the ECI's collection, and the problems posed by these types of works. It then introduces the design for the InterPARES 2 study of the ECI collection, observes some preliminary results from that unfinished study, then comments upon both InterPARES 2 and non-InterPARES 2 issues related to this kind of work.

### **Description and Importance**

Established in 1988, Electronic Cafe Intentional (ECI) is a multimedia international network for showcasing creative, multi-cultural, multi-disciplinary, collaborative telecommunications. As one of the pioneers in artistic and community-based explorations of multimedia and telecollaborative cyberspace, ECI has created a networked lab that supports collaboration and co-creation between people in different cultures, exploring multimedia telecommunications, cultural diversity, and the arts in a truly hybrid-networked environment. Boasting a 25-year artistic partnership, ECI Co-founders Sherrie Rabinowitz and Kit Galloway have become internationally recognized for their early classics in (and contemporary uses of) telecommunications and telecollaborative art.

After nearly three decades of aesthetic inquiry, research and development, and the production of hundreds of telecollaborative arts projects, ECI now holds thousands of hours of video and digitally stored documentation. The first to build an international network dedicated to the creation of telecollaborative arts, ECI has accumulated a large and historically important collection of assets throughout the years. The collection of electronically stored documentation represents a large part of the history and story of how artists migrated to cyberspace (beginning decades before WWW, and continuing on into the present).

ECI's collection includes many of the domestically and internationally recognized "classics" intrinsic to the telecollaboration genre, and is not entirely "antiquated" by the current revolution in telematic networking and the WWW. In fact, much can be learned from the seminal ideas created at ECI, and revisiting the artists in the beginnings of this age can allow them to be rediscovered. When revisited, these ideas from the beginning are often remarkably insightful and clear (even visionary) from the dawn of a new age that quickly became obscured in the impending level of information overload, velocity and infatuation with keeping up.

The collection of telecollaborative arts at ECI proceeds its founding by more than a decade, as founders Sherrie Rabinowitz and Kit Galloway forged new paths in the genre throughout the 70s.

### Examples of ECI Works



*Hole in Space (1980)*

For their 1980 piece "Hole in Space", the Electronic Café set up video projection screens and hidden microphones in storefront windows in Los Angeles and New York, hooked these together via satellite, and waited to see how long it would take people to notice that they could communicate with people across the country, and how they would choose to use this (see illustration). People just stumbled upon this in surprise, and word spread quickly. Crowds played games, explored stereotypes between Californians and New Yorkers, and some even called relatives and arranged meeting times to give them their first look at their grandchildren. In a piece like this, what is the work? The video feeds from the NYC projection? The video feeds from the LA projection? The plans for the installation? Interviews with people in the crowd? It's not easy to define even what the piece is, let alone what about it needs to be saved.



The ELECTRONIC CAFE Restaurants



The Gumbo House, South Central Los Angeles



Ana Maria's, East LA



8th Street Restaurant, Koreatown



Gunters, The Beach Community of Venice



The Museum of Contemporary Art, Downtown

*Electronic Café International, Los Angeles (1984)*

Then, in 1984, the concept of the Electronic Cafe network was unveiled to the world as an antidote to the Orwellian prophecy. The artists were commissioned by the Los Angeles Museum of Contemporary Art (MOCA) to participate in a project that linked five culturally diverse communities in L.A. for seven weeks during the Olympic Arts Festival (see illustrations above and below). The Electronic Cafe was the first articulation and manifestation of a multimedia telecollaborative network designed to link multi-cultural artists and their communities to other artists throughout the city. Ten years ahead of its time, the project demonstrated with astonishing accuracy what the WWW would become...and encouraged artists to demand a multimedia telecollaborative network and

pictorial database that would enable people to share ideas even if they did not speak the same language. L.A. was then, and remains today, the textbook example of the multicultural city of tomorrow. And Electronic Cafe exploited this opportunity by creating a model for what later would become an international network of public venues (all dedicated to the concept of cross-cultural telecollaborations, resource sharing, and informal community institutions). In 1984, they proofed their concept, in 1988 they opened the Electronic Cafe International headquarters in Santa Monica, and by 1991 they had more than thirty networked affiliates around the world. Currently ECI has more than 3000 hours of video and digitally stored documentation in its collection, including collaborations with domestic and international artists.



