



Arvest: a multi-user IIIF-driven environment for multimodal document analysis.

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IIIF Annual Conference, June 4-7 2024, Los Angeles, USA.



European Research Council
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arts: pratiques & poétiques



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Ressources d'innovation





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#1

What is Arvest?

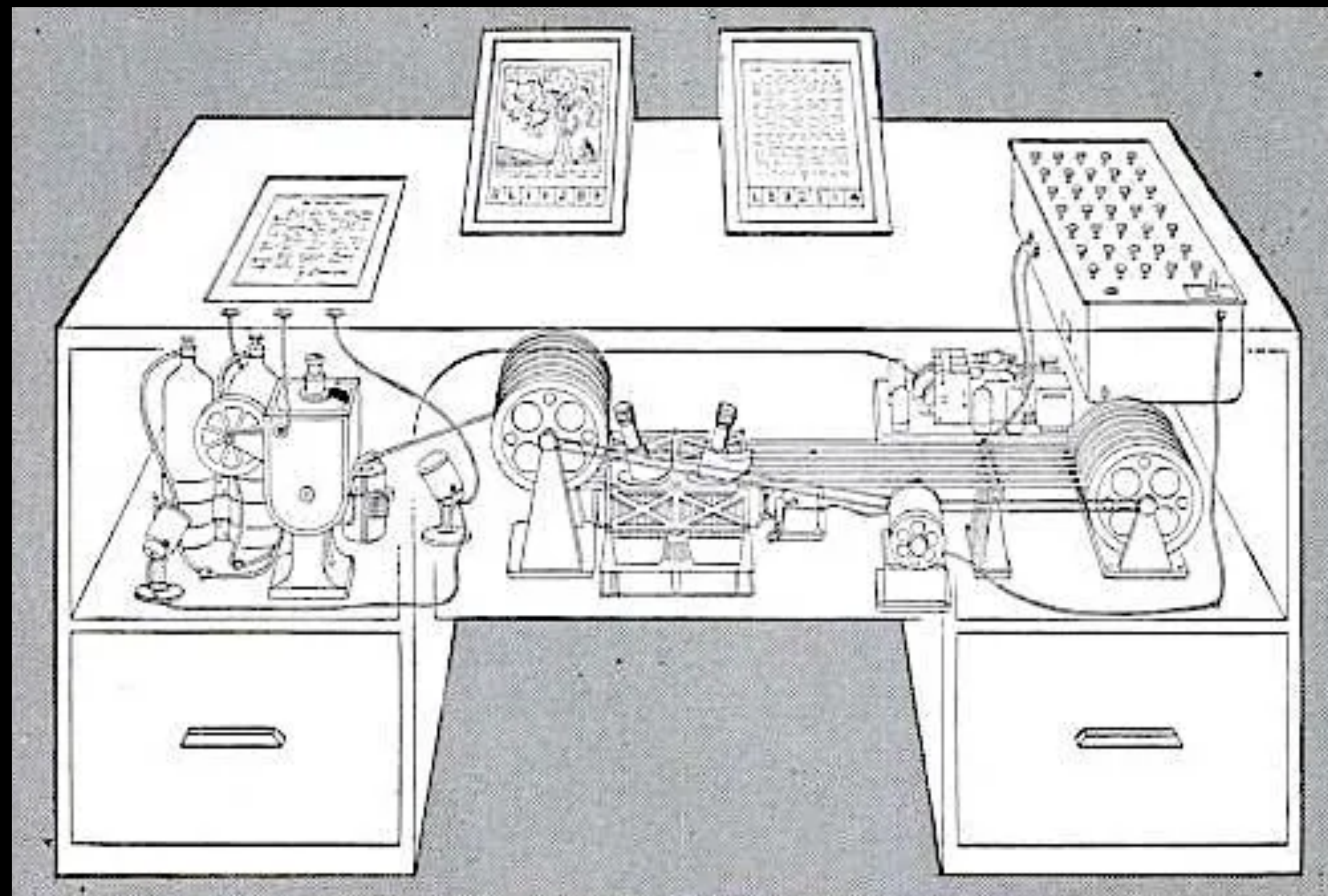
Arvest

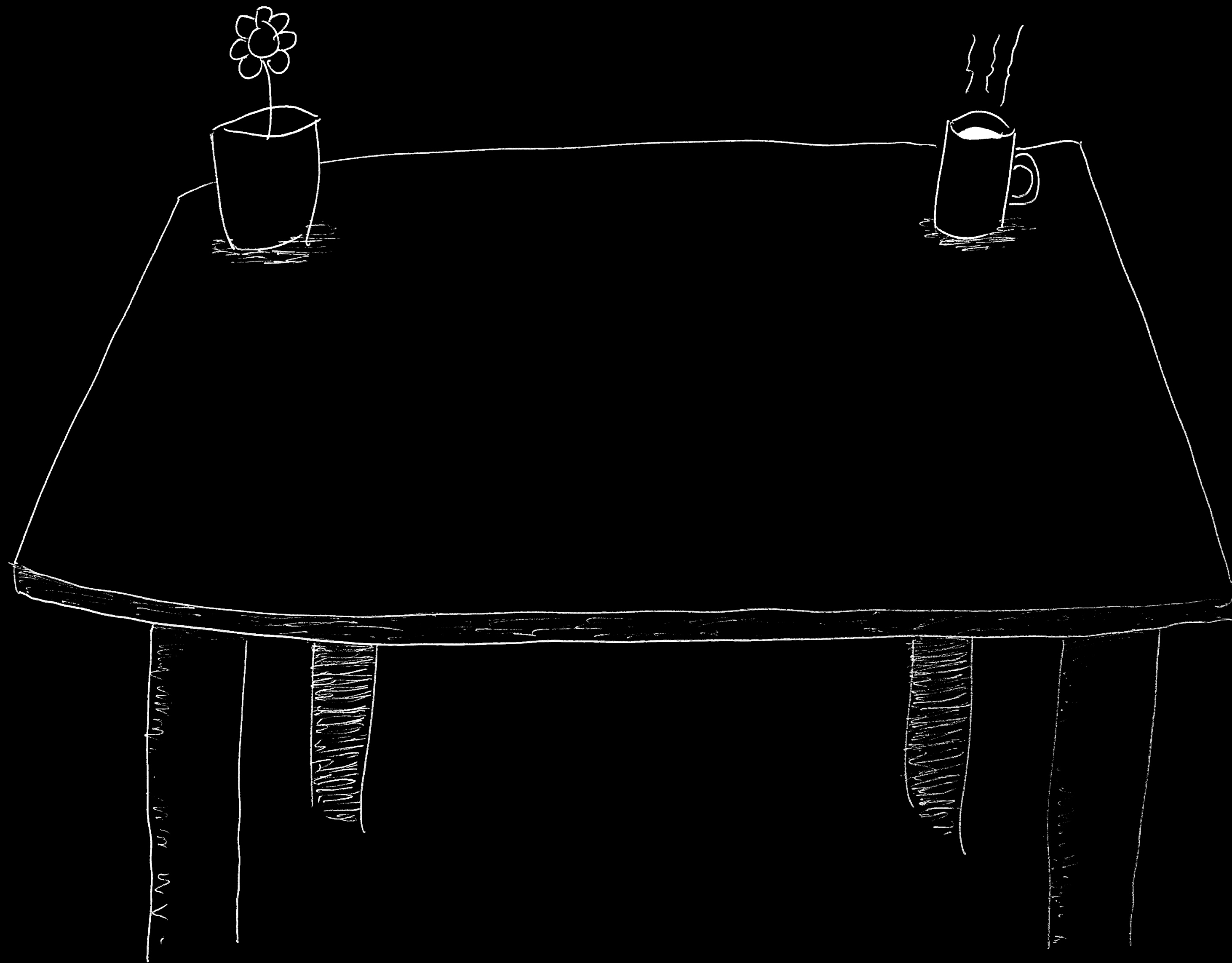
Data in context

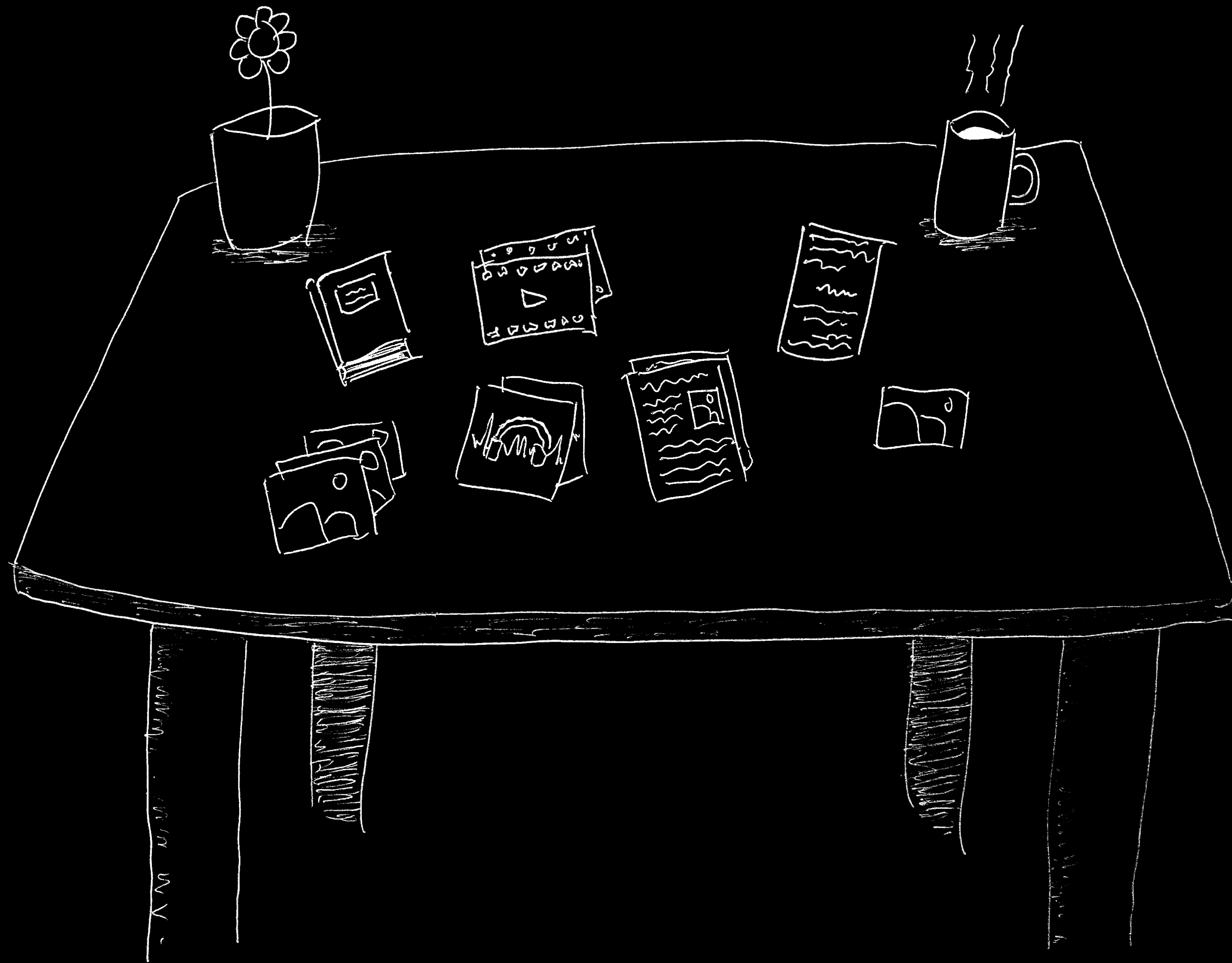
ABOUT

SANDBOX

DISCUSS



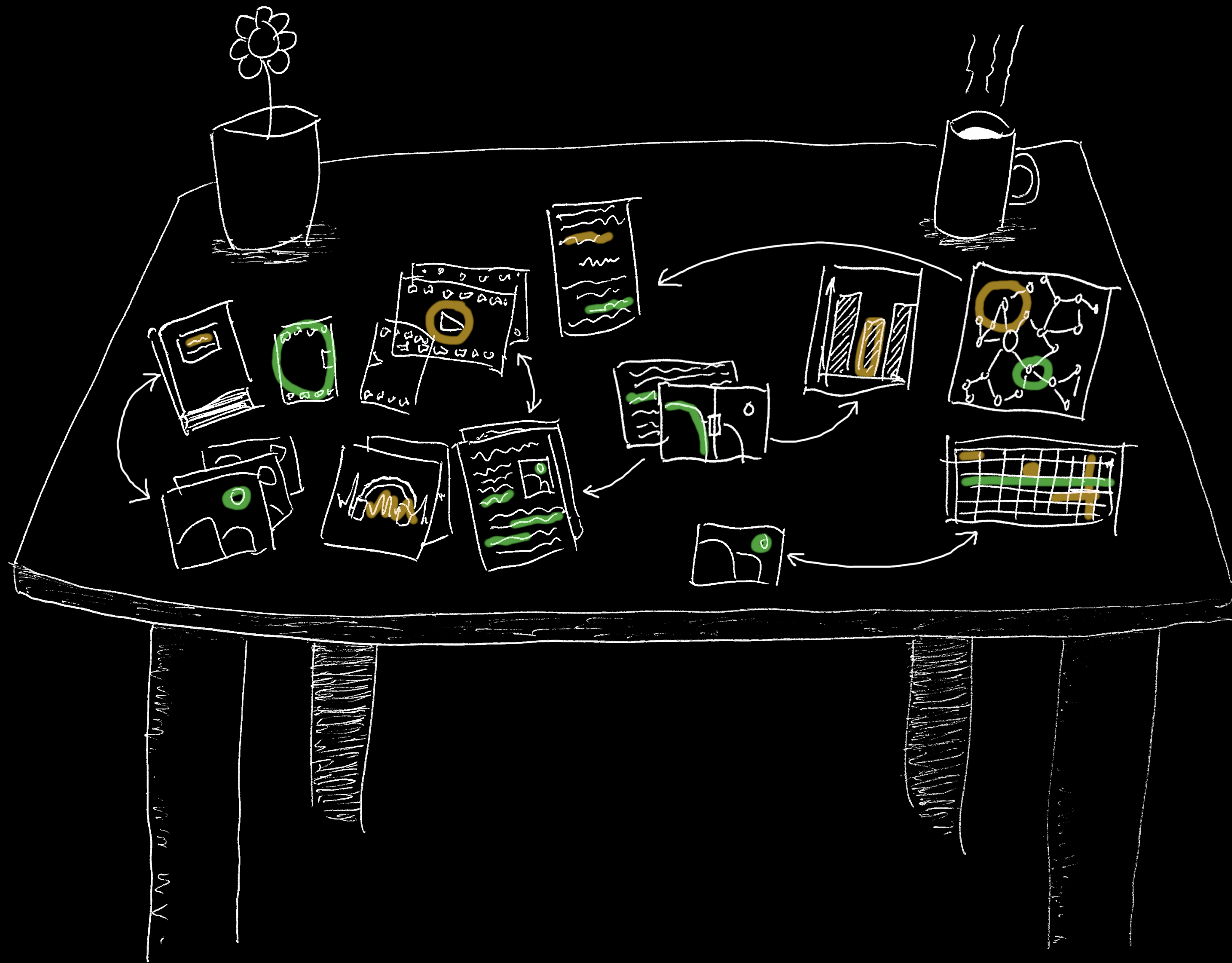


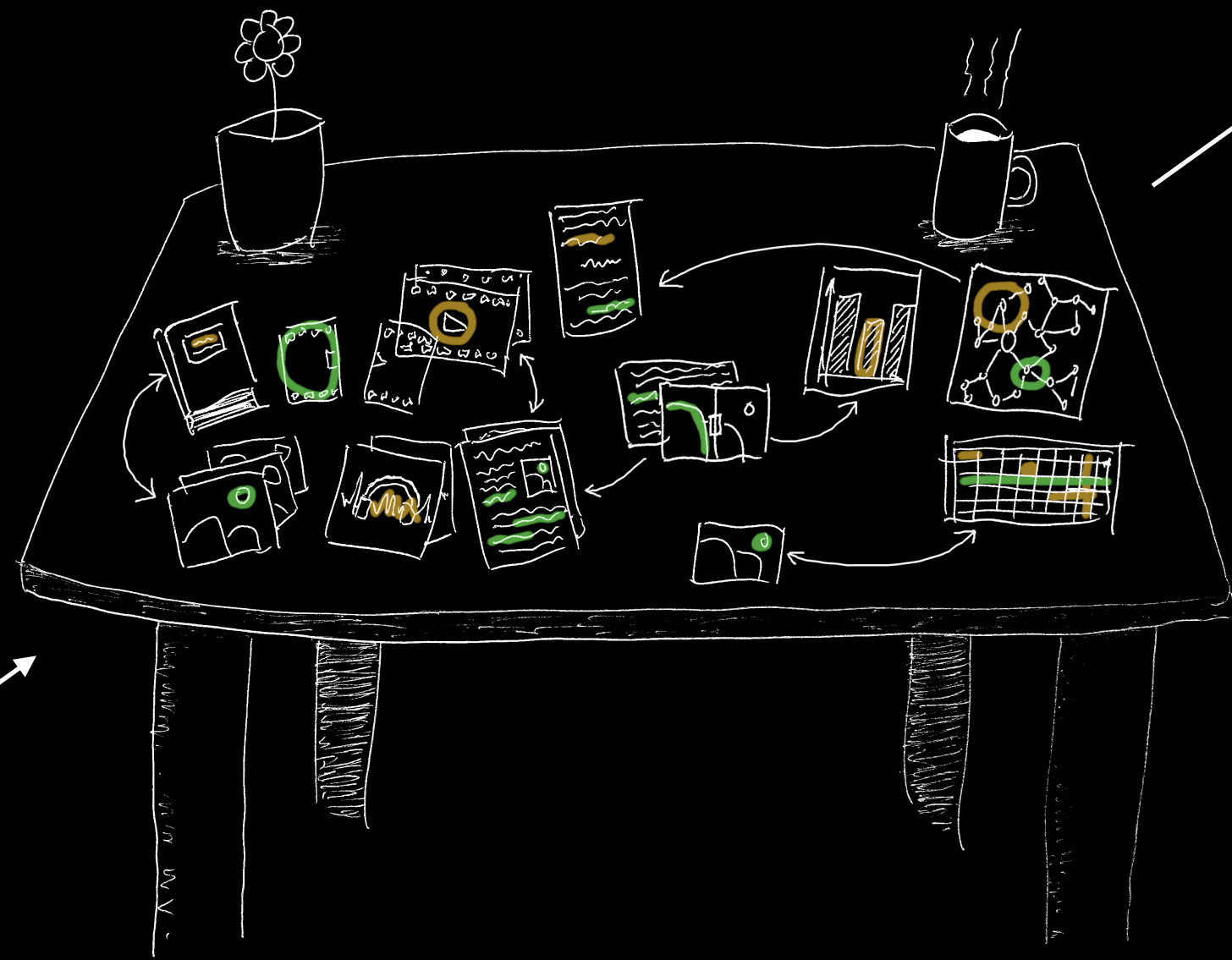


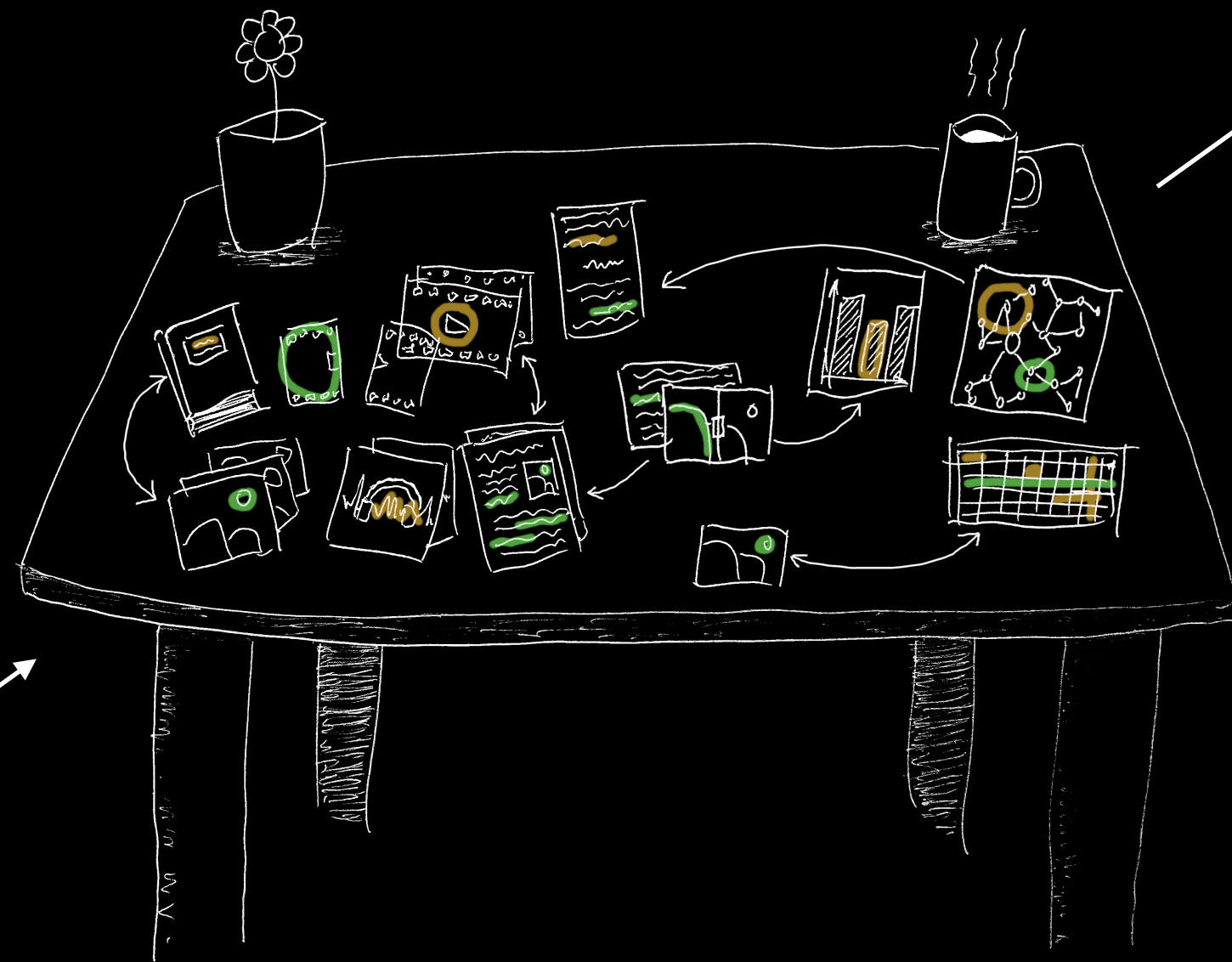












Hakanai – Compagnie AMCB

Annotations

Filter...

