



MemoRekall

www.memorekall.com - contact@memorekall.com

**RE:SOURCE (10th International Conference on the
Histories of Media Art, Science and Technology)**
15th September 2023, 10:10

**Documenting electroacoustic music for preservation:
the design of a network-driven application
based on MemoRekall and IIF**

Jacob Hart, Clarisse Bardiot, Alexandre Michaan, David Rouquet, Anthony Geourjon

#1 Introduction

FICHE TECHNIQUE

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PARTITION

Storyboard dessiné par Claire Bardainne servant également de conduite pour les répétitions. Décembre 2013, mis à jour en 2014.

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DOSSIER DE PRÉSENTATION

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 Carnet, novembre 2012

DISPOSITIF

Représentation de Hakanai à l'espace Lino Ventura, Garges-lès-Gonesse, février 2016

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DISPOSITIF- MAQUETTE 3D

Maquette en 3D de la scénographie.

2012

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Couverture du carnet de recherche.

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Team & Partners



**Clarisse
Bardiot**

[\[website\]](#)
[\[email\]](#)



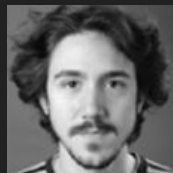
**Tétrás
Libre**

[\[website\]](#)
[\[email\]](#)



**Jacob
Hart**

[\[website\]](#)
[\[email\]](#)



**Alexandre
Michaan**

[\[website\]](#)
[\[email\]](#)



UNIVERSITÉ
RENNES 2



Maison des
Sciences
de l'Homme
en Bretagne



Huma-Num

la TGIIR des humanités numériques



FEDEC

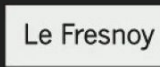
coeso

connecting research and society

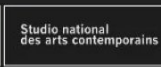


CCI
GRAND
HAINAUT

NORD DE FRANCE



Le Fresnoy



Studio national
des arts contemporains



Centre national
des arts et de
l'image animée



Lille
Métropole



INSTITUT
INTERNATIONAL
DE LA MARIONNETTE



MA
LILLE MÉTROPOLIS



le phénix

scène nationale Valenciennes

Subjectile



ÉTABLISSEMENT SOUTENU PAR LA RÉGION
Nord-Pas de Calais
La culture au cœur



centre national
du cinéma et de
l'image animée



Pictanovo
LILLE REGION WASS COMMUNITY



CNAC

CENTRE
NATIONAL
DES ARTS
DU CIRQUE

Rhône-Alpes



Rhône-Alpes

MemoRekall

- A **free** and **open source** web app.
- Allows for the **annotation of videos** with **multimodal documents** (videos, images, audio documents, annotation etc.).
- Create **capsules**: a new document which can be **shared** and **embedded**.



