

Open source, shareware, and other free software

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Please let me know of outdated links, errors, suggestions, and comments

As a creative CAD professional I know as well as anyone that software companies lock us into upgrade cycles by any means they can. This obsolescence-based marketing model doesn't encourage code writers to improve simplicity, stability, and speed (something that users would really appreciate). It does encourage the rush development of marketing based features regardless of their actual value to users. Open source software by contrast costs nothing, works well, and (being written by volunteers) isn't driven by a financial incentive. As a result speed and stability are impressive, hardware requirements are minimal, and features are determined by users' feedback to the development community rather than marketing decisions.

Open source will never replace for-profit software unless this world suddenly becomes a good and perfect place, but even as things are it offers more than most people realize. Try some yourself: open your sources.

A few definitions:

OS – open source, meaning the code is available for inspection and revision. No cost to the user, may be a manual or help pages on the web site, generally help is provided by user forums.

SW – shareware, meaning the code is proprietary and copyright, but usage of the program is free. Small donations to the developer are encouraged and may unlock additional features.

FS – free software produced for commercial purposes, generally a file reader, viewer, or player. May have limited productivity features with additional features available for purchase.

Win/Mac/Linux – operating systems for which the software is available.

All the software listed below is standalone: ie, it doesn't require you to work in the cloud by uploading your files to a server, and (apart from items like FTP clients) functions without an internet connection. I favor open source software compiled for all three major platforms as it is more likely to be written and maintained by idealistic and knowledgeable enthusiasts. All the programs listed below I know and use; the best website that I know for further open source software is www.sourceforge.net. There is a comprehensive article on free and open source software at http://en.wikipedia.org/wiki/List_of_free_software_packages and thirty open source apps for web designers at <http://sixrevisions.com/tools/30-useful-open-source-apps-for-web-designers>

Operating systems

Linux – www.ubuntu.com – I find Ubuntu the most versatile and best documented flavor of Linux, though if you get seriously into open source operating systems another version may suit your needs better. The current Ubuntu looks like a better designed version of Windows and runs fast on old machines; I use it regularly to show videos in trade shows and bring old machines back to life for additional workstations in the studio. You can create a “dual boot” system on a computer with enough disc space and choose which operating system to run on startup. Beginners to Linux might want to contact their local users' group for advice and tuition: in Santa Cruz this would be www.scruz.org.

Linux Mint – <http://www.linuxmint.com> – supposedly the most user-friendly version of Linux, and particularly easy to download and install additional software.

VirtualBox (OS: Win/Mac/Linux) – www.virtualbox.org – is a virtualization product free for home use that allows you to run programs written for Windows, Mac, or Linux on any other operating system. ComputerWorld has a review of it at <http://bit.ly/d8dA2j>. Mainly useful if there are some Windows programs you absolutely have to run on Mac or Linux and you don't want to purchase them – even if available for that OS – a second time.

There is a good comparison of twenty free operating systems at <http://downloadsquad.switched.com/2009/01/11/20-awesome-free-os-downloads-that-arent-windows-7>.

Communication

OpenOffice (OS: Win/Mac/Linux) – www.openoffice.org – virtually a clone of Microsoft Office from a few years back (before the Ribbon interface appeared) but OpenOffice is entirely free, written and formerly maintained by Sun Microsystems, now owned by Oracle. OpenOffice reads and saves all current MS Office formats including Word, Excel, and PowerPoint. It also includes the equivalent of Access and has a competent drawing editor. I use this on Studio Cruz field laptops rather than buying more copies of the overpriced Office. However: read below

LibreOffice – (OS: Win/Mac/Linux) - <http://www.documentfoundation.org> – is produced by former leading members of the OpenOffice team who left because of concerns about how committed Oracle is to the development of open source software. This group is independent and will develop LibreOffice even if Oracle does not abandon or neglect OpenOffice (a situation paradoxically made more likely by the loss of so many team members). Watch this space.

phpList – (OS: Win/Linux) – www.phplist.com – phpList is easy to integrate with web sites, and good for newsletters and publicity lists. It can scale to manage lists with many thousands of names.

jEdit (SW: Win/Mac/Linux) – www.jedit.org – programmer's text editor, very customizable and powerful. I use this for Google Earth animation and tour development.