[Fiche technique](#)

[Storyboard](#)

[Dossier de présentation](#)

[CARNET : Couverture](#)

[CARNET : Octobre 2012](#)

[CARNET : Octobre 2012 \(2\)](#)

[Dispositif](#)

Showing 8 annotations

01:14 / 02:45

1 of 1 · Hakanai

New annotation

TARGET

STYLE

START

0 1 4

END

0 1 14

IMAGE CONTENT

Image URL

TEXT CONTENT

B I

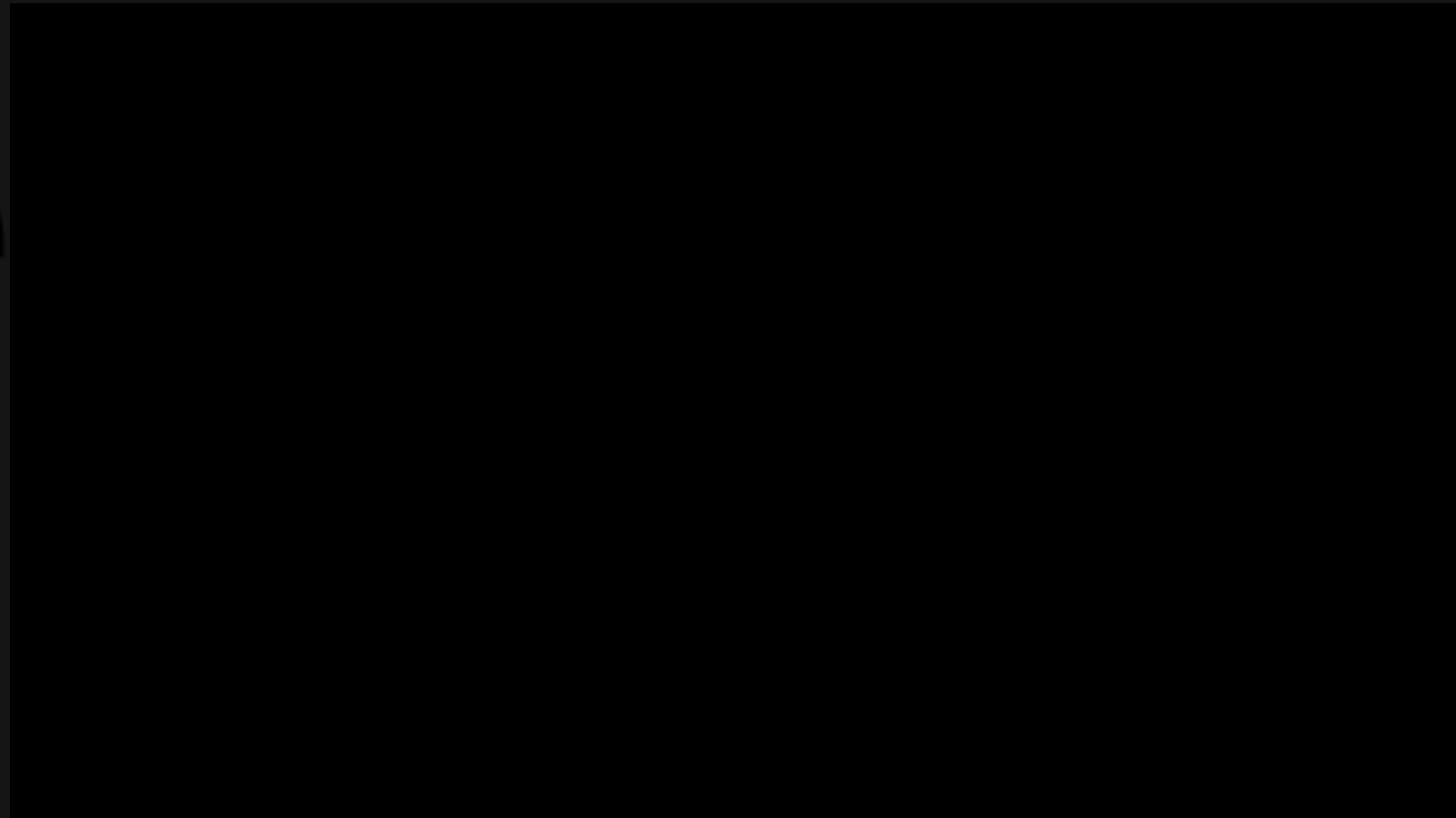
My Annotation

CANCEL SAVE

Prototype

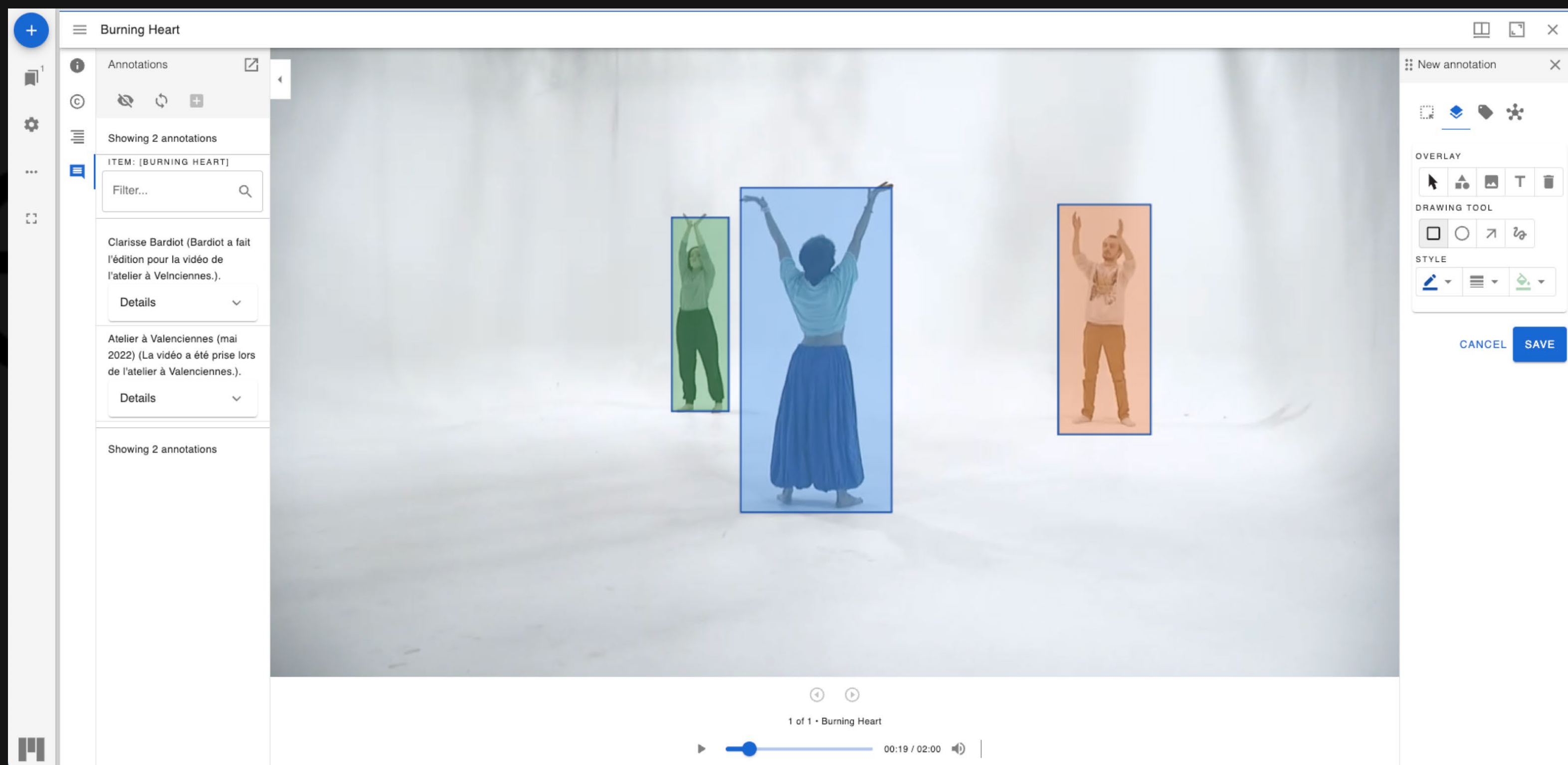
MemoRekall to Arvest

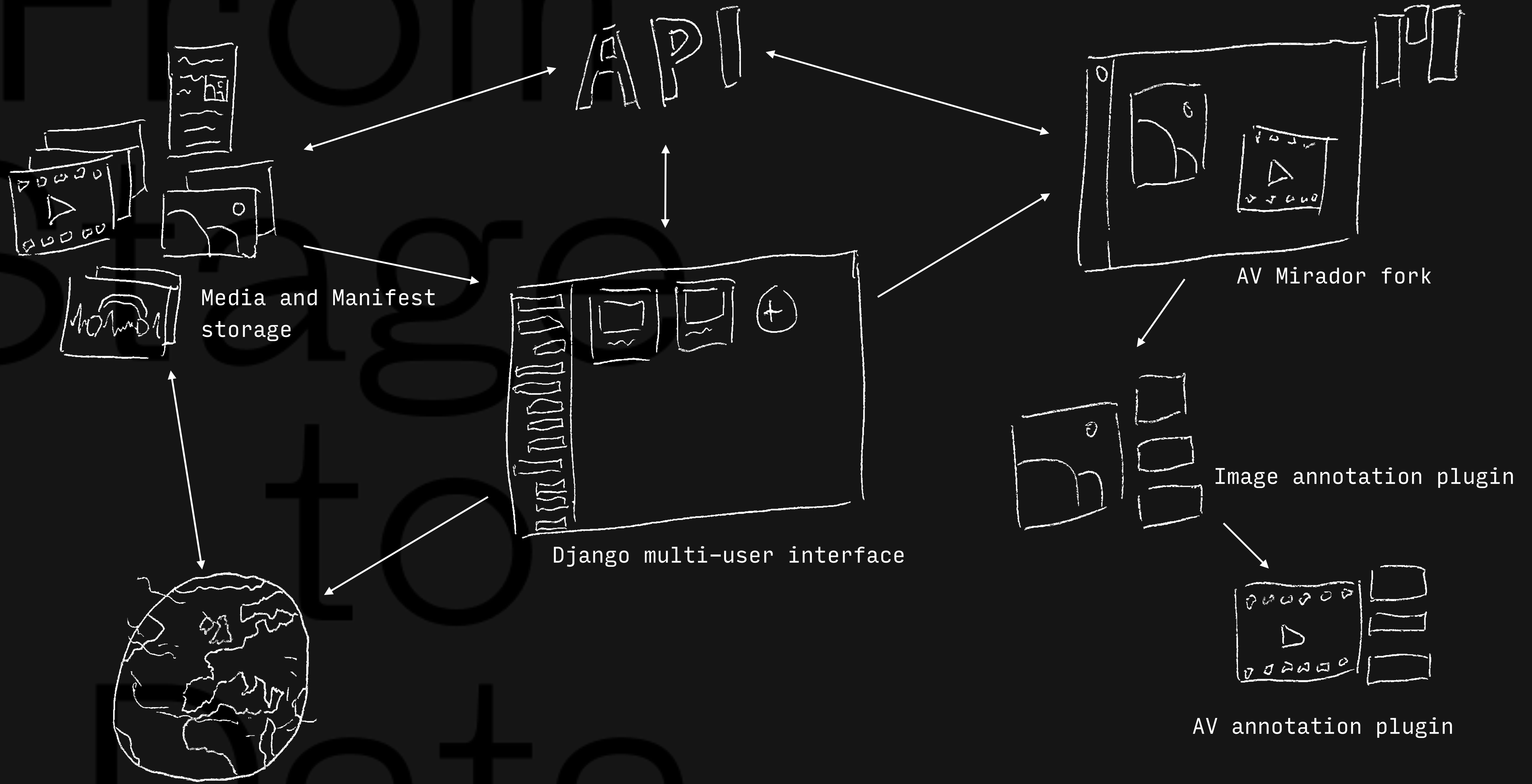
- MemoRekall: video annotation app in development since 2015.
- 2023: development of a prototype for Arvest (IIIF Conference 2023).
- Video playback in Mirador.
- Video annotations.



