

QUASE- CINEMA

VJ Software

2

FUNDAÇÃO NACIONAL DE ARTES
funarte

Projeto contemplado pela Fundação Nacional de Artes
no Programa de Bolsas de Estímulo à Produção Artística

What is Quase-Cinema

Quase-Cinema is a computer software dedicated to live video editing. Live presentations are made in front of the public, being watched as created.

The name Quase-Cinema (Almost-Cinema) is a homage to Brazilian artista Hélio Oiticica, who used this name for his audiovisual projects (“a field of transgressive experiences within the universe of the media or the images and sounds produced technically”).

http://en.wikipedia.org/wiki/Helio_Oiticica

The project for the creation of a VJ software was born as my graduation thesis for the Fine Arts course at the University of Brasília, under the orientation of professor Elyeser Szturm.

The current version of the software (2) was the fruit of a grant for artistic creation from Brazilian National Arts Foundation (Funarte).

As Marshal McLuhan said, “Any of the new expression mediums is, in a certain way, a new language, a new experience coding generated collectively by new work habits and inclusive collective awareness.”

“Videoart will be, on the universe of technical images, the form of artistic expression that will assume, more radically than the other, the task to produce a iconography explicitly contemporary, in a way to reunite technical images with the aesthetic production of our times (...) turning this quest on it's own reason to be.” (Arlindo Machado)

Alexandre Rangel - VJ Xorume

Installing Quase-Cinema

Download the latest version of the software from the project's website www.quasecinema.org . The naming of the program version is based on the release date and platform, as the following example.

QuaseCinema2.2009.05.28_MacOS =

QuaseCinema2.year..month.day_platform

Mac OS X

- Unpack the downloaded .tgz file.
- Open the QuaseCinema.dmg file.
- Move the QuaseCinema folder to your applications folder.
- To create a shortcut, open the QuaseCinema/bin folder and drag the Quase-Cinema icon to your dock.

Windows XP / Vista

- Unpack the downloaded .zip file.
- Move the QuaseCinema folder to your applications folder.
- To create a shortcut, open the QuaseCinema/bin folder and drag the Quase-Cinema icon to your dock.
- Install the Quicktime software, if needed (free download on www.apple.com/quicktime)

Computer config

The recommended computer configuration is:

- Processor speed greater than 2 Ghz.
- RAM greater than 2 GB.
- Fast hard disk (7200 RPM or greater). The image database can be as big as the free disk space.
- Video card with TV out option.

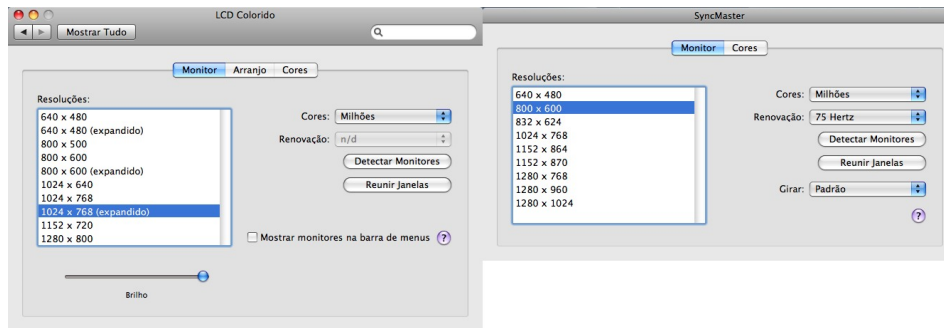
The minimum computer configuration is:

- Processor speed 1 Ghz.
- RAM memory 1 GB.
- 1 GB of free disk space.

