

Born-digital art: documentation models as a conservation measure

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Abstract: This article aims to present a revision of the existing documentation models for the conservation of digital and born-digital art.

It has been noted that most recognized projects, including latest ones, adjust to specific cases in order to meet the isolated needs of the born-digital art. However, models fitted to give general answers have not been found. It is imperative to revise documentation models for conservation means, due to soft- and hardware obsolescence. This is an opportunity to unify documentation and conservation aspects, which are not always reflected in them. Differing from traditional conservation procedures, often focused in keeping the work or document in its original condition, born-digital works have to be modified and altered regularly for their accessibility and intelligibility. Hence documentation plays an essential role.

Key words: born-digital art, digital art, analogical art, obsolescence, documentation models, conservation, software, hardware.

Born-digital art: modelos de documentación como medida de conservación

Resumen: El objetivo de este artículo es presentar una revisión de los modelos de documentación actuales dirigidos a la conservación de digital y born-digital art.

Del examen de los proyectos de referencia y de los modelos de documentación vigentes, se evidencia que los mayores problemas para la conservación radican en que los modelos se tienen que adaptar a cada caso específico, puesto que entraña una gran dificultad que adquieran un carácter de aplicación general. Debido a que no todos los modelos contemplan siempre la problemática de la obsolescencia de soft- y hardware así como la posibilidad de unir aspectos conservativos con documentales, queda evidenciada la necesidad de revisar y actualizar los modelos de documentación como medida de conservación.

Palabras clave: born-digital art, arte digital, arte analógico, obsolescencia, modelos de documentación, conservación, software, hardware.

Introduction

It is a fact that an iPhone bought only a few years ago and still working perfectly, today starts a mandatory obsolescence process. The Apple update iOS 8 cannot be installed on an iPhone 4, which means that the Apple developed device is going to stop being updated; in other words, Apple has decided it is about time you start thinking of replacing your smartphone.

One of the main aspects of the contemporary art is its closeness to life, including society and everyday elements. Art is highly influenced by the "digital era" we live in.

The cross between internet and computers (introduced for user level on the nineties for industrialized countries) and at present the Personal Digital Assistants PDA, (PALM, smartphone, tablet etc.) have made it possible that, on top of being an art generator tool, we take the artistic outlook towards a digital field.

We are facing new typologies linked to contemporary art:

- Digitalised art (works conceived analogical/ which were later digitalised).
- Born-digital art (since conception owes a digital existence).

- Analogical art (mixed works).

This new art, "born-digital" presents new goals and problems in relation to conservation.

The fast cycles of innovation and the short life of the technology deployed are in contradiction with durability. On top of the repairs of obsolete technology implied problem, as the difficulty to find replacements parts. In both a near and a distant future this situation will get worse.

Since the apparent infinite possibilities of "digital" have been considered as the solution for all "problems", most of all for archive, from analogical production.

It is important to distinguish between art conservation through digitalisation and digital art conservation, which is digitally codified and linked to digital procedures of born-digital art forms since its origin.

Not existing at present a documentation model which meets all the requirements for born-digital art preservation, different conservation strategies in the medium term are being combined and there are experiments trying to ensure the digital materials accessibility and recovery.

Most standardized documentation guidelines are requested in order to help in registering and archive in a sustainable and organized way the information gathered about the work.

Anyhow, a debate in the professional world is expected, to continue developing strategies to preserve the born-digital art for posterity and not only documentation about it to survive.

"Are you born-digital? this will be the key question when it comes to preserve and maintain in the long term the art of our time."(Serexhe, 2013:13)

This is how Bernhard Serexhe starts his prologue on the last great Symposium publication about digital and born-digital art.

Most researchers used the term "MEDIA ART" until recently to refer to a diversity of artistic practices and works of art, which performance, was intrinsically linked to the use of accessible technologies, from the second half of the XX century.

This term is no longer useful since the born-digital art appearance.

Digitalized art, analogically developed and subsequently digitalized, does not need a program language application, unlike born-digital art.

From here on, we will speak about „born-digital-art“ when we refer to digital born art.

Documentation of these works of art is a key element for its conservation and it has become the core of any conservation strategy and art preservation based in technology.

Methods and methodology

Since approximately 15 years ago, experts in the art field, research groups and different organizations, try to develop a documentation model that will consider all the distinctive features of the born-digital art, aiming to better its conservation.

What do we refer to with "document" a born-digital work? Documentation is the material that illustrates, shows, provides instructions or supply evidences of an activity, in relation with a work.

