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Preaching to
the unconverted



Time for your
PC to celebrate

TUX

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Unreal Tournament 2004
Linux vs Windows

Planeshift

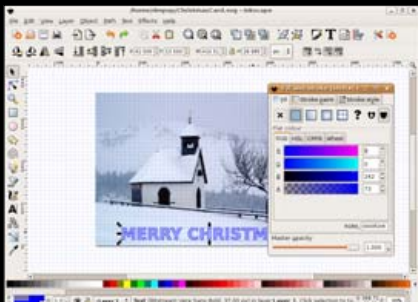
ISSUE 20 • DECEMBER 2006

NATIVITY THEMES AND NEW YEAR'S RESOLUTIONS

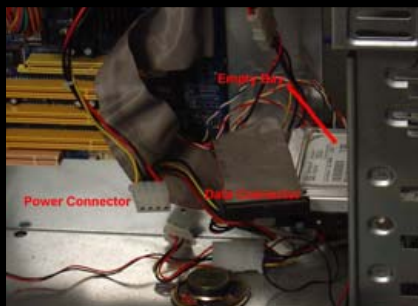
LET YOUR LINUX SYSTEM HELP YOU
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PLUS

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- ▶ Working with Groups in Linux
- ▶ Basic Steps with OpenOffice.org Basic
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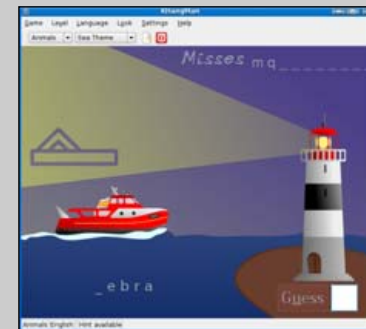
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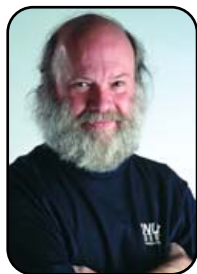
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FROM THE PUBLISHER

Preaching to the Unconverted

See, Nicaraguan parties have side benefits.

PHIL HUGHES

Yesterday, I was at a party. There were three of us who were not Nicaraguan. I started talking to one of the other two. He moved here from the US. He even worked at Microsoft and, like me, had lived in Seattle. The expected conversation followed.

He asked what work I had done in Seattle. I told him the same work I do here—publish two Linux magazines. After he said the obligatory, “oh, you work for the enemy”, we talked more seriously. His knowledge of Linux was from a few years ago, and it was interesting to see his perspective. If you have been using Linux for a few years, you won’t be surprised. If you still haven’t given Linux a try, maybe this will inspire you.

We never talked security, reliability or trashed the other product. It was very much him telling me what he had “learned” and me pointing out today’s reality. Note that both of these guys left with Kubuntu DVDs in order to give Linux a try.

His first statement was that Linux was free, but it was the maintenance and administration that cost much more. I talked about how Linux administration has gone from command-line, UNIX-like

work to automatic free updates and graphical administration tools. I expect when he plays with the Kubuntu DVD, he will see this is the truth.

IF YOU STILL HAVEN’T GIVEN LINUX A TRY, MAYBE THIS WILL INSPIRE YOU.

He then told me that Linux was not used by businesses. I first pointed out that there are more Linux and Apache-based Web servers on the Internet than there are Windows with IIS Web servers. He seemed surprised. Actually, most people seem surprised by that one. The reality is that Microsoft tried, multiple times, to turn the Internet into an extension of its products and failed. With the Internet being there first, it is logical that it remains independent.

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THEN, I WENT OUT ON A LIMB AND SAID THAT IN THE FUTURE, MICROSOFT WOULD BE REPLACED AS THE PRIMARY SUPPLIER OF SOFTWARE.

I also talked about government agencies in Costa Rica using Linux. The first was when the Ministry of Science and Technology converted all its servers to Linux. That is ancient history now—see <http://www.linuxjournal.com/article/5461>. Next, I talked about the Ministry of Health putting in some Linux servers and converting old Windows-based desktops to Linux thin clients so that the users would still have the same computer on their desks but everything would be much faster.

Then, I went out on a limb and said that in the future, Microsoft would be replaced as the primary supplier of software. He agreed, but said that the new system wasn't here yet. Knowing that Microsoft makes most of its money by selling Microsoft Office, I pointed out that most people don't know or care what an operating system is, and today, OpenOffice.org is a perfectly viable office suite that runs on MS Windows as well as Linux.

He listened. He heard. He has the Kubuntu DVD. I now am waiting anxiously to see what happens. Will he come back and tell me that Linux doesn't work on the desktop? Will he come back and agree that everything he needs is right there in an easy-to-use and free package? I don't know what the result will be, but it was a pleasure to get to talk to someone

who was willing to listen rather than to someone with an "if it ain't Microsoft, it doesn't work" attitude.

Finally, I want to offer a quick update on what I said in my column last month. First, a beta version OpenSUSE 10.2 has been released. The production release probably will be out by the time you read this. This desktop is still running 10.0, so I have a new excuse not to upgrade to 10.1.

Last month, I talked about my experience with the pre-release of Kubuntu Edgy Eft. The final release is out, and I upgraded to it on one of my test systems. I am pleased to say that all the problems I found in the pre-release did get fixed in the final version. Dapper Drake still remains the version that will be supported for the long term, but if you want to try what's new, I now can say that Edgy offers a reliable alternative.

Of course, as I said last month, there is just no one right answer. The good news, however, is that all Linux distributions continue to be easier to install, work on more hardware and are easier to maintain—all big wins for the new Linux user.■

Phil Hughes is Publisher for TUX Media, Ltd.



FROM THE EDITOR

Time to Celebrate

Your PC needs a holiday (theme) as well.

TONY MOBILY

I have never been into holidays. This doesn't mean that I am a workaholic (even though a lot of my friends would probably say that I am). It's just that I have always been lucky in my life, and apart from 11 sad months, I have always been able to work "in my own time". This normally means "a rather lot", but it's my own choice and freedom to do so, at least in theory. So, I observe the outside world change: I see Easter eggs appear on supermarket shelves and imagine huge chocolate hens laying them. I see timid Christmas trees appear in July, for those people who are surprisingly determined to have Christmas in winter. I see severely over-dressed Santa Clauses strolling the street with sweets of Fremantle, as their wet faces admit that they are going through an unkind variation of a sweat lodge. Lately, I also realise that I see computers following the same path as real life: screensavers, wall papers, splash screens, colour themes, games—they often seem to converge toward the "Holiday Season" theme.

Also, I have started seeing more and more cards that break the rules of the normal Christmas cards in several (sometimes unspeakable) ways—cards that were created ad hoc by senders with their PCs.

Although I am not a great follower of all of the nativity packages, I must say that I enjoy seeing people making an effort to sweeten the way the world and their computers look. Linux has a lot to offer as far as customisation, and, unlike Windows, you can do so without fearing Trojan screensavers and other such Christmas "presents". So, this issue of *TUX* focuses on how to use your computer this holiday season.

In his article "Nativity on Your Linux Desktop", Dmitri Popov explains exactly what to do to create nice Christmas cards using Linux. This article will be most welcome by all those people who, before now, had a big entry in their budget dedicated to Christmas cards!

Jay Kruienga tells you how to make your Linux desktop look "right" for the

holiday season, and—maybe even more important—how to use Linux to keep up with your New Year's resolutions.

Mango Parfait shows off her magnificent skills while answering questions about printing and opening Konqueror windows as root. I nearly rejected her article when I saw all those GNOME screenshots! Then, we talked through it, and she told me she'd do anything for the sake of our readers—and proved it!

Colin McGregor inaugurates the beginning of a new column: "*TUX* People". Each month, we will interview a relevant person in the Linux world. This month, Colin had the honour to interview Pamela Jones from Groklaw. Thanks Pamela!

Phil Hughes covers two important topics in Linux: how to manage groups and Linux Edutainment. Even if you are not really interested in these topics, I think these articles are a must—read them, and you will see why!

Brian Jones also starts a new column in *TUX* this month: "Linux Commands".

Yes, we have given in; we are indeed going to talk about the feared command line. However, we will do it the *TUX* way: simple, simple, and again, simple. I am sure many of you will enjoy Brian's simple articles, which will give simple explanations on how to use simple commands. You get the message.

Dmitri Popov talks about how to create very basic programs using OpenOffice.org. Although this is programming strictly speaking, we feel that what we talk about is definitely within reach of most of *TUX* readers. Dmitri will provide practical code examples for using OpenOffice.org at its full potential.

Willy Smith talks about partitioning a second hard drive for backups and music. I feel that too many people use "luck" as their main backup. However, just like anything else, luck runs out. Hopefully, this article will convince a few readers to install an external hard drive in their PCs and back up away....

Jay Kruiuzenga covers a topic that is highly in demand at the moment: "Where to Buy Linux PCs". When he proposed the article to me, I answered, "yes", immediately. In fact, I might have broken a few laws of physics by answering "yes" before I had actually received his message. The resulting article is a fantastic resource, which will hopefully convince people to buy hardware from those manufacturers who love and support Linux.

Finally, Travis Kepley compares *Unreal Tournament 2004* under Linux and Windows, and Matija Suklje talks about *Planeshift*. For those readers who are addicted to video games, beware!

Well, it's time for me to let you go and devour this issue of *TUX*. As always, comments and suggestions are welcome. As many of you may have noticed, we actually do listen! Enjoy your holidays. ■

Tony Mobily (BSc) is a computer consultant, journalist and Zen Buddhist. He lives in Australia working as a magazine editor and consultant. Tony has been an active member of the Open Source movement for many years. In 2004, he founded *Free Software Magazine*, a popular publication about free and open-source software. He is also the author of the book *Hardening Apache* and several articles about Linux and open-source software.



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LETTERS

Requests

I am newbie to Linux. I installed SUSE Linux 10.1 on my laptop computer, because I got tired of having to pay for new versions of MS Office, Photoshop and so forth. I installed SUSE following the instructions of the e-book: *The Easiest Linux Guide You'll Ever Read, An Introduction to Linux for Windows Users* by Scott Morris. I read all his suggestions, followed the screenshots for the installation process, and selected what I wanted to install in SUSE 10.1.

However, I was wondering if a near-future *TUX* magazine could show us a programming column with simple stuff, like how to create a small program and compile it and how to write a basic script, and also, how to install software using the terminal with screenshots as Scott Morris did. This would make us feel more confident, and it would be of great help when using the terminal, especially for people like me who do not have any background in Computer Sciences (I am a graduate student in Crop Sciences), but who are willing to learn Linux. I want to be able to install all the software I need to do my research with Linux, and also, I want to show my labmates and classmates that the migration from Windows to Linux is possible.

--

Michael

You are in luck, Michael! We received several requests, and I am happy to announce that I have already organised a

"OpenOffice.org Programming" column and a "command-line" column. They will be very, very basic—aimed at the beginner users. I am sure you will find them interesting!—Ed.

On Microsoft

In the November 2006 Letters section of *TUX*, Bill Cupp wrote that Microsoft did not help spread the use of computers. I don't wholeheartedly agree. I do believe that, even without Microsoft, computers eventually would have been widely accepted. However, it was Microsoft that led to the breakthrough of using an OS on different hardware. At the same time, do realize that this was less because Microsoft wanted computers to be used widely, than it was because Microsoft wanted to make all the profit it could (which is, in a way, logical). The popularity came because those other personal computers were clones of the popular IBM microcomputer.

Additionally, more about the Microsoft bashing: you also can't deny that we do not have reasons to bash Microsoft. In the Netherlands, we have this saying "de klant is koning", which means that you have to put the customer first, and it is something that all companies say they do (surely there's an English saying for it too). Anyway, apparently a company (or perhaps just Microsoft) does not put the customer first if it is in a position where it would not matter if it put the customer first, because if it does not, it'll sell anyway. Look at Internet Explorer, and how Microsoft has come to work on it only now that Firefox has been eating its market share. If we now let IE

become dominant again, Microsoft will stop developing again. However, no matter how small its market share is, Firefox will continue to innovate.

All in all, I see no problem with Microsoft bashing, as long as you do it in a reasonable tone, with reasonable arguments, and only if it's relevant (that is, if someone asks a question, answer it, or don't, but don't go complaining).

--
Vincent

Thanks for your letter, Vincent!—Ed.

KShowmail

Kevin Vollick, in a letter to Mango Parfait [November 2006], asked about a Linux program to examine mail headers and delete the unwanted ones before downloading. KShowmail does this and is quick and easy to use.

--
Sandy Runcie

Thank you Sandy!—Ed.

Need Printing Help

I, like many others, get a lot of help and news from your magazine. In fact, I've downloaded all the back issues, and there is much I've learned from them.

When doing your review of printers (which I read you are preparing), could you give some space to finding ways for using printers that don't provide drivers? In particular, I'm

referring to Canon printers. A year ago, I bought a Canon i865 for the main purpose of printing photographs. It works great with Windows, but a few months ago, I made the leap and now work only in Linux. The *only* leftover from that (happy) choice of mine is the inability to get my printer to give me the full benefits for printing photos under Linux. I tweaked around until I got it to print using some generic driver, but if I want to print photos, I have to print from my wife's computer, which still runs Windows.

I know about Turbo Print, but I feel to pay more money for a driver is sad.

--
Errol

Errol, I think it's important to do our best and explain to people how to get unsupported hardware to work in Linux. However, I feel that it's even more important not to buy hardware from Linux-unfriendly companies, so that they get a clear message on what they should do.—Ed.

On Mice and Adept

With regard to the letter from Terrence Dreyer [November 2006], I am currently using a Logitech Marble Mouse with Kanotix—no problems. Mine is several years old. A friend has a new one (it has two more buttons), and it also works fine in Kanotix. I don't see why any other standard PS/2 or USB mouse shouldn't work in Linux without any specific drivers, unless they have some special function(s). Of course, I cannot say these mice will work on any other specific distros for sure. Kanotix has the best hardware support of the 15 or so distros

that I have tried, and the best and most helpful forums.

Adept was included in an RC release of Kanotix, and most users seemed to want KPackage back, or Synaptic. Adept had one extremely glaring flaw. It had no way to install a .deb package from CD or hard drive. I am using a modem and a dial-up connection, so from CD or hard drive is the only way to install my modem driver. Without the modem, of course, I couldn't install any other packages. I finally ended up using alien to install the modem driver. Then I used Adept to install KPackage. Then Adept got removed. Adept also caused Apt not to work. Even when Adept was not running, trying to apt-get packages gave me an error, saying something like the package folders were locked by another application. Until these flaws are fixed, I would not recommend Adept to anyone. *If* you want to try it, make sure you have Synaptic or KPackage already installed!

--
KBOHAE

Games, Cedega and Freespire

Many thanks for a very useful and informative "magazine"—I look forward to reading it!

There's just a couple of items I thought I'd like to comment on.

While I agree in general, with Evan Thomson's letter [October 2006], concerning game coverage, I'd like to voice an opinion that there are people who are not looking at getting the very latest games working on Linux (although it is nice, and attractive for new users). There are many "old" games that are very

playable, and that I'd love to see on a Linux screen. Personally, I was very pleased to see *Tomb Raider*. The only thing I've ever found is that I've never had much success with Wine (other than getting notepad to work!). Is there any possibility of a masterclass? Or, for that matter, do you know of any sites that give detailed step-by-step instructions on getting these programs to work?

Having bought Cedega, I was very disappointed with the program. None of my Windows games worked (most didn't even install), which is why I was a little saddened by the very pro-Cedega review you did a little while ago [September 2006].

On a different tack, I note you say Linux is ready for the desktop. I very much second that opinion. To date, I've been running SUSE 6.4 through to 10.1, and I've been impressed. However, I've also now installed Freespire and I was very impressed by the simple and straightforward operation, and most of all, the Click and Run software installation worked very well indeed. While a hardened Linux user may say that such facilities are a dumbing-down of the desktop, I'm all for it, as it will attract users, which is never a bad thing.

--
Carl Beech

There isn't much we can do about games not working using Wine. Unfortunately, emulation is what it is—emulation, and it's not always perfect. A tiny crack means that either the whole program won't run or it will crash. Now, it's time to lobby game companies so they release games under Linux as well!—Ed.

Excessive KDE Coverage?

I've just finished reading the October 2006 issue of *TUX*, and as usual, it's an excellent issue. However, I can't help but agree with the letter from Andrew Hawkins, who is dismayed by the excessive KDE coverage. I've suspected for some time that KDE gets better play, so I did a non-scientific review of every issue of *TUX*, back to the first one.

I excluded editorials, letters and Mango. The result? KDE programs: 36; GNOME: 12. Reviews of KDE distros (not counting Smackdown): eight. GNOME distros: one. The October 2006 issue was a perfect example—articles mentioning five KDE programs and no GNOME programs. You even tested the Acer laptop with a KDE distro. In fairness, you review many cross-interface programs and many of the KDE programs will also work in GNOME.

When I read Phil Hughes' editorial, in which he referred to getting back on track with his vision of "bringing newcomers to the desktop and KDE", I understood where this KDE bias is coming from. But, consider this: the top DistroWatch hits are coming to the GNOME flavour of Ubuntu. I have no scientific basis for saying this, but maybe the majority of Linux "newcomers" that you want to reach are trying Ubuntu. How does that fit with your vision?

--

Stephen Wilson

KDE is our favourite desktop system. This is not a secret. Yes, there is a bias, which is mainly due to the audience of TUX. We feel that covering both GNOME and KDE would confuse too many people, and choosing KDE is the best option. However, as you said, most programs will work on both distributions; so, the difference is not as marked as it seems.—Ed. ■

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Q&A with Mango Parfait

How to install a printer in GNOME and KDE and open files as root in KDE.

MANGO PARFAIT

I have good questions this month! Thank you very much for your good questions. They are perfect for a very beautiful, humble genius like me. I will not tell you a story this month, because I have many pictures, and they take up a lot of room. Just remember to keep sending me good questions like these questions.

Q I want to install a printer on the Ubuntu 6.06 OS. It is a Lexmark x1100. Is there a place to get drivers for printers? I looked at Lexmark and did not see a driver for this printer. I also have SUSE 10.1/64 on a machine, and it shows that my Canon i455 is installed and needs to be configured. How do I configure a printer?—*Mike*

A Hello Mike. Ubuntu has a printer driver for the Lexmark 1100 printer. You do not need to find one.

You tell me you run Ubuntu, not Kubuntu, so I think you are using GNOME. I will not tell you to change to KDE. It is a very good idea, but I will not tell you that. You will like KDE more than GNOME, but I will not tell you to change.

You use GNOME, so click System→Administration→Printing from the main menu. If you do not see Printing in the menu, you must install `gnome-cups-manager`. You can use any package manager. If you want to type a command, click Applications→Accessories→Terminal. Then, type this command:

```
$ sudo apt-get install gnome-cups-manager
```

You must do this only if you do not see Printing in the menu. If you see Printing in the menu, never mind this part. After you click System→Administration→Printing, you will see a window like the one shown in Figure 1.

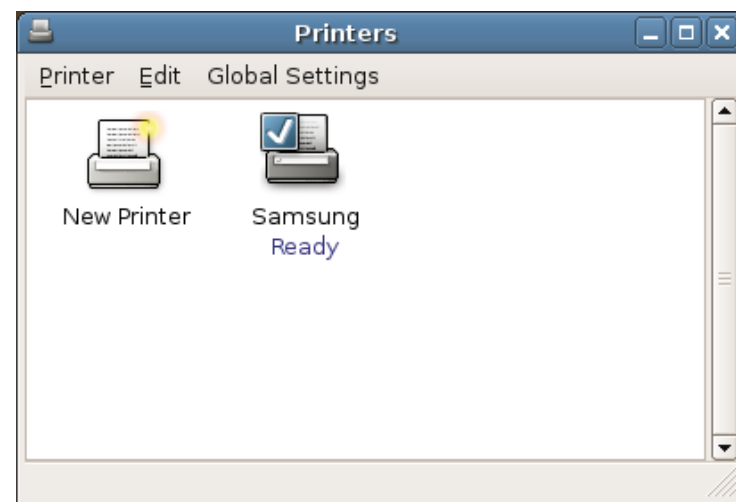


Figure 1. Printers Configuration Window

You see that I have a Samsung printer? Maybe you have one too. Maybe not. It does not matter, because you will see New

Printer. Double-click on the New Printer icon. You will see a window like the one shown in Figure 2.

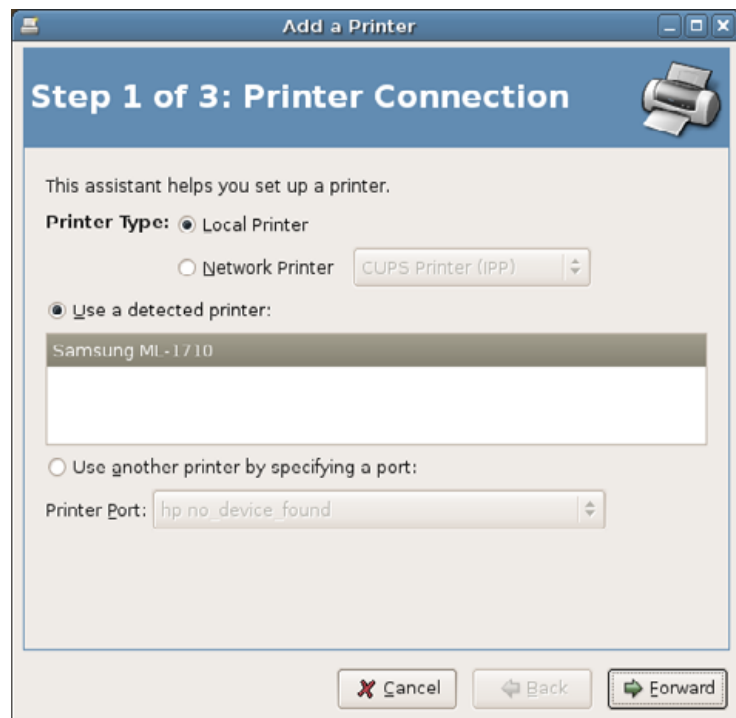


Figure 2. Step 1 for Adding a Printer

See my Samsung printer in my window? Maybe you do not see any printer there. Maybe you see your Lexmark printer. I do not know. I think you can click the Forward button anyway. You will see a window like the one shown in Figure 3.

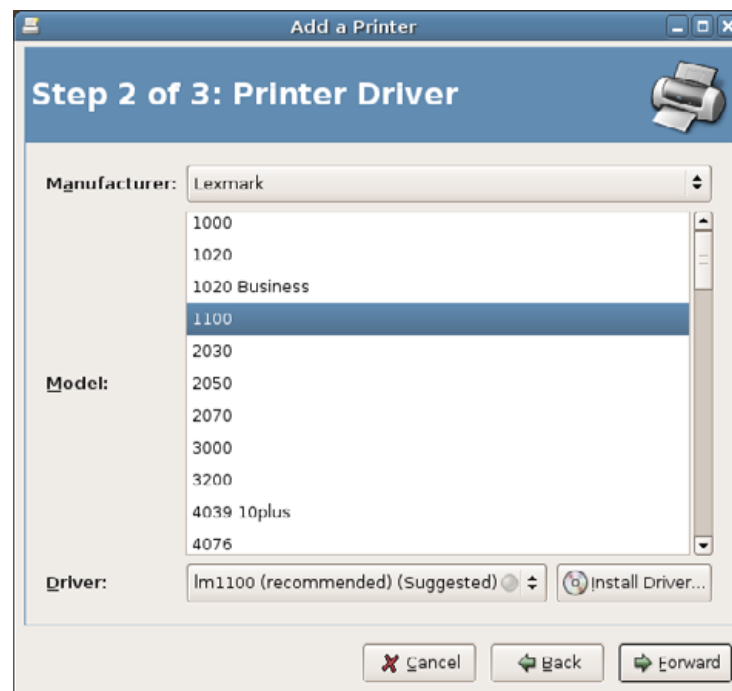


Figure 3. Step 2 for Adding a Printer

See the selecting thing next to Manufacturer? If this does not say Lexmark, click on this and choose Lexmark from the list. Now, select 1100 from the list of printers. Click the Forward button. Now, you will see a window like the one shown in Figure 4.

I typed MyLexmark for the Description and Office for the Location. You can enter whatever you like. Now, click the Apply button. You are done! You see the Printers window now looks more like the one shown in Figure 5.

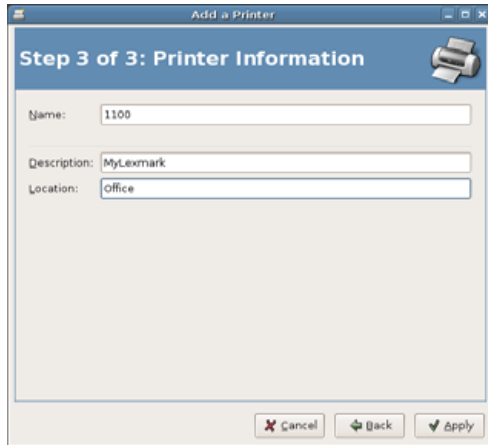


Figure 4. Last Step for Adding a Printer

My computer still thinks Samsung is the default printer. If I want to make 1100 the default printer, I right-click on the 1100 icon, and select Make Default.

Maybe I am wrong, and you have good taste, and you use KDE. Maybe you do not use KDE, but some readers have good taste and use KDE. I will tell you and those readers how to set up the Lexmark printer in KDE.