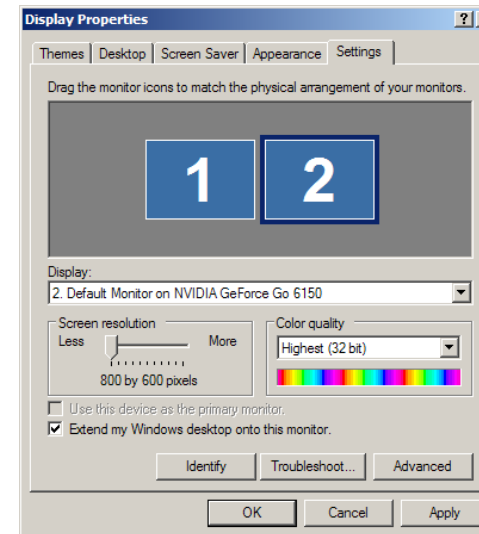
Configuring your computer

Mac OS X

- Access System Preferences > Monitors.
- Configure monitor 1 (left) with the resolution of 1024 x 768 pixels.
- Configure monitor 2 (right) with the resolution of 800 x 600 pixels.



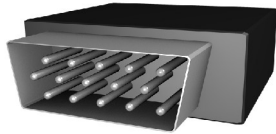
Windows XP / Vista



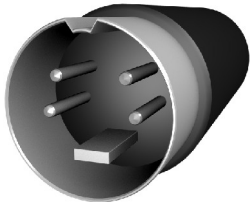
- Access Start > Control Panels > Monitors.
- Configure monitor 1 (left) with the resolution of 1024 x 768 pixels.
- Select monitor 2 and enable the option “extend desktop onto this monitor”.
- Configure monitor 2 (right) with the resolution of 800 x 600 pixels.

Cabling

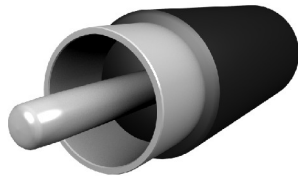
Research about the available output options from your notebook or computer video card and plan your cabling accordingly. Follows the descriptions of the cables used in live video setups, listed in decreasing order of signal quality.



VGA (DB 15) - High quality connection between computer and monitor or video projector. Editing desks that accept this standard are very expensive.
DVI cabling is similar, but carries an even better digital signal.
Uses high cost cables.



S-VHS (Super Video) - Medium quality connection between computer and video projector.
Signal accepted on standard editing decks.
Uses medium cost cables.



Composite (RCA) - Low quality connection between computer and video projector.
Signal accepted on standard editing decks.
Uses low cost cables.

Extra equipment



System example made of semi-portable computer, touch screen monitor, editing desk and preview monitor.

A few extra equipments can be used to increment your live performances, such as:

- **Editing desk:** allows mixing images coming from the computer with other sources (DVD, live camera, other computer...).
- **Video monitor:** allows the previsualisation of the image feeds connected to the editing desk. A small television can be used, if it has a video input connection.
- **Video camera:** allows adding live video to your image mix. The image feed can be used on a editing desk or directly via the Quase-Cinema software (using USB or Firewire connections).
- **DVD player:** allows using images recorded on video DVDs. The player is connected to a editing desk.
- **Touch screen monitor:** allows all the interface to be controlled on-screen, without the need to use the mouse or the keyboard.

Using your videos

The Quase-Cinema download package contains a few test videos. You will soon want to add your own videos to your mixes. To do so, copy your movie folders into the folder QuaseCinema/bin/data/_videos.

So, the folder _videos will contain your own videos folders inside of it, as in the example below.

QuaseCinema/bin/data/_Videos/Animations

QuaseCinema/bin/data/_Videos/People

... and so on, separating your videos on distinct folders.

Video file format

The Quase-Cinema software works with Quicktime video files (.mov).

The parameters that can be altered on the creation of the Quicktime files are movie size, frames per second and compressor settings. These parameters can be altered when creating or converting your movie files.

Your videos can have as much quality as the computer running the software is powerful (CPU, disk speed).

Watch the fps (frames per second) display at the bottom left side of the interface. This number should be between 30 and 60 for a smooth video playback. It is a relation between the computer processing power and the quality/weight of the videos being played at the time.

The parameters that influence the quality/weight of a video are described below.