*Electronic Café International, Los Angeles (1984)*

The global information revolution in the last decade mandated that cultural institutions rewrite and expand their charters and mission statements to embrace what has become a technologically mediated renaissance. Migrating to cyberspace enables people to be in step with and acknowledge new art forms, genres and content/context creations inspired by the new technological potential. The collected video and digitally stored art at ECI includes the first examples of telcollaborative art in genres covering painting, dance, music, poetry, theatre, telerobotics and telepresence in virtual cyberspace as well as in visually compositing geographically dispersed locations into a single image inhabited by the artists-collaborators. What distinguishes the quality of the documentation in the ECI collection from other efforts is the obvious scale, complexity and consistent dedication to research over many years.

### **The ECI Collections**

Their collections hold more than 3,000 hours of video, optical disks, audio recordings, computer back-up media, additional electromagnetic storage media, equipment, text, drawings, paper documents, photos and other types of images, most of which they hope to make available on-line for researchers, scholars and casual browsers. The collection documents hundreds of artists engaged in telecollaborative works. For several years, their top priority has been to assess the collection and create a plan to stabilize and catalogue its contents.

Major sub-collections include the following: "Satellite Arts" (10hrs); "Hole in Space"

(15hrs); "Aesthetic Research in Telecommunications (ART COM)" (5hrs); "Electronic Cafe '84" (8hrs); "slow scan", "Electronic Cafe International" (100hr history to the present), and "ECI Special Events" (100hr history to the present).

Around 1997, as part of the Getty's "Faces of L.A." project, the ECI began cataloging small pieces of selected works. This process inspired them to see the importance of cataloguing more of their collection. In 1999, with funding from the Getty Grants Program, Howard Besser supervised PhD students Shelby Sanett and Karen Gracy in performing an evaluation of the ECI collection. Some of the following observations are excerpted from their 10-page report.

The extensive collection consists of a variety of media. The paper-based collection spans a timeframe of approximately twenty-five years. It consists of books; pamphlets; newspapers; magazines; clippings from newspapers and magazines; original artwork; thermographic paper; textual documents; color and black and white photographs; 35 mm color slides; and toys and art objects made of varieties of plastic, paper, vinyl and metal. In many cases the artwork consists of a variety of media. The electronically stored materials consist of "floppy disks", "zip disks", Optical Memory Disks, and Optical Disk Cartridges.

The collection was surveyed *in situ* at the Santa Monica location. Santa Monica is located near the beach, and thus the collection is susceptible to the effects of high humidity and other beach conditions. The collection is stored within filing cabinets and on wooden shelves in well-lit, well-ventilated rooms.

The items found in the ECI collection reflect a wide span of production and consumer formats. The following list summarizes the formats found in the collection (date spans of items are listed in parentheses):

- 3/4" U-matic (1972-1993)
- 1/2" open reel (1971-1979)
- 1" Sony (1981)
- VHS (1/2")(1979-1999)
- Audiotapes (cassette) (1973-1995)
- Betacam (1/2") (ca. 1987)
- S-VHS (1988-1996)
- 8mm, Hi8 (1983-1999)
- Betamax (1/2") (ca. 1990)
- Betacam SP (1/2") (ca. 1993)

Many of the materials from the 1970's are artifacts created from the production process, including original masters, sub-masters, dubs, and mixes. 1/2" open reel, 3/4" U-matic, Betacam, S-VHS, 8mm, Betacam SP, and Hi-8 were the production formats in this collection, while VHS was used largely for casual off-air recordings and for documenting activities at the ECI in the 1990's. A majority of the collection consists of 3/4" U-Matic and 1/2" VHS cassettes. A small number of audiotapes, in standard cassette format, also contain some important original material.



Examples of storage media in ECI's collection

Digital formats include:

- DC300 XL and DC6150 data cartridges
- removable optical media and optical video disk
- Kodak Photo CD
- Floppy Disks (various formats)
- SyQuest
- Mini-Floppy (photographic) and other photographic storage media
- Yamaha Disklavier piano floppy disks
- CD ROM

Electronic devices include:

- 12 computers and servers
- 25 peripheral computer devices
- 30 video production, processing, and display devices
- 22 audio and MIDI production devices
- 30 specialized teleconferencing devices
- 18 customized, one-of-a-kind 'homebrew' devices
- 25 Descriptions of industry networks satellites, and communications systems and services
- 40 Sub-systems, components and devices

## The InterPARES 2 Study

The ECI InterPARES 2 case study was developed by Howard Besser (New York University), Shelby Sanett (AMIGOS Library Services), and Henry Daniel (Simon Frazer University). In their Fall 2003 application for InterPARES 2 sponsorship, these three researchers wrote:

“This case study deals with a wide variety of media types that now pose the problems of aging and obsolescent formats. The ECI activities took place from the mid 1970s to the present, and incorporated experiences that were dynamic and interactive, which is the focus of InterPARES 2 research. This study is unique because InterPARES has thus far focused on records of contemporary activities. This study highlights the problems posed by interactive, experiential, and dynamic records many years after they were initially created. Digital repositories are currently being set up independent of knowledge of the needs of aging records, and tend to be based upon thinking of problems beforehand. The ECI material will allow repository design using a more bottom-up than a top-down approach, with design based upon real problems that have shown up in similar aging records. We expect that this activity will foreground issues that need to be dealt with in record systems at the point of creation (now and in the future).”