Click on the main menu on the toolbar, and click System Settings in the menu. You will see a window like the one shown in Figure 6.

Click the Printers icon. You will see a Printers System Settings window like the one shown in Figure 7.

It is good to use Administrator mode.

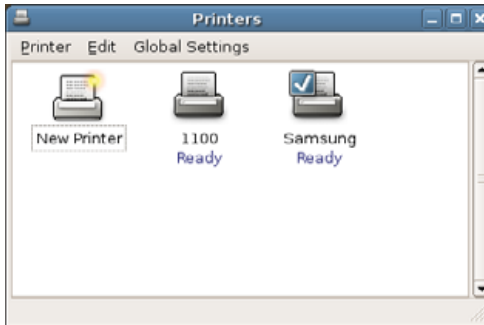


Figure 5. Printers now includes the Lexmark 1100.

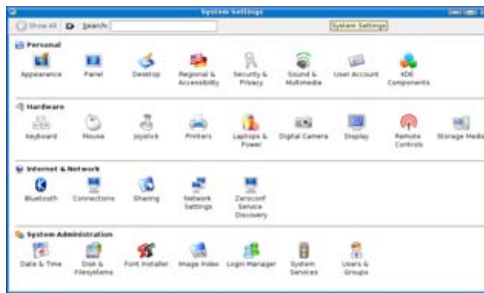


Figure 6. KDE System Settings

Click the Administrator Mode button at the bottom of the window. Type your user password when it asks you for a password. You do not type the administrator password, because if you are using Ubuntu the right way, there is no Administrator password. You type your user password. You will see a window like the one shown in Figure 8.

Click Add→Add Printer/Class in the main

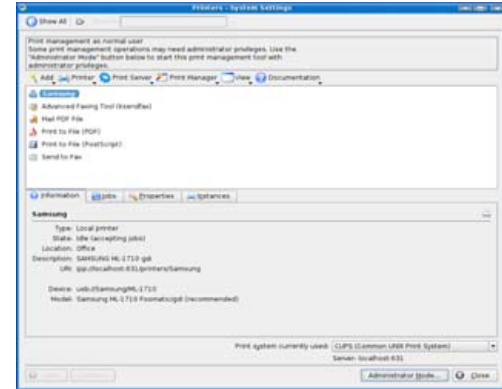


Figure 7. KDE System Settings for Printers

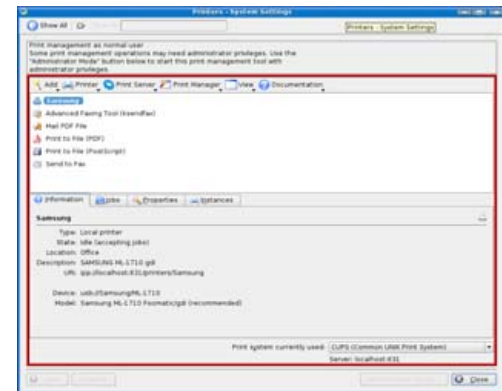


Figure 8. Printer Settings in Administrator Mode

menu. You will see a window like the one shown in Figure 9. This answer has a lot of figures. Do you think so? It has many more!

I RUN GNOME TOO, BECAUSE I NEED TO ANSWER GNOME QUESTIONS.

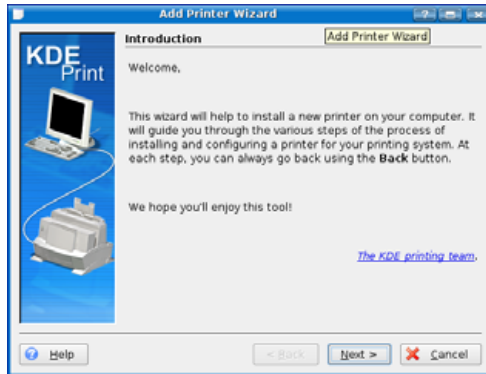


Figure 9. The KDE Add Printer Wizard

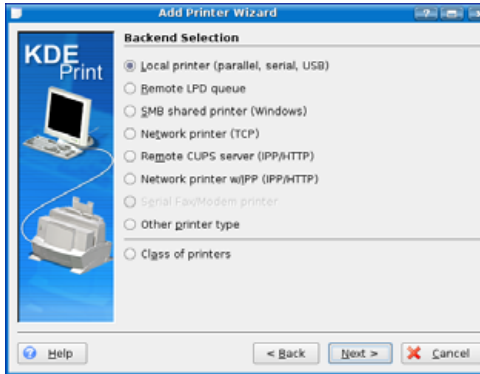


Figure 10. Select the type of printer connection.

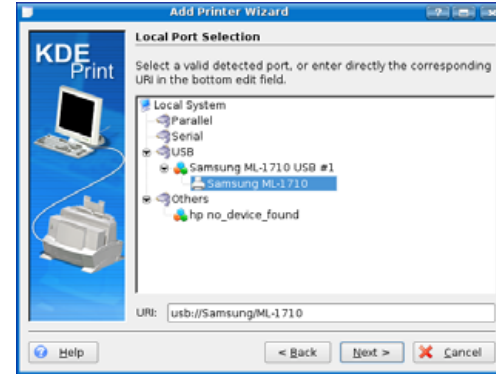


Figure 11. Select the printer to configure.

There are many windows in the KDE Printer wizard. You see the first window now. It looks like Figure 9.

Click the Next button at the bottom of the window. You will see a window like the one shown in Figure 10. Do not worry; there are many more windows, as I say.

Click on Local printer (parallel, serial, USB). I think you have your Lexmark connected this way. Click Next, and you will see a window like the one shown in Figure 11.

My window has my Samsung printer. I hope you see your printer, not my Samsung. If you see your printer, click on the name. If you do not see your printer, click on the con-

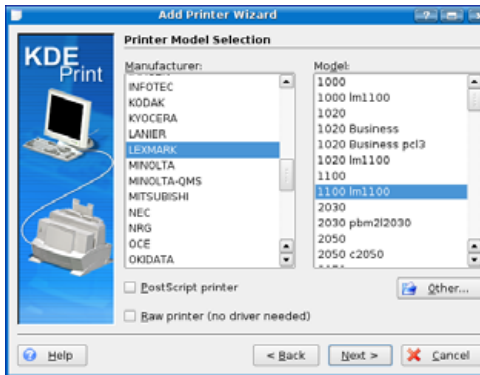


Figure 12. Select your printer brand and model.

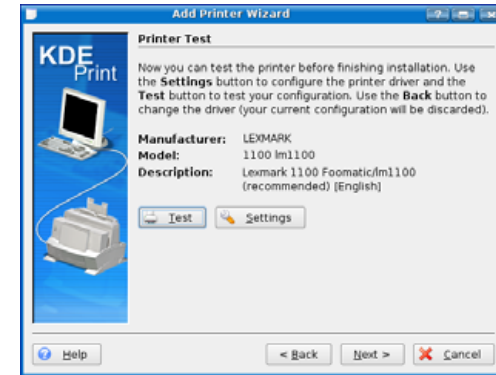


Figure 13. The Settings and Test Screen

nection you are using. If it is a parallel printer, click that. If it is USB, click that. Click Next. You will see a window like the one shown in Figure 12.

Click on LEXMARK, and click the model. I think you want to click 1100 lm1100. Click Next, and you will see a window like the one shown in Figure 13.

I think you should click the Test button. This is a good idea. If you make the right choices before this screen, you get a test page on your printer. If you do not get a test page, you need to go back and change the settings to make them right. Click Next when a test page works. Some of the next pages in the wizard are not important, so keep clicking Next to see the windows like the ones shown in Figures 14, 15 and 16, and then stop when you see one like

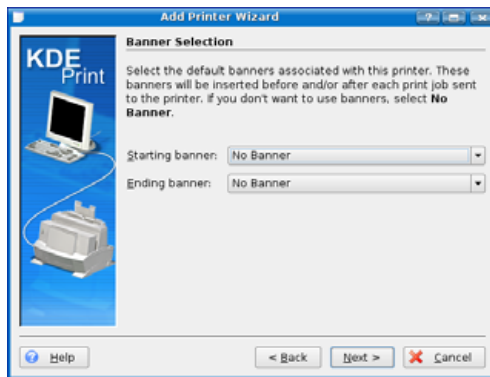


Figure 14. You can choose whether you want a banner page, but it is not needed.

Figure 17.

Like I said for GNOME, I typed MyLexmark for the Description, and Office for the Location. You can enter what you like. Click Next, and you will see a window like the one shown in Figure 18.

I do not have a Lexmark printer, so the information in Figure 18 is not right. I hope it is right for you. Click the Finish button, and you are done!

Q Hi Mango. Thanks for your article entitled “Add Custom Actions to Your KDE Konqueror Pop-up Menus” [see the December 2005 issue of *TUX*]. It works great on my Dapper Kubuntu.

I would like to have a script so that when I right-click on a folder, it lets me “Open as Root” (I have such a thing in GNOME). Then, I can use Konqueror to move/

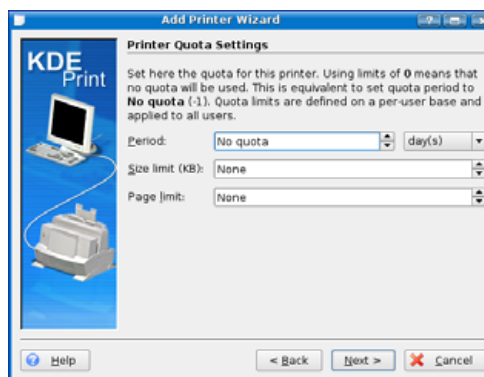


Figure 15. You can skip the quota page too.

delete/edit files in system folders.

I don't know what to put for ServiceTypes. I'm also not sure if I should use one of the % options like %F or %d.

If you have the time and are so inclined, I'd love some help.—*Satyam*

A You are smart and have good taste because you run KDE! I want Mike to meet you. Maybe you can tell Mike why he should run KDE. I see you run GNOME too, but that is okay. I run GNOME too, because I need to answer GNOME questions. Maybe you need to answer GNOME questions, or maybe someone is making you run GNOME sometimes.

Okay, I have an answer for you. Actually, I have four answers for you! The first answer is that you can look for features like this at the Web site <http://www.kde-apps.org>. I get

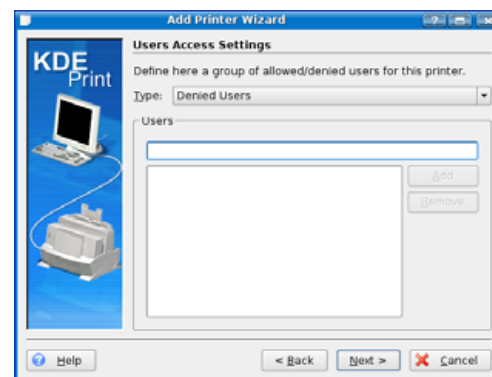


Figure 16. You can skip the page to tell KDE not to let other users print here.

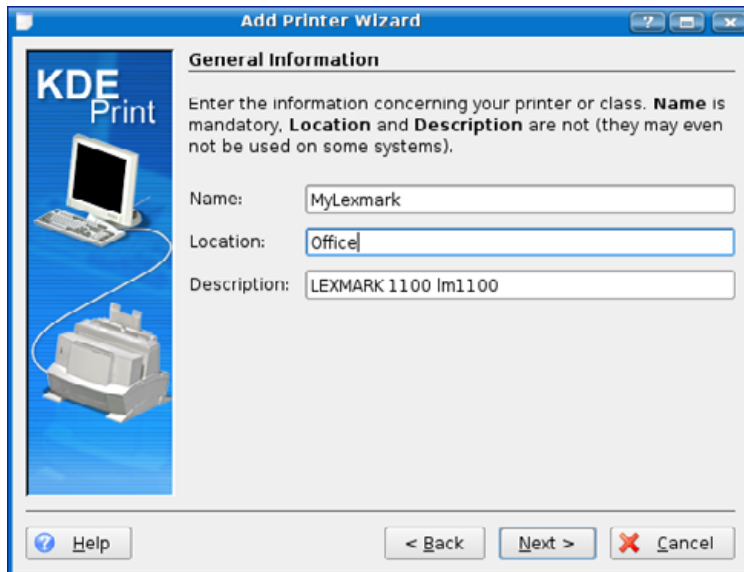


Figure 17. Description and Location Page

some of my ideas from this site. This is a good site to find service menus and other nice KDE programs. But, you do not have to go there. I have three more answers. I will teach you how to add three actions to your Konqueror menus. You use the first action to run any file as any user. The second action is to open any file as root. The third action is to run any file as root. You do not need all three. You can use the first one to open a file as root, because it makes root the default. I use all three because I think it is easier.

First, you create a file called open as user desktop, and save this file anywhere for now. Here is what to put in the file:

```
Encoding=UTF-8
Actions=OpenAsUser
ServiceTypes=all/all
```

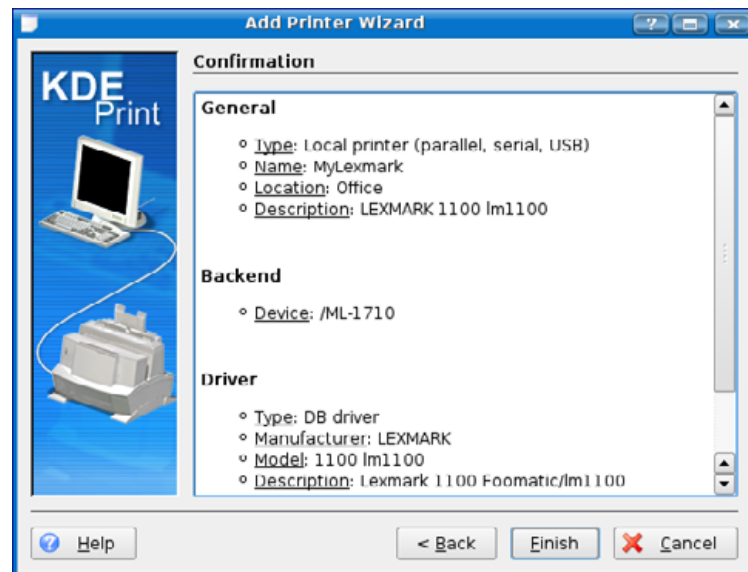


Figure 18. Final Wizard Page with Information about the Printer

```
[Desktop Action OpenAsUser]
Name=Open as user...
Icon=kuser
Exec=kdesu -u `kdialog --inputbox "Enter username:"
↳root` -c "kfmclient exec %u"
```

Now, you must save the file and move this file to the right place. Here is the command:

```
$ mv openasuser.desktop ~/.kde/share/apps/konqueror/servicemenus
```

This command works if you open a terminal and you are in the directory where you save the file. You can use Konqueror to move the file as well, but I think you are smart enough to use a terminal and commands.

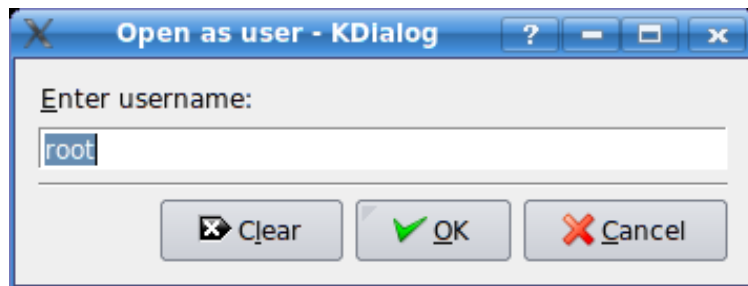


Figure 19. Type another user name if you do not want the root user to be the default.

If you have Konqueror open, you need to restart Konqueror. Now, right-click on a file and click Actions→Open as user to get a window like the one shown in Figure 19.

Click the OK button. KDE will open the file as the user.

Maybe you just want to open as root always. Make a new file called `openasroot.desktop`, and put this in it:

```
[Desktop Entry]
Encoding=UTF-8
ServiceTypes=all/all
Actions=OpenAsRoot
```

```
[Desktop Action OpenAsRoot]
Name=Open as Root
Icon=kuser
Exec=kdesu "kfmclient exec %u"
```

Now, you must save the file and move this file to the right place. Here is the command:

```
$ mv openasroot.desktop ~/.kde/share/apps/konqueror/
↳servicemenus
```

Maybe you want to run a file as root always. Make a new file called `runasroot.desktop`, and put this in it:

```
[Desktop Entry]
Encoding=UTF-8
ServiceTypes=all/all
Actions=RunAsRoot
```

```
[Desktop Action RunAsRoot]
Name=Run as Root
Icon=kuser
Exec=kdesu -c
```

Now, you must save the file and move this file to the right place. Here is the command:

```
$ mv runasroot.desktop ~/.kde/share/apps/konqueror/
↳servicemenus
```

Restart Konqueror, and right-click on a file. Click Action, and then pick the new action you want. If you make a mistake with the service files, sometimes KDE will get confused and it will not work. If you make a bad mistake, you must log out and log in again after you fix it or it will never work because KDE might run some services wrong and not stop them. You stop them when you log out.■

I am a sweet, humble, delicate and very cute genius who is at your service to answer your Linux questions. Send your questions to mango@tuxmagazine.com. I am deeply sorry that I do not have time to respond to anyone directly by e-mail, but I will select as many questions as I can and answer them here.



TUX PEOPLE

Pamela Jones

The author of the Web site that sank the SCO ship.

COLIN MCGREGOR

This is the first of a series of articles on people in the Open Source community. This month, we interview Pamela Jones.

Since May of 2003, Groklaw (<http://www.groklaw.net>) has been documenting legal issues of interest to the Open Source Software community. Although many legal topics are covered, the SCO Group lawsuits have been a central part of Groklaw coverage. The person behind Groklaw is Pamela Jones—or PJ, as she is known to many—helped by a loosely knit collection of volunteers.

CM: How did you get involved with open source in general and Linux in particular?

PJ: I was working in a small law office, and I ended up being the designated person trying to handle all the computers. The office was too small to have a tech department, and I was appointed. It was an education. Being a Windows office, and full of clueless folks, it was a nonstop battle with viruses and blue screens of death and apps that didn't work any more ("What did you do just before this happened?" "Nothing."). A relative told me about Knoppix and Red Hat, and how in Linux you wouldn't have all those troubles. I also learned on investigation how to use Knoppix as a live CD to fix troubles in Windows. It was mind-blowing. I couldn't get over that the GPL meant I didn't have to register or type in numbers proving who I was, and that I could share with as many people as I wanted.



Pamela Jones as drawn by J.D. "Illiad" Frazer of UserFriendly.org. Copyright 2005, Pamela Jones.

So, although I actually enjoyed Windows up until that point (I just love using computers), using Red Hat and then Mandrake, now Mandriva, and Knoppix and Kubuntu...little by little, I found myself using the Linux side of my dual boot more and more instead of the Windows side. And, eventually, I just moved over and got rid of the Windows side. I do also use a Mac OS X laptop, and I have just downloaded Yellow Dog Linux and Kubuntu, and I'm hoping to have time to play with them on that hardware eventually. Groklaw is very time-consuming, and I don't get to have fun with learning new things the way I used to.

That is the fun of Linux to me—that you can try things out, and you can learn. I think it's incredibly interesting to look at the logs, and at changes in files, and to be able to understand that computers don't do things magically or unknowably—that you can comprehend how it does what it does, and then you can tweak it to make it do what *you* want very precisely, instead of getting to do only what the computer is set up to do by a stranger at a company who doesn't know you or what you want your computer to do.

CM: What do you see as Groklaw's main role in the community?

PJ: Education. I started with the idea that geeks don't know enough about the law to function well in a digital world, where all of us are affected personally by copyright law, at a minimum. At the same time, I certainly knew that most lawyers need to have more information about the technology in order to handle cases that require such knowledge. I wanted to put those two groups together, so they could work together.

I still see that as a primary purpose. And, Groklaw is also a place where a large group of folks, dispersed over the Internet in more than one country, can work together effectively doing

legal evidentiary research. In the SCO case, for example, our readership includes the folks that wrote UNIX and Linux, so who would know better than they do what happened and where the evidence is? They lived it.

Finally, Groklaw is an antiFUD site, where we try to educate against false information corporations sometimes dispense.

CM: What do you see as the biggest legal challenge currently facing Linux and the Open Source community?

PJ: Patents. And, how to keep the community united in the face of legal challenges, when it has always been somewhat divided in philosophy and interests.

CM: How would you encourage more women to get involved with the IT sector in general and open source in particular?

PJ: By doing it myself. I have found more and more women becoming members of Groklaw. In the beginning, I was literally the only one. That's not true any more at all. It would help a lot if guys treated women who show up with respect. Although I am treated very well, it's still true that for some reason, there seems to be an idea that women in tech must also be rated on appearance, not only on ideas and skill. Imagine how men would feel if, say, Alan Cox or RMS were rated on that. Linus would do all right, and Ingo Molnar is a bit of a hunk...oops. Now *I'm* doing it.

But do you see how weird it is to rate people by something that certainly doesn't matter when we're all working on the Internet, the most faceless of environments? It's very off-putting to women when they offer an idea or some code and they get asked on a date instead of being taken seriously, or a guy assumes that the woman can't possibly know what she is talk-

ing about, even when she actually does. I can't tell you how often that has happened to me, or did happen in the beginning. When it happens to me, I've learned to stand up for myself, but I shouldn't actually have to. Women tend to underestimate themselves already, so when they get stomped on, they are very likely to believe it. I almost shut Groklaw down in the beginning, because so many people told me that there was no way the Linux Kernel Personality had any kernel code in it. I had found some evidence that it did. But it was like an avalanche of negativity, so at first, I thought I'd made a mistake so huge I should just stop. I'm not a programmer, after all, so the possibilities of mistakes are higher than if I were, and I recognized that. But I do know how to research, and I have tech advisers, and I'd found this thread to pull, and after a bout of insecurity, I pressed on, and eventually I found out which version it was. This was later confirmed in a SCO deposition, so everyone who derisively had told me I didn't know kernel code from my eyeball were simply wrong. They assumed I couldn't know what I was talking about. But I did. So I tell women to ignore such things, to know what they know, to accept their own skills, and if they believe they've done good work, to stand their ground. It isn't just the guys that need to change; we do too. Tech

is all about brains. That's not a gender thing.

CM: What else would you like readers of TUX to know about you?

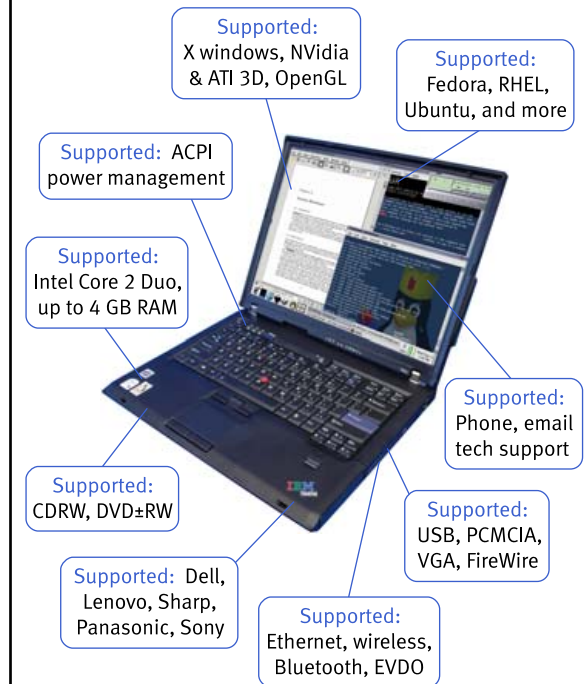
PJ: Not a thing.

Just come and help out. I'd love to have you join us. The more the merrier. It doesn't matter how small each individual's contribution might be. Others can build on it, and that is the power of group work.■

Colin McGregor works for a Toronto-area charity, does consulting on the side and has served as President of the Toronto Free-Net. He also is secretary for and occasional guest speaker at the Greater Toronto Area Linux User Group meetings.

I STARTED WITH THE IDEA THAT GEEKS DON'T KNOW ENOUGH ABOUT THE LAW TO FUNCTION WELL IN A DIGITAL WORLD, WHERE ALL OF US ARE AFFECTED PERSONALLY BY COPYRIGHT LAW, AT A MINIMUM.

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Nativity on Your Linux Desktop

The fun side of Christmas cards and desktop backgrounds.

DMITRI POPOV

Just because it's Christmas time, that doesn't mean you have to turn off your computer. Although you can't use Linux to make egg nog or bake Christmas cookies, you can use it for all sorts of creative things, such as designing Christmas cards and desktop background pictures. All you need is Inkscape, The GIMP (both available through the Ubuntu repository) and a scanner.

CREATING A CHRISTMAS CARD

Instead of buying Christmas cards this year, why not create them yourself? This way, you not only will add a personal touch to your season's greetings, but you also will impress your friends and family with your Linux skills and creativity. The only software you need for this project is the Inkscape drawing application. It's available with most major Linux distributions, and you can install it using your distribution's package manager.

Next, you need a picture that you can use as a key motif for your Christmas card. If you have a digital camera, you can take the picture you want or choose an existing one from your photo collection. Alternatively, you can find a picture suitable for your project on the Web. In fact, there are quite a few Web sites that offer free, high-quality photos. Stock.xchng (<http://www.sxc.hu>) is one of

the best on-line resources containing more than 250,000 photos from which to choose. Using the search feature on the Web site, you quickly will find a picture you like. You also might want to try morgueFile (<http://morguefile.com>) or the Yotophoto search engine (<http://yotophoto.com>), which allows you to find free photos on the Web. (In case you're wondering, for this project, I chose a picture I took during my winter vacation in St. Wolfgang, Austria.) Once you've found the picture you like, download it and launch Inkscape.

