



The best new open source software on the planet

LXF HotPicks



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When compiling HotPicks, Nick makes frequent use of Curses. Tell us your favourite programming language at the usual address.

Ayam » Brain Party » Clockywock » Final Page » Fingerprint GUI » KXStitch » Omron++ » Ping » PylInstaller » Smb4K » Zim

3D Modeller

Ayam 1.17

Version 1.17 Web <http://ayam.sourceforge.net>

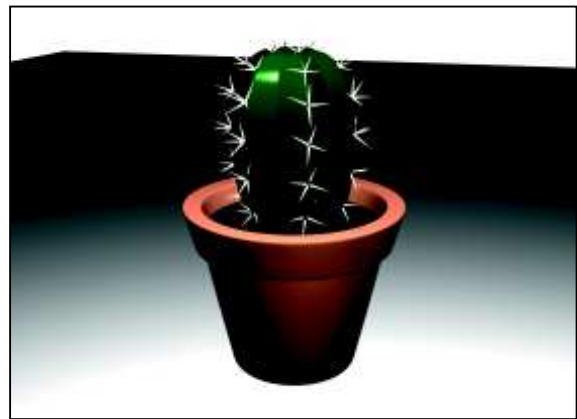
As the saying goes: I think, therefore *Ayam*. Or something like that. Yet while we've covered plenty of 3D tools in the past, this most excellent example has not yet appeared. To be honest, though, there are a lot of simple 3D editing tools around these days, so what makes *Ayam* worthy of note?

Well, it goes beyond the normal boundaries of such tools, which usually stop short at simple primitives and meshes. They're useful for throwing together a simple model, but lack some of the advanced features that can make complex modelling easier. Of course, there's always the mighty *Blender*, but

Ayam might be a better bet if you don't have a spare three years to work out the user interface.

Organic shapes

With support for a wide range of object formats, *Ayam* is quite capable of editing pre-built 3D files, or you can create your own using the range of tools provided. In addition to the usual tools, *Ayam* offers Nurb (Non-Uniform Rational B-spline) objects and patches, which use a mathematical technique that describes smooth curves and surfaces. They're useful for creating organic-looking, irregularly shaped objects that render well.



» Well, it seemed like a good idea at the time.

Ayam also outputs data in Pixar's *RenderMan* format, so you can use any of the existing *RenderMan*-compatible rendering engines in conjunction with it. We particularly recommend the *Blue Moon Rendering Tools* software, although this is hard to find these days. The same is true of its successor: the Nvidia-sponsored *Gelato* render software. However, there are plenty of GPL render engines that fit the bill, and we can heartily recommend *Aqsis* (www.aqsis.org), which you'll find available for collection in your friendly neighbourhood distro repository.

Rendered useful

Once you've chosen a back-end renderer, you can make your life easier by editing the application's preferences to include the path to the executable, so that then you can render images directly from within *Ayam* itself.

Building the program from source is possible, but it's also fraught with difficulties, so for ease of use you might want to consider just running the pre-compiled binary. This is statically linked to the required libraries, so although it is a fair bit larger, it should just run with no problems on your Linux box. If you want to build it yourself, make sure you install *Aqsis* first.

Exploring the Ayam interface

Toolbox

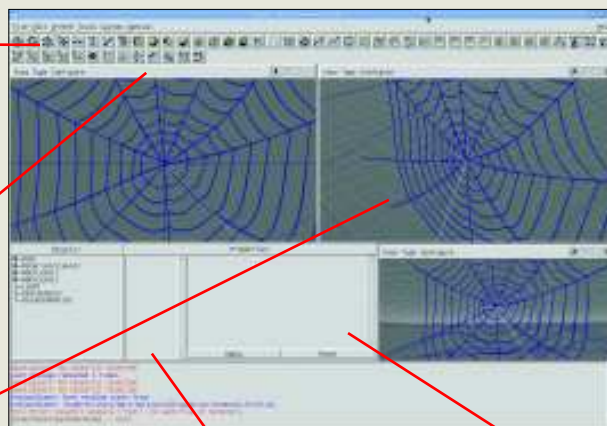
This includes a range of primitives and modelling tools.

Three-pane view

The standard treble-windowed environment is loaded by default, but you can adjust all the windows to suit your needs.

Edit anywhere

Helpfully, manipulating objects or rendering the scene can be done from whichever view suits the current task best.



Hierarchy

A tree hierarchy helps keep track of complex objects.