https://youtu.be/r_AHZSrCOxE



www.memorekall.com

Uses & Users

Preservation

Researchers

Documentation

Artists

Publication

Cultural Institutions

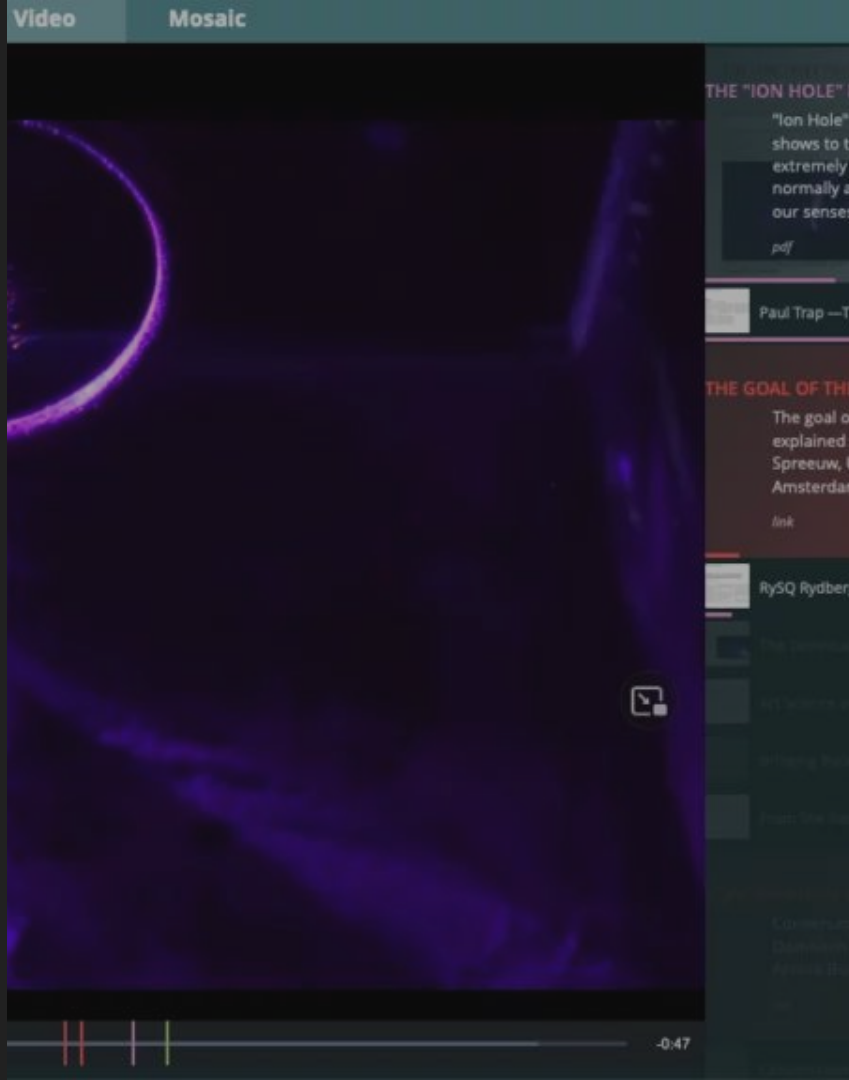
Pedagogy

Teachers & Students

Communication

Cultural Mediators

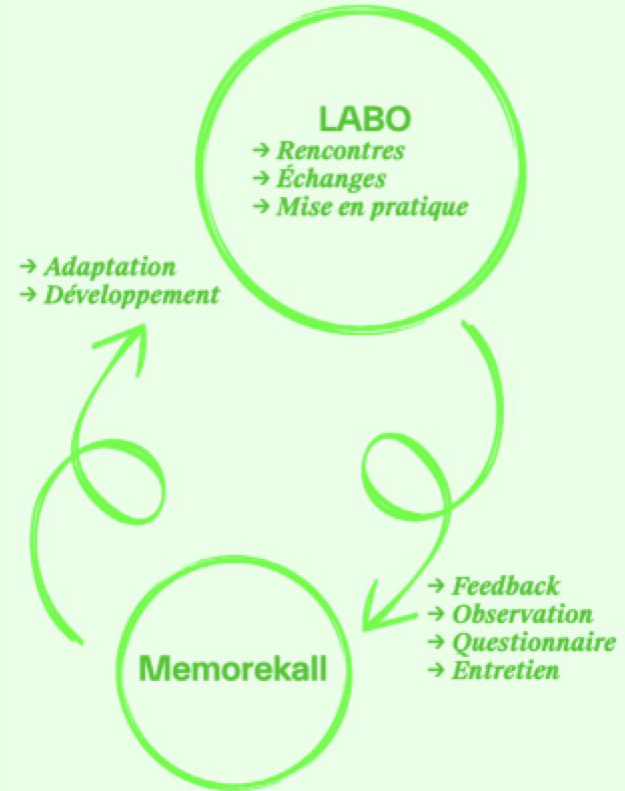
...



Practice-led Development

- Development across various contexts: **research projects** (COSMIC, COESO, FEAT) ; **workshops** with researchers, teacher, schoolchildren, cultural professionals.
- **Co-design** development cycle:
 - **Exploration** phase.
 - **Development** phase.

CO-DESIGN MEMOREKALL



MemoRekall 2023-24

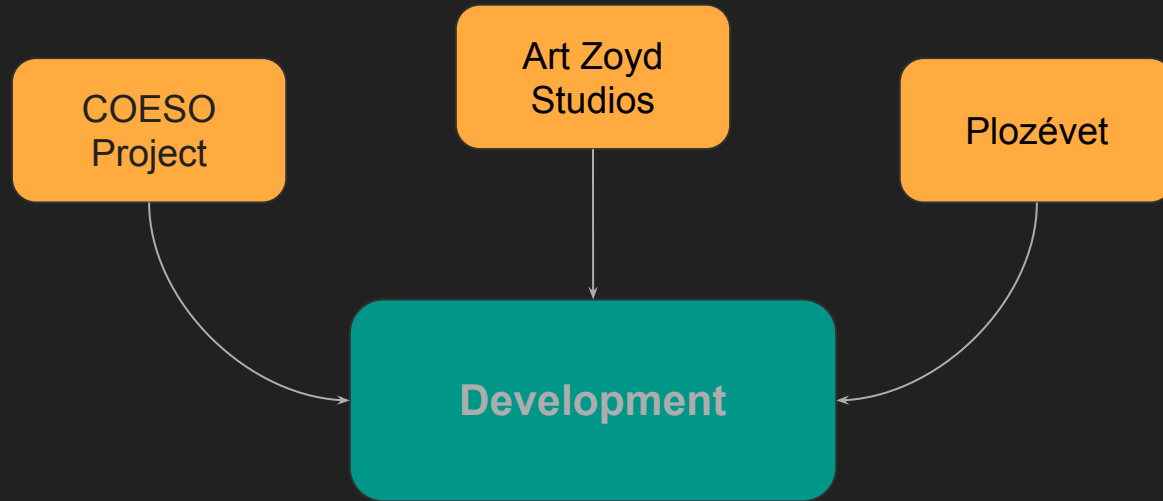
New development phase.

Primary objectives:

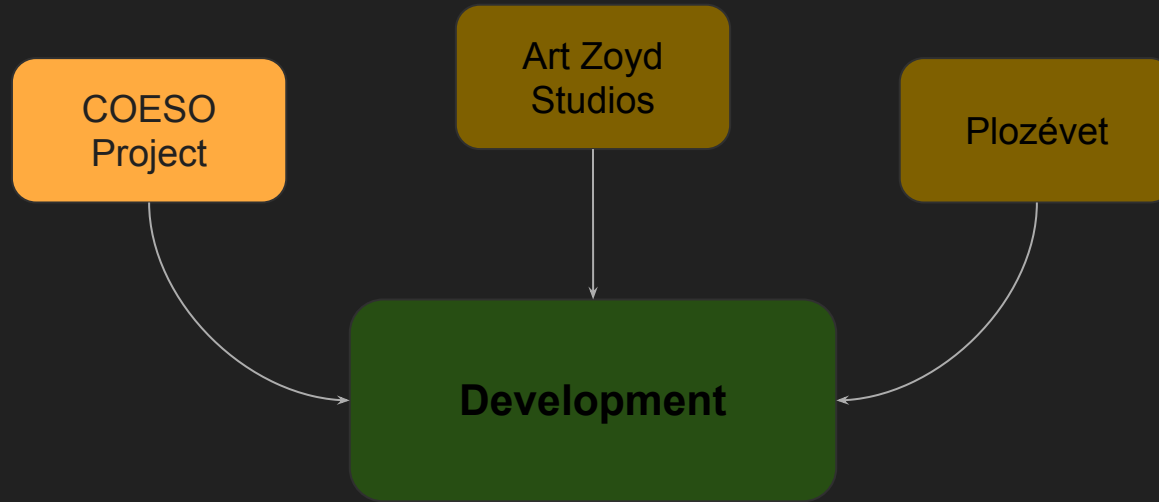
- Compatibility with **IIIF**.
- Integration of **AI** and **ML**-driven analysis tools.



Case Studies

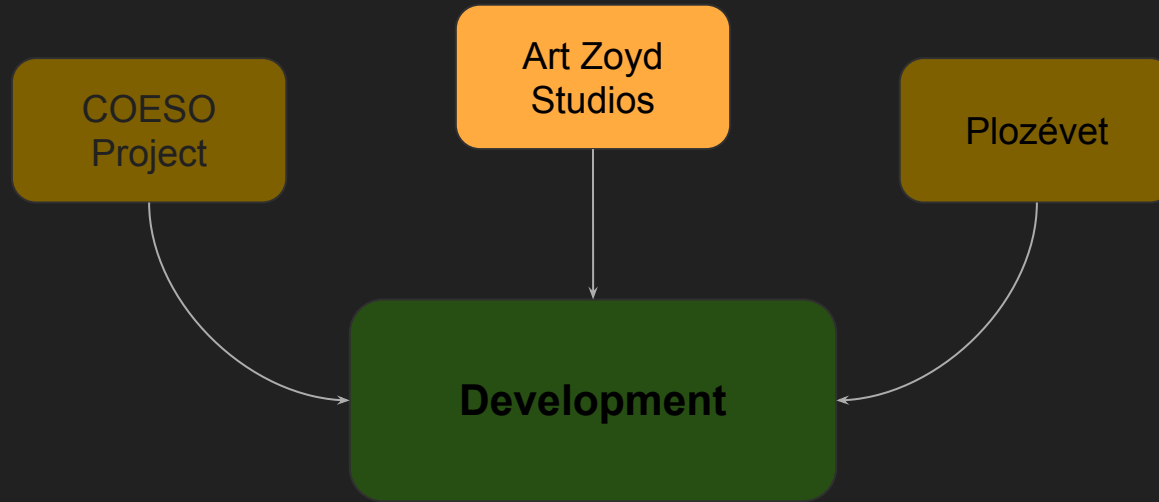


Case Studies



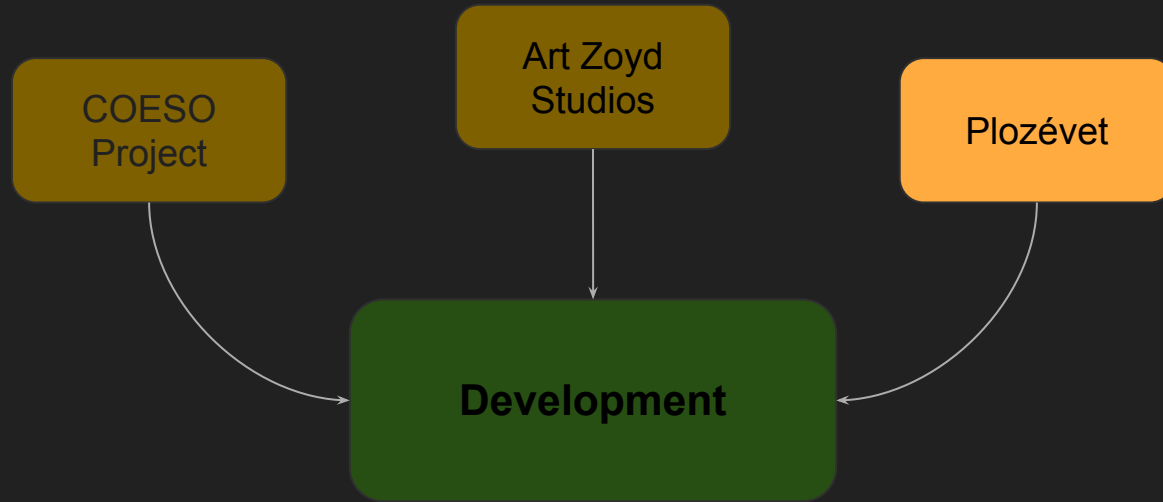
- Initial **prototype**.
- Proof of concept for **IIIF integration**.
- Available online: <https://gitlab.tetras-libre.fr/iiif/coeso-deliverable/-/wikis/home>

Case Studies



- **Time-based artwork** preservation and analysis.
- How to **model** a **creative process**.
- Preservation as a tool against **technical obsolescence**.

