TUX

the first and only magazine for the new linux user

Reviews:

- *The Freespire Beta is here and we take a first look*
- *Is Xandros 4 Desktop the platform for your digital life?*
- *Prepare to meet your maker with* Doom 3 *and* Quake 3

TUX *presents* *GCompris and the KDE Edutainment Project* *Both are children's educational software aimed at making learning easy and fun in Linux*

Do you enjoy breaking your head against *puzzles? TUX shows you a few to keep up the punishment*

If you're looking for a quick escape, **TUX** *examines some* *Classic Linux games*

RUN WINDOWS GAMES ON LINUX

TUX SHOWS YOU THE LATEST VERSIONS OF CEDEGA AND WINE TO BRING LINUX GAMING TO A NEW LEVEL.

15 *Lbreakout2*

22 GCompris

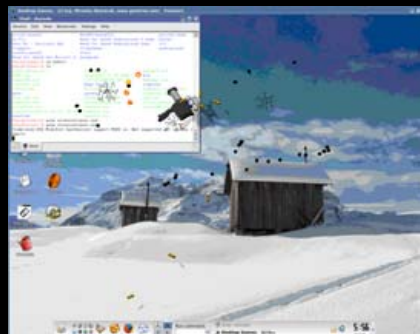**44** Wine 0.9.17

TUX

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- *TUX* gives you a new weapon, SpamAssasin, for your battle against spam.
- How to use KMail for managing e-mail messages through filters.
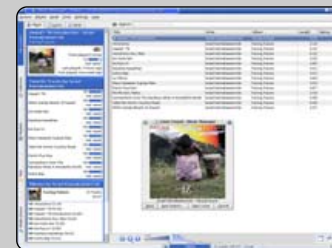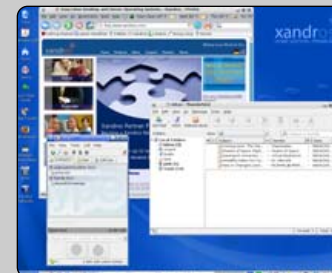- Use smart folders and extensions within Thunderbird to increase productivity.

COVER PHOTO CREDIT: Jayme Thornton/Photodisc Green/Getty Images

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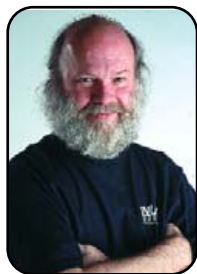
FROM THE PUBLISHER

Why Is Linux So International?

There are strong reasons why Linux world domination will happen first outside the US.

PHIL HUGHES

Linux seems to be more popular in many other countries than it is in the USA. Why? Here are my observations.

First, the price is certainly an issue. Proprietary software prices don't follow average income levels. That is, you might spend $1,000 US on proprietary software for your PC in the US, where $1,000 US is a fraction of your monthly salary, but that same cost is more than the average annual income for someone in Nicaragua.

On the other hand, piracy of the contents of CDs and DVDs—whether it is video, music or software—tends to be much higher in poorer countries, so this isn't the only consideration. Let me offer some other ideas.

One big issue is flexibility. For example, KDE supports 66 languages or dialects. That doesn't just mean that you could get KDE in one of those languages or that you can select one when you install. It means that your one computer can be configured at the user level to be in, for example, Punjabi, Mongolian or Hindi.

The number 66 didn't come from a marketing flyer. I started up Adept on my Kubuntu system

and counted the number of files that had names starting with kde-i18n-. These are the files KDE uses to configure the user interface. Now, I haven't loaded all of them, but, for example, the computer in my living room has US English and Spanish configured on it.

In the USA, most people speak English, and the majority of the others speak Spanish. Being able to have one computer working in five languages is virtually never an issue. In India, however, where there are more than 20 different languages, this becomes a lot more important. Think of being able to walk into an Internet café in Romania and getting to choose English, French, Spanish, German and so on—as well as Romanian. That alone makes Linux a better choice in areas where multiple languages are commonplace.

As a side benefit, look in the Tools menu of Konqueror. Figure 1 shows one of the many translation sub-menus. This built-in feature makes it easier to use Linux in a multilanguage environment. Something, again, that is appreciated more by people living in areas where multiple languages are commonly used.

Freedom is another issue. Linux is ending up

Figure 1. Translation Sub-Menus

being embedded in many systems. Although the Nokia 770 and Sharp Zaurus lines are obvious as you think of them as computers, Linux is regularly embedded in home appliances in Japan. Licensing allows vendors to include their proprietary application with a Linux-based kernel (which is licensed under the GNU General Public License). Licensing obligations may require that they "give back" kernel-specific enhancements; however, they are still allowed to decide how to license their applications software.

I remember when Linux creator Linus Torvalds first said, as a joke, that the goal of Linux was world domination. Since then, many of us have realized that, in computing, it really is the goal and it actually is attainable. What I hadn't realized was that Linux domination was likely to happen first in many countries spread around the globe before it happened in the US. It just makes me think of those who said that people in the US didn't want foreign cars—until they realized they were surrounded by Hondas and Toyotas.∎

Phil Hughes is Group Publisher for SSC Media Corp.

THINK OF BEING ABLE TO WALK INTO AN INTERNET CAFÉ IN ROMANIA AND GETTING TO CHOOSE ENGLISH, FRENCH, SPANISH, GERMAN AND SO ON—AS WELL AS ROMANIAN. THAT ALONE MAKES LINUX A BETTER CHOICE IN AREAS WHERE MULTIPLE LANGUAGES ARE COMMONPLACE.

P2P

What Will It Take for Linux to Become a Mainstream Option for Gamers?

By facing the truth about the tendencies of some Linux users, the secret codes necessary to make Linux gaming more popular are found.

KEVIN SHOCKEY

I remember when my older brother got his first computer, he was really into it. But what he was into even more was gaming. Having missed out on the Atari and Nintendo eras, the personal computer opened up his eyes to the majesty and splendor possible from computer graphics. Before soon, he was hooked big time. He went through all of the classic games—*Doom*, *Quake*, and even *Myst*. It made me happy to see how a personal computer and computer gaming was bringing so much enjoyment to his life. Truth told, I'm sure the same goes for millions of people around the world.

Through the later part of the the 1980s and 1990s, gaming on the PC was always blessed by a wide assortment of developers, attracted to the faster CPU speeds and an exploding market. Game development shops popped up all over the place. Although this growth has led to game consoles and the $100 million debut of *Halo 2*, it has caused a decline in the personal computer game industry. The personal computer is now just another option for consumers, and considering the price comparisons, it is no wonder game consoles are so popular. However, a new alternative is available, and perhaps Linux can help stem the tide of gamers choosing game consoles, over personal computers. I'll dive into that premise, in just a moment.

LINUX GAMING THEME

Something we've never really gone out of the way to emphasize is that every issue we put together follows a theme. These themes are determined at the beginning of the year, and we list the topics in our editorial calendar. However, it occurred to us that our readers might not be familiar with the calendar, and they might have wondered why we cover certain topics instead of others. So from now on, I'll make sure that I mention what the topic of an issue is, but I won't be giving a summary of the articles, because I believe we give enough information on the cover and within the article abstracts. Armed with that information, you should be able to decide whether you are going to read an article or not. Who knows, maybe you just read *TUX* from cover to cover, and that's great—I do too! So, if I haven't already tipped my hand yet, this month we take a broad look at Linux gaming.

WHAT'S HOLDING BACK LINUX GAMING?

While you are enjoying this month's magazine, one question that might occur to you is what will it take for Linux to become a mainstream option for gamers? Now, before we get lost in a labyrinth of a debate over driver support, licensing or ease of use, the most important thing to keep in mind is that for a vibrant market of Linux gaming to emerge, end users must become paying customers. The predominant business

models for free and open-source software will not work for games on Linux. There is no training, there is no service to provide, and there is only the fees associated with game licensing. So, many of the features that make Linux so attractive become obstacles for Linux to become a popular gaming platform.

One might respond that if there were games worth buying, you might consider making a purchase. True, but the same logic might also be used for Linux and many other Linux software applications. Some very high-quality Linux distributions are available for sale, but I bet the majority of Linux users neither bought nor contributed financially for their copy of Linux. It's easy to say that "if there were high quality [insert your favorite software category here] I'd buy it", but the uncomfortable truth is that most people don't follow up their words with action. Everyone must understand the power of voting with their credit card or checkbook! Games are typically too expensive to produce to give them away for free. We review a lot of those great games in this issue, but Linux gaming will never power-up without paying customers. Now, if we connect Linux games to Internet gaming servers that deliver the kind

of flow experiences available from other gaming networks, maybe, just maybe, there is a chance. For example, a company could create a client front end that would be freely available and support single-person play, but you would have to pay to subscribe to the real action. Anyway, it's something to think about.

If we can clear that first level and build a base of paying game customers, I believe that Jon "maddog" Hall has the rest of the answer from our interview in the June 2006 issue. For game manufacturers to begin offering popular games on Linux, as well as game consoles and Windows, there has to be the potential for high volume. We will need to build a critical mass of paying customers large enough for these companies to take the Linux market seriously. When we clear both of those levels, I assure you, Linux gaming will explode like a zombie hit by a BFG 9000 discharge.

Of course, I won't deny that a killer game, as in killer app (application), could certainly be the energy boost Linux gaming might need to get started. Although we have *Doom* and *Quake*, it will take an industry-changing experience for a new game to break from the pack of seemingly indistinct games currently available. To imagine that developers of such a game would choose Linux as the first

platform to create an industry-changing game is a stretch. It is not impossible, but it is more likely to come out first on a game console.

A SECRET HOPE

I do have one special hope for Linux gaming. It fits in very nicely with the environment and could dove-tail nicely with supporting projects. I'd like to see Linux become the platform of choice for educational games. It provides developers with a cost-effective development platform and an even more cost-effective host for games. By leveraging the model we have seen with *Doom* and *Quake*, where the core engine was donated to the community, many games might be possible and achievable if there were only a base of educational game code available as free or open-source software. Deep down, I want to believe that educational games are the untapped power of computing. If there were only some way to transfer everything the game industry knows into ways to create better learning, what a powerful tool we would have! Then to imagine that the platform of choice for that tool would be Linux—well, that would just be better than slaying the Cyberdemon.■

Kevin Shockey is Editor in Chief of *TUX*.

LETTERS

The Helix Audio Engine

Thanks for the great magazine! I've been using Linux for six years now, both on the desktop and on various servers, but I still consider myself very much a newbie. Although I prefer software *libre*, I am not a zealot, and I accept the fact that patents and copyrights exist and should be respected.

There seems to be a myth that MP3 playback cannot be *gratis*, and that you must pay for a distribution in order to cover license fees associated with the patents. This is false. Real Networks has gone a long way toward being more open, and not just *gratis*, but also *libre*. RealPlayer or Real's Helix Player are available free of charge, including license to play MP3 among other formats. If you are not fond of the player, both the excellent Amarok player for KDE and Banshee for GNOME are available with the Helix back end, including the licensed, *gratis*, MP3 codecs. I use SUSE Linux 10.1, and both amarok-helix and banshee-helix are in the YaST and ZEN installer lists; I can't speak for any other distribution. Here are links to the relevant project pages:

- http://amarok.kde.org/wiki/Audio_Engine_Comparison

- http://www.banshee-project.org/Guide/Preferences

- https://helixcommunity.org

I hope this helps clear things up while keeping things legal.

Incidentally, I don't think you've given SUSE its due—with both the OpenSUSE distributions (like SUSE Linux 10.1) and the paid distributions (SUSE Linux Enterprise Desktop), Novell and SUSE have become a powerful force for improving the desktop experience. Check out http://reverendted.wordpress.com for a few good examples.

—
James Mason

*As I mentioned in my editorial, unless you are a patent and copyright lawyer, I still recommend that everyone checks with one concerning the Helix Player and engine to determine their legality. I did confirm that you can play MP3s with the Helix engine with Banshee and Amarok. I also confirmed that the Helix Community Codecs Web page (*http://datatype.helixcommunity.org*) does list MP3 and a boat load of other formats as supported.—Ed.*

More Distro Review Suggestions: Zenwalker, Vector Linux and Damn Small Linux

I've zoomed through your back issues—getting an impression of what *TUX* is and does.

The Smackdown on distros was impressive, with some sort of benchmarking of popular distros. It made me think, though.

When I started using Linux (one year ago), I didn't want big distros with lots of confusing programs (that overlap), and my hard drive wasn't big enough for that anyway (my computer is from 1999).

I therefore would like to suggest that *TUX* write a review of some smaller distros for desktop usage. Personally, as a longtime Zenwalker, I can recommend it (http://www.zenwalk.org), but I

understand that others exist (for example, VectorLinux and Damn Small Linux, of course). In fact, it would be highly interesting to see these smaller distros benchmarked. This would help newbies select a suitable starting point.

When benchmarking, I hope that you'll do something similar to what was done in the Smackdown reviews. Consider installation difficulties and installation time. Consider "getting started" difficulties. Consider whether the applications cover standard usage (maybe right out of the box, or what's required to change the setup) and how well these applications would match desktop user requirements. In general, prepare your key point indicators beforehand to make the comparison as straightforward as possible, and a bit objective:

■ Writing letters and general ease of printing.

■ Private budgeting.

■ Surfing the Internet.

■ E-mailing and instant messaging.

■ Storing contact info for friends and family and also storing info about CD libraries and so forth.

■ Handling digital photos.

■ Games and entertainment (audio and video).

■ Managing the computer.

Maybe also something about whether the software for that given distro can be checked out in Windows beforehand. It often helps the transition from Windows to Linux if you don't have to learn both a new system *and* new applications (from scratch).

—
Claus

Great suggestions! I'll add them to the Distribution Smackdown for next year. It should be a real nasty one with even more contenders grappling for the championship belt.—Ed.

xgl + compiz Article Request

I have been hearing a lot about xgl + compiz lately on the Linux forums and have even managed to find an .avi demo of this new technology. I haven't really heard exactly what it is or how you can set it up on a Linux workstation. I'm also not sure if it works better on a certain distro or if it works on all of them. Is there possibly a distro where setup of this technology is easier than others? I'd love to see an article on this in an upcoming *TUX* issue. Thanks for your great publication so far.

—
Michael King

I've been meaning to get to around Xgl since I first saw the videos circling the Internet, so thanks for asking. It is most definitely something we want to feature. Our challenge is simplifying the installation so that it will not confuse and aggravate everyone.

To whet your appetite, I'll try to at least describe what Xgl and compiz do; we can worry about getting them installed and working later. Technically, Xgl is an X Server architecture on top of OpenGL (Open Graphics Library). X Server, as in the X Window System, provides the standard toolkit and protocol to build graphical user interfaces (GUIs) on UNIX and UNIX-like

operating systems. If you're using Linux and you are interacting with windows and menus and icons, you are using the X Window System. OpenGL is a standard specification that allows the creation of applications that produce 3-D computer graphics.

Xgl is the technical foundation that lets a windows manager provide OpenGL-enhanced compositional windows. Xgl is nothing without a windows manager. The compiz software was the original windows manager developed along with Xgl to demonstrate the features of Xgl. Together, these two pieces create a 3-D look and feel to your windows. In addition, it turns your desktop into a 3-D cube that allows you to rotate between the different desktops on your system.

For me, a great way to characterize Xgl and compiz is that they are eye candy for your desktop and windows. The flexibility of effects that are available make using Linux more fun, and everyone knows, if it's more fun to use, it is typically easier to use (as well as easier to learn).

To find out more about Xgl, visit http://www.novell.com/linux/xglrelease *and* http://en.opensuse.org/Xgl.—Ed.

In Defense of Driver Support and Codecs

I was just reading through the Letters to the Editor in the August 2006 issue, and thought I would write in with regard to drivers and codecs. Hopefully, I don't come across as merely defending the cause!

In response to the issue of poor driver support in Linux, there are steps in place to address this. The Open Drivers Summit produced http://developer.osdl.org/dev/opendrivers/wiki/index.php/Main_Page in an attempt to encourage and cen-tralise driver development. Srinivas' letter in that issue criticised the ability of the community to solve his driver issues. It is worth noting that, if the card works in Red Hat 9 but not in Ubuntu, there is a wealth of paid support for Ubuntu that could probably get it working. The community has solved every issue that I have ever had for free, but it isn't too unusual to pay someone to fix one's computer issues. Sadly, Canonical giving Ubuntu away for free seems to make some less inclined to pay for support than they would be after they have already paid a fortune for a copy of Windows. Windows also has a huge advantage in that hardware manufacturers write a lot of the drivers for them. As was hinted by the editor, Srinivas could purchase hardware that was well supported in Linux and encourage hardware manufacturers to improve their Linux support.

Regarding the issue of multimedia codecs, I think that it is easy to be misled. When one buys a copy of an operating system, the vendor can increase the price by $20 to cover all of the codecs. If you are getting the operating system for free, you have to use a different method to pay that $20 for legal use of the "ideas". This isn't too unusual. I once tried to find a program to play DVDs in Windows and was shocked at how difficult it was. Fluendo is working on a suite to play all these formats—the program will be available, for a cost, to legalise the playing of most protected codecs/DVDs on Linux. As an aside, they already provide a legal method to play MP3s free of charge (http://www.fluendo.com/press/releases/PR-2005-05.html). This will make MP3s play legally in any GStreamer application (such as Totem). It is available in the Ubuntu Universe repositories (gstreamer0.10-fluendo-mp3). Hope this helps.