The InterPARES 2 ECI project has only recently begun, and only one preliminary interview has been held. When completed, the study aims to address the following types of questions that are important to InterPARES 2:

Questions and concerns surrounding records creation and maintenance of ECI’s multimedia records:

- How are the electronic records generated? For what purposes are the records created? What form do these records take?
- What are the processes from which the records emerge?
- What are the key elements, attributes, and digital components of the records?
- How does the creator use the records?

Questions related to the age of the collection and the long-term issues of preserving ECI’s multimedia records:

- How does ECI maintain its records through technological change?
- What preservation paradigms are required to support the long-term preservation of ECI’s records?
- What are the documentary and technological processes or procedures that ECI follows to identify, retrieve, and access the records?
- What descriptive metadata are currently being used by ECI and how has it been implemented?

In examining a multimedia collection more than 25 years old, and knowing that this collection exemplifies issues facing collections in the future, policy-related questions must be explored to determine the role of policy with respect to practices and standards.

- To what extent do policies, procedures, and standards currently control the preservation and use of ECI's records?
- Do these policies, procedures, and standards need to be modified or augmented?
- What legal, moral, or ethical obligations exist regarding the preservation and use of ECI's records?

Following a standard type of InterPARES methodological approach, the researchers plan to conduct an in depth interview with the Electronic Café artists who conceptualized and implemented this wide variety of works. They plan to administer a taped interview, focusing in on questions within the framework of the IP2 research questions referred to above. They will conduct content analysis on the transcriptions once the interviews are transcribed. They will identify key concepts in the interviews, such as preservation, authenticity, creation, and explore how the interviewees' concepts might be linked to IP1/IP2 concepts. After data analysis, the deliverable will consist of a list of criteria that a digital collection will need to incorporate to deal with preserving an aging collection across time.

### **Preliminary Study Results**

Only preliminary interviews have taken place. But researchers have examined the ECI records, and found that there are five basic record types:

- Records involved in planning a work (sketches, correspondence)
- Records involved in executing a work (hardware, software,)
- Records created by participants in the course of performing a work (digital art, collaborative writing)
- Records that attempt to capture/record major portions of a work (composite or single-channel video feeds)
- Records that attempt to document a work (interviews, videos and photos of participants, news coverage, email from participants)

Categories like these can help us better match the records that need to be preserved to the specific goals of preservation/conservation. In trying to preserve works like this, we need to understand which of the following we are trying to accomplish:

- A. Show the work the way people saw and interacted with it when it was first created
- B. Show documentation of the work and people interacting with it when it was first created
- C. Show various elements of the work
- D. Reinstall/Recreate/Reenact the work

Option (A) has traditionally been a conservation goal, but that may not be a realistic goal with works like this. In a pre-electronic age, the artifact and how one interacted with it didn't change much, so preservation and documentation were relatively straightforward. But with contemporary electronic works, both the physicality of the work and the way that one interacts with it might change so much that one would never be able to show the work the way people initially saw and interacted with it.

The ECI appears to feel strongly that option (A) is not viable, so they wish to pursue the other options. Options (B) and (C) seem quite plausible, as ECI created video documentation of people interacting with the works when they were originally performed, and they have also saved elements of the original works as well as other rich documentation. Option (D), which is best represented by the Variable Media approach (Variable Media website) might also be pursued if enough resources were to emerge.

### **Challenges posed by this type of Collection**

Collections like this pose both administrative and technical challenges. These are even more acute when the collection is maintained by the artists themselves rather than by an institution. While we who work in institutional collections may feel like we never have enough resources to do our jobs, our situation is never as dire as that of artists trying to manage their collection while still eking out a livelihood. During the course of this InterPARES 2 study, one of the two ECI principals was hospitalized with multiple sclerosis, and the other had to act as her caregiver. And, at some point, they needed to sell part of their collection in order to meet their rental needs (both generating cash and reducing the storage space they needed). Even with artists who are highly committed to preservation, artist-maintained collections can be highly vulnerable to changes in the personal life of the artist.