Size

The recommended size (in pixels) for the video files are:

320 x 240 - for use on slow computers.

400 x 300 - medium quality size.

480 x 360 - recommended for most videos / systems.

640 x 480 - excellent quality size, but heavy to playback.

800 x 600 - recommended for videos with little movement.

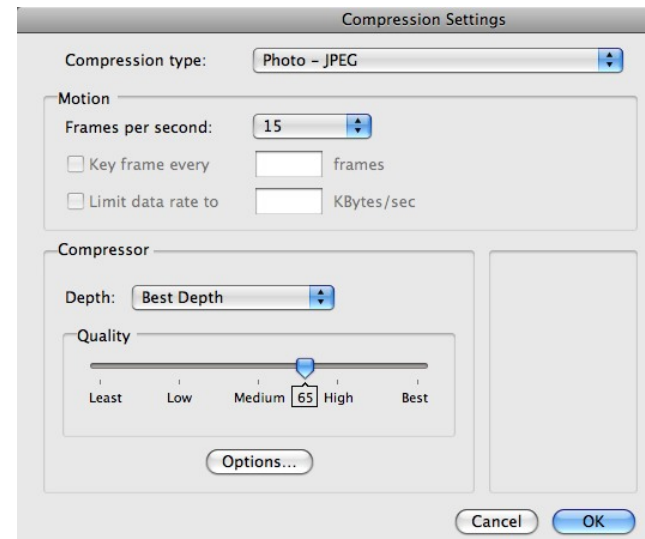
Compressor

The compressor (or CODEC, compressor /decompressor) is an algorithm used for video encoding.

Quicktime accepts many Codecs, but the one indicated for live editing work is the Quicktime Photo-Jpeg compressor. On its settings page, you can set the bit depth (grayscale or color) as well as the image quality (I recommend values between 45% and 75%).

Frames per second

I recommend setting the framerate from 15 to 30 frames per second (fps), depending on your system.



Using Quase-Cinema

The Quase-Cinema software is divided in two modules, main and live cinema.

The main module is used for the more dynamic and improvised performances, while the live cinema module is used for a more structured montage of audio and video.

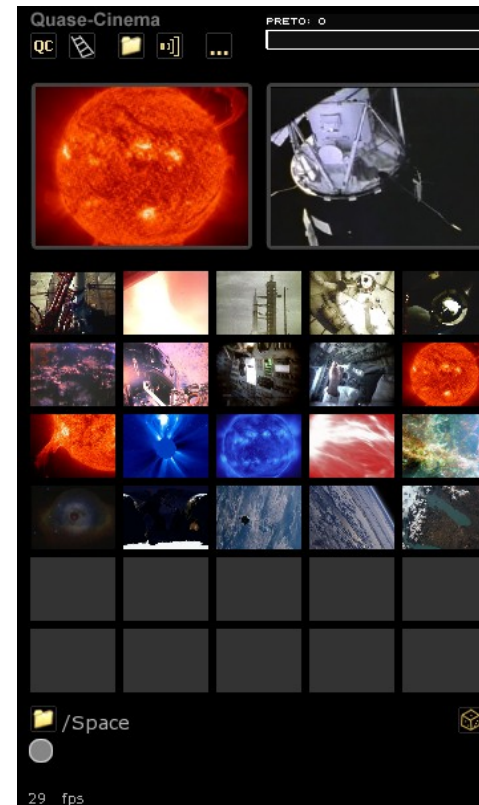
You can switch between the modules using the two icons on the top left corner of the interface.



The two icons following - folder and speaker - allow opening different video and audio directories.

The fifth icon open the help and preferences screen.

Media window and previz screens



The media window is present on both modules. It is used for browsing the contents of video and audio directories available for the program.

Above the media window sits the two previz screens:

The left screen shows the contents of the video file under the mouse pointer, so you can see the video before clicking on it.

The right screen shows the result of the current composition, that is, it shows the video feed coming out of the system.

The dice icon below the media window changes, randomly, the folder being browsed.