—
Aaron

A Kind Reader Reminds Us All of Our Civil Responsibility to Speak Up on Issues That Impact Us

I would just like to add one thing to your August 2006 editorial [see Kevin Shockey's "Slogging through the Murky Swamp of the Digital Millennium Copyright Act"]:

For those of you living in the USA, *complain*, long and loud, to your elected representative(s) about the idiocy that is the DMCA. Keep it polite, and keep it succinct, but *tell* them how irritating it is that, in a country supposedly dedicated to freedom, you are legally prevented from using your preferred choice of *free* (as in liberty!) software to view your DVDs, because of this legislation.

There's a lot of money pushing the pro-DMCA side of this, so it's going to take a lot of un-moneyed pushes to make any real headway on fixing it. Good luck!

—
Mike (writing from Canada)

True Mike—thanks for pointing that out. Making sure that our elected officials understand how the laws they make affect our lives, especially concerning technologies they may not under-stand, is important. I agree, we should try to educate them on the issues and share our perspectives. Hopefully, then, we'll have fewer idiots claiming that the Internet is just a bunch of tubes.—Ed.

Many Thanks from a Frustrated Reader

Thank you so much for your editorial in the August 2006 issue of *TUX* [see Phil Hughes' "Ubuntu and Dapper Drake Illustrate the Social Power of Inclusion"]. I got so frustrated reading through the letters in the July 2006 issue, and I think you addressed some of the uninformed attitudes very well. Your

"Japanese cars vs Fords" analogy illustrates a point that every-one needs to consider before making sweeping "Linux vs. Windows" comparisons. Linux is a *platform*, not a *product*. Individual distros are products, so it makes no sense to compare Linux grandly to any other commercial product. You'd have to compare SUSE, or MEPIS, or Red Hat, or some other distinct dis-tribution to Windows to have a valid comparison.

That people are crying out for a single unified way of installing software, or one desktop environment, or fewer distributions in general, only goes to show how deeply the "Microsoft mentality" has sunk into users. When did we lose sight of the fact that we are *consumers* with the free will to choose a product that best suits us? In what other industry do consumers view choice as a bad thing? Do people complain if there are too many Asian restaurants or too many car dealerships in their community?

Readers need to understand this. The point of wanting to spread Linux usage is not to replace one product with another. The point is to replace a platform that is monopolized by one company with a platform that allows a diversity of organizations (commercial or otherwise) to compete with their own products. Thanks *TUX*, keep up the good work!

—
Alan Moore

A Reader Responds to a Previous Letter and Offers His Own Frustrations as Well

I felt that your reply to Srinivas in the August 2006 letters did not adequately address one of his observations: his unhappiness with the types of responses he was getting on various forums. Consider the following: Go to the Ubuntu forum for absolute beginners, search for grub and one of the threads "Using LILO instead of Grub" has 74 responses. Now, we frequently hear

that one of the advantages of Linux is that there is more than one way of doing anything. *But* not 74 ways. That thread implies that there are at least 73 wrong (inappropriate) ways— maybe 74 wrong ways. For those who are retired (like me) and have lots of time it may be okay to spend hours reading forum responses, but some of us, even if we are retired, want to use the computer for our own purposes. The forums are essential for an OS that changes as frequently as any Linux OS, but it would be a tremendous help if the responses worked more often.

PS. The book *Linux: Annoyances for Geeks* is a great help.

PPS. This grub thread on Ubuntu forum makes my point more explicit: "HOWTO: Restore GRUB (if your MBR is messed up)": http://ubuntuforums.org/ showthread.php?t=24113&page=8&highlight=grub.

—
jan

How Dangerous Are Rootkits in Linux?
My name is Jean-Guy, and I have been a Linux user for approximately three months. I have tried, like many other people, many distributions. I am now with SUSE 10.0. Issue 12 was the first *TUX* issue I read, and I will continue reading them.

My question is about rootkits. I have been reading about them (googling, of course), and found it scary. All the articles or how-tos were dated in 2001, and I even came across a few articles from 1996. It was complicated to understand and would make a newbie back away from Linux all together.

My question is, how dangerous are they today (2006)? How do you reassure new users?

I should mention that I have my own business repairing PCs. All the PCs I repair are from people that don't know a lot about software and computers; every one of them is using Windows 98 or Windows XP and so forth. In short, I remove a lot of viruses, spyware and all the nasties. I have never removed a rootkit, and I certainly am not an expert on the subject, but I know that there are a lot that exist for Windows, and I came across a listing for Linux rootkits too.

I would like to see a good article that would explain everything about them. Thank you for your time and wonderful magazine.

—
Jean-Guy Doucet

In general, the concept of rootkits is scary and reminds me that we all need to be vigilant and protect our computers whenever possible. Your suggestion highlights a much bigger problem all together, which is security on Linux. Although it is a topic that tends to be overlooked, I want to make sure we provide as much help as we can. We are still in the planning stages for next year's editorial calendar, so I'll add a security issue into the list of potential topics. With a complete issue dedicated to security, we'll be able to address your concerns about rootkits as well as the broader issues of security on Linux.—Ed.

Great Ideas to Beef Up Your Local Libraries with Linux and FOSS Titles
Here's a call to action: I'd like to hear your ideas about how we can raise the general computing knowledge of the populace.

Idea: get your public library to purchase GNU/Linux/FOSS titles.

Here in St. Louis County, Missouri (which surrounds the city), there is a tax-supported public library system. Its Web site has a

page for suggesting purchases. I have personally recommended three-quarters of more than the 130 Linux-related titles that are in the holdings. During the last two years, I have started recommending titles covering the OpenOffice.org suite, Firefox and other free and open-source software.

We have started doing a little tutorial for new LUG attendees on how to make the book requests.

I believe that someone on the library staff is starting to read these books before they get to me, because of a somewhat longer delay once they are cataloged. Other titles that I request aren't delayed.

—
Stan Reichardt

Sounds like you've got a model Linux User Group (LUG) running in Hazelwood. I recommend other LUGs follow suit. Working with a public library makes a lot of sense.—Ed.

Ever Needed to Shut Down Linux in a Hurry due to a Power Outage?
Could you do an article on NUT and the Knutclient? Having a UPS working on a system is more important than most want to have for a fact. Thank you in advance.

—
Jan van Leeuwen

Although the "authorities" call our power system in Puerto Rico 1st world, I wonder why every business has to have its own backup generator? At the personal computer level, it is absolutely essential to have an uninterruptable power system. Knuclient would be an asset to power off Linux automatically in

the case of a prolonged power outage. I might need to set up this for myself, so I'll definitely get someone to take a close look at this great KDE package.—Ed.

A New Subscriber Looks for Guidance on Installing a Printer and Using a Graphics Tablet
I'm a new subscriber, and I was wondering if the topic has been covered yet, but here's an interesting situation I read about in the linuxquestions.org forum:

If anyone is interested in installing the drivers for a Canon PIXIMA here's how: go to the Canon Japan FTP site: ftp://download.canon.jp/pub/driver/bj/linux. There you will find drivers for the Canon PIXIMA ip3000, ip4000, ip8500 and some others.

You will need to download the three RPMs you need. You will also need to download a third RPM from here: ftp://rpmfind.net/linux/fedora/core/....18-2.i386.rpm.

Be careful—the last RPM is for Fedora Core; however, it worked for me. Install all four at the same time and you should be in luck.

One issue though, you need to configure your printer whenever you'd like to switch between the tray and the topload paper location.

If anyone knows how to configure the printer so that I can select the button configuration, please let me know! It would be a great bonus. Right now it gives me only two choices. Somehow Turbo Print for Linux has figured out how.

I had replied to ask if the driver was in Japanese, but as of yet, I have no answer. Also, I'm not sure if the directions above would work for all distros (I have SUSE 10.0), so I did not try this. Just wondering if anyone more experienced with using SUSE has.

I wrote to Canon USA and asked them, "If Canon Japan can support Linux, why can't Canon USA?" I have not received a reply yet.

Also, have you covered any info regarding the Wacom tablet? I would love to try out the driver from LinuxWacom Project (http://linuxwacom.sourceforge.net), but the directions seem way over my head. I was thinking of replacing the wacom_drv.o file with the wacom_drv.o_xorg file, as I've read about in the linuxquestions.org forums as well: http://www.linuxquestions.org/questions/showthread.php?t=375320 and here: http://www.linuxquestions.org/questions/showthread.php?t=458906.

I have both a Graphire (an old regular one) and a new Intuos 3 (that one is connected to my Windows computer right now), and I was wondering if they [the tablets] could be used interchangeably. If you've covered this info, please point me to the right issue, thanks.

—
Bobbie Colegrove

You are in luck, we are going to be covering printing-related topics with an entire issue next year. I'll keep your concerns and questions on hand to help drive content for that topic. Concerning the Wacom tablet, we'll also be doing a graphics issue next year as well. I think using a graphics tablet with Linux is a great idea for an article. I have a clone tablet myself, and I actually have a project where I'll need to get it

out and start playing around with it. Thanks for the great ideas and welcome to the community.—Ed.

A Suggestion for Alternative Window Manager Reviews. Done.

First, let me say that, although I have been using Linux for three years, I fully enjoy reading your publication every month and have from the beginning. Because of your primary audience focus, I understand your decision to focus primarily on KDE and, to a lesser extent, GNOME.

I would, however, like to suggest that many of your readers may, like me, be running (or trying to run) Linux on an older machine. They might be interested in an article or even a series of articles focusing on alternatives to KDE and GNOME and to the applications designed to run in those environments (like KOffice or Kexit). I know I would be interested in such a series of articles.

For example, this series could look at alternative window managers with an eye toward assessing the comfort level for a new or fairly new Linux user. This article could examine any number of WMs, such as the obvious like Fluxbox, Xfce and IceWM, along with a few lesser-known but perhaps comfortable alternatives like JWM.

From there, the article could look at alternatives to OpenOffice.org (and KOffice) for those of use who either don't have the space to devote to a full-blown KDE installation (especially when our system can't really get the benefits of said installation) or the inclination to wait perhaps two to three minutes for an overly large installation of OpenOffice.org to start.

Anyway, keep up the great work. I enjoy looking through the pages of *TUX* every issue.

—
Walt Huntsman

Actually Walt, one of our regular authors, John Knight, has covered all three of those windows managers, plus another lesser known WM, all in previous issues. He covered IceWM in issue 6, Xfce in issue 8, Window Maker in issue 9 and FluxBox in Issue 12. If you don't already have those issues, you can download them from the archives.—Ed.

Glowing Praise and Support Always Makes Us Ready to Fight the Good Fight

Thanks for the surprising [subscription] notice! I certainly look forward to each new issue of *TUX*. The fact that it has been free up to now does not detract from its value. In fact, I'm still quite perplexed as to how you could offer such a high-quality product for free. I would have been more than happy to be a paying customer right from the start!

You mention that you will be upping the ante with quality. Well, you have your job cut out for you, since I have trouble seeing how you will be able to improve on the current high levels of quality. The only thing would maybe be more content, and maybe challenging your readers to write some articles (I'm aware that you do that in your sister publication, *Linux Journal*). Maybe it would be a good idea to make the article topic selection a more interactive affair with an on-line forum or something similar. You're using Drupal (marvelous CMS!), so plugging in a native forum could be an easy prospect. Otherwise, look at phpBB or something similar. A good example of an absolutely gargantuan forum site would be the Gentoo forums at http://forums.gentoo.org, which is a great, albeit chaotic, place to do research on all things Linux, whether you use Gentoo or not.

Anyway, I'm convinced that you will have a tough time improving your excellent mag, so instead of wasting your bandwidth, I'll let you at it!■

—
Jan Henkins

Send Letters to the Editor to editor@tuxmagazine.com.

Classic Linux Game Roundup: *LBreakout2*, *Pingus* and *SuperTux*

Available in nearly every distribution, old-school arcade games are yet another reason for the popularity of Linux.

BILL KENDRICK AND MELISSA HARDENBROOK

Whether you're looking for a five-minute fix or hours of fun, nothing beats the classics. Though bleeding-edge PC gamers will still find Linux's game pickings slim, open-source developers have brought the rest of us many addictively entertaining clones and classic-style originals—too many, in fact, to give each one the loving attention it deserves. We've picked just three of our favorites to share with you: *LBreakout2*, *Pingus* and *SuperTux*.

LBREAKOUT2: http://lgames.sourceforge.net
As the name suggests, *LBreakout2* is a clone of the classic Atari arcade game *Breakout.* You know the one—ball, paddle, colorful bricks. Ceaselessly re-vamped and aped since its 1976 debut, *Breakout* has been copied so many times, it's become a genre unto itself. Luckily for Linux users, *LBreakout2*, with its many innovations and new twists on old ideas, is one of the best of the class.

Game play is simple. Click once to launch the ball; move the mouse left and right to control the paddle.

The game itself, however, is not so simple. *LBreakout2* tweaks the very foundation of the genre—the bricks. Scattered amongst the ordinary bricks are bricks that won't obligingly blink into non-existence when hit once, or even twice. Rainbow-colored bricks complicate matters by multiplying when struck, and one hit to the right of a TNT brick can clear half the screen in an explosion of chain reactions and power-ups.

And, that's another improvement on the original—this game has power-up items hidden in the bricks. It also has power-down items. You never know when you'll be blessed, or cursed, with sudden changes to the basics of game play, like the size of your paddle and the speed of your ball. One item showers you with 1,000-point bonuses. Another turns the entire game screen invisible. Creative and sometimes cruel, these items guarantee *LBreakout2* will never be the same game twice.

LBreakout2 comes packed with 50 levels, as well as an integrated level editor, so you can make your own levels from scratch. You can download even more from the LGames Web site—many of them submitted by demented geniuses just like you.
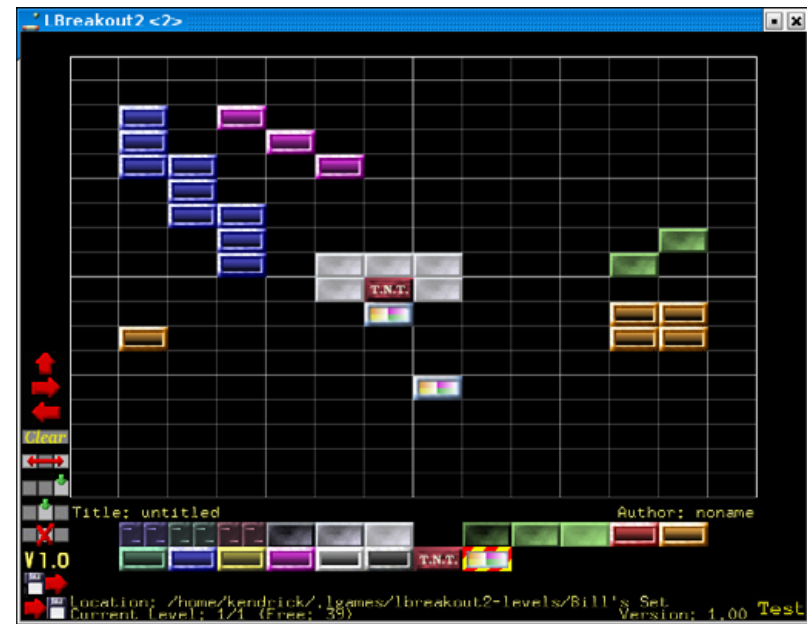

Figure 1. Make colorful patterns in *LBreakout2*'s level editor.

You even can watch your wizardry at work with the multiplayer hotseat and Network Game options. Up to four people can play on the same PC using the hotseat mode. Play can be quick—turns switch every time a player loses a ball—but good luck getting your kids to give up the mouse when their turn ends.

If you're looking for multiplayer action without a bonus game of musical chairs, you can also play on-line against other humans. You can use the main server or start your own by running `lbreakoutserver`.
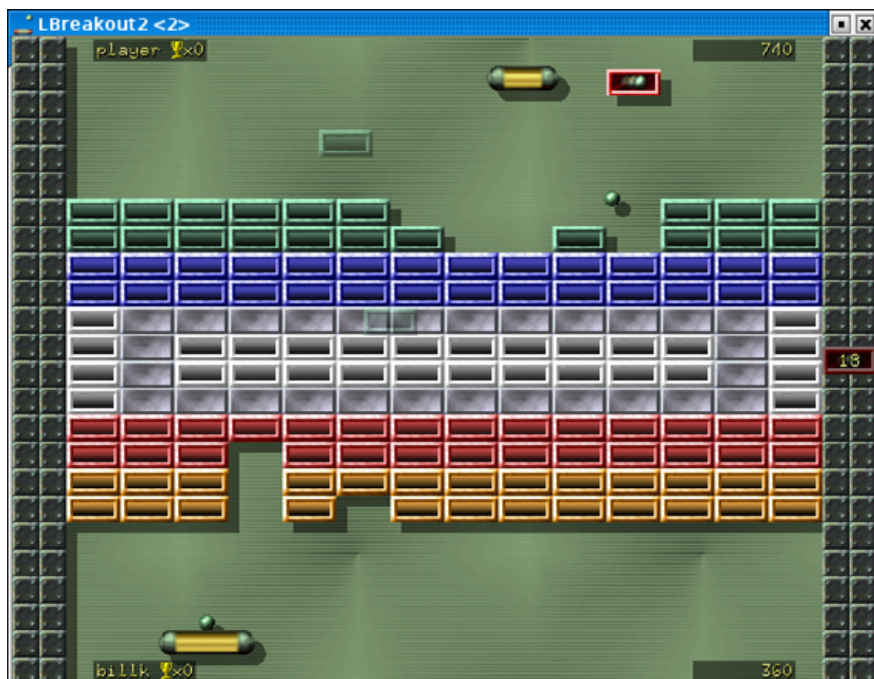

Figure 2. A Two-Player Game of *LBreakout2*

Like any open-source app worth its salt, *LBreakout2* is highly configurable. You can tailor many options to your particular predilections, including keyboard controls, sound and graphics settings and a variety of game play options. The youngsters in your family might appreciate the Kids difficulty

setting, with its molasses-slow ball and ridiculously wide paddle. If you're a pinball wizard, set the difficulty to Hard. If that doesn't satisfy your need for speed, hold down either the middle mouse button or the C key while you play to see the ball fly.