When you start Inkscape, it creates an empty document, but before you can start working on it, you have to adjust its properties. To do this, choose File→Document Properties. First, choose the page orientation for your document. The Landscape orientation is a good choice as that's what's used in most classic card designs. Next, you need to specify the dimensions of your card. The actual size of the card depends on whether you plan to print the card. If you want to send the final Christmas card via e-mail or put it on your Web site, the dimensions of the card are not too important. However, if you are going to print your design, you need to adjust the card's size to the paper format you will be using. For example, if you have a photo printer, you can use the stan-

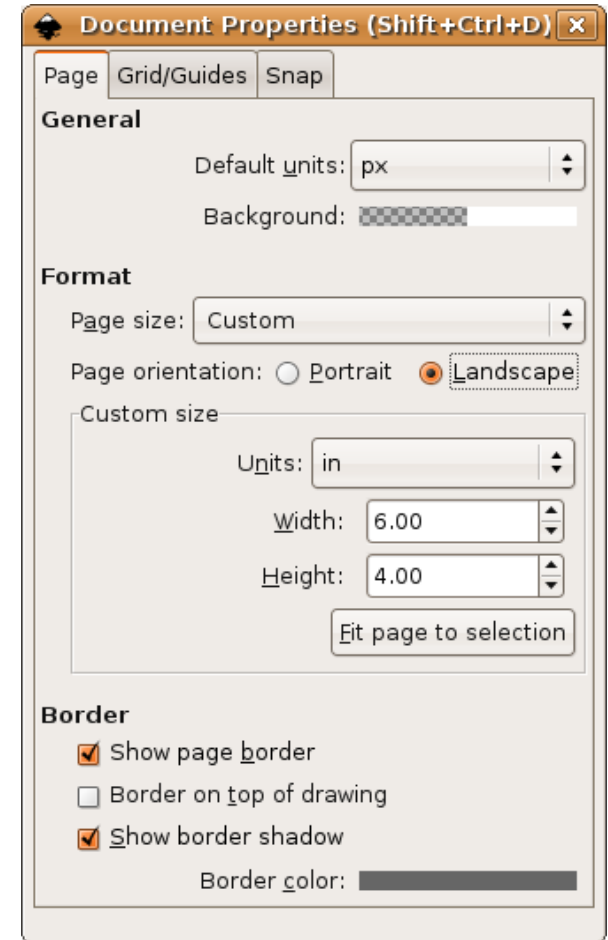


Figure 1. Specifying Document Properties

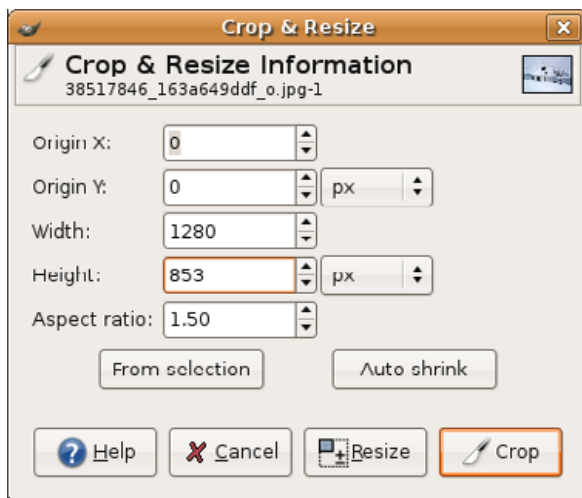


Figure 2. Adjusting the Aspect Ratio Using the Crop Tool in The GIMP

card 4"x6" photo paper to print your cards. To adjust the document's size, select Inches from the Units drop-down list in the Document Properties window, and set Width and Height to 6 and 4 inches, respectively. Close the dialog window, and you are ready to go.

Start by inserting the photo into the empty document. To do this, choose File→Import, and select the image. To scale the image to fit the card, press and hold the Ctrl key while dragging the bottom-right black arrow with the mouse. Once you've placed the image correctly, you can lock it to avoid accidental changes. To do this, choose Object→Object Properties, and tick the Lock check button.

Tip: it may happen that the selected image doesn't fit the 4"x6" card, because of the

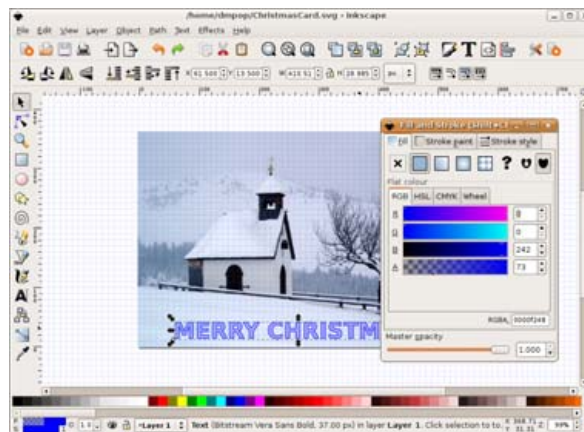


Figure 3. Working with the Fill and Stroke Properties

“wrong” aspect ratio, but you can fix that quickly using The GIMP. Open the image in The GIMP, choose the Crop tool (it looks like a knife), then select the entire image. In the Crop & Resize dialog window, set the Aspect ratio field to 1.50, adjust the cropping area, and press the Crop button. Save the resulting image, and import it into Inkscape.

Now, let's add the “Merry Christmas!” greeting to the card. Choose the Text tool from the Toolbar, click on the document in the spot where you want the greeting to appear, and type the text. Choose Text→Text and Font, and select the desired font and size. Keep in mind that chunky fonts will look best on the card, so you might want to try something like Bitstream Vera Sans Bold or one of the decorative fonts installed on your system. So far so good, but the plain look and black font color aren't very exciting, so let's



Figure 4. The Final Christmas Card

do something about it. Choose Object→Fill and Stroke, and use the dialog window to change the text's color and enable and adjust the stroke paint. As a starting point, you can use the settings I used for the greeting text in the sample card (Figure 4):

- Under the Fill tab, the R, G, B and A values are set to 0, 0, 225 and 75, respectively.
- Under Stroke Paint, the stroke is set to Flat Color, and the R, G, B and A values are set to 0, 0, 225 and 225, respectively.

If you want to jazz up the greeting text even further, you can make it flow along a path. Use the Bezier curve tool to draw a path. If you've never tried working with Bezier curves, getting it right can be a bit tricky, so you might want to start with simple straight lines. When the curve is ready, select both the greeting text and the curve,

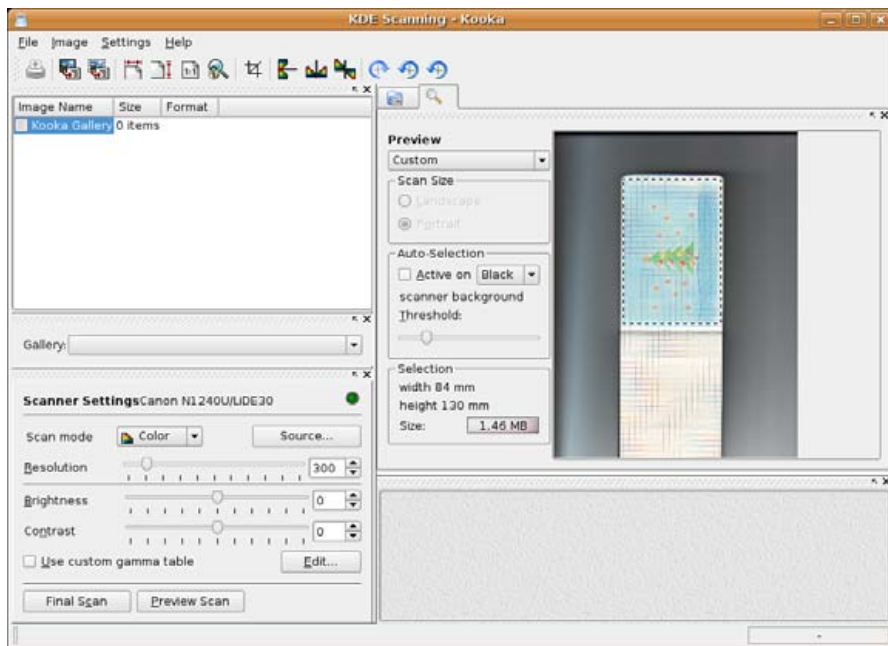


Figure 5. Using Kooka to Scan the Drawing

and choose Text→Put on Path. This places the text along the curve, and you can use the Edit path tool to adjust the curves' nodes and make the text flow more smoothly. If you want to hide the curve, choose Object→Fill and Stroke, click on the Stroke paint tab and press the No paint button.

You also can spice up the card by adding stars using the Stars and Polygons tool. Click the Stars and Polygons button on the main toolbar and draw a star. In the properties toolbar at the top of the window, you can tweak the star's settings, including the number of corners, spoke ratio and so on. To change the star's fill and stroke color, use the Fill and Stroke window (Object→Fill and Stroke).

Finally, if you plan to send the card via e-mail or publish it on the Web, you need to export it as a bitmap image. Choose File→Export Bitmap. In the Export dialog window, make sure the Page button is pressed, set the

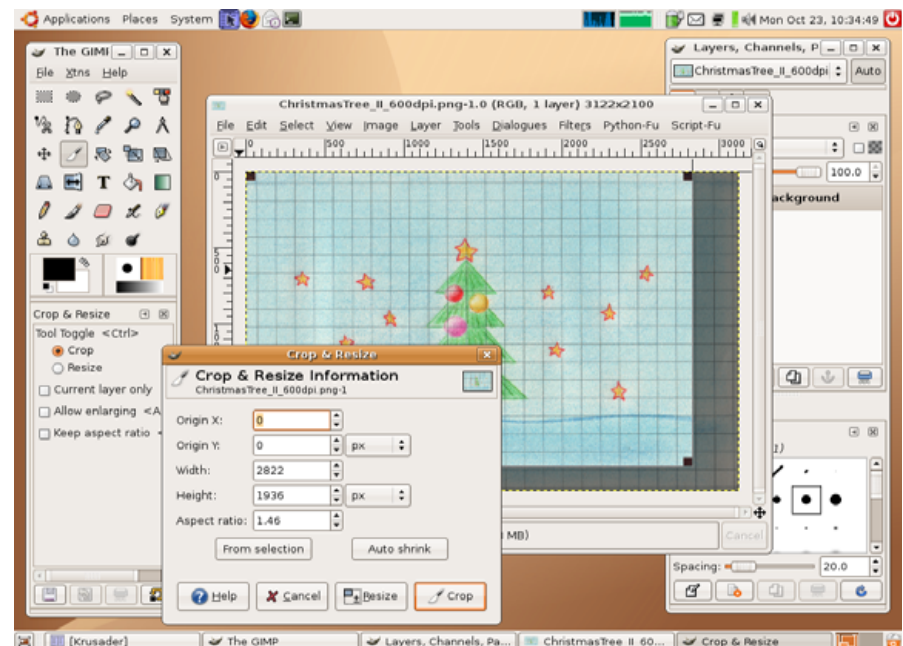


Figure 6. Cropping the Image in The GIMP

Resolution field to 72dpi, specify the file path in the Filename field using the Browser button, and press the Export button.

IF YOU HAVE A SCANNER, YOU CAN CREATE A HAND-DRAWN CHRISTMAS BACKGROUND PICTURE.

CREATING A CHRISTMAS DESKTOP BACKGROUND

Once you're done with the Christmas card, it's time to decorate your desktop. You can, of course, easily find a nice background picture on the Web,

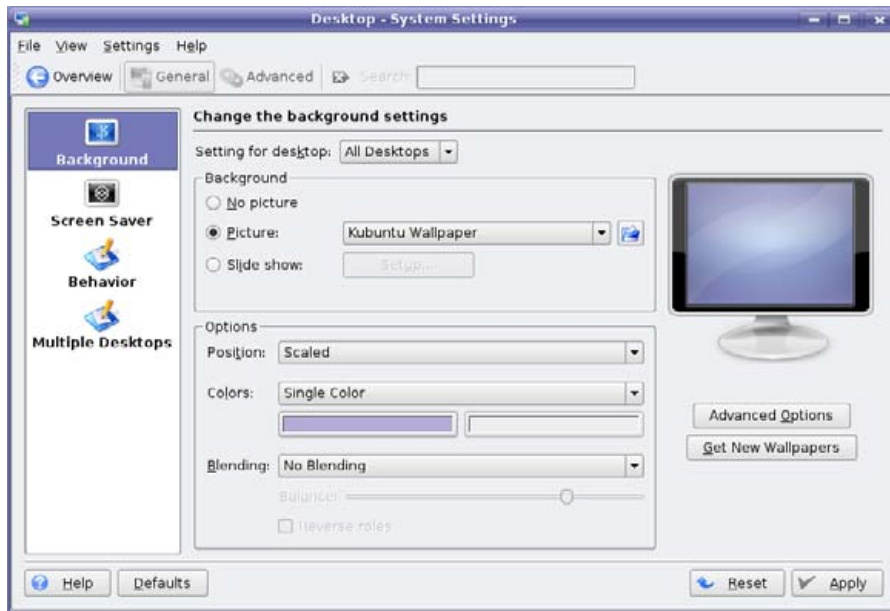


Figure 7. Choosing a Background Picture in KDE

but that wouldn't be much fun, would it? Instead, you might want to try something more unusual. If you have a scanner, you can create a hand-drawn Christmas background picture. The main prerequisite is a drawing, which you either can draw yourself or ask your kids to do for you. Next, scan it using the Kooka scanning software. It comes with virtually any KDE-based Linux distribution, and you can use your package manager to install it. Make sure that the scanner is connected to your computer, and launch Kooka.

Kooka's default settings work fine most of the time, so you should be able to get a decent scan even without tweaking different options. The only thing you need to configure is the scan mode and resolution. For your color drawing, use the Color scan mode. Because you are going to use the final image on your computer only, the resolution doesn't have to be very high—

something between 150dpi and 300dpi is more than enough. Once you have chosen the desired settings, click the Preview Scan button to see a rough preview of the scan. Use this to see whether the drawing is positioned correctly as well as to narrow the scanning area. To do this, select with the mouse the exact area of the image you want to scan. When everything looks fine, press the Final Scan button, and wait for Kooka to do its job. Save the scanned image in the format you want (PNG or JPG are good choices). The scanned image appears in the default gallery in Kooka, and to save a copy of it in another location on your hard disk, right-click on the image and select Save image.

In most cases, the scanned image needs additional tweaking in The GIMP. The first thing you probably need to do is to crop the image. To do this, click the Crop button on the toolbar, select the desired area of the image, and click the Crop button in the Crop & Resize dialog window. Next, scale the image to fit your screen resolution. For example, if you have a 1024x768 screen, you need to adjust the image accordingly. Here is a simple technique you can use to do this. Choose Image→Scale Image and set the Width field to 1024 pixels. Make sure the value of the Height field is equal to or more than 768 pixels. If it's not, press the Cancel button and re-crop the image. Press the Scale button to scale the image. Select the Crop tool from the toolbar and set the Width field to 1024 and the Height to 768. Use the upper-right handle of the cropping area to move it around. Once it's positioned the way you want it, press the Crop button. Sometimes scanned images look a little blurred, but you easily can fix that using the Sharpen filter. Choose Filter→Enhance→Sharpen, set the desired Sharpness level, and press OK. Save the image, and you are ready to use it as a background. Choose System Settings from the K menu, and select your picture in the Background section. That's all there is to it. Merry Christmas, everyone! ■



Dmitri Popov is a freelance writer whose articles have appeared in Russian, British and Danish computer magazines. His articles cover open-source software, Linux, Web applications and other computer-related topics.

Customizing KDE for the Holiday Season and Methods for Keeping New Year's Resolutions

Keep your desktop and your life in sync with the season.

JAY KRUIZENGA

The holiday season often puts us in what you might call the holiday mood—a mood of love, of kindness, of a desire to do good to our fellow humans, placing all animosity aside. It's not an easy task. Still, we do get into the holiday spirit, and that spirit leads to the purpose of this article. Here I explain ease of changing your Linux desktop by tapping into a large repository of GPL-licensed file downloads, entering your KDE Control Panel and making the appropriate changes to give your desktop a holiday face lift. I also briefly touch on a couple of calendaring applications to help you follow through with your New Year's resolutions and show you a special Web site where children can write letters to Santa.

The <http://www.kde-look.org> Web site is a large repository of file downloads (eye candy) specifically for the KDE desktop. The files located here are GPL-licensed (for the most part); however, I did find a few that were obviously mislabeled due to their content (images of celebrities or borrowed images from other Web sites). The GPL-license indicates that the respective image/file is free to download, change, customize or distribute at will, free of all legal attachments (in a nutshell). You immediately can see the problem associated with lifting an image from another Web site, adding a few changes and labeling the new combined image as "GPL". That is unethical—but I digress.

The KDE-Look.org Web site is easy to navigate. The left-hand column lists all of the content separated by usage: wallpapers, themes, icons, splash screens and so forth. You can browse each listing by category, choosing to download the files that catch your interest. Or, you also can conduct a search, which is found in the right-hand column, by entering the term you

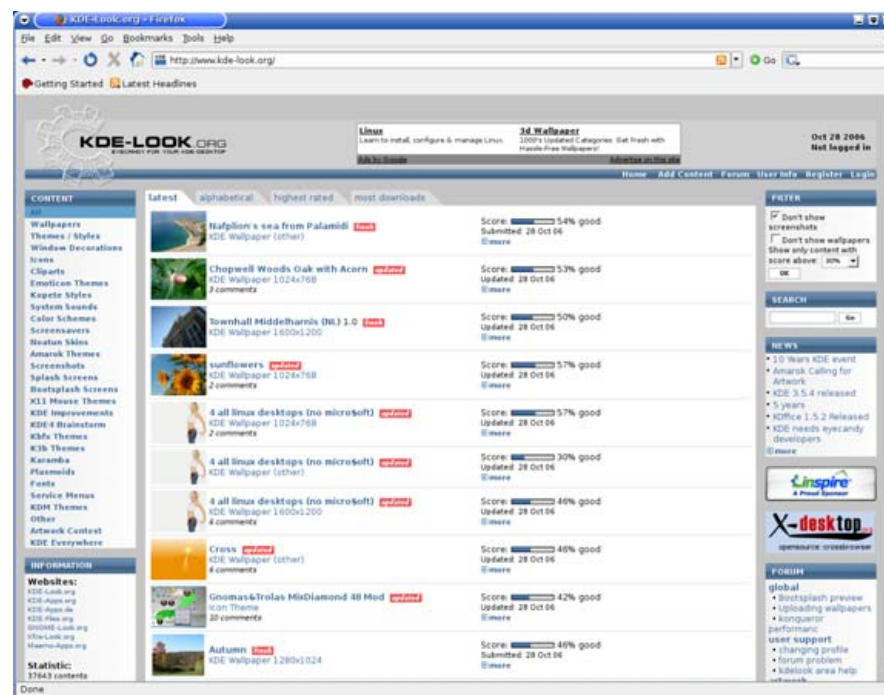


Figure 1. KDE-Look.org is a large repository of eye candy for the KDE desktop.

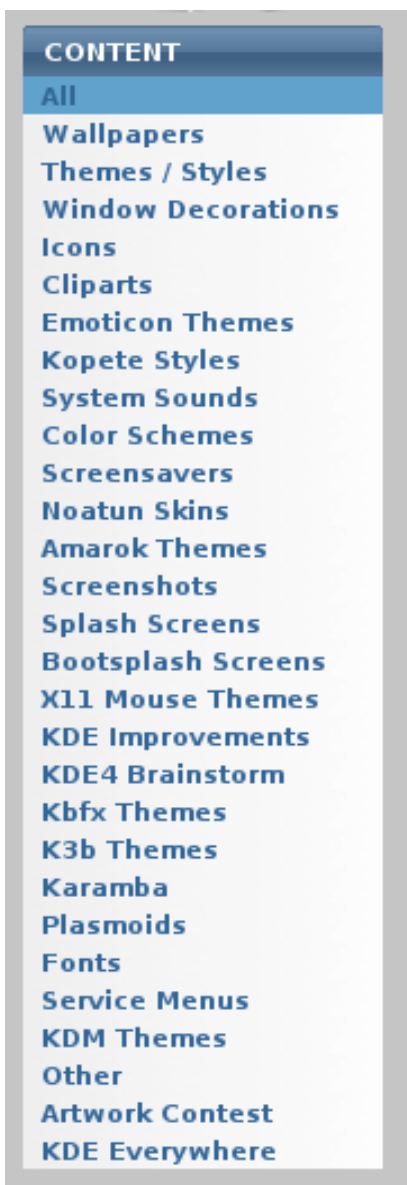


Figure 2. The left column shows the content of KDE-Look.org.

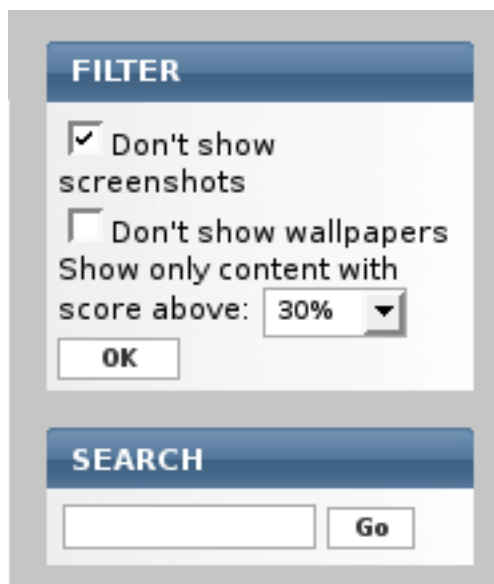


Figure 3. The right column contains a place to conduct a search.

want to find. Each category of files can be sorted further using the tabs across the top marked latest, alphabetical, highest rated or most downloads.

First, you need to register. In the top-right corner of the KDE-Look.org site, you will find a place to do this. It is a simple process that requires only a user name, password and e-mail address. Once you have done this, you will receive a temporary password via e-mail that you'll need to log in for the very first time. Don't bypass this important step; from this point on, I assume you have registered and logged in.

For the purpose of this article, we are looking for a holiday-related theme. So, type in searches for Christmas, santa, win-

ter, xmas and the like. You will find numerous options under some searches, while others will have few. Unfortunately, not a large assortment of Christmas-related downloads are available, but there are enough to make our quest for a holiday-oriented desktop successful. Below are some links to file downloads (with authors noted) that I found to be fitting. Take a look at your leisure, or feel free to discover your own. I also have provided a link to official wallpaper downloads of the new movie *Santa Clause 3: The Escape Clause*.

To download a file, click Download, and save the file to your My Documents folder or a location where you will be able to find it later. Download one or more of the following: wallpapers, screensavers, splash screens and color schemes.

WALLPAPERS

- A Christmas Eve, 1280x1040, by Rebe Bernhard of Austria is a beautiful shot taken of Rebe's hometown in Austria on a wintry Christmas Eve: <http://www.kde-look.org/content/show.php?content=34730>.
- Snowy Christmas, 1024x768, by Doug Conrad is a mixture of snow, Tux and snowmen frolicking: <http://www.kde-look.org/content/show.php?content=4112>.
- Santa-Tux, 1042x768, by DSC is Tux with a Santa cap: <http://www.kde-look.org/content/show.php?content=32895>.
- Other great wallpapers from the movie *Santa Clause 3: The Escape Clause* starring Tim Allen and Martin Short are available from http://www.moviewallpaper.net/wallpaper/2006_The_Santa_Clause_3:_The_Escape_Clause.html.

SPLASH SCREENS

- Tux-Christmas, by Oliver Bestmann: <http://www.kde-look.org/content/show.php?content=19098>.
- Seasons-Winter, by Sean Hickey: <http://www.kde-look.org/content/show.php?content=13005>.

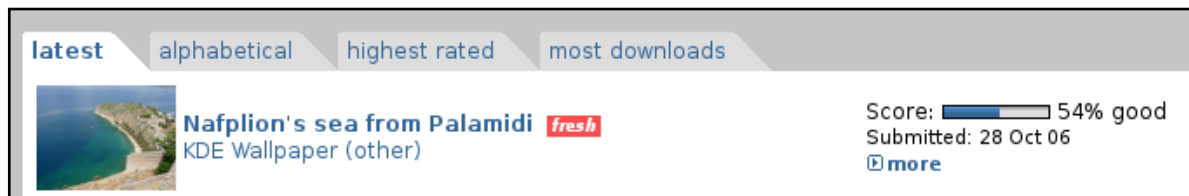


Figure 4. The top column lets you sort searchable images.

COLOR THEMES

- Keramik Christmas, by Doug Glidden:
<http://www.kde-look.org/content/download.php?content=18038&id=1>.
- Christmas, by Doug Glidden:
<http://www.kde-look.org/content/download.php?content=18037&id=1>.

Now that you have downloaded a few files, how do you install them? Open the KDE menu (on the bottom-left of most Linux PCs), and start the Control Center.

INSTALLING THE WALLPAPER

Click on Look and Feel and then Background. Switch to the Wallpaper tab, and select Single Wallpaper. Click on Browse, and find your newly downloaded wallpaper. Select the mode you like, and press Apply.