If the current folder has more than 45 video files, round paging icons show beneath the folder name.

Main module

The main module is the part of the software that can mix images with more freedom and rhythm.

The module is divided in 8 image channels, each used for a different type of media.



The software has a master fader on the top of the interface, which allows fading the whole output to black.

- **Channels 1 to 4:** movie channels. Accepts Quicktime .mov files.
- **Channel 5:** shows USB or Firewire live camera input.
- **Channel 6:** shows 3D files.
- **Channel 7:** shows still image files (png, jpg, bmp). PNG files can have an alpha channel for transparency.
- **Channel 8:** utilizado para digitação de texto.

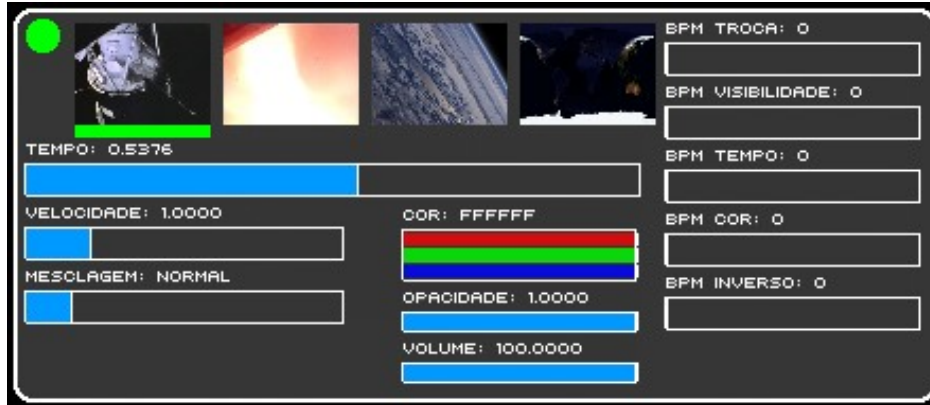
To select a channel, click on its gray area. A white contour indicates the selected channel. Keyboard shortcuts act on the currently selected channel.

Up and down arrows change the active channel. To access the channels in a fast manner, type the keyboard number from **1** to **8**.

Each channel has a round icon to control its visibility (green when on and red when off). The toggle a channel visibility, click on its icon, without the need to first select the channel. The shortcut key **delete (backspace)** toggles the visibility of the selected channel.

Video channels

The main module has 4 video channels, each with individual controls, as follows.



Controlling the videos

It is possible to control the following parameters of a video channel:

- **Tempo**: controls the position of the playback head, that is, the part of the video being played.
- **Speed**: controls the speed of the video playback, from zero (paused) to 5 times faster than normal. Shortcuts left key and right key control the speed of the selected video channel.
- **Blend**: controls how the colors of the channel influence the colors of the channels behind it.
- **Color**: controls the color of the channel images..
- **Opacity**: controls the transparency of the channel, when blend is set to "Normal".
- **Volume**: controls the volume of the sound track, if the video file has sound.

Minisequences

Each video channel (1 to 4) can contain four video files organized in the form of sequences.

Video channels shortcuts

Space bar: changes the direction of playback (forward/backward) of the videos on the selected channel.

Left / Right arrows: change the speed of playback of the videos on the selected channel.

Beats per minute controls (BPM)

The video channels have controls based on beats per minute (BPM) measurements. Use these controls to match the editing rythim to match a sound track. If you set the BPM slider to 240, the action will repeat itself 240 times per minute.

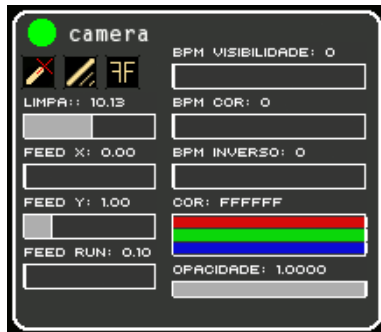
The BPM parameters are:

- **BPM Change**: changes the active video on a channel minisequence.
- **BPM Visibility**: changes the visibility state of a video channel, making it blink on and off.
- **BPM Tempo**: changes the position of the playback head randomly.
- **BPM Color**: changes the color of the video channel randomly.
- **BPM Invert**: changes between he normal color of the video channel and its inverse color.

