Open Source Video Software: An Inventory

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Introduction

This inventory is the result of an ongoing effort at the Netherlands Institute for Sound and Vision R&D Department at creating an insight in the current availability of open source software for video. The main reason for this research is the current development of Open Images (see below), but it is also aimed at expanding our institutional knowledge and expertise, and to share this within research projects and (collaborative) software development. The goal is to get an overview of the available tools for the whole spectrum, from production to distribution and ultimately consumption. Next to this, we also consider processes involved with preservation, interaction and creative reuse of video.

The publication of this document is meant as a first step towards sharing this knowledge and transforming this research into a collaborative effort. We hope this document can become a starting point for a more comprehensive and elaborate inventory. To make this possible we have used an OpenDocument Text file for this document and licensed it under a Creative Commons license. So feel free to correct and/or add information to this inventory, or – for instance – convert the document into a wiki!

Open Images

As part of Images for the Future, the Netherlands Institute for Sound and Vision and Knowledgeland are developing Open Images. The aim of this project is to offer online access to a selection of archive material to stimulate creative reuse. Reuse includes remixing of archive footage in new videos. Open Images also supports interlinking with other data sources (like Wikipedia), allowing the easy creation of mashups. Access to the content will be based on the Creative Commons model, which proposes a middle way to rights management, rather than the extremes of the pure public domain or the reservation of all rights. The 'open' nature of the project is underscored by adapting open formats and using open source software for its infrastructure. Software resulting from Open Images will also be released under an open source license.

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Please attribute both Maarten Brinkerink and the Netherlands Institute for Sound and Vision, and in case of online reuse please also refer to Open Images.

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Consumption

MPlayer

type	platform	license	website
media player	Linux, Windows, OSX	GNU GPL (v2)	http://www.mplayerhq.hu

MPlayer is a media player for many (open and proprietary) media formats, that runs on all major platforms.

Kaffeine

type	platform	license	website
media player	Linux	GNU GPL	http://kaffeine.kde.org/

Kaffeine is a media player for many (open and proprietary) media formats, that runs on Linux.

xine

type	platform	license	website
media player	Linux	GNU GPL	http://xinehq.de/

xine is a media player for many (open and proprietary) media formats, that runs on Linux

Totem

type	platform	licentie	website
video player	Linux	GNU GPL	http://www.gnomefiles.org/app.php?soft_id=64

Totem is a video player based on xine (see above), with expansive functionality for reproducing video. Totem runs on Linux.

JW FLV

type	platform	license	website
media player	Flash	CC-BY-NC-SA (v2.0)	http://www.jeroenwijering.com/?item=JW_FLV_Player

JW FLV is an embedable Flash media player for websites, that plays multiple (Flash supported) media formats.

Gnash

type	platform	license	website
media player	Flash	?	http://www.gnu.org/software/gnash/

Gnash is an embedable Flash media speler for websites, platforms, and devices, that plays mutiple (Flash supported) media formats.

VLC

type	platform	license	website
media player & media streaming client/ server	Linux, Windows, OSX	GNU GPL	http://www.videolan.org/vlc

VLC is a media player for many (open and proprietary) media formats, that runs on all major platforms. VLC can also function as a streaming client and/or server.

Miro

type	platform	license	website
video and/or internet tv player	Linux, Windows, OSX	GNU GPL	http://www.getmiro.com

Miro is a video and/or internet tv player, that runs on all major platforms. It allows to subscribe to (via RSS), download (via peer-to-peer technology) and watch free video channels in several (HD) video formats. Miro also makes it possible to create your own branded channels (http://www1.ndr.de/unternehmen/presse/pressemitteilungen/pressemeldungndr2180.html).

XIMPEL

type	platform	license	website
interactive media player	Flash	CC-BY-NC (3.0 Netherlands)	http://ximpel.net/

XIMPEL is and eXtensible Interactive Media Player for Entertainment and Learning and offers the possibility to create interactive media applications. It uses the open source Adobe Flex framework, and the open XML description format. XIMPEL's modular approach allows for flexibility and extendibility. XIMPEL is being developed at VU University in Amsterdam, The Netherlands.

