The best new open source software on the planet

LXF HotPicks

DXF2Papercraft » Usermin » Komparator 4 » MP3 Diags » Evince » Amahi » Tremulous » Performous » Fotoxx » Terraform

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

Modelling tool

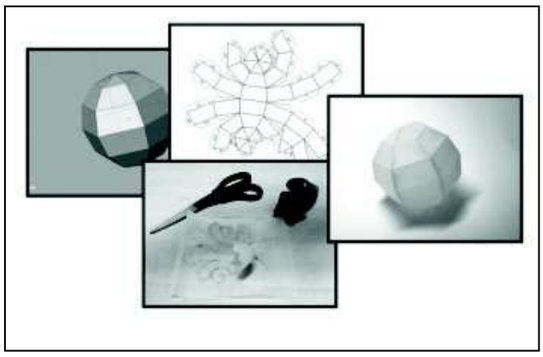
DXF2Papercraft

Version 0.2 **Web** http://dxf2papercraft.sourceforge.net

Didn't you ever have the urge to take a model of a character's head from some game, blow it up to twice lifesize and then build it out of paper? And colour it in. And then... maybe cut out little eyeholes and wear it as a mask and freak everyone out with your twice-lifesize head? OK, I may have lost the audience a bit there with that last bit, but seriously, that would be a really cool thing to do.

One of the problems you might find is actually creating the model in a way that you can easily make it out of paper. Loads of things are made out of folded-up sheets of stuff, and in engineering, there's software for calculating the best way to fold thin sheets of metal to make, well, whatever it is you're making.

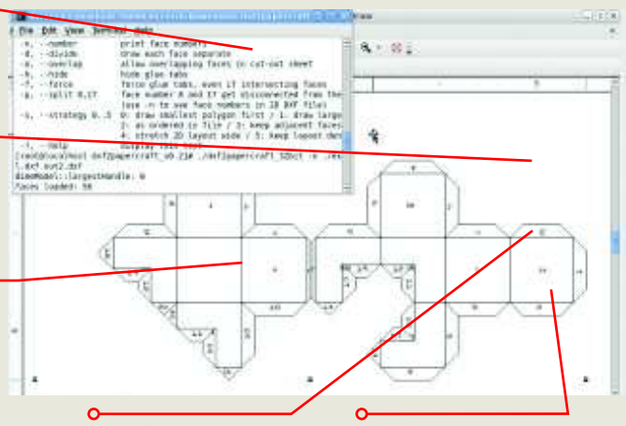
This exciting project, *DXF2Papercraft*, is like a scaled-down version of that for your own micro-industrial use. It takes a standard DXF 3D file (you can export these from *Blender*, for example) and computes each face as a shape, then unwraps it all flat so that you can print it on a sheet of paper. The edges that should be joined are left together, while the rest are printed with little glue tabs so that you can stick it all together later. As a bonus, for those more complicated structures, you can also print out numbered tabs that will cross-match. This means that, as long as you can read, you should be able to assemble your creation.



› **This is a simple unwrapped *DXF* primitive, but imagine a giant head object, with holes for the eyes.**

> **"Don't bother trying a 20,000-face model of the Eiffel Tower."**

Exploring DXF2Papercraft



Input
This shell shows the command line interface of the *DXF2Papercraft* app.

Output
The output from *DXF* looks like this. We've opened it using *OpenOffice.org*.

Fold lines
Solid lines between faces of your 3D shape indicate normal folds.

Glue tab
Tabs that you apply the glue to each have numbers, making the shape easier to assemble.

Face labels
The flat faces of your 3D creation can also be labelled, as we've done here.

Keep it simple

This project is at an early stage of development, but it works well on simple models – don't bother trying a 20,000-face model of the Eiffel Tower or something, unless you have a lot of spare paper. Hopefully, later versions of *DXF2Papercraft* will also enable you to map UV textures on – having that capability would be truly amazing.

The utility relies on a library called *dime*, which is included in the source. The distribution tarball contains some pre-built binaries as well, which should run out of the box if you don't want to bother compiling it yourself. What are you waiting for? Go and have some fun, and I look forward to seeing you and your creations at ScaryBigHeadFest '10.

LXF129.hot 68 18/1/10 12:21:45 pm

Remote system management tool

Usermin

Version 1.4.3 **Web** www.usermin.com

› **Why struggle with complicated services and SSH when you could get the same functionality using *Usermin*?**

These days, everything is better run as a web service. Booking flights, relaying phone calls, writing HotPicks, abusing Mike – all these things can be done online with less hassle. For a long time, it has also been somewhat easier to manage your Linux boxes online too.