Firefox (SW: Win/Mac/Linux) – www.mozilla.com – one of the most popular Internet browsers in the world. If you don't like ads disfiguring web pages, download and install the Adblock Plus extension from www.adblockplus.org/en.

Chrome (FS: Win/Mac/Linux) – www.google.com/chrome - fast, powerful browser from Google.

Thunderbird (SW: Win/Mac/Linux) – www.mozillamessaging.com/en-US/thunderbird – an email client that rivals and in some ways exceeds Microsoft Outlook.

FileZilla (OS: Win/Mac/Linux) – www.filezilla-project.org – good FTP client

Skype (FS: Win/Mac/Linux) – www.skype.com – free phone calls over the net, cheap ones to landlines; additional features include instant messaging and video conferencing. This may change due to its recent acquisition by Microsoft.

Business

Sugar CRM (OS: Win/Mac/Linux) – www.sugarforge.org. Powerful customer database management with commercially supported professional and enterprise editions at www.sugarcrm.com.

OrangeHRM (OS: Win/Linux) – www.orangehrm.com – free package for human resources management, including benefits, recruitment, leave, and attendance.

GnuCash (FS: Win/Mac/Linux) - www.gnucash.org. Personal and small-business financial-accounting software that lets you track bank accounts, stocks, income, and expenses. Supports invoicing and can import data from Money and Quicken.

OpenProj – (OS: Win/Mac/Linux) – www.openproj.org/openproj - replaces Microsoft Project and imports Project files. More than a million users, installed base second only to Project itself.

TrueCrypt – (OS: Win/Mac/Linux) – www.truecrypt.org – disk encryption software; lets you make financial data on a laptop or portable hard drive inaccessible if the item is lost or stolen.

Creativity: 3D

Blender (OS: Win/Mac/Linux) – www.blender.org – the leading open source modeling, rendering, and animation software. Good documentation, but as with any animation software quite a steep learning curve

123D – (FS: Win only) – www.123dapp.com – the only good free NURB (fully curved surface) modeler I'm aware of. From Autodesk, the makers of AutoCAD.

POV-Ray – (OS: Win/Mac/Linux) – www.povray.org – high quality rendering engine for 3D models, in development for about ten years with a good support community. Works well with Blender.

BRL-CAD (OS: Win/Mac/Linux) – www.brlcad.org. Solid modeling and raytrace rendering system.

SketchUp (FS: Win/Mac) – <http://sketchup.google.com> – free modeling and rendering software from Google.

Wings 3D – (OS: Win/Mac/Linux) – www.wings3d.com – open source subdivision modeler for organic forms. Open GL required on Windows and Linux.

Sweet Home 3D – (OS: Win/Mac/Linux) – www.sweethome3d.com – free 3D interior design application

Creativity: 2D

GIMP (OS: Win/Mac/Linux) – www.gimp.org – as good as PhotoShop was a few years ago. Widely used, well documented, highly recommended image manipulation program. The interface is very different to PhotoShop, however; download the Gimphoto and Gimpad plugins from www.gimphoto.com to create a free PS clone.

Inkscape (OS: Win/Mac/Linux) – <http://inkscape.org> is the leading open source vector graphics editor, similar to Illustrator.

FontForge – (OS: Win/Mac/Linux) – <http://fontforge.sourceforge.net> - an outline font editor that lets you create your own Postscript, TrueType, or OpenType fonts. Includes conversion utilities.

CamStudio – (OS: Win) – <http://camstudio.org> – a screen recording app to create demonstration videos in AVI or SWF format.

Scribus – (OS: Win/Mac/Linux) – www.scribus.net – page layout software comparable to InDesign; can output CMYK color separations and PDF files.