There are specific models designed to gather the required information for an accurate description. In order to keep the maintenance and care regulations and to order the work.

Some of the most pertinent aspects of documentation are the following:

Artist's intention and purposes (interviews); diagrams and technical details for the setting-up; details of the work's relocation; description of piece's behaviour; exact description; audio-visual interaction, whenever it is necessary and a description of the ideal spatial requirements.

Sources as reference publications, catalogues, migration options, updates and reviews can be useful for this issue. Most of them are developed from the "case study" and for this reason it becomes more difficult its applicability as a general rule.

The revision of the documentation models, aims to analyse the following problems to assess and how they could affect them:

- Technological obsolescence (deterioration of sensitive components; USB, CD...).
- Technological advance (new versions and software updating).
- Royalties and licences.

Conservation not only does not find its goal in digitalisation, it's just that conservation fights against its own means. In opposition to traditional conservation (guided to maintain work's or document's original condition), born-digital works have to be continuously modified and transformed so that they stay accessible and comprehensible. Documentation is one of the main foci. Digital continuous

intervention concerns not only the document but also its description and requires permanent financing.

There are four generalized (most commonly used) strategies in use: 1. Conservation of the hardware (spare parts store). 2. Migration (data transfer from one format to another). 3. Emulation (only “simulates” the original software behaviour). 4. Reinterpretation (It makes a data transfer from one storage medium to another).

Supporting devices are introduced: - by trying to conserve the largest number of models, copies and reparation pieces possible, to be able to emulate, transfer, migrate, etc., raising a kind of technology museum; - by establishing a “replication” in order to preserve digital online copies, in standard format; - by maintaining analogical items of any kind, that would impel to support them in time, such as paper, microforms, etc.: - by preserving digital archaeology which obliges us to wait for future casual selections.

Each strategy has difficulties and limitations of its own.

Migration, emulation, and reinterpretation count on 2 basic actions in relation to digital preservation that often go together: Medium Actualisation and Format Migration. We are also deep into a social phenomenon, which forces us to follow the dictates of the technological industry dynamic innovation, which is not interested in taking in account the related aspects of the developed products preservation.

Projects:

Projects have produced reference models for digital documentation.

We present some of the first documentation examples, which served to configure the documentation models we use nowadays.

The first initiative in the conservation field of Video art was launched in 1971. It is about EAI, Non_Profit_Organisation Electronic Art Intermix, which remains active.

Other ambitious projects such as OAIS, which is a reference storage model, is developed by the Consultative Committee for Space Data Systems (CCSDS), in order to provide an environment for the preservation standardization of all types of objects within the scientific range. OAIS was created aiming to be widely used for the long-term preservation of all types of objects not only digital ones. In 1999, from the New York Salomon Guggenheim Museum emerged an initiative for the Media Art and Performances conservation; the Variable Media Network. Matters in media Art; A common project from the New York MOMA, the San Francisco SFMOMA and the London TATE was born in 2003. The aim was to develop strategies for conservation and presentation contemporary art from that time, such as Video-, Film-, Audio- and systems

with software base from those years: Matters in media Art collaborating towards the care of time-based media. PACKED (Centre for Expertise in Digital Heritage) is a Belgium Centre, which made the project “Obsolete Equipment”, together with NIMk, (Netherlands media Art Institute, Amsterdam) about digital art conservation. The Symposium Modern Art, Who cares? was the first one to make an international call on concerns posed on contemporary art preservation, taking in account the digital art but not including at that moment born-digital art yet. Within the main results of the project we must mention the fulfilment of the International Symposium on Contemporary Art *Who Cares?* and the publishing of the book *Inside Installations* and of the documentary *Installation Art Who cares?*. Inside Installations (Preservation and presentation of Installation Art); This European research project was developed during the years 2004 to 2007. More than thirty complex installations were selected as study cases to be installed, researched and documented. The experiences shared by the associates resulted on them cooperating on the development of good practices about five research subjects; preservation strategies, the artists’ involvement, documentation and storage strategies, theory and semantics, as well as the knowledge management and the information exchange. Managed by the Netherlands Institute for the Cultural Heritage (ICN), some of the participating organizations are the Tate, the Stedelijk Museum voor Actuele Kunst (SMAK) and the National Museum Art Centre Reina Sofía (MNCARS). Media Art net, a database organized by the Goethe-Institute and the Centre for Art and Media Karlsruhe (ZKM), born in association with a three volume print publication about history and aesthetics of electronic art. Rhizome ArtBase, established in 1999, is an online storage for new mediums with 2171 works of art, and it keeps growing. The ArtBase includes a wide range of projects of artists from all over the world who use materials such as the software, websites, motion images, games and browsers for aesthetics and for critical purposes. DOCAM; The project, “Documentation and Conservation of the Media Arts Heritage”, comes up in 2005 from the Daniel Langlois Foundation for Art, Science, and Technology. They start International research alliances focusing their activities on works of digital, electronic and technologic art conservation, up till 2010. Virtueel Platform Research: Born-Digital Kunstwerken in Nederland, the scientific publication aims to analyse and report about the digital art conservation singularities in 2012. Digital art conservation: We found some information about the last great conservation project for Digital art, which took place in Germany and lasted three years. This project aimed on the first place to document and catalogue the Upper Rhine Valley digital art collections and on the second place to contribute on international debates about the digital art preservation. Berkeley Art Museum And Pacific Film Archive: The museum initiated a consortium with the aim of store, document and preserve media art, as well as to discuss strategies for digital art conservation. The Guggenheim Museum and the Franklin Furnace Archive are some of their associates for this project. IMAP: Independent Media Art Preservation (1999) is a service non-profitable organization committed to