Case Studies



- Multi-institutional project, **interoperability**.
- **Large, multimodal** corpus.
- **Distant** reading, viewing, listening **{perceiving}** of multimodal documents.

#2 Art Zoyd

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
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Art Zoyd Studios

- **Art Zoyd** founded in 1969 by Rocco Fernandez.
- 1971: Gérard Hourbette and Thierry Zaboïtzeff join the group.
- **Art Zoyd Studios** founded in 1999 by Gérard Hourbette and Monique Hourbette Vialadieu.
- 2018: death of Gérard Hourbette. Efforts for **preservation** begin.



www.artzoydstudios.com



Preservation

Issues to overcome:

- **Technical obsolescence** (Akai S6000 samplers).
- **Preservation of time-based artwork.**



Emulator

Paris, Southammavong, Venner.

The interface is divided into several sections:

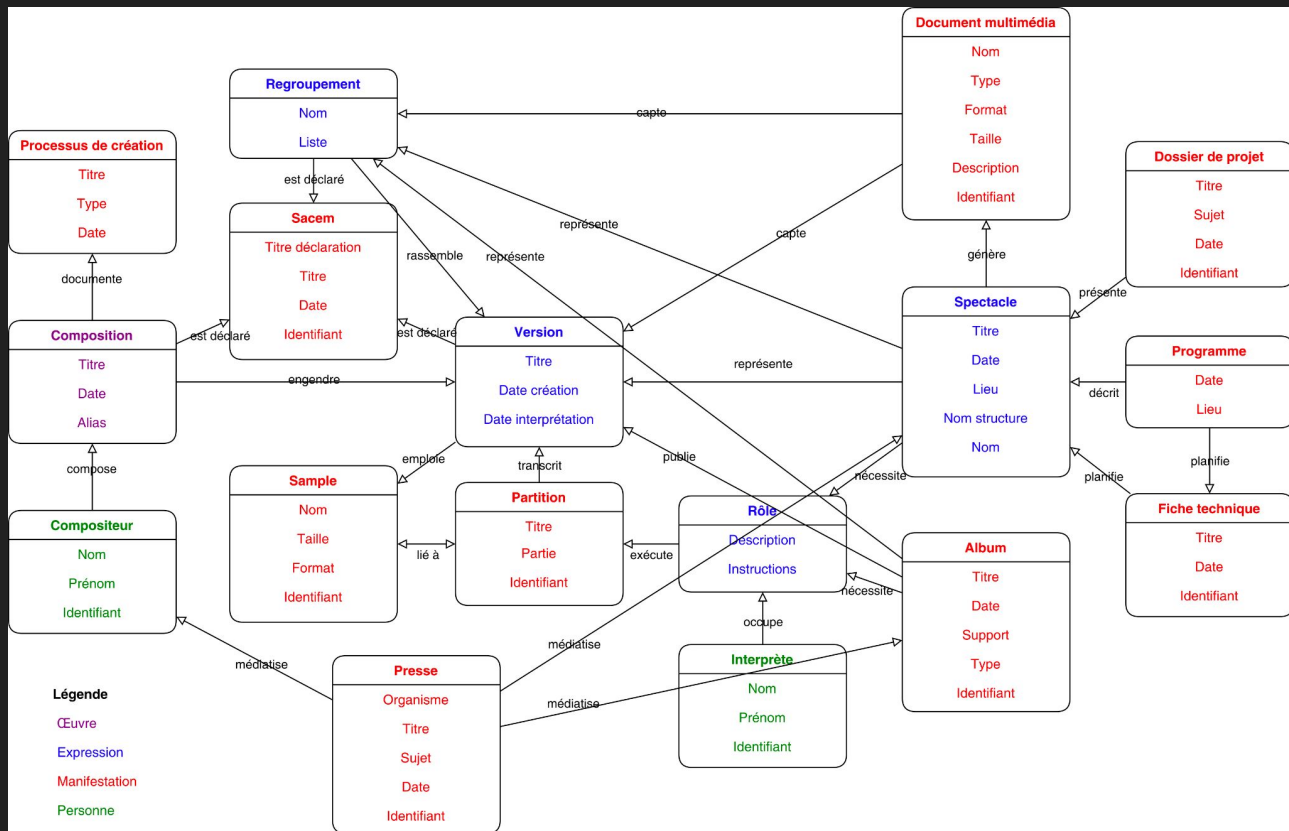
- Top Left:** A digital piano keyboard with a channel selector set to 1 and a MAX CHANNEL value of 2000.
- MIDI Section:** Includes a MIDI Device dropdown (ReMOTE SL Por...), voice count buttons (8, 16, 32), a 'steal 1' button, an 'allnotesoff' button, and a 'live.gain~' slider set to 0.0 dB.
- System Section:** Shows 0.0 % CPU usage, a speaker icon, and system status bars for 69 0, poly~ SUB-poly 8, and SUB_FX_PROCESS.
- Right Panel:** Contains tabs for GENERAL, KEYGROUP, AMP+FILTER, APM, and MODULATIONS. The GENERAL tab is active, showing a SAMPLE Folder, Memory size (0), and buttons for Copy KG, edit, export, Init KG, clear, and import. It also displays 'Ext. MIDI CC n°' and 'KeyGr n° 0'.
- Table:** A table with columns for KG, NAME, MIDI, MIN, MAX, Level, Pan, OUT, EN, and Solo. It lists 11 rows of parameters, all with 'No_Name' as the name and consistent values for other fields.