INSTALLING THE SPLASH SCREEN

The Splash Screen is the screen you see when you first turn on your PC. Select Appearances and Themes in the Control Center, then select Splash Screen. Click Add, and browse your PC for your newly downloaded splash screen. Select the new

theme, and restart the KDE desktop for this to take effect.

INSTALLING THE COLOR THEME

This is a bit different. When you click the Download button, your browser opens a new window where you should see several lines, as shown in Figure 5. In your browser, click File and then Save as; note that the suffix includes .kcsrc. This is exactly what you want. Save the file to your PC (in a place where you will find it later easily).

Next, click on Theme and Colors. Click Import scheme, and find the downloaded .kcsrc file. Now, select your color theme, and click Apply.

You now should have a customized holiday-oriented KDE desktop. Figure 6 shows an example of my finished product.

WRITE A LETTER TO SANTA

Children can write a letter to Santa at <http://www.emailsanta.com>. This is a parent-created site that lets kids write a letter to Santa, and it also provides additional fun things to do. Children will get an instant personalized letter back from Santa that must be saved or printed or it will be lost—very nicely done.

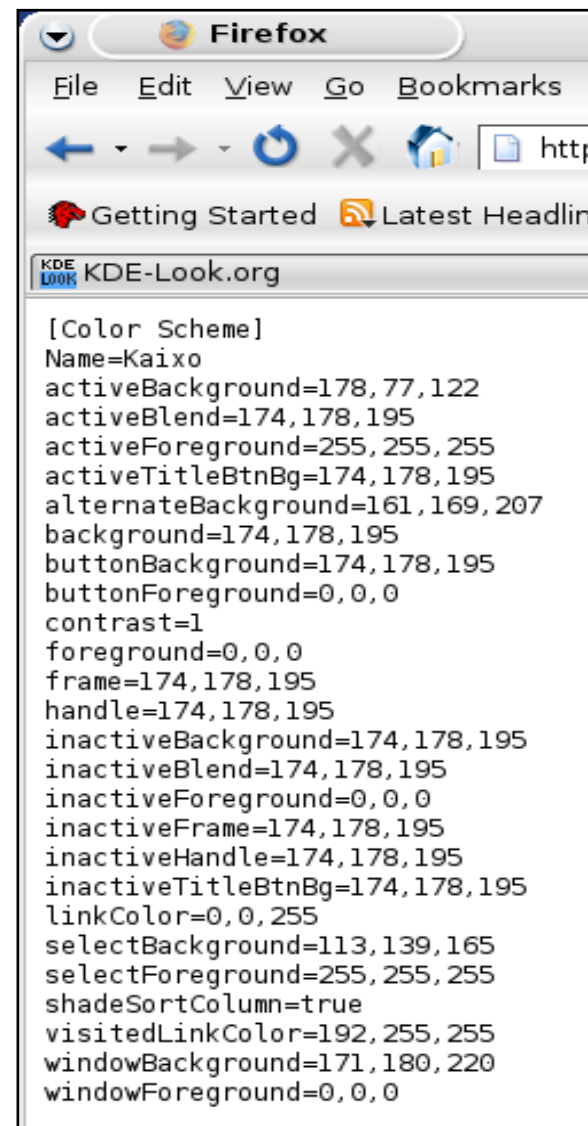


Figure 5. Import .kcsrc files to change color themes.



Figure 6. Example of a Customized KDE Holiday Desktop

NEW YEAR'S RESOLUTIONS

The holiday season is also a time for reflection—a time to look back on the past year (or years) and decide what you most would like to change in your life. Did you know that the New Year's resolution tradition can be traced all the way back to the Roman Empire? The Roman god Janus was the god of gates and doorways, and it is no coincidence that he is placed at the front of the calendar. As a two-faced god, Janus looks both forward into the new year and backward into the past—symbolic of the way we look to the past in order to change the future—thus, New Year's resolutions. We have been doing this ever since.

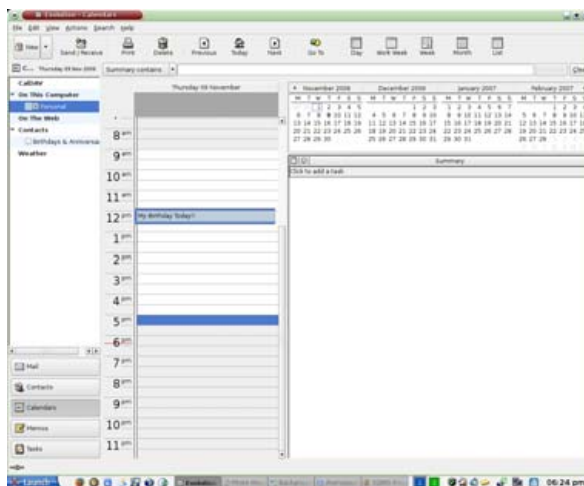


Figure 7. Evolution is a full-featured e-mail/ calendaring program.

Most people who make New Year's resolutions also break them. Perhaps this is because they do not put them in writing. According to <http://eHow.com>, certain steps can be taken to accomplish a New Year's resolution once it is made, including putting it on paper, marking a calendar with deadlines, starting immediately and checking progress daily with the occasional reward for meeting little goals. To help attain your New Year's resolution, it might be helpful to have a good calendaring application with a place for personal note keeping and tracking of dates.

One great calendaring application is Evolution, available through the Debian and Ubuntu reposi-

tories. Evolution, similar to Microsoft's Outlook Express, includes integrated e-mail, address book and calendaring application, useful for keeping track of that New Year's resolution. Evolution includes a place to write memos and tasks, and it can be a full-featured, all-inclusive program to assist your goal-setting and record-keeping.

Another great calendaring application is KOrganizer, from <http://korganizer.kde.org> (if it is not already included with your KDE desktop). KOrganizer is another useful tool for logging your New Year's resolution and establishing a schedule of completion or goal dates where you can reward yourself for keeping that resolution. The main objective is to follow through and to take massive and immediate action. With either of the above applications, you will have a better chance of success.

I hope this article has helped you customize your KDE desktop with a festive holiday theme. Whatever holiday you are celebrating, I wish you and yours all the best success and fortune in 2007. Enjoy your loved ones, and have a safe holiday season. ■



Jay Kruijenga, a former Marine, is an accomplished Marketer (specialty: E-Commerce), business owner and aspiring author. He has a deep love for everything pertaining to Linux.

Working with Groups

Giving the right permissions to the right people.

PHIL HUGHES

When you first created your login on your computer, it contained two different things related to access control: your user ID and your group ID. There is a one-to-one correspondence between login names and user IDs—that is, your login name is nothing more than a synonym for your user ID.

Groups, however, are different. Any number of user IDs can be associated with a group. This part of the Linux permissions system allows you to share information and access to devices. Let's start with a simple example.

You likely have a CD-ROM device on your system. You might want to restrict who can access that device. That is, you might want to allow access if you are logged in, but not if your kids are logged in.

On most systems, there is a group called `cdrom`, created with default permissions that allow the owner (which will be root, or the superuser) and members of the `cdrom` group to access it but no one else. This means that if you want a certain user to have access to it, you simply can add that user to the `cdrom` group.



Users & Groups

Figure 1. Select Users & Groups from the System Administration section of the Settings menu.

Let's look at the process. Click on the K menu, and select System Settings. Then, select Users & Groups from the System Administration part of that page (Figure 1). This will get you to the Users & Groups page, showing user information (Figure 2).

You can see that there are four users on my system: `ana`, `fyl`, `nagio` and `nx`. These are the nonsystem accounts. Click the Show system accounts box if you want to see them all.

As we are going to be making some changes, we have to be in Administrator Mode. Click that button, and enter your password when prompted. The display will look the

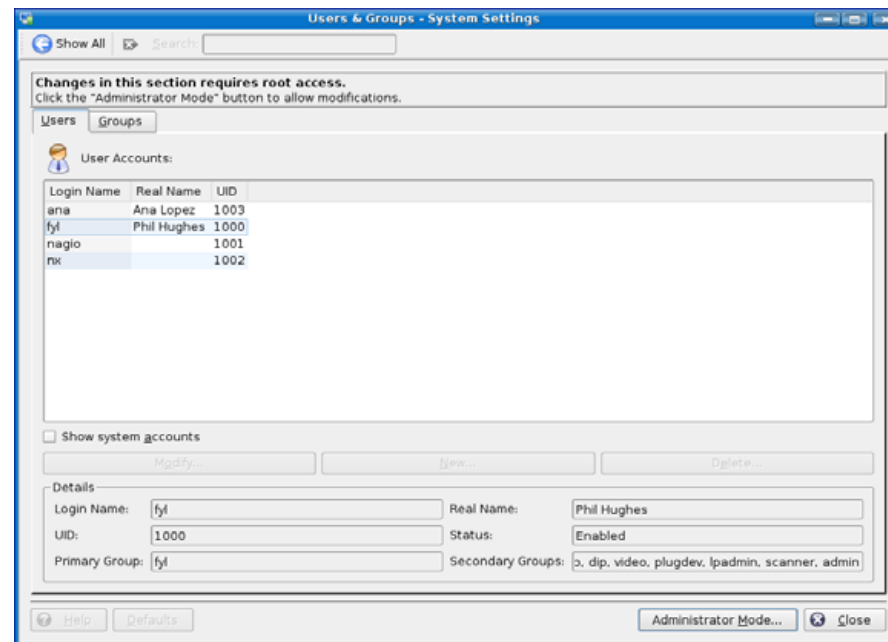


Figure 2. Users & Groups Page

same, except a red box appears around the frame. Figure 3 shows what I got by clicking on `ana` while being on the Users tab. You see that her primary group is `ana` and that she is not a member of any secondary groups. Thus, she cannot access the CD-ROM drive.

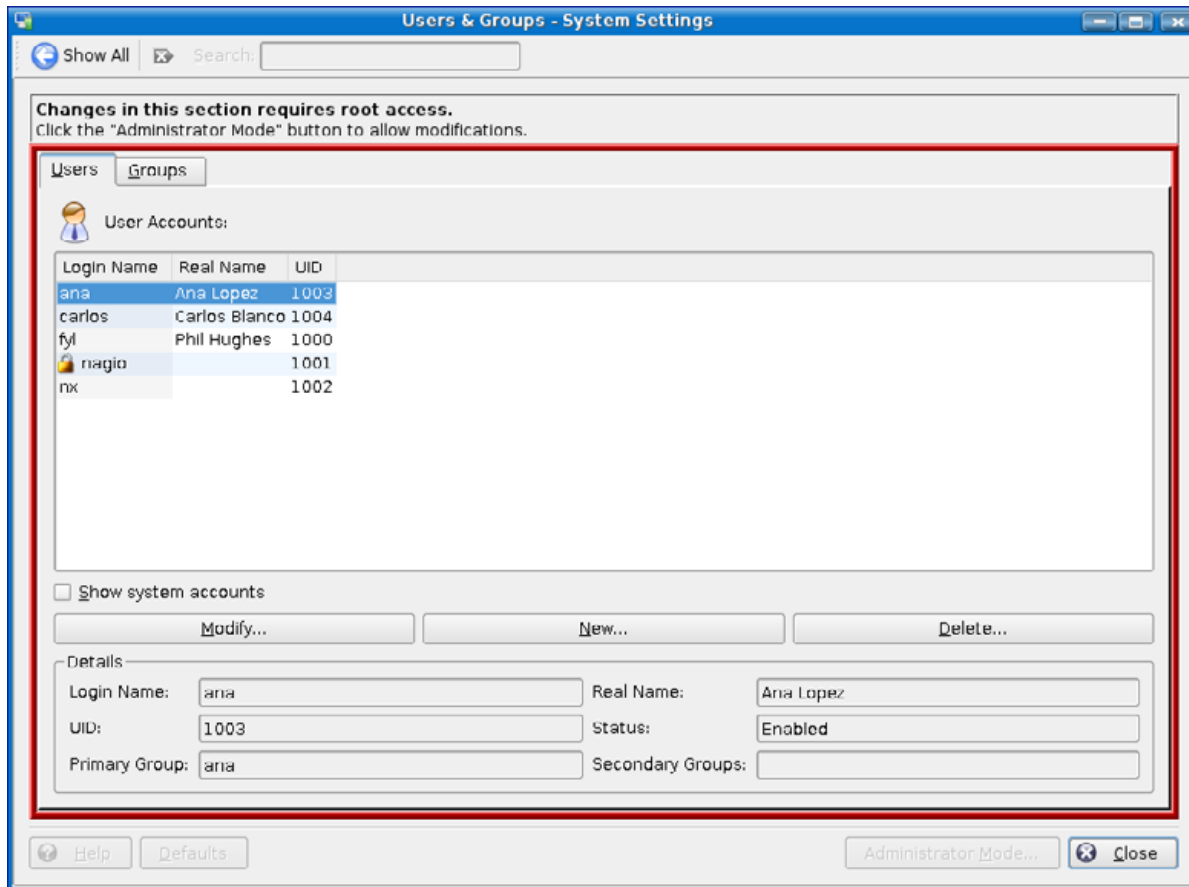


Figure 3. Clicking on ana in the Users Tab

Next, I am going to add a new login. It's easy—simply click the New button to get to the User Account window and fill it in. Figure 4 shows the results on the Detail tab for when I added carlos. Note that I added cdrom in the Secondary Groups box. Note also that before clicking Ok, you need to click the Password & Security tab and fill in the password information.

Now, go back to the main Users & Groups window and click on the Groups tab. Then, check the Show system groups box, as we want to see who is now in group cdrom, and click on it. The bottom pane shows the group members (Figure 5). Sure enough, I am a member, as is my dog carlos, but my wife ana isn't. (Oh, don't tell her.)

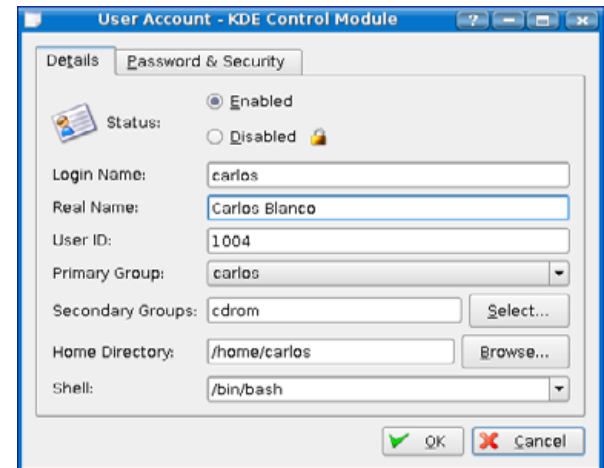


Figure 4. Adding the User carlos

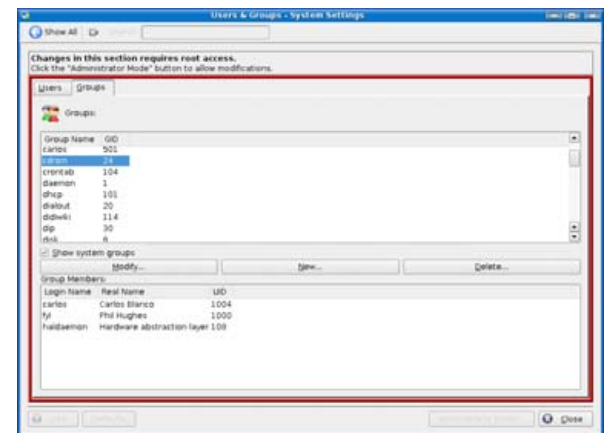


Figure 5. cdrom Group

While we are here, another interesting group is admin. In Dapper Drake, members of this group are allowed to use the sudo command. By default, the first user is added to this group automatically.

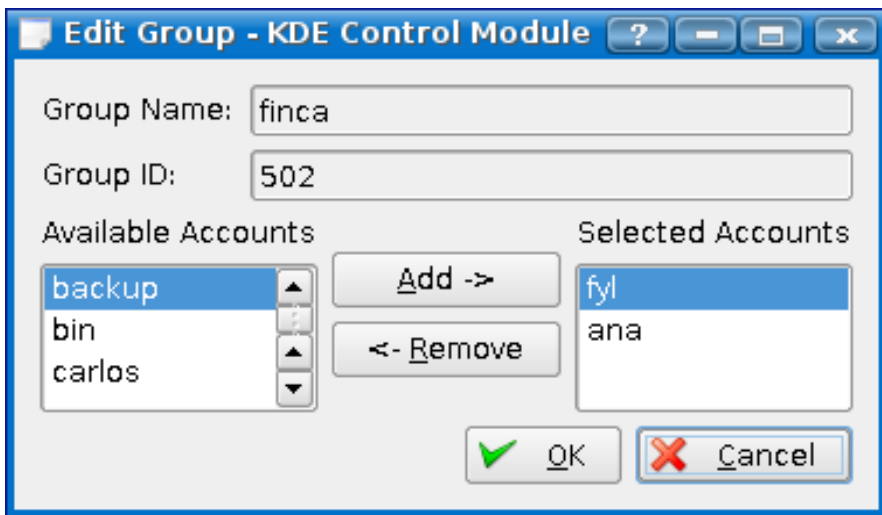


Figure 6. Creating a New Group

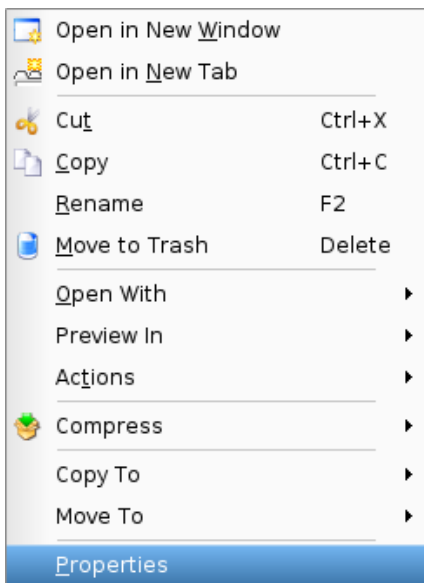


Figure 7. Properties Submenu

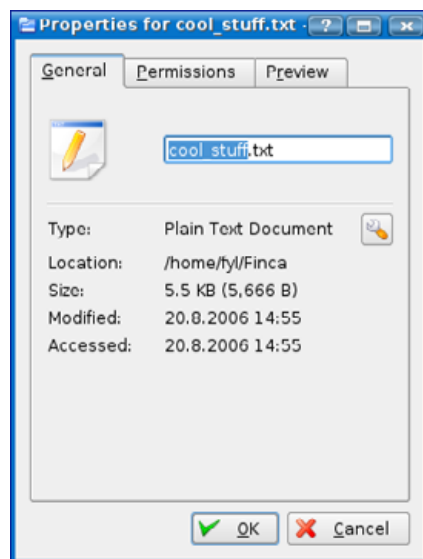


Figure 8. Properties for a File

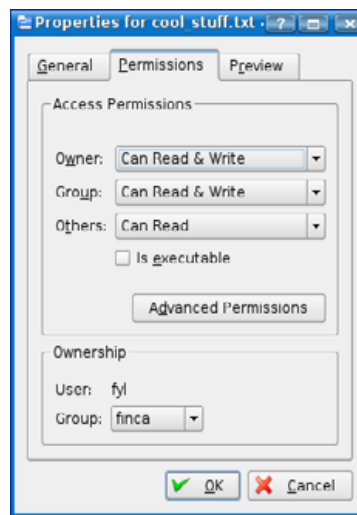


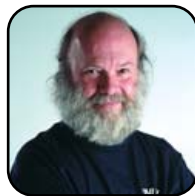
Figure 9. Permissions Tab

members, as shown in Figure 6. So, that part is easy. One word of warning, however; your new group membership won't become effective until you log out and back in again.

To change the group and permissions for a file, you can simply go to the directory with Konqueror and right-click on the icon. Then, select the properties from the menu (Figures 7 and 8). Select the permissions tab and change the group permissions to Can Read & Write and the Group Ownership to finca as shown in Figure 9.

Note, you also must allow group access to the directory where the files are located. Otherwise, the non-owner won't be able to modify any files or create new ones, because to do so requires the directory itself to be modified.

This gives you the basics of the Linux permissions system. Using this information will make your system more secure and easier to use. ■



Phil Hughes is Publisher for TUX Media Ltd.

Should you want to allow sudo privileges to others, all you need to do is add the admin group to their secondary groups list.

One other use for groups is file sharing. This is really no different from device sharing, which we just did—in Linux, a device is simply a file. If I wanted to work on a project and allow access to the files only to two people (I will pick ana and fyl this time as carlos isn't a person), I could add a new group—say finca for a project related to our finca—and add us as members.

Then, if we want to share a file about the finca, we simply need to put it into group finca and set group read and write permissions. When you create a new group, the dialog allows you to add the

Linux Edutainment

More than ten options for Edutainment.

PHIL HUGHES

Linux systems offer many educational resources for anyone old enough to use a mouse. Deciding what is a game and what is educational is not an easy line to draw. For example, Mr Potato Man teaches the young computer user the needed coordination to use a mouse along with presenting vocabulary.

Most, but not all, of the programs presented here are from the KDE Edutainment Project, which deserves special mention. KDE itself supports multiple languages, and the KDE Edutainment Project follows that lead.

THE KDE EDUTAINMENT PROJECT

The KDE Edutainment Project has been building useful educational software for more than six years. The focus of the project is to develop high-quality educational software for KDE, focusing on school children aged 3–18. The project goes beyond that, also offering programs to help teachers with lesson planning and programs that are of interest to anyone who wants to learn.

The software can be categorized into vocabulary, mathematics, science, teaching tools plus some other miscellaneous programs. You can read about the KDE Edutainment Project at <http://edu.kde.org>. The software is far from static—it continues to be developed, and most of the programs allow you to add, modify and reconfigure them as needed.



Figure 1. Kanagram Default Usage

LANGUAGE TRAINING

Eight language learning programs are offered, and four programs support multiple languages. The three exceptions are KVerbos, Kiten and KLatin, which are designed to help you learn Spanish, Japanese and Latin, respectively. Let's look at the other five.

Kanagram is a KDE 3.5 replacement for the older KMessedWords. This program displays words from any of several word lists with the letters rearranged and lets you guess the correct order. Figure 1 shows a screenshot of the default usage. One of the configuration options lets you create new vocabularies, which include the words and hints.

KHangMan is a traditional hangman game. Graphically, it offers the choice of two themes. It supports multiple difficulty levels and multiple languages. A configurable hint feature is also available. Figure 2 shows a sample screenshot.