preserve non-commercial electronic resources. IMAP offers an on-line resources guide for media art exhibit, collection and preservation, from their New York headquarters. ZKM: Zentrum für Kunst und Medientechnologie, since 1999, under professor Peter Weibel's direction, explores theory and practice of new resources and analyses critically, by means of different projects (study cases), the role that new art practices play in the information society. Netherlands Media Art Institute: from the beginning in 1992, as a Media Art preservation expert Centre, it develops new preservation methods and researches the video art, installations and performances preservation. Also INCCA, the International Network for the Conservation of Contemporary Art, which is a net of professionals related to modern and contemporary art preservation. It is formed with conservators, curators, scientists, art historians and researchers who share unpublished information from artists' archives via a database, have seen the light since then.

Documentation Models

Some of these documentation models present specific tools for technological art, some others have a holistic approach (properties which must be analysed as a whole), often related with efforts on the preservation, collection or cataloguing fields.

The most relevant documentation models, which therefore have been object of study on our research, are: the tools and models of the DOCAM; This documentation models, provides with a frame that enables us to organise the global information about a work, by concentration, categorization, and accessibility. VMN; The researches on the sphere of the Variable Media Network have enabled a concept of a methodology and the production of some tools serving to identify what is potentially variable in a work and what is not. QMV; Variable Media Questionnaire: Unique and unprecedented elaboration of a work documentation via an invitation (to an artist or to a person with an important experience with the matter work), to answer a number of questions about the work purposes. The documentation system MANS; Media Art Notation System: This is a concept mode with directions to distribute the work information, which is very influenced by the previous ones and by the CMCM (Capturing Unstable Media Conceptual Model), which offers a strict and articulated documentation structure. And the models of INSIDE INSTALLATIONS carried out the development of a documentation model and a method to document illumination, sound and movement. MATTERS IN MEDIA ART; it provides with preservation tools and museology resources for the technologic works.

The selection of documentation models is displayed in a way that can be understood how they affect one another.