KG	NAME	MIDI	MIN	MAX	Level	Pan	OUT	EN	Solo
0	No_Name	1	C-2	G8	85	0	1-2	X	X
1	No_Name	1	C-2	G8	85	0	1-2	X	X
2	No_Name	1	C-2	G8	85	0	1-2	X	X
3	No_Name	1	C-2	G8	85	0	1-2	X	X
4	No_Name	1	C-2	G8	85	0	1-2	X	X
5	No_Name	1	C-2	G8	85	0	1-2	X	X
6	No_Name	1	C-2	G8	85	0	1-2	X	X
7	No_Name	1	C-2	G8	85	0	1-2	X	X
8	No_Name	1	C-2	G8	85	0	1-2	X	X
9	No_Name	1	C-2	G8	85	0	1-2	X	X
10	No_Name	1	C-2	G8	85	0	1-2	X	X

Eulalie

Jacquemin, Bardiot, Michaan, Westeel,
Southammavong, Koskowitz (2023)

<https://journals.openedition.org/revuehn/3535>



#3 Case Study

FICHE TECHNIQUE

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Musical Organics

Magnusson (2017)

Iconismus
IX fol. 500
Tuba ordinaria



Fig.

Fig. II

Fistula Hexastoma



Tuba
Ductilis

Fig. I

Fistula Tristoma



Anthropoglosa maxima

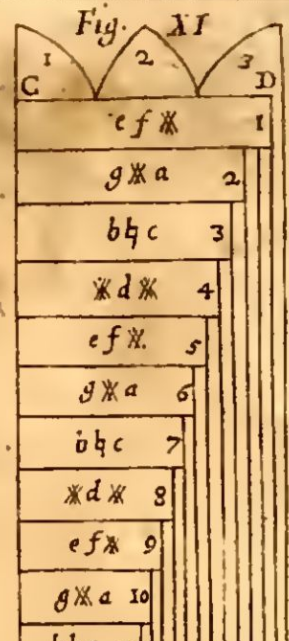
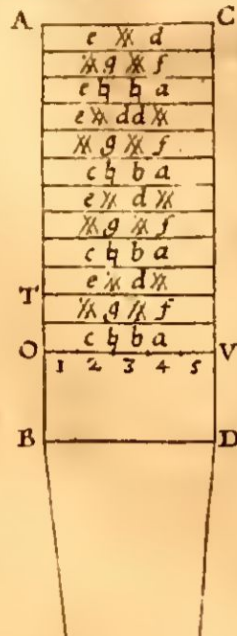


Fig. XIII

Musical Organics

Data repositories

Searches, queries, probes

Display engines

Traditional classifications

Search API

Plugins

User contributions (folksonomies)

Plugins

Engagement creates knowledge

Machine analysis

Interoperable data serving



Data

The screenshot displays the HEURIST interface for the 'ArtZoyd_Archives'. The top navigation bar includes the HEURIST logo, version 'v6.1', the current archive name, and a note to 'Use the latest (alpha) version (recommended)'. The left sidebar contains navigation options: Admin, Explore (selected), Design, Populate, Explore, and Publish. The 'Explore' sidebar lists 'Filters' (Recent | All by date, Entities, Saved Filters), 'Build' (Filter builder, Facets builder, Save filter), 'Advanced' (Rules, Set as subset), and 'Favourites' (drag from saved filters).

The main content area is titled 'Filtered Result' and shows a search bar with 'sortBy: -m' and a 'FILTER' button. Below the search bar are options for 'Filter builder', 'Facet builder', and 'Filter help'. A toolbar includes 'Selected', 'Collect', 'Recode', 'Share', and 'Reorder' buttons. A pagination bar shows 'n = 2949' and a list of page numbers (1, 2, 3, 4, 5, 6, 7, 8, .., 30). The list of results includes several albums, with the selected item highlighted in blue:

- Album Double CD CD 2021 Art Zoyd Live - Et Avec Votre Esprit - La Forêt De Samplers
- Album CD 1990 Nosferatu
- Album CD 2002 Faust
- Album CD 2008 Musique pour l'Odyssee
- Album Vinyle 1980 Musique pour l'Odyssee
- Album CD 1990 Art Zoyd - J. A. Deane - J. Greinke**
- Album Double CD CD 1993 Marathonnerre I + II
- Album CD 1997 Håxan
- Album Double CD CD 2011 Eyecatcher
- Album Vinyle 2011 Symphonie pour le Jour où Brûleront les Cités
- Album CD 2010 Expériences De Vol # 7
- Album CD 2000 Radio

The right sidebar shows the 'Record' view for the selected album, 'Album CD 1990 Art Zoyd - J. A. Deane - J. Greinke'. It includes a 'Record' tab, 'List View', 'Map', 'Report', 'Export', 'Network', and 'Crosstabs' options. The record details are as follows:

- Code d'identification: Ear- Rational Records ECD 1021
- Titre: Art Zoyd - J. A. Deane - J. Greinke
- Support: CD
- Date: 1990
- Emplacement de stockage: Pas en stock
- Target record pointer: Zabolzef, Thierry; Hourbette, Gérard
- Version (composition) 1990 Caryocinèse (version 1990)
- Version (composition) 1990 Mariée A La Nuit (Japanese Version) (version 1990)

Below the record details is a 'LESS...' section with options to 'Cite as' (XML, HTML) and 'Right click to copy URL'. It also shows 'Added' (2022-05-12 14:25:06 (16:25:06 local)), 'Updated' (2023-05-10 23:12:19 (01:12:19 local)), 'Ownership' (Everyone - readable by anyone (public)), and 'Rating' (none).