Properties

Edit an object's properties and materials here.

Document manager

Final Page 0.3.90

Version 0.3.90 Web <http://finalpage.sourceforge.net>

The word 'document' means different things to different people. If we were to play some word association, we imagine you, dear reader, would think of data files on your beloved Linux box, or floating in the ether on some website. Others may call to mind R.E.M.'s early attempts at music or perhaps, thanks to the hurried passing of the Digital Economy Act, you are expecting some other document to arrive in the post telling you your free Wi-Fi service is to be shut down. The word 'document' actually stems from Latin (via French), where the be-togaed teachers of the day would use it to mean an example or a proof.

Whatever way you slice it up, though, in spite of the fact that there are probably more documents that exist virtually than in reality these days, we probably still think of a document as something that could be printed out, even if it never is. So although paper

sizes and so on should really mean nothing to us these days, we still think in terms of A4 (non-Europeans, please adjust your set now) and everything being neat and uniform.

Rank and file

Final Page is a multiformat document processing program that attempts to help you make sense of the disparate data sources you've gathered together and assist in the task of organising them into something more uniform.

Although the software originally dealt exclusively with PDF files, this has now been extended to include any type of document that can be easily converted to PDF. This is made possible



› What do you make of this? A hat? A plane? A pterodactyl?

thanks to the *Caméléon* conversion tool (from the same author), which will convert *OpenOffice.org* files, images and text documents into PDF on the fly as they are imported.

This application is still a little rough around the edges, and to be honest, took more than a bit of effort to get working, but there is potential here.

“Although paper sizes should mean nothing to us, we still think in A4.”

Package creator

PyInstaller 1.4

Version 1.4 Web www.pyinstaller.org

If you have been following the series of Python tutorials in this illustrious mag, you will know how great it is for putting apps together. Letting other people use those apps can be fraught with difficulty, though. First, it usually requires them to download third-party modules, and then there's always cause for concern about the version of the language they run, especially if they use a different platform. (OS X is a prime offender, and there are often a few minor versions kicking about).

PyInstaller is the solution to these multifaceted woes. Well, at least in part. Not only does it take care of bundling all the standard modules, and many of the third-party ones if they are needed, it also compresses the whole into a single executable if required, so you can immediately start distributing software to all and sundry, even if they are a stranger to the PY file extension. The list

of officially maintained or supported modules isn't extensive, and is limited to some oft-used, usually interface-related modules, such as the GUI toolkits *wxPython* and *PyQt*, the graphics extensions *PyOpenGL* and *PIL*, and a dozen or so others (head over to [www.pyinstaller.org/wiki/Supported Packages](http://www.pyinstaller.org/wiki/Supported_Packages) for the full list).

For platform compatibility, currently you have to build your software on the intended deployment platform (Linux apps must be run on Linux, Mac apps on OS X), though that's being looked at.

Fortunately, there is ample documentation available online, which is necessary. There are only two steps



› There are easier ways to build packages, but when this works, it works well. You do need the instructions, though.

“There's ample documentation online, which is necessary.”

to building a package, but unless your environment is set up right, something will go wrong, so check here first. There are perhaps more open-source friendly and pythonic ways of building packages, but for a simple fire-and-forget solution this has a lot going for it.

Biometrics

Fingerprint GUI 0.13

Version 0.13 Web www.n-view.net/Appliance/fingerprint

Try to do anything on a computer these days and you'll wind up triple-authenticating everything and being forced to remember a 12-digit password that includes at least one number, one capital letter, one piece of punctuation and the maiden name of your favourite pet's first school. Oh, and you will need a different password for absolutely everything. Fingerprint scanners, lifted into reality direct from science fiction, promised to give us a world where poking your computer would make it submit. For various reasons, in spite of enjoying a brief flurry of popularity, they've fallen out of the mainstream. Maybe because they didn't have good drivers?

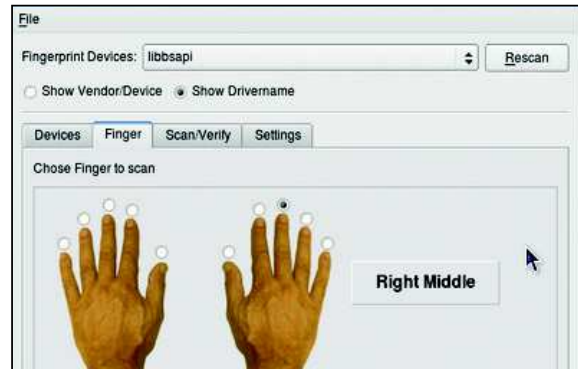
FingerPrint GUI is an attempt to put the proddable back on the map, or at least make it easier to integrate into a desktop Linux environment. Libraries do exist for managing various USB fingerprint readers, but where the

whole experience falls down is the integration of this tech into tasks such as logging on, or even setting the device up in the first place.