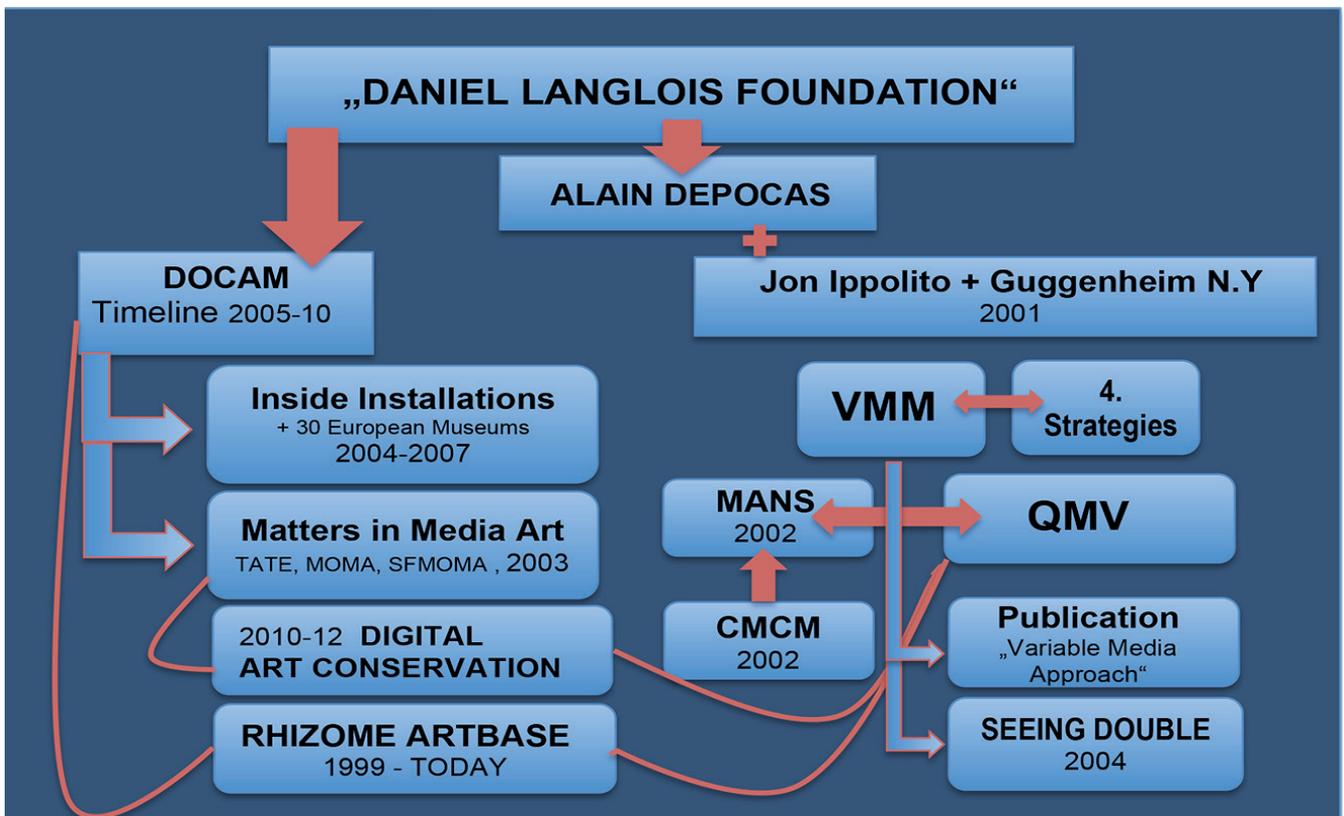


Figure 1.- Studied Documentation Models. Amelia Boogen©.

The Langlois Foundation plays an important role launching by means of Alain Depocas, (director of the Foundation Daniel Langlois Research and Documentation Centre; CR+D since 1999), the DOCAM project creation, under which, Depocas creates Timeline.

As such, he is responsible of the documentary collection, which includes the history, works and practices related with the media, electronic and digital Arts. He has also developed a database to manage the collection and other data within the CR+D scope of interest, such as the technologic art, and he is the Fundación Daniel Langlois website editor. Between the years 2005 and 2010 he has run an ambitious research project about documentation and conservation of the media art heritage (DOCAM), in which frame several tools and resources have been produced, as a chronologic line of technologies and a documentation model adapted to technological art.

The Variable Media Network (VMN) arises from the cooperation of Jon Ippolito and his New York Guggenheim Museum colleagues, together with the Foundation Daniel Langlois and they develop the Variable Media Questionnaire (VMQ).

They develop also a publication named *"Variable Media Approach; Permanence through Change"* and organize in 2004 the exhibit *"Seeing Double; Emulation in Theory and Practice"*.

Richard Rinehart creates the Media Art Notation System (MANS) and it is highly influenced by the Variable Media Questionnaire and by the Unstable Capture Media Concept Model (CMCM).

The Inside Installations documentation models are developed working 30 European Museums together, under the Netherlands Institute For Cultural Heritage (ICN) direction, in Amsterdam, and they take many references from the DOCAM model.

The models developed by Matters in Media Art, emerges from an European-United States cooperation, where the Tate Modern of London, the MOMA, the SFMOMA take part, as well as the project manager, the New Art Trust, developing quality tools by means of well known art experts cooperation.

Regarding the critical analysis of the revised projects and models we can confirm that the lack of applicability still exists. Conclusions evidenced that methodology constantly has to be modified to overcome the differences of each single case.

Two more projects develop new proposals of documentation models and solutions. They are Digital Art Conservation and data base ArtBase.

During the development of the project "Digital Art Conservation" (2010-2012) led by Bernhard Serexhe issues

related to conservation of digital art were analysed from 2 points of view: one theoretical and one practical.

The theoretical standpoint settled the bases for the correct documentation of born-digital art, while the practical perspective helped to develop a new practical documentation model according to the analysed cases.