The image shows a software interface for network visualization. On the left, a sidebar contains various filter and control options. The main area displays a dense network of grey lines connecting numerous nodes. Two nodes are highlighted with large blue circles. On the right, a detailed view of a selected node is shown, including a profile picture and several text-based sections.

stageapi

Simulation of the STAGE API.

Easily create content for [this fork](#) of [Mirador](#). Mirador is a widely-used IIIF viewer. The fork allows you to view video and audio resources in Mirador. This is great, but IIIF manifests and the [Presentation API 3](#) can be a headache to handle. This makes everything easier. The actual manifests are handled by [Mike Bennet's iiif-prezi3](#). This wraps a system around them that interfaces with it nicely, and allows for things like different versions of manifests etc.

Basic usage

```
import stageapi as stage

# Create an instance of the STAGE API:
instance = stage.StageAPI()

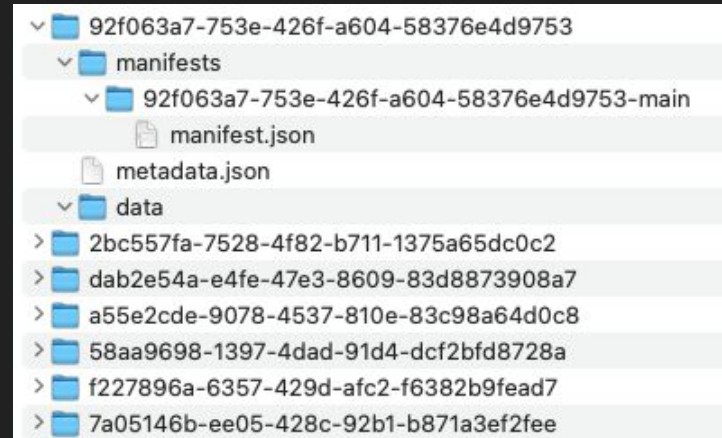
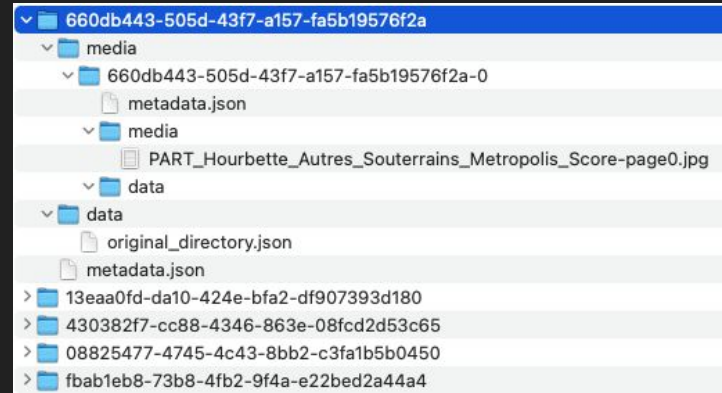
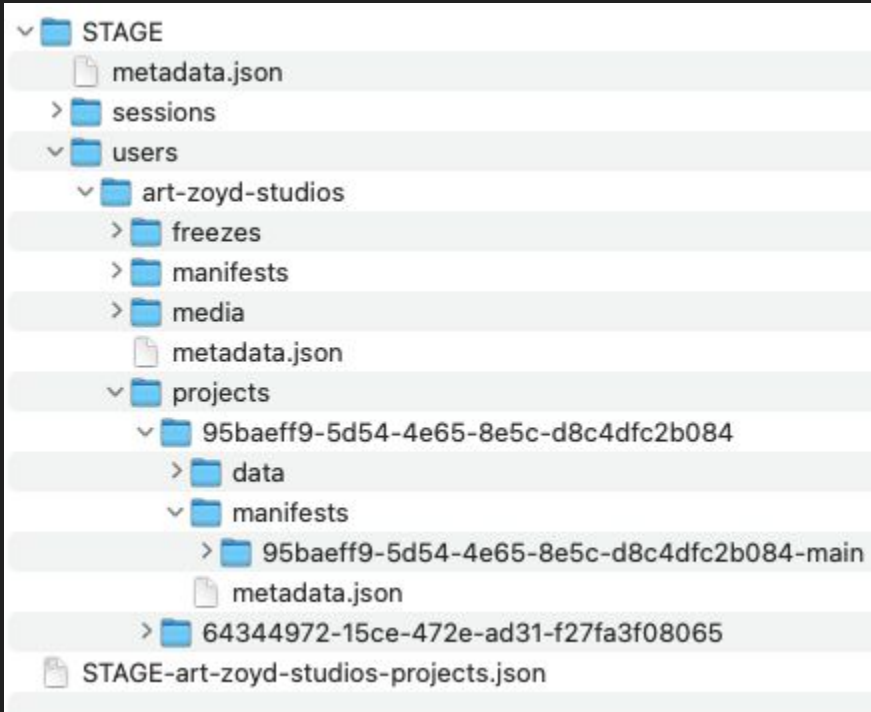
# Create a user:
user = instance.create_user(user_id = "jdchart")

# Start having fun! Create a IIIF manifest from a local or online file (image, audio, video, pdf):
imageManifest = user.create_manifest_from_media(
    user.create_media(file = "my_media_file.jpg")
)

# Create a project:
project = user.create_project()
project.add_manifest(imageManifest)

# View them on your server at this adresse:
print(imageManifest.get_project_id())
print(project.get_project_id())
```

