



MEMORY AND THE DIGITAL ARCHIVE OF CONTEMPORARY ART: THE CASE OF THE SPANISH ARCHIVE OF MEDIA ART

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ABSTRACT | This article outlines some reflections about digital reality, contemporary art production, and possible ways of archiving and constructing memory through and for a historiography of contemporary art in light of the project Archivo Español de Media Art / Spanish Archive of Media Art (AEMA/SAOMA). In the first part I propose a definition and an account of media art and its artifacts. In the second part I present and describe the SAOMA project, and its antecedent, the MIDECIANT museum project, and discuss the conceptual and technical requirements of an archive devoted to the media arts. In the third part I sketch some interconnections between the concepts of memory and archive with reference to new media art and outline the difficulties that are inherent to any effort to define and archive these art forms. The final section includes some concluding thoughts and a brief explanation of what I regard as the most urgent needs for any archival project in the realm of digital art (digital restoration, documentation, and narrative).

KEYWORDS | media art, digital archive, classification, conservation, history of contemporary art.

Introduction

To conserve, to preserve, to restore, to disseminate, to dignify. The knowledge accumulated through centuries devoted to the study of art's various disciplines has prioritized the creation of archives or collections of works that also include attendant documents: letters, historical texts, mentions by third parties, publications, and other discursive artifacts have gradually come to function as primary and secondary sources that may be used in the study of any artistic age.

The history of humanity in general, and of art in particular, has been carefully classified, organized, categorized, and archived, preserved to be accessed and studied by interested parties. We do our best to construct truthful narratives that allow us to understand a historical age and we are constantly looking out for new pieces of evidence that may allow us to fill the incomplete lines of history.

However, as history and its ages unfold, many things are also forgotten and lost, more so during the unstable twentieth century. Since then, the tendencies, schools, techniques, and

movements of art now have begun to appear and disappear at an unprecedented speed; while before a movement could last for centuries, we now encounter forms of artistic expression that pop up for a few years before vanishing or transforming into another. This is precisely what has happened with the most advanced art form of the final third of the twentieth century, and up to the present time: the field known as media art.

During the past few years the expression "*arte de los nuevos medios*" has been hesitantly accepted in Spanish-speaking areas as a translation of "media art," alongside more generic labels such as "art and technology." Nonetheless, and unlike its English equivalent, the Spanish terminology seems to be less precise, or to lack clear boundaries, so we must approach it more carefully. It is clear that the word "media" in this context alludes to the term "mass media," which gained popularity after the 1960s and specifically denotes organized broadcast media.¹

To this we must add that, as new technologies have entered the stage, we have also come to experience an age in which media play an ever greater role in our societies and economies.

After the 1960s and '70s the term “media” absorbed new theoretical implications through the contribution of theorists like Marshall McLuhan.² Thus, the concept of media, grounded on an intrinsic relationship between technology and communication, has come to encompass printed forms of communication, audiovisual means of recording and playback, film, telephony, radiophony, television, and the Internet, each of which is structured on the basis of different media (in the sense of tools, mechanisms, devices, and technologies).

To approach the study of the different disciplines of media art, and to determine possibilities of memory-building and archiving suitable for each of them, we must confront two important questions that come up as soon as we turn our attention to an artwork that is perceived as subsumable under this category: what is media art? In the simplest terms, we may claim that it encompasses any work produced by an artist through the use of new technologies. But, strictly speaking, which technologies should be regarded as “new”?

1. Media Art: Some Definitions and a First Approach to Taxonomy

If our response to the former question is along the lines of “any use of unconventional techniques and/or tools that are not part of traditional art practice,” we might be forced to look all the way back to, say, the Industrial Revolution and the arrival of electricity, materials and concepts that have nourished several experimental and avant-garde tendencies since the onset of the twentieth century; we could even go a few decades back and consider the invention of photography, the film camera, the radio, X-rays, and other significant technological advances that were most often deployed by experimental artists more or less as soon as they arrived.