Webmin is a remote management tool that sets up a web server and lots of little configuration tools to do all the heavy lifting. The rationale is that practically every box is easier to get to via the web. Why bother configuring SSH tunnels or authorising loads of different services, when one application running on a website on the target machine will take care of all your needs? It's certainly less hassle than poking half a dozen holes through your firewall and then constantly having to monitor the ports to make sure that nothing naughty's going on. So, all in all, *Webmin* is a great thing.

But hang on, I was supposed to be talking about *Usermin*, a spin-off from *Webmin* – a bit like *Torchwood* and *Dr Who* without the time-travel. *Usermin* is a pared-down version that doesn't rely on root access to the target box.

Easy to use

The thinking, by lazy system admins, is that ordinary users might like to change things on a remote box too – mail settings, proxy stuff, spam filters, or even just access usage statistics (and there's the facility to add custom commands too). *Usermin* runs as a web server with pretty icons and plenty of explanation, so that the dear little users won't get confused. What's more, it understands lots of variants of Linux/Unix and their derivatives, so you can have one common interface regardless of the distro you're using.

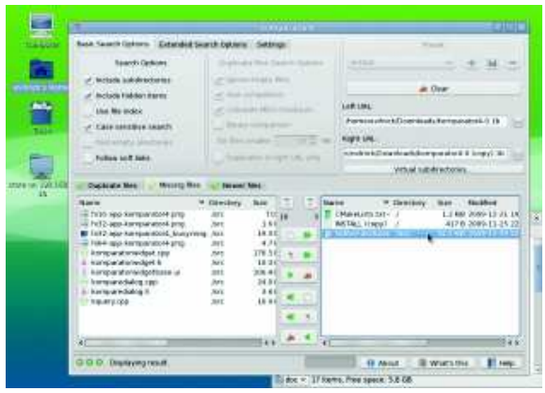
> **"You have one common interface regardless of the distro you're using."**

Installing is as simple as downloading the relevant RPM or Deb file. The install scripts will work out what version of Linux you're using and act accordingly, setting up paths and services to run on demand. Once you've installed it, do a quick **sudo /etc/init.d/usermin start** to launch it and then point your browser to **localhost:20000** to configure it.

Directory sync utility

Komparator 4

Version 0.1b **Web** http://bit.ly/7YIv3I



› **While its interface isn't the most intuitive we've ever seen, what *Komparator* does is undoubtedly useful.**

Sounding a bit like the latest euro-grunge-electronica group from Berlin doesn't seem to be holding back this little directory utility. You may be wondering how it could be any good if nobody noticed the previous three, but it seems the numerical suffix relates to the version of KDE that it's designed for, rather than indicating a trio of predecessors.

The idea here is straightforward, but executed with more than a modicum of rigorous excellence. You have directories, you put things in them. Some of the things are the same. Some seem the same but are in fact only similar. And so on. Whether it's giant folders full of digital photos, or directories containing different versions of code, *Komparator* will either point out 'missing' files (which are in one place but not the other), duplicate files or files that just have a newer date on them. Commonly searched pairs of directories can be added to a saved list of presets, which could be handy for regularly checking backups or mirrors.

More tricks

Other options include the ability to filter out particular files or groups of files, follow symlinks, as well as different types of comparison depending on whether you want speed or ruthless accuracy. There's a nifty file finder in the tabs along the top of the window too, just in case you didn't think *Komparator* was doing enough. There's also a feature to use 'virtual' subdirectories, where additional sources for one side of the comparison can be defined and treated as if they were all in the same place.

> **"It's executed with more than a modicum of rigorous excellence."**

The array of options and radio buttons on the opening screen may put some users off for good. The points where you declare the directories to be searched are somewhat buried halfway down the right-hand side. If you can get to grips with the interface (which could surely be sorted out!), this is a powerful tool that could save you some filespace or help find that lost photo.

LXF129.hot 69 18/1/10 12:21:46 pm

MP3 toolkit

MP3 Diags

Version 1.0 **Web** http://mp3diags.sourceforge.net

Yes, I know. We shouldn't even be bothering with MP3s. But in the same way that VHS became the *lingua franca* of video, so too the annoyingly inefficient, clunky and bodged MP3 format has become the mainstay of music. Although it probably isn't the worst format in the world, let's face it, we're stuck with it. This wouldn't be as bad if there weren't so many devilish ways in which these files could be malformed and mangled, resulting in unpleasantness at the point of use. Think tracks that skip, stop halfway, are too loud, have the wrong info...