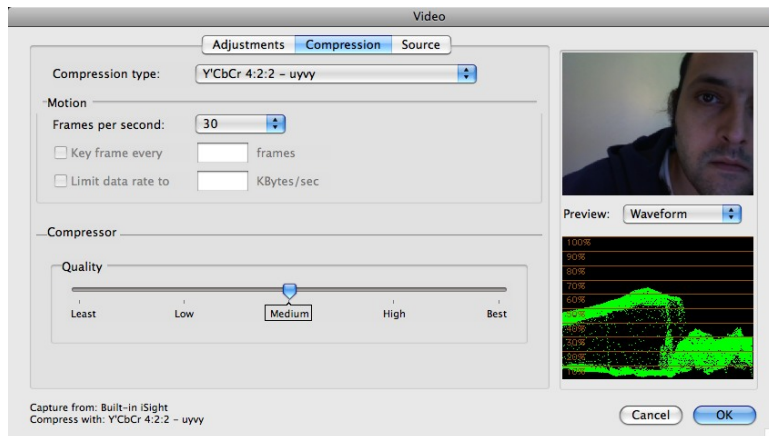
Using live camera images

You can add live video from a camera to your image mix. Quase-Cinema allows the use of a webcam via USB or a MiniDV camera via Firewire. Live camera images are displayed on channel 5.

You can switch between connected cameras by selecting the channel 5 and hitting the **right arrow key**.



To configure the live camera images settings, such as brightness and contrast, enter the window mode (shortcut **F**) and access shortcut **V**.



Light Paint

Light paint is a drawing technique used by photographers and artists such as Man Ray and Picasso since the Thirties. A mixture of painting and performing art, the traditional process requires a light source to be moved while a photographic camera makes a long time exposure. The transposition of the process to video art allows the generated strokes to be seen instantly on projections or video screens.

To work with the Quase-Cinema light paint system, move light emitting objects (lantern, cell phone, lighter - be careful!) in a dark site on the front of the camera.

This module was developed on a Quase-Cinema workshop in Aalborg (Denmark), on invitation by the collective Tossesreger (www.tossesreger.org).

The following buttons control the light paint system:



Turns light painting on/off.



Turns the dripping effect on/off (*feedback*).



Inverts the camera image horizontally.

The following sliders control the behavior of the painting:

- Clear** Determines a timer for clearing the painting.
- Feed X** Controls the amount of horizontal dripping.
- Feed Y** Controls the amount of vertical dripping.
- Feed Run** Controls the speed of the dripping effect.

3D files

Quase-Cinema allows the visualization and manipulations (size and rotation transformations) of 3D files (.3ds format).

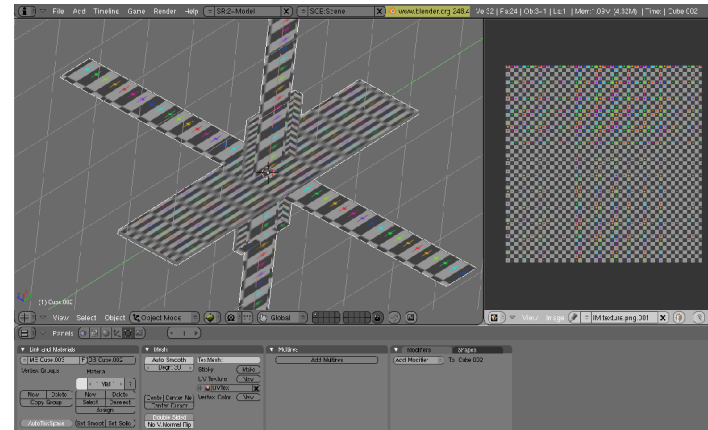
The 3D file and its associated texture should be on the hard disk, on the directory QuaseCinema/bin/data/_3D

3D files are shown on channel 6.