Kaltura

type	platform	license	website
video distribution platform	Wiki, Wordpress, Drupal, PHP, Rails	?	http://www.kaltura.com

Kaltura is a complete video distribution platform that builds on different other internet platforms and frameworks as a video player with additional functionality or uploading and remixing content.

My_Embed

type	platform	license	website
library	Javascript	GNU GPL v2	http://metavid.org/wiki/Mv_Embed

Mv_Embed is a javascript library for easy embedding of ogg theora/vorbis media with the html5 tag.

SMPlayer

type	platform	license	website
media player	Linux Windows	GNU GPL	http://smplayer.sourceforge.net/index.php?tr_lang=en

SMPlayer is a complete front-end for MPlayer, from basic features like playing videos, DVDs, and VCDs to more advanced features like support for MPlayer filters and more.

Distribution

VLC

type	platform	license	website
media player & media streaming client/ server	Linux, Windows, OSX	GNU GPL	http://www.videolan.org/vlc

VLC is a media player for many (open and proprietary) media formats, that runs on all major platforms. VLC can also function as a streaming client and/or server.

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Icecast

type	platform	license	website
streaming media server	Windows, Linux	?	http://www.icecast.org

Icecast is a streaming media server for Windows and Linux, that supports several (open and proprietary) audio and video formats.

Ices2

type	platform	license	website
Icecast client	Linux	?	http://www.icecast.org/ices.php

Ices2 is client for Icecast (see above) streaming video, and runs on Linux.

Theorur

type	platform	license	website
Icecast media streaming GUI	Linux	GNU GPL (v2)	http://sarava.org/theorur/

Theorur is a GUI for Icecast (see above), and runs on Linux.

Ogg Streamer

type	platform	license	website
live streaming media server	Windows	?	http://dir.visonair.tv/streamer.php

Ogg Streamer is a live streaming media server, that works with Icecast (see above) servers. Ogg Streamer is developed for the Visonair.tv network (http://www.visonair.tv), and runs on Windows.

Visionair

type	platform	license	website
streaming media player	Windows	?	http://www.visonair.tv/player.php

Visionair is a streaming media player for Windows, developed for the Visionair.tv network (see above).

Flumotion

type	platform	license	website
streaming media server	?	GNU GPL	http://www.flumotion.net/

Flumotion is a streaming media server.

Cortado

type	platform	license	website
streaming video player	Java	GNU GPL	http://www.flumotion.net/cortado/

Cortado is a Java streaming video player, that integrates Flumotion Theora video streams on websites.

PeerCast

type	platform	license	website
peer-to-peer streaming media server	Linux, Windows, OSX	GNU GPL	http://www.peercast.org

PeerCast is a streaming media server that utilises peer-to-peer distribution, and runs on all major platforms.

Geekast

type	platform	license	website
PeerCast GUI	Linux	GNU GPL	http://home.gna.org/geekast/

Geekast is a GUI for PeerCast (see above), and runs on Linux.

Swarmplayer

type	platform	license	website
peer-to-peer video streaming client	Linux, Windows, OSX	?	http://www.tribler.org/browser/abc/branches/mainbranch/Tribler/Player/swarmplayer.py

Swarmplayer is a peer-to-peer video streaming client that runs on all major platforms. Swarmplayer is being developed by TU Delft.

Tribler

type	platform	license	website
peer-to-peer media distribution client/server	Linux, Windows, OSX	LGPL	http://www.tribler.org

Tribler is a peer-to-peer media distribution platform that runs on all major platforms. It combines BitTorrent (http://www.bittorrent.com) technology with advanced social and semantic functionality. Currently Tribler is experimenting with Video-on-Demand (VoD) and live streaming. Tribler is developed by TU Delft.

P2P-Fusion

type	platform	licentie	website

Peer-to-peer media distribution client/server	Linux, Windows, OSX	?	http://www.p2p-fusion.org

P2P-Fusion is a modular media distribution platform that runs on almost all major platforms. It's curently under development within a EU funded consortium of Finish, Hungarian and Dutch institutes (including Sound and Vision). P2P-Fusion is partly based on the Tribler platform (see above).