KLettres is geared for both reading and hearing

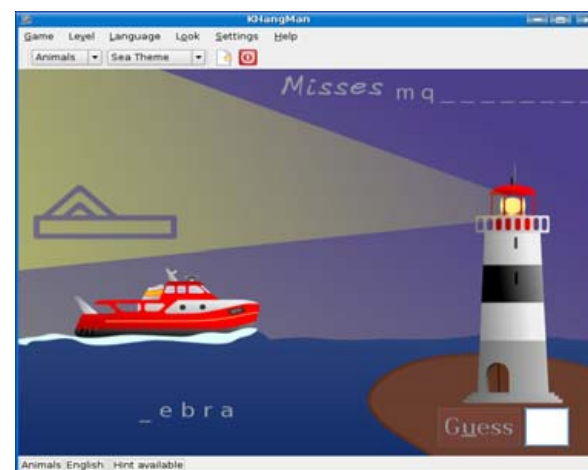


Figure 2. KHangMan

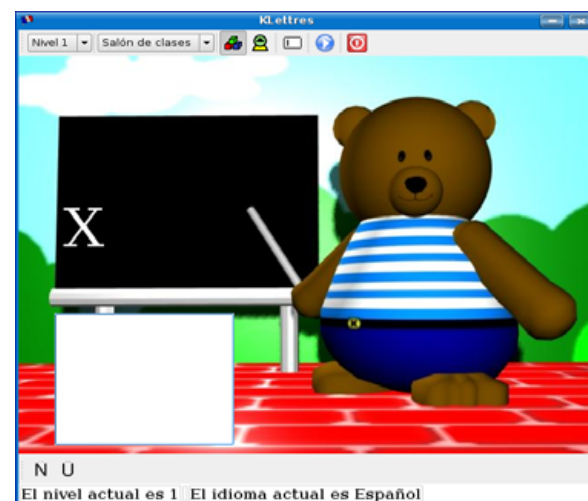


Figure 3. KLettres, Running at Level 1

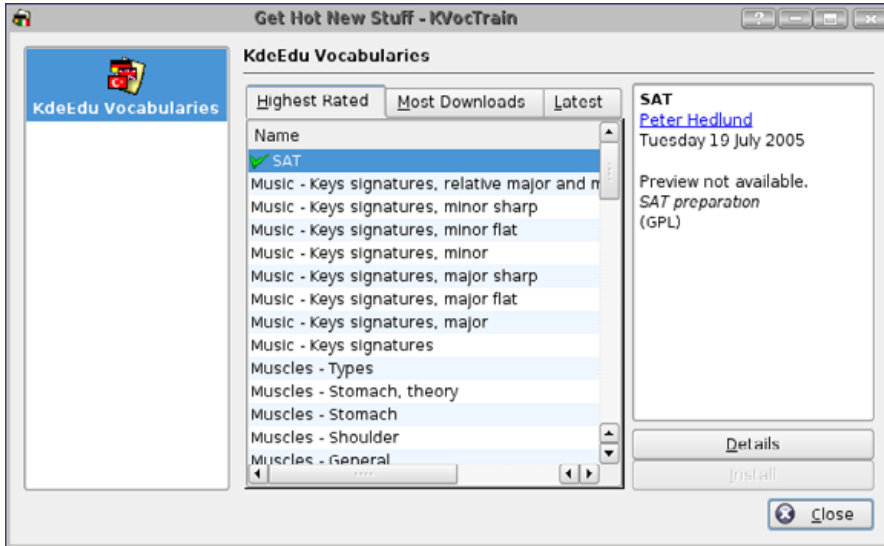


Figure 4. KWordQuiz—Preparation for the SAT



Figure 5. KWordQuiz—Running in Multiple-Choice Mode

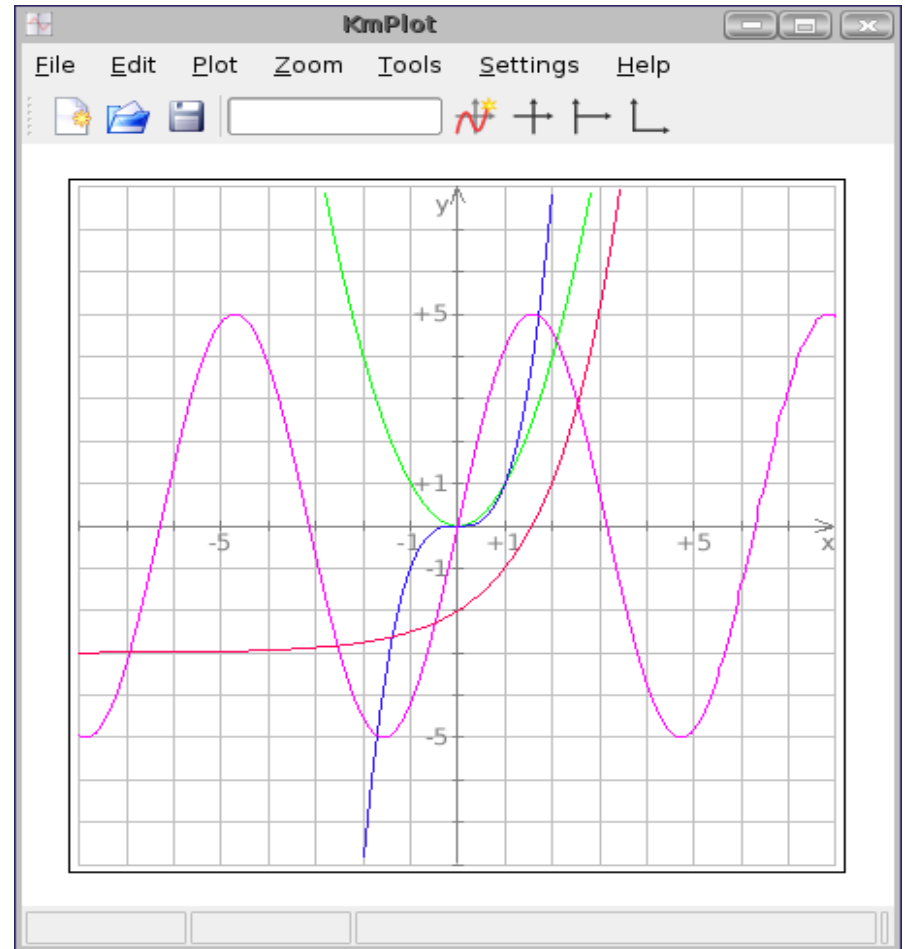


Figure 6. KmPlot

letters. It offers four levels of instruction. Level one presents you with a letter and also speaks it. You then type the letter in response. Level two eliminates the display of the letter, making it more difficult. Levels three and four are like the first two, except a syllable rather than a single letter is presented.

The speech sounds good, and it works in multiple languages—that is, the let-

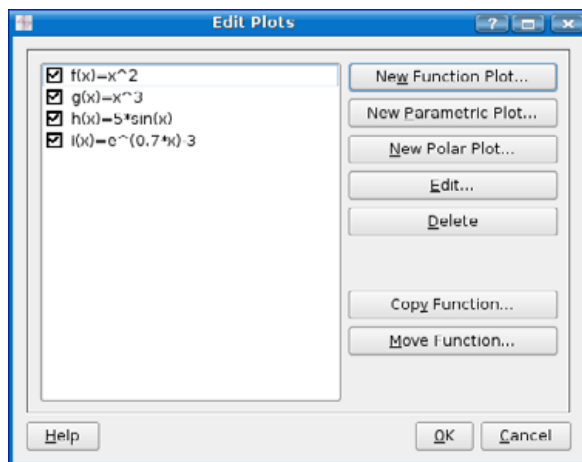


Figure 7. KmPlot, Edit Display

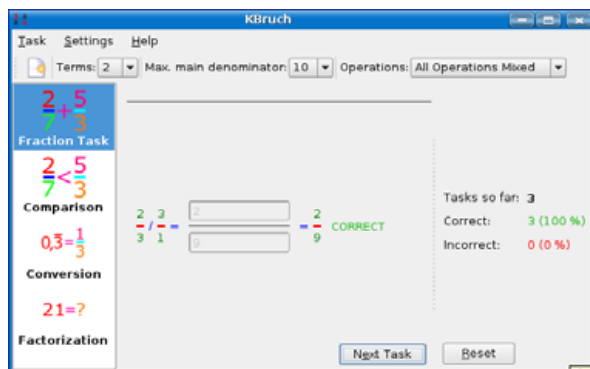


Figure 8. KBruch

ter or syllable is pronounced the way it should be in the corresponding language. Figure 3 shows an example of running it at level 1.

There are two vocabulary learning programs: KVocTrain and KWordQuiz. KVocTrain is a very sophisticated program, well deserving of its own article. Although using it is relatively easy, building the

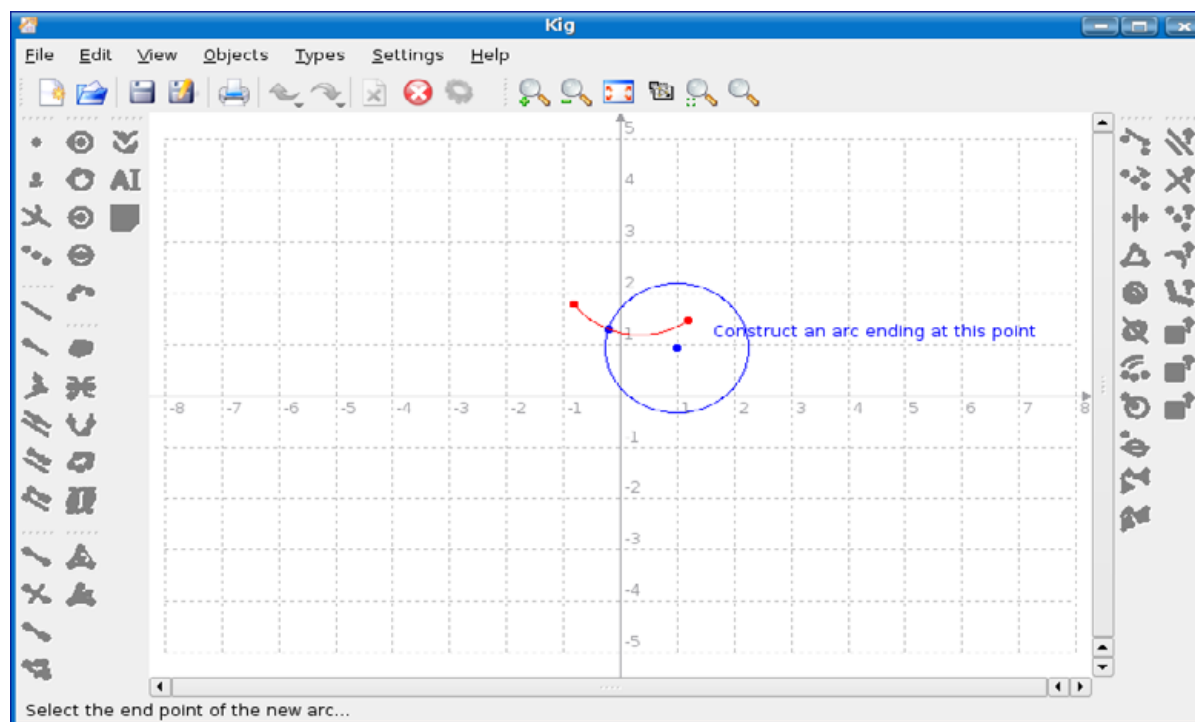


Figure 9. Kig

data files for it can be pretty complicated. For this article, I focus on KWordQuiz.

KWordQuiz uses a vocabulary file (and, in fact, can use the same vocabularies as KVocTrain) to produce tests. Those tests can be in the form of flash cards, multiple-choice questions or questions where you fill in the blanks. There is no difference in the data—users can select how they would like the test presented.

One of the available files from the list (Figure 4) is preparation for the Scholastic Aptitude Test (SAT). Figure 5 shows KWordQuiz running in multiple-choice mode, right after I got the definition of

datum wrong (on purpose).

MATHEMATICS

KmPlot is one of the easiest-to-understand yet most powerful programs in the KDE Education Project. When you first start it, you likely will be looking for a complicated way to tell it what to plot. Not so. As its own documentation suggests, simply type x^2 in the box at the top and press Enter. You will immediately see a plot of $y = x^2$.

Although you can customize the display and use Cartesian or polar coordinates, you can get started with about zero work. Figure 6 shows four functions

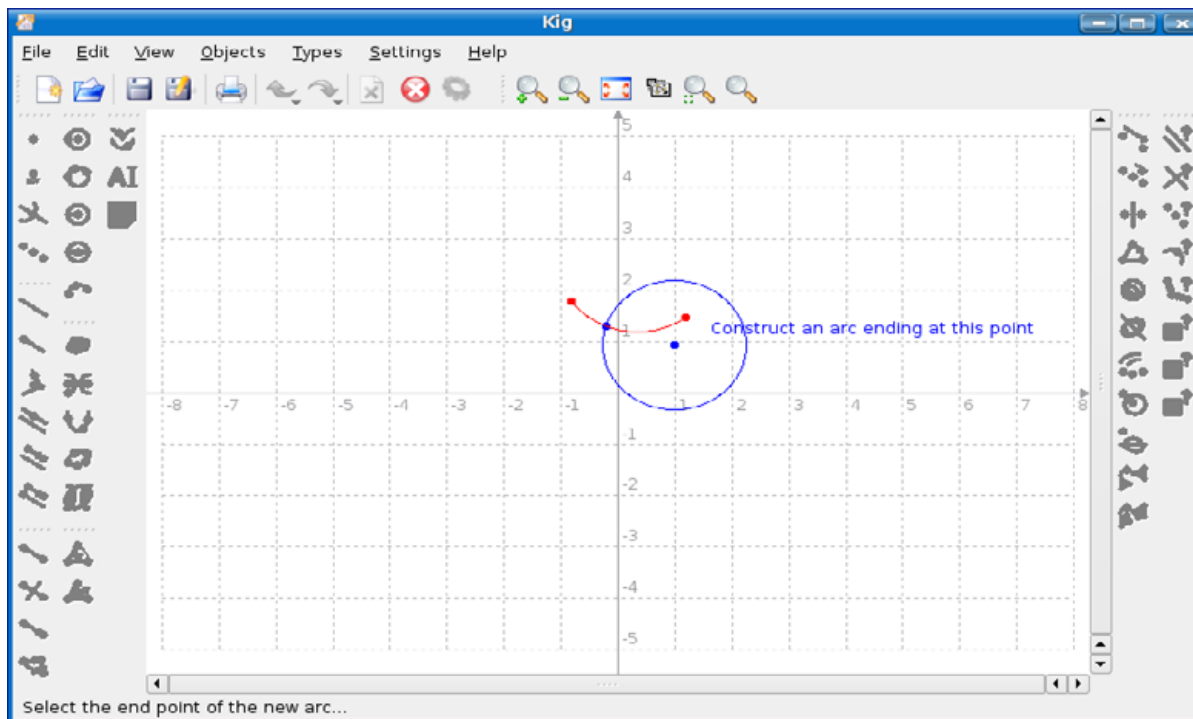


Figure 9. Kig

I plotted, and Figure 7 shows the edit display you get to by clicking on Plot→Edit. Note that each function has a name. KmPlot chose them. So, you then can reference them in other plots.

You can change the displayed ranges, the colors and just about anything else about the plots. KmPlot also has an assortment of predefined functions you can use. So, although KmPlot is a quick way to show a child what a sin wave is, it can be used as a serious tool as well.

KBruch is available for people who hate fractions but know they need to learn to work with them. The program offers a test on fraction arithmetic

where you can choose separate addition/subtraction and multiplication/division practice or both combined, comparisons, conversion to decimals and factorization. For those who want to scare themselves or a family member, you can specify up five fractions to be included in a combination of arithmetic functions.

The only real configuration options are what fonts and colors to use. Figure 8 shows a typical screen.

Kig is an interactive geometry construction program. Besides being a way to explore geometry, it also can be used to create figures with geometric

Raven X60s

- ThinkPad X60s
- 3 pounds/1" thin
- 12.1"@1024x768
- 1667 MHz Core Duo
- 40-100 GB HD
- Up to 2.0 GB RAM
- DVD±RW
- 802.11a/b/g WiFi
- Ethernet/Bluetooth
- Tablet available
- Starts at \$1775



3%
off
til 12/31/06

Tiger D520

- Dell Latitude D520
- 5 pounds
- 15.0"@1400x1050
- 2000 MHz Core 2 Duo
- 40-120 GB HD
- Up to 2.0 GB RAM
- DVD±RW
- 802.11a/b/g WiFi
- Ethernet/Bluetooth
- Ultra-configurable
- Starts at \$1140



3%
off
til 12/31/06

You choose your laptop: Dell, Lenovo, IBM, Sony, Sharp, Panasonic. You choose your distro: Fedora, Ubuntu, SuSE, Red Hat Enterprise, and more. Let EmperorLinux do the rest. Pre-installation and configuration of Linux on your laptop. Full support for your laptop's hardware. One year of Linux technical support and full manufacturer's warranty.

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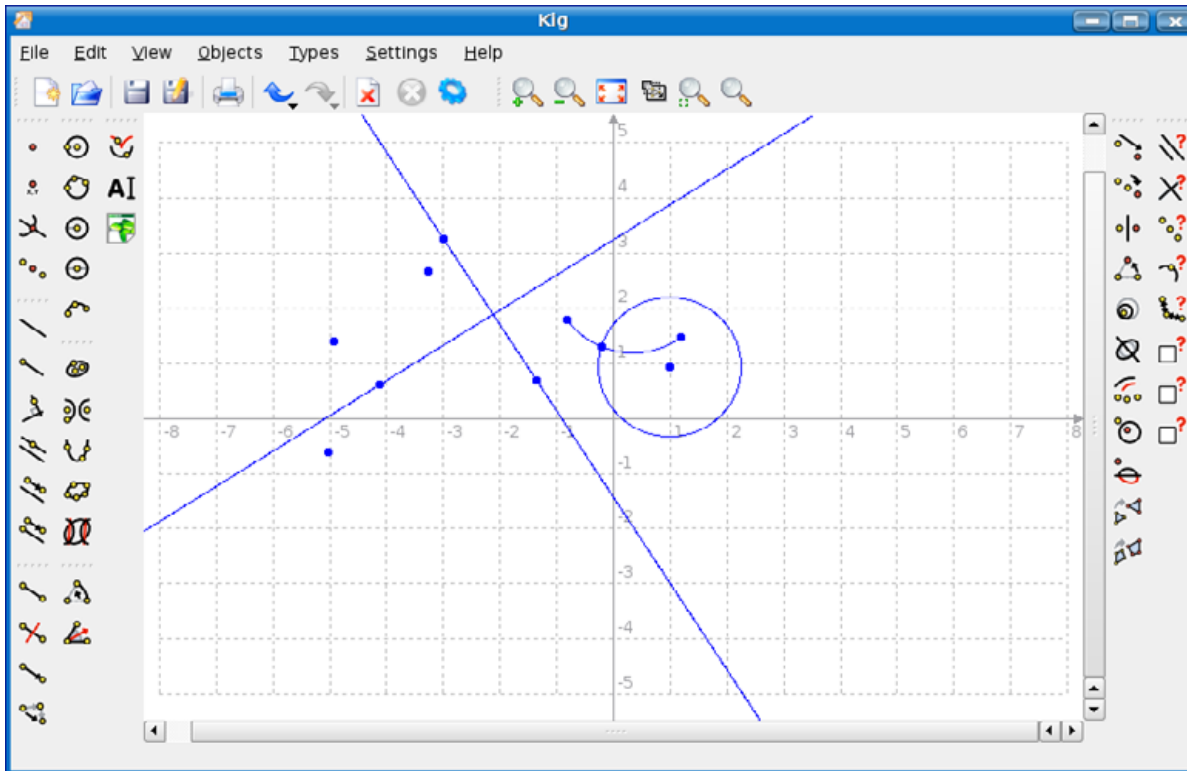


Figure 10. Kig Icons

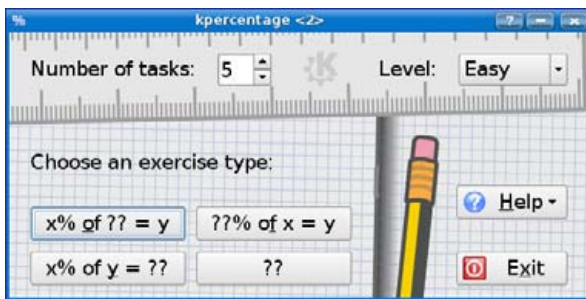


Figure 11. KPercentage Options

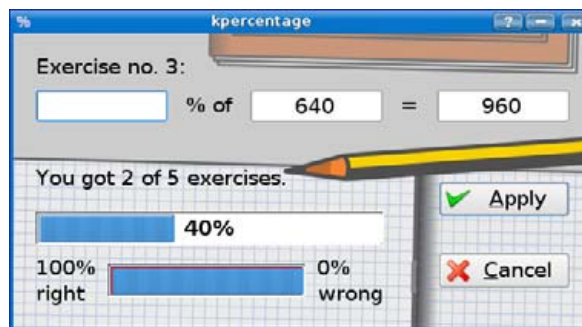


Figure 12. KPercentage, Doing an Exercise

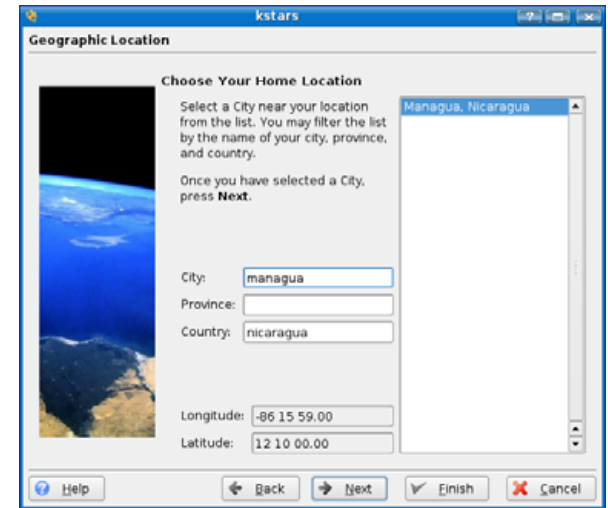


Figure 13. KStars—Prompting for Your Location

drawings for use in other programs. They can be saved in various formats including PNG, JPG and SVG (Scalable Vector Graphics).

When you first look at Kig, it seems very intimidating, but that is because the window is littered with buttons for creating the various shapes. Although a pop-up help shows you what each symbol means, I find it less intimidating to go to the Objects menu.

When you select an operation (for example, a circle defined by three points), you get helper text each step of the way. Figure 9 shows one example. Note that you always can press the red stop button to terminate the current sequence.

When in the middle of an operation, the icons on the left and right are grayed out. Figure 10 shows the icons. Those on the left are for creating objects, and those on the right for tests, such as whether two lines are parallel or perpendicular.

KPercentage lets you practice working with per-

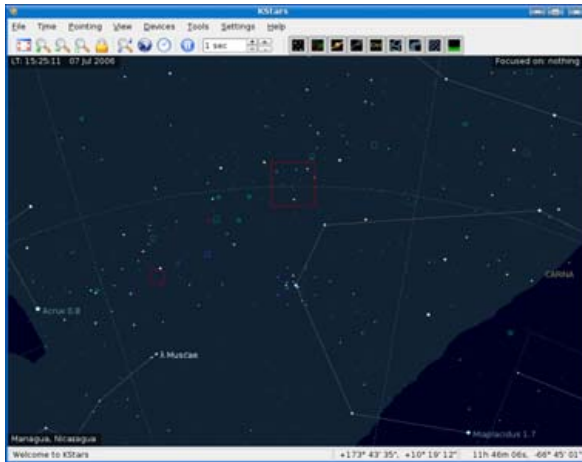


Figure 14. KStars, Showing the Southern Sky

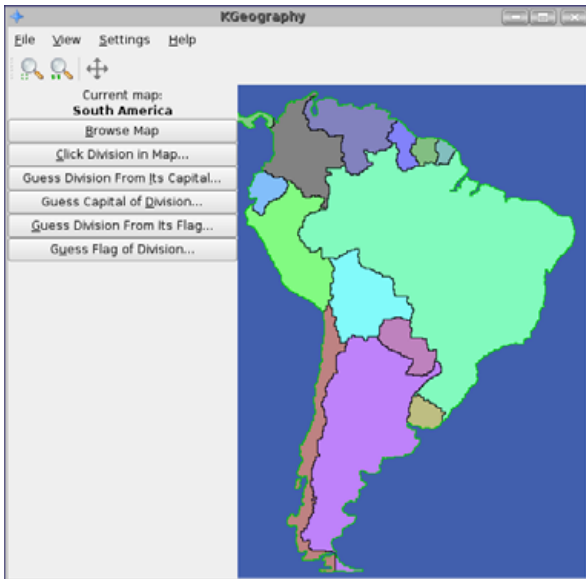


Figure 15. KGeography



Figure 16. KGeography Flags Test

centages. When you start up the program, you are offered options as to what level and type of practice you want (Figure 11). You have choices as to level, number of exercises and type of exercises. Figure 12 shows what you see when actually doing an exercise.

SCIENCE

KStars offers a planetarium for your desktop. When you start KStars, it prompts for your location (Figure 13). If where you live is in the list, it is simply a couple of clicks. But, you also have the option of entering your latitude and longitude. I chose the closest location, because I know I can modify the latitude and longitude later. You also are offered a chance to

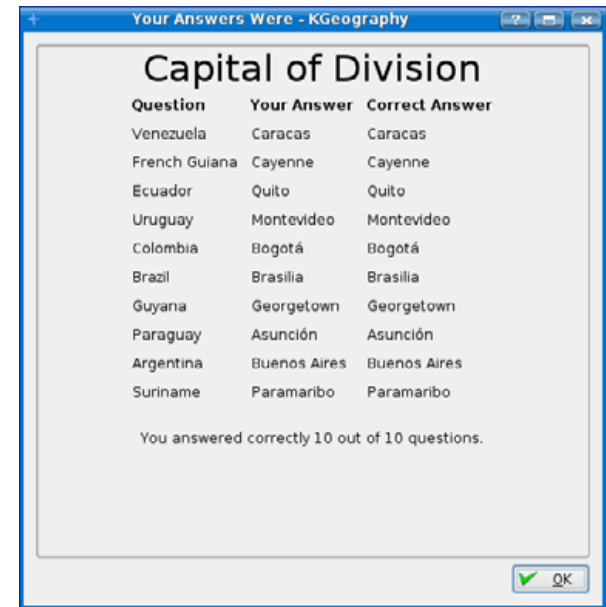


Figure 17. KGeography Capitals Test

download additional data.

Once you are set up, the main screen shows a view of the sky. Make sure your computer clock is set correctly, as the view is, of course, based on the current time. You can alter the direction you are looking, turn on and off types of objects and center the display on a particular object.

The display is in real time, which means that it updates to follow the rotation of the earth. Better than that, it actually can control various telescopes to keep them pointed where it is pointed. Figure 14 shows the southern sky from here with most of the options turned on.

KGeography is a basic geography trainer. Figure 15 shows the choices for the current version. There

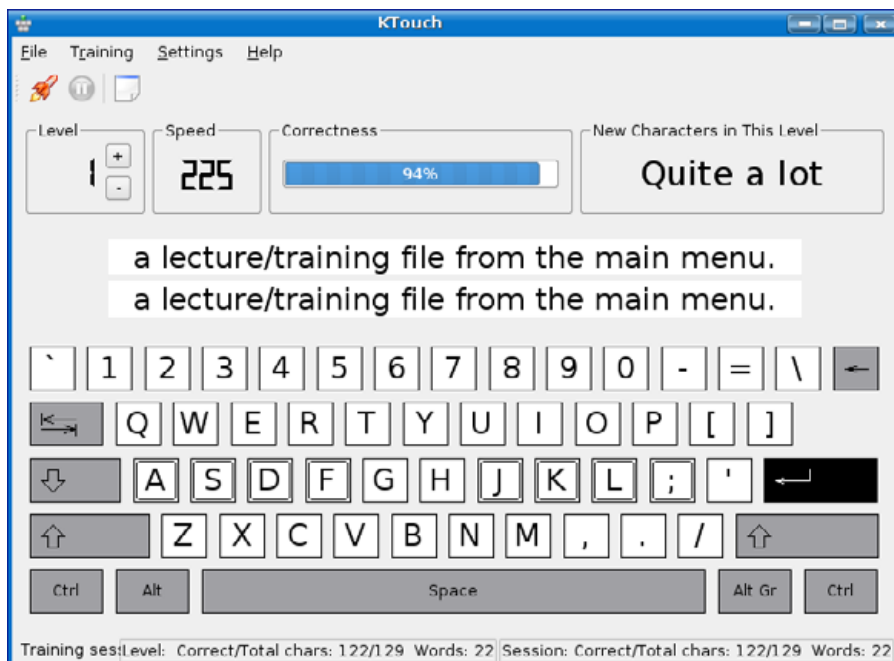


Figure 18. KTouch

are various maps to select from—mostly regions but a few countries. On the flags test, I didn't do very well (Figure 16) but made up for it on the capitals test (Figure 17).