Starting to feel overwhelmed with options? Fear not—*LBreakout2*'s slick interface includes built-in help to get you started, including pop-up tips that explain what each option does. Just hold the mouse pointer over any menu item and wait a moment.

Although the game is full of fun stereo sound effects, the one thing it lacks is music (though some may argue that's one of the game's features, not one of its faults). Also, you may find *LBreakout2* is an unideal choice for passing idle moments while multitasking. Because the game uses your mouse to control the paddle, it keeps your mouse pointer from escaping the game window. You have to pause the game with the Esc or P keys before you can use your mouse as a mouse again, which quickly can turn tedious if you're having to do it often.

PINGUS 0.6.0: http://pingus.seul.org
In the early 1990s, armies of heedless humanoids intrepidly traversed monitors around the world, thanks to DMA Design's popular game *Lemmings*. *Pingus* pays homage to this quirky classic, but—surprise—its meandering pilgrims are marching penguins instead of green-haired whatsits.

Your objective in Pingus is to guide the clan of penguins through dangerous terrain to the level's Exit. Like DMA Design's lemmings, Pingus' penguins trickle in single-file, with one and only one directive: walk forward. Left to their own devices, they will do just that. They even will walk straight to their doom, casually plunging over cliffs.

You must save them by overriding their innate urge to walk. Give a select few of them jobs to help the whole clan overcome the obstacles and dangers inherent to each level. Sometimes you'll need a digger to make a hole, a builder to make a staircase or a traffic cop to keep the mindless mob from marching straight over one of those cliffs. Other times, you'll need to give the whole lot of them propellors, so that when they do go over the edge of that deadly crevasse, you won't be left with a mound of penguin jelly on the ground below. If you can escort enough penguins to the Exit, you advance to the next level.

Figure 3. An Easy Level in *Pingus*

Figure 4. The *Pingus* World Map

Game play is largely identical to *Lemmings*, though some of the tasks, like the Jump task, are bizarrely new. Unlike *Lemmings*, *Pingus* features a world with a variety of themed terrains and a story. It also features a world map, which gives you the option of replaying a previous level with a single click.

The game eases you into play, beginning on the aptly named "Tutorial Island" with a set of tutorial levels. And, that's essentially where the game ends. Still a beta release, *Pingus*' 100-plus more-advanced levels are not integrated into the game, and can be accessed individually only from the command line with the `--level filename` option.

At the top of the screen, you'll find a status bar, which shows how many penguins will be released into the level, how many have been released, how many are still wandering about, and how many you have successfully ushered to safety.

On the left-hand side, the screen shows what you can command the penguins to do. This is also your interface for actually giving the penguins jobs: first select a task by clicking on the icon, then assign it to a particular penguin by clicking on the desired creature.

Three icons occupy the screen's lower right. The flipper-print icon pauses the game (as does pressing the P key), which is occasionally critical to your success. While the game is paused, you still can pan around the level and assign tasks. The triple-green arrow (or the Space key) fast-forwards play. You'll love this option when you've got everything set in motion and you're just waiting for the little automatons to get to the Exit. You'll hate it when you only *think* you've got everything set in motion, and suddenly those little automatons are cheerfully extinguishing themselves at an alarming rate. In those situations, when all hope is lost, use the mushroom cloud Armageddon icon to nuke the level and start over.

Pingus is still a work in progress. The game is graced with polished animation, music and sound effects, but the unbearably cute graphics are occasionally unrefined. The story and instructions, though intelligible enough, are awkward to read and need improvement. Playing the higher levels is still tedious, and most will find the level editor to be prohibitively difficult to use. But, despite its rough edges, *Pingus* is already an addictively fun game with loads of potential. Older kids and adults looking for a strategic puzzle game definitely should give *Pingus* a go.

SUPERTUX: http://supertux.berlios.de
Sometimes it really is quite a small world. In 2000, one of the authors of this article (William Kendrick) published some code he'd been playing with. He called it *SuperTux*, and it was an open-source clone of Nintendo's flagship game, *Super Mario Bros.*, starring Linux's mascot, Tux the Penguin. That first release contained a single unfinished level, two kinds of enemies and graphics that we'll charitably describe as geeky.

The game sat dormant for two years before new developers (including Ingo "grumbel" Ruhnke, creator of *Pingus*) took over the project. During the course of the next two years, this new team replaced William's computer theme with a gorgeously cartoony "snowy island" theme. They expanded that one lonely level to more than two-dozen new levels. The two kinds of enemies multiplied, and the game acquired both a built-in level editor and an original soundtrack.

SuperTux plays much like any other sidescrolling jump-and-run game. Use the arrow keys to move Tux the Penguin left and right—that is, forward and backward—along the screen. Press Space to jump over gaps and avoid enemies like

Figure 5. Duck to avoid enemies in *SuperTux*.

Figure 6. Hold Ctrl to grab stunned iceblocks and use them as weapons.

sentient snowballs and walking ice cubes. Hold the down arrow to duck, and run faster with the Ctrl key to avoid those deadly (and perfectly timed) dropping icicles. If you find the default controls awkward, you can reconfigure the keyboard settings. Or, just plug in a joystick.

Like *Super Mario Bros.*, *SuperTux* hides coins and power-ups in blocks. Grab the egg-shaped power-up to transform Tux from his diminutively vulnerable self to the more powerful SuperTux, nab the icy flower to equip yourself with a fiery projectile weapon, and don't neglect the coins! Collect 100 for an extra life.

Fans of the genre will recognize a variety of familiar enemy behaviours in *SuperTux*. Some enemies mindlessly walk, and some patrol certain stretches of ground; others jump in place or bounce all over the screen. When you simply can't avoid enemies, you can eliminate them by jumping on their heads, knocking them from below or shooting them. You even can bowl them out of the way by chucking ice cubes toward them.

SuperTux has come a long way from William's original code-doodle. The game offers little in the way of unique game play, but *SuperTux* asserts its individuality through its adorable graphics and original soundtrack. Kids will love the whimsical themes and fast-action play, and grown-up kids will love the new

flavour of nostalgia and the built-in level editor. Your NES never gave you that kind of power.

LBreakout2, *Pingus* and *SuperTux* are all published as open-source software under the GNU General Public License (GPL). Pre-built packages are available for most Linux distributions. In fact, many distros already include these games in their installation CDs or DVDs and/or their software repositories. If you can't find a pre-built package, you can always download the source code and compile it yourself.

LBreakout2 and *SuperTux* depend on the SDL library (*Pingus* relies on another game library, ClanLib, but an SDL version is in the works), which means fun with near-complete platform freedom. SDL's compatibility with Linux, Windows, Mac OS X and even handheld devices like Sony's PlayStation Portable (PSP) and Nokia's Linux-based 770 Internet tablet, means you can always get in a classic gaming fix, whether you're relaxing at home, on the go or just taking a breather at work.■

Figure 7. Edit *SuperTux* levels, or create your own.

William Kendrick is a mobile game developer for LimeLife, Inc., in Menlo Park, California. He also designs and develops *Tux Paint* and other open-source games for Linux in his "copious" spare time.
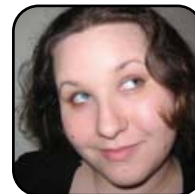
Melissa Hardenbrook, William's wife, has the mind of a poet and the heart of a scientist. She works part-time as a freelance writer and full-time growing the household's newest and littlest Linux user.

KDE Edutainment

Fun, colorful and attractive, the KDE Edutainment Project provides solid tools to learn critical skills.

DONALD EMMACK

Many Linux users are savvy game experts. So, although computer games can be purely for fun, they also can train your mind. KDE's Edutainment suite is proof of that. The suite of packages lets users learn and have fun at the same time.

The Edutainment suite includes more than 15 packages, ranging from plain-old Hangman to Latin. Each of the packages within the KDE Edutainment Project targets children ages 3 to 18. Although most of the packages within the suite have a user interface suitable for school-age children, this is not true for complex training aids like Kalzium. Kalzium is a training tool for the periodic table of elements—nothing makes that simple!

Because there are so many packages in the Edutainment Project, I cover only three in this article. First, I give you a brief outline on KTouch, a touch-typing trainer. Next, I look into the a cornerstone of all education with KGeography. Finally, I highlight the lost knowledge of Latin with KLatin.

GETTING EDUTAINMENT

Various individual software packages comprise KDE's Edutainment Project (http://edu.kde.org), so you need to download and install them separately. Before you start downloading, look through the descriptions of the different Edutainment packages and find the ones you're interested in. Once you're familiar with the packages, use the Adept or Synaptic package manager for installation.

Keep in mind that there are other programs, such as KLang, a language trainer. The KDE Edutainment site doesn't list these, but they're good resources as well.

KTOUCH

Linux users are keenly aware how important it is to educate children on computer use and not just train them with Microsoft Windows. KTouch is a touch-typing program that trains first-time users efficiently.

KTouch starts with basic keyboard touch-typing in level one. At level 15, you work on complicated typing patterns. After opening the application, KTouch presents you with the home screen, as shown in Figure 1. From here, you can see the active level, typing speed and percent of correct entries. To start the program, simply type what's presented in the rolling purple window. KTouch gives immediate response for errors and tells you the typing speed.

KTouch refers to the test text as a lecture—it's like seeing words on a teleprompter for you to type into the program. It comes with several default lectures for your use. If you like, you can edit the default lecture or create a new lecture. Go to File→Edit Lecture and a window like the one shown in Figure 2 pops up. Here, you assign levels for the training
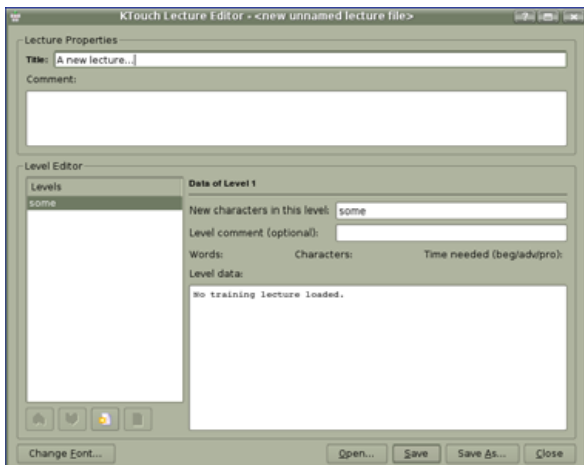

Figure 1. KTouch Home Screen

Figure 2. Setting Lecture Text

Figure 3. The Statistics Page

Figure 4. The Selection of USA Map for KGeography

Figure 5. When finished with the test, you can look at the results.

lesson and the text used by the application. For a full view of your typing skills, select Training→Lecture Statistics. Figure 3 depicts the statistics for whatever lesson you select in the overhead drop-down list.

KTouch is not only for new typing students. It's also good fun for experienced typists needing to brush up on keying punctuation and special symbols.

KGEOGRAPHY

I'm frequently lost on road trips—don't tell my wife. Thus, geography is not one of my educational strong points. So, if you're like me or have school-age children, KGeography is a fun and educational way to memorize your way around the planet.

Like KTouch, the clean user interface is refreshing. On start-up, you will see a listing of regional maps as shown in Figure 4. Select your area of interest, and press OK. KGeography
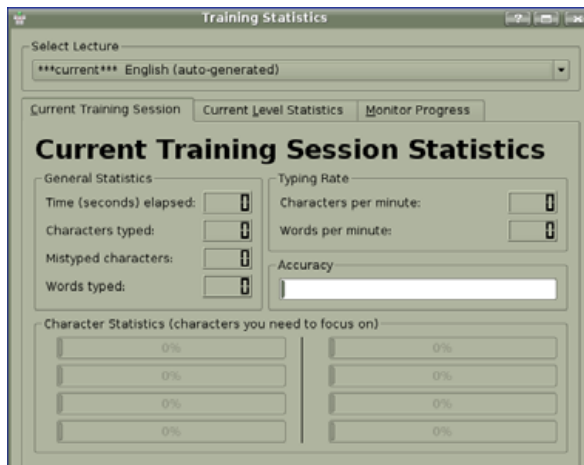
takes you to the home screen where you can browse the map to learn more about the area. For example, I selected the map of the USA. Clicking on California shows the state capital is Sacramento.

Like other Edutainment packages, KGeography also provides tools to help test you or your protege. KGeography can test you by showing the name of the capital and asking you to select the state. Or, it can show the name of the state and ask you to choose the capital. Either way, the program gives you the ability to choose the number of potential questions. Figure 5 shows the results of a test on USA state capitals. I won't admit whether these were my answers—with only three right out of ten.

KGeography goes where you want to go—anywhere in the world. Instead of specific regions or countries, you also can select a world map and quiz away at neighboring continents.
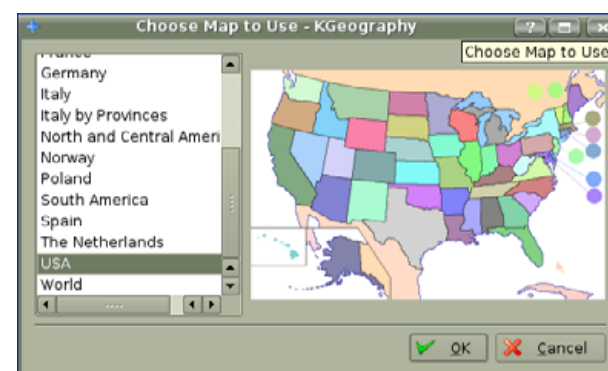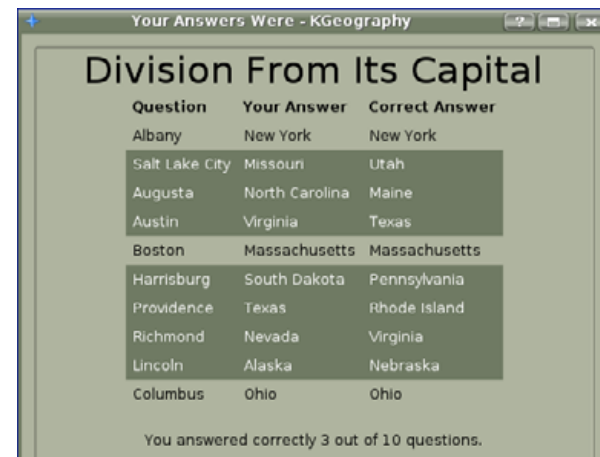
KLATIN

Educational institutions are increasing reliance on classical education. I'm not referring to the three Rs of reading, writing and arithmetic. Classically trained
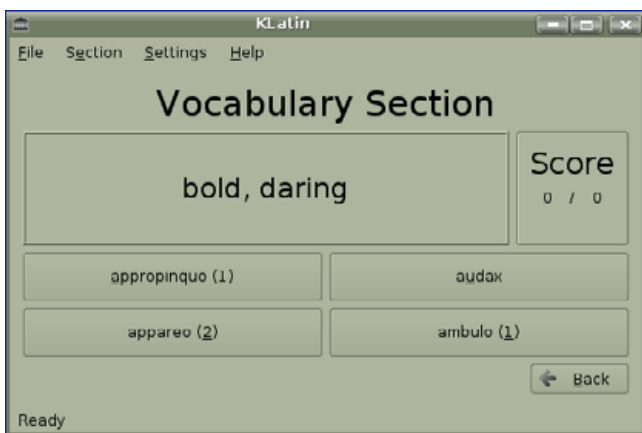
Figure 6. The Home Screen for KLatin

Figure 7. KLatin's Vocabulary Screen

students base education and problem solving on a solid understanding of the Latin language. So, KDE remains on the forefront of this educational wave with KLatin (Figure 6).

This package divides instruction into vocabulary, grammar and verb testing. With vocabulary, KLatin gives you a word with four alternative translations from which to choose (Figure 7). Verb and grammar testing are different. Figure 8 shows how KLatin quizzes you with the question, and then you're prompted to type in a proper answer. For verb and grammar testing, you can change the question options with the pull-down boxes on top of the test screen (Figure 9).

Like the other Edutainment packages, KLatin lets you change certain characteristics of the application. Go to Settings→Configure KLatin. Here you can increase or decrease the number of questions the program asks. You also can change translation direction for testing.

FINAL THOUGHTS

I grew up in the 1970s and 1980s. Back then, there were no clear leaders in the world of personal computer information systems. Most often, I trained on large UNIX boxes. My professors also immersed me in the Apple Corvus system and others too.

Watching the information technology industry grow gives people like me a different perspective on education. I'm trained on computers, not one operating system. So, it's easier for me to jump around between platforms and keep my mental balance.

Educational programs like the old X/Y battleship kept my interest and thirst for knowledge in the electronic world. I think it's inspiring to see KDE promote the Edutainment suite of applications. It's one sure way to keep school-age folks interested in open source and its marketplace benefits.■

Figure 8. Quizzing on Latin Grammar

Figure 9. Verb screen—note the drop-down tabs above.