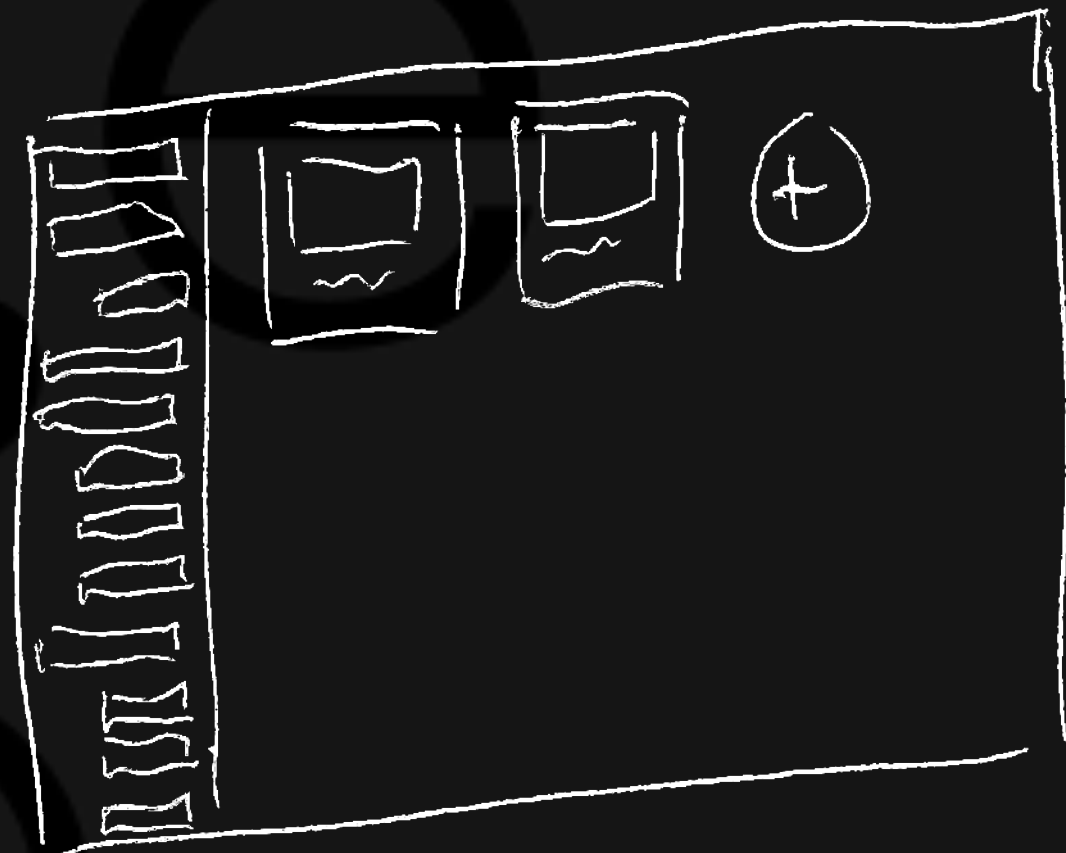
#2

Architecture & Features





From Staggo to Data



Django multi-user interface

Multi-user environment

- Built in Django.
- User-friendly: create an account for free and start using IIIF.
- Stocking of media, Manifests and video files (PeerTube).

<https://github.com/SCENE-CE/mirador-multi-user>

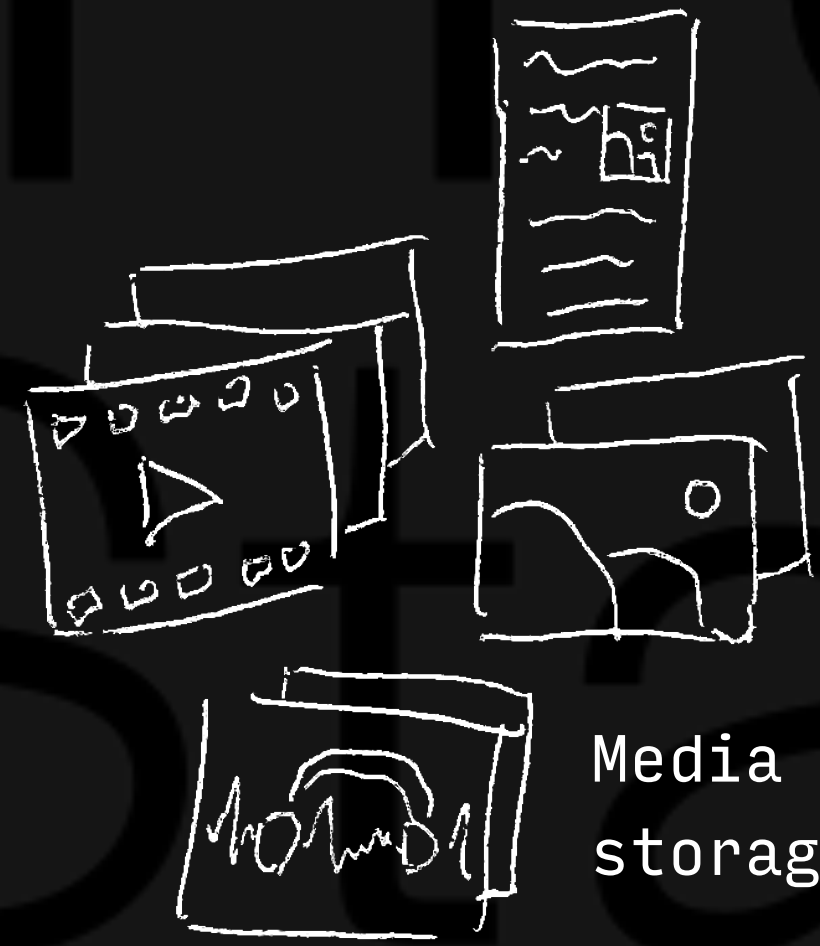
<https://arvest.tetras-libre.fr/>

From

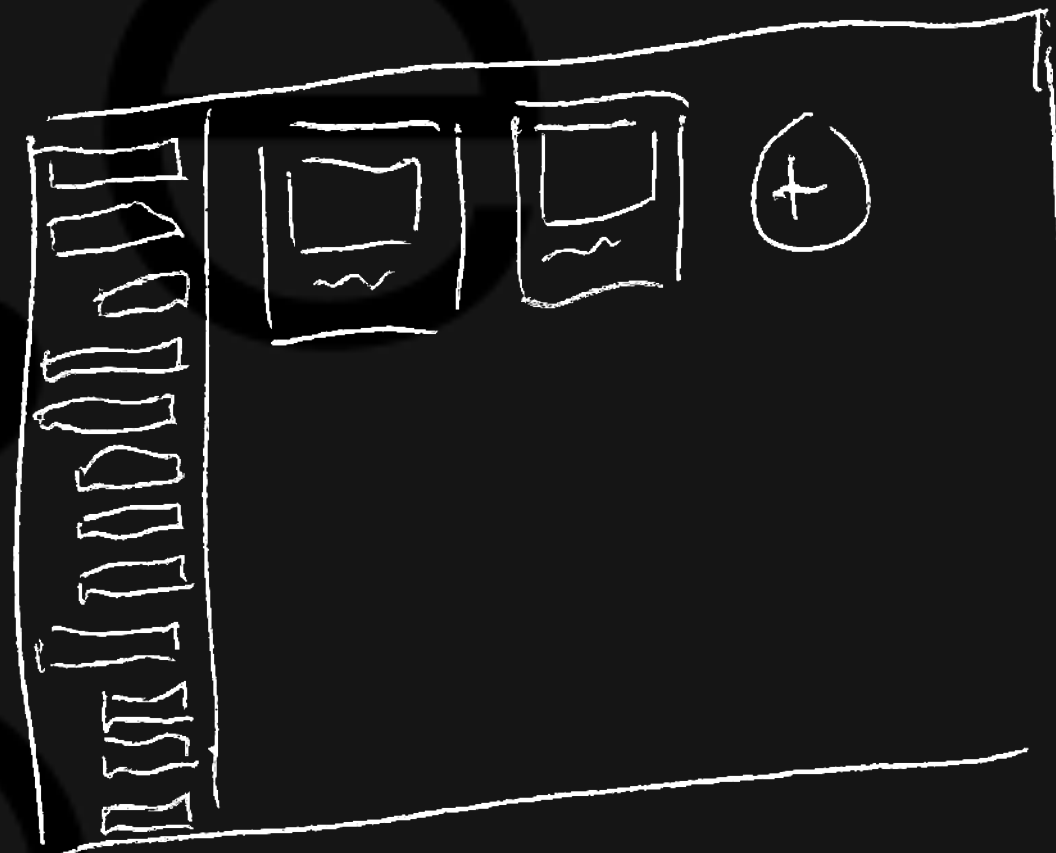
Storage

to

Data



Media and Manifest storage

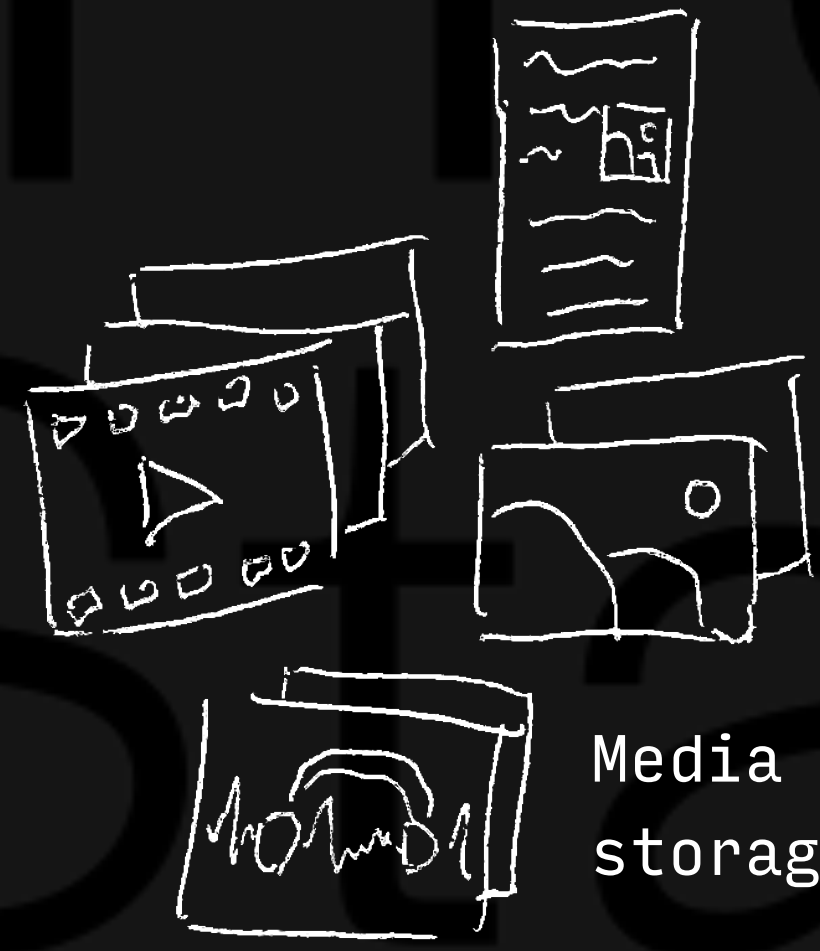


Django multi-user interface

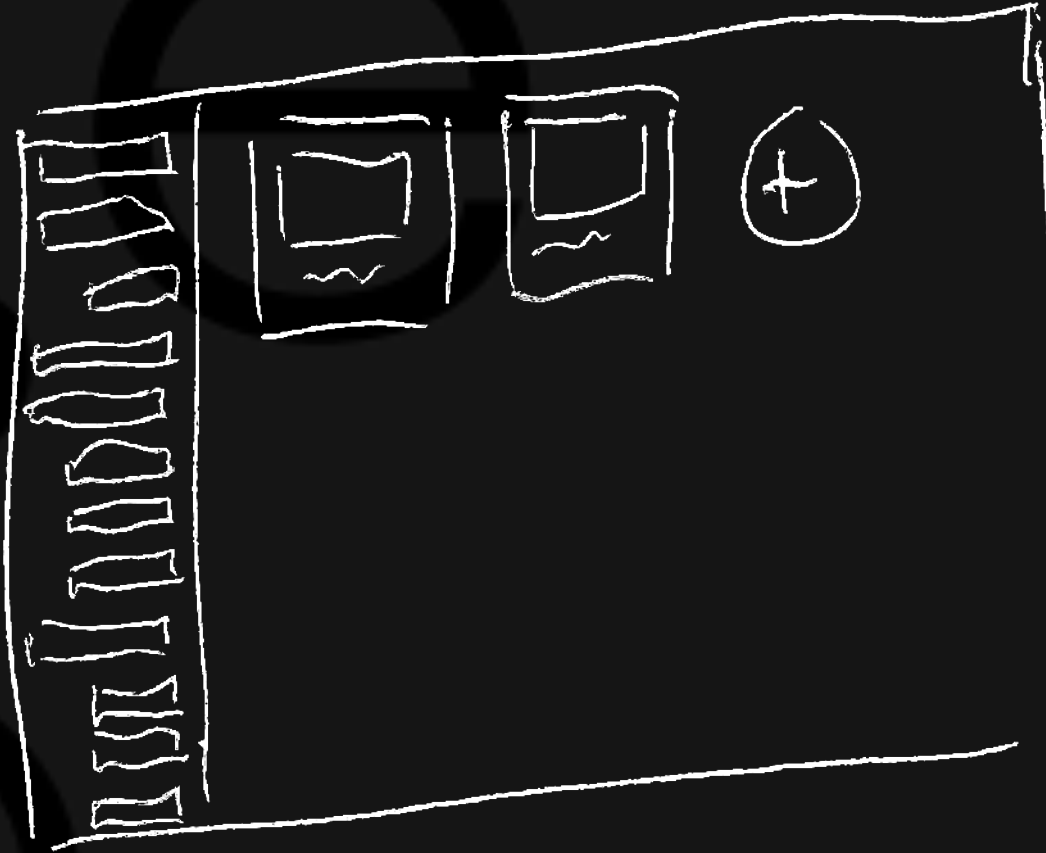
The image displays a digital workspace divided into two main sections. The left section, titled "01 - Manual Network Configuration", features a central network diagram with numerous nodes and connecting lines. A sidebar on the left contains a search filter set to "alma" and three expandable sections: "Alma Ballet Workshop Photos.", "Alma Ballet Exercises.", and "Alma Ballet Laban Notations.", each with a "Details" dropdown. Below these, it indicates "Showing 3 annotations". The right section, titled "Alma Ballet Exercises", shows a video player with a list of annotations on the left. The video frame displays a dance studio with several people. Below the video, a diagram shows Laban notation symbols (arrows and circles) with labels "A", "H", "P", and "L". The video player controls at the bottom show a progress bar at 00:11 / 06:45 and a "1 of 1 - Alma Ballet Exercises" indicator.