Touchy feely

FingerPrint GUI is a friendly way to hand your biometric data to a heartless computer. It's actually a set of applications that perform different tasks depending on the situation – for example, there's a helper app for unlocking the Gnome screensaver (which otherwise won't allow windows to pop up), and there's a GUI for setting up the fingerprint data in the first place.

The software is pretty stable, but the author has not had the opportunity to



› You might forget a password, but not your hand.

test it on a wide range of different hardware, or in the complete gamut of usage scenarios. Give it a go, and if it doesn't work for you, contribute to the project or at least let the developers know of your trials. Hardware can be had for about £10 from eBay, so maybe now really is a good time to lock the cat out of your laptop.

“A friendly way to hand biometric data to a heartless computer.”

Stitch designer

KXStitch 0.8.4

Version 0.8.4 Web <http://kxstitch.sourceforge.net>

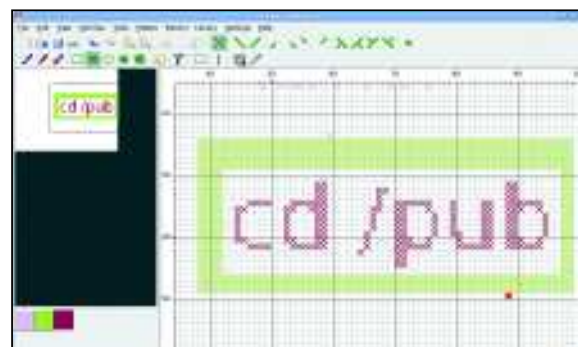
You can fool some of the people all of the time, but to really stitch them up, you need to be able to render them in cotton. Whether you just want to design your own sampler, or render a favourite uncle or tricky pet in their own immortal tapestry, you need more than a piece of squared paper and a pencil... No, wait – what if you don't have a piece of paper handy? Or maybe you can't read your own writing? In any case, this far from pointless app is here to help.

Essentially, what you have is a sort of graphics package, but instead of pixels, you're drawing stitches. In spite of the name, not all stitches in *KXStitch* are actually crosses – some of them are just lines going in one direction or another, so you won't be surprised that *KXStitch*'s toolbar has all the possible stitches for you to draw with. But what to draw? Well, if you are stuck for

inspiration, you can always load an image in the background to trace over (all usual formats are supported), and there are drawing tools that render various shapes in proper stitchy style.

Colours can be chosen from a carefully configured palette – which calls 'orange' something like "warm mauvey russet" – so you can keep tabs on your inventory easily enough. That's actually a good tip for the developers: the software would be even more useful if it calculated how many metres of each colour thread you need.

For an application that is, in concept, very simple, it takes a really long time to compile. To do so, you will need to have



› Behold what happens when crafters and geeks collide...

the KDE 3 headers available for your system, which may be a bit tricky to track down, given that most distros have moved on to KDE 4. Look for **kdelibs3** packages, you'll want the development version as usual, as this contains the all-important header files. We don't think this is a threaded application though (sorry).

“KXStitch's toolbar has all the possible stitches for you to draw with.”

HotGames Entertainment apps

Brain game

Brain Party 0.61

Version 0.61 Web <https://launchpad.net/brainparty>

There's a party going on that's going to change the way you think, but how do you know you've been invited? Well, consider this your burnished aluminium summons to the launch of what might be the game of the century.

You must be familiar with the general idea now. Your computer tries to humiliate and belittle you by suggesting that you are not smart enough to complete some tests, which are mini games that involve some amount of cerebral effort. In this case, there are 36 of these devilish games, which combine such mental feats as counting objects as they bounce around the screen, pattern-matching, untangling knotted nodes, remembering

sequences and matching hypnotic-looking tiles. Practise at the games, take a test and find out just how smart you are.

There is a great variety of games in here, so even if you're flummoxed by some of them, you won't have to face them every time you take the test (which chooses five of the available games at random). The end-of-test score gives you something to boast about, and the game will keep track of your progress so you can see if you are getting smarter or stupider over time.