Donald Emmack is Managing Partner of The IntelliGents & Co. He works extensively as a writer and business consultant in North America. You can reach him at donald@theintelligents.com or by cruising the 2 meter amateur RF bands in the Midwest.
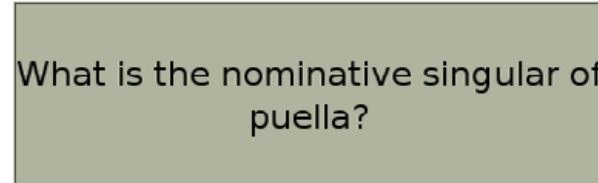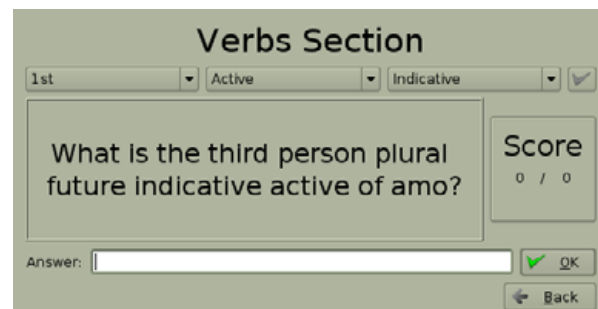
GCompris

Demonstrating that learning is best when it is fun, the GCompris educational suite offers a wide variety of pleasurable activities for children everywhere.

DMITRI POPOV

There is no lack of Linux games or software for grown-ups, but what about for kids? You know, Linux is not only about *Doom*, *Gorky 17*, database servers and bash scripting, after all. GCompris is an educational suite that offers a perfect mix of games as well as learning and creative activities, which makes it perfect software for your kids. GCompris is designed for children between the ages of 2 and 10, and it features a comprehensive set of activities—from solving simple math tasks and reading to more advanced games that require some understanding of physics.

GCOMPRIS CONTAINS A RATHER IMPRESSIVE COLLECTION OF ACTIVITIES THAT COVER EVERYTHING FROM MATH AND PHYSICS TO DRAWING AND PUZZLE GAMES.

GCompris is available with every major Linux distribution, including Ubuntu. To install it, choose Add/Remove Applications from the Applications menu, select the Games section, tick the GCompris item and press Apply. You then can launch GCompris by choosing Applications→Games→GCompris. GCompris also is available as a live CD disc, which allows you to run the educational suite on any machine without installing it. This is a perfect solution if you prefer not to install GCompris on your machine, or if you want to demonstrate the suite to other parents on their computers.

When you launch GCompris, you are greeted by a colorful interface, big icons and attractive graphics. GCompris' interface is divided into two parts. The main window is used to navigate through activities, and it acts as the main play area. Right below the main window is a toolbar containing a set of buttons. Unfortunately, there are no tooltips that explain what each button does. This is, however, a minor gripe, as most of the buttons are self-explanatory. Just remember that the Dice button lets you change the difficulty level, and the Thumbs-Up button is used to accept your answer or the current choice. The Help but-

Figure 1. GCompris features an easy-to-use and colorful interface.
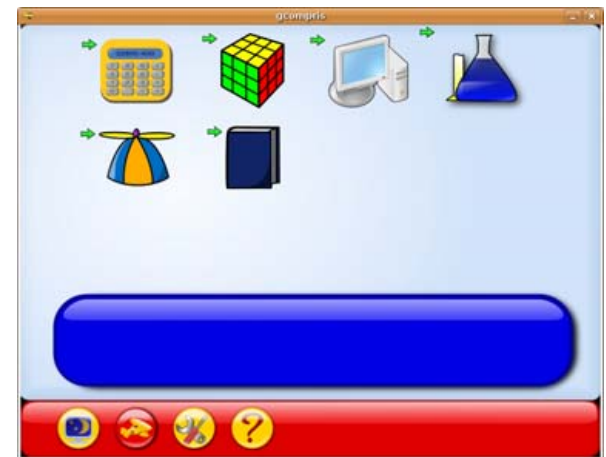

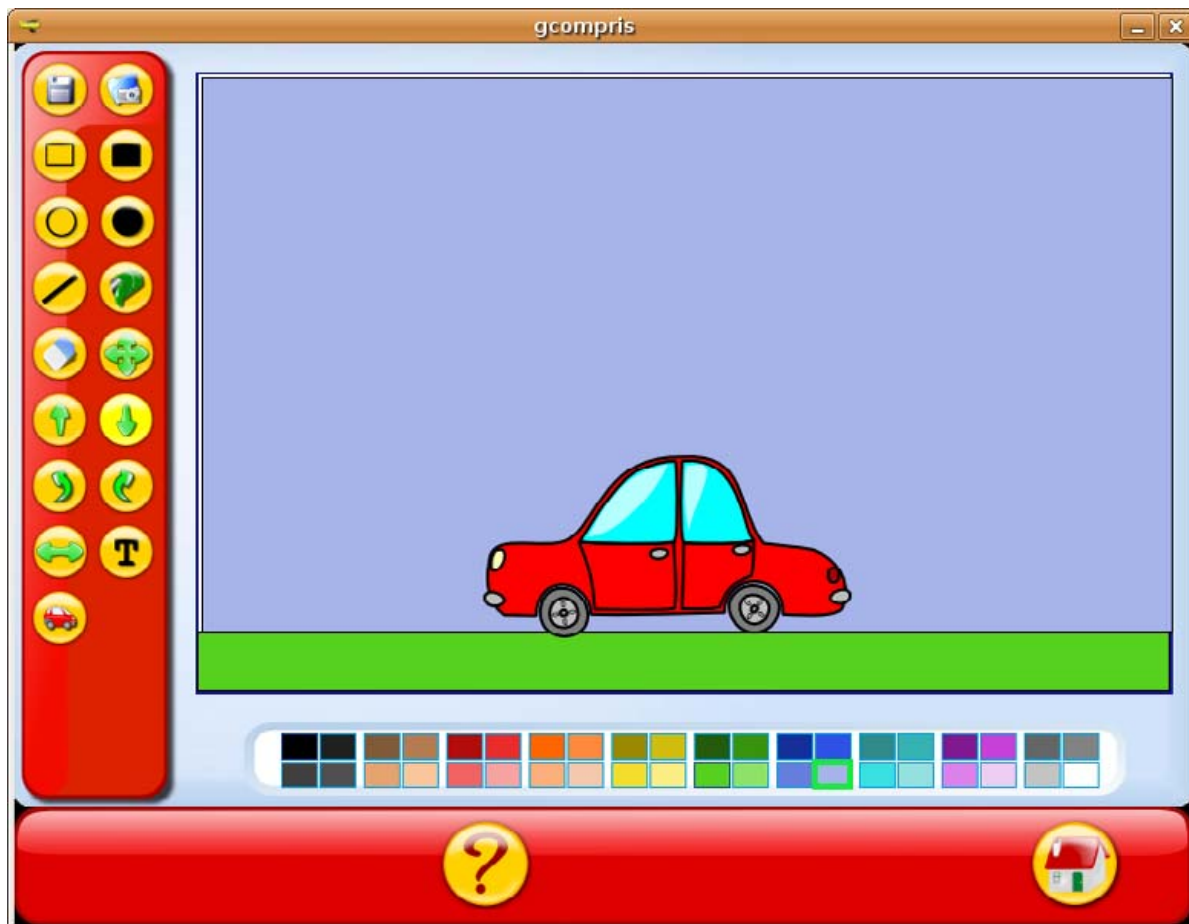**Figure 2. All activities in GCompris are divided into several categories.**

Figure 3. GCompris' drawing module is a powerful tool with nice features.

Figure 4. Controlling the submarine is not as easy as it may seem.

ton gives you access to the help section, which is divided into three sections: Prerequisite, Goal and Manual. The Prerequisite section contains a description of the skills required to accomplish the current activity, the Goal section provides the objective of the activity and the Manual explains the rules. This is, indeed, a very nice layout, but the available help for some activities is a bit sketchy. All in all, you can't simply fire up GCompris and leave it to your kid. You need to spend a fair amount of time explaining the rules and features of the software.

All activities in GCompris are divided by their types, such as Math, Board-based activities, Discover the Computer, Experimental activities, Amusement and Reading. Almost none of the available activities include a scoring system. In other words, each activity is focused on accomplishing the task and not on competing with other players or the computer. All activities are accompanied by relaxing music, making the learning process even less stressful.

GCompris contains a rather impressive collection of activities that cover everything from math and physics to drawing and puzzle games. It would be impossible to cover all of the available activities, but here are a couple of highlights. GCompris includes its own drawing program that features simple-to-use yet rather powerful drawing tools. In addition, the drawing program features a nice clip-art collection, and it lets you import your own pictures into
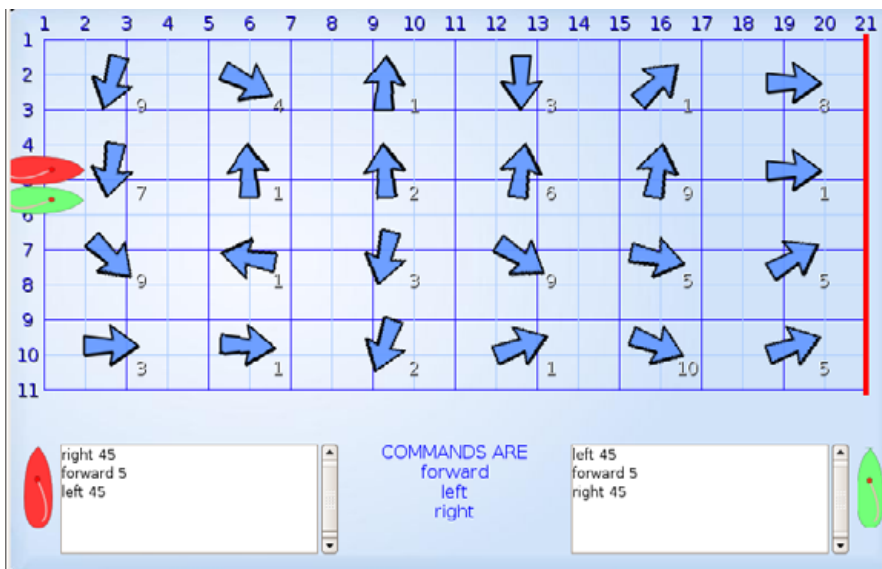
Figure 5. The *Sea Race* game teaches kids some programming basics, and it's a great game too.
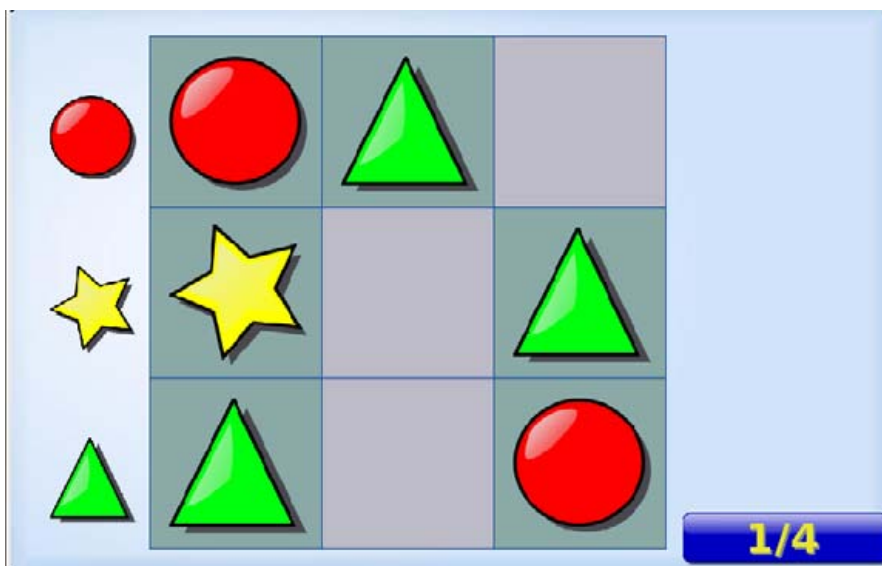

Figure 6. GCompris even includes a kid-friendly version of *Sudoku*.

the currently opened drawing, so your kid can spend time "improving" family photos.

Some GCompris activities are rather simple—the suite is also designed for small kids, after all. But a couple games can pose a real challenge even for grown-ups. Controlling a submarine, for example, is not as simple as it may seem. You have to control several components, such as the engine, rudders and air tanks, to avoid collisions with ships and whales. You also have to remember not to dive too deep, or your submarine will be crushed.

Another great activity in GCompris is *Sea Race*. In this game, you have to program your boat so you can reach the finish line before your opponent (this is probably the only game where kids have to compete with the computer or each other). To do this, your kid actually has to write a simple program using the list of available commands, such as Forward, Left and Right. Each command also must have a value depending on the wind strength and other factors. In other words, *Sea Race* is not only a nice race game, but it also provides a gentle introduction to programming.

All in all, GCompris is a solid suite of educational activities, which will not only keep your kid busy for hours, but also will help him or her learn a thing or two. And, because GCompris is available as a live CD disk, there's no excuse not to introduce it to other parents as well.■

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.

Doom 3 and *Quake 3*, or Nightmares Spoken Here

Escape to your own private nightmare or join one with your friends; id Software's *Doom* and *Quake* are great FPS games for Linux.

COLIN MCGREGOR

Everyone has his or her own way of coping with stress—taking a run, having a beer, or, in my case, the answer is playing a game. An intense video game forces you to forget your other problems and just focus on the game. This brings us to *Doom 3* and *Quake 3 Arena* (both games are produced by id Software). This article focuses on the newer of the two games, *Doom 3*, with a look at the older and less hardware-demanding *Quake 3*. Both games are known as first-person shooters (FPSes), where what you see on screen is normally what the main character would see looking forward. Because of the violence, both of these games carry an Entertainment Software Rating Board rating of Mature and are not recommended for those under the age of 17.

A problem shared by all the FPS-type games is the hardware demands. With *Doom 3*, you need an Intel-compatible CPU chip with a clock speed of at least 1GHz (faster is recommended). With *Quake 3*, the CPU needs to be at least a Pentium II of at least 266MHz. What is key to both of these games is a good 3-D graphics video card. My boss tried *Quake 3* on a 1.8GHz Pentium 4 box and found it so slow as to be unplayable—his problem was a bottom-end video card. Although some in the Linux community express unhappiness with the NVIDIA Corporation for not releasing full hardware specifications for its video cards, the Linux binary drivers it offers do work very well, and they tend to be my first choice in 3-D graphics cards.

Beyond CPU and graphics, you also have to pay some attention to sound, memory and disk space. Some of the bottom-end sound cards can put enough drag on your CPU to hurt the game's performance. Sound does matter in *Doom 3*. For example, each of the different types of monsters makes a unique sound, and the volume gives you some idea as to how far away a monster is. So listening helps you keep your game character alive. For mem-

Figure 1. Getting Your First Handgun on Mars

ory and disk space, you just need to make sure there is enough.

id Software has been good to the Open Source community in that it does release its source code for its older games under the GPL, but not the

accompanying data files. This offers a base for people wanting to create their own FPS game, and it is a look into how FPS games are created. Also, some architects have taken the source from *Quake II* and used it to allow people to walk around designed but not built buildings to get feedback from non-architects.

In *Doom 3*, the year is 2145 and you are a marine newly assigned to help with security at the Union Aerospace Corporation (UAC) facility on Mars. UAC uses Mars to develop technologies that are considered too dangerous to try on Earth. At the start of the game, you see a short animated video of your arrival on Mars. Once on Mars, you get orders to report to Sergeant Kelly, and while you try to find his office you overhear conversations about how things are going wrong around the facility. When you do find Sergeant Kelly, he gives you the assignment of finding a missing scientist. On your way to find the scientist, you are issued your first weapon, a hand gun, and again you hear how things have been going

badly. When you find the scientist, things go from bad to terrible, as you get to watch via close-circuit TV as an experiment to connect different dimensions goes out of control. Within moments, most of the people in the facility are either dead or transformed into demonic killers. At this point, your basic goals become simple: stay alive and get off Mars.

In your trip through the *Doom 3* landscape, you will encounter a few other human survivors, most of whom can offer you information and/or access to weapons. There is a scattering of dead bodies through the complex, and a great variety of nasty demons. Before you are through, you will visit id Software's vision of hell. You also get some radio orders and advice from Sergeant Kelly. As you travel, you will find personal digital assistants (PDAs) with information like combinations to storage lockers containing ammunition, body armor and medical supplies. As the game progresses, the demons and the weapons get progressively more lethal.

Keep a pen and paper handy while playing the game to take notes. Sometimes you will find a PDA with information, like locker combinations, before you need it in the game. Also, there is the http://martianbuddy.com Web site, set up by id Software, which contains one piece of information that is useful in *Doom 3*.

On some levels of *Doom 3* you can expect to get killed—often. The trick is to save your game position regularly. This way, when you are killed, you can return to the game from where you last saved your position.

If this sounds like an interesting challenge, and your computer can support *Doom 3*, the next question is how to install it. First, you need to purchase a copy of *Doom 3* for Microsoft Windows 2000/XP, as there is a security code in the package and CD-ROMs with data files needed for the Linux version of the game. Also, there is documentation. Once started, the Linux and Windows versions of the game play the same way. Most game retailers should have or be able to order a copy of

Figure 2. When Things Totally Fall Apart

Figure 3. Feel free to feed the monsters...shotgun shells, before one puts a sword into you.

Figure 4. Talk to the (few) survivors.

Figure 5. Getting Ready for Some Serious Nasties with a BFG 9000

Doom 3, which id Software distributes through larger game-maker Activision. Beyond the retail package, you also need to download to your home directory a copy of the *Doom 3* software for Linux. As of this writing, the latest version of the software is doom3-linux-1.3.1302.x86.run and can be found via id Software's Linux Web site, http://zerowing.idsoftware.com.