Kaltura

type	platform	license	website
video distribution platform	Wiki, Wordpress, Drupal, PHP, Rails	?	http://www.kaltura.com

Kaltura is a complete video distribution platform that builds on different other internet platforms and frameworks as a video player with additional functionality or uploading and remixing content.

Elisa

type	platform	license	website
media center	Linux, Windows, OSX (under construction)	?	http://elisa.fluendo.com/

Elisa is an open source cross-platform media center connecting the Internet to an all-in-one media player.

Permovi

type	platform	license	website
media center	Linux	GNU LGPL	http://forge.novell.com/modules/xfmod/project/?permovi

Permovi is a Linux-based HTPC (Home Theatre PC) application. It transforms a PC into a standalone CD-player/tuner/DVD-player/PVR device.

Mangement

SURFmediaCore

type	platform	license	website
video distribution platform	internet	?	http://www.surfmedia.nl

SURFmediaCore is a complete video distribution platform with advanced ways to protect the material. A future FLOSS general release was announced recently.

Noterik

type	platform	license	website
video distribution platform	internet	?	http://www.noterik.nl

Noterik offers custom video distribution solutions for the internet (syndication, streaming, management). A future FLOSS general release was announced recently.

Plumi

type	platform	license	website
video distribution platform	Plone (internet)	GNU GPL, Zope Public License	http://www.plumi.org

Plumi is an advanced video distribution platform with, based on the Plone CMS (http://www.plone.org).

ccHost

type	platform	license	website
open content management system	internet	GNU GPL (v2)	http://wiki.creativecommons.org/CcHost

ccHost is an open content management system designed to distribute and reuse Creative Commons licensed media. Besides this it creates a visual representation of any remixing practices of the hosted media.

OpenCollection

type	platform	license	website

collection management system	internet	GNU GPL (v2)	http://www.opencollection.org/

OpenCollection is a web-based content management system, designed for museums, archives, and digital collections. The system handles multiple (proprietary) media formats, and allows for advanced meta data management.

V2V Drupal Module

type	platform	license	website
video importer	Drupal (internet)	?	http://www.v2v.cc/development

V2V Drupal Module is a Drupal CMS (http://www.drupal.org) extension, to be able to encorporate video material from the V2V network within a website.

MetaVidWiki

type	platform	license	website
video distribution platform	MediaWiki	GNU GPL v2	http://metavid.org/w/index.php/MetaVidWiki

MetaVidWiki (MVW) is a free extension of MediaWiki – the wiki-system powering Wikipedia – that enables community engagement with audio/visual media assets and associative temporal metadata.

Videodefunct

type	platform	license	website
video CMS	WordPress	?	http://videodefunct.net/about/

Videodefunct is a customised Video Content Management System based on the blogging application WordPress. Built using a combination of the PHP and jQuery programming languages, the system utilises tagging and folksonomy classification as a way to present related video content as multiple clips in a multi-window interface, the ‘Videodefunct Player’.

dmmdb

type	platform	license	website
multi media database	Linux	GPL	http://giss.tv/wiki/index.php/Distributed_Multi-Media_DataBase_

			%28_dmmdb_%29_

dmmdb aims at publishing a multimedia database system that would enable each content provider to share his media archive with G.I.S.S. Participants.

vPIP

type	platform	license	website
WordPress plugin	WordPress	?	http://wiki.vpip.org/index.php?title=Wordpress_Install

vPIP is a Wordpress Plugin that places links to the vPIP scripts and style sheet into the header section of the blog page. With those links, either the Media Entry video and audio entry areas or the the code generator ("Generate vPIP HTML Code" app) is available below where you write the blog entry.

VideoPress Video Archive

type	platform	license	website
WordPress plugin	WordPress	?	http://changelog.ca/project/VideoPress_Video_Archive

VideoPress Video Archive is a Wordpress Plugin that allows publishers, like you, to add a Video Archive (with thumbnails and everything... instead of the default text archive). VideoPress Recent Videos needs vPIP or Video Wrangler (or another WordPress plugin that implements the WordPress Video API).

Video Comments

type	platform	license	website
WordPress plugin	WordPress	?	http://www.davidmeade.com/wordpress-plugins#videoComments

Video Comments is a WordPress plugin that will add fields to the comment form to allow visitors to leave video responses and will include these responses as enclosures in the comment rss feed. Output of video responses is css configurable, and with the addition of vPIP, videos will play “inline”.