MISCELLANEOUS

KTouch is a typing tutor (Figure 18). Although it's not as much fun as TuxType (which I could not capture as it takes over the whole screen), it works just fine. It contains a choice of lectures in different languages and levels. The high point of KTouch is the statistics it keeps (Figure 19), which includes a progress graph.

AND MORE

There are many more programs that fit in the Edutainment definition. TuxPaint certainly qualifies, for example. If you don't see what you are looking for in this article, try out the various programs you find in the Edutainment, Games and

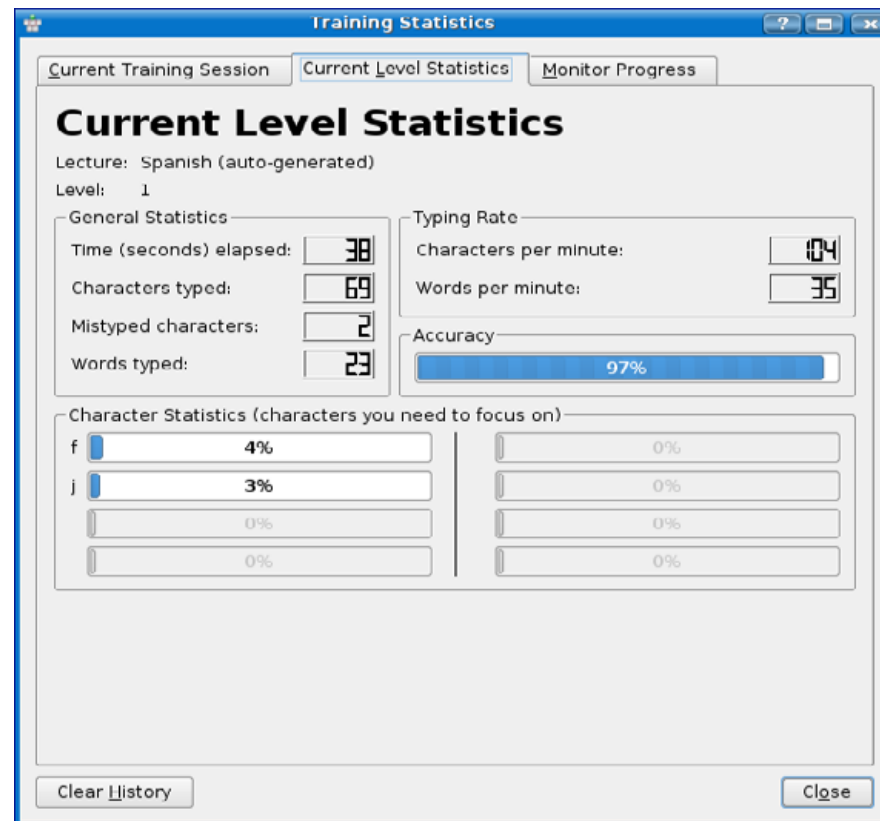


Figure 19. KTouch Showing Statistics

Graphics menus and play. If you still don't find enough, use your package manager to load more. With Adept, you can search for keywords, such as game or education. ■



Phil Hughes is Publisher for TUX Media, Ltd.

ls and cd

Finding your way around your computer.

BRIAN JONES

If you're going to learn only two commands to use on the command line, I'd vote for `ls` and `cd`. Why? Well, because just like in life, if you can't move around, and you can't see what's around you, it's quite difficult to do anything else! The `ls` and `cd` commands facilitate moving and looking around, which can teach you more about the "world" that is your system and get you ready to perform other useful tasks. Let's take a look at how these two commands work.

When you open Konsole, you're greeted with something that looks like this:

```
jonesy@sycamore:~$
```

This is the command-line prompt. Though it looks a little bit like gibberish, the prompt is made up of components that tell you useful things. For example, the default command prompt, as shown above, tells me (from left to right), "You're logged in as user `jonesy`, on the host called `sycamore`, and you're in your home directory." Home directories are used so frequently, they have a shortcut, `~`, which is shorter than printing out `/home/jonesy`.

So, what's in your home directory? Simply type the `ls` command to find out:

```
jonesy@sycamore:~$ ls
Desktop eet138 Photos Examples testbin new-article
```

There you have it! Now I know what's in my home directory. Looks like I have about six things in there, but running `ls` didn't tell me whether they are files or directories. If only there were a way to get a listing that would show me what these things were instead of only their names. Let's try this again, but this time we'll add a flag to our command to indicate that we'd like to know what each thing in the directory is, instead of only the names:

```
jonesy@sycamore:~$ ls -F
Desktop/  eet138/  Photos/  Examples@  testbin*  myfile
```

This is a bit nicer. Anything with a `/` appended to it is a directory. If nothing is appended, it's a regular file. If the `@` symbol is appended, the file is actually the Linux equivalent of a shortcut in Windows. In Linux, it's called a symbolic link or symlink for short. Finally, if a file's name is followed by a `*`, that means the file is an executable file, or program. Although there are a couple other possible symbols, it's unlikely that you'll run across them very often.

So, now that we know what's in our home directory, how can we change directories and enter, say, the `Photos` directory? To change directories, we use the aptly named `cd` command. Here's how it works:

```
jonesy@sycamore:~$ cd Photos
jonesy@sycamore:~/Photos$
```

THE `ls` and `cd` COMMANDS FACILITATE MOVING AND LOOKING AROUND, WHICH CAN TEACH YOU MORE ABOUT THE “WORLD” THAT IS YOUR SYSTEM AND GET YOU READY TO PERFORM OTHER USEFUL TASKS.

Remember how I said the prompt is there to give you information about where you are? You'll notice that our prompt is now showing our location as `~/Photos`, which means we're sitting in the `Photos` directory, which lives in `~`, which we learned earlier is the shortcut for home directory (`/home/jonesy`, in this case).

So, what's in this directory? Of course, we lean on the trusty `ls` command again. Remember, you can always run `ls` with no flags and add flags if you need more information:

```
jonesy@sycamore:~/Photos$ ls
IMG_2794.JPG  IMG_2795.JPG
```

Looks like there are two photos in this directory. Pretty boring. Now, how can I get back to my home directory? Well, this is also a task that is performed so often, it also has a shortcut. If you ever find yourself deep in the bowels of your system and don't know how to get home, you can just type `cd` with no flags or arguments at all, and it will take you to your home directory:

```
jonesy@sycamore:~/Photos$ cd
jonesy@sycamore:~$
```

And there you have it! Now you can move around, have a look at the files on your system, and if you ever get lost, you have a quick way home. With a few minutes of practice, you'll be all over the system. And, if you're feeling daring, you can run the `man ls` and `man cd` commands to learn about all of the other flags and arguments that are available for these two commands. ■



Brian Jones is a system/network/database administrator and sometime Web developer for the Computer Science Department at Princeton University. He is also a freelance writer and editor, spending most of his freelance time writing about technology for various Web and print publications. In his free time, he enjoys brewing beer, home recording and playing billiards.

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Basic Steps with OpenOffice.org Basic

Programming for nonprogrammers.

DMITRI POPOV

Because there are many beginner-friendly languages out there, learning to program using OpenOffice.org Basic (OOoBasic) may seem like an odd choice. But, it does make a lot of sense when you think about it. As the name suggests, OOoBasic is based on BASIC (<http://en.wikipedia.org/wiki/BASIC>), a mature programming language designed with beginners in mind. As such, it has a gentle learning curve, and programs developed in OOoBasic are easy to read and understand. More important, however, you can use OOoBasic to control and customize OpenOffice.org—one of the most popular application suites on Linux. Once you’ve come to grips with OOoBasic, you can do some pretty amazing stuff. You can, for example, fetch documents from a remote server with only one click, look up words from any document in Wikipedia or WordNet, and even develop simple games. Better yet, you can apply your OOoBasic skills to other programming languages as well. So, if you at some point decide to move to Python or Perl, the time spent learning OOoBasic won’t be wasted. If all of this makes sense to you, read on.

FORTUNATELY, THE OPENOFFICE.ORG BASIC IDE OFFERS SEVERAL FEATURES THAT MAKE BUG HUNTING A LOT EASIER, INCLUDING BREAKPOINTS AND WATCH.

MACROS, MODULES AND LIBRARIES

Before you dip your toes into the programming water, you should familiarize yourself with OpenOffice.org Basic’s essential concepts and tools.



Figure 1. The Macro Organizer allows you to manage macros and libraries.

OpenOffice.org Basic has four basic elements: macros, dialogs, modules and libraries. Macros are the actual programs that perform one or multiple actions. Some macros may have dialogs, which are windows and forms that usually act as a graphical front end, which accepts input from the user and provides all kinds of feedback. For example, a macro that fetches a Writer document from an FTP server may have a dialog where the user types the necessary login information. Macros and dialogs are organized into modules, which are, in turn, grouped into libraries.

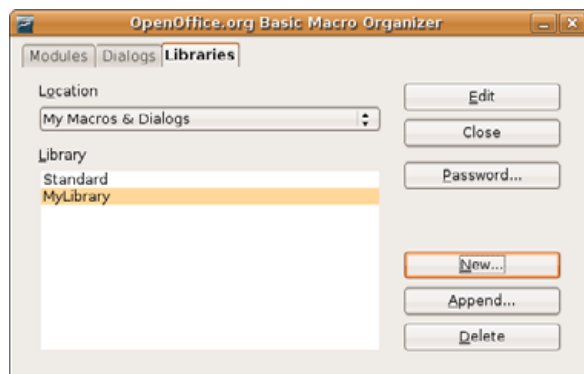


Figure 2. Creating a New Library Using the Macro Organizer

This hierarchy lets you easily keep tabs on your macros. To see how this works in practice, let's create a library for your modules and macros. Choose Tools→Macros→Organize Macros→OpenOffice.org Basic. In the OpenOffice.org Basic Macros dialog window, press the Organize button to open the Macro Organizer, then click on the Libraries tab. There are two containers where you can create your library: My Macros and the currently opened document. (There is also the OpenOffice.org Macros container, but it's reserved for OpenOffice.org's built-in macros.)

If you choose to create your library in the currently opened document, it will be available only as long as the document itself is opened in OpenOffice.org. In most cases, however, you might want your library to be available whenever OpenOffice.org is running. In this case, you should create the library in the My Macros container. Select My Macros→Dialogs from the Location drop-down list, and press the New button. Give your library a descriptive name (such as

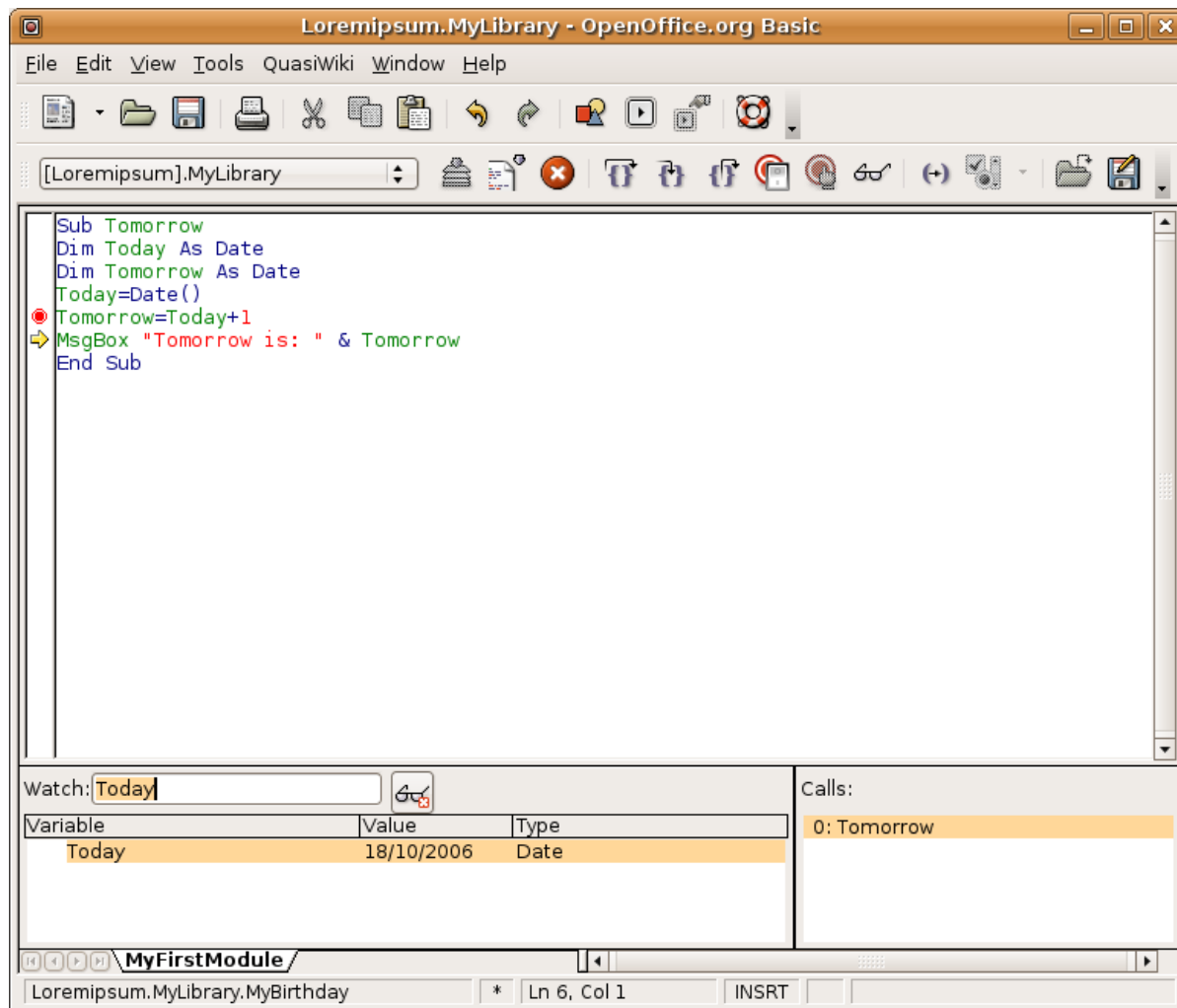


Figure 3. OpenOffice.org Basic IDE

MyLibrary), and press OK. The library should appear in the Library list. Click on the Modules tab and double-click on MyLibrary to expand it. By

default, it contains a module named Module1. Select it, and press Edit or simply double-click on it. This opens the OpenOffice.org Basic Integrated

Development Environment (IDE), which contains all the tools you use to write, test and troubleshoot your macros.

WORKING IN THE OPENOFFICE.ORG BASIC IDE

First, you might want to change the default Module1 name to something more descriptive. Right-click on the tab at the bottom of the window, select Rename and type the name you want (such as MyFirstModule). Using the tabs, you also can create new modules quickly, bypassing the Macro Organizer. To do this, right-click on any tab at the bottom of the window, and choose Insert→BASIC Module. Using the drop-down list of existing libraries, you can switch to another library easily. Select, for example, the Euro library, and you see several module tabs as well as the macro in the currently selected module. You can switch between different modules by pressing on the tab you want.

To learn the basic functionality of the IDE, let's write a simple macro. Clear the main window, and type the following code:

```
Sub Tomorrow
Dim Today As Date
Dim Tomorrow As Date
Today=Date()
Tomorrow=Today+1
MsgBox "Tomorrow is: " & Tomorrow
End Sub
```

Don't worry about what this code means. Right now it's just important to get familiar with OpenOffice.org Basic IDE. To execute the macro,

press the Run button on the Macro toolbar. The Run command compiles the macro (that is, translates it into machine language) and executes it. If everything works properly, you should see a message box containing tomorrow's date.

ONCE YOU'VE COME TO GRIPS WITH OOoBASIC, YOU CAN DO SOME PRETTY AMAZING STUFF.

DEBUGGING YOUR MACRO

Writing macros is probably the easiest part, but troubleshooting them is a different kettle of fish. Even the most experienced programmers need tools to find bugs in their programs effectively. Fortunately, the OpenOffice.org Basic IDE offers several features that make bug hunting a lot easier, including Breakpoints and Watch.

Breakpoints are like stop signs in your macro. Every time the Run command sees them, it pauses the execution and waits for your further instructions. Using the Watch feature, you can put one or several variables in the macro on a watch list and see what happens to them when the macro runs. Used together, breakpoints and watch lists provide an effective way to pinpoint errors in macros. For example, you can use both tools to see whether the macro above assigns the correct date to the Today variable. Type Today in the Watch field, and press Enter. This adds Today to the watch list. Now, place the cursor on the Tomorrow=Today + 1 line, and press the Breakpoint On/Off button. A red dot appears in

the column to the left. When you press the Run button, the macro pauses at the specified breakpoint (you should see the yellow arrow), and the Watch window displays the value of the Today variable, which should be the current date.

The OpenOffice.org IDE also allows you to run the macro step by step. This can come in quite handy when you need to get a better idea of the macro's behavior during execution. In the Macro Toolbar, there are three buttons: Step Over, Step In and Step Out. It's a bit tricky to explain the difference between these buttons without getting too technical, but in most cases, you might want to use the Step In command to perform a step-by-step execution of the macro. Simply press the Step In button, and the yellow arrow appears next to the first code line. To move to the next line, press the Step In button again. If you want to stop the execution process, press the Stop Macro button on the Macro toolbar.

CONCLUSION

That's all there is to it. Now you know how to manage macros in OpenOffice.org and use the IDE's tools. In a followup article, we'll start writing some real code. ■



Dmitri Popov is a freelance writer whose articles have appeared in Russian, British and Danish computer magazines. His articles cover open-source software, Linux, Web applications and other computer-related topics.

Install Linux on a Second Hard Drive

An economical, safe solution for installing Linux.

WILLY SMITH

I've talked to a lot of people who have tried Linux, and who would like to learn more about it, but for one reason or another they are afraid to install it permanently on their computers. Typically, they are Windows XP users, and they have one or more applications for which there is no available Linux equivalent. Unfortunately, what usually happens in this case is that they end up getting stuck with a limited knowledge of Linux unless they somehow have a way to use it every day.

The solution to this problem is to install Linux so that you can run either XP or Linux. Doing that is really much simpler than it might sound, and this article shows you how to do it in a non-intrusive fashion by installing a second hard drive. A second hard drive nowadays is very inexpensive—I picked up an 80GB drive at a local computer chain store to do this in my system, and the final cost was only \$16 US, including tax. Since I downloaded SUSE Linux 10.1 from the OpenSUSE site, the total cost for modifying my system was less than \$20 US, including the blank CDs I used.

INSTALLING A SECOND HARD DRIVE

Setting up such a dual-boot system has a number of advantages besides just allowing you to learn Linux by running it every day. It also means that if you ever get a dangerous virus on XP (a relatively common occurrence as Windows seemingly has a never-ending supply of new vulnerabilities), you can boot Linux and clean the virus from the Windows disk without booting Windows. This can be important if the virus is destructive and has damaged essential operating system files. Even if the Windows disk has been damaged to such an extent that you have to re-install XP, you still can boot Linux and rescue your data from the Windows drive before you do the re-install.

This article takes you step by step through the installation of both a

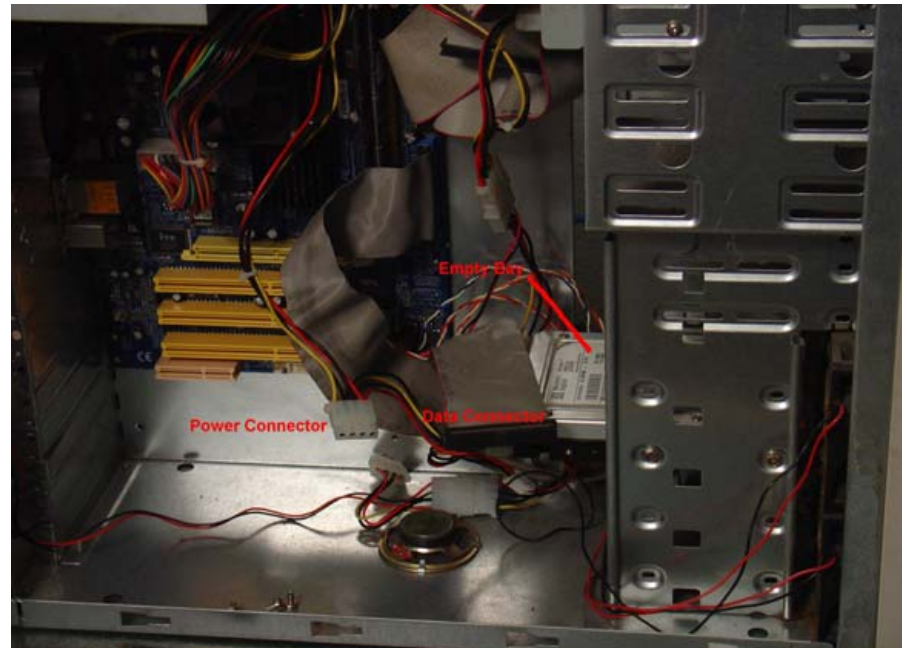


Figure 1. View inside the computer—locate a spare bay and the connecting cables inside your computer's case.

second hard drive and SUSE Linux 10.1. The steps are as follows:

1. Buy and install a second hard drive in your system.

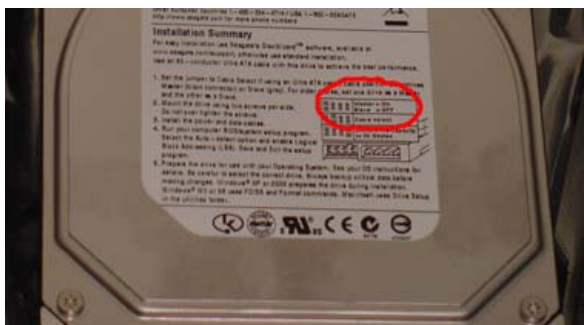


Figure 2. Hard drive label—all the information you need to set up the drive is usually found on its label.

2. Download and burn the five SUSE Linux10.1 installation CDs from the OpenSUSE site.
3. Install Linux on the second drive.

First, remove the left-side cover from your PC (top cover if it's a desktop system). You should see the motherboard and the first hard drive, as shown in Figure 1.

Although some systems are now using serial (SATA) drives, most systems still use IDE drives, which have a wide flat ribbon cable, as shown in Figure 1. After you verify which type of drive you need, buy a second hard drive of the correct type for your system. It's not necessary to buy a big drive—although I found an 80GB drive, a 10GB or 20GB drive is plenty. If you have any question about this, it might be a good idea to take your system into the store where you are going to buy the drive, to make sure you're getting the right one.

Before you start working on your system, make sure there is no static electricity present in your

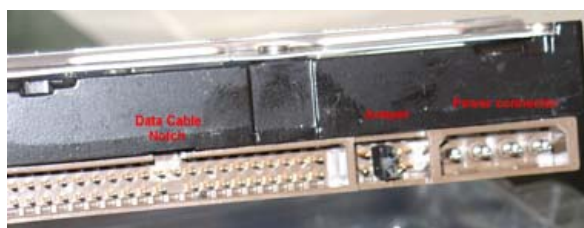


Figure 3. Hard drive connectors and jumpers—make sure the jumpers are set correctly, and note the location of the cable alignment guides.

work area that could damage any of the components. If you feel any sparks when you touch the outside of the case, you can get rid of this problem by spraying the carpet with a little Downy fabric softener, which has compounds that will dissipate the static. Alternately, you could move to an area that has a damp concrete floor. I also like to unplug the power cord when I'm actually doing anything inside the case, to be sure I don't accidentally do anything while the power is on.

Locate an empty drive bay and the end of the data cable, which should come from the first hard drive. You also will need to locate a spare power connector, also shown in Figure 1. Now, you need to set up the drive so it is ready to install. Figure 2 shows the setup for my drive.

In this case, we are installing a slave drive, so I removed the jumper located at the back of the drive between the data and power cables (Figure 3).

Note that your drive may require you to change the position of the jumper, or it may require you to remove it entirely. While you are looking at the back of the drive, note that there is a notch on the top of the data cable connector, and there are beveled edges on the power con-



Figure 4. Installing the drive—carefully install your hard drive in a spare bay.

necter. You will need to plug the cables in to these connectors correctly, so note their position. In my system's case, there is enough room that I could plug in the cables before sliding the drive into position. If your case is smaller, you may have to install the drive and then plug in the cables.

Once the drive is in place, install the mounting screws, which are supplied with the drive. You may have to remove the other side of the case in order to do this.