You need root privileges to do the *Doom 3* install, and the safest route is to use the sudo command. Some distributions automatically put "normal" users into a sudo list, but Debian Sarge isn't one of them. If your distribution didn't add you to the sudo list, here is how you quickly add a user to sudo, with full root privileges. Bring up a terminal window and type:

```
su
<enter the root password>
visudo
```

visudo lets you edit the sudoers file with the vi editor commands. So, add the following line to the bottom of the file:

```
<user> ALL=(ALL) ALL
```

`<user>` is the login name for whoever you want to be able to use the sudo command. In my case, the `<user>` is replaced with colin. Save your file, and exit vi. At this point, you can type `exit`.

Start up a terminal screen, and type the following commands:

```
cd ~
sudo chmod 700 doom3-linux-1.3.1302.x86.run
sudo ./doom3-linux-1.3.1302.x86.run
```

Next, the install program will ask you a series of questions, you will need to agree to the conditions, and the default file location values should be fine. Once the software is installed, you can worry about the data files.

Start by putting the *Doom 3* Disc One CD-ROM in your CD-ROM drive. Some Linux distributions autodetect and automatically mount CD-ROMs; Debian Sarge isn't one of them. Assuming you're using Debian Sarge, you can follow this exactly. If you're using a distribution that automounts CD-ROMs, you can drop the mount/umount commands and replace /mnt with wherever your distribution puts the CD-ROM disk:

```
sudo mount /dev/cdrom /mnt
sudo cp /mnt/Setup/Data/base/pak002.pk4
/usr/local/games/doom3/base
```

```
sudo umount /dev/cdrom
```

Now, change from Disc One to Disc Two and, as above, if your system automounts you can skip the lines starting with mount/umount; otherwise:

```
sudo mount /dev/cdrom /mnt
sudo cp /mnt/Setup/Data/base/pak000.pk4
/usr/local/games/doom3/base
sudo cp /mnt/Setup/Data/base/pak001.pk4
/usr/local/games/doom3/base
sudo umount /dev/cdrom
```

Finally, change from Disc Two to Disc Three and follow the same steps as above:

```
sudo mount /dev/cdrom /mnt
sudo cp /mnt/Setup/Data/base/pak003.pk4
/usr/local/games/doom3/base
sudo cp /mnt/Setup/Data/base/pak004.pk4
```


Figure 6. You can find all sorts information in the PDAs, some of it hidden as spam.

```
/usr/local/games/doom3/base
sudo umount /dev/cdrom
exit
```

At this point, you are ready to start the game. So, from the terminal, type doom3.

You will be asked to enter the security code combination of letters and numbers found inside the CD-ROM package. Then, a few moments later, you will see a brief bit of animation followed by the main menu. In my case, the sound was bad and the animation jerky—a problem that was solved by changing the default sound driver. Check your distribution's documentation, but you need the libasound.so.0 driver, which under Debian can be installed by typing the following at a terminal screen:

```
sudo apt-get install libopenal0
exit
```


Figure 7. For once a locker where you don't have to hunt for the combination, but with a locker number like 666, you have to wonder if it will be something nice inside.

To change the default sound driver, you need to edit the file ~/.doom3/base/DoomConfig.cfg and change the line:

```
seta s_alsa_lib "libaund.so.2"
```

to:

```
seta s_alsa_lib "libasound.so.0"
```

Then things should play well. First you will be asked how hard you want the game to be, and unless you are an experienced gamer with excellent reflexes, I strongly suggest you use Recruit as opposed to the other levels running up to Nightmare.

Beyond the basic game, *Doom 3* includes a multiplayer package that lets you play against others with *Doom 3* on their computers, be they on a LAN or around the world on the Internet. There are several variations on the multiplayer game: Deathmatch, where the question is who can make the most kills in a certain amount of time; Team Deathmatch where the question is which team can make the most kills in a certain amount of time; and in Last Man Standing, you attempt to kill off all the other players, while keeping yourself alive. Finally, there is Tournament, where you battle another player one on one, and the other players are observers waiting to take on the match winner.

id Software also has released and sells an add-on package called Resurrection of Evil, which adds extra levels to fight through.

QUAKE 3 ARENA
Quake 3 Arena has a single-player game, but it

Figure 8. Blasting away in *Quake 3*. The numbers across the bottom are remaining ammunition, health and armor plate left.

Figure 9. Some of the Possible Non-Default Body Types

is quite weak, and the game should be thought of as a multiplayer game with a good training section (the single-player game). Getting a copy of *Quake 3* may be a bit of an issue, as the firm that distributed *Quake 3* for Linux, Loki Software, went bankrupt. Still, a look around some of the on-line auction Web sites, such as e-Bay, should help here.

The install of *Quake 3* could not be much simpler. Pop in the CD-ROM, start up a shell, and under Debian type:

```
sudo mount /dev/cdrom /mnt
cd /mnt
sudo ./setup.sh
```

Answer a few questions, and you should be all set. Next, type:

```
exit
quake3
```

You will be asked for a CD Key, printed on a sticker on the back of the CD-ROM jewel case. Now you can start playing.

In the single-player mode, it is a simple collect-more-kills-than-the-computer-controlled-players game. The first player to get a certain number of kills, typically five or ten, wins the level, and if your score isn't higher than the computer players', you will have to replay the level. At the start of each section, you are asked how hard you want the level to be, with difficulties ranging from "I CAN WIN" to "NIGHTMARE!".

Quake 3 offers versions of the multiplayer games in *Doom 3*. Plus, *Quake 3* offers Capture the Flag, where you make up part of a team that tries to grab the other team's flag and get it to your base while the other team is attempting to do the same with your flag.

Quake 3 gives you the option of changing your game character look from the default of a white male Sergeant to any of 89 looks—male, female or alien, and body types that range from anorexic to morbidly obese. It is disappointing that *Doom 3* does not offer a similar option.■

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 the Greater Toronto Area Linux User Group meetings and is the moderator for the Unix Unanimous user group.

Gorky 17

Gorky 17 is one of the latest games from the leading Linux game company, Linux Game Publishing. Mixing elements of strategy and RPG game play, Gorky 17 is a horror conspiracy game.

THOMAS HEDDEN

Gamers who miss the bad-old days of the Cold War will not want to miss *Gorky 17*. A NATO commando group including an American, a Frenchman and a Pole is sent to a former Russian complex in Poland to deal with a Russian military experiment gone awry.

Anyone can meet the hardware requirements for *Gorky 17*: a 300MHz processor, 64MB of memory and a video card with 4MB of video memory (and of course a CD-ROM drive, sound card and 500MB of disk space). No joystick or other special input device is required—only a mouse. Most people probably also meet the operating system and other software requirements: Linux kernel 2.2.x or later, glibc-2.1 or later, and XFree86 3.3.x or later.

Newbies might not know how to determine whether they have the right kernel and libraries, however. So, to determine what version of the kernel you have installed, open an interactive shell (that is, a terminal window or console), and type `uname -r` (this is case-sensitive, like all commands in Linux). The uname program will return the version of the kernel that you are running. To determine what version of glibc libraries you have installed, try typing `rpm -q glibc`. If the glibc libraries were installed using the rpm program, it will tell you what version is installed. Similarly, to determine the version of XFree86, type `rpm -q XFree86`. Alternatively, you should be able to get this information from your distribution's configuration tool. For example, to get the version of glibc using the YaST tool in SUSE Linux 9.0, click on Software→Install and Remove Software, and then filter on glibc. Click on the package glibc, and then the Technical Data tab at the bottom.

Gorky 17 can be purchased directly from LGP, but LGP does not provide a download service (except for the free demo version). However, there are two resellers that do: Tux Games and Linspire (see the Summary sidebar for the URLs). Tux Games allows you to download the game immediately, and they also send the boxed version. Linspire provides download-only service.

I downloaded *Gorky 17* from Tux Games. It is a long download: 473.4MB. It is also possible to download the manual. The manual contains some installation information, but only for installation from a CD-ROM.

Here is how to install *Gorky 17* from a download. The name of the down-loaded file is gorky17.run, which is the setup program. Save this file in a place where you can find it easily, for example, on the Desktop. Once the download is finished, it is necessary to make the file executable. To do this in Konqueror, right-click on the file and choose Properties. Then, click on the Permissions tab. Make sure that the Exec check box is checked. To do this in an interactive shell, use the cd command to navigate to the directory containing the file, and type `chmod +x gorky17.run`. Once the file is executable, simply click on it to launch the installation process. (Note that it takes a little while for the installation process to start, because the setup program first checks the integrity of the downloaded file.) This will install *Gorky 17* in your home directory. If you have only one user account and/or if you are the only person who uses your computer, this should not matter. It is possible to install *Gorky 17* in a system directory so that all users can use it, but this is a little more involved, and space does not allow me to cover it here.

The first thing that the installer does is install an update program to
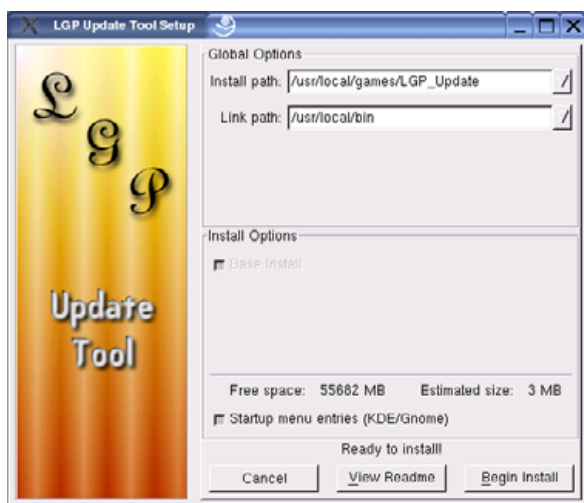
Figure 1. *Gorky 17* first requires the installation of an update utility.

facilitate updates to the program.

Next, it installs an uninstaller.

Once these are installed, the installer launches the Setup dialog box to install the actual game. The Setup dialog box lets you choose the installation path—that is, where it should install the game.

The Setup dialog box also allows you to specify a Link path—that is, a path where the Setup program will put a link or shortcut to the program to make it easier to launch. Choose a directory within your PATH on which you have write permission. (To find what directories are in your PATH, type `echo $PATH` in your console window.) This Setup dialog box also allows you to choose which language to install. The available languages are English, German, Spanish and French (text only). Characters' conversations are both spoken and printed on the screen.

Figure 2. Next, *Gorky 17* installs an uninstall utility.

Once installation is complete, you can launch *Gorky 17* by opening an interactive shell and typing the complete path to the program, for example:

`/home/tom/gorky17/gorky17 &`. If you have put a link in a directory that is in your PATH, as described above, you simply can type `gorky17 &`.
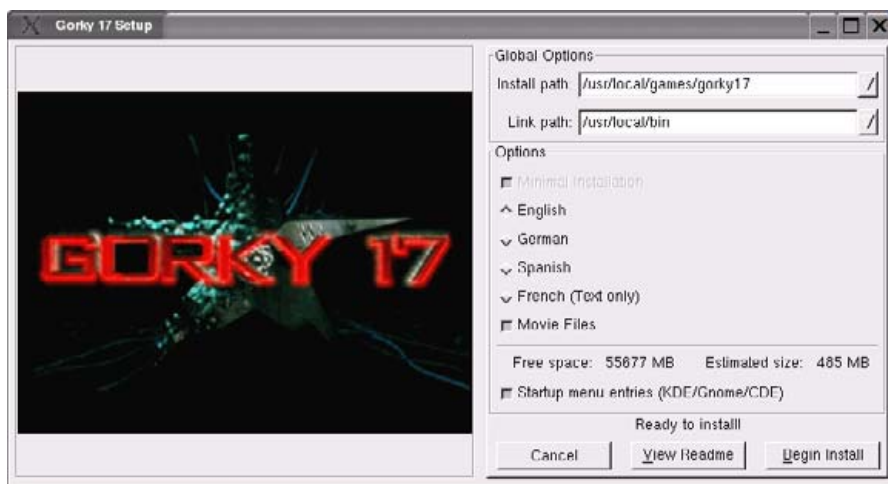
Figure 3. Finally, the installation process installs the actual game.

Figure 4. A sample of *Gorky 17* in action with the commando team battling a monster.

Alternatively, if you use the KDE, GNOME or CDE desktop, look for the program under Games in the menu. The Setup program puts it there automatically, assuming the Startup menu entry's check box is selected during installation. To change where the *Gorky 17* program is found in the KDE menu, click on the Start Applications button and select Control Center. Click on Desktop and then Panels. On the Menus tab, click the Edit K Menu button.

Game play is turn-based. The members of the commando team must use their weapons and skills to defeat various monsters that try to destroy them.

The boxes at the bottom of the screen allow you to select the weapons that the characters use and so forth. Characters are controlled by moving the mouse and clicking. At the beginning of each turn, a player can move within a prescribed area (shown in green) to get within range to attack a monster or to escape from it. During an attack, it is important to select the right weapon. Certain monsters have body armor, which protects them from certain weapons. It is necessary to aim properly, or the attack will miss. After attacking a monster, the character can move away to safety; however, the total number of squares that a character can move in one turn is limited, so if a character uses all of his move distance to mount the attack, he will not be able to escape afterward.

A feature of the game that keeps things interesting is allowing characters to heal themselves and others as well as giving weapons to one another—as long as they are next to one another.

I am more of a Linux enthusiast than a gamer, but I find the gaming experience of *Gorky 17* enjoyable. My biggest regret was that I could not get a version in Polish, especially since it appears that it was developed in Poland. LGP offers at least 16 other games, including several that have not yet been released. I'm looking forward to trying *Cold War* next.■

Thomas Hedden is a freelance technical translator and Linux enthusiast. He lives with his wife and two children in Carlisle, Massachusetts.

Linux Puzzle Games

Most Linux distributions include a wide variety of games. If solving puzzles is your favorite genre, here are three that should keep your brain busy.

DMITRI POPOV

There are Linux games for every taste: first-person shooters, board and arcade games and strategy games. But if you prefer to train your intellectual skills instead of blasting monsters or conquering the world, there are a few high-quality puzzle games too. In this article, we take a look at some of the best puzzle games for Linux.

ENIGMA
Enigma is probably one of the most popular and

Figure 1. *Enigma* features about 700 levels— enough to keep you busy for hours.

addictive puzzle games on Linux—and deservedly so. It has all the attributes of a high-quality puzzle game: slick graphics, simple yet challenging game play and a huge number of levels. What sets *Enigma* apart from other puzzle games is that it requires not only some intellectual skills, but also a lot of dexterity.

Most Linux distributions have *Enigma* in their repositories, so you can easily install it using your distro's package manager. On Ubuntu, use the Add/Remove Applications command to launch the package manager. To get access to *Enigma*, you have to enable access to the Universe repository containing unsupported applications. To do this, tick the Enable unsupported applications check box. Don't worry about the unsupported part, the game installs and runs like any other Ubuntu application. Choose the Games section, tick the check box next to the *Enigma* game, press Apply, and you are in business.

The purpose of the game is to locate and uncover matching pairs of oxyd stones by touching them with a black marble ball. This may sound like a doddle, but it most certainly is not. The marble ball is controlled by the mouse, but the tricky part is that the ball adheres to the laws of physics, which you must take into account when moving the ball. Managing the

ball takes some practice, so don't be surprised if in the beginning it moves like a drunken sailor. Luckily, the first couple of levels are not so difficult, and they give you an opportunity to master your ball controlling skills.

BUT YOU MIGHT WANT TO STAY AWAY FROM SKULL STONES— IF YOU TOUCH ONE OF THESE, YOU ARE HISTORY.

What makes *Enigma* even more challenging (and addictive!) is that the game has three different types of landscapes: normal, two-players and meditation landscapes. Each of them has its own rules, which ensures that you won't get bored doing the same thing again and again.

When on a normal landscape, use the ball to touch and uncover the similar oxyd stones. The ball also allows you to pick up different objects (where available). Some of them can help you to accomplish the level, while others can do quite the opposite. Black bombs, for example, can help you blow up floor tiles and other objects (it's actu-

Figure 2. Skull Stones Madness!

Figure 3. Meditation landscapes require a steady hand and a lot of patience.

ally a good thing). But you might want to stay away from skull stones—if you touch one of these, you are history. There are, in fact, landscapes where all non-oxyd stones are skull stones—it's like solving a puzzle in a mine field! Even worse, there are also invisible skull stones, so remember to wear your magic glasses to see them.

Despite its name, the two-player landscape is not designed for several players. *Enigma* doesn't yet support network games, so the two-player landscapes are in reality a single-player game, where you control two marble balls.

Meditation landscapes are called so for a reason; you have to have a steady hand and a lot of patience to accomplish a meditation level. Here you control several balls, and your objective is to put each ball in a pit. But be careful; one wrong or fast move and all the balls that already have been

placed in the pits will be pushed out.

For many puzzle games, when you've solved the level, you don't come back to it. What's the point of solving the same puzzle again anyway? But in *Enigma*, you can do the same level again and again to perfect your ball-controlling skills and beat your own time record.

Enigma is a fantastic puzzle game, and you easily can spend hours trying to solve a particularly tricky level. Once you've mastered the basics, make sure to check the game's manual (http://www.nongnu.org/enigma/manual/index.html) for additional info, tricks and even spoilers. There is also a Web forum dedicated to *Enigma*'s tips and tricks (http://www.magheut.net/blackball/index.php?s=d02ffbd6db6a546cdcb24c70292afb8c&act=SF&f=8). Finally, if 700 levels are still not enough for you, you can design your own using the BlackBallEd (http://www.blackballed.uni.cc) level editor.