Storage

V2V Server

type	platform	license	website
video server	Linux	?	http://v2v.cc/development

V2V Server is a video server that works as a node in the V2V network. New video material will appear on all V2V Serves simultaneously, and hence increases availability. V2V Servers run on Linux.

V2V Upload Client

type	platform	license	website
video upload client	Linux, Windows, OSX	?	http://v2v.cc/development

V2V Upload Client is a video upload client for the V2V network. It uses BitTorrent technology to upload video material to V2V Servers (see above), and runs on all major platforms. It also allows for adding meta data.

V2V KeepAlive

type	platform	license	website
V2V Server module	Linux	?	http://v2v.cc/development

V2V KeepAlive is a module for V2V Servers (see above) that makes it possible to keep hosting video material on a single V2V Server, to ensure its existence when the material disappears from the V2V network.

ccPublisher

type	platform	license	website
media upload client	Linux, Windows, OSX	GNU GPL (v2)	http://wiki.creativecommons.org/CcPublisher

ccPublisher is a media upload client for Creative Commons licensed material, that runs on all major platforms. It automatically enriches media files with meta data about the specific Creative Commons license that is used and then uploads to the Internet Archive (http://www.archive.org) or

another domain of choice.

Enrichment

ccREL

type	platform	license	website
meta data specification	RDF, XMP	?	http://wiki.creativecommons.org/CcREL

ccREL is a specification for adding meta data about Creative Commons licenses to media files.

TX metadata standard

type	platform	license	website
metadata standard for video	Atom	?	http://transmission.cc/TXFeed

TX metadata standard is a draft standard for markup of video metadata.

Annodex

type	platform	license	website
Annotation plugin for Firefox	Linux Windows OS X	?	http://www.annodex.net

Annodex is a Mozilla plugin. The plug-in is easily installed on OSX, Linux and Windows, and works on the basis of Theora files. Comments and links can be inserted and are displayed when you play the file in Firefox.

Jubler

type	platform	license	website
subtitle editor	Lunix, Windows, OSX	GNU GPL	http://www.jubler.org/

Jubler is a tool to edit text-based subtitles. It can be used as an authoring software for new subtitles or as a tool to convert, transform, correct and refine existing subtitles. The most popular subtitle formats can be used. Preview of the subtitles in realtime or in design time, spell checking, translation mode and styles editing are some of the main features.

MIYU

type	platform	license	website
subtitle editor	OSX	under revision	http://www.fluffalopefactory.com/miyu/

MIYU is an all-in-one solution for video subtitling and translation management on Mac OS X.

Advene

type	platform	license	website
video annotation system	Linux Windows OSX	?	http://liris.cnrs.fr/advene/index.html

Advene (Annotate Digital Video, Exchange on the NEt) is an ongoing project in the LIRIS laboratory (UMR 5205 CNRS) at University Claude Bernard Lyon 1. It aims at providing a model and a format to share annotations about digital video documents (movies, courses, conferences...), as well as tools to edit and visualize the hypervideos generated from both the annotations and the audiovisual documents.

Encoding

Ogg Theora

type	platform	license	website
video codec	-	BSD License	http://www.theora.org

Ogg Theora is a open standard video codec, for compressing audiovisual media. It offers multiple qualities and resolutions (up until HD).

FFmpeg

type	platform	license	website
video encoder	Linux, Windows, OSX	LGPL	http://ffmpeg.mplayerhq.hu/

FFmpeg is a command-line video encoder for video conversion from and to almost every video format (open and proprietary), that runs on all major platforms.

Gfrontend

type	platform	license	website
video encoder	Windows	?	http://www.freewarefiles.com/GFrontend-ffmpegtheora-V-Final_program_33306.html

Gfrontend is a GUI for FFmpeg under Windows, that allows to convert several (open and proprietary) video formats to Ogg Theora.

MediaCoder

type	platform	license	website
media encoder	Windows	?	http://mediacoder.sourceforge.net/

MediaCoder is a media encoder for conversion from and to several (open and proprietary) media formats, that runs on Windows.