Now, although unacknowledged, there does seem to be a consensus in regarding these artforms as the antecedents or sources of media art, so that the label “media art” as such is applied only to practices associated with those media that made their appearance during the second half of the twentieth century. As Oliver Grau remarks:

The goal is to open up art history to include media art from recent decades and contemporary art forms. Besides photography, film, video, and the little-known media art history of the 1960s to the '80s, today media artists are active in a wide range of digital areas (including net art, interactive, genetic, and telematic art). Even in robotics, a-life, and nanotechnology, artists design and conduct experiments. This dynamic process has triggered intense discussions about images in the disciplines of art history, media, cultural studies, and the history of science.³

The artistic practices included under the label “media art” may be quite diverse and, as we shall see, broadly different from a strictly technical point of view: we need only compare, for instance, what is required to archive or restore an analog work (such as a photocopy⁴) and a digital work; and, in the second case, a work produced using a code that is now obsolete (like Director or Flash, or a work contained in a CD-ROM) and works produced with high-level computers or processors, such as those generated by GANs.

There are thus many possible examples of artistic practice that fit under the umbrella of media art as a category; however, and bearing in mind that there are ongoing discussions on the matter,⁵ these practices do have to meet two concrete and fundamental conditions: the use of a machine—conceived for use in office or industrial contexts—by a collective of artists for an unforeseen artistic result. Both of these conditions require us to determine in specific terms what needs to be done in order to preserve, conserve, museize, or collect these artworks.

To the difficulties that may already be intrinsic to artworks of this kind, we must add the significant impact of technological—and thereby cultural—acceleration during the past twenty years (as discussed by Paul Virilio⁶ and Alessandro Baricco⁷), and its repercussions not only in the field of art but in everyday life; we need only refer to the contemporary implications of the Internet, digital life, and augmented humanity.⁸ Therefore, our inquiries into the exact meaning of the terms “media art” and “new technologies” are inevitably linked. Precisely at this point we encounter one of the greatest challenges of this accelerated time, namely, the need to find a definition that includes not only those practices that have come about in the recent past, but also those that are yet to come and of which we may still be unaware of.

How we define media art—and, by extension, contemporary digital art—will determine which strategy we use to construct a potential historiography, a memory, and an archive, as will be discussed in the following sections. Before that, however, I will briefly describe the first effort to establish a museum for media art in Spain, which will allow me to exemplify and describe some media art practices and to outline the decisions required by efforts to situate them within a museum or an archive.

In 1990, José Ramón Alcalá founded The International Museum of Electrography and Center for Innovation in Art and New Technology (MIDECIANT, for its initials in Spanish) at the Universidad de Castilla-La Mancha in Cuenca. From the start, the institution was to be a center for experimentation in the arts and new technologies, and initially it focused on works from fields like copy art, fax art, and related movements.⁹ The taxonomy used in MIDECIANT to classify works by type of work, which was later used as the point of departure for the taxonomy used by SAOMA, was the following:

1. Digital Imaging
 - 1.1. Digital Graphics
 - 1.2. Digital Design (Industrial & Virtual Architecture)
2. Time-based Arts
 - 2.1. Audiovisual
 - 2.1.1. Digital Cinema
 - 2.1.2. Digital Video
 - 2.1.3. TV (Broadcast)
 - 2.2. Computer animation
 - 2.2.1. 2D Animation
 - 2.2.2. 3D Animation
 - 2.3. Multimedia
 - 2.4. Sound Art
3. Communication Arts
 - 3.1. Telematics
 - 3.2. Data Visualization and Mapping
 - 3.3. Net Art
 - 3.4. Communities
4. Interactive Arts
 - 4.1. Game Art
 - 4.2. Browser Art
 - 4.3. Interactive Installations
 - 4.4. Virtual Environments
 - 4.4.1. Full-Digital Environments
 - 4.4.2. Mixed Reality
 - 4.4.3. Augmented Reality
5. Art/Science/Technology
 - 5.1. Software Art (Code)
 - 5.2. Robotics
 - 5.3. Genetic Art
 - 5.4. Bio Art
 - 5.5. Artificial Life.¹⁰