Elsewhere, this author has explained the 5 major challenges facing preservation of electronic works: the Viewing Problem, the Scrambling Problem, the Inter-relational Problem, the Custodial Problem, and the Translation Problem (Besser 2000). He has also examined the challenges of moving image preservation in a digital environment (Besser 2001a).

In his article entitled "Longevity of Electronic Art (Besser 2001b), this author discusses the problems of dynamic works, lack of fixity, authenticity, and malleability. He also raises questions around what is the boundary of a hypermedia work, as well as the over-arching question of "what really is the work?". He proposes several approaches to begin to address these challenges (including saving all types of ancillary materials, encoding in higher-order multimedia encoding standards such as SMIL, adhering to other standards wherever possible, using semiological analysis to identify canonical forms of works, etc.).

Electronic media works pose particular conservation problems. The works themselves may no longer even exist; in many cases, all that remains amounts to forensic evidence. With any given work, there may be an enormous number of elements can, at times, be very important to preserve (pacing, original artifact, elements used to construct the artifact). It may be too complex to save every one of these aspects for every work, and keep these functional over long periods of time. Therefore, this increases the importance of saving pieces, ancillary materials, representations, and documentation. It may be important to involve creators & curators to capture intentions (Variable Media). And conservators need to familiarize themselves with the various international projects that have been undertaken in recent years: the European Community's International Network

for the Conservation of Contemporary Art (INCCA), the Variable Media Initiative (Variable Media), and Australia’s Preservation and Archival of New media and Interactive Collections (PANIC).

Because we may not be able to make challenging works like these survive *in toto*, conservators need to be aggressive in the realm of asset management -- saving component parts and ancillary materials. Institution-wide plan need to be developed for saving electronic works, incorporating standard encoding schemes, and refreshing as well as either migration or emulation. And for each work, the conservator needs to address the question of what really is the work.

For works involving motion and/or interactivity, we may be faced with the following sets of choices:

- Capture the full functionality
- Freeze certain aspects (e.g., screen captures)
- Capture the documentation (from artifacts created during the performance, to write-ups, to videos of people interacting, to interviews with people experiencing the work).

These choices may involve a series of trade-offs. Capturing full functionality is most desirable, but may also be both the most expensive choice and the most risky one. The other choices are cheaper and less risky, but may not be a true conservation of the original. In the coming years, conservators will need to seriously grapple with these kinds of trade-offs, and will likely discover that only vastly reduced functionality (or no functionality) can be preserved for many works.

	<u>Old</u>	<u>New</u>
<b>Physical preservation</b>	Atmospheric control	Ongoing mgmt
<b>What to save?</b>	Artifact	Idea + ancillary material & documentation
<b>Cataloging</b>	Individual work in hand	FRBR
<b>Later access</b>	Artifact & documentation	Restaging, ancillary material & documentation

*The New Paradigm?*

Those involved in preservation and conservation may well be faced with a new paradigm. With older types of works, we could feel confident with storing them in climate-controlled areas without looking at them for decades. The rapid obsolescence of technology-based works makes that approach untenable; these works require ongoing monitoring and management. For pre-electronic works, our focus was on preserving a physical artifact. With electronic works, we cannot make the original physical storage mechanism (magnetic tape, magnetic disk, laser disk, etc.) work for much more than a decade, so we need to separate the informational content of a work from its physical embodiment; we are no longer saving a physical artifact, we are saving disembodied informational content.

With older works, we described and cataloged each work as a distinct separate item; our newer works are starting to have an enormous number of variant forms, causing enormous description problems, as well as problems in tracking different versions, and even determining whether two versions are really identical. (Is a 20:1 compressed image the same as a 10:1 compressed image of the “same” element? How does a close-up of one section of that image relate to the whole image, or to another close-up?) We would do well to expand upon and utilize the recent work done by the library community establishing Functional Requirements for Bibliographic Records. This work could be instrumental in helping us to describe and distinguish between different versions of both works and the various elements that may comprise any given work.

Finally, because older media could remain fully functional for long periods of time, re-displaying works has relied upon preservation of the physical artifact and documentation around it. But when our electronic works cannot be retained in a physical embodiment, and may not retain their full functionality in any embodiment, we have begun to look at the newer approach of restaging works (Guggenheim 2004).

Interactive electronic works pose major challenges to traditional approaches to preservation and conservation. In the coming years, we can expect to find a variety of new methods and concepts emerge.

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