Multimodal projects

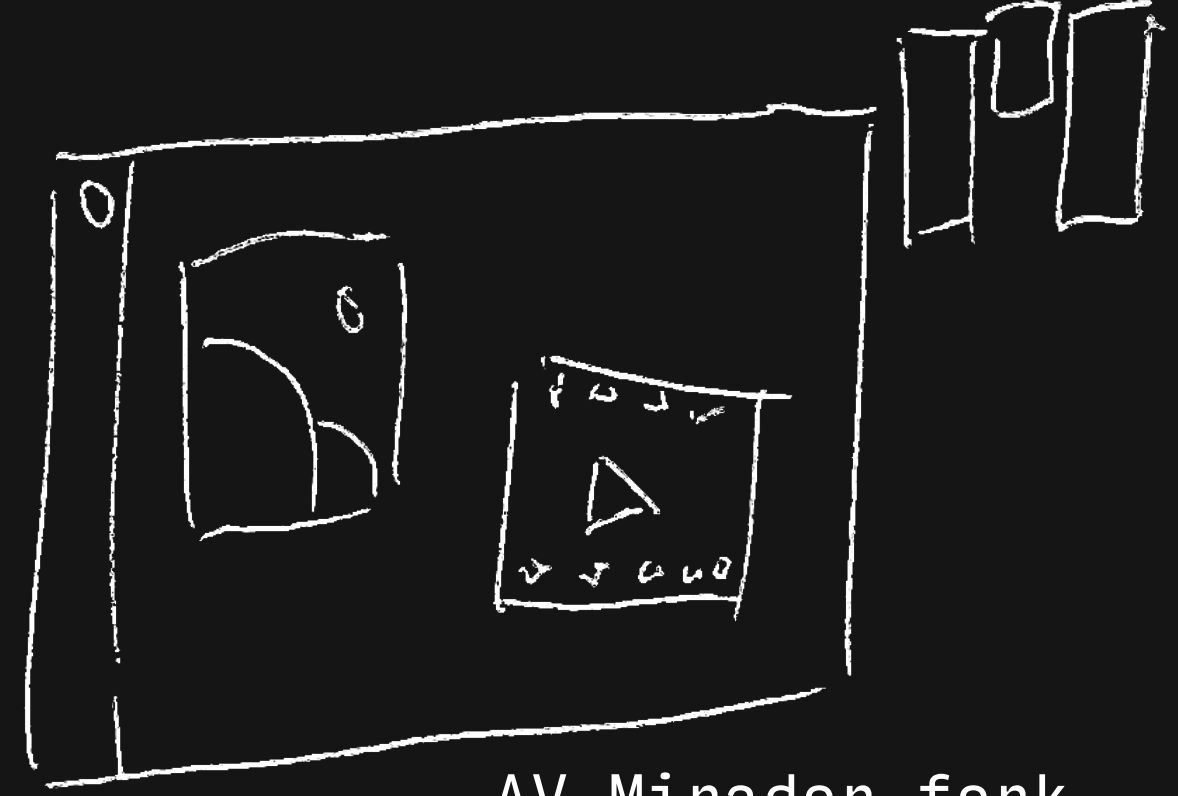
From
Storage
to
Data



Media and Manifest storage

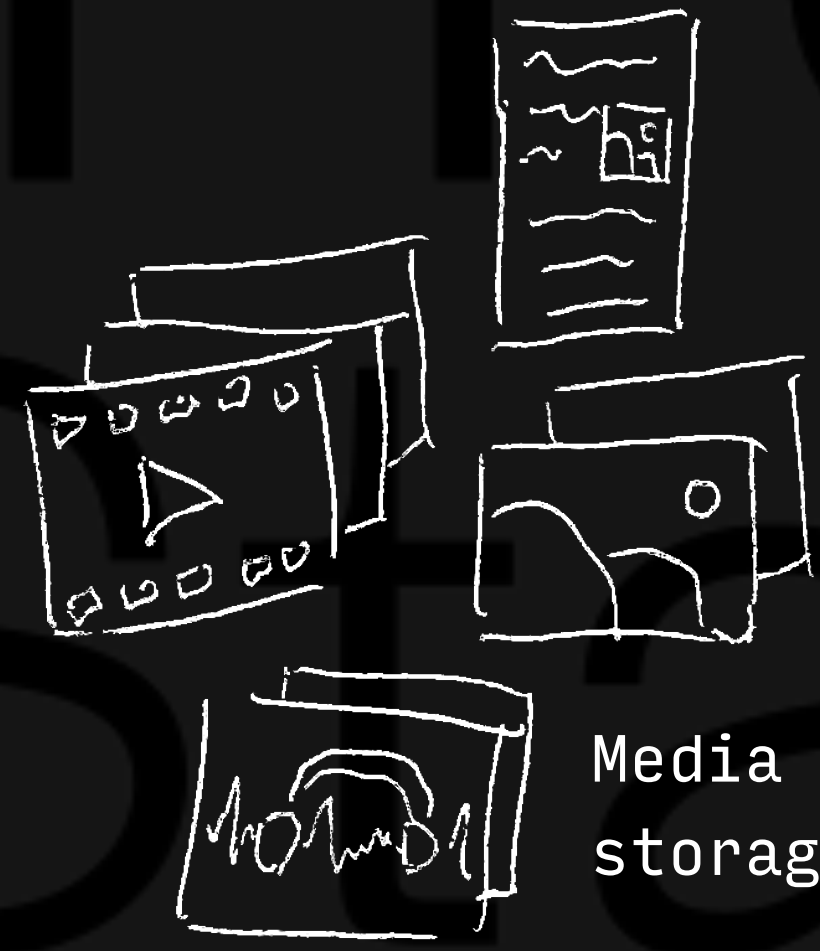


Django multi-user interface

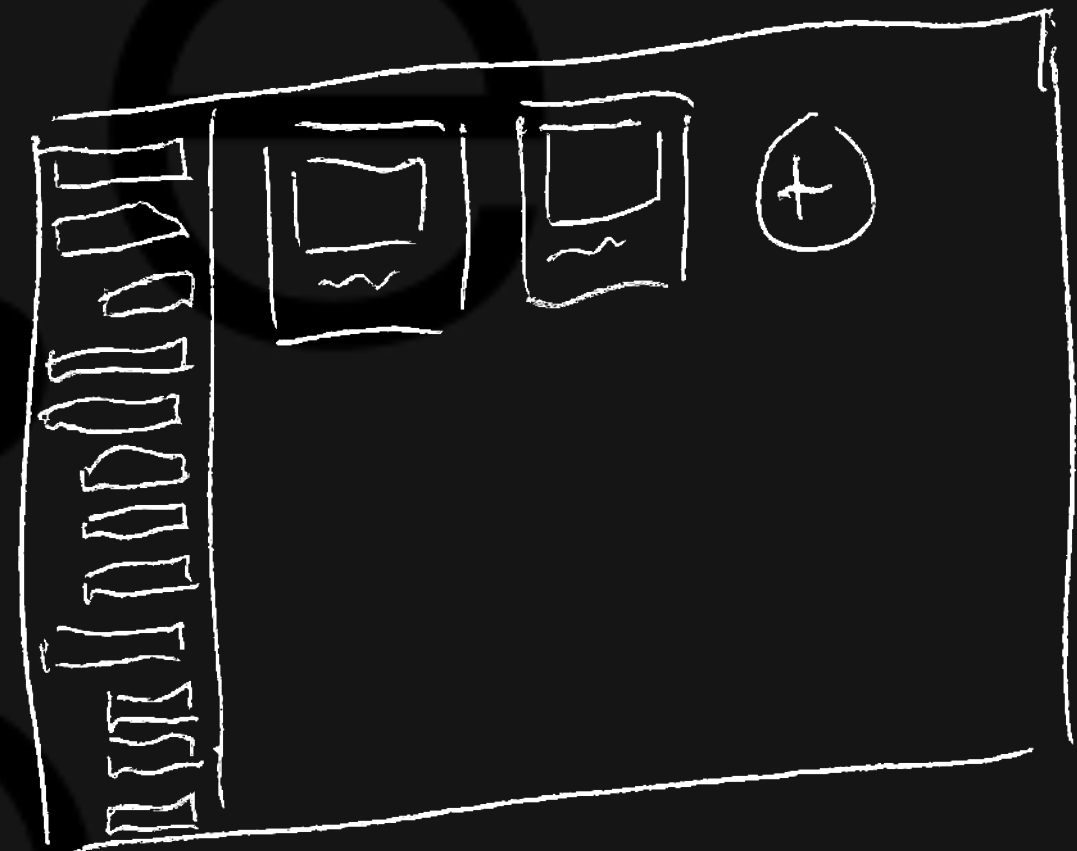


AV Mirador fork

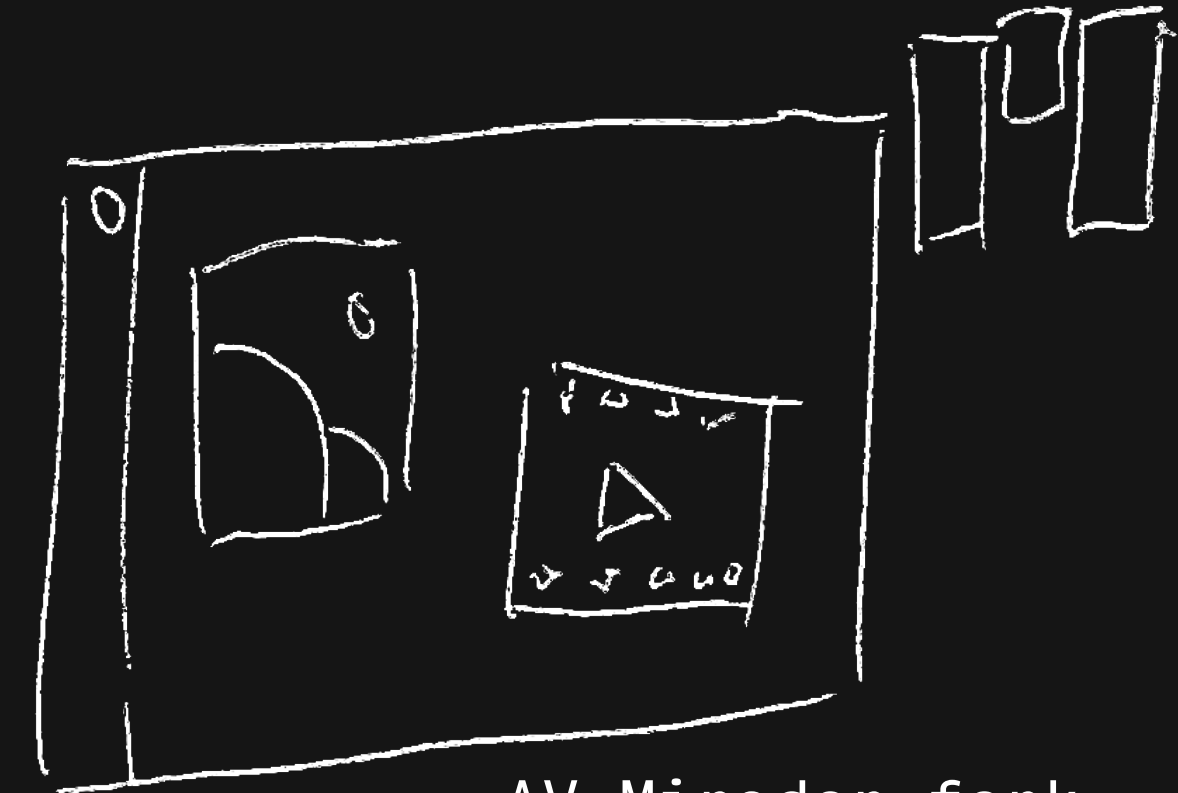
From
Storage
to
Data



Media and Manifest storage



Django multi-user interface

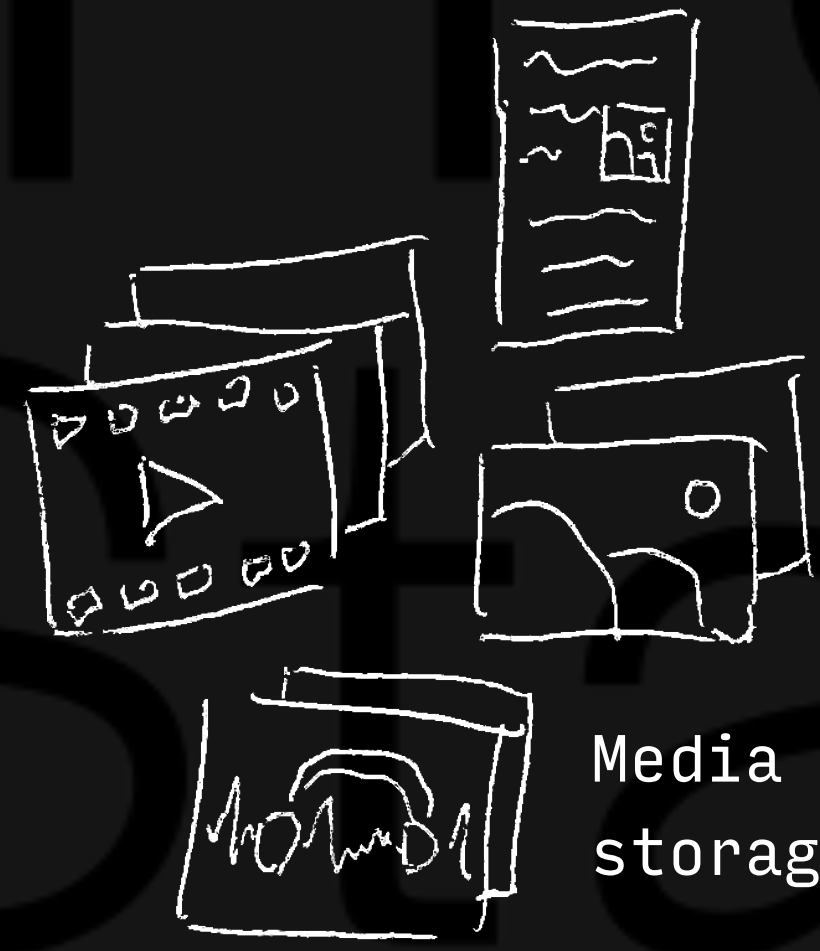


AV Mirador fork

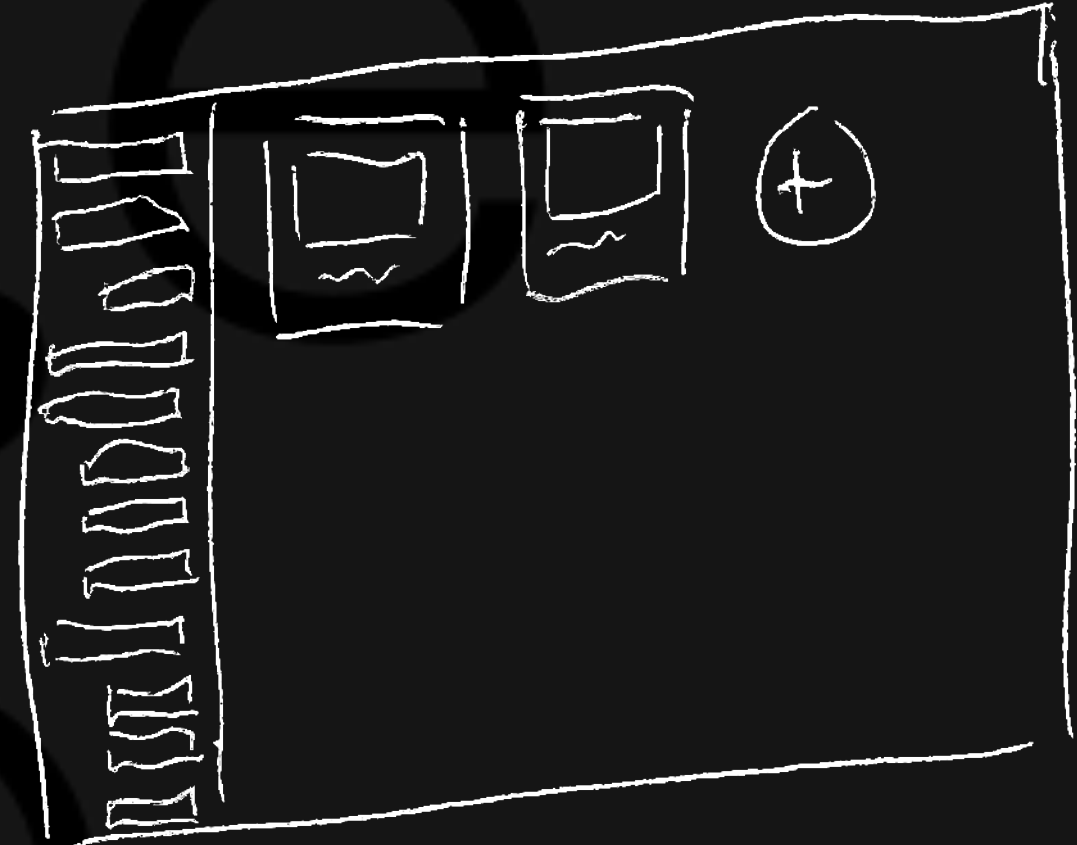


Image annotation plugin

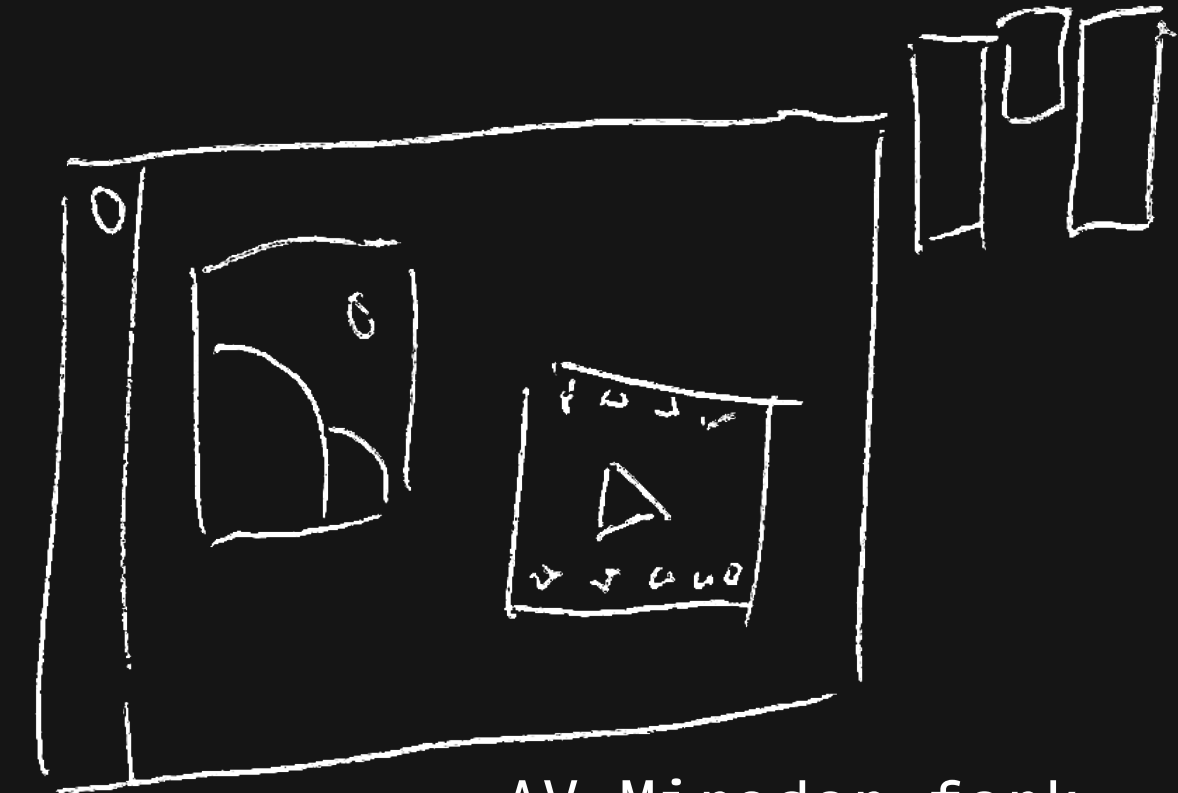
From
Stagger
to
Data



Media and Manifest storage



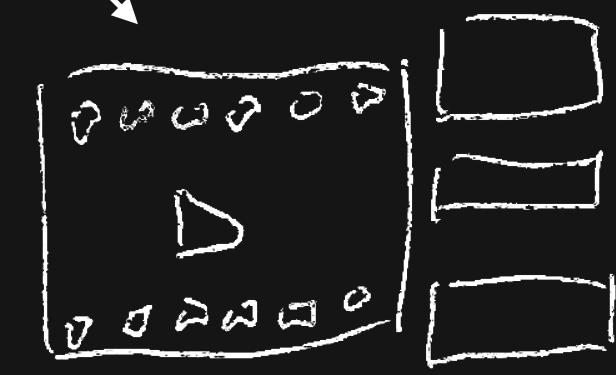
Django multi-user interface



AV Mirador fork



Image annotation plugin



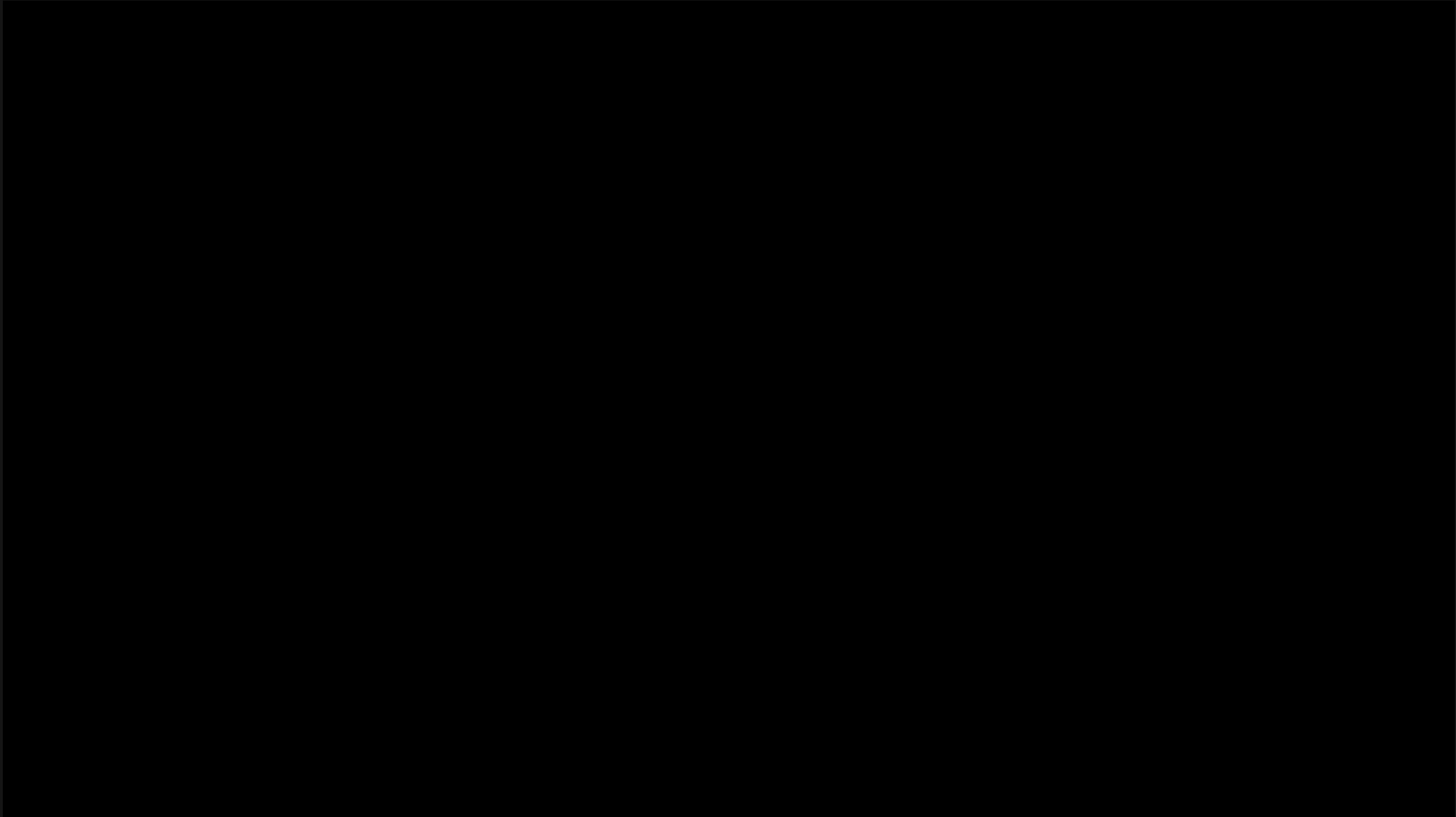
AV annotation plugin

From *Annotation types*

- Annotation plugin for latest version of Mirador.
- Target image, video and audio content.
- Time-linked annotations for time-based media.
- Annotation types: notes, tags, images, overlays, expert mode, Manifest annotations.