ATOMIX

Atomix may not be as advanced as *Enigma*, but it is still a nice puzzle game, which can even help you refresh your knowledge of chemistry. In Ubuntu, the game is available through the package manager, so installing the game shouldn't cause any problems. The game resembles *Sokoban*, where the player pushes boxes around a maze. In *Atomix*, your objective is to compose the required molecule by pushing atoms around the maze. But there is a twist to it. In *Sokoban*, you can push a box one square at a time. In *Atomix*, when you push an atom, it flies all the way until it hits the wall. This makes the puzzle much more challenging, and constructing even a simple molecule can be a tricky thing to do. A colored square is used to control the currently selected atom. Move the square using the Arrow keys on your keyboard to the atom you want to control and press Enter, or simply click on it with the mouse. Now you can move the atom around using the arrow keys. There is another thing you have to keep an eye on. Each atom has one or more connectors, so there is only one way to "dock" the atoms

correctly. All this makes *Atomix* a solid brain teaser and a great game for a lunch break.

PATHOLOGICAL

If you like puzzles with falling objects, such as *Tetris*, *Pathological* (http://pathological.sourceforge.net) is for you. But if you think *Tetris* is tricky, wait till you play *Pathological*. Here you have to keep an eye on several rotating wheels, colored balls, triggers and stop lights. The objective of the game is to fill each wheel with the balls of the same color. To rotate the wheel, right-click on it with the mouse, and click on the ball to eject it from its current wheel. To make the game even more "interesting", each level must be completed within a specified period of time. In addition to the wheels, a level in *Pathological* can contain several elements you have to take into account when playing the game and use them to complete the level. For example, the painters allow you to color the passing balls to the specified color, while filters can allow only balls of a certain color to pass through. Things get even more complicated if

the level contains stop lights. In this case, you not only have to fill the wheels with balls, but you also have to do it in a specified order. With a trigger, you must fill it by matching the specified color combination—and you have to do this fast: triggers can change their color combinations at any time! All this is enough to keep you busy for hours.

FINAL WORD

Enigma, *Atomix* and *Pathological* are just a few puzzle games available for Linux. If you take a closer look at the Games section in Ubuntu's package manager, you discover many other brain teasers from *Same GNOME* to *Fish Filets*. If you like puzzles, try them too.■

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.

Figure 4. Compose molecules by moving atoms—and learn some chemistry as well.

Figure 5. If you think this level in *Pathological* is tricky...

Figure 6. ...then take a look at this one!

Running Windows Software on Linux with CrossOver Office

CodeWeavers brings to Linux an unprecedented level of support and flexibility for Windows applications.

DEE-ANN LEBLANC

There are a variety of methods available for running Microsoft Windows software within Linux. One of these methods is a set of products from CodeWeavers (http://www.codeweavers.com), generally referred to as CrossOver Office. Rather than trying to re-implement all of the various versions of Windows in order to run every possible program, CodeWeavers utilizes customer feedback to identify Windows software that needs to run under Linux. Then, CodeWeavers focuses on getting those particular programs working as flawlessly as possible. This means you don't actually have to own Microsoft Windows to use CrossOver Office. You need to own only the software you run inside it.

The average home user would be most interested in either CrossOver Office Standard ($39.95 US) or, if many people use the same computer, CrossOver Office Professional ($69.95 US). CrossOver Office Standard comes with the ability to run supported Windows applications, plus supported Windows plugins. So, if you are a Web developer, for example, you could use CrossOver Office to run Internet Explorer and the Windows-only plugins that go with it. You also could use it to run Macromedia Dreamweaver MX, Macromedia Flash MX or other popular Web development tools.

GETTING AND INSTALLING CROSSOVER OFFICE

CrossOver Office is a commercial program, so in order to use it, you first need to purchase it from CodeWeavers. You can purchase it from the CodeWeavers Web site in either downloadable or CD format. If you're not in a hurry, you can choose to have a CD mailed to you. However, if you're anxious to get started right away, you'll want to purchase the downloadable version. Downloads are available in RPMs (for Red Hat Enterprise, Fedora, Mandriva and SUSE users), in DEB format (for Debian users) and through

both the Xandros Network and Linspire's CNR (Click and Run) Warehouse.

All of these packaging options are a definite plus, allowing you to integrate CrossOver Office properly into your distribution's package management system. Double-click the download to launch the appropriate installer, and walk through the relatively straightforward installation process. You will find that installing CrossOver Office itself isn't the complex part. The real meat of this tool is installing the Windows programs.

WHEN IT COMES TO INSTALLING UNSUPPORTED SOFTWARE, EXPERIMENTATION IS THE NAME OF THE GAME.

INSTALLING WINDOWS SOFTWARE

When you're ready to install a Windows program, first check it against the list of supported applications on the CodeWeavers Web site. Once you have looked to see how well the product works in CrossOver Office and what features may or may not give you trouble, you can launch the Installation Wizard. If CrossOver Office is properly installed in your GUI menus, choose the CrossOver menu and then select Install Windows Software. If you need to run the program by hand, and you installed it as a regular user, type `~/cxoffice/bin/cxinstallwizard`. Once you have done this, the Installation Wizard dialog box appears (Figure 1).

To install a Windows program that's available on the list, click it in the listing, and then click Next to go to the next screen (Figure 2).

Figure 1. CrossOver Installation Wizard

Figure 2. The Second Screen in the Installation Wizard

If you have the program CD or DVD, insert the disk into the drive and then click Browse next to Alternative CD-ROM location. This action opens a file browsing dialog box, which you can use to navigate to your CD or DVD-ROM's location—for example, in Fedora Core 5, it might be /dev/media/cdwriter. If you're not sure where your CD or DVD-ROM is, you can figure it out by opening a command-line terminal window and typing df. This command shows you a list of what you have attached to your filesystem (all of your partitions and drives, such as your CD or DVD drive). The CD or DVD will appear under /mnt or /media. Once you have either navigated to the CD or DVD's base directory or typed in the path to the directory in the Selection text box, click OK.

If you don't have a DVD or CD, but instead have a file, click the Other *.exe file Browse button and browse to the file you want to install.

Either way, once you have clicked OK, click Next to continue to the next step in the installation process. Drivers, fonts, new versions of the Windows installer and other items can be downloaded and installed, requiring you to answer questions. Eventually, you will have to sit for a while and watch the X roll back and forth in the dialog box as the installer does its work. There is no progress bar, perhaps because it's hard to know what element might need to be downloaded next. Instead, it's best

to be patient and not jump the gun. If you are absolutely positive that the installation finished, click Installation Complete.

Note that, alternatively, if CrossOver Office is properly installed in your GUI, you may be able to insert the CD or DVD into the drive, double-click the installation program, and be offered the chance to install the software using CrossOver Office without having to open the Installation Wizard by hand.

INSTALLING UNSUPPORTED SOFTWARE
If you want to install software that isn't on the supported list, you can do so as well. Click the Install unsupported software button and then click

Next. You will be taken to a set of tips on how to handle unsupported software. They're worth reading (or at least clicking the links to hold the recommended pages open in case you need them). When ready, click Next, which takes you to the same screen you saw in Figure 2. Follow the same instructions as given earlier for this dialog box, and click Next to proceed. This action takes you to the "bottle" dialog box (Figure 3).

Stay with the recommended option, which will be New bottle for the first time you install an unsupported application, and click Next. If you have already tried one, simply add a digit at the end of the word unsupported to create a new one. This way, each unsupported application is isolated and can't damage another install. You may find it useful to change the default selection of Win98 to Win2000 if your software requires newer features.

When you click Next, CrossOver Office attempts to install the software, just as it would with a supported application. Return to the instructions for adding supported applications for the rest.

PERSONAL EXPERIENCES

When it comes to installing unsupported software, experimentation is the name of the game. Sometimes these programs install so easily you would think that they must be officially supported, and other times, you might wonder if you're still on the same planet as the installation repeatedly hangs in the same spot.

All in all, if a Windows program you want to use is listed on the site and you really need access to it, CrossOver Office can be a great choice. You don't need to go through the pain or expense of installing Windows, and at the same time, you can do things like run Internet
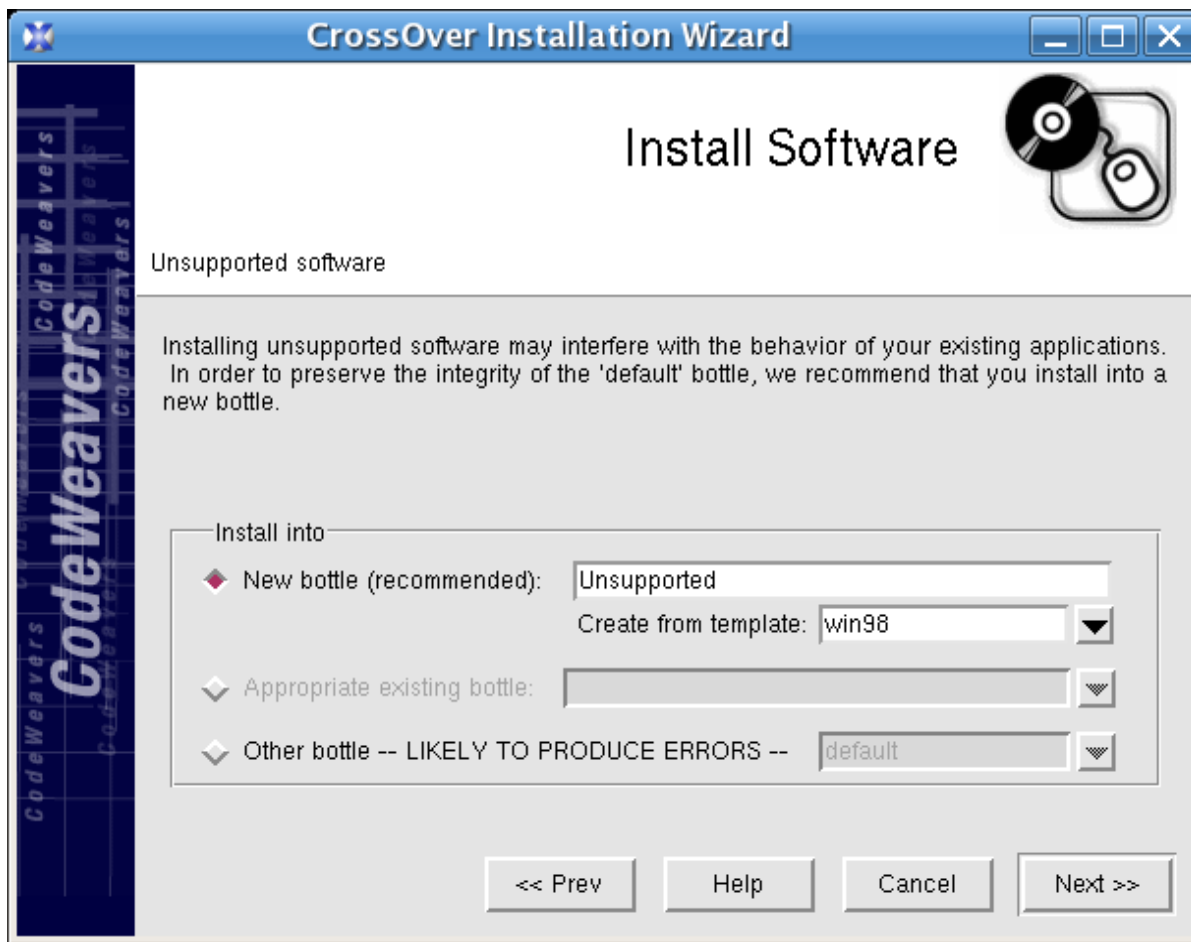
Figure 3. Bottles are used as containers for programs and program groups, like mini-Windows installations.

Explorer to test your Web pages without having to switch over to a Windows computer. Add to this the fact that popular Windows media formats are legally supported, and many people might find CrossOver Office too useful to pass up.∎

Dee-Ann LeBlanc (http://dee-ann.blog-city.com) is an award-winning technical writer and journalist specializing in Linux and miniature huskies. She welcomes comments sent to dee@renaissoft.com.

Cedega 5.1

Jay Kruizenga measures up TransGaming's Cedega and finds that it fills an important need for new Linux users.

JAY KRUIZENGA

If gaming is your passion, you'll really appreciate TransGaming's Cedega. Although a handful of good games are available on the Linux platform, it is no secret that the majority of games are being written for Windows. This has caused a major problem for many gaming fans who want to switch to Linux but are unwilling to give up gaming to do so. This is where TransGaming's Cedega comes into play. Based in Canada, TransGaming Technologies offers Linux users the ability to play high-demand AAA Windows game titles right from their Linux desktops. This month, we take a hard look at Cedega to see how this program measures up in its promise to play select Windows games.

HOW TO GET AND INSTALL CEDEGA

First, make absolutely certain that your system meets the minimum recommendations for optimal game play. You will need the following: Linux kernel 2.4 or higher, Xfree 86 4.0 or higher (4.3 recommended) or Xorg, glibc 2.2 or higher, sufficient hard disk space for installation of games in addition to the 60MB needed for Cedega, and an NVIDIA GeForce video card (recommended). If your system is up to specs, you will be able to install Cedega to take full advantage of select Windows games on your Linux system.

   Use of Cedega is by subscription. At the TransGaming Web site (http://www.transgaming.com), you have the option of purchasing a renewing subscription at $5 US/month (minimum three-month purchase) or a non-renewing subscription where you pay a full $55 US as a one-time annual fee. Not only do you get free updates over the course of your subscription, but you also are registered to cast your votes for the Windows games you would like to see work under Cedega. The TransGaming crack team of programmers listens to your requests and works hard on getting requested games to work, releasing periodic updates with new game-playability included.
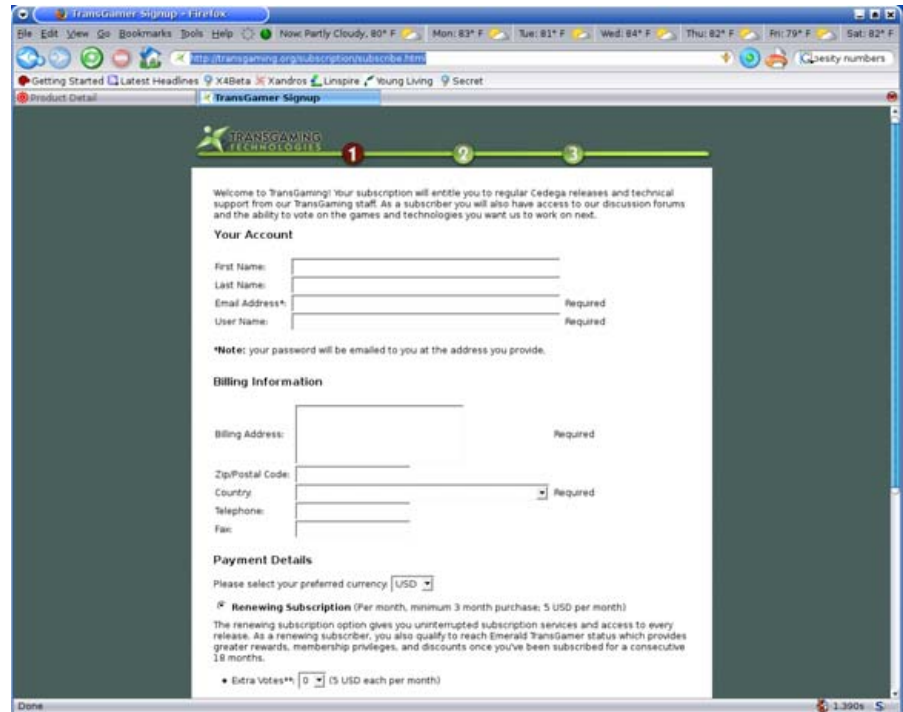
Figure 1. Log on to the TransGaming site to enroll and make your Cedega purchase.

To subscribe and download Cedega for your system, you need to visit the

TransGaming Web site, enroll, make the purchase of your choice, and then log in to download Cedega. The latest version is 5.2.4, code-named Mackeral. On our test system running the newly released Xandros 4.0 and an NVIDIA GeForce FX 5200 video card, we found we needed to download and install an earlier version of Cedega from the TransGaming archives (cedega_5.1_i386.deb), because not all the needed dependencies were met on our system. Therefore, we chose to access the archives and download/install the first available release, being careful to select a package that stated "all dependencies met". That did the trick. So, if you run into problems during installation, remember you have access to earlier versions of Cedega (rpm/deb/tgz) in the archives.

Install the file as usual. Once you have the program installed and running for the first time, you must run the setup wizard found under the Tools menu. This is an important step—one that you have to do. Not only will you be prompted to enter your user name and password, but the setup wizard will check for updates. Select all available updates shown, and install (be certain MS Core Fonts and Mozcontrol are selected for optimum playability). If you need help, there's a How-to Guide found under the Help tab.

It doesn't matter which version of Linux you are using, as TransGaming's on-line distribution system makes it extremely simple to download and install the Cedega package of your choice in deb/rpm/tgz formats.

On our test system, installation was simple and took only a matter of a few minutes. Updates were downloaded quickly and installed automatically. No problems were encountered. An icon for TransGaming Cedega showed up in our Game menu—accessible with one click.