Discussing the current state of media art studies, Alcalá argued that it was necessary to determine “the specific issues that pertain to the treatment of art media practices as heritage and museum artifacts” regarded as the source of “the languages, movements, and art practices that are currently collected, studied, and described by the new discipline of media art studies (and its methodological strategy, media archaeology).”¹¹ At this point it is important to emphasize that the historical consolidation of a field or an object of study¹² enables the corresponding discipline to likewise consolidate: the very existence of academic disciplines specializing on the “history” or the “archaeology” of media art points beyond historiographical narrative and, in a matter of a few years, has earned these practices a place in the history of contemporary

art that—technically—“did not yet exist” in 2007, as Grau pointed out:

Over the last thirty years media art has evolved into a vital factor of the contemporary artistic scene. Digital art has become the art of our times, yet it has not “arrived” in the cultural institutions of our societies. It is rarely collected, it is not included or supported under the auspices of art history or other academic disciplines, and it is almost inaccessible for the non-North-Western public and their scholars.¹³

Certainly, in less than twenty years the media art landscape has changed significantly, and the field has become established historically, historiographically, institutionally, and in the market, spearheaded by digital art. Our task, then, is to keep Alcalá’s observations in mind as we continue with the work of “institutionalizing” media art. Part of that “institutionalization” involves developing strategies that may allow us to locate, collect, archive, and conserve media art, and to bring it to museum institutions, among other things.

Based on our foundational experience at MIDECIANT, and following its guidelines, we have developed a project designated as the Spanish Archive of Media Art (SAOMA).

2. The Spanish Archive of Media Art (SAOMA)

For the past few years MIDECIANT has carried out various activities designed to recover and value the artforms that are part of its purview. These activities included hosting artist-run labs and the creation of working and research groups tasked with solving problems pertaining to the conservation, restoration, and dissemination of this kind of heritage. In 2016, the MIDECIANT’s research team initiated the project Vocabularies for a Network of Media Art Archives and Collections (known as VOREMETUR, for its initials in Spanish).¹⁴ The fundamental aim of the project is to develop a tool for a networked documentary language—a specific thesaurus—that can be applied to media art archives and collections dealing with art forms that operate at the intersection of communications and information media and the visual arts.

Above all, this project means to respond to the specific technical needs of such art objects (which to a great extent are exposed to an extreme and more than accelerated obsolescence) and to the technical—as well as theoretical—conditions under which they can be archived, collected, and displayed.¹⁵

As noted on its website, the SAOMA aims to “identify, catalogue, and label artworks held in public and private collections that focus on these art practices, both historical and contemporary,” including also “all those works that reveal the origins of media art,” such as copy art, video art, or

computer art, and art productions or practices like broadcast art, multimedia installation, interactive art, net.art, digital photomontage, virtual reality, media performances, expanded and experimental cinema, and telepresence, among others.¹⁶ Of course, the continued development of new technologies and devices makes it possible to expand the catalogue to include practices linked to the use and exploration of the artistic potential of mobile devices, geolocation services, big data, artificial intelligence, robotized systems, or genetic engineering.

For these reasons our first task has been to work out a comprehensive list of art practices in order to establish SAOMA's "archival objects"—its taxonomy— which has also allowed us to develop a more precise definition of media art through its products. Based on MIDECIANT's earlier taxonomy, the following is the proposed list of media works and kinds of works to be used by SAOMA:

- 2D computer animation
- 3D computer animation
- Virtual architecture
- Database art
- Electronic art
- Telepresence art
- Sound art
- Audiovisual art
- Bioart: Genetic art / Transgenic art / Genomic art
- Browser art
- Computer art
- Copy art (related terms: copy machine art / photocopy art / copier art)
- Data art
- Emulation
- Electrography
- Electrophotography
- Virtual environments
- Fax art
- Game art (gaming)
- Generative art
- Glitch art
- Hacker art
- Infographics
- Interactive installation
- Interactives
- Internet memes / memetics
- Interactive multimedia
- Multimedia performance
- Nano art (vaporwave and seapunk)
- Newsgames

- Net art
- Mixed reality
- Robotics
- Software art
- Video art
- Videoactivism
- Video mapping
- Technical xerography
- Digital xerography
- Xerox art.

