

# Progiciels libres pour l'archive

Reto Kromer • AV Preservation by reto.ch

Atelier Memoriav  
**Logiciels ouverts dans l'archive**  
Berne, 11 janvier 2024

1

# Benutzerschnittstellen Interface utilisateur

- en: command-line interface (CLI)  
de: Kommandozeile  
fr: interface en ligne de commande
- en: graphical user interface (GUI)  
de: grafische Benutzeroberfläche  
fr: interface graphique

2

# FFmpeg est utilisé partout

- VLC et mpv
- Audacity et Handbrake
- QCTools et AEO-Light
- vrecord
- Google Chrome et YouTube
- «et cetera et cetera et cetera»

3

# La famille FFmpeg

## commandes

- ffmpeg
- ffprobe
- ffplay

## bibliothèques

- libavformat
- libavcodec
- libavfilter
- libavutil
- libavdevice
- libswscale
- libswresample
- libpostproc

4

## Lecteur multimédia

**VLC** (GUI)

→ [www.videolan.org/vlc/](http://www.videolan.org/vlc/)

**mpv** (CLI/GUI)

→ [mpv.io](http://mpv.io)

**ffplay** (CLI)

→ [ffmpeg.org](http://ffmpeg.org)

5

## Extraction des métadonnées

**MediaInfo** (GUI) and **mediainfo** (CLI)

→ [mediaarea.net/MediaInfo](http://mediaarea.net/MediaInfo)

**ffprobe** (CLI)

→ [ffmpeg.org](http://ffmpeg.org)

**MediaInfo Parameter Definitions**

→ <http://bits.ashleyblewer.com/mediainfo-definitions/>

6

## Metadata of all AV files

**Bash AVpres** (CLI)

→ [avpres.net/Bash\\_AVpres/](http://avpres.net/Bash_AVpres/)

```
metadata_csv -i input_path
```

```
metadata_csv -h  
man metadata_csv
```

7

## Transformations de fichiers

**ffmpeg** (CLI)

→ [ffmpeg.org](http://ffmpeg.org)

**FFmpeg Cookbook for Archivists**

→ [avpres.net/FFmpeg/](http://avpres.net/FFmpeg/)

**ffmprovisr**

→ [amiaopensource.github.io/ffmprovisr/](http://amiaopensource.github.io/ffmprovisr/)

8

# Interface graphique

## FFCommand Engine (GUI)

→ [github.com/ColorlabMD/FFCommand\\_Engine](https://github.com/ColorlabMD/FFCommand_Engine)

9



10

# A GUI for FFmpeg

## FFCommand Engine (GUI)

→ [github.com/ColorlabMD/FFCommand\\_Engine](https://github.com/ColorlabMD/FFCommand_Engine)

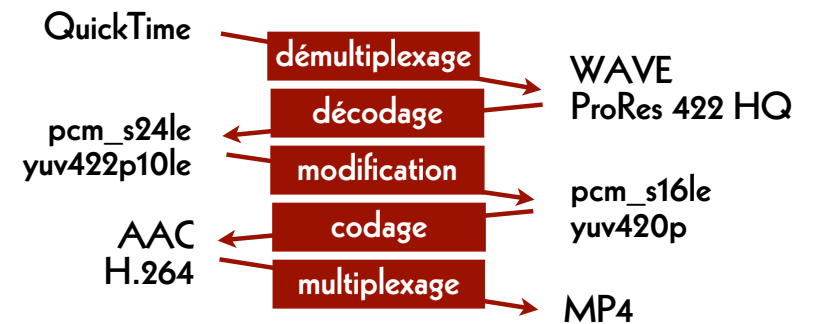
version 0.6 for macOS via Homebrew:

```
brew tap avpres/formulae
```

```
brew install --HEAD fcommand-engine
```

11

# Exemple: audiovisuel



12

## Bibliothèques logicielles

démultiplexage: libavformat

décodage: libavcodec

modification: libavfilter

codage: libavcodec

multiplexage: libavformat

13

## Terminal

- cp, gcp
- rcp, rsync

15

## Copier fichiers et dossiers

- glisser-déposer
- copier-coller
- terminal

14

## Policy Checker

**MediaConch** (GUI, CLI, web)

→ [mediaarea.net/MediaConch/](http://mediaarea.net/MediaConch/)

16

## MediaConchOnline

- [mediaarea.net/MediaConchOnline/](http://mediaarea.net/MediaConchOnline/)

17

## Quality control

- check technical metadata
- analyse signal
- watch image and listen sound
  
- difference file
- split screen

18

## Quality Control Tools

container and codec

- MediaInfo, ffprobe, MediaConch
- hexdump, fq

image and sound content

- QCTools, qcli, SignalServer
- VLC, mpv, ffplay

19

## Quality Control

**QCTools** (GUI), **qcli** (CLI)

→ [bavc.org/preserve-media/preservation-tools](http://bavc.org/preserve-media/preservation-tools)

**QCTools Documentation**

→ [bavc.github.io/qctools/](http://bavc.github.io/qctools/)

**AV Artifact Atlas**

→ [bavc.github.io/avaa/](http://bavc.github.io/avaa/)

20

## A Bridge

### **RAWcooked (CLI)**

→ [mediaarea.net/RAWcooked](http://mediaarea.net/RAWcooked)

`rawcooked input_path`

`rawcooked rawcooked_input_file.mkv`

`rawcooked -h`

`man rawcooked`

21

## Make BagIt

### **Bash AVpres (CLI)**

→ [avpres.net/Bash\\_AVpres/](http://avpres.net/Bash_AVpres/)

`make_bagit -i input_folder`

`make_bagit -h`

`man make_bagit`

22

## Verify BagIt

### **Bash AVpres (CLI)**

→ [avpres.net/Bash\\_AVpres/](http://avpres.net/Bash_AVpres/)

`verify_bagit -i input_folder`

`verify_bagit -h`

`man verify_bagit`

23

## Undo BagIt

### **Bash AVpres (CLI)**

→ [avpres.net/Bash\\_AVpres/](http://avpres.net/Bash_AVpres/)

`undo_bagit -i input_folder`

`undo_bagit -h`

`man undo_bagit`

24

## Video Transcoder

**HandBrake** (GUI)

→ [handbrake.fr](http://handbrake.fr)

25

## Audio Editor (and Recorder)

**Audacity** (GUI)

→ [www.audacityteam.org](http://www.audacityteam.org)

26

## Video Compositing

**Natron** (GUI)

→ [natrongithub.github.io](http://natrongithub.github.io)

27

## Compositing, Grading and Restoration

**Resolve** (GUI)

→ [www.blackmagicdesign.com/products/davinciresolve](http://www.blackmagicdesign.com/products/davinciresolve)

28

# Optical Sound Extraction

## **AEO-Light** (GUI)

→ [usc-imi.github.io/aeo-light/](https://usc-imi.github.io/aeo-light/)

## **AEO-Light Manual**

→ [github.com/usc-imi/aeo-light/releases/download/v2.2-beta/AEO-Light-2.2-beta-Manual.pdf](https://github.com/usc-imi/aeo-light/releases/download/v2.2-beta/AEO-Light-2.2-beta-Manual.pdf)

29

# DCP Encoder (and Player)

## **DCP-o-matic** (GUI)

→ [dcpomatic.com](https://dcpomatic.com)

## **DCP-o-matic users' manual**

→ [dcpomatic.com/manual/html/](https://dcpomatic.com/manual/html/)

30

AV Preservation by  
**reto.ch**

Sandrainstrasse 3  
3007 Berne  
Suisse

reto.ch  
info@reto.ch



31