From *Manifest networks*

- Link an annotation to a IIIF Manifest.
- Create data-driven interfaces to navigate collections of linked documents.
- Compare documents at different levels of granularity.



Data

The screenshot shows a Jupyter Notebook titled "Speech Recognition using vosk.ipynb". The interface includes a top navigation bar with options like "Fichier", "Modifier", "Affichage", "Insérer", "Exécution", "Outils", and "Aide". On the right, there are buttons for "Commentaire", "Partager", and "Connecter".

The left sidebar, labeled "Sommaire", contains a search bar and a list of sections: "Speech Recognition Using vosk", "Setup", "Get Media", "Audio Pre-processing", "Speech Recognition", and "Export to Arvest". A "+ Section" button is located at the bottom of the sidebar.

The main content area displays Python code in a code editor. The visible code includes:

```
[ ] with open(result_file_name, 'w', encoding='utf-8') as f:
    json.dump(res, f, ensure_ascii = False, indent = 2)
    files.download(result_file_name)
else:
    # Recognition failed
    print("Recognition failed.")
    print(result)
```

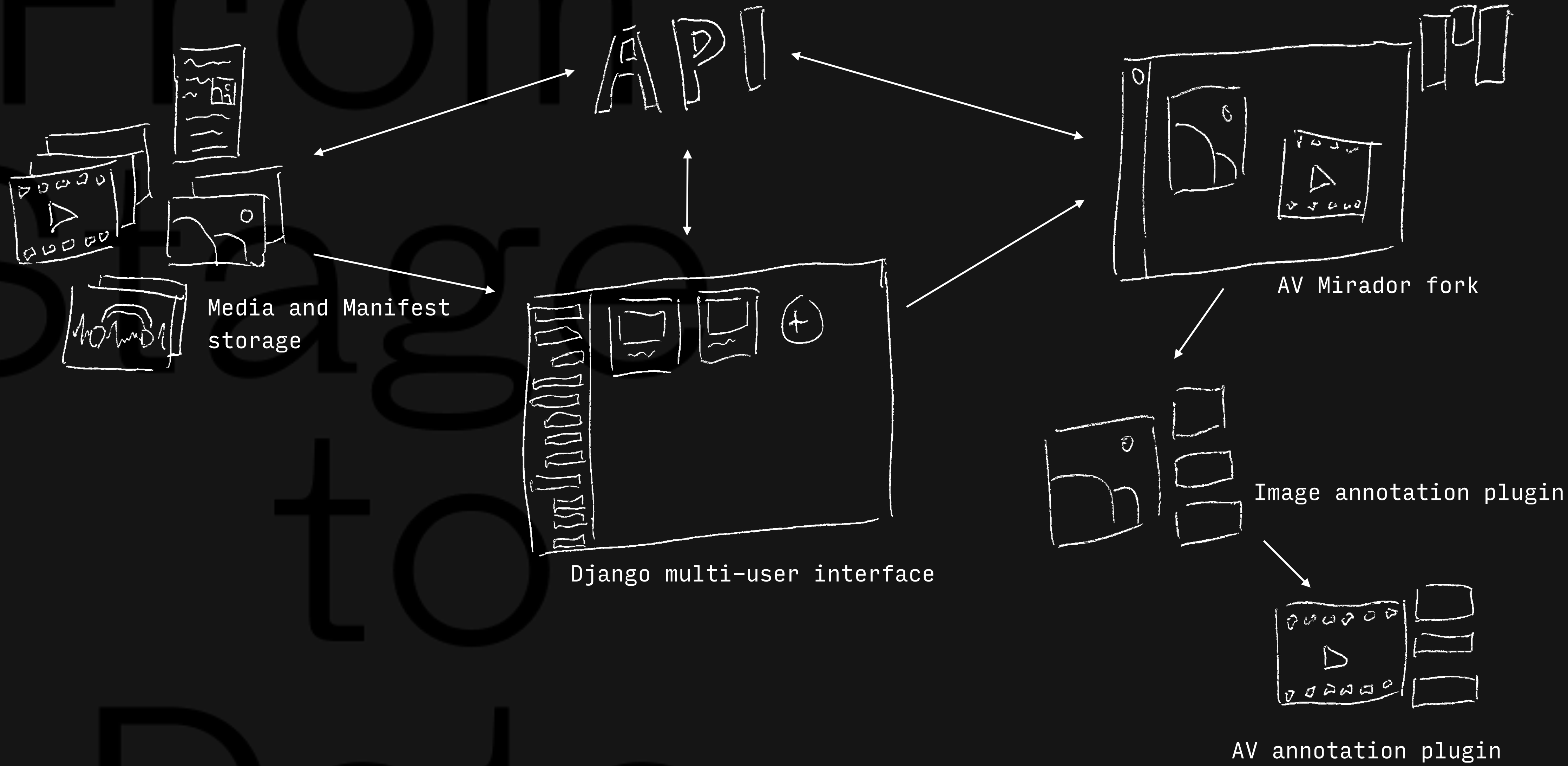
Below the code editor, a section titled "5. Export to Arvest" is expanded, showing a paragraph: "Finally, we can create a new Manifest with time-linked annotations so that we can see these results interactively in Arvest." Below this text, more code is visible:

```
[ ] PATH_ON_SERVER = "manifests/my_manifests"

for analysis_src in file_map:
    print(f"Treating {analysis_src} ({file_map[analysis_src]})...")

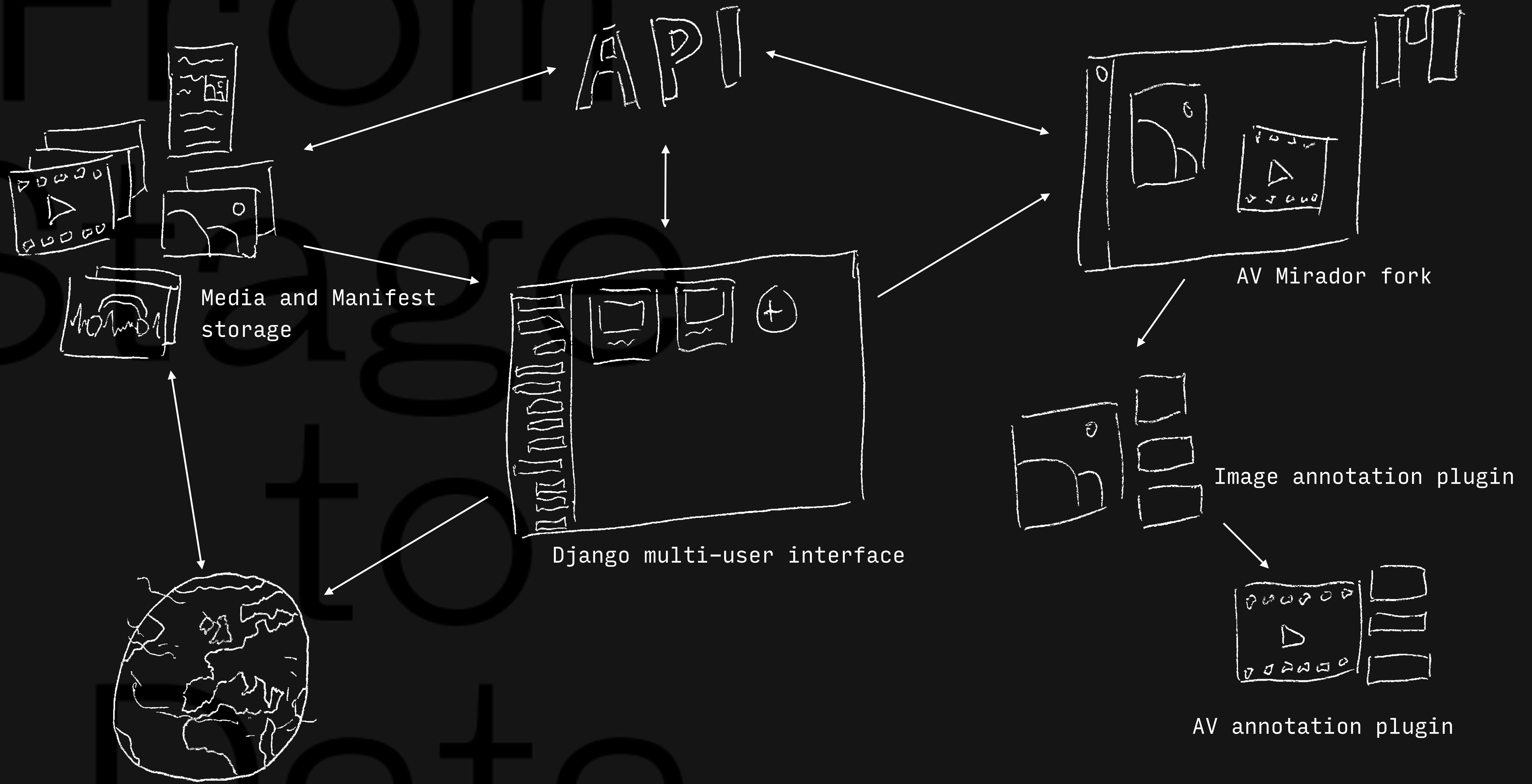
# Retrieve data
```

Towards ML-driven workflows



RESTful API

- Open API for content management (retrieval, creation and modification of Manifests and media).
- Integrate Arvest into open ML-driven workflows.
- A set of online python notebooks to get you started.



#3

Case studies

Photo: Ivo van Hove, *Les Damnés*,
Festival d'Avignon, 2016.