Data repository





About this item

COLLECTION

Art Zoyd Heurist Parse Database

SHOW COLLECTION

RESOURCE

Gaude Score-3138

Record Title
Gaude Score

Record Type
Partition

Record ID
3138

Record Type ID
108

Added
2022-12-22 01:05:41

Modified
2023-05-10 16:12:46

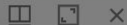
Title
Gaude

Unknown field (1066)
Score ;

RELATED

Links

IIIF manifest
<http://localhost:9000/data/stage-api-instances/STAGE/users/art->



Annotations

COLLECTION

Art Zoyd Heurist Parse Database

Accelerando Faust Big Bad Score-3084

Lisière Score-2868

Brigades Spéciales Score-151

Metal Moe Theremine-2724

Eleven Score-2944

La tentation de Saint-Antoine Score-2844

Expérience De Vol 3 Score-2809

Robots-Dragons Score-2905

Sepulchra Score-2907

Chambre Noire Score-2792

Metal Moe Score-3193

Du Sang Sur La Neige Score-223

Zwischenspiel Score-2941

Oh Les Filles ! Score-2888

En Dessous Du Ciel Per-2750

Eaux Tourbillonnantes Score-2802

Expérience De Vol 1 Score-2807

Gaude Score-3138

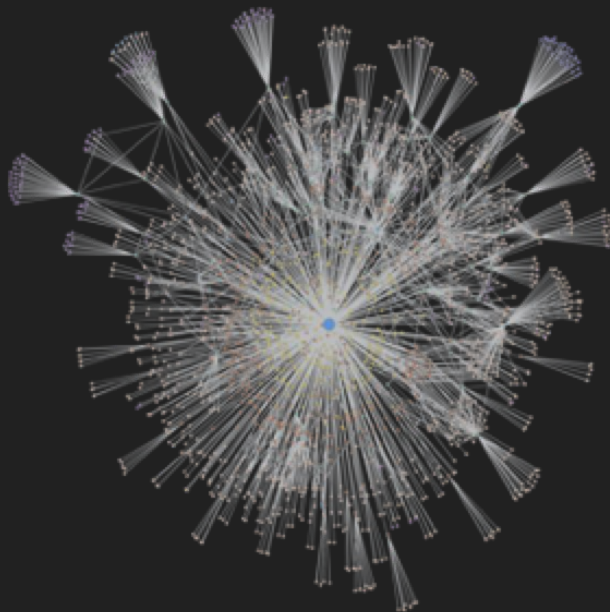
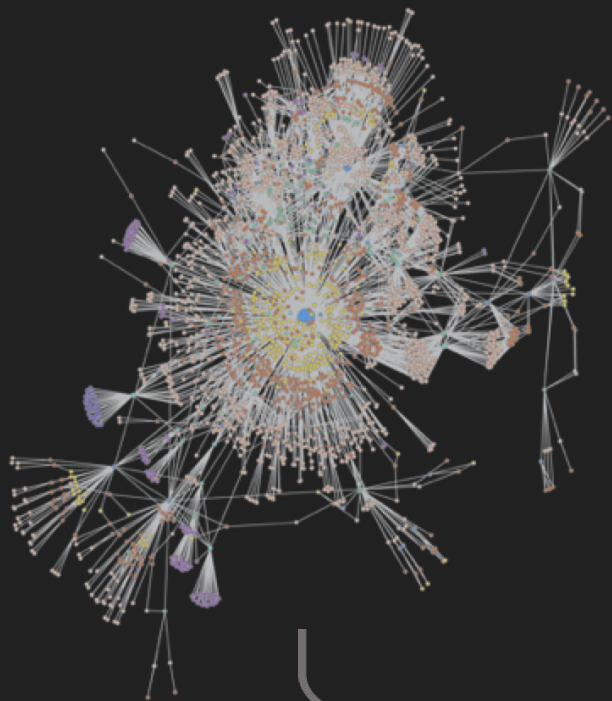
Preco Preheminenciae Score partiel-3173

Trois Rêves Non Valides Part 3 Score-3148

Les trois mousquetaires score-3162

CLOSE

Heurist to network



Hourbette, Gérard-92

About this item

COLLECTION

AZ Base Heurist Database (branch: "main").

[SHOW COLLECTION](#)

RESOURCE

Hourbette, Gérard-92

Record Title
Hourbette, Gérard

Record Type
Compositeur

Record ID
92

Record Type ID
95

Added
2021-10-17 17:36:30

Modified
2023-05-10 23:12:32

Surname name
Hourbette

First name
Gérard

Score classification + OMR

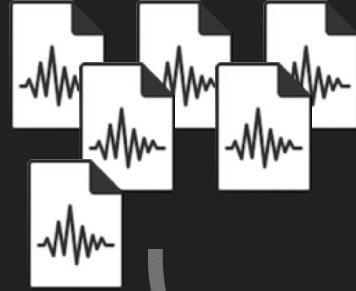


The screenshot displays the 'OMR Test' application interface. On the left, a sidebar contains a list of annotations under the heading 'Annotations'. The list includes various musical notations such as 'v:meter<4/4>', 'd1/4', 'e1/32', 'e2/2', 'e1/8', 'e1/16', 'e1/32', '{e1/4,g1/4}', 'e1/4', and 'e1/8'. The 'e1/8' annotation is currently selected and highlighted. Below the list, it indicates 'Showing 42 annotations'. The main area of the application shows a musical score in 4/4 time, consisting of three staves. The top staff is a treble clef, the middle is a grand staff (treble and bass clefs), and the bottom is a bass clef. A yellow highlight is visible on a note in the top staff. At the bottom of the application window, there are navigation arrows and the text '1 of 1 • OMR Test'.