Installation score: good

CEDEGA IS EASY TO USE

Once we had installed the proper file for our system with the dependencies met, we were up and running, ready to install our first Windows game. Before installing a Windows game, be certain to check the TransGaming Web site to discover whether that particular game works under Cedega—not all of them do. Don't make the mistake of thinking that just because you have Cedega on your system, you can run out to your local computer store, purchase any Windows gaming CD and have it run. It won't. Cedega is a great tool to get select Windows games (and there are quite a few) to run well under Linux at native speeds, but you need to do your homework first. On the TransGaming Web site, we counted 73 games with a perfect five-star playability rating, meaning that those will work flawlessly. An additional 147 games had a four-star rating, indicating that those might have only a few minor bugs, but will play well. The TransGaming Web site itself recommends that you try only games with a three-star rating or above. So stick to the four- and five-star lists, and you should be very happy with your purchase.

The following list is by no means exhaustive, but it serves to mention a few of the bigger AAA games that TransGamers have gotten to work under Cedega. Visit the official TransGaming site for further information; this is only a partial list. Working games include *Half-Life 2*, *Hitman: Contracts*, *Medal of Honour: Breakthrough and Spearhead*, *Sacrifice*, *Thief*, *Warcraft 3*, *Grand Theft Auto*, *Max Payne* (1 and 2), *City of Heroes*, *Madden NFL 2006* and many more. Note: TransGaming officially supports 45 games.
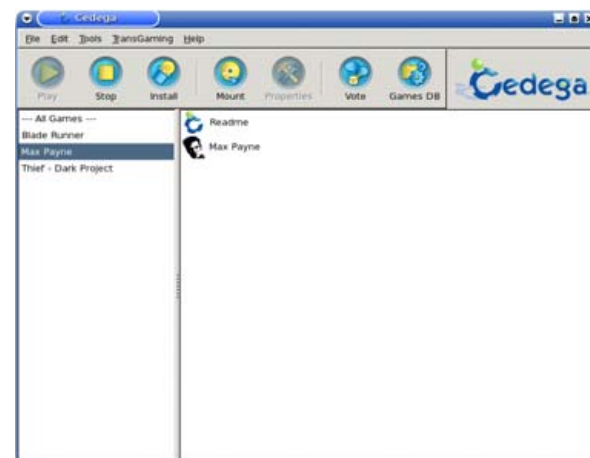

Figure 2. The TransGaming GUI is simple to use: highlight a game in the left list, select an option from the right list, and press Play.
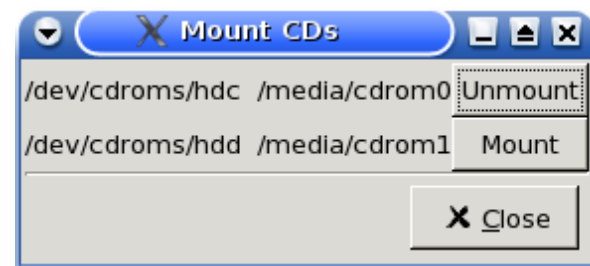

Figure 3. Select the CD drive to mount.

When you start Cedega the first time, you should check for available updates. Once everything is in working order, you will see the TransGaming GUI as shown in Figure 2. Note: the GUI shown in Figure 2 has games already loaded in the system by the installer. Yours will be blank initially.

HOW TO LOAD A GAME

To load a game, place the CD into your working drive and click the mount button. You will be given your choice of CD drives to mount.

Once accomplished, click the Install button. In the pop-up menu, name your game and then click the browse button to find your CD's install path. (Think Windows here, so look for an .exe or setup file.) For our sample installation *(Thief)*, we found the file under setup.exe. Once you have chosen your setup file, you should be able to finish your installation with relative ease, just as if you were installing under Windows. Now, just sit back and relax as your game is installed.

HOW TO PLAY A GAME

Once your games are installed, to play a game, insert the game CD into a drive, mount the CD, select the game icon from the left menu, select the game start file from the opened right menu, and click the Play icon at the top.

On our test system, we had no problems using the Cedega GUI. Everything is quite simple to use, enabling you to get in on the fun in the shortest amount of time possible. The games we played (*Max Payne*, *Syberia 2*, *Blade Runner* and *Thief*)
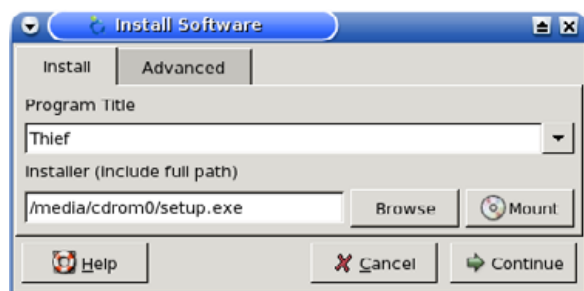
Figure 4. Name your game and begin installation.

worked extremely well.

You can change the size of your Cedega gaming window (if your video card supports it) by right-clicking the game through the right menu, then selecting edit profile. This opens a new window where, under the General tab, you will see a desktop option with a pull-down arrow. Select your window size here.

Ease of use score: good

MAINTAINING CEDEGA

Once Cedega is installed on your system, there really is not much to do except begin enjoying your favorite Windows games on your Linux desktop. As a TransGaming subscriber, you are entitled to all the new releases that become available during your subscription period. An easy way to check for updates is from the TransGaming menu→check for updates. A window opens to let you know if any are available, and you then have the option of updating or not.

Maintenance score: good
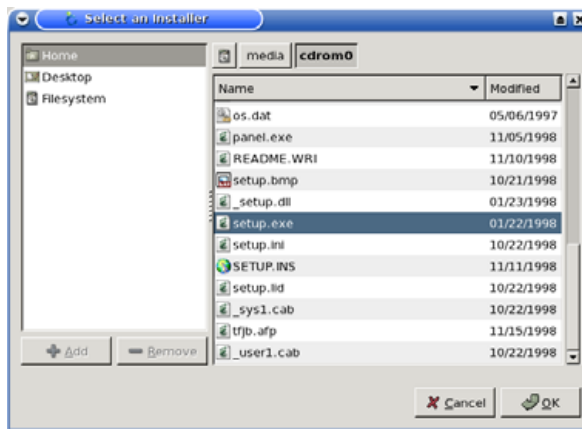
Figure 5. Look for a setup file or .exe on your game CD (think Windows).

TRANSGAMING USER DOCUMENTATION

You can access the TransGaming User Documentation under the Help tab→How-To Guide. Clicking this option opens your default browser to the Help Guide where you can find information pertaining to Cedega, from installation notes to troubleshooting procedures. You also can access the FAQs from the TransGaming Web site for even further information.

Documentation score: average

DOES TRANSGAMING'S CEDEGA MEASURE UP?

We found game playability under Linux to be equivalent to Windows. We were able to load, test and play *Max Payne*, *Blade Runner*, *Syberia 2* and *Thief the Dark Project.* The only thing we noticed during installation of some of these games was font misplacements, but this was a minor discrepancy—one that could be overlooked given the fact that the game worked.
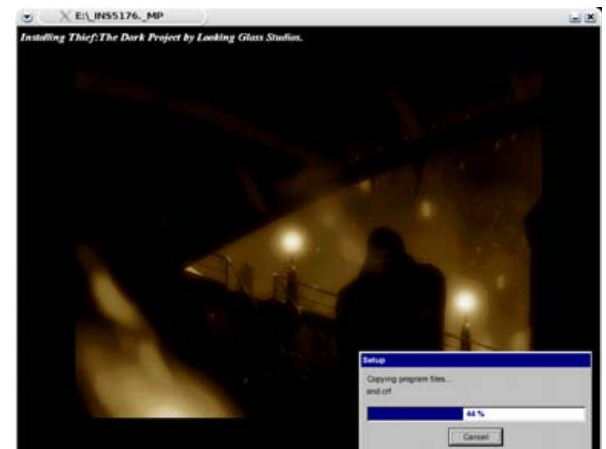

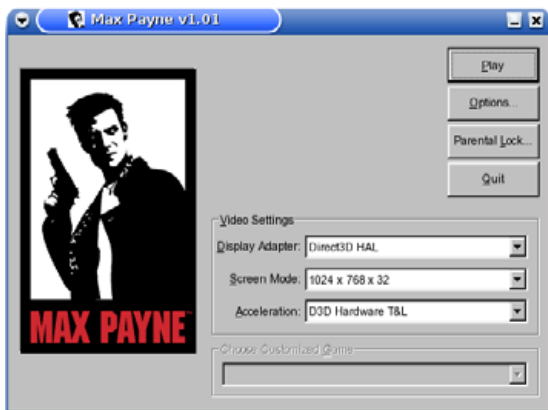Figure 6. Installation of Windows games is easy—just a few simple clicks.

Figure 7. It's easy to get started. Simply insert the CD and press the green play arrow.

Figure 8. *Syberia 2*

Figure 9. *Max Payne*

The Cedega GUI is easy to understand, simple to operate and quick to load. The only problem encountered during our entire test period was in the installation of a multiple-CD game (*Blade Runner*). Single-CD games are very easy to install. Simply mount, select the install file and install; however, multiple-CD games are not quite as easy. If your system is set for CD auto-mount, you may have to turn that off to get your installation to run smoothly. The first few times running the *Blade Runner* installation, the install froze asking for the second CD to be inserted, but we could not unmount.

We attempted to unmount the CD by pressing the Eject button on the player. No go. After a few shots, we decided to investigate the troubleshooting procedures. They state that it is *not* necessary to turn off automount, because
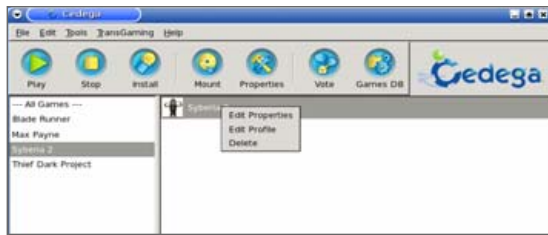
Figure 10. Right-click a game to edit desktop and other settings.
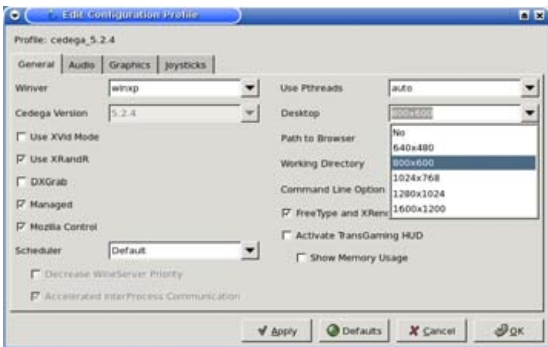
Figure 11. To resize your gaming window, select the desktop arrow for available options.
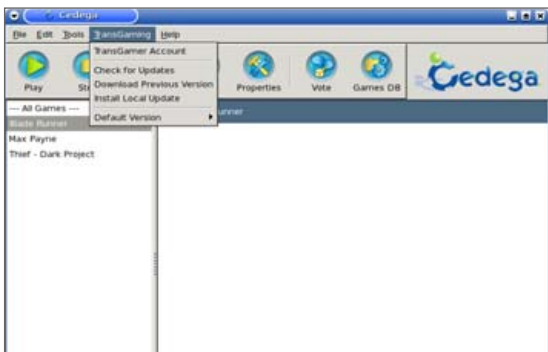
Figure 12. Easily check for updates in the Cedega GUI.

Cedega interfaces transparently with most auto-mount configurations. All that was required was to press the Eject button twice. This did not work for our system. We had to unmount the disk, wait about ten seconds, and then eject the CD. Apparently, Cedega does not interface well with our test system's automount.

If you do run into trouble and the documentation does not help your situation, send an e-mail to support@transgaming.com (you must be a subscriber).

Capability score: good

EVERYTHING HAS ITS PRICE—EVEN CEDEGA

As previously mentioned, Cedega is available by subscription. At only $5 US/month, you have access to the playability of more than 275 games (games purchased separately), plus the ability to vote on games you would like to see work under future editions of Cedega. The TransGaming Web site states that new polls are opened the first week of every month. Games up for bid must be given ten votes by members to be given precedence.

We think you'll agree that having the ability to play select Windows games under Linux with Cedega is worth the $5 monthly charge. For the price of a Venti cup of coffee at Starbucks, you can enjoy hours of entertainment sitting in front of your computer (though you might still need the caffeine).

Price score: good

HOPEFULLY, TRANSGAMING IS BUT TEMPORARY

Although programs like Cedega, Win4Lin or CrossOver Office are great for getting Windows programs to run on the Linux desktop, still we can only hope that they are merely a temporary
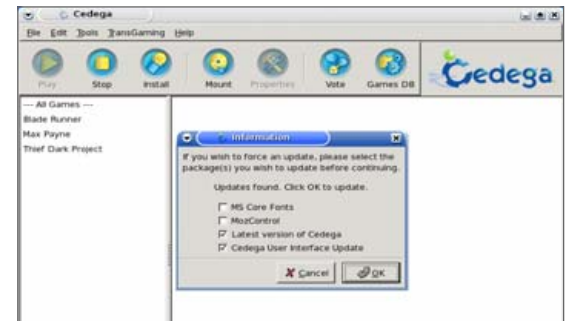

Figure 13. When updates are found, click OK to install selected items.

necessity. Once the Linux desktop market becomes substantial in quantity, marketers will begin to take notice of this former fringe group, resulting in games and other programs being ported to or written native for Linux. That time is not yet here. If you are wanting to play games on your Linux PC, you have your choice from a handful of good-quality AAA games (try GarageGames), or you can use Cedega and have your choice of more than 220! At least you have that option available.

All in all, TransGaming's Cedega is an excellent program that fulfills a need in the Linux community. If you are a hard-core gamer who just can't give up your old Windows games, now you may not have to.

Overall score: good ■

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.

Wine 0.9.17

With improved configurability, a more mature Wine offers another solid alternative for gamers.

JOHN KNIGHT

If you've recently joined the Linux scene, you may be familiar with TransGaming's Cedega, but you might be unaware of the original project from which it forked, Wine. Wine (Wine Is Not an Emulator) attempts to run Windows programs under Linux, not through machine emulation—as with programs such as VMware—but instead takes the approach of receiving a Windows request and substituting it with a Linux one. This effectively allows you to run a Windows application under Linux, as a Linux program, rather than the clunky process of emulating an entire machine. This results in much greater performance, and more important, it lets you play Windows games! Oh, er, you can run business applications too (wink-wink).

For those of you who are well aware of Wine, like me, you might've put it on the shelf a while ago and not picked it up since, waiting until it progressed some more. The good news is that it has. After what must be a decade of sitting at alpha status, it has recently matured to beta and is looking decidedly more grown up. As well as cleaning up the configuration tools, Direct3D support has been included for the last year or two—albeit a touch immature—along with a fairly solid Windows GUI (graphical user interface) code base.