In this connection, it is also useful to consult the media art thesaurus developed by Oliver Grau for the Archive of Digital Art.¹⁷ SAOMA's taxonomy is closer to the "genre" thesaurus proposed for the ADA, which, incidentally, includes certain—very interesting—specifications, such as "aesthetics," although it seems to be used more as a tagging system than as a proper list of controlled terms.

Although they do not use an explicit taxonomy for media art "objects," we may also mention Rhizome's ArtBase search— which uses a "simpler" cataloguing system by artist and year— and some features of the project Research into Image and Sound Design (IDIS, for its initials in Spanish) developed at the Department of Architecture, Design, and Urbanism of the Universidad de Buenos Aires in Argentina, although the latter does not elaborate a set of categories as specific as those of our repository.¹⁸

Following criteria for action based on the theoretical and practical developments of media archaeology and media art history, during the first stages of the SAOMA project— which have led, among other results, to the taxonomy listed above—we have located and recorded more than 40 collections and archives¹⁹ in different locations in Spain, all of which can be accessed through the project's website.²⁰ These include important projects like the "Seminars for the Automatic Generation of Plastic Forms" organized by the Centro Cálculo of the Universidad Complutense de Madrid, the Juan March Foundation, Espacio P, or the Fundación Telefónica, in addition to the collections at Neomudéjar, MediaLab, or Colección Solo, among others in the Madrid/Centro area. In Catalonia there are the collections of the Asociación de Cultura Contemporánea L'Angelot, Festival Sónar, Festival Art Futura, Festival Loop, MACBA, or HAMACA. In Cuenca we have the CAACs and MIDECIANT, and there are other centers and collections elsewhere in the country including important and relevant institutions like the Archivo de Media (Biblioteca UBIK: Tabakalera) in San Sebastián, the DKV Media Art Collection, INELCOM's Technological Art collection, Etopía (Fundación Zaragoza Cultura), or MEIAC's collection in Badajoz, and the collection of media art works at the Fundación Helga de Alvear, in Cáceres.

The cataloguing process used to locate the works, analyze them, and include them in SAOMA must comply with technical specifications, but must also consider conditions that pertain to reproduction rights and the acknowledgement of intellectual property. These crucial considerations, which are in the process of becoming increasingly complex, call for legal, industrial, and commercial counseling, and they are contingent on each country's legal framework. We can also anticipate these issues becoming more complex in the coming years thanks to the arrival of new market practices like NFTs.

3. Philosophy and Hermeneutics of the Archive

In general terms, we may define an *archive* as a set of documents that is kept or preserved by a community as a memory or testimony of a certain past, as well as the institution that may be in charge of their conservation. However, philosophical and hermeneutic debates around the notions of archive and memory during the past decades compel us to seek a broader characterization of these notions in order to address questions regarding the archiving, preservation, or conservation of media art and, by extension, digital archives or memory.

For Michel Foucault, for example, the archive—understood as an “apparatus”—is a system that does not in fact collect “documents,” but rather statements, which he understands as “discursive events.”²¹ According to Foucault the archive is in fact a set of rules—but first and foremost a set of boundaries—that determine what is and what cannot be a possible statement. In other words, Foucault understands the archive as a law that determines the historical conditions of possibility of statements. Jacques Derrida, for his part, speaks of the “archontic power” of an archive, in the sense that it not only collects, but also consigns—we find here the “attribution of value” conditioned by acknowledgement of this kind of artwork by institutions, the market, or an audience.²²

We must therefore understand that, in these circumstances, everything that is left out of an archive at a given moment will not only be inexistent in the future—which will have no access to or retain a memory of it—but that its past (the moment in which it happened) and its present (the moment of its being archived) will also remain unsanctioned. To constitute or build an archive is to delimit—and to thereby sanction the setting of limits—what is to be included and, by extension, what must be left out. This entails that one of the first tasks for a media art archive is to propose a definition that includes—with the awareness that it also thereby excludes—certain practices (statements, discourses) and which thereby fixes those discursive or enunciatory limits.