› We would have scored more, obviously, but I lost time due to taking screenshots...

Originally developed as an iPhone app, this Linux version has been GPLified and ported to a proper platform through extensive use of the SDL libraries. To build it, you just need to unpack the weighty archive and just type **make**. And that's it! It's like a party in your brain – remember to clear up afterwards. *Brain Party* was brought to you by Paul Hudson and the letter B.

“Practise at the games, take a test and find out how smart you are.”

Life simulation

Omron++

Version 0.5.0 Web <http://bit.ly/cWiaOG>

It's life, but not as you know it. *Omron++* is a kind of weird, more violent variation on the standard Game of Life automaton. Unleashed into a screen-sized arena, coloured pixel warriors band together and then wander around their world looking for others not quite of their ilk to subjugate and destroy.

There are several parameters that may be manipulated at the beginning of the game, including the number of pixels in the army, the size of a 'mob', how far apart they start and other minutiae of the sort that you may want to fiddle with. Two or four teams can compete in the digital arena, and after the initial muster they're pretty much on their own to seek out and destroy at will.

Interaction is provided by a hotkey that causes the pixels of a particular faction to attempt to reform in their original parade-

ground square. This retreating action can be a useful tactical ploy, as it lures the enemy into your territory, by which time they are a little more dispersed and easy prey for your concentrated forces of pixel cannibals. All the while, a read-out in the bottom-left corner of the screen gives you information on the current population and a percentage of the original forces remaining.

Dead pixels

The game ships from the website as a pre-built binary, but you will be fortunate to get it to run straight off, as it seems to have been built against some outdated libraries. Never worry though, because it takes but a few clock



› One day, all wars will be fought this way.

cycles to compile, providing you have the devel packages for SDL and **SDL_gfx**. The code itself is pretty sensible, so if you want to delve in and fiddle with the mechanics a bit, that shouldn't be too difficult.

And remember, the only good pixel is a dead pixel. No, that doesn't sound right...

“Pixel warriors band together and look for others to subjugate.”

Network tool

Smb4K 0.10.7

Version 0.10.7 Web <http://smb4k.berlios.de>

It's good to share. And really, it's also nice to know what you have shared. And to be honest, it is even better to know what everyone else is sharing too. In mixed environments, and even Linux-only networks, the default method of filesharing is usually managed with Windows filesharing software. Well, actually, usually it's done using the Windows-like protocols, but often actually on a Linux box. *Samba* is probably one of the best-known and most used cross-platform network protocols in use anywhere – it facilitates shared folders and reasonably secure access with little network overhead, so it's even the default choice on Linux-only networks.

The *Samba* tools for Linux are exceptional, except where it comes to letting the user know what's going on. Many desktops have integrated *Samba* functionality into filemanagers, and

when installed, it does exist at an OS level. But while you can fiddle around on the command line trying to find stuff out, it isn't the same as a nice friendly and convenient browser.

Smb4k attempts to address that situation by enabling you to browse workgroups and services that are available on your local network. There are a mass of configuration options to meddle with should you feel the need, though to be honest the only really important one is how the app performs its network discovery. The automatic mode may work for most, but depending on the exact nature of your network, you might need to set up a



› If you can't see anything, make sure the workgroup name is set correctly.

workgroup name or specify a server from which to fetch the list of machines.

While you're browsing, you can easily connect to any shares you discover and even save them as bookmarks. The only issue here is that by default the system uses a different mountpoint to the Gnome desktop when mounting shares, so if you want everything neat and tidy you may want to fiddle with the settings a bit more.

“Smb4K lets you browse workgroups available on your local network.”

Curses clock

Clockywock 0.2.3E

Version 0.2.3E Web www.soomka.com

Retro-appreciation is not a thing of the past. Not any more anyway. Just as one might want to sometimes eschew the glitz and glamour of a 3D desktop for the power and convenience of the command line, so too might you want to forego the fifth-decimal-place accuracy of a digital timekeeping system for the more friendly, round-faced and instantaneous nature of the analogue clock. If you want to do both, then my friend, you have struck enriched uranium with this little utility.

Open up a terminal and simply run the **clockywock** executable, then sit back and soak up the excellence of the quirky yet brilliant timekeeping. There is no need to wonder which hand is which, for they are cunningly composed entirely of the relevant character designation, though this can be changed should you so wish. Pressing the 1, 2 or 3 keys will advance the

character designation, while you can hold down the Shift key and do the same to make the hands move in the opposite direction. One can even, should it be so desired, set an alarm. The full bandwidth of configurational changes are opened up to you should you press a key on the terminal within which *Clockywock* is running, or you could peruse the short but generous documentation files.