Now you are ready to verify that the drive has been installed correctly and the BIOS can "see" it. Turn the computer back on, but before it boots, enter the BIOS setup program. This is usually done by pressing F2 or the Del key while the system is initially starting up. If in doubt, refer to your computer's manual to see how to do this. Now, enter the main setup, change the Primary Slave drive to auto-detect, and make sure the size agrees with

Architecture	CD 1	CD 2	CD 3	CD 4	CD 5	Addon CD ¹	DVD ²	Net Boot Image
x86								
	Torrent					Torrent	Torrent	
x86-64								
	Torrent					Torrent	Torrent	
ppc							Not Available	
	Torrent					Torrent		
Checksums	MD5SUMS					MD5SUMS	MD5SUMS	MD5SUMS

Figure 5. OpenSUSE Linux download matrix—find the correct version of SUSE Linux for your computer and download it here.

what the drive is supposed to be. There may be another parameter that you will need to change. For example, my drive says on the label that I need to enable LBA mode. The BIOS in my machine was smart enough to set this by itself, but it's a good idea to check it. You also should make sure that your BIOS is set to prioritize booting from the CD before the hard drive. This is usually on the Advanced Setup page.

INSTALLING SUSE ON THE NEW HARD DRIVE

Assuming that you have successfully installed your second hard drive, make sure it still will boot your legacy operating system, and we'll go on to the software installation.

I've used SUSE Linux for several years and have always bought the "professional" version. But, now there is a free version available for download from the Internet, at the <http://www.OpenSuSE.org> site. Go to the download page (http://en.opensuse.org/Released_Version), or follow the Download link from the home page. Follow the instructions to determine which version you will be using, and then use the links in the download matrix to get all five ISO (whole CD) images.

Note that you can download the images with a BitTorrent client, or you can simply download the individual images. Burn all five CDs once you have finished downloading, making sure that you are burning an ISO image. I don't bother with the

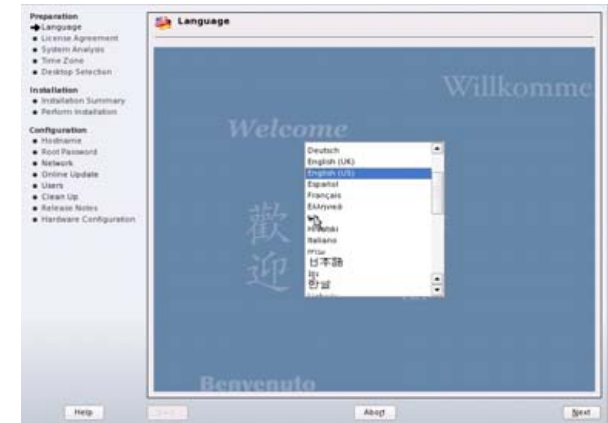


Figure 6. SUSE Linux language selection—the default language for SUSE 10.1 is US English, but you can choose from many others.

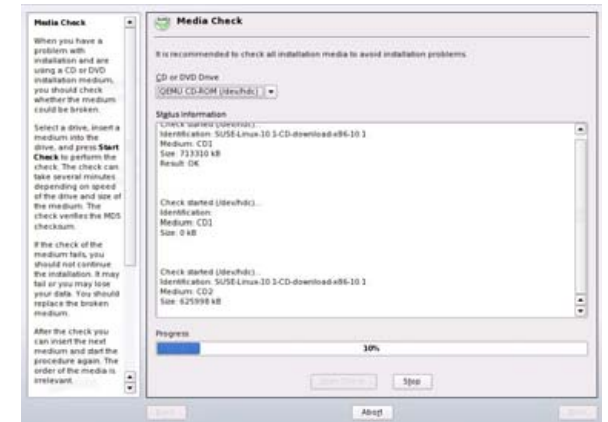


Figure 7. SUSE Linux CD media check—using this dialog, you can verify that the installation CDs you have made have no errors.

MD5 checksum as the SUSE install program will allow you to check all the CDs before you begin

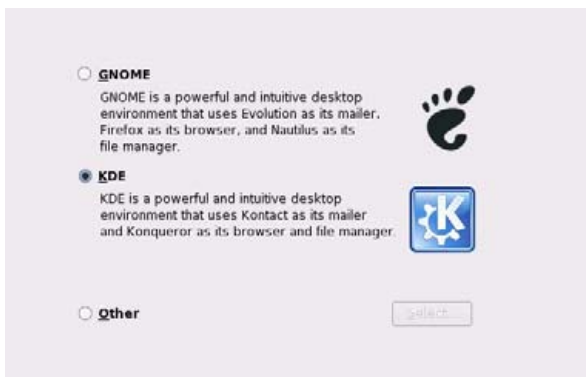


Figure 8. SUSE Linux desktop selection—click on KDE to choose your favorite windowing GUI for Linux.

the install, and this verifies that the CD image actually can be read correctly by the installation program.

When you have burned the CDs, put the first one in your computer's CD drive and boot from it. You will see a Welcome screen, and after a few seconds, a boot menu will appear. Choose Installation with the arrow keys, and press Enter. The Linux kernel will load, and after a minute or so, you will see a screen that lets you choose the language of the installation. The default is English (US). Choose the language you want to use, then use the mouse to click on the Next button in the lower right-hand corner.

Next, you will see the Media Check screen. Click on Start Check with CD1 still in the drive.

When the check has completed successfully for the first CD, load each of the other CDs (2–5) into the drive, and press Start Check until you have checked all five CDs. If there are any errors, you will have to figure out why they happened and

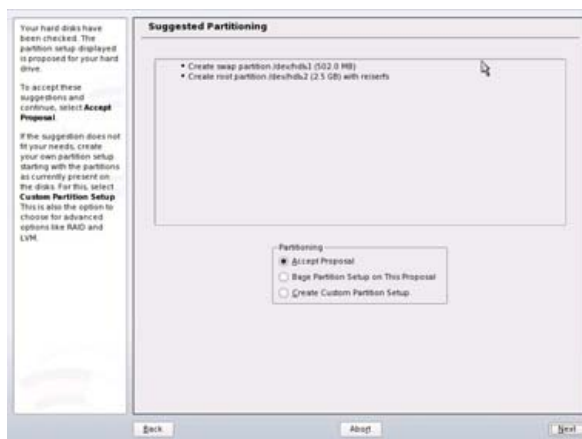


Figure 9. SUSE Linux partitioning dialog—verify that the installation program is being installed on the second hard drive!

correct the problem. For example, in Figure 7, you will note that there was an error when I inserted the second CD. I removed the CD, checked to make sure that I hadn't dropped any Kung Pao chicken on it, and tried it again. This fixed the problem. If it hadn't, I would have burned another CD and tried again. If you experience something like this and the CD is bad more than one time, you will need to download the ISO image and burn it again. Once you have checked all five CDs, click on Next at the lower-right corner.

The next screen is the license agreement. Read the agreement, click on Yes I agree, and click Next. Now the installation program will analyze your system and load the required modules. You will then be asked whether this is a new installation or an update. Click on New Installation, and then click Next. After a few moments, the clock and time zone screen will appear. Choose your

region and time zone from the lists, then click Next.

You will now choose which desktop to use. Click on KDE, then Next.

The next screen is the Installation Settings screen. Click on the Expert tab, near the top next to Overview. Under the heading Partitioning, you will see a proposed setup. It will typically have two or three sections:

- A Swap section (typically hdb1).
- A Root (/) section (typically hdb2).
- A Home (/home) section (typically hdb3)—note: this section may or may not be present.

It may show only two sections (Swap and Root), but that's not crucial. The important thing is to make sure these sections are all on hdb (the second hard drive), *not* hda (your Windows drive). If the installation program is trying to install Linux on the first drive (hda), you can click on Create Custom Partition Setup, and on the next screen select the second hard drive hdb, and click Next. The installation program will shortly return to the Installation Settings screen.

Next, you will need to verify how the system boots. Click on Booting. Another screen will appear with two tabs, Section Management and Boot Loader Installation. Under Management, choose whether you want to default booting to Linux or Windows. Then click on the Boot Loader tab (Figure 10).

The installation should make these selections by default, but make sure they agree with what is shown in Figure 10. Bootloader is GRUB, and the location is /dev/hda. Click Accept once you have

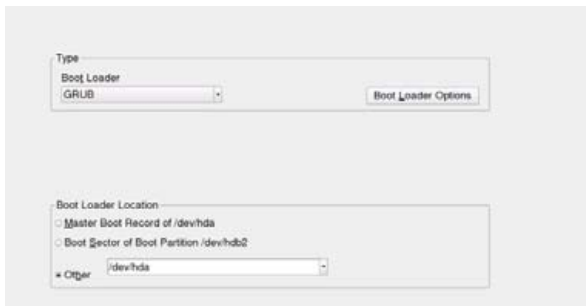


Figure 10. SUSE Linux GRUB installation dialog—verify that your system will be booting from hda, the first hard drive.

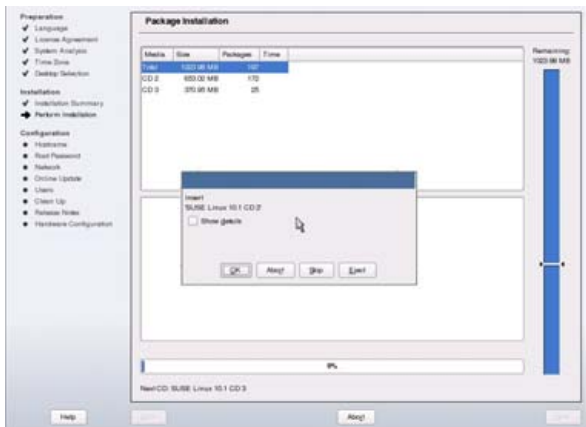


Figure 11. SUSE Linux installation CD dialog—the installation program will prompt you when it needs each of the CDs you have made.

done this.

Now you are ready to commit to your choices and install Linux. When the Installation Settings screen appears again, click on Accept. A small window will pop up, asking you to confirm the instal-

lation. Click Install. The hard drive will now be partitioned and formatted automatically, and then the installation will start from the first CD. When everything has been installed from the first CD, you will be prompted to insert the second CD.

Simply press the CD drive button to eject the first CD, and insert the second CD. Unless you have gotten creative and changed something in the installed program list, you should need to do this only twice, for the second and third CDs. This process usually takes between 30 and 60 minutes, and does not need to be monitored closely, so you may want to do something else while it's going on and check back occasionally.

Once this has finished, there are a few more steps. The installation will prompt you for a hostname, a root password and network setup details. The hostname is not too important; it's simply a name for your computer to distinguish it from any other computers you have. The root password is very important. Choose something that you won't forget. Otherwise, you will never be able to update your system without a complete re-installation. For the network setup, choose automatic setup via DHCP, unless you know what you are doing and need something different.

I always skip the Online Update step during installation, as I want to get through and verify that everything works before I spend anymore time waiting. Once you have your system running, you can perform this step with YaST. You also will be prompted to set up at least one user account. Again, I like to set up only one user during installation, because this too can be managed later with YaST.

Once the installation has finished and you reboot your system, you will see a boot menu.

Depending on what you chose in the bootloader installation step, if no action is taken, the system will boot the default operating system (Linux or Windows) after a brief pause. Verify that you can run both operating systems, and you're done. Note that there should be an icon on your KDE desktop that allows you to access your Windows drive; however, you will not be able to access your Linux drive from Windows, because it cannot recognize the filesystem.

THE ROOT PASSWORD IS VERY IMPORTANT. CHOOSE SOMETHING YOU WON'T FORGET.

CONCLUSION

I have successfully made many dual-boot systems for myself and others, and I think that this is the easiest method, especially for Linux newbies, because it seems to make sense intuitively to use two drives, and it has a very low chance of interfering with Windows. I hope this will enable you to learn a lot more about Linux by making it easy to run on your system without interfering with your other tasks. ■



Willy Smith is a musician who earns his daily bread dispensing financial advice. Besides being an avid Linux user and FOSS advocate, he is a linguist, hardware designer and truck driver. He usually spends time off playing "tree-rock-chakra" in wilderness areas, both in the US and abroad.

Here They Are: the Linux PC Shops

Linux-friendly hardware stores for hassle-free purchases.

JAY KRUIZENGA

Today, there is a booming Linux market demanding high-quality desktop and laptop computers as well as numerous companies that are taking a stand with their belief in and support of Linux by offering a growing number of Linux PCs that are equal to or better than those found in stores.

I always have loved browsing my local electronics stores, and I get excited looking at all the new gizmos and gadgets available for purchase. Recently, I visited the computer section where there were several rows of desktop and laptop name-brand computers alongside LCD monitors and other computer paraphernalia, such as printers. I could not help but notice how saturated the market is with Microsoft products, as there was not a single alternative offered in competition to Windows XP.

Most new PC buyers never stop to think that there may be alternatives to the Microsoft monopoly, and they really couldn't care less—all they want is a computer that works and functions properly, without the threat of viruses, spyware and malware invading their machines. Yet it happens.

I remember several years ago when I purchased a brand-spanking-new, high-tech, name-brand PC with all the extra bells and whistles offered at the time. I was extremely satisfied with my purchase and thought Windows XP was the best thing in the world. DSL was just being offered in my area, and I was one of the first to jump on the bandwagon—being a trend-setter and all. It wasn't long, perhaps only a few weeks, and my new PC began running more and more slowly each time I booted. I couldn't understand what was happening. How could my DSL connection be running more slowly than my old 56K?

I searched for answers and learned how spyware/malware could piggy-back one's system, and that the so-called free programs I was downloading/installing could infect my machine, and that my machine could

be infected merely by visiting the wrong sites. I determined that I might have such a problem and downloaded and installed a recommended spyware/adware program to check my PC. More than 100 programs were discovered. My new PC had been compromised. I was angry at how vulnerable Windows XP was to allow so many unauthorized programs to be installed without my permission or knowledge. That was when I began my search for an alternative operating system and discovered Linux.

I SEE VARIOUS FORUMS FOR NUMEROUS LINUX DISTRIBUTIONS FILLED WITH FRUSTRATED USERS WHO CAN'T GET ONE OR MORE PIECES OF HARDWARE TO WORK CORRECTLY, AND I KNOW MANY USERS SIMPLY GIVE UP THINKING THAT LINUX IS TOO HARD TO INSTALL.

So, where do new Linux users purchase a computer desktop system or laptop, pre-loaded with their favorite Linux distribution? My first Linux machine was a hostile take-over where I completely reformatted my hard drive with the Linux distribution I chose at the time. I was able to keep my same PC by making a few minor adjustments (onboard sound non-operational). Many users become frustrated having to check each of their computer components to verify Linux compatibility, and it seems that most databas-

es of tested components are out of date. I see various forums for numerous Linux distributions filled with frustrated users who can't get one or more pieces of hardware to work correctly, and I know many users simply give up thinking that Linux is too hard to install.

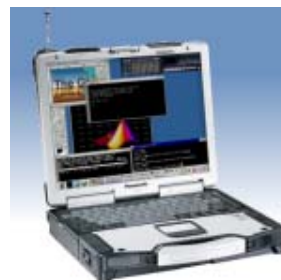
The problem does not lie in the particular components themselves but in the various manufacturers who fail or refuse to release drivers that would enable their hardware to work with Linux. That's the real problem for all the frustrated users who have given up on Linux due to nonworking components. If you are out there and happen by chance (I don't believe in chance) to be reading this, there is a solution to the problem that has plagued Linux far too long—buy a Linux PC.

With computer prices tumbling to all-time lows, there is no reason to keep your existing PC, unless you are absolutely certain that the manufacturers of your computer components are friendly to Linux. Although you cannot yet purchase a new Linux PC right from your local computer store, buying a Linux PC is much more simple. Simply get on the Net and search the numerous options available from the growing number of Linux PC distributors you will find there. With the advent of a Linux desktop revolution (predicted for many years now), these Linux PC forerunners are ahead of the pack that is certain to follow (the copy-cats). It is important to shop and support those PC/component manufacturers and distributors who believe in Linux and recognize Linux as a valid operating system.

The point is to support those who are supporting Linux—that is the best way to assist the growth of Linux and the desktop revolution explosion. This being said, I have searched the Net for an assortment of Linux PC distributors who offer quality Linux systems that are competitive with the name brands we see and hear about on a daily basis in our local computer stores. The sampling of on-line stores listed below, in alphabetical order, are high-quality distributors who are doing the Linux community a great service with their offerings. Where noted, I have listed which distributors are exclusively Linux—meaning no other operating systems are sold (unless by dual-boot). To all Linux PC distributors, here's a big thank you for your service! I apologize to all those companies I may have missed (and there are certain to be a few); space did not allow me to list any more than I have.

EMPERORLINUX, INC.

- <http://www.emperorlinux.com>
- Desktop systems: no.
- Laptop systems: yes (13); from \$1,160–\$4,800 US.
- Extras: well-written user's manual comes with all orders.
- Distributions pre-Loaded: you choose the distribution. Full hardware support on Fedora, Red Hat, Debian, Ubuntu, SUSE, Slackware and Mandriva. Warranty varies from one to three years, depending on the manufacturer, plus one-year of tech support.
- Notes: EmperorLinux has been offering quality systems with full hardware support under Linux since 1999. It has supplied systems to engineers, physicists, mathematicians, astronomers and more than 200 universities. EmperorLinux is a well-known name brand in the Linux world. Its hand-picked technical staff has more than 60 man-years of Linux experience. EmperorLinux has received great reviews, and it offers a Linux experience of the same quality as the large, name-brand laptop providers.



Tarantula Rugged Linux

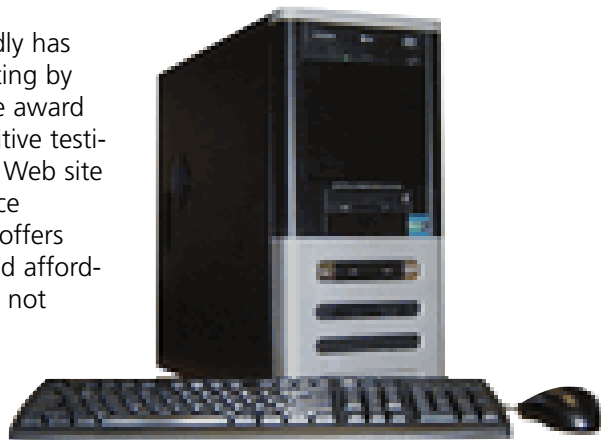
The Tarantula (Panasonic ToughBook CF-29) is the ultimate rugged Linux laptop. It is dust and moisture resistant and has shock-mounted drives and MIL-spec certification. 1.6 GHz CPU and daylight-readable 13.3" LCD are standard.

EmperorLinux's Tarantula—Extremely Rugged Unit

WITH COMPUTER PRICES TUMBLING TO ALL-TIME LOWS, THERE IS NO REASON TO KEEP YOUR EXISTING PC, UNLESS YOU ARE ABSOLUTELY CERTAIN THAT THE MANUFACTURERS OF YOUR COMPUTER COMPONENTS ARE FRIENDLY TO LINUX.

IBEX COMPUTERS, INC.

- <http://www.ibexpc.com>
- Desktop systems: yes (6); from \$399–\$649 US.
- Laptop systems: no.
- Extras: ability to customize systems.
- Distributions pre-loaded: Fedora Core 4.0 or 5.0, Red Hat Enterprise WS 4.0, SUSE 10.1 Professional or Ubuntu 5.0. IbexPC also will create a dual-boot system with Windows Home or Professional.
- Warranty: one-year parts and labor warranty.
- Notes: IbexPC repeatedly has been given a 5-Star rating by Yahoo! as a top service award winner. Numerous positive testimonials on the IbexPC Web site speak well of the service offered. The company offers top-quality, on-time and affordable systems. IbexPC is not exclusively Linux.



IbexPC's 4260 Intel Pentium D 2.66GHz Dual-Core System

KOOBX

- <http://www.koobox.com>
- Billed through Linspire, sold by Mirus Innovations.
- Desktop systems: yes (3); from \$299–\$739 US.
- Laptop systems: no.
- Extras: Mirus Innovations is no new-comer to the PC industry, serving many Fortune 1000 clients and staffed by more than 4,000 certified technicians and engineers. It is ISO 9001 certified, and that means quality.
- Distributions pre-loaded: comes only with Linspire; however, the site does state "because it is optimized to work with desktop Linux, you may be able to get it to work with other Linux distributions, but there is no guarantee for this."

\$399⁹⁹*

after \$100 mail-in rebate



The Koobox Mini—Lightweight Size, Heavyweight Value

- Warranty: 90-days limited parts and labor warranty with upgrades available (one year for \$29 US or three years for \$89 US).
- Notes: there's something for every budget—Koobox offers the Mini PC starting at \$399 US, with numerous upgrade options available. It's perfect for a small space and is similar in style to the Apple MAC-Mini.

LINUXCERTIFIED, INC.

- <http://www.linuxcertified.com>
- Desktop systems: no.
- Laptop systems: yes (5); from \$699–\$1,299+ US.
- Extras: offers timely specials, from free laptop bags to hardware upgrades.
- Distributions pre-loaded: Fedora Core 5, Ubuntu 6.06 LTS or OpenSUSE 10 and optional dual-boot with Windows XP.
- Warranty: standard one-year warranty covers hardware and device drivers, and it's expandable to three years. Plus, it includes an exclusive five-year memory warranty.
- Notes: LinuxCertified was the winner of the 2004 *Linux Journal* Readers' Choice Award as well as the 2005 *TUX* Readers' Choice Award. LinuxCertified offers open-source training, and it has trained IT professionals from Boeing, NASA, Oracle, MIT, Compaq, the US Army and more. LinuxCertified offers very high-quality laptop systems, and it also offers limited



LinuxCertified's Award-Winning LC2000 Series 64-Bit

refurbished systems for cost-conscious consumers.

R CUBED TECHNOLOGIES

- <http://www.shoprcubed.com>
- Desktop systems: yes (3); from \$375–\$1,249+ US.
- Laptop systems: yes (6); from \$899–\$1,159+ US.
- Extras: offers a full-range of hardware accessories.
- Distributions pre-loaded: Fedora Core 5, OpenSUSE 10.1 or Ubuntu 6.06.



The LS1250 Laptop from R Cubed Technologies

- Warranty: one-year limited warranty, expandable to three years.
- Notes: founded in 2003, R Cubed strives to make itself the ultimate on-line computer superstore for all your computer component needs.

SEASCAPE, LLC.

- <http://www.seascape.us>
- Desktop systems: yes (9); from \$376.99—\$1,072.99 US.
- Laptop systems: no.



Stylish and Sleek — SeaScape's Signature Series

- Distributions pre-loaded: PCLinuxOS, Linspire or any of the Ubuntu family.
- Warranty: guaranteed three-year warranty on all computers sold.
- Notes: SeaScape is raising the standard on warranties where most of the industry offers a limited one-year warranty, charging more for extensions. SeaScape offers some very stylish small footprint designs that look better than most PCs offered through stores, with quality ingredients as well. A relatively new company, SeaScape plans on offering higher-end PCs in the near future (as per its Web site).

SUB300.COM

- <http://www.sub300.com>
- Desktop systems: yes (3); from \$169.99–\$759.99 US.



How about a Zero-Footprint PC offered by Sub300?

- Laptop systems: yes (2); from \$899.99–\$1199.99.
- Extras: reduced rates for elementary, middle school, high school and university users.
- Distributions pre-loaded: Linspire 5.0.
- Warranty: one-year warranty on parts and labor.
- Notes: offers very low-cost and ultra-affordable systems. Sub300 carries the unique zero-footprint PC (a computer inside the keyboard)—a powerful system minus the box. It also offers LCD monitors, hard drives, modems and the Sonos digital music system (which lets you play the same song or different songs in up to 32 rooms simultaneously).

SYSTEM76

- <http://www.system76.com>
- Desktop systems: yes (4); from \$799–\$1,599 US.
- Laptop systems: yes (3); from \$799–\$1,099+ US.

System76's Koala Mini—Lots of Power in a Tiny PC

- Extras: free shipping for orders of more than \$800 US and provides the ability to customize systems.
- Distributions pre-loaded: Ubuntu.
- Warranty: one-year limited warranty, plus tech support expandable to three years.
- Notes: System76 offers excellent support, innovative hardware (guaranteed to be fully compatible with Linux) and clear documentation. System76 offers only Linux systems. Its various computers are named after exotic animals, such as serval, bonobo, gazelle, sable and so forth.

Z-TECH SERVICES

- <http://www.ztechshop.net>
- Desktop systems: yes (4); from \$75–\$579.99 US.
- Laptop systems: no.



Z-Tech's Power AMD Athlon 64 3500" System Only \$75 US. Offered by Z-Tech

- Extras: free shipping in the US. Will install virtually *any* distribution you request.
- Distributions pre-loaded: SUSE Linux 10.1 by default (with the exception of their Sub-100 PC, which comes with Xubuntu by default). More than 75 distributions are offered.
- Warranty: because of the low mark-up, Z-Tech does not offer a warranty or official technical support, though the company will make every attempt to solve any issues by e-mail. All sales are final.
- Notes: Z-Tech sells much more than PCs, includ-

ing CDs, Linux and BSD apparel, merchandise, books and so on. It sells Linux and BSD on every format, including USB thumbdrives. It's offerings are exclusively Linux and BSD. Z-Tech distributes worldwide, and 20% of the profit from each order is donated back to open-source software development.