This is a very interesting feature of Grau's Archive of Digital Art, which makes an explicit argument in this regard:

Since today's digital artworks are processual, ephemeral, interactive, multimedia-based, and fundamentally context-dependent, because of their different structure, *they require a modified, we called it an “expanded concept of documentation.”*

The ADA represents the scientific selection of several hundred international artists of approx. 5,000 evaluated artists. We ascribe high importance to artistic inventions like innovative interfaces, displays, or software.²³

As Derrida observes, an archive also requires a certain degree of institutionalization, that is, a “law that begins by inscribing itself there” and “a right which authorizes it,”²⁴ which entails that the archive is in principle “at once *institutive* and *conservative*.”²⁵ Secondly, an archive also needs to equip itself with a policy that “controls” the archive and by extension memory, so that “[e]ffective democratization can always be measured by this essential criterion: the participation in and access to the archive, its constitution, and its interpretation.”²⁶ As we see, both the ADA and SAOMA exhibit these “characteristics.”

The notions of digital memory and archive might introduce a different range of theoretical, philosophical, and hermeneutic possibilities through the concepts of RAM_culture and memory developed by José Luis Brea (in contrast with the concepts of ROM_culture and memory), which can be used to rethink the concepts of memory and archive.²⁷

According to Brea, in ROM_cultures memory apparatuses (like the ADA or SAOMA) are conceived as archival memories and, in keeping with the computing metaphor, as a backup or hard drive. ROM_memory is constituted by unique and unrepeatable singularities: its objects are monuments inasmuch as they are located in places of privilege where time is suspended and its flow is interrupted “in order to hold and preserve the lost moment.” It is the consignment of an other-time that is memorious and acts as a resonance.

In contrast, RAM_culture does not have a primordially memorious intent towards consignment and recuperation; instead, its intent is productive and relational. The idea is to confront archive_culture by making room for and assembling a network_culture, which Brea understands as a “processing memory that interconnects data—and subjects—of knowledge.” Against ROM_culture (archival culture understood as a culture whose aim is to develop objects/discourses understood as *monuments* preserved for the knowledge of future generations), we must try to realize RAM_culture, a culture in which memory is no longer understood as a backup, but rather as a processing memory: an interconnective memory that is active and produces data (and interconnects

machines that are themselves distributed in a network); a “factory-like constellation memory, rather than a store-like consignment memory.”²⁸

Certainly, digital reality now allows us to conceive forms of archiving that are specifically created by and for the digital; the question lies in how to contain, archive, and preserve the past, present (and future) material of media art. Undoubtedly, different kinds of work will call for specific ways of doing things, but there is no way of getting around the need for further development and a technical and technological expertise, in addition to documentation and evaluation by specialists.

4. Final Thoughts: Memory and the Digital Archive

Keeping in mind the characteristics described in the previous section, we must be attentive to how they can be actually realized when we take on the task of putting together a digital archive/repository or, in other words, of assembling an archive of digital products—in our case, restricted to the practices of media art. If we think about contemporary digitized culture, the task of the archive requires us to comply with the basic characteristics described above; but it also requires a range of concrete technical capacities or features.

One of the most delicate and problematic aspects of archiving media art is, as we have noted, the fact that some of the disciplines that work through programming code and/or specific devices have become obsolete. The evolution of hardware and software during the past few decades has been such that many works based on supports like the floppy disk or the CD-ROM can no longer be viewed or studied in conventional contexts and it is necessary to resort to period hardware. Such hardware is

occasionally still available—when its obsolescence is relatively recent—but it is becoming progressively more difficult to keep period media devices operational.