Audacity (OS: Win/Mac/Linux) – www.audacity.sourceforge.net – versatile, well featured audio editor.

KompoZer – (OS: Win/Mac/Linux) – www.kompozer.net – web page file management and WYSIWYG web page editing.

VirtualDub – (FS: Win) – www.virtualdub.org – video capture and processing utility with good AVI file editing capabilities. Blender (see Creativity 3D) also has a video editing mode built in.

File viewers

Irfanview (SW: Win) – www.irfanview.com – unbeatable image viewer/image adjustment program. The default in Studio Cruz for five years, it also runs slide shows and video presentations. Unfortunately only available for Windows.

Acrobat Reader (FS: Win/Mac/Linux) – <http://get.adobe.com/reader/> - reads and runs Acrobat files; can also present PDFs full screen (using Control-L in Windows).

Rhinoceros trial version – (FS: Win) – www.rhino3d.com/download.htm – the trial version of Rhinoceros allows 25 saves, but unlimited importing, viewing, and manipulation of every major 3D format. Again Windows only (though it is being ported to Mac, with info at <http://mac.rhino3d.com/>, and there is a campaign to persuade McNeel to port it to Linux).

Video players

GOM Player (FS: Win) – www.gomlab.com – excellent South Korean video and DVD player. Windows only. The default in Studio Cruz for DVD and animation viewing/presentation, though more recent heavily copy protected DVDs may not run. You may also need to download Gordian Knot (http://www.free-codecs.com/download/Gordian_Knot_Codec_Pack.htm) for some of the more obscure AVI and MPG video and audio codecs.

QuickTime (FS: Win/Mac) - www.apple.com/quicktime/download - well designed, powerful video/slide/audio software with some video editing features in the free version, many more in the affordably priced \$30 professional upgrade.

VLC Player (OS: Win/Mac/Linux) – www.videolan.org/vlc - widely used, versatile multimedia player and converter. Somewhat old fashioned interface.

RealPlayer (FS: Win/Mac/Linux) – www.real.com – versatile but irritating player that tends to display update/upgrade reminders on your desktop unless controlled by configuring the Tools-Messages options. Some editing capabilities, but its most useful feature is that it can capture Flash video from web sites such as YouTube.

DVD ripping

Handbrake (OS: Win/Mac/Linux) – www.handbrake.fr – straightforward DVD ripper. Though its use in the US is technically illegal under the Digital Millennium Copyright Act, this French program gives US DVD owners the ability to backup their property to an electronic format, as is allowed for music CDs in the US, and both CDs and DVDs in other parts of the world. DVDs can be saved via Handbrake as MP4 or MKV video files, either compact enough to fit on a data CD or uncompressed. DVD chapters can be saved in the MP4 format.

Utilities

ClamAV – (OS: Win/Linux) – www.clamav.net – antivirus kit with support for most mail and document formats.

7-Zip (OS: Win/Max/Linux) - <http://www.7-zip.org> – file archiver/compressor with high compression. Offers conventional Zip and Tar packing as well as its own 7z format, unpacks pretty much everything. Linux version is command line only.

dSynchronize (SW: Win) – <http://dimio.altervista.org/eng/> – reliable, somewhat old fashioned backup and synchronization software. The standard in Studio Cruz for backing up the workstations to external hard drives at the end of the day.

Open file formats

If you're planning to archive a lot of content you will want to do this in a format that preserves as much information as possible while avoiding closed formats. The best known open file formats are:

www.opennurbs.org – the website devoted to the .3dm format. “The openNURBS Initiative provides CAD, CAM, CAE, and computer graphics software developers the tools to accurately transfer 3-D geometry between applications.”

The **Open Document Format for Office Applications** (also known as **OpenDocument** or **ODF**) is an [XML](#)-based [file format](#) for representing electronic documents such as [spreadsheets](#), [charts](#), [presentations](#) and [word processing](#) documents. See:

http://en.wikipedia.org/wiki/OpenDocument_Format_Alliance
<http://www.odfalliance.org/>