INSTALLATION
Thankfully, installation was a breeze, as there are pre-compiled binaries for most mainstream distributions. Personally, I run SimplyMepis that has been upgraded
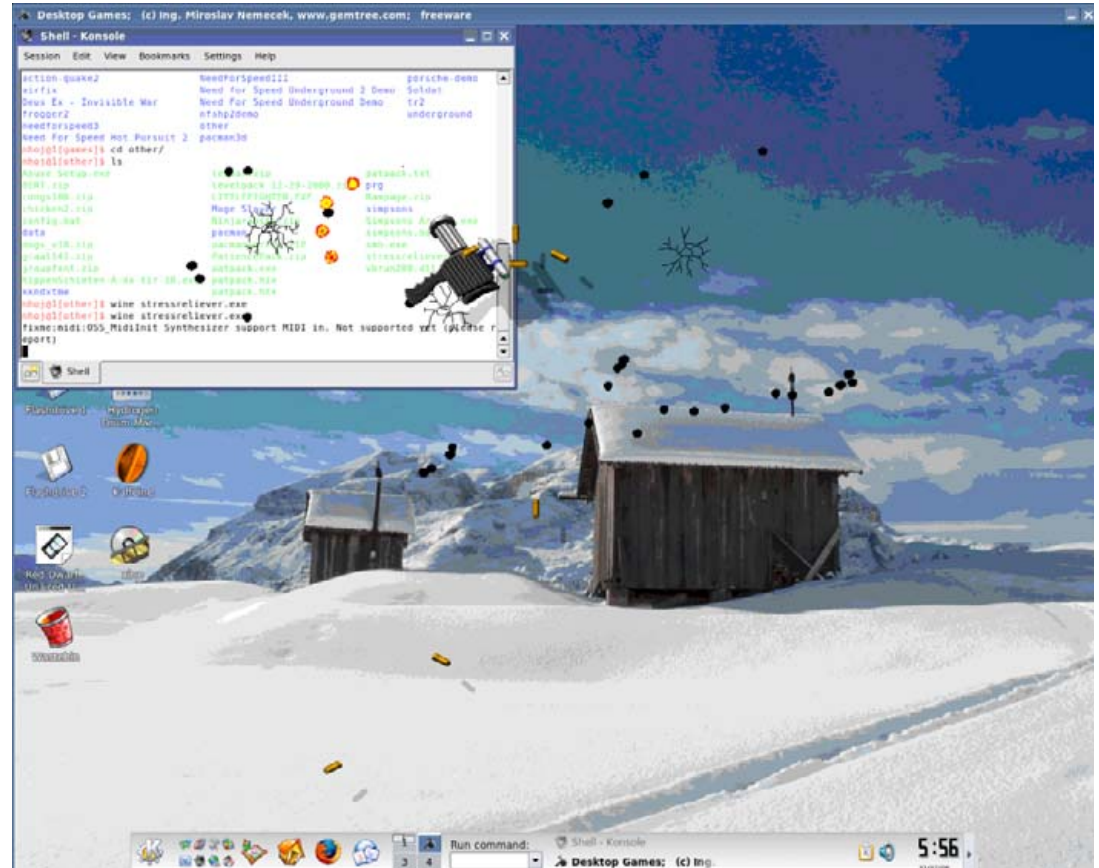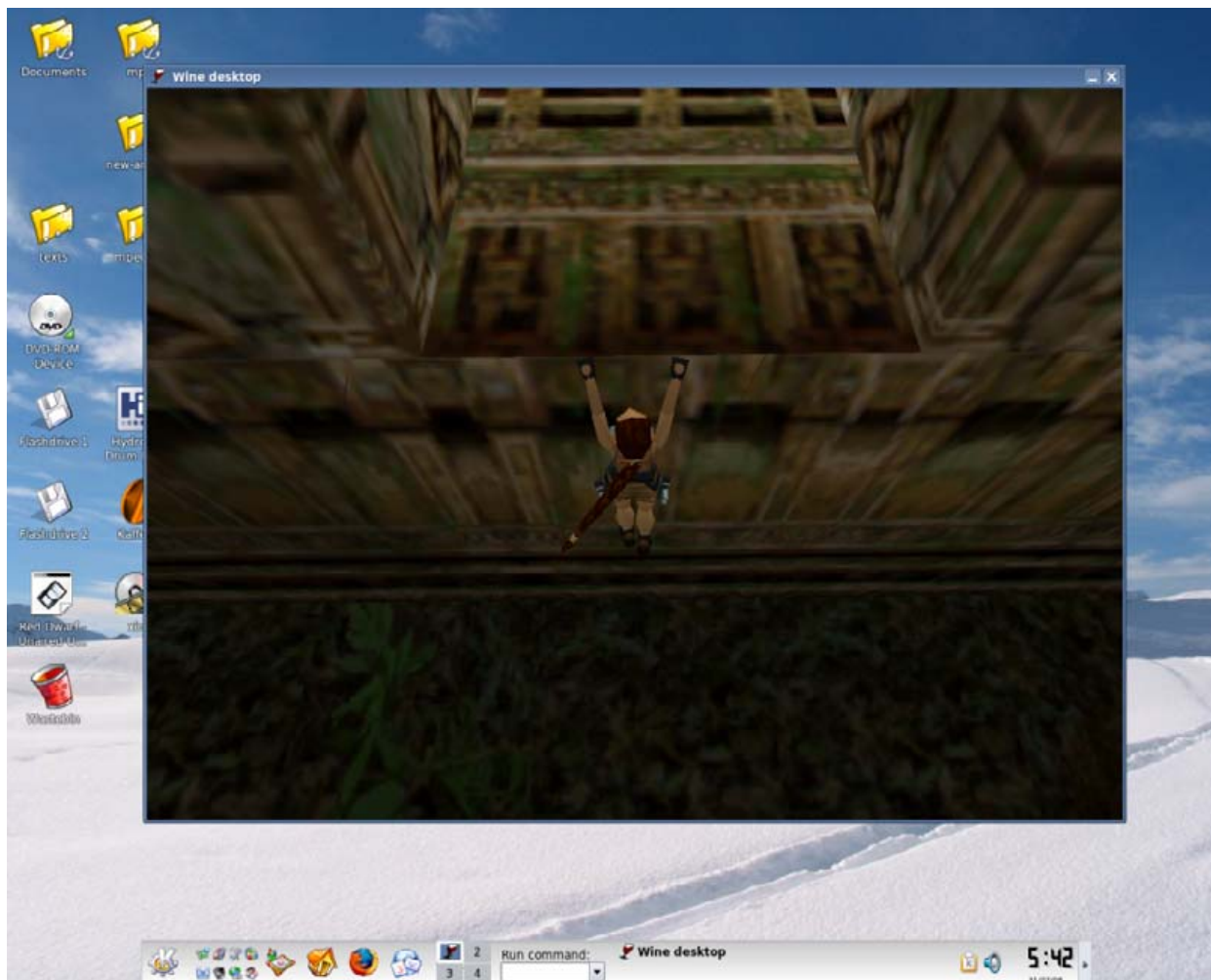

Figure 1. Mangle your desktop with *Stress Reliever*!

via the Debian archive and modified to my tastes, which may have presented some challenges. Luckily, the Ubuntu/Kubuntu packages installed without a hitch and tick along nicely,

and I recommend the same packages to anyone running a Debian-based distro.

TESTING

To cast a fairly wide net, I decided to test some OpenGL-based games, Direct3D games, Windows desktop applications, game installers and programs that may use sound, video or GUI code in a difficult manner. As well as throwing some difficult programs Wine's way, I also tried some programs that I knew worked well with Wine previously to see if that was still the case.

WINDOWS APPLICATIONS/SOFTWARE-RENDERED GAMES

I ran through a few desktop applications, and the GUI code seems to be very stable. Most applications and installers run quite nicely with almost bulletproof behavior. Curiously, a little desktop game called *Stress Reliever*, which involves mangling the desktop with hammers, machine guns and so on, worked flawlessly.

There doesn't seem to be any major issues with WAVE audio (although I did keep getting error messages about midi-in not being supported), and audio-intensive programs, such as Audacity, worked without a hitch. Unfortunately, I couldn't get Winamp to run, but it was due to the critical font being missing, not an audio problem. The majority of old software-rendered games (no 3-D acceleration) I tried ran fine, particularly a great old game, *RC Racers*.

OPENGL

As has been the case in the past, just about anything OpenGL-based runs fine. *Quake 2* and *Half-Life* run as well as ever, but I was more interested in system-taxing games like *Quake 3* and *Unreal Tournament 2003*. Although a slightly redundant test, as there's a native Linux client available, *Quake 3* seemed to run better than under Windows! Although I had no time for frames-per-second testing and the like, there was a distinct lack of the random jolts usually experienced when playing under Windows. Unfortunately,

UT2003 had only a black screen and was probably running in Direct3D—was it just my imagination that it had OpenGL? Didn't it also have a Linux port? Oh well.

DIRECT3D

I almost became aggravated trying to find Direct3D games that would run, but a quaint little game called *Think Tanks*, ran very smoothly but
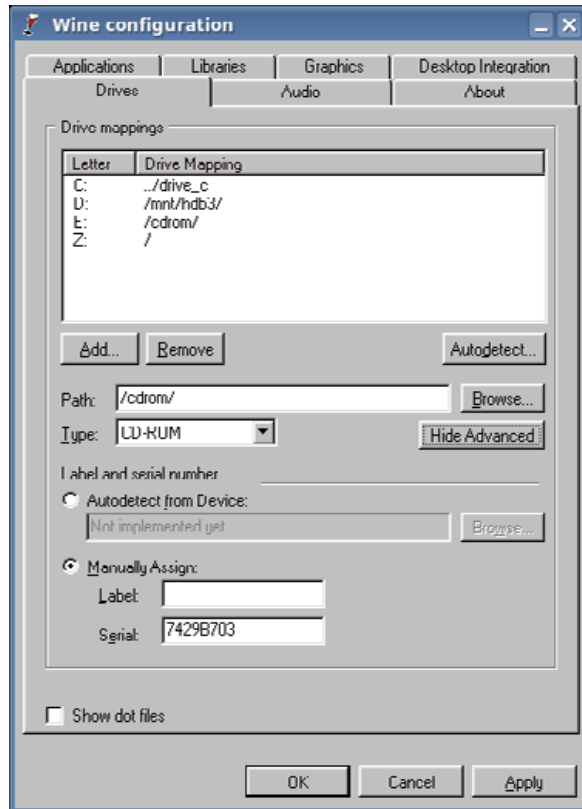
Figure 3. Don't forget to add your CD-ROM drive.
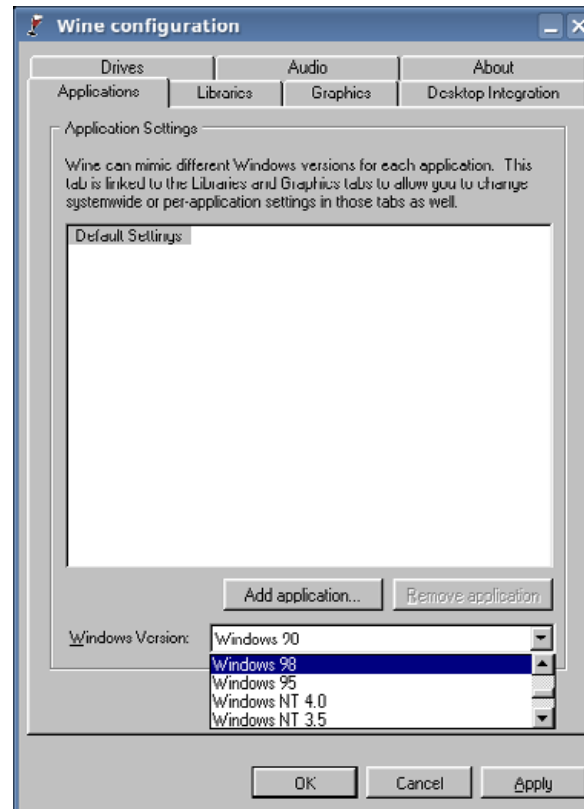
Figure 4. If a game doesn't work, try switching to Windows 98 instead of 2000.
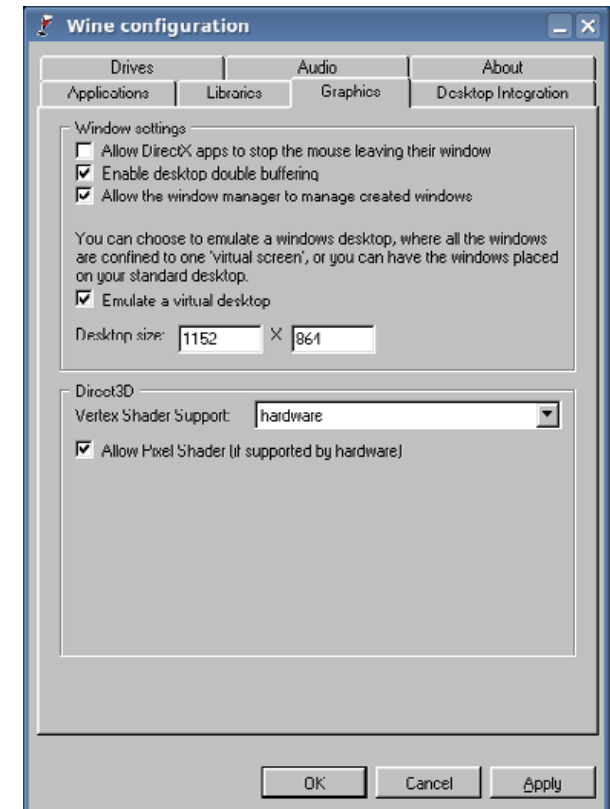
Figure 5. Wine's Handy Virtual Desktop

had choppy audio. After some tweaking with winecfg and switching to Windows 98 mode (see next section), I finally managed to get *Tomb Raider 3* working. It's been years, and I've been trying to get it to work under Linux for just as long—joy of joy! The sound was a little buggy with some sound effects repeating themselves, but *TR3* always was infamous for this, even under Windows. Ultimately, it seems that only older Direct3D games work, and even then, it's still hit or miss. The Direct3D code is quite new though, so hopefully this will improve with time.

CONFIGURATION, BUGS AND RECOMMENDATIONS

Configuring Wine used to be a messy affair—fairly haphazard tools with anarchic behavior leaving most users manually trawling through configuration files. Thankfully, this has all been remedied with an elegant configuration tool, which is probably the biggest drawcard for the latest Wine release. Simply run the command `winecfg`, and you're in business. While we're here, let's discuss needed system tweaks.

First, you need to add your other drives/partitions, especially your CD-ROM drive. There's an autodetect button for adding all of your partitions, but I recommend adding a CD-ROM manually, pointing to its location and specifying it as a CD-ROM drive in the Advanced Options (Figure 3).

If a game doesn't work right off the bat, don't be dismayed; try changing to a different Windows Version in the Applications tab. Many games have trouble switching between DOS/NT emulation, so try Windows 98 if it's set to Windows 2000/XP, and vice versa.

Running games in full-screen mode generally wreaks havoc with the desktop, especially GNOME and KDE. If your resolution hasn't been changed, you can be guaranteed that icons will move or windows will be resized. I strongly recommend running Wine's virtual desktop window, so everything is contained in a separate window (see Figure 2) and your desktop remains intact. If you can't live without the immersion of full-screen gaming, it may be best to create another account purely for Wine gaming, and then log back in to your normal account when

you're done. I also ran into trouble with some games not being able to switch between 32- and 16-bit color. If you're really serious about gaming, you may want to switch to 16-bit color in your X Window System configuration.

STATE OF PLAY

Overall, this is an absolute necessity for any gamer, and it's free, so install it anyway! If something doesn't work in Cedega, it may work in Wine, and vice versa. Wine has come a long way since I last played with it, and configuration is no longer a headache. As well as new (but immature) Direct3D support, I also noticed that there doesn't seem to be the same problems accessing game CDs with strange copy protection measures, like *Tomb Raider 3*, so you probably won't need those CD crack files! For newbies who want to run their Windows games at full speed without annoying reboots, it's a must. However, those that will find Wine of particular interest are people who need to run Windows-only desktops applications, such as Photoshop. Either way, I've been playing *Tomb Raider* nonstop this week, and I'm a happy man!■

John Knight is a 22-year-old, rock-climbing, Japan-loving megalomaniac, trying to take over the world from his bedroom via his keyboard. He spends most of his time tinkering with MPlayer and headbanging to his MP3s.

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Xandros 4: the Platform for Your Digital Life

The Xandros development team took its time, but it was worth it! Xandros 4 provides a rock-solid distribution that's also easy to use. It should outperform your greatest expectation.

JAY KRUIZENGA

The word that comes to mind when we think of Xandros is quality. Xandros Linux is praised for being one of the easiest desktop Linux products available— a great choice for beginning Linux users. Xandros takes great pride in assuring that every detail of its distribution is of the highest quality, and it held nothing back with its latest release, Xandros 4. With the recent disposal of more than 50-million Windows 98 and ME users, these orphans are looking for a new home. They have three choices available: 1) continue using their unsupported OS and hope that nothing goes wrong, 2) upgrade to Windows XP or Vista and hope that their older PC still will function properly, or 3) continue using their older PC, replacing Windows with Xandros 4. We believe that these orphans will feel right at home with Xandros 4. There is very little learning curve involved, and everything looks and acts just like their former operating system—with the exception being that Xandros is much more secure.

This review takes a look at the newly released Xandros 4 Desktop Home Edition - Premium, available from Xandros (http://www.xandros.com) for $79.99 US. We focus mainly on the new additions that separate this product from Xandros 3.

Our test system was as follows:

- Hewlett Packard 543x
- AMD Athlon XP 2200+
- NVIDIA GeForce FX 5200 video card
- 180GB hard drive
- 768MB RAM
- Creative Labs SB Live audio card
- Platronics .45 headset
- CD/DVD player
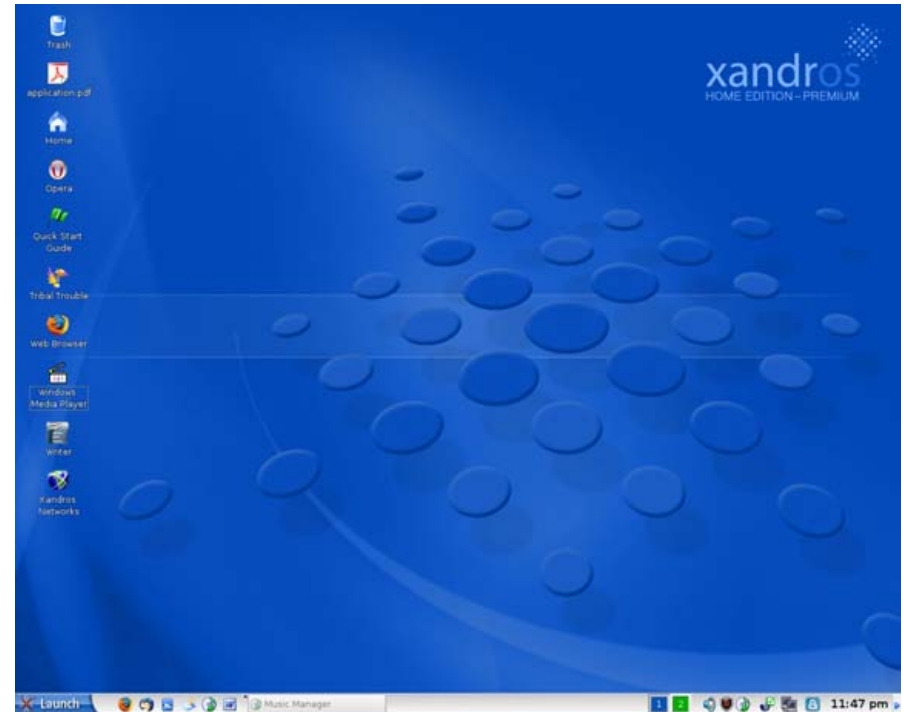- DVD burner
- Proview LCD monitor

Figure 1. The Beautiful New Xandros Desktop

INSTALLING XANDROS 4
Not much has changed from Xandros 3 when it comes to installation. It is still a four-click install. Simply insert the CD, answer a few questions, and you are up and running in no time. It would be hard to improve on this. Our entire test system was detected properly without exception, and the entire process took less than