Some institutions have devoted some effort to conserving these works in order to include them in exhibitions, but their aim is typically to present the works under the same conditions and the same level of consciousness in which they were created. Our experiences working with intangible or digital art at SAOMA have taught us that the archive and memory of media art will inevitably traverse passive and active strategies in the composition and configuration of its past, present, and future:

—Digital restoration. We must look for the technical formulas that guarantee the preservation and the possibility of future viewing and interaction, conserving content through specific hardware/software solutions. Some of these proposals have been described above; some members of the MIDECIANT team focus their work specifically on the design of technical solutions (TetraArt). In any case, this technical component must be complemented by a second component that accounts for the processes and states of consciousness in which the work was developed: that will be the narrative.

—Narrative. We must assume that the first generation of works of intangible art has already been lost, although it is also true that we may still have an opportunity to conserve and preserve those original sources that are still available (or “alive”); in any case, it is also necessary to emphasize that the very passage of time produces a new narrative or a new consciousness for the protagonists.

—Lastly, documentation. In the case of second and later generations, and on the basis of period materials that are conserved, we must organize exhibitions—or analogous projects—that may allow us to obtain photo and video documentation of the works, as well as other materials that can be published for future consultation.

NOTES

¹ It is also true that the term “communication” was progressively replaced by the term “information” in response to mathematical theories of communication such as Wiener’s cybernetics or Shannon and Weaver’s theory of information, both of which were published in the late 1940s and came to constitute what is known as the *communicative paradigm*.

² Marshall McLuhan, *Understanding Media: The Extensions of Man* (Cambridge: MIT Press, 1994); Marshall McLuhan and Bruce R. Powers, *The Global Village: Transformations in World Life and Media in the 21st Century* (New York: Oxford University Press, 1989).

³ Oliver Grau, *MediaArtHistories* (Cambridge: MIT Press, 2007), 1-2.

⁴ The photocopier, invented in 1938 by Chester Carlson and popularized in the early 1960s, was not conceived as a tool for artistic production, but as an industrial solution to the reproduction of documents. In 1959 Haloid Corporation launched the Xerox 914, an automatic office copier. The Xerox machine eventually became an “incalculably valuable instrument due to its expressive features, whose representational support—paper—proved to be most adequate due to its nature, being the most apt for shipping via mail, and due to its affordability, which allowed for much lower costs.” José Ramón Alcalá and Fernando Canales, *Copy art: La fotocopia como soporte expresivo*