FINAL THOUGHTS

I dream of the day when Linux PCs will sit right alongside Windows and Mac computers in stores. Today is not that day. As Linux was born and evolved over the Internet, I believe that the power of the Net to spread the Linux message is yet to be seen. Although there are certain drawbacks to

ordering a PC on-line, such as not having the ability to touch, feel and play with the unit prior to purchase, I still think this will not deter from the success of the companies listed above who are bold enough to stand forward and take a chance on what we Linux users know is the very best OS out there. Many new PC buyers order via phone each and every day—just look at Dell's success! PC buyers need to be assured that the system will work as advertised, right out of the box, and that assurance is absolutely crucial to the future success of Linux if we are to be taken seriously. We need Linux PCs!

There's no need to tinker with existing machines or outdated components, and no need for frustrated users to voice their numerous incompatibility complaints to user forums. Go with what *does* work and purchase a new Linux PC from one of the distributors listed above. If your distribution of choice is not listed anywhere in the pre-loaded options, that does not mean it won't work. The best thing to do in that case is bookmark the Web site for the PC you are interested in purchasing, and send the link to the distribution's technical support team for a compatibility check. Chances are, if the PC works for one distribution, it will work for most of them. But, it's always best to be safe rather than sorry. ■



Jay Kruizenga, a former Marine, is an accomplished Marketer (specialty: E-Commerce), business owner and aspiring author. He has a deep love for everything pertaining to Linux.

Unreal Tournament 2004: Linux vs. Windows

Battle of the boxes.

TRAVIS KEPLEY

“Will it run my games?” That is always one of the first questions posed to me by people who are considering the switch to Linux from Windows. Unfortunately, I am usually forced to rattle off the six or seven recent commercial titles that include the penguin on their supported operating system list. The tides have waxed and waned over the years, but with many recent blockbusters, such as iD’s *Doom 3* and *Quake 4*, Bioware’s *Neverwinter Nights* and Epic Games’ *Unreal Tournament 2004*, coming to Linux—not to mention advancements in graphics drivers from NVIDIA and ATI—it’s beginning to look as if our beloved operating system is steadily becoming a viable gaming platform.

INSTALLATION ON A LINUX SYSTEM IS ACTUALLY MORE INTUITIVE THAN ONE MIGHT THINK.

Because these games are primarily developed for the Windows’ crowd, it only makes sense that, as a Linux-based publication, we would be interested to see how well the Linux iterations hold up. Unfortunately, we cannot provide a direct comparison through and through. However, we can do our best to compare the two and use the conclusions to evaluate the current state of gaming in Linux.

With Epic’s *Unreal Tournament 2007* just over the horizon, I decided to take an in-depth look at the experiences of installing, patching and playing *Unreal Tournament 2004 (UT2k4)* in both Windows and Linux and was surprised to see what I found.

INSTALLATION

Installation on a Linux system is actually more intuitive than one might think. The developers have included an executable installer right on the DVD. This

NOTE:

Loki Games was one of the pioneers in bringing Windows-based games to Linux. Its installers are still used to this day.

simply means that you can open the file aptly named `linux-installer.sh` to begin the installation (Figure 1). After reading the lengthy License Agreement (you read those, right?), you are greeted with a fairly intuitive installer window (Figure 2). Unlike its Windows counterpart, the *UT2k4* installer has all

ADVANCED USERS:

If you would like the ability to create directories during the install, you either can run the installer as root or create the directories in your home folder ahead of time. Also, you have the option to install both the OpenAL and SDL12 source code if you want to fiddle around with some code, which, like many of the unchecked options, is far from necessary.

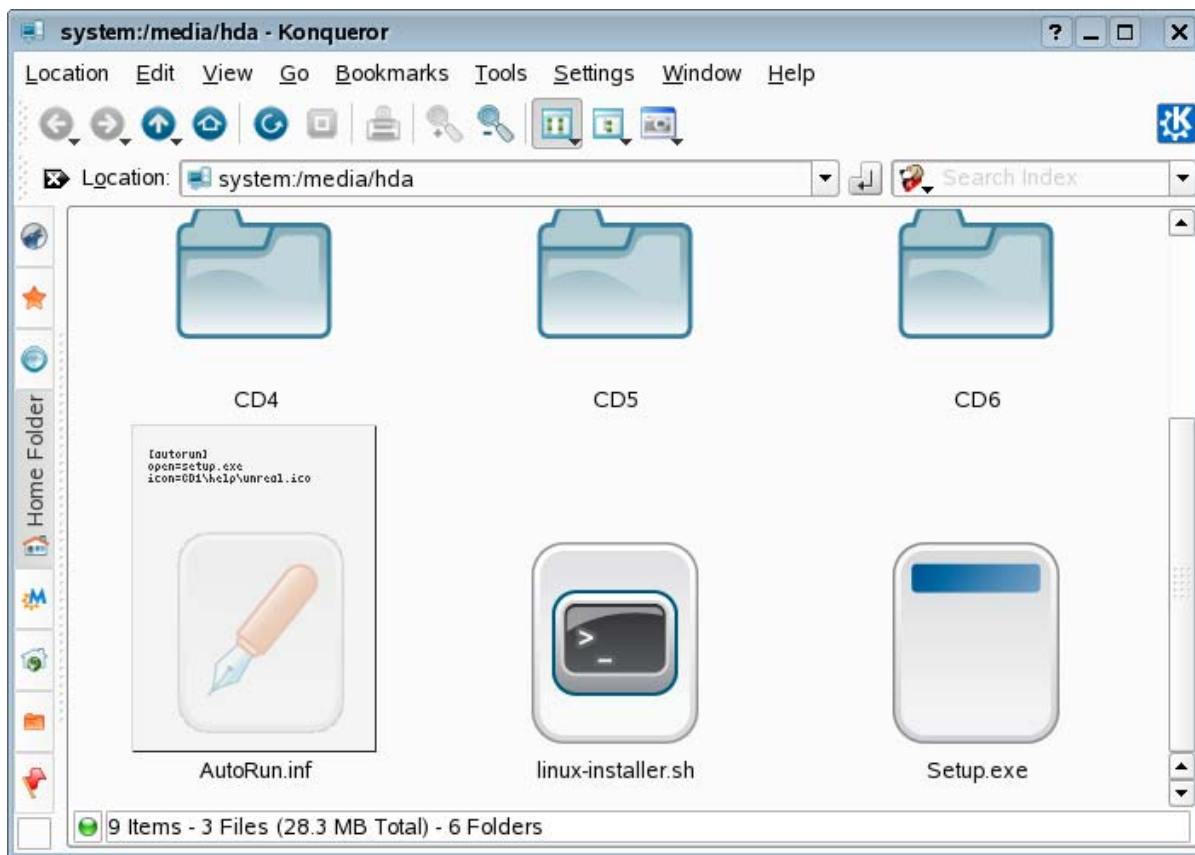


Figure 1. The Linux Installer comes before the Windows Installer. Is Epic trying to tell us something?

the major options on one page (as is par for the course for most Loki-based installers).

I like to keep all my games, as well as the symbolic links (a fancy term for shortcut), in one directory in my home folder. Unfortunately, the installer lacks the ability to create these directories for me. This, however, will likely not pose any problem for most users.

All that's left is to click Begin Install, type in your CD-key and play your game.

Of course, anyone who has played a computer game, such as *UT2k4*, already knows the joys of installing a game in Windows and can tell Linux has topped it in many areas. There is very little need to detail the typical Windows quirks, such as the restarts, clicking Next incessantly and praying

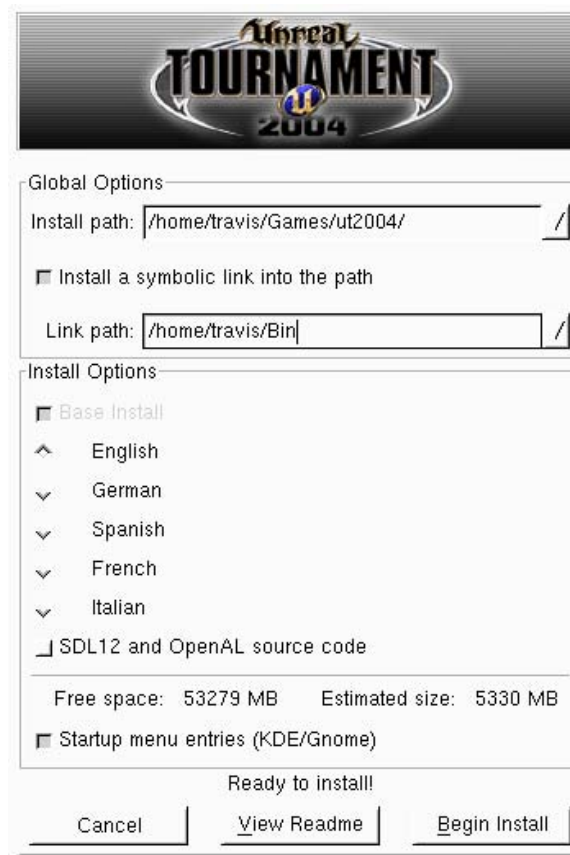


Figure 2. The *UT2k4* Loki Installer for Linux

you don't have to fiddle with Gamespy Arcade or a new DirectX version. Whew! It makes me anxious just thinking about the hassle!

PATCHING

One of the bittersweet requirements of on-line PC gaming is keeping the game up to date. Although it discourages cheating and often adds new fea-

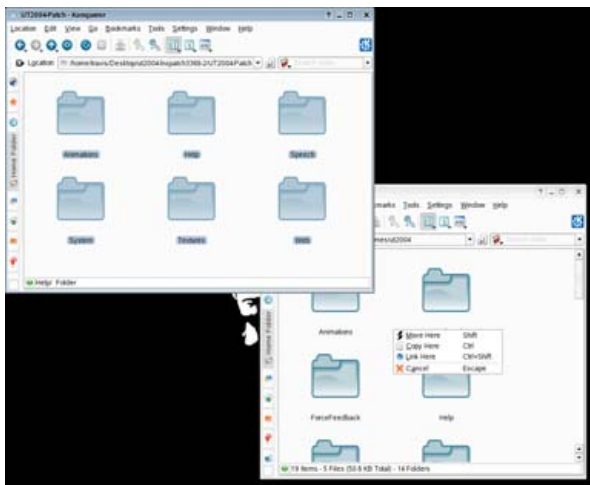


Figure 3. Copy and overwrite all—what a pain.

tures, the patching process can become tedious if the developer makes the procedure more difficult than necessary. Updating to the latest version of *UT2k4* is a spot where the Windows client really shines. Epic has made it as simple as going to the Unreal Tournament Web site (<http://www.unrealtournament.com>) and downloading the latest patch in a self-installing/extracting executable file. A double-click and a few Next buttons later, and you're back in the fray.

The Linux version gets a bit stickier, but it isn't a terrible pain assuming you feel comfortable overwriting files yourself. Simply go to the same site as before, but instead you have to get the latest Linux patch, which is in a tarball (a type of compression). Once the file is downloaded, simply use a tool, such as Ark, to extract the files. All that is left is to copy the newly extracted files over top of the existing files in your *UT2k4* directory, overwriting as necessary (Figure 3).



Figure 4. Maybe he's too cute for fragging?

I believe that this method is much more of a pain, and for the novice, it can be a quick turn-off to gaming with Tux. Hopefully, Epic will correct this with the upcoming release of *UT2007*, as Epic is known to update its software frequently once it is released.

PLAYING

What good is talking about the installations and patching if we aren't going to play the game itself? Well I'll tell you—it isn't nearly as good and is nowhere near the fun! As the game loads, you are presented with perhaps the coolest novelty of the Linux version. To the right of all the logos is a picture of Tux sitting fat and happy (Figure 4). I assume this is where some of the art on <http://www.kde-look.org> with Tux holding an Unreal rocket-launcher was inspired. I must say that I had a big grin the first time I saw the chubby guy featured as part of a retail game's splash screen. Once in the

game, aside from a few changes in sound server selections, I was hard pressed to find any major differences in the Windows and Linux versions of the game—that is, until I compared frame rates.

SOME PITFALLS

Unfortunately for Linux, I received between a 5–15 frame-per-second (FPS) drop when running the bot-match demo. This isn't a huge problem for me, because the average FPS was still well more than 100. But for those with older hardware, this could prove to be a disadvantage—especially in an on-line environment. This slight drop in speed comes from the OpenAL and SDL12 mentioned earlier. Both technologies, pioneered by none other than Loki, are used to provide a compatibility layer so that games are easily ported to multiple platforms. In other words, by using the same code, it is very easy for programmers to make a game that can run on Windows, Mac OS, Linux and even the likes of BSD and Solaris. The price of it comes in the form of a slight drop in speed. Of course, this is much better than running an emulator, and it is fast enough that most people won't even notice. It is also worth mentioning that, due to the compatibility layer, some visual features are supposedly missing, but I have yet to notice it in the game even with visuals set at full in Windows and Linux.

I MUST SAY THAT I HAD A BIG GRIN THE FIRST TIME I SAW THE CHUBBY GUY FEATURED AS PART OF A RETAIL GAME'S SPLASH SCREEN.

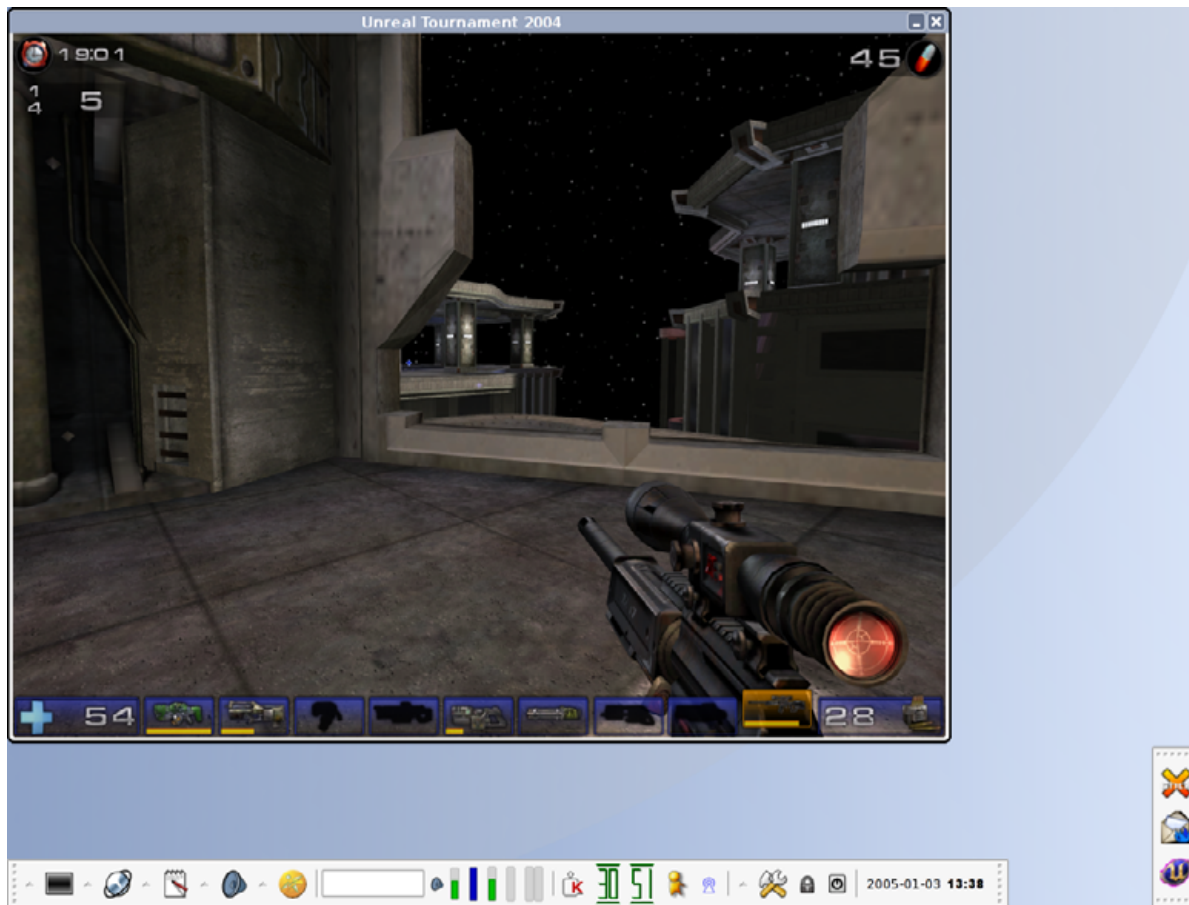


Figure 5. Linux? Check. UT2k4 Check. Sniper Rifle? Check.

It should be mentioned that prior to patching the Linux version, I had a few stability issues—all of those were taken care of, along with some speed improvements with the latest patch. Of course, this means you must go through the fairly tedious patching process to alleviate the problems if you happen to run into them (Figure 5).

CONCLUSIONS

Without a doubt, one of the hardest things to do as a geek is convince my gamer friends to switch to Linux. The moment they find out their favorite game is not Linux-compatible, they shy away. Let's face it, most gamers need as much hard disk real estate as they can get and would rather not waste

GAME INFORMATION:

Developers: Epic Games, Digital Extremes

Publishers: Atari (Win/Linux), MacSoft (Mac)

Designer: Steven Polge

System Requirements: 1GHz processor, 128MB of RAM, DirectX 9.0b or OpenGL, 64MB video card and 2.6 kernel

URL: <http://www.unrealtournament.com>

Price: \$15.99 US (Amazon)

their time with dual-booting—especially considering the bulk of their computing experience is spent playing their favorite games. Although there were some small issues, *Unreal Tournament 2004* is an excellent example of doing a Linux port well. Epic employees have openly stated that *UT2k7* will be available for play in Linux. If the trend continues, it might not be long before my buddies and I are fragging each other in Linux, claiming dominance on the game and of our favorite distribution. ■



Travis Kepley is the co-owner of a computer repair shop in Lewisville, North Carolina (<http://www.kepleyscomputers.com>). He recently graduated with a degree in English Literature from UNC-Greensboro. He is an avid gamer, musician and loves spending time in his recording studio, which can be

found at <http://www.goodbeef.net>.

Planeshift

A graphically appealing, addictive Linux game.

MATIJA SUKLJE

Free, open-source games are mostly known to be small, fun and inventive. The FOSS community is not exactly known for big games with complicated plots, graphics, music and so forth—or so they say.

However, there is a gaming genre—the oldest of all to be exact—that a lot of penguin gamers are familiar with and that Linux has inherited from the old times of UNIX domination. Yes, I am talking about adventure and role-playing games (RPGs). Since the ancient classic RPGs, such as *Nethack* (which is one of the oldest games still in development) and *Rogue*, the penguins have been taking their role playing rather seriously. And, I am willing to argue, that the game I present here continues the tradition and applies it to more modern times with 3-D graphics, quality music and sound—and, of course, network playing.

Planeshift started as a graphical multiuser dungeon (MUD) many years ago. Although the graphics and the interface have changed enormously since those days, it is important to note that the world and main logic behind the game has not changed much. It is very typical of *Planeshift* that nothing gets into the world or game unless it fits in that world and its logic flawlessly. This is one of the reasons why true role players love it.

So, here is a short introduction into the wonderful world of this great free (as in beer) and open-source, massively multiplayer, on-line role-playing game (MMORPG). Hold on to your hat; this will be a pretty wild trip!

STORY AND WORLD

The whole story takes place in a magical place called Yliakum, which consists of nine circular layers, the lowest of which are under water. Light and energy radiates from a giant crystal that the inhabitants call the Crystal Sun. What the races do not know is that their beloved Yliakum is actually in an enor-



Figure 1. *Planeshift* takes place in Yliakum—a huge hollow stalactite.



Figure 2. A Group of Characters Meet

mous hollow stalactite.

A shortened version of the publicly known history is that two young gods, Talad and Laanx, ruled together in perfect harmony over Yliakum and created the world. But, when they came to the part where they started creating intelligent life—Laanx and his Lemurs and later on Talad and his Kran—jealousy sprang a crack between the two gods, and Laanx departed in a grudge from Talad. To the present day, they have not made peace, regardless of Talad’s efforts to make peace once more.

The world of Yliakum is so full of crystals (magical and otherwise) that they also are used as currency. The official currency is—as in real life—made from pieces of different value. Tria is the basic currency, with a Hexa being worth five Tria, an Octa being worth 50 Tria and the Circle being worth 250 Tria.

RACES, SKILLS AND JOBS

There are a dozen playable races—either created

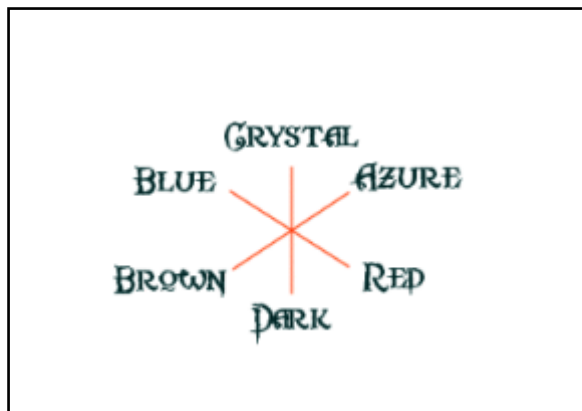


Figure 3. Diagram of the Magic Ways

by the two gods or those who found their way into the world from the outside.

From the human races are the pale and inventive Xacha and the robust and practical Ylians. Elven races consist of the ancient amphibious Nolthrir and the dark-loving Dermorians. From the dwarves are the Stonebreaker clan, which is more inclined to mining, and the Hammerwielder clan, which finds joy in smithing and crafting. Among the other races one finds the already-mentioned intelligent but fragile Lemurs, the tough silicon-skinned and gender-neutral Kran, the horned Diaboli with their resistance to magic, Ynnwns—the most versatile of them all made by the crossing of Diaboli with elves, the wild and strong feline Enkidukai and the slim-winged Klyros.

Each of these races has its own special traits, but there are no restrictions on what job(s) or skills players can have their characters learn. In *Planeshift*, any character can master any skill if the character puts enough effort into it. *Planeshift*, for a long, long time, has supported skill-based level-

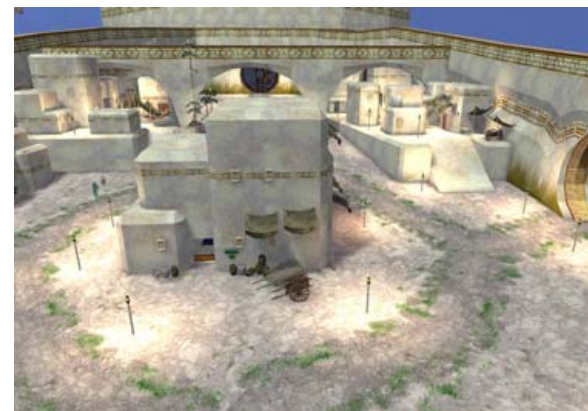


Figure 4. A View of a Village

ing. The idea behind it is that a player’s character is free to develop and make his/her/its (remember Kran?) own destiny. If players desperately want to make a Kran who is great in herbal lore and a master of all six magical ways, they can do so. And, if those same players decide after a few months that their Krans also should learn fishing and martial arts, the characters are free to learn those skills as well.

I’ve already mentioned magic, so I think it is high time to dedicate a paragraph to it. In *Planeshift*, there are six magic ways—Crystal Way, Azure Way, Red Way, Dark Way, Brown Way and Blue Way. Each way has two neighboring ways with which it works well and an opposing way (Figure 3). Each way has its own magical stones called glyphs. To form a spell, you need to combine glyphs into a specific combination in order for the spell to work.

Other skills vary from standard fighting (melee, sword, axe, daggers and so on) and crafting skills to more interesting, less widespread skills, such as

special fighting techniques, cooking, herbalism and so on.

Each level of skill needs to be learned first on a theoretical level from a trainer and later on be trained in praxis until that level is mastered.

INTERFACE, LOOK AND FEEL

So far, I've described the world itself and nothing about how the game *looks*. There is a very simple reason for this—*Planeshift* is mostly about the experience, the story and a world that works (although logically works only in itself), and what I've described so far scratches only the surface of it all.

The overall look and feel of the graphics, interface, music and sound effects are quite enjoyable. Do not expect to get the same level of detail that you would get in *Neverwinter Nights 2* though—not yet. The graphics are quite detailed, and a lot of effort is put into quality and making sure that everything works together as a whole (and not as though it was thrown together). The animation of characters is good—not yet perfect, but improving all the time.

The interface and interaction are things that some players might find new, but once you get used to it, it's logical and enjoyable. Character movement is done via the keyboard (WSAD or arrow keys, Shift to run, Alt to strafe, spacebar for jumping), and targeting an object or character is done with the mouse.

The part that takes the most time getting used to is interaction with NPCs (non-playable characters) and pets. This is not done with conversation menus (as many are used to), but players have to type their conversations—just like they would do with another PC (player character). NPCs in *Planeshift* are characters just like any others—that



Figure 5. Having a Virtual Picnic

is the big plan. The problem is that to make this work, the NPCs have to be intelligent enough to understand and make conversation successfully. So far, they understand simple phrases and also synonyms, which makes them usable but far from perfect. However, *Planeshift* is getting there—at least in the aspects of thinking about every possible situation and having continuing development.

THE END?

In summary, *Planeshift* already is a nice, playable MMORPG in which the role-playing community is

a key part, and there is still space left for improvement. ■



Matija Suklje is a 23-year-old law student and member of Cyberpipe from Ljubljana, Slovenia, who has been interested in Linux and F(L)OSS since his early high-school days when he first met with Slackware. Currently, his favourite distribution is Gentoo. You can contact him via e-mail at matija.suklje@rutka.net,

or look for more contact information on his home page (<http://matija.suklje.name>).