To create or convert files to the .3ds format, I recommend the open source 3D suite Blender (download on www.blender.org). You can texture the model with UV mapping techniques.

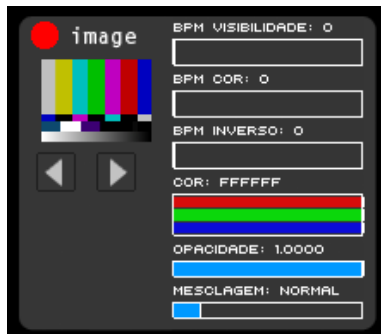
A .blend file is supplied on the Quase-Cinema download package, to facilitate the creation/conversion process.



Still images

The Quase-Cinema software allows displaying still images of the formats JPG, BMP and PNG (PNG files can have a alpha channel for transparency).

Still images are shown on channel 7.



Text

Channel 8 is used for displaying text typed just on time. To compose a text message:

1. To type the text, press key **T** or click on the icon **T**.
2. After typing, press key **return (enter)**.
3. To change the typeface, click on the icon **A**.
4. For the text to be shown, toggle the visibility of channel 8.



Recording your performances

You can record parts of your performance as Quicktime files, for using right away on the mix or for further editing on other applications.

Type **N** to start a recording and **M** to finish it.

Recorded files are written the the following directory:

QuaseCinema/bin/data/_videos/_Recordigs

Live Cinema module

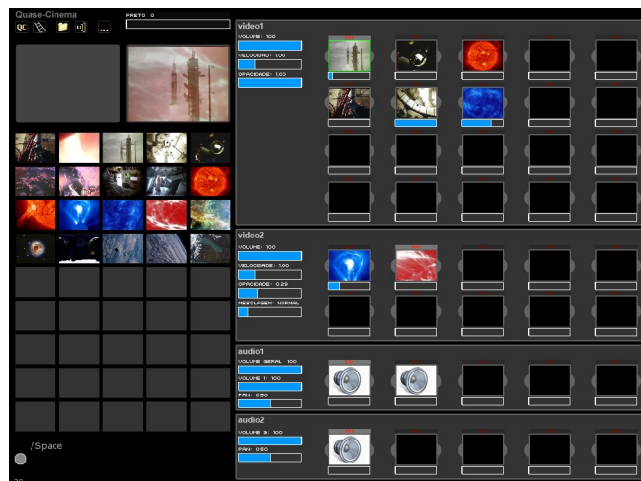
The practice of live cinema consists of making an audiovisual narrative, editing and improvising live.

Quase-Cinema's live cinema module allows formatting a narrative, permitting (or not) the computer to make certain edit decisions.

The live cinema module has two video channels and two independent audio channels.

Each channel has its own controls for speed, volume and position of the playback head.

The live cinema module interface:



Base video channel

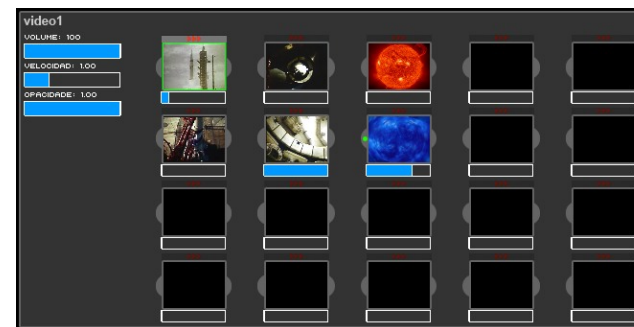
Overlay video channel

Audio channel 1

Audio channel 2

Base video channel makes up the the structure of the montage.

The montage runs from left to right. When the file being playing reaches its end, the playback head moves to the next column, choosing the next file randomly. If you want to specify what file is supposed to play next, click on the file's left side, where a green dot will appear, indicating the next file to be played.