Guidelines from the reference models were applied into the production of one of their own and specific for born-digital art according to their study cases.

The data inclusion into the template to properly register the hard- and software features is one of his contributions to the born-digital art documentation.

The use of a free software (Open Source) distributed and developed over a XMind program (which is similar to Dropbox), allowed them to carry out an interactive, interdisciplinary and upgradeable archive work.

The Rhizome ArtBase data base lead by the curator Ben Fino Radin, is at the cutting edge of born-digital art data storage with preservation purposes.

They suggest universal access to their archive, as well as its active maintenance to boost its dissemination and the mitigation of obsolescence. The respect towards the artist's intention is a direct extension of the principal company values of ArtBase, to support and promote art that is engaged with the emerging technologies.

ArtBase highlights 3 important risks facing conservation; dispersion (data base and works located in more than one place or platform), data obsolescence (works that acquire contents from other sources have to perform the same changes and updating as the selected source) and physical degradation (degradation of any physical element holding digital information).

The source code preservation (the instructions a computer has to follow in order to run a software program) impels to constant recreation. The use of automatic scripts is added to their conservation methodology (to detect the links that are no-more working) and the crowdsourcing (collective work to detect failures caused by the users).

Conclusion

Despite all the group of researchers that work around the development of born-digital art conservation models effort, everything is pending of a greater international consensus.

It has been recognized that a major problem for conservation resides in having to adapt the documentation models to each specific case, as it entails a large difficulty for them to acquire a general guideline.

Additionally it can be remarked that not any documentation model proposes neither alternative, in relation to the obsolescence shown on the items (hard discs, DVD, USB...), in which the data obtained under their guidelines has been stored. Nor do they indicate what type of operating software system would be more appropriate.

We share the opinion that, the software's obsolescence solution could include the creation of a legal model supported by computer tools, to simplify the distribution and use of public domain contents.

We also want to advise that the "dispersal" ArtBase points out as one of the 3 threats for the conservation of born-digital art (it has implied the constant update to go along with the contemporary technologies, creating separate copies and leaving the original archive online untouched and reachable) can be related with the warning that copy and original are practically identical.

In the migration (data transfer from one format to another) of born-digital art in particular, it is necessary to make copies, modifying the originals partially or totally.

Therefore it is basic the agreement with the author to carry out these measures of conservation in order not to commit an offense.

In relation with intellectual property and licences framework, it must be noted that born-digital art more than any other artistic typology goes closely linked to the different legal aspects that concern them, like the intellectual property or the licences.

In the same way we consider that in order to reach the aforesaid sustainability, plans to reduce the creativity legal barriers should be continuing being developed by means of a new legislation and new technologies, facilitating the distribution and the use of contents for freeware (Freeware: it is understood the situation in which the art works, including computer programs, remain when the period of copyright protection expires).

In fact currently purchases are made based upon the format obsolescence -hardware and software - (Free software, is the name for the software that respects the freedom of all users that purchased the product, and therefore, authorise them to make any use of it) and the "rights" handed over or not to the institutions/collectors in order to be able to transform/update the work to ensure future accessibility.

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Degree in Fine Arts 1997 from the Basque Country University (UPV/EHU) where I specialised in Conservation and restoration of Cultural Heritage having carried out since then this activity. Master Degree in Conservation and Exhibition of Contemporary Art (CYXAC). I received the award for the best student of Master 2014, UPV/EHU. I am currently a pre-doctoral fellow of the University of the Basque Country – UPV/EHU. From 2005 on I have coordinated it with teaching Arts and Ethics at the German School of Bilbao, -Deutsche Schule Bilbao- being head of arts department. I am also the coordinator of German as specific language (DFU) in the German School of Bilbao. Over these years I have continued my permanent formation in German, having achieved Certificate C2 from the Goethe Institute in Frankfurt as well as SEK II coalification in Arts, which permits me to examine German high school diploma (Abitur). Through my participation in a great number of restoration forum as GEIC member and taking part in restoration projects with other companies I am continually on the job training.

Work experience: I have regularly collaborated with business of art restoration in Bilbao and Cantabria since 1999. This is how I have acquired knowledge in skills and specific treatment for modern and contemporary works of art, using equipment's of specialised technology as the suction plate and the realization of scientist analysis for the study of the works of art. All this work has allowed me to work as teaching assistant in several methodological courses, organised by the Institute of Cultural Heritage of Spain (IPCE) dependent on the Ministry. At present I accomplish the documentation of contemporary works of art as a preventive measure of conservation.