MP3 Diags may look like just another superfluous tag editor, but before you hasten on, it has more to offer. Indeed, its tag-friendly surface is a disguise for its real purpose of rooting out and fixing problem audio files. With Torquemada-like tenacity, it rummages through the giblets of your audio files to find wrongdoings such as incomplete frames, garbled tags, missing info, bad normalisation settings and many other such heinous audio file crimes.

Now fix it

Of course, with the help of both internal and external instruments, the software can also attempt to correct these deficiencies with a number of tools along the top of the main window. The icons aren't particularly intuitive, so if you're not sure what something does, try using the tooltips.

If you want to mess around with the tags, there's a separate window for doing just that. It'll query MusicBrainz and all the usual things to find cover artwork and such too. There's even a complicated set of filter parameters and tools for matching tags to filenames or vice versa. We suggest you have a good play around with these functions before unleashing them on your entire audio collection, though.

> "Its real purpose is rooting out and fixing problem audio files."

Installation is straightforward. The source is there for you to compile, but the author has also made a number of packages available in differing formats, and because there aren't a lot of dependencies *per se*, they should install without giving you any problems.

You may find that in order to get the most out of *MP3 Diags*, you'll have to install a few helper apps such as volume normaliser *MP3Gain* as well.

› Music behaving badly. Actually, these are only minor misdemeanours compared to some files you'll come across.

Document viewer

Evince

Version 2.28.2 **Web** http://projects.gnome.org/evince

Although many of your documents may be delivered or originate online these days, there are still some occasions when you'll actually want to download something. This may be to look at it later, or even (cue gasps), destroy the planet a tiny bit further by printing it out.

For such occasions, it's nice to have a reliable document viewer, and the Gnome-recommended *Evince* is more than up to the job.

Small and stable

Why bother jumping through hoops to install Adobe's proprietary reader, when you can look at PDFs and print them using a tiny application that doesn't crash just as you're getting to a good bit? The wonderment doesn't need to stop there, because the main goal behind *Evince* was to create a program that could view many different types of document, removing the need to have a plethora of tools installed for looking at the various file formats you encounter.

It uses a series of back-ends to deal with other popular document formats such as DVI (favoured by *Tex* and its derivatives), DjVu (a format primarily used by compressed scanned documents to maintain high quality) as well as TIFF images (including multi-page ones), CBR/CBZ (comic book formats) and PDF documents.

There are plans to include even more in the future, although it has to be said that extending the range of formats that *Evince* supports doesn't appear to be top priority at the moment.

> "You can look at PDFs using a tiny application that doesn't crash."

If you already run a Gnome desktop, you probably have a version of *Evince* installed, most likely lurking under the title of Document Viewer in some rarely-frequented application menu. If you do, ensure you have a recent version because the latest two releases have fixed pernicious problems with printing, among other things. The best way to install or upgrade is through your distro repository. As this is pretty mainstream Gnome stuff, most distro repositories should be reasonably up to speed, but of course you can always build it yourself from source if you wish.

› Why view comics online when you can download a CBZ file and read them in the way that was originally intended?

LXF129.hot 70 18/1/10 12:21:46 pm

Linux server platform

Amahi Linux Home Server

Version 5.1 **Web** www.amahi.org

› **Sit back and relish the interconectivity of everything with *Amahi*.**

Nearly all of us have the internet and nearly all of us have gigabytes full of stuff – pictures, music, half-finished novels. We even have multiple devices, such as phones, consoles, laptops and desktops. The next stage is to bring these things together in a coherent way so they can talk to each other, swap data and be a model of digital harmony.

For many, this dream is quickly dispelled, but for those with the time and patience, it's possible to set up a Linux box on your home network to take care of a lot of central services. The *Amahi* project wants to make such connectivity more widely distributed.

Amahi isn't really a distro; it's a collection of software built into a web-managed central package that sits on top of Fedora. All you really need is a box capable of running Fedora and a network connection.

Seamless work

To get *Amahi* you need to sign up to a beta program, so we're unable to put it on the **LXFDVD**; instead you should grab it from the project's website.

As well as useful-but-boring things including managing DNS and DHCP, *Amahi* can do useful tasks such as share music files to *iTunes* or share files to Windows networks. As we said, this isn't anything new – the software to do this has been around for a large chunk of the Linux epoch, but if you've ever tried to set up a *Samba* share so that Linux, Mac and several different types of Windows machine can all access it seamlessly, you'll appreciate the utility of a package that takes care of that.