@ Christophe Raynaud de Lage



COESO Project

- Contemporary dance, philosophy, citizen science
- Collaboration analytics, network analysis, close reading + distant reading

Art Zoyd

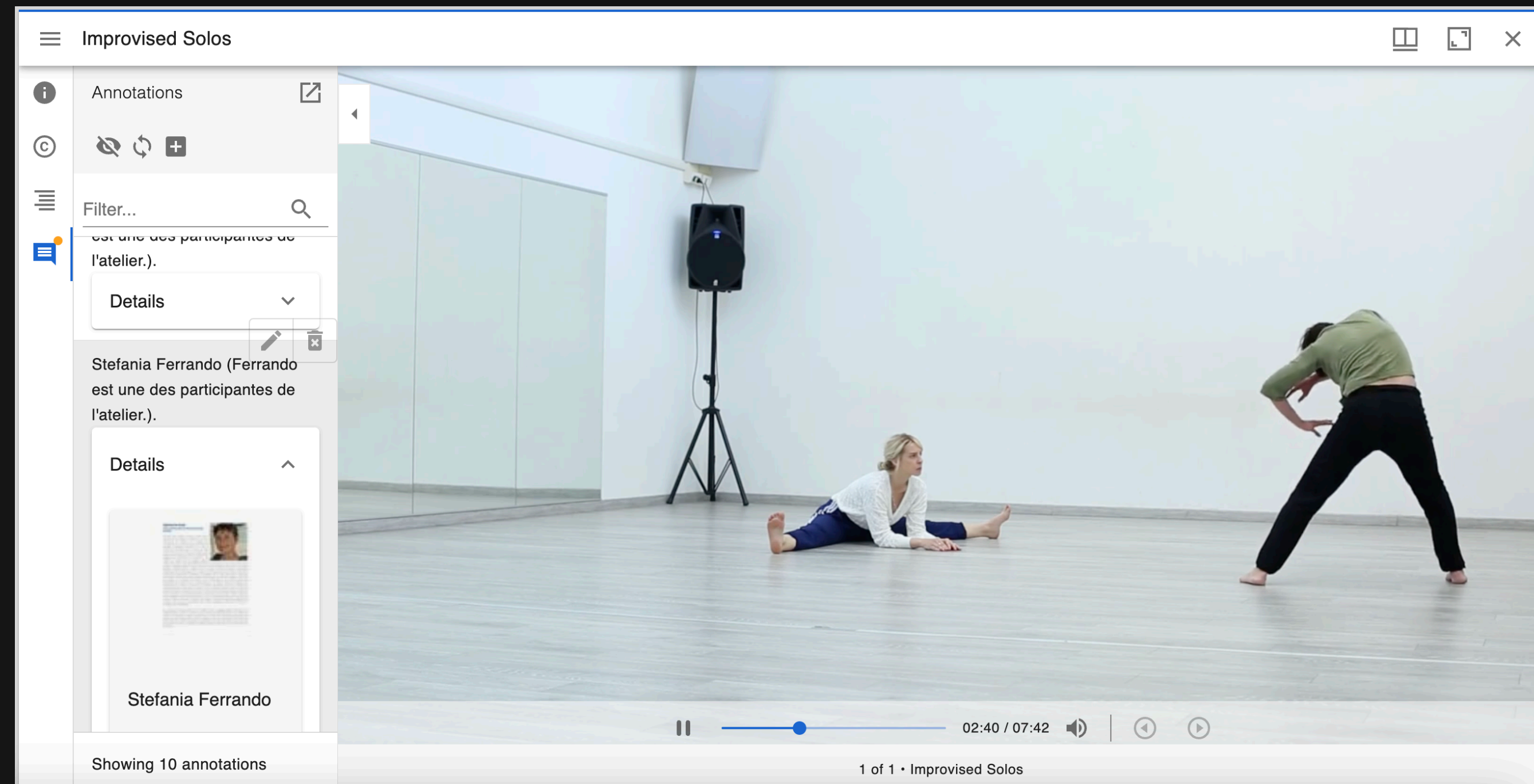
- Electroacoustic music, preservation, music analysis
- Content discovery, music information retrieval, optical music recognition, classification

Plozévet

- History, preservation, anthropology, sociology
- Computer vision, network analysis, close reading + distant reading

COESO

- Horizon 2020-funded project: Collaborative Engagement on Societal Issues
- Contemporary dance, philosophy, citizen science
- Collaboration analytics, network analysis, close reading + distant reading



Art Zoyd

- Centre for contemporary music creation Art Zoyd Studios, Valenciennes (France)
- Electroacoustic music, preservation, music analysis
- Content discovery, music information retrieval, optical music recognition, classification

The screenshot displays the OMR Test software interface. On the left, an 'Annotations' panel lists various musical elements with a search filter. The main area shows a musical score with three staves in 4/4 time. A yellow box highlights a specific note in the top staff. The interface includes standard window controls and a status bar at the bottom indicating '1 of 1 - OMR Test'.

Annotations
Filter...
meter<4/4>
d1/4
e1/32
e2/2
e1/8
e1/16
e1/32
{e1/4,g1/4}
e1/4
e1/8
...

Showing 42 annotations

1 of 1 - OMR Test

Plozévet

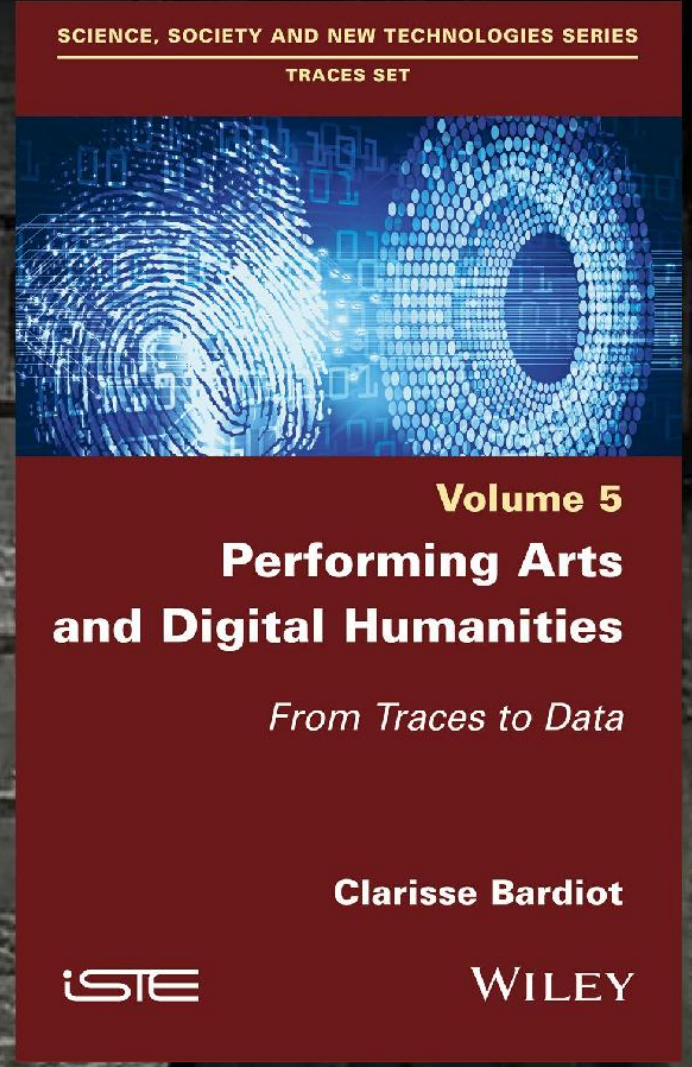
- Project led by the Maison des Sciences de l'Homme en Bretagne and the Cinématèque de Bretagne
- History, preservation, anthropology, sociology
- Computer vision, network analysis, close reading + distant reading

The image displays two software windows side-by-side. The left window, titled 'Image Embedding T-SNE Projection (frame averages)', shows a large, dense cluster of small image thumbnails arranged in a circular pattern. To its left is a sidebar with a search bar and a list of annotations, including: '[Les agriculteurs (shot decomposition)] (shot 466)', '[Les pêcheurs de Pors Poulhan (shot decomposition)] (shot 163)', '[Les agriculteurs (shot decomposition)] (shot 545)', '[Au bourg (shot decomposition)] (shot 411)', and '[Gestes des repas (shot decomposition)] (shot 470)'. The right window, titled 'Les pêcheurs de Pors Poulhan (shot decomposition)', shows a video player interface. It features a list of shot numbers from 67/331 to 85/331. A video frame is visible, showing two people in a field, with a timestamp '01:07:49:03' overlaid. A progress bar at the bottom indicates the video is at 07:49 / 32:47.

STAGE

From Stage to Data, the Digital Turn of Contemporary Performing Arts Historiography

Clarisse BARDIOT, Professor in Performing arts and digital humanities



Ivo Van Hove, *Les Damnés*, 2016 © Christophe Raynaud de Lage

STAGE Data

#4

Next steps

Photo: Anne-Teresa de
Keersmaeker, *Cesena*, Festival
d'Avignon, 2011.

@ Christophe Raynaud de Lage

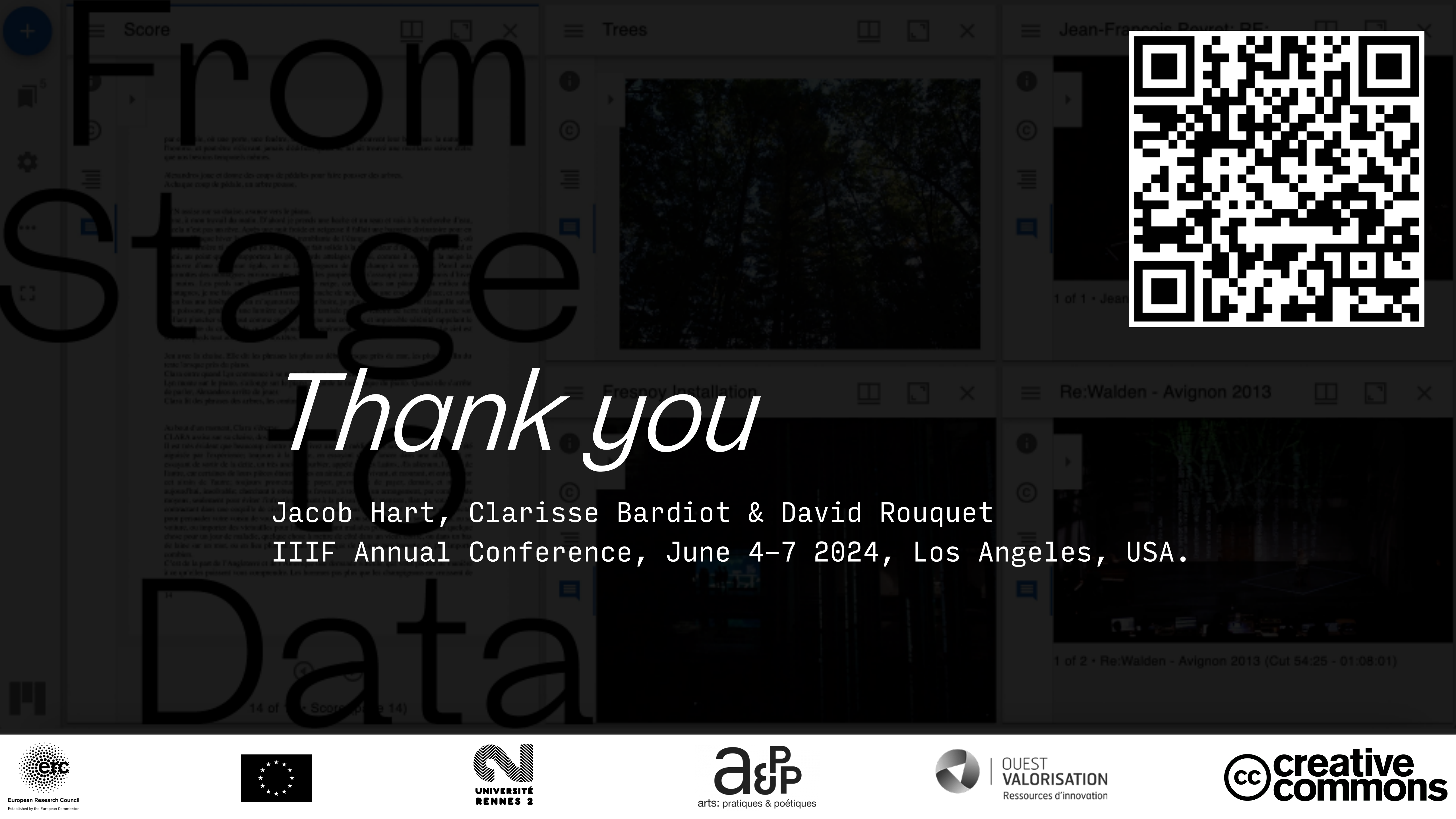


Development

- Beta version for December 2024.
- Release of image annotation + AV annotation plugin for Mirador 4 October 2024.
- PeerTube instance for hosting of large video and audio files.
- Implementation of storytelling functionality
- GUI overhaul

Collaboration

- Contribute to or use the code on GitHub
- Discuss and chat on Discourse
- Keep updated, find out more and try out the live demo!



Thank you

Jacob Hart, Clarisse Bardiot & David Rouquet
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