Quaaludes and red wine

Amazingly, this application has been in continuous development for over 10 years, so there's no wonder it's so robust. The latest version is supplied as source code with a Makefile. Before you



› Ticking away the moments that make up a dull day...

“Sit back and soak up the excellence of the quirky timekeeping.”

try to build it, make sure you have the devel package for the *Ncurses* library (which provides the **ncurses.h** header file) – you should have everything else you need already. Now all you need is to run it in full-screen terminal mode, connect it up to the largest plasma screen display you have, and watch the seconds tick away.

Partition imaging distro

Ping

Version 3.00.04 Web <http://bit.ly/cnK7tX>

We last looked at Ping back in LXF110. In the usual but potentially tedious acronym style, Ping stands for Partimage is Not Ghost. It isn't, but that doesn't really explain what Ping actually is.

Partimage is an excellent partition-imaging application. It will read a disk partition, optionally compress it, and save it somewhere safe in case you should ever need it again. Uses abound from simple backups to rapid provisioning of desktops or servers with all the requisite gubbins already installed. Of course, to do that you would want to run the software from some sort of live distro, which is where Ping comes in.

Boot from this self-contained distro and you'll be at once in the world of *Partimage*, from where you can back up or restore a partition. Networking, *Samba* and other such niceties are included, making short work of an

otherwise arduous task. As it is a live distro, you don't even need to bother about building it – just burn the ISO to a disk and you're done.

This version has seen a few updates to take account of changes to Linux in general. As well as a more up-to-date kernel (giving you a better chance of getting it to run on a newer machine), it also includes updates to the *Samba* system, and new-found capability for handling ext4 partitions, which is, frankly, essential. The interface is still the old-fashioned *Curses* fare, but it does work fantastically well.



› Why is 'Go get a beer' never an option?

desktop wiki

Zim 0.46

Version 0.46 Web <http://zim-wiki.org/>

There must be a text editor project on SourceForge for every bearded person in the western hemisphere. Fortunately, *Zim* is not one of those. Well, in a way we suppose it is, but in a different way, the way we are going to look at it, it isn't.

Zim is an effort to bring wiki-style editing to the desktop. The documents you create by merrily tapping in text, to what might look very much like some sort of text editor, are in fact hypertext documents in a wiki style. Just like with an online wiki, you can include local and online links to other resources, images and even mathematical equations using latex notation. Almost all the common web/wiki features are included, and practically all of them are easily achievable without having to choose things from menus or even enter any tricky characters. For example, to start a bulleted list, you just need to enter *

and start writing. For extra cool points, you can also include checkboxes just by putting in an open and close square bracket `[]`. *Zim* will recognise this as a checkbox, and draw a checkable box on the screen – you can even use this feature to keep track of all your tasks using one of the *Zim* plugins. In fact, you can pretty much process any of the pages any way you want, as *Zim* has a neat interface for adding custom scripts and commands. **LXF**



› If you use the version from the DVD, you can install it by extracting the archive and simply typing `python setup.py install`.

Also released

New and updated software that also deserves a look...

› Brutal Squirrel 0.3

Translate everything into hex and back again on standard outputs. <http://saahriktu.org>

› Childsplay 1.0.5

Educational software that runs without GNOME. www.schoolsplay.org



› Erm... is it a mouse? I like mice.

› DocFetcher 1.0.3

If *Beagle* doesn't do it for you, try this desktop search tool. <http://docfetcher.sourceforge.net>

› Gecode 3.3.0

If you know what generic constraints programming is, this is for you. www.gecode.org

› Instantbird 0.2

Instant messaging gets a XUL makeover, but gosh it's big. www.instantbird.com

› Neformal 4.3.0

GNOME-based file manager/audio player symbiosis. <http://freshmeat.net/projects/neformal>

› VirtualBox 3.1.6

Great virtual machine, easy to configure, comes in two flavours. www.virtualbox.org

› Wireshark 1.2.7

snoop on network traffic before your ISP does. www.wireshark.org



› You should have seen the size of the packet that got away...

› WriteOnly 1.0.5

Quirky text editor aimed at fiction writers. www.gam3.org/writeonly.html