<https://github.com/apacha/MusicScoreClassifier>

<https://github.com/AbdallahHemdan/Orchestra>

Regression



1 | 1 | MAX CHANNEL | 2000

REMOTE SL Pos... MIDI Device

voices 8

voices 16

voices 32

stereo 1

in/out stereo off

0.0 dB

0. % CPU

69.0

poly- SUB- poly 0

SUB- FX- PROCESS

	GENERAL	KEYGROUP	AMP+FILTER	APM	MODULATIONS
	ZONE1	ZONE2	ZONE3	ZONE4	FX
GENERAL					
SAMPLE Folder					
Memory size 0					
0 Ext: MIDI CC n°					
Copy KG add export					
test KG clear import KeyGr n° 0					
	MIXER	TUNE/FX/Send	Keyboard		
KG	NAME	MIDI MIN MAX Level Pan	OUT	EN	Solo
0	No_Name	1 C-2 G8 85 0	1-2	X	X
1	No_Name	1 C-2 G8 85 0	1-2	X	X
2	No_Name	1 C-2 G8 85 0	1-2	X	X
3	No_Name	1 C-2 G8 85 0	1-2	X	X
4	No_Name	1 C-2 G8 85 0	1-2	X	X
5	No_Name	1 C-2 G8 85 0	1-2	X	X
6	No_Name	1 C-2 G8 85 0	1-2	X	X
7	No_Name	1 C-2 G8 85 0	1-2	X	X
8	No_Name	1 C-2 G8 85 0	1-2	X	X
9	No_Name	1 C-2 G8 85 0	1-2	X	X
10	No_Name	1 C-2 G8 85 0	1-2	X	X

#4 Conclusion

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
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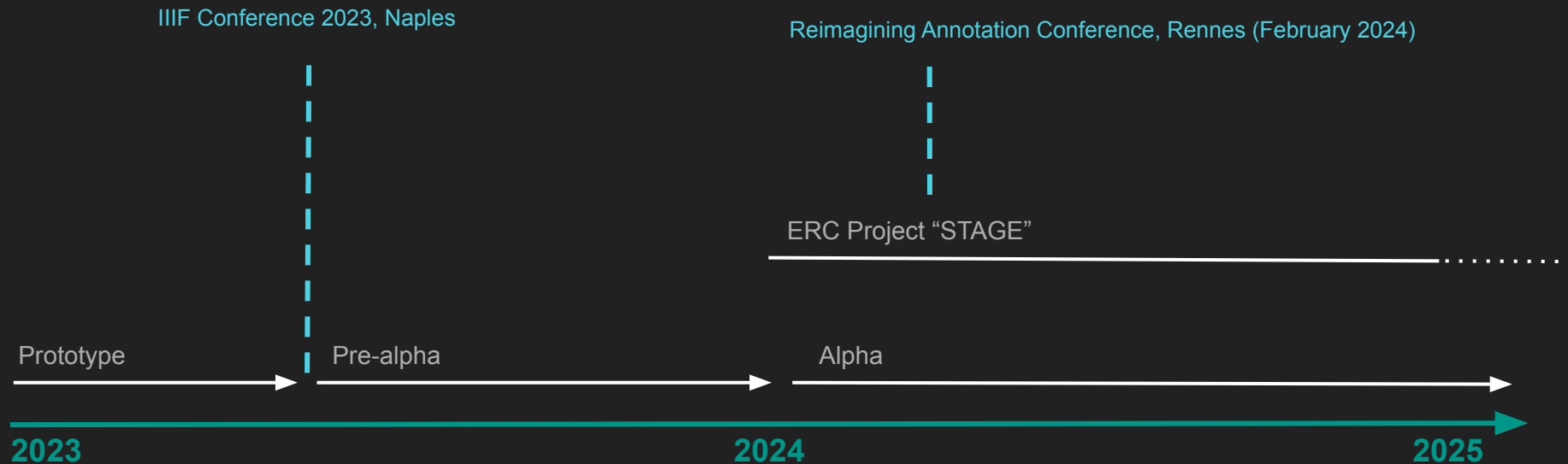
Couverture du carnet de recherche.

© Claire Bardainne

Claire Bardainne

[jpeg](#)

Development timeline





Reimagining Annotation for Multimodal Cultural Heritage Conference

<https://reimagining-amch.sciencesconf.org/>

7th– 9th February 2024. Rennes (France)

Useful Links

www.memorekall.com

www.memorekall.com/en/memorekall-iiif-prototype

www.coeso.tetras-libre.fr

www.iiif.tetras-libre.fr

www.tetras-libre.fr

gitlab.tetras-libre.fr/iiif