Simple Theora Encoder

type	platform	license	website
video encoder	OSX	?	http://v2v.cc/~j/SimpleTheoraEncoder/

Simple Theora Encoder is a video encoder from several (open and proprietary) video formats to Ogg Theora, that runs on OSX.

Dirac

type	platform	license	website
video codec	Linux	Mozilla Public License GNU GPL v2 GNU LGPL MIT License (Schrödinger implementation only)	http://diracvideo.org/

Dirac is an advanced royalty-free video compression format designed for a wide range of uses, from delivering low-resolution web content to broadcasting HD and beyond, to near-lossless studio editing.

ffmpeg2theora

type	platform	license	website
video converter	Linuxs Windows OSX	?	http://v2v.cc/~j/ffmpeg2theora/

ffmpeg2theora is a simple command line converter to create Ogg Theora files.

Production

Kino

type	platform	license	website
video editor	Linux	GNU GPL	http://www.kinodv.org

Kino is a video editor, that runs on Linux.

Avidemux

type	platform	license	website
video editor	Linux, Windows, OSX	GNU GPL	http://avidemux.sourceforge.net/

Avidemux is a simple video editor suited for editing several (proprietary) video formats, that runs on all major platforms.

Cinelerra

type	platform	license	website
video editor	Linux	GNU GPL	http://www.heroinewarrior.com/cinelerra.php3

Cinelerra is an advanced video editor suited for editing several (proprietary) video formats, that runs on Linux.

PiTiVi

type	platform	license	website
video editor	Linux	LGPL	http://www.pitivi.org/wiki/Main_Page

PiTiVi is a video editor – still under construction – that runs on Linux.

AviSynth

type	platform	license	website
video editor	Windows	GNU GPL	http://avisynth.org/mediawiki/Main_Page

AviSynth is a video editor for post-production and non-linear editing based on scripting, that runs on Windows.

FreeJ

type	platform	license	website
video mixer	Linux, OSX	GNU GPL	http://freej.org/

FreeJ is a video mixer with several effects for image manipulation. FreeJ can also be combined with Icecast (see above), and runs on both Linux and OSX.

dyne:bolic

type	platform	license	website
operating system	Linux	GNU GPL	http://www.dynebolic.org/

dyne:bolic is a operating system shaped on the needs of media activists, artists and creatives as a practical tool for multimedia production.

Ubuntu Studio

type	platform	license	website
operating system	Linux	?	http://ubuntustudio.org/

Ubuntu Studio is a operating system aimed at the GNU/Linux audio, video and graphic enthusiast as well as professional.

DeVeDe

type	platform	license	website
video disc creator	Linux	?	http://www.rastersoft.com/programas/devede.html

DeVeDe is a program to create video DVDs and CDs (VCD, sVCD or CVD), suitables for home players, from any number of video files, in any of the formats supported by Mplayer (see above).

Kdenlive!

type	platform	license	website
video editor	Linux	GNU GPL	http://kdenlive.sourcefo

			rge.net/wiki/index.php?title=Kdenlive_features

Kdenlive! is a Non-Linear Video Editing Suite for KDE.

Celtx

type	platform	license	website
media pre-production software	Linux Windows OSX	CePL v 1.2	http://www.celtx.com/

Celtx is the world's first all-in-one media pre-production software. It has everything you need to take your story from concept to production.

CinePaint

type	platform	license	website
image retouching tool	Linux Windows OSX	GNU GPL	http://www.cinepaint.org/

CinePaint is a deep paint image retouching tool that supports higher color fidelity than ordinary painting tools. CinePaint opens high fidelity image file formats such as DPX, 16-bit TIFF, and OpenEXR, and conventional formats like JPEG and PNG.

Lumiera

type	platform	license	website
video editor	still under development	still under development	http://lumiera.org/

Lumiera is a Free/Open Source Non-Linear Video Editing (NLE) application project for Linux developed by the CinelerraCV (see above) community.

Open Movie Editor

type	platform	license	website
video editor	Linux	GNU GPL v2	http://www.openmovieeditor.org

Open Movie Editor is a free and open source video editing program, designed for basic movie making capabilities. It aims do be powerful enough for the amateur movie artist, yet easy to use.