Dozens of other pre-configured packages are available too, from web-based apps such as *WordPress*, *Joomla* and other wiki and CMS tools, to more exotic stuff such as web-based torrent clients, backup software and more. All of this is on top of the core stuff including filesharing, UPnP media streaming and dynamic DNS services. Of course, there's nothing to stop you adding unsupported services yourself if you can configure them manually.

> **"It's possible to set up a Linux box to take care of central services."**

This new release has been updated to work on top of Fedora 12. There are plenty of fanboys who would like an Ubuntu version, but the development team is small and doesn't have time to rebuild everything continually against different distros. If you offered to help...

Most of the work in this version has been on getting everything to run under the new release of Fedora, but there are plenty of features to come. One area still very much in the testing phase is the ability to configure your router through the *Amahi* control panel.

Slide alongside

The installation process is almost as easy as installing a new distro, and we've outlined it for you in the walkthrough below. It's rather like making a base install of Fedora, but you have to add the *Amahi* repository during the install process. A few post-install bits of configuration will have your home network set up in no time.

You can continue to run the *Amahi* server alongside a Fedora desktop if you like – this certainly cuts down the number of computers you need to have a tricked-out home network. It's also ideal if you have one main desktop and loads of other devices such as laptops and netbooks on a wireless LAN.

A networked machine is a handy addition to your home setup, and there aren't many easier ways of getting one set up than installing this.

Step by step: Install Amahi Home Server

» Sign up

The first step is to sign up on the *Amahi* website, log on and answer some simple configuration questions.

» Install Fedora 12

Install the latest Fedora 12. Add the *Amahi* repository as an additional source and select the *Amahi* packages to install.

» Configure it

Continue the setup in your web browser to download any extra software that you want to use, and configure your services.

LXF129.hot 71

18/1/10 12:21:48 pm

HotGames Entertainment apps

FPS/RTS

Tremulous

Version 1.1.0 **Web** http://tremulous.net

There are few finer things in life than gathering together a group of really good friends and then emptying a few clips of high-calibre ordnance into them. I know I'd do it every day if I could, and many other people must think likewise, which is why the team-play FPS shooter is one of the most popular game genres ever and second only to MMORPGs as the most popular type of computer game on the planet. Yes, amazingly, some people would rather hunt through dungeons for a +4 dagger of Regex than waste their friends.

Fortunately for the world, the *Tremulous* developers are very much that other sort of gamer who like to do their slaying in an immersive 3D environment with the aid of some hi-tech weaponry. Based on the open source *Quake 3* engine, it actually goes further than just another death-arena blaster by adding RTS elements as well. Players can co-operate with one another to build or destroy benefit-giving structures in the game, which gives the gameplay a novel dimension.

No bots here

Tremulous is playable, but still in a beta phase of development. That doesn't mean to say that you can't enjoy a good game on it. There's a widely-dispersed development community continually adding quality maps and extra code. Currently there are no AI bots, so you'll need to get your kicks online against real people, but the open source nature of the project and the evil inventiveness of the developers may address that.

› **Lots of work has gone into this game's graphics, but it's a shame that there's no one to shoot at here.**

> **"It goes further than just another death-arena blaster by adding RTS."**

You'll need an accelerated graphics card, but the other system requirements are fairly light. Hours of effort have gone into all the levels and some of the lighting effects are superb. What lets this game down is that there aren't enough online players – what are you waiting for?

Karaoke game

Performous

Version 0.4.0 **Web** http://performous.org

People who can't sing a note always seem to be the keenest to show off their dearth of talent. Whatever the reason for this curious tendency may be, this audio gem will bring them hours of fun. It would be wrong to say that this is like *SingStar* for Linux, although you can use your *SingStar* discs in it. It would be wrong, but that gives you a very good idea of what this game's all about. Notes tumble out of your speakers, words appear on the screen and you have to shriek in time and key to score points.

Performous goes a little further than *SingStar* in that it demands a fair effort at getting the pitch right. However, if you're not quite ready to try to knock Rage Against The Machine out of the charts, there are different difficulty settings you can try. This game used to be known as *UltraStar*, and although it'll still play songs from that format, it has moved on a lot since its early days.