- (Alicante: Diputación de Alicante, 1986), 40.
- ⁵ Some crucial sources that allow us to contextualize the concepts linked to the notion of media art, and to understand the cultural processes within which it developed, include: Otl Aicher, *Analógico y digital* (Barcelona: Gustavo Gili, 2001); Beatriz Escribano Belmar (coordinator), *Procesos: El artista y la máquina. Reflexiones en torno al media art histórico* (Cuenca: Ediciones de la Universidad de Castilla-La Mancha, 2017); and Lev Manovich, *The Language of New Media* (Cambridge: MIT Press, 2002).
- ⁶ Paul Virilio, *The Art of the Motor* (Minneapolis: University of Minnesota Press, 1995); *Politics of the Very Worst: An Interview with Philip Petit* (New York: Semiotext[e], 1999).
- ⁷ Alessandro Baricco, *The Game: A Digital Turning Point* (San Francisco: McSweeney's, 2020).
- ⁸ See: Manovich, *The Language*; Éric Sadin, *La humanidad aumentada: La administración digital del mundo* (Buenos Aires: Caja Negra, 2013) and *La silicización del mundo: La irresistible expansión del liberalismo digital* (Buenos Aires, Caja Negra, 2018).
- ⁹ The MIDECIANT is a museum and research center attached to the Universidad de Castilla-La Mancha. It currently holds a collection of over 4,000 works of electrographic and digital art, stored and organized to offer access to specialists and researchers upon request. Some studies about its holdings and collections can be found on the "Publications" section of the museum's website: <http://www.mide.uclm.es/es/publicaciones/>.
- ¹⁰ José Ramón Alcalá Mellado, "Musealización, historicación y divulgación del *media art*. Experiencias y problemáticas." *Revista oficial del Observatorio Iberoamericano de Artes Digitales y Electrónicas* 0 (2019): 38-47.
- ¹¹ Alcalá Mellado, "Musealización, historicación y divulgación," 39. See also: Eric Kluitenberg (ed.), *Book of Imaginary Media: Excavating the Dream of the Ultimate Communication Medium* (Rotterdam: NAI Publishers, 2006), and Siegfried Zielinski, *Deep Time of the Media: Towards an Archaeology of Hearing and Seeing by Technical Means* (Cambridge: MIT Press, 2008).
- ¹² See Michel Foucault, "Nietzsche, Genealogy, History," in *Language, Counter-Memory, Practice: Selected Essays and Interviews* (Ithaca: Cornell University Press, 1977), 139-164. "[The story of the origin] is always sung as a theogony," 143.
- ¹³ Grau, *MediaArtHistories*, 3.
- ¹⁴ The project, whose full title is "Vocabularies for a Network of Media Art Archives and Collections and Its Effects: Metaliteracy and Cognitive Tourism," was financed by Spain's Ministry of Industry and Economy (HAR2016-75949-C2-2-R) and coordinated by researchers from the Universidad Carlos III in Madrid and the Facultad de Bellas Artes and MIDECIANT in Cuenca. The head researchers are Ana Navarrete Tudela and Miguel Ángel Marzal García-Quismondo.
- ¹⁵ It is clear that the difficulties that arise from media art are not limited to its definition and taxonomy. Although this debate is interesting in its own right, projects like SAOMA allow us to reflect on how to preserve—and to hold and exhibit in a museum context—works of contemporary art that are not only exposed to the passage of time but to a process that is specific to electronics: obsolescence. Although I cannot dwell on this point here, I will mention a few projects that aim to provide answers to these questions: Solimán López's Hard Disk Museum (<https://harddiskmuseum.com/about/>), Bernhard Serexhe's investigation for the ZKM in Karlsruhe (see: Bernhard Serexhe [ed.], *Digital Art Conservation. Preservation of Digital Art: Theory and Practice* [Karlsruhe: Ambra / V, 2013]), and Rhizome in New York (<https://rhizome.org/about/>). In this more technical line it is possible to do further work in hardware emulation and FPGA systems that seem to present themselves as a future alternative to the conservation and restoration of this kind of material.
- ¹⁶ See: https://vorematur.uc3m.es/aema/aema_saoma/.
- ¹⁷ See: <https://mediaresearch.org/search/thesaurus-hierarchical.html>, and <https://www.digitalarchive.at/nc/home.html>.
- ¹⁸ See: https://artbase.rhizome.org/wiki/Main_Page, and <https://proyectoidis.org/>.
- ¹⁹ Here it is worth pointing out that SAOMA works specifically with "groupings of media art works and documentary materials that constitute a substantive corpus that can function as the basis for a contextualized historiographical narrative about what has been collected, produced, and disseminated in Spain. For this reason, at SAOMA we do not regard as collections or archives those loose or disconnected works that may have been acquired or collected by a museum, art, center, gallery, or individual collector, and which are mixed with works belonging to other art forms and movements in the context of a particular museographical or historiographical narrative." Alcalá Mellado, "Musealización, historicación y divulgación," 42-43.
- ²⁰ In the same way, and in parallel fashion, in this archive we have applied the standards of the Europeana project (<https://www.europeana.eu/es>).
- ²¹ Michel Foucault, *The Archaeology of Knowledge* (London and New York: Routledge, 2002), 145.
- ²² Jacques Derrida, *Archive Fever: A Freudian Impression* (Chicago: University of Chicago Press, 1995), 3.
- ²³ "Databases," *Archive of Digital Art*, accessed May 3, 2021, <http://mediaartresearch.org/databases.html> (my emphasis).
- ²⁴ Derrida, *Archive Fever*, 4.
- ²⁵ Derrida, *Archive Fever*, 7.
- ²⁶ Derrida, *Archive Fever*, 4.
- ²⁷ José Luis Brea, *Cultura RAM: Mutaciones de la cultura en la era de su distribución electrónica* (Barcelona: Gedisa, 2007).
- ²⁸ Brea, *Cultura RAM*, 5.

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