Each column represents a shot on the montage.

Each line contain a clip option for the shot (up to four).

The overlay video channel allows adding a second layer, with controls for blending mode, transparency and volume (if the clip has audio).

Audio channels **1** and **2** allow the inclusion of sound of the montage, such as music or narration.

It's worthy remembering that videos on the base and overlay channels can have embeded audio tracks, such as actors speaking.

All channels have individual audio volume controls.

Shortcuts

1 to 4 - selects channels 1 to 4.

5 - selects the live camera channel.

6 - selects the 3D image channel.

7 - selects the still image channel.

8 - selects the text channel.

delete (backspace) - toggles the visibility of the selected channel.

space bar - inverts the direction of the playback of the selected video channel (1 to 4).

left arrow - slows down the speed of the selected video channel (1 to 4).

right arrow - speeds up the playback of the selected video channel (1 to 4).

down arrow - selects next channel.

up arrow - selects previous channel.

f - toggles between windowed and full screen modes.

v - opens the live video configuration screen (enter the windowed mode - **f** - first).

i - inverts the colors of the selected video.

t - starts the input of text (hit return/enter to finish typing).

H - opens the preferences screen.

s - saves the output frame on the hard disk as a .BMP file.

n - starts the recording of the performance (as a Quicktime file).

P - toggles full screen preview on / off.

n - starts recording a movie file.

m - finishes recording of movie file.

Reference links

Experimental cinema/ Video art / Electronic art

Vídeo arte - http://en.wikipedia.org/wiki/Video_art
Artists - http://en.wikipedia.org/wiki/List_of_video_artists
Center for Visual Music - www.centerforvisualmusic.org
Andy Warhol - http://en.wikipedia.org/wiki/Andy_Warhol
Bill Viola - www.billviola.com
Corpos Informáticos - www.corpos.org
Fluxus - <http://en.wikipedia.org/wiki/Fluxus>
Nam June Paik - www.paikstudios.com
Wolf Vostell - http://en.wikipedia.org/wiki/Wolf_Vostell

Sites VJing

Create Digital Motion - www.createdigitalmotion.com
Le Collagiste - <http://blog.lecollagiste.com>
Perpetual Art Machine - www.perpetualartmachine.com
rraul Visual Jôquei - <http://rraurl.com/blogs/visualjoquei>
VJ Forums - <http://vjforums.com>
VJ.TV - <http://vj.tv>
VJ Kung Fu - <http://vjkungfu.tv>

VJs

AddictiveTV - www.addictive.com (England)
Alexis - www.visualfarm.com.br (Brazil)
Anyone - www.anyone.org.uk (England)
Astronauta Mecânico - www.astronautamecanico.com (Brazil)
Bijari - www.bijari.com.br (Brazil)
Desconstrução - www.desconstrucao.com.br (Brazil)
Eletro-I-Man - www.festivalvisualbrasil.com (Spain)
Embolex - www.embolex.com.br (Brazil)
Inside Us All - www.thepixeladdicts.com/inside-us-all (England)

SOLU - www.solu.org (Spain)
United Visual Artists - www.uva.com.uk (England)
1mpar - <http://vj.1mpar.com> (Brazil)
Neef - www.vjneef.nl (Netherlands)
Spetto - www.visualradio.com.br (São Paulo, Brazil)
United Visual Artists - <http://www.uva.co.uk> (England)

Video editing and compositing applications

Blender - www.blender.org
Premiere - www.adobe.com
Quicktime - www.apple.com/quicktime
VirtualDub - www.virtualdub.org

Image creation/editing applications

Blender 3D - www.blender.org
GIMP - www.gimp.org

Video editing desks

Edirol V4, V8 - www.roland.com
Numark AVM02 - www.numark.com
Vixid VJX16-4 - www.vixid.com

C++ programming language

<http://pt.wikipedia.org/wiki/C++>
<http://www.research.att.com/~bs/C++.html>
openFrameworks - www.openframeworks.cc