Multi-talented

For a start, it's no longer just a singing game – it has become a little bit like um, what's the name of that thing, where you have a guitar, and you think you're a hero. *Axe Champion*? Anyway, the upshot is that if you have devices you can configure as instruments, you can play *and* sing. Oh frabjous joy! I can almost hear it now. Of course, you do need to have the relevant files to be able to play along to. *Performous* has some CC licensed work that you can use, and a utility to extract the files off your *SingStar* discs.

› **If you've achieved top scores in *SingStar* and need a new vocal challenge, look no further than *Performous*.**

> **"Performous demands a fair amount of effort at getting the pitch right."**

It seems unlikely that Sony will release any files for Linux people to play with, but there are utilities for transcribing your own music.

LXF129.hot 72 18/1/10 12:21:49 pm

Photo manipulation tool

Fotoxx

Version 9.3 **Web** http://bit.ly/au195

Since we last took a look at *Fotoxx*, a range of new features and capabilities has been added, boosting the usefulness of this as a one-stop photo manipulation tool.

The huge increase in digital photography has led to a proliferation of tools of this type on Linux, but results can be variable and the feature-sets patchy. Previously, *Fotoxx* had some great features but lacked the roundness of a comprehensive app. Many of the gaps have been filled in, with new features such as select by colour, automatic white balance adjuster and an improved red-eye removal tool.

Dynamic lighting

The killer feature at the moment is the multi-image HDR, which enables you to combine up to 10 images to create a dynamically-lit result. You can add images for extra detail and adjust their contribution to the final picture while watching a real-time sample output, making the whole process more precise and less time-consuming.

There are other nifty effects, including perspective correction, image unbending and multi-shot panorama creation. The few filter effects aren't nearly as developed as *Gimp* and it doesn't handle full bitdepth RAW camera files directly, but it does a pretty good job of managing your library of images, with ratings, tags, and EXIF editing.

› Multi-image HDR without having to line up each shot when you take it is rather splendid.

Fractal landscape generator

Terraform

Version 0.9.5 **Web** http://bit.ly/8x4mzv

To every thing, there is a season, and a time to every purpose under heaven. There's a time to plant, a time to reap. A time to laugh and a time to weep. A time to appear in HotPicks and then disappear into the ether for seven years and a time to make an end-of-decade comeback. It's to the latter part of these wise words we look to when we consider that *Terraform* looms again on the radar.

If you can't guess it from the name, or the fact that we wrote a little description above the name, *Terraform* is a landscape generator and manipulator. Using random seeds, it'll generate a square block of terrain to your specifications. Once it has (very quickly) rendered a height map, you can do all sorts of other clever things with it, such as add rivers, smooth or erode the landscape and add random objects such as vegetation or stones.

Of course, there isn't much point to all this if you can't export the final result, so *Terraform* gives you the option to save in a number of different formats, or render directly to the venerable (but still not open source) POV Ray. Perhaps it doesn't quite meet 2010 rendering standards, but that's largely because nobody has really added any code to it for eight years other than to make it behave in a more socially acceptable way by 2010 rendering standards. LXF

› Create your very own paradise island from the comfort of your Linux box.

Also released

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

› *Scan Tailor* prepares your scans for printing or PDF creation.

Scan Tailor 0.9.7.2
Make document scanning easier with this auto-fixing scanner utility.
http://scantailor.sourceforge.net

Wammu 0.32
Mobile phone management, now with better IMAP support.
http://wammu.eu

Atomic Tanks 4.2
Destroy other tanks to win cash in this familiar-looking game.
http://atanks.sourceforge.net

Surl 0.7
Make those URLs shorter with this command line client for popular sites.
https://launchpad.net/surl

Bleachbit 0.7.2
Tidy up your disk space with a dollop of this. Kills 99% of cache files. Dead.
http://bleachbit.sourceforge.net

DeVeDe 3.15.2
Comprehensive DVD authoring front-end with easy-to-use presets.
www.rastersoft.com/programas/devede.html

Gcalert 1.1
Manage your Google calendars and get desktop alerts.
http://github.com/raas/gcalert/tree/v1.1

Opengrok 0.8.1
Search and cross-reference source files to understand the code better.
http://hub.opensolaris.org/bin/view/Project+opengrok/WebHome

Retro Forth 10.3
Relive the days of the Jupiter Ace with this working Forth interpreter
http://retroforth.org

Qastrocam-g2 4.6 beta
Use your webcam for astronomy and get some great images.
http://sourceforge.net/projects/qastrocam-g2

LXF129.hot 73 18/1/10 12:21:50 pm