

Future of Digital and Technology based Arts

Urgence en FWB...

Yves Bernard yb@imal.org

December 2015



The context:

The Memory of the World in the Digital
Age...

D.O.A.

Dead On Arrival

[Urban Dictionary: DOA](#)

www.urbandictionary.com/define.php?term=DOA ▼

Your Job's a joke, you're broke, your love life's **D.O.A.**. It's like you're always stuck in second gear. And it hasn't been your day, your week, your month, or even ...

You've visited this page 2 times. Last visit: 3/9/14

[D.O.A. \(band\) - Wikipedia, the free encyclopedia](#)

[en.wikipedia.org/wiki/D.O.A._\(band\)](http://en.wikipedia.org/wiki/D.O.A._(band)) ▼

D.O.A. was a hardcore punk band from Vancouver, British Columbia, Canada. They are often referred to as the "founders" of hardcore punk, along with Black ...

You visited this page on 3/9/14.

[D.O.A. \(1950 film\) - Wikipedia, the free encyclopedia](#)

[en.wikipedia.org/wiki/D.O.A._\(1950_film\)](http://en.wikipedia.org/wiki/D.O.A._(1950_film)) ▼

D.O.A. (1950), a film noir drama film directed by Rudolph Maté, is considered a classic of the genre. The frantically paced plot revolves around a doomed man's ...

You visited this page on 3/9/14.

[D.o.A: The Third and Final Report of Throbbing Gristle - Wikipedia ...](#)

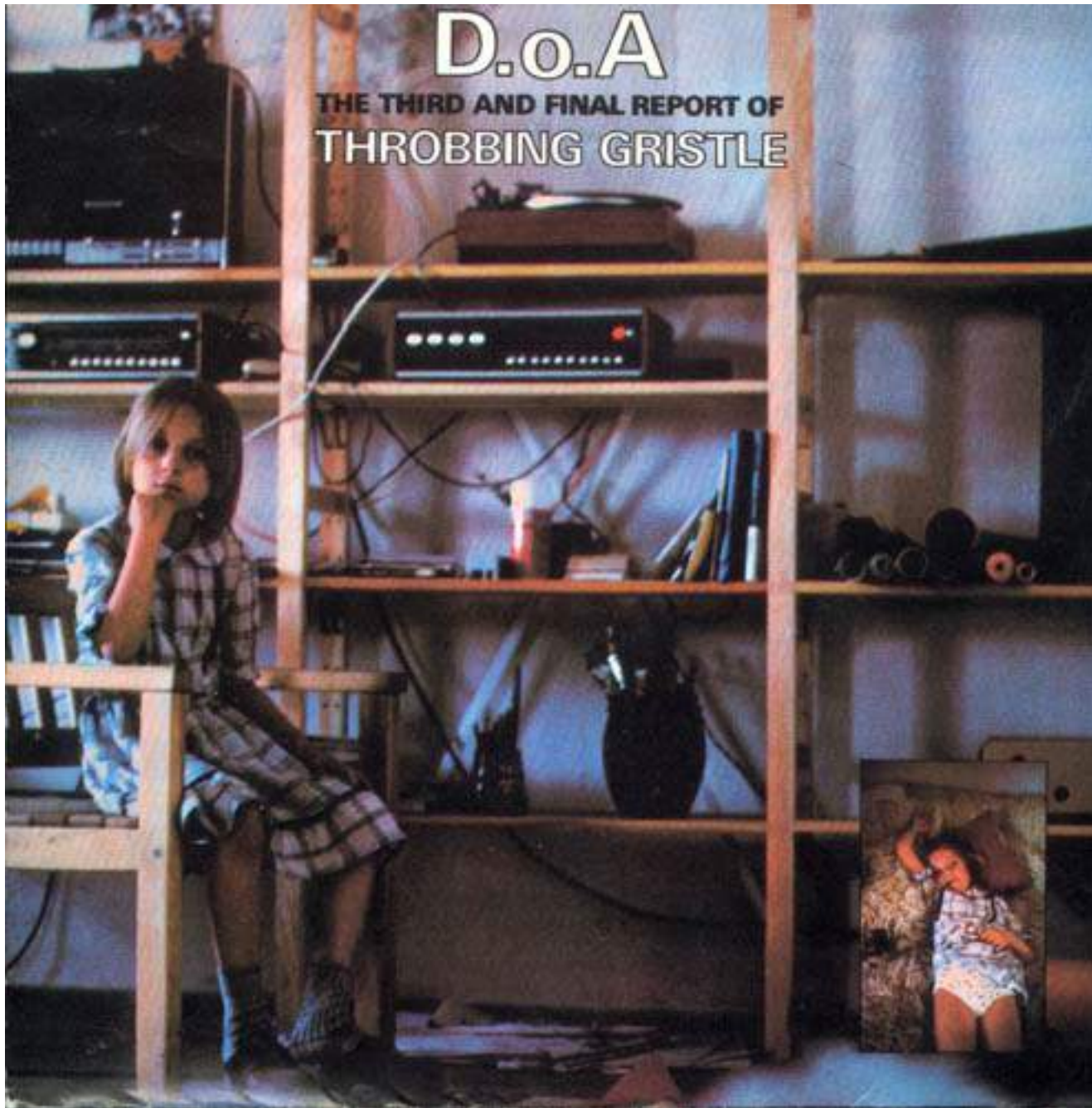
en.wikipedia.org/.../D.o.A:_The_Third_and_Final_Report_of_Throbbin... ▼

D.o.A: The Third and Final Report is the second studio album by industrial music pioneers **Throbbing Gristle**. It was released on 4 December 1978 through ...

[Release](#) - [Critical reception](#) - [Legacy](#) - [Track listing](#)

D.o.A

THE THIRD AND FINAL REPORT OF
THROBBING GRISTLE



The No Future of Digital Arts...?

How you, young digital artists, will you show your works in 5, 10 or 20 years?

(when at last you will be recognised and famous...)

The No Future of Digital Arts...?

Original hardware will be dead (apart at some vintage computer clubs)



*Basically, it's beyond hope. The speed of its decay is uncontrollable and irreversible.

<http://blogs.loc.gov/digitalpreservation/2013/05/what-are-we-going-to-do-about-hardware/>

What are We Going to do About Hardware?

May 24, 2013 by Leslie Johnston

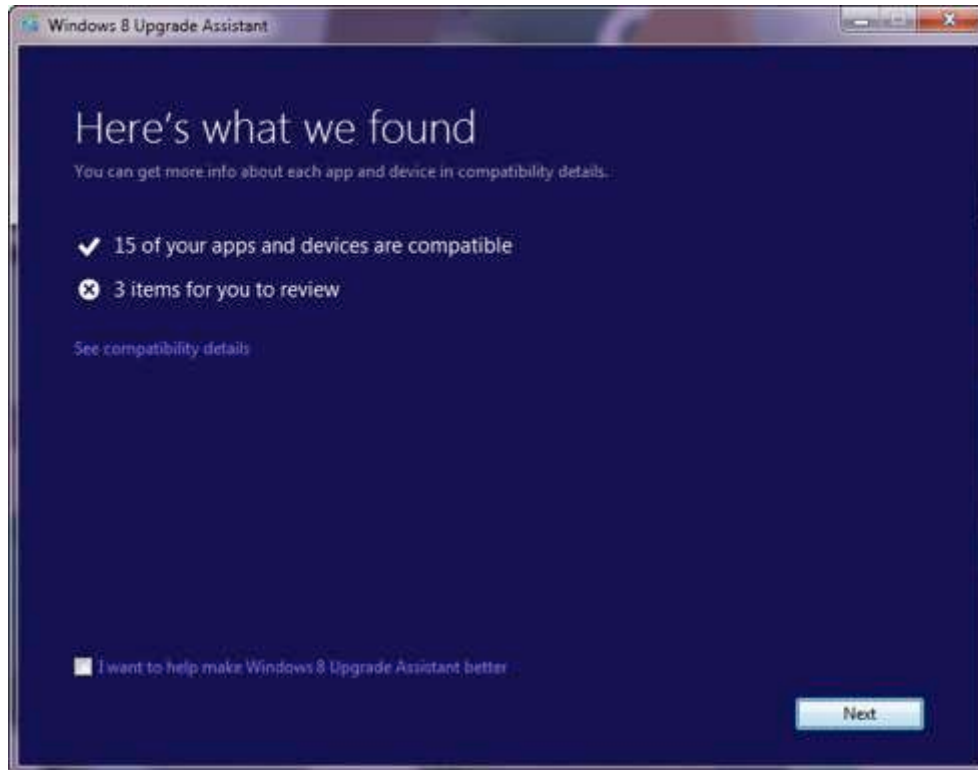
The No Future of Digital Arts...?

Your backups will be unreadable...



The No Future of Digital Arts...?

And if by any chance you have the original hardware and recovered your digital files, your software will not be compatible with the OS version which still runs on this old machine...



The No Future of Digital Arts...?

Obsolescence of Hardware

Short life of digital data carriers

Obsolescence of Software

The No Future of Digital Arts...?

Obsolescence of Hardware

A recent example:

In the last 5 years, 4x3 screens have been replaced by 16x9 screens...





[Still Living](#), Antoine Schmitt, 2006 (Collection Espace Gantner)

The No Future of Digital Arts...?

Short Live of Digital data carriers

Digital data are ephemeral, fragile,...

Historic records can be retained on microfilm for 500 years and on paper for 50-100 years. But today *no demonstrated nor affordable approaches can be certified to assure "digital continuity" beyond 10 or 20 years without significant information loss.*

www.savingthedigitalworld.com

THE INTERVAL

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PLAY VIDEO



RESERVE A BOTTLE



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The Long Now Foundation was established in 01996 to creatively foster long-term thinking and responsibility in the framework of the next 10,000 years. [Read More...](#)

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starting at \$8/month



The Rosetta Project

A Long Now Foundation Library of Human Language

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[Disk](#)

[Projects](#)

[Blog](#)

[People](#)

[Blog Homepage](#)

[RSS Feed](#)

The Rosetta Blog

Posted on Wednesday, August 20, 02008 by Kevin Kelly

[14 Comments](#)

Very Long-Term Backup

Paper, it turns out, is a very reliable backup medium for information. While it can burn or dissolve in water, good acid-free versions of paper are otherwise stable over the long term, cheap to warehouse, and oblivious to technological change because its pages are "eye-scanable." No special devices needed. Well-made, well-cared for paper can last 1,000 years easily, and probably reach 2,000 without much extra trouble.

We can not say the same for digital storage. Pages stored on plastic DVDs are neither stable over the very long term, nor readable over the long term. Unless digital information is ceaselessly migrated from one fading medium to another new one, it will quickly cease to be accessible. Two decades ago the floppy disk was ubiquitous. Most personal digital information then was stored on this format. Today, any information stored only on a floppy disk is essentially gone. Imagine the incompatibility of today's DVD in 1,000 years.



10 KG FROM THE NEW FACTORY, Sebastian Schmieg and Johannes P Osterhoff, 2014
destroyed hard-drives from Google's data center in Saint-Ghislain

The No Future of Digital Arts...?

Short Life of Digital data carriers

Example of cinema... all movies are shot and displayed digitally...

Movies are supplied to the theatre as a digital file called a [Digital Cinema Package\(DCP\)](#).^[21] For a typical feature film this file will be anywhere between 90 and 300GB of data (roughly two to six times the information of a Blu-ray disc) and may arrive as a physical delivery on a conventional computer hard-drive or via satellite or fibre-optic broadband.^[22] Currently (Dec 2013) physical deliveries are most common and have become the industry standard. Trailers arrive on a separate hard-drive and range between 200 and 400MB in size.

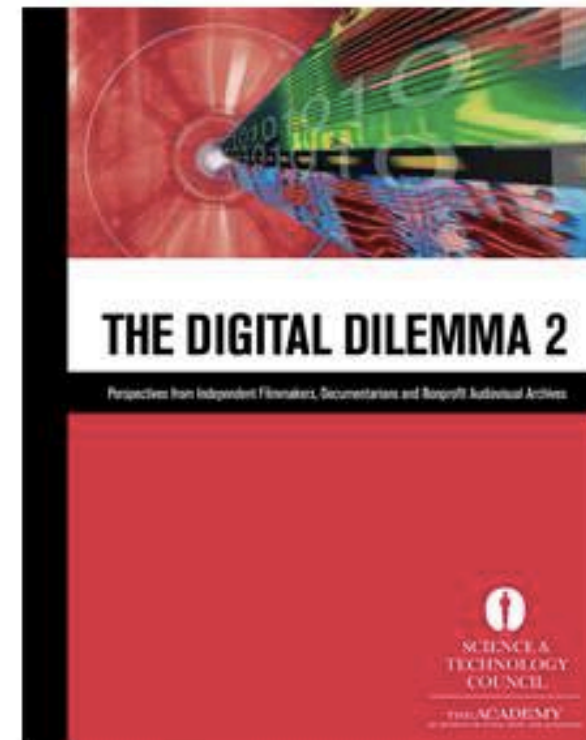
The Digital Dilemma 2

Perspectives from Independent Filmmakers, Documentarians and Nonprofit Audiovisual Archives

The Digital Dilemma, published in 2007, raised important concerns about the longevity of digital motion picture materials created by the major Hollywood studios, as well as other valuable digital data managed by large commercial, scientific and government organizations. It found that all organizations dealing with digital systems and data collection face the same problem: they do not have an operationally and economically sustainable means to maintain long-term access to their materials.

The Digital Dilemma 2 focuses on the more acute challenges faced by independent filmmakers, documentarians and nonprofit audiovisual archives. While 75 percent of theatrically released motion pictures are independently produced, these communities typically lack the resources, personnel and funding to address sustainability issues that are available to major Hollywood studios and other large, deep-pocketed enterprises. Independent filmmakers create – and nonprofit film archives collect and store – a sizeable part of moving image and sound heritage. The Academy partnered with the Library of Congress's National Digital Information Infrastructure and Preservation Program (NDIIPP) to produce this new study with the conviction that these communities shouldn't be allowed to fall through the cracks.

Download



The Digital Dilemma 2 is now available for free download.

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LE COCHON DE GAZA • POULET AUX PRUNES • LENA • PATATJE OORLOG
RUNDSKOP (TÊTE DE BOEUF) • LARGO WINCH II • HITLER À HOLLYWOOD
VIVA RIVA! • OMBLINE • LE TABLEAU • NUIT BLANCHE • DEATH FOR SALE
LA FOLIE ALMAYER • ALL GOOD CHILDREN • PRESIDENT • ISABELLE
UNE VIE DE CHAT • FILS UNIQUE • ELLE NE PLEURE PAS, ELLE CHANTE
LÉGITIME DÉFENSE • LATE BLOOMERS • DE LEUR VIVANT • OXYGÈNE
NICOSTRATOS • LES NUITS ROUGES DU BOURREAU DE JADE • LA FÉE
AU CUL DU LOUP • LIBRE ÉCHANGE • BIBLIOBURRO • MISS MOUCHE
GOOISCHE VROUWEN • SWOONI • BEYOND THE STEPPES • VAMPIRES
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The Memory of the World in the Digital age: Digitization and Preservation

26-28 September 2012, Vancouver, British Columbia, Canada



In cooperation with the University of British Columbia (Canada) UNESCO organized an international conference from 26 to 28 September 2012 in Vancouver (BC) Canada that explored the main issues affecting the preservation of digital documentary heritage. The more than 500 participants discussed strategies that can contribute to greater protection of digital assets and produced the **UNESCO /UBC Vancouver Declaration for implementation by UNESCO, and its Member States, professional associations and industry.**

The conference participants included professionals from the heritage sectors, as well as a range of government, IT industry, rightsholders and other stakeholders who were exposed to the views of experts from all levels of development in an attempt to produce practical recommendations to ensure permanent access to digital

documentary heritage.

Despite the adoption of the ***UNESCO Charter on the Preservation of the Digital Heritage*** in 2003, there is still insufficient awareness of the risks of loss of digital heritage, even though knowledge is today primarily created and accessed through digital media.



Nos ordinateurs ont-ils la mémoire courte ?

vendredi 11 décembre à 22h30 (52 min)

ARTE+7 52 min

Documentaire de Vincent Amouroux (France, 2014, 52mn)

Sombre menace sur le numérique : nos supports sont fragiles, nos données informatiques en danger. Ce documentaire explore les alternatives pour éviter à notre époque de perdre la mémoire.

RE-COLLECTION ART, NEW MEDIA, AND SOCIAL MEMORY

By Richard Rinehart and Jon Ippolito

This book will arrive like a bombshell in the twin citadels of art museums and conservation departments...incredibly interesting and compelling narrative.

— John G. Hanhardt, Senior Curator of Film and Media arts at the Smithsonian and former curator at the Guggenheim and Whitney museums

Get it

amazon.com

MIT Press



RE-COLLECTION

Art, New Media, and Social Memory

Richard Rinehart

Jon Ippolito

Re-collection: Art, New Media, and Social Memory is the first academic book on new media preservation. Its authors make a startling claim: that the historical record of our era will be unretrievable without a drastic change in the technologies, institutions, and laws that now govern cultural preservation. Weaving theory into practice, *Re-collection* spells out much-needed, real-world approaches to preservation along with their theoretical foundations and

#Re_collection



Jon Ippolito
@jonippolito

19h

"A life is like a garden. Perfect moments can be had, but not preserved, except in memory."
Leonard Nimoy should have written
#Re_collection

Expand

Jon Ippolito
@jonippolito

26 Feb

Thanks! RT @edsu: @jonippolito btw, thanks for #Re_collection, I really enjoyed it!
pic.twitter.com/LTsEnsvg9A @rick_rinehart



Tweet #Re_collection

implications.

re-collection.net/

The No Future of Digital Arts...?

Obsolescence of Software

Example: Apple, end of Classic (OS 9) in 2007

Which are the last Macs capable of running MacOS 9/Classic applications?

Unfortunately for some whom have been Mac users since the beginning of the Macintosh, Apple does not support the MacOS 9/Classic environment on any of the Intel-based Macs or *even* on PowerPC-based Macs starting with MacOS X 10.5 "Leopard". Nevertheless, you also may be interested in reading "Are there any third-party programs to run MacOS 9/Classic applications on Intel Macs?"

The last Macs capable of running MacOS 9/Classic applications within the "Classic Environment" -- provided by MacOS X 10.4.11 "Tiger" and *earlier* -- are the last models in the Power Macintosh G5, iMac G5, eMac, Mac mini G4, iBook, and PowerBook G4 series. *These systems cannot run MacOS 9/Classic applications if running MacOS X 10.5 "Leopard" or later.*

The No Future of Digital Arts...?

Obsolescence of Software

Example: Apple, end of Rosetta (PowerPC emulation) in 2011

OS X Lion to Drop 'Rosetta' Support for PowerPC Applications

Monday June 13, 2011 12:37 pm PDT by Eric Slivka

Soon after Apple released the first developer preview version of OS X Lion [back in late February](#), we [noted](#) that Apple appeared to have dropped support for Rosetta, the system that allowed Intel-based Macs to run applications written for earlier PowerPC-based systems.

Apple of course made the transition to Intel-based processors five years ago, and Rosetta is an optional install under Snow Leopard, but some users are still hanging onto old PowerPC applications that either have not been updated at all or have updated versions to which the users do not wish to upgrade for one reason or another.

With OS X Lion now on its fourth developer preview version and a public release set for next month, it is clear that Rosetta will not be making an appearance in Apple's next-generation Mac operating system, finally leaving those legacy applications out in the cold.

What Strategies to preserve *born-digital contents*?

Migration

Re-coding

Emulation

Re-interpretation

What Strategies to preserve *born-digital contents*?

Migration

Example: Adji Game (online game, 2002, director/shockwave)



**Jouez avec Meschac Gaba au jeu "adji"
et gagnez 10.000 Francs CFA !!
(à imprimer vous-même)**

>> LIRE LA RÈGLE DU JEU **>> JOUER MAINTENANT!**

Ce jeu a été réalisé dans le cadre de l'exposition de Meschac Gaba présentée au Palais de Tokyo du 29 janvier au 8 septembre 2002.

Production du jeu "Adji" : **Divento**, Paris (www.divento.com), **Palais de Tokyo, site de création contemporaine**, (13, avenue du Président Wilson, 75016 Paris, www.palaisdetokyo.com) / Réalisation : **Magic Media** (crédits), Bruxelles (www.magic.be).

!!! Pour jouer, le player Shockwave doit être installé sur votre ordinateur. Pour le télécharger gratuitement, [cliquez ici](#).



Credits

This game has been created as part of Meschac Gaba exhibition
presented at the Palais de Tokyo (Paris), 2002.

Production: Palais de Tokyo, Paris

Realisation : Magic Media, Brussels

Project Management, Interactive Design & Software Development:
Yves Bernard

Graphic Design: Isabel Debry

Sound Design: missfit@FYKE Facilities

2013 version produced by Tate Modern,
software upgrade by Yves Bernard @ IMAL

PLAYER

SCORE 0

Cliquer pour afficher les crédits

REDO ACTION

LEVEL > NOVICE > EXPERT

NEW GAME

What Strategies to preserve *born-digital contents*?

Migration

Example: on-line work, net art

DOUGLAS DAVIS

THE WORLD'S FIRST COLLABORATIVE SENTENCE

1994

[Introduction](#) [Preservation of the Work](#) [About the *Sentence*](#) [Images](#) [News](#)

The World's First Collaborative Sentence, created by Douglas Davis for a survey exhibition of his work in 1994 and donated to the Whitney in 1995, is a "classic" of Internet art. Allowing users to contribute to a never-ending sentence, it anticipated today's blog environments and ongoing posts. In early 2012 the Whitney Museum undertook a preservation effort spearheaded by Carol Mancusi-Ungaro, Associate Director of Conservation and Research and Christiane Paul, Adjunct Curator of New Media, in concert with Farris Wahbeh, Manager, Cataloguing and Documentation, and implemented by Ben Fino-Radin, digital conservator at Rhizome, and the Museum's Digital Media department. The result of the initiative are the two versions of the *Sentence* accessible here.

Learn more about the work's preservation, **view** the live *Sentence*, and **contribute** by adding your own words.

When Artworks Crash: Restorers Face Digital Test



A detail of the Web page of Douglas Davis's interactive computer artwork "The World's First Collaborative Sentence."
LEHMAN COLLEGE ART GALLERY

By MELENA RYZIK
June 9, 2013



Paintings fade; sculptures chip. Art restorers have long known how to repair those material flaws, so the experience of looking at a Vermeer or a Rodin remains basically unchanged over time. But when creativity is computerized, the art isn't so easy to fix.

1. THE NEW LIVE VERSION

The new live version restores the work's functionality and allows visitors to contribute to the piece. The display of the work has been promoted to current standards, so that all text is shown at its original size.

ENTER THE LIVE VERSION

CONTRIBUTE TO THE SENTENCE

- The original links and URLs posted by users in the past were left "broken," pointing to the ephemeral nature of the Web and the fact that files may vanish over time.
- The issues surrounding the legibility of the Korean character set have not yet been resolved. While most of the characters were rendered legible after the character set was properly defined in the header of the pages, some remained illegible. The Whitney invites contributions via [GitHub](#) to make the Korean text legible for the first time.
- Davis's instructions have been left intact, though contributions via fax and mail are no longer accepted.

2. THE RESTORED HISTORIC VERSION

The restored historic version leaves the code mainly untouched. Visitors may not contribute to the historic version. Viewed through an old browser, this version would display the *Sentence* as it appeared at the time of its creation until it stopped functioning in 2005.

VIEW THE HISTORIC VERSION

- The links have been modified to point to copies of the original pages at the Internet Archive Wayback Machine, a service that allows people to visit archived versions of Web sites (pages created in the early years of the project may not be accessible through the Wayback Machine). The historic version also allows visitors to compare how the design and conventions of Web pages have changed over the years, e.g. the link to [whitehouse.gov](#)—embedded in one of the *Sentence*'s pages—leads to differently designed pages in the live and the historic versions of the *Sentence*.
- The Korean character set displays as garbled characters.

What Strategies to preserve *born-digital contents*?

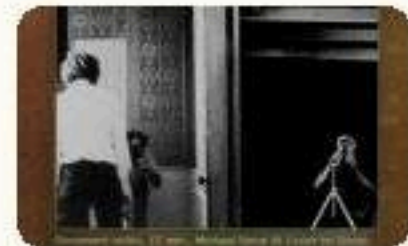
Re-coding

Example: Digital Snow (dvd-rom put online, Director to Flash)

Digital Snow DVD-Rom

Now on the Web

www.fondation-langlois.org/digital-snow



Digital Snow DVD-Rom

Now on the Web

www.fondation-langlois.org/digital-snow



The DVD-Rom *anarchive 2: Digital Snow* was co-produced in 2002 by the Daniel Langlois Foundation and Époxy Communications. From June 2011 to February 2012, with permission from Michael Snow and Anne-Marie Duguet (*anarchive*), the Daniel Langlois Foundation has transposed *Digital Snow* to the Web: www.fondation-langlois.org/digital-snow

What Strategies to preserve *born-digital contents*?

Re-coding

Example: World Skin (Maurice Benayoun, 1997)



What Strategies to preserve *born-digital contents*?

R-coding

Example: World Skin (Maurice Benayoun, 1997)

World Skin is an interactive artwork presented for the first time at Ars Electronica (Linz, Austria). It won the Golden Nica Award in the Interactive Art category in 1998.

....

This installation requires a system able to manage a big number of textures. The original version runs on SGI Onyx.

The PC version adapted by Ars Electronica Future Lab runs on Linux PCs. The photographic system requires 1 to 5 real photo cameras (a compact, economical type, but sturdy), modified at the release level and 2 to 6 magnetic or infrared trackers.

What Strategies to preserve *born-digital contents*?

Emulation

Emulator

From Wikipedia, the free encyclopedia

This article is about emulators in computing. For a line of digital musical instruments, see [E-mu Emulator](#). For the Transformers character, see [Circuit Breaker \(Transformers\)#Shattered Glass](#). For other uses, see [Emulation \(disambiguation\)](#).

In [computing](#), an **emulator** is hardware or software or both that duplicates (or *emulates*) the functions of one computer system (the *guest*) in another computer system (the *host*), different from the first one, so that the emulated behavior closely resembles the behavior of the real system (the guest). This focus on exact reproduction of behavior is in contrast to some other forms of [computer simulation](#), in which an abstract model of a system is being simulated. For example, a computer simulation of a hurricane or a chemical reaction is not emulation.

Contents [hide]

- Emulators in computing
- Emulation in preservation
 - Benefits
 - Obstacles
- Emulators in new media art



Emulators in new media art [edit]

Because of its primary use of digital formats, [new media art](#) relies heavily on emulation as a preservation strategy. Artists such as [Cory Arcangel](#) specialize in resurrecting obsolete technologies in their artwork and recognize the importance of a decentralized and deinstitutionalized process for the preservation of digital culture.

In many cases, the goal of emulation in new media art is to preserve a digital medium so that it can be saved indefinitely and reproduced without error, so that there is no reliance on hardware that ages and becomes obsolete. The paradox is that the emulation and the emulator have to be made to work on future computers.^[14]



You are here: *Welcome to the MESS Wiki!*

External Links

- [Forum](#)
- [GitHub MAME](#)
- [ProjectMESS](#)

Latest Updates

[OpenGL](#) on windows now supports glsl options. This worked out of the box by couriersud

[Merged](#) sdl_video_config and win_video_config by couriersud

[Merge branch](#) 'master' of <https://github.com/mamedev/mame.git> by couriersud

[tugboat.c](#): killed anonymous timer, added save state support (nw) by Ivan Vangelista

Welcome to the MESS Wiki!

Welcome to the official wiki for [MESS](#) (Multi Emulator Super System), the sister project of [MAME](#)¹⁾. [MESS](#) is a source-available project which documents the hardware for a wide variety of (mostly vintage) computers, video game consoles, and calculators through software emulation, as [MAME](#) does for arcade games. As a nice side effect to this documentation, [MESS](#) allows software and games for these hardware platforms to be run on modern PCs.

The goal of this wiki is to document how to use [MESS](#), the technical architecture of [MESS](#), and the systems emulated by [MESS](#). If you want to help, register a user name and look at the pages already in the Wiki to get an idea how things are currently laid out here.

As of version [0.158](#), [MESS](#) supports 994 unique systems with 2,106 total system variations and is growing all the time (you can find a complete list of the supported systems [here](#)). However, not all of the systems in [MESS](#) are functional: check the specific [driver pages](#) to know the emulation status of your favorite machine in [MESS](#).

If you have any questions or would like to contribute to [MESS](#) or the wiki, feel free to join us in the [IRC](#) channel [#messdev](#) on [EFnet](#) or at the [MESS](#) forum.

Table of Contents

Welcome to the [MESS](#) Wiki!

- Downloads
 - [Emulator](#)
 - Extra Files
 - External Frontends
 - Freely Available Systems
- Random Screenshots
- Documentation
 - Usage Docs
 - Programming Docs
 - Wiki Docs
- Driver Infos
- Development
- Tools
 - [MESS Tools](#)
 - Related Tools
 - Driver-Specific Tools
- Dumping Project

JSMESS

JSMESS is an attempt to port [MESS / MAME](#) to JavaScript using [Emscripten](#).

Why?

[Jason Scott](#) says it best:

The MESS program can emulate (or begin to emulate) a majority of home computers, and continues to be improved frequently. By porting this program into the standardized and cross-platform Javascript language, it will be possible to turn computer history and experience into the same embeddable object as movies, documents, and audio enjoy.



Internet Arcade



 Share
 Favorite

The Internet Arcade is a web-based library of arcade (coin-operated) video games from the 1970s through to the 1990s, emulated in
[MORE](#)

[About](#)

[Collection](#)

DESCRIPTION

The Internet Arcade is a web-based library of arcade (coin-operated) video games from the 1970s through to the 1990s, emulated in JSMAME, part of the JSMESS software package. Containing hundreds of games ranging through many different genres and styles, the Arcade provides research, comparison, and entertainment in the realm of the Video Game Arcade.

The game collection ranges from early "bronze-age" videogames, with black and white screens and simple sounds, through to large-scale games containing digitized voices, images and music. Most games are playable in some form, although some are useful more for verification of behavior or programming due to the intensity and requirements of their systems.

Many games have a "boot-up" sequence when first turned on, where the systems run through a check and analysis, making sure all systems are go. In some cases, odd controllers make proper playing of the systems on a keyboard or joystick a pale imitation of the original experience. Please report any issues to the Internet Arcade Operator, [Jason Scott](#).

If you are encountering issues with control, sound, or other technical problems, read this [entry](#) of some common solutions.

Created on
August 6
2014



Jason Scott
Archivist

VIEWS

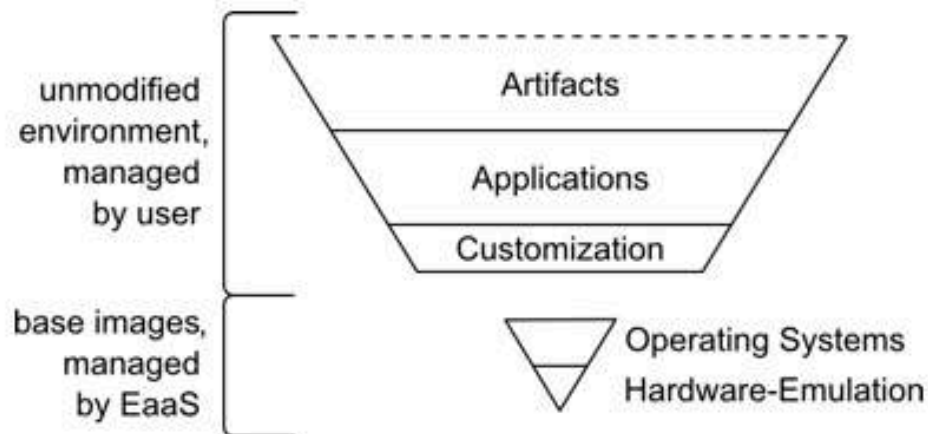
112,559,035



bwFLA — Emulation as a Service

Functional Long-Term Archiving

Digital data is highly volatile, the processes and systems that make use of it even more so. Initially creating data and establishing workflows is very costly, in an ever-changing technological environment the upkeep presents a long-term challenge. To fulfill their designed purpose over a long period of time or for making research results, documents and decisions of today verifiable in the future, efficient and authentic access is required.



What Strategies to preserve *born-digital contents*?

Re-interpretation (variable media)

“Color Sequencer” – 2005

Paul SLOCUM

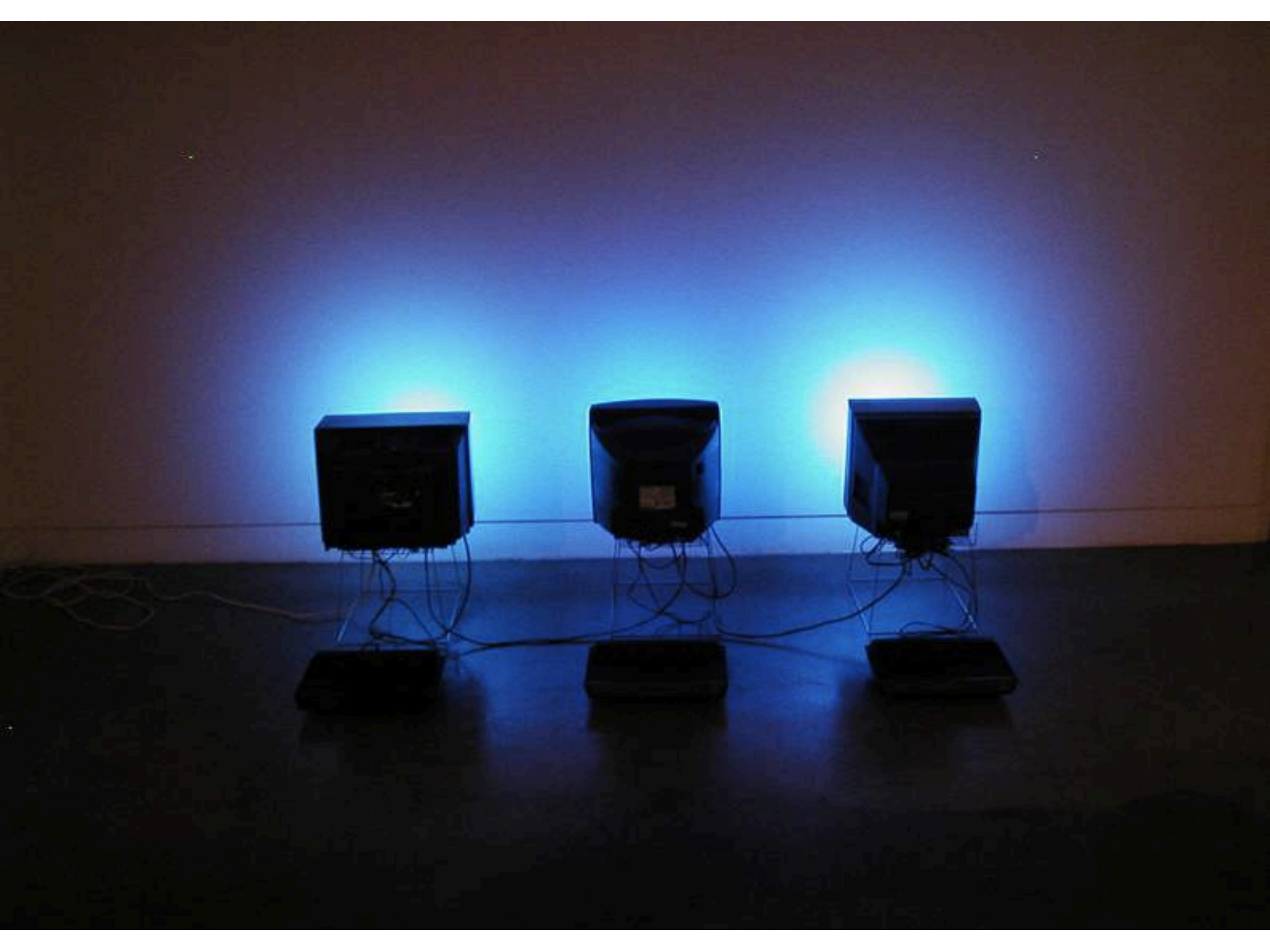
Custom software, 3 Atari 2600, 3 video monitors.

Private collection, Brussels.

L'installation Color Sequencer révèle une simplicité aussi esthétique que conceptuelle. Comme l'explique l'artiste, “le dispositif est composé de 3 téléviseurs faisant face au mur, reliées à 3 consoles Atari 2600. Les consoles sont programmées pour jouer une séquence répétée de couleurs qui dure environ 4 minutes.” Chaque couleur est le résultat du mélange de deux bandes de couleur différentes qui découpent l'écran, créant une sensation de vibration lumineuse, renforcée par celle de la fréquence de rafraichissement du moniteur TV. Le résultat pourrait être décrit comme un Rothko de la génération 8 bit.



“Color Sequencer” – 2005





Some basic advices:

Use open technologies, standards, prefer open source

**Document your work and the process, from initial concept to its exhibition:
archive design and production documents, data and media files, softwares,
...**

Document the experience of the works by users: interviews, videos,...

Archive on various digital storage systems, refresh them often...

Cultural Heritage in the Digital Age

[EN] In 2015, **iMAL, Center for Digital Cultures and Technology** present, in collaboration with **PACKED, Centre of Expertise in Digital Heritage**, a series of exhibitions, workshops and symposiums on cultural heritage in the digital age.

[FR] En 2015, **iMAL, Center for Digital Cultures and Technology** présente, en collaboration avec **PACKED, Centre d'Expertise pour le Patrimoine Numérique**, une série d'expositions, de workshops et de conférences sur le patrimoine culturel à l'ère numérique.

[NL] In 2015 presenteert **iMAL, Center for Digital Cultures and Technology**, in samenwerking met **PACKED, Expertisecentrum Digitaal Erfgoed**, een reeks tentoonstellingen, workshops en symposia ihkv cultureel erfgoed in het digitale tijdperk.

UPCOMING PROGRAMME

- **19 March - 26 April** : Welcome to the future! The floppy cd-rom revolution
- **20 March** : From the CD-ROM Revolution to the Future of Electronic Publishing
- **9-11 April** : Digital Media Archaeology in Practice

Preservation and Access to Born-digital Culture

30 Octobre - 31 Octobre 2015

Présentations



Main

Programme

[À propos](#) | [Galerie Média](#) | [Crédits](#) |

Symposium international

Dans la suite de leur programme 2015 sur le [Patrimoine Culturel à l'ère numérique](#), [IMAL](#) et [Packed](#) organisent un symposium international sur la préservation et l'accès à la culture dite "née-numérique", une première à Bruxelles.

Avec: [Erkki Huhtamo](#) (FI, [UCLA](#)), [Baruch Gottlieb & Philipp Tögel](#) (DE, [Vilem Flusser Archive](#)), [Emmanuel Guez](#) (FR, [pamal.org](#)), [Gaby Wijers](#) (NL, [Lima](#)), [Valérie Perrin](#) (FR, [Espace Gantner](#)), [Jon Ippolito](#) (US, [re-collection](#)), [Ben Fino-Radin](#) (US, [MoMA](#)), [John Langdon & Anna Henry](#) (UK, [Tate Modern](#)), [Céline Thomas & Chu Yin Chen](#) (FR, [BnF - Univ.Paris 8](#)), [Geoffrey Brown](#) (US, [indiana.edu](#)), [Clarisse Bardiot](#) (FR/BE, [rekall.fr](#)), [Olia Lialina](#) (DE), [Dragan Espenschied](#) (US/DE, [Rhizome.org](#)), [Klaus Rechert](#) (DE, [Univ.Freiburg - bwFLA](#)), [Jason Scott](#) (US, [Internet Arcade - archive.org](#)).

INFOS PRATIQUES

Symposium public

Vendredi, 30 octobre, 09h00 - 18h00

Samedi, 31 octobre, 09h00 - 17h00

Inscriptions Closes...

Le symposium sera précédé par le workshop *Artists and Art Organisations Digital Archives* organisé par [Packed](#) le **29 octobre** à [IMAL](#). Details [here](#).

Entrée gratuite!

Langue: principalement en anglais

Location: [IMAL](#)

Quai des Charbonnages 30 Koolmijnenkaai
1080 Brussels

Live broadcast on Youtube

[Check our channel!](#)

LIENS

[#pabc2015](#)

TAGS

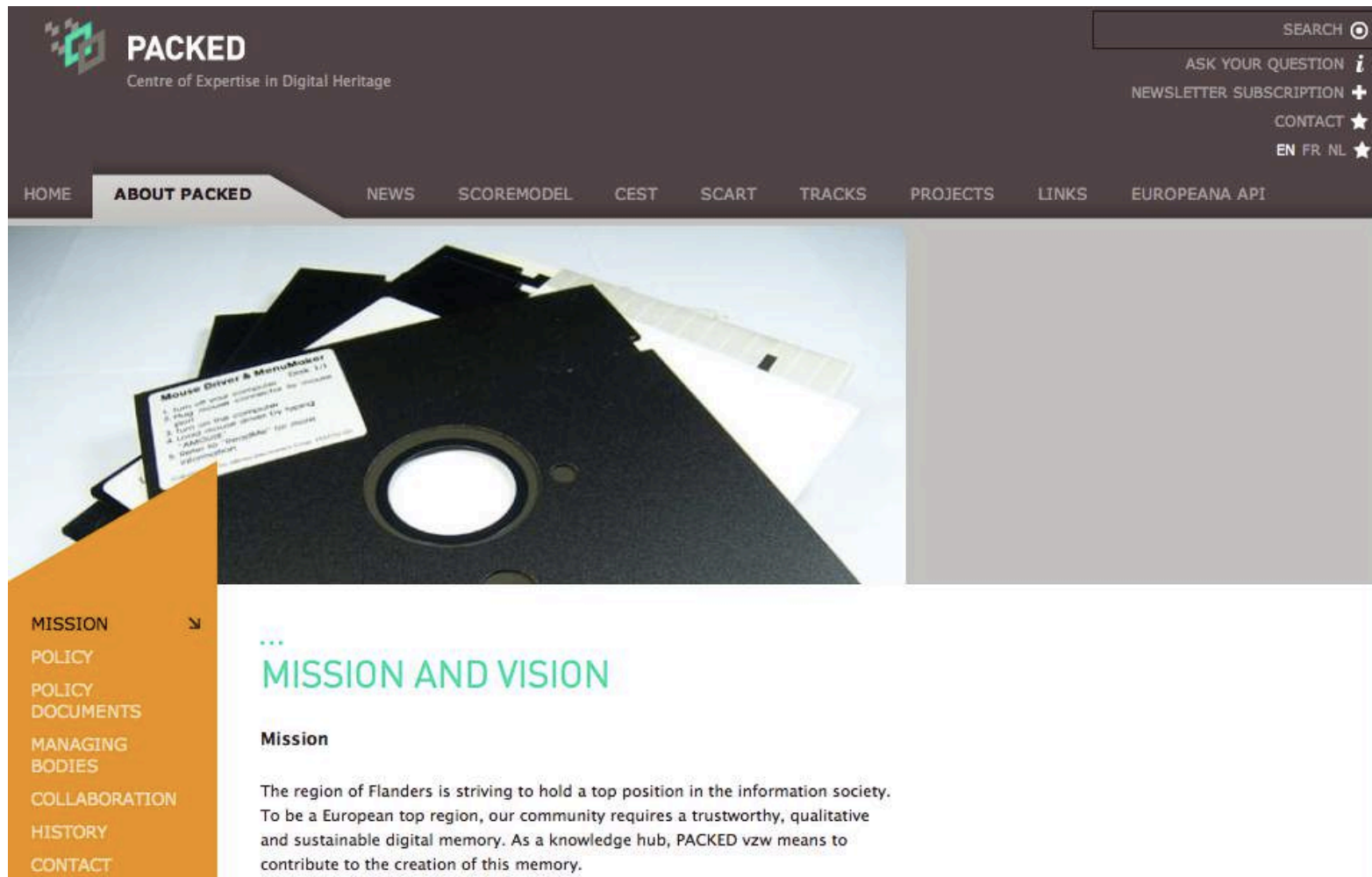
Et en Belgique, qui s'occupe de cela??

D'aider les artistes à documenter et préserver leurs oeuvres, à prévoir les stratégies de conservation et monstration du futur ?

D'aider les collectionneurs et institutions muséales d'art contemporain (technologique) à conserver et rendre accessibles leurs oeuvres ?

Et en Belgique, qui s'occupe de cela??

En Flandres: Packed.be !



The image shows a screenshot of the Packed website. The header features the Packed logo (a stylized 'P' with a green and blue square) and the text 'PACKED Centre of Expertise in Digital Heritage'. On the right side of the header, there are links for 'SEARCH', 'ASK YOUR QUESTION', 'NEWSLETTER SUBSCRIPTION', 'CONTACT', and 'EN FR NL'. Below the header is a navigation menu with the following items: 'HOME', 'ABOUT PACKED', 'NEWS', 'SCOREMODEL', 'CEST', 'SCART', 'TRACKS', 'PROJECTS', 'LINKS', and 'EUROPEANA API'. The main content area features a large image of a floppy disk with a label that reads 'Mouse Driver & MenuMaker' and lists instructions. Below the image, there is a sidebar on the left with a list of menu items: 'MISSION', 'POLICY', 'POLICY DOCUMENTS', 'MANAGING BODIES', 'COLLABORATION', 'HISTORY', and 'CONTACT'. The main content area below the image is titled '... MISSION AND VISION' and contains a section titled 'Mission' with the following text: 'The region of Flanders is striving to hold a top position in the information society. To be a European top region, our community requires a trustworthy, qualitative and sustainable digital memory. As a knowledge hub, PACKED vzw means to contribute to the creation of this memory.'

Et en Belgique, qui s'occupe de cela??

En FWB?

Personne...

(un peu à iMAL mais sans moyens)



Conservation et Accès Public aux contenus numériques

Resurrection Lab est un nouveau projet d'IMAL pour répondre aux problématiques de la conservation et de l'accès public d'oeuvres d'arts numériques. Les objets nés numériques (born-digital objects) sont victimes des changements constants des technologies et de l'obsolescence de plus en plus rapide des logiciels et matériels. Leur durée de vie est imprévisible et très courte dans la plupart des cas.

Le Patrimoine Culturel à l'Ere du Numérique.

Ces dernières années, le débat sur le patrimoine culturel à l'ère du numérique s'est intensifié (ex. [Unesco 2012](#), [re-collection](#), [evanescent culture](#),...) et est devenu en ce début du 21e siècle, une question primordiale pour beaucoup d'institutions culturelles (ex. [zkm](#), [DCA project](#),...). Sans un effort substantiel de recherche dans les méthodologies et technologies de conservation des objets numériques, sans décisions politiques concernant les éditeurs de logiciels, les fabricants d'électronique et d'informatique, les grands acteurs d'internet, sans une réflexion profonde sur les problèmes de propriété intellectuelle, sur les rôles et actions des institutions muséales par rapport aux contenus numériques, le patrimoine culturel et artistique né numérique est condamné à mourir d'obsolescence, perdu pour les générations futures.

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↗ [bwFLA](#)

TAGS

📖 Digital Heritage
🏛️ University of Freiburg

SUGGESTIONS

Activités

Preservation and Access to Born-di...
Digital Media Archaeology in Pract...
From the CD-ROM Revolution to the...
Welcome to the Future!

Actualités

Digital Publishing : Time for Arch...

The Resurrection Lab Project @ iMAL

First case study: born-digital software arts from the 90's for the PC.

iMAL takes care of these born-digital objects...

- we consider them as culturally and historically important

Welcome to the Future!

19 March - 26 April 2015

Exhibitions



PRACTICAL INFO

Opening: Thursday 19 March
18:30-22:00

Dates:
19 March - 26 April 2015
Wed-Sun, 13:00-18:00

Free entrance!

Group visits
02 410 30 93
info@imal.org

Location: [iMAL](#)
30 quai des Charbonnages - Koolmijnenkaai
1080 Brussels

LINKS

<http://www.imal.org>

Resurrection Examples

We are very happy to present some of our first results with the bwFLA platform. The examples below are directly playable in your browser (Chrome only, read the instructions) and demonstrate the feasibility of an online collection of born-digital arts that anyone could experience in a rendering quality very similar to the original works.

Warning: the bwFLA servers at University of Freiburg which host these emulation in the cloud can not support many simultaneous sessions. So if this do not work, be patient, come back and try later.



No Other Symptoms - Time Travelling with Rosalind Brodsky (1999) by Suzanne Treister.

This cd-rom is an interactive investigation into the life of Rosalind Brodsky (an alter ego Suzanne Treister invented in 1995 with whom she shares similar Anglo/Eastern European/Jewish roots), a delusional time traveller who believes herself to be working at the Institute of Miltronics and Advanced Time Interventionality (IMATI) in the 21st century..

[Discover the online resurrection.](#)



The Third Lyon Biennale (1995) by Jean-Louis Boissier.

The cd-rom of the Lyon contemporary art Biennale proposes the works of 63 artists with interactive video interviews, photos, texts and audiovisual documents. The cd-rom is an experimental new media work matching the nature of the exhibited artworks using new technologies.

[Discover the online resurrection.](#)



Kaos 3 - Action Poétique (January 1993) by Jean-Pierre Balpe and contributors.

This electronic literature magazine was published on floppy by the company Kaos as a new year electronic postcard. Realised by Jean-Pierre Balpe, the father of automatic literary text generation, the issue #3 for Apple Mac proposes generators by different authors.

[Discover its online resurrection.](#)



Camps de Réfugiés (1994) by John Vink and Magic Media, published by Apple France.

This cd-rom (in French) was one of the very first hypermedia essay in photojournalism proposing a rich multimedia experience around 300 pictures by photographer John Vink from Magnum.

[Discover its online resurrection.](#)

Exemple: LIMA en Hollande



LIMA preserves, distributes and researches media art

[News](#) [Calendar](#) [Projects](#) [Catalogue](#) [Organisation](#)



dutch

SEARCH CATALOGUE ENTER TITLE...



PRESERVING DIGITAL ART



Does your institution house a collection of digital media works of art? LIMA can sustain and preserve these works. Our conservation specialists store your born-digital material and insure that it can be exhibited now and in the future.

Bonnefantenmuseum

Centraal Museum Utrecht

De Appel

Frans Hals Museum/De Hallen

Gemeentemuseum Helmond

Gerrit Rietveld Academie

Groninger Museum

Jan van Eyck Academie

Kröller Müller Museum

LIMA

LIMA documentation

Lijnbaancentrum

MonteVideo

Montevideo/TBA/NIMk archive

NIMk distribution

RCE

Rijksakademie

Stichting Behoud Moderne Kunst

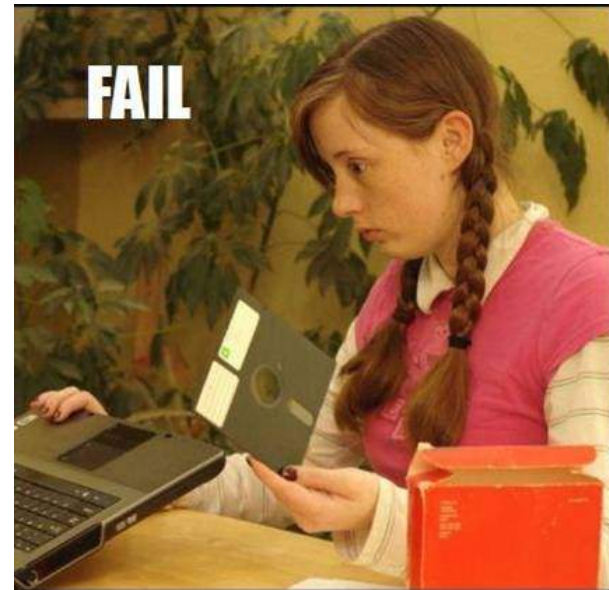
Time Based Arts

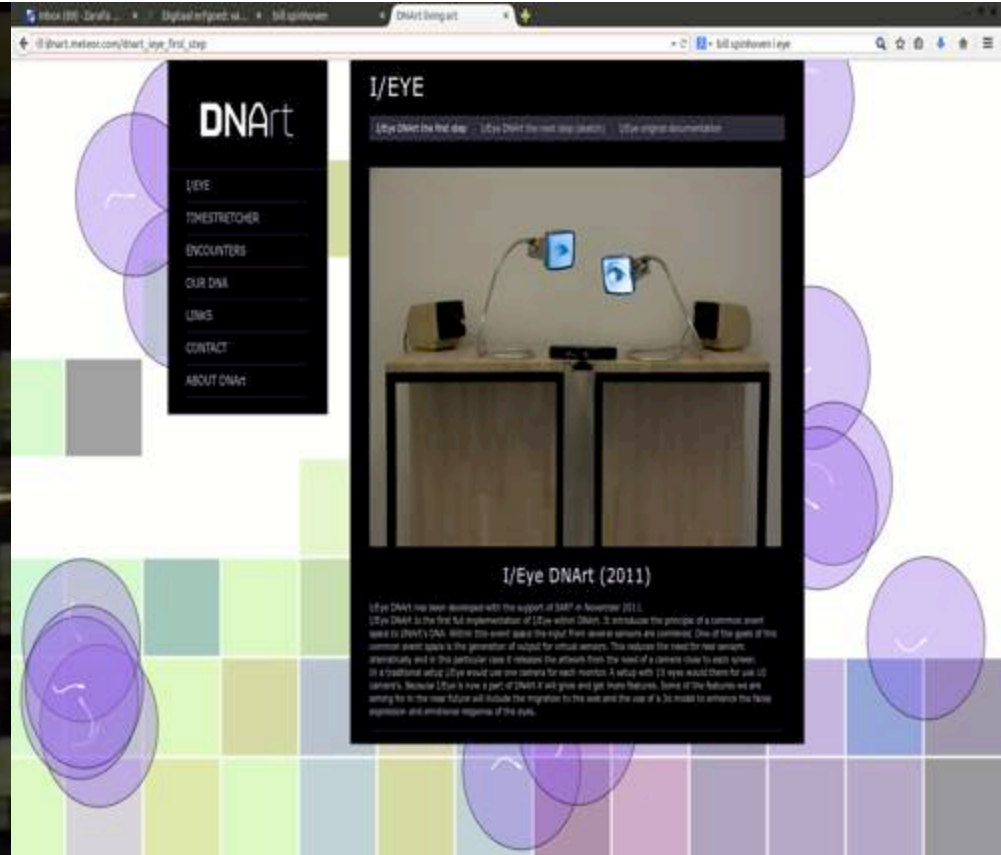
Van Abbe Museum

Client collections in preservation

Digital art is often

- Undercollected
- Undercounted
- Undermanaged
- Unpreserved
- Inaccessible



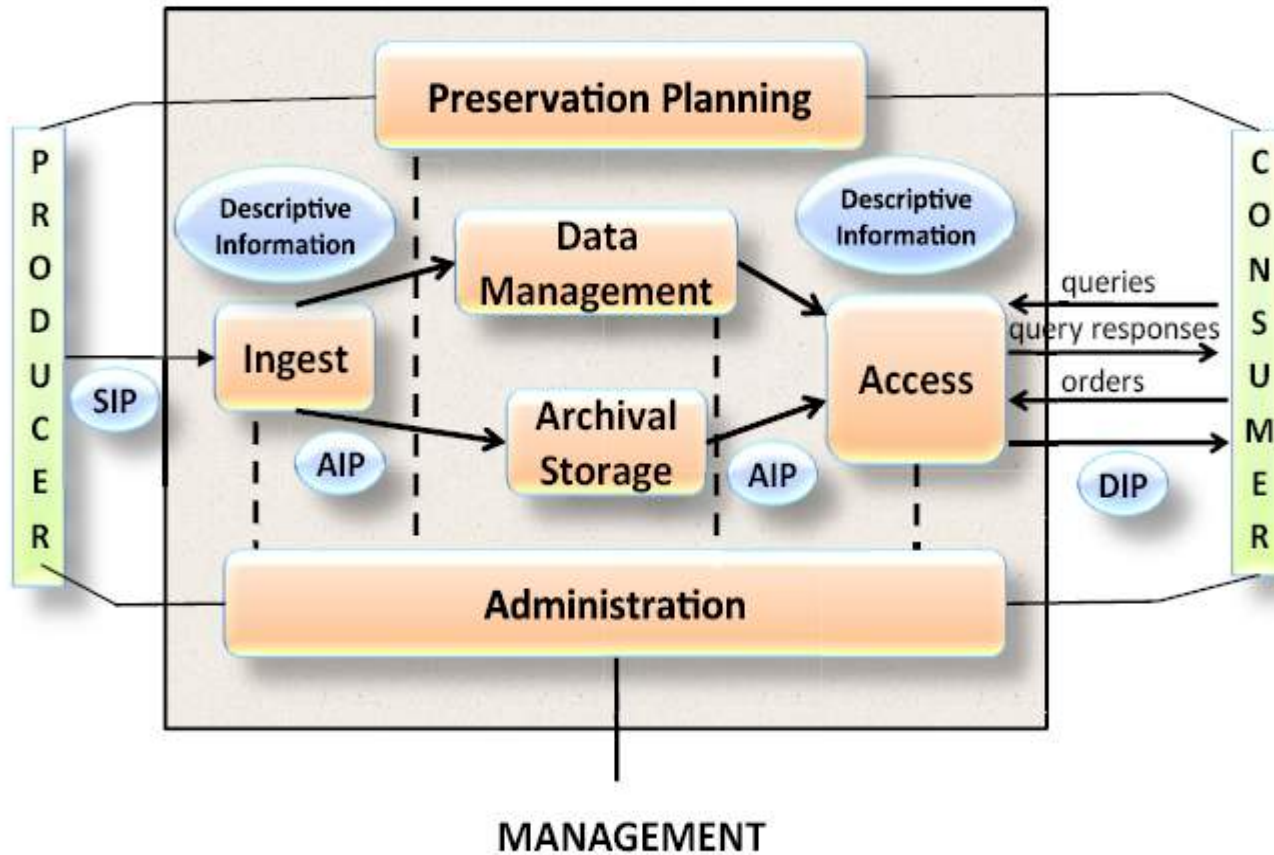


Digital artworks are not one object, they are many elements, dynamic and changing (over time)

Change is rapid and constant

- Be prepared to meet each work on its own needs
- Formal standards *per se* are not the answer
- Promote interdisciplinary collaboration
- Work with the artist
- Cross train collaborating experts
- Develop institutional knowledge and embrace new practices of documentation
- Embrace uncertainty and take action - cooperate!

OAIS media art e-depot





.iso of the CD-Rom is made and a backup of the SD-card. The files are identified and described.

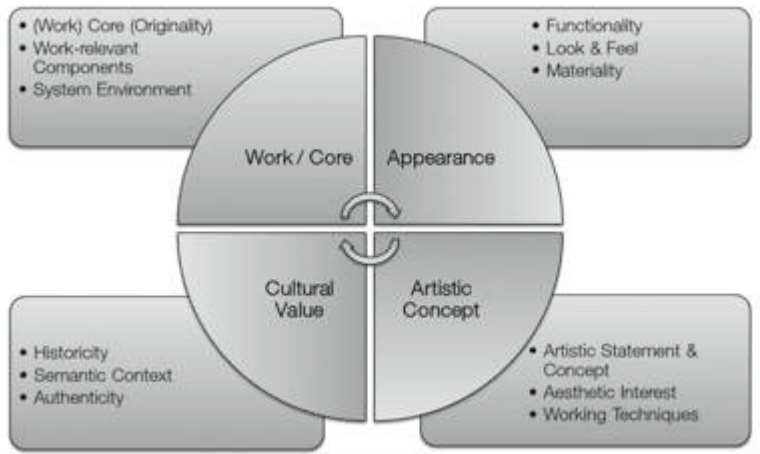


ISO 9660 is an exact copy or image. Contains all files and bootcodes, structures and attributes.



normalisation

The significant properties of the work are researched and add to the preservation report



preservation report



List of files:

- > Folder "JAVA"
 - jre-6u2-linux-i586.bin..... *This is a JAVA installation for Linux*
 - jre-6u2-windows-i586-p-s.exe..... *This is a JAVA installation for Windows*

- > Folder "SHFT-34"
 - > Folder "application.linux"
 - Folder "lib"
 - core.jar
 - SHFT_34_1982_2007.jar
 - SHFT_34_1982_2007..... *This is the executable for Linux*

 - > Folder "application.macosx"
 - SHFT_34_1982_2007..... *This is the executable for MacOS*

 - > Folder "application.windows"
 - Folder "lib"
 - core.jar
 - SHFT_34_1982_2007.jar
 - SHFT_34_1982_2007.exe..... *This is the executable for Windows*

- > PDF "SHFT_34_1982_2007"..... *This is the instruction / copyright text*

[IMG.5]

- > PNG "Untitled-1.png"..... *This is a screenshot / example image*

[IMG.6]

SHIFT 34 was made for several platforms Mac OS, Windows en Linux. The ISO contains all versions and JAVA instalment folder

The work is tested on several systems



L
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A



access

Linux is selected because this version is more simple to configure for auto login and auto start and is Open-source.
Windows and Mac will have license issues

For presentation the upcoming 3 to 5 years MSI Cubi mini-pc is selected :

- small
- i3 processor, fast and strong enough
- ssd, solid state drive: start quick, no sound
- vesa mount to mount on the back of the monitor
- hdmi and via mini-displayport vga and dvi videoport



The ISO with all versions is stored , but the linux version will be the one that will be used for presentations.

Conclusions

Tout (ou une très grande partie) de l'Art Contemporain sera technologique

Sans politique de conservation et accès pour le futur, les oeuvres n'entreront pas dans les collections (privées ou publiques), dans les expositions (à venir et futur),...

Pas de marché, pas de visibilité, pas de patrimoine futur...

Pas de présent et pas de futur pour les artistes et leurs oeuvres

En FWB, on est nulle part, URGENCE !!!

Thanks!

Yves Bernard

yb@imal.org

Brussels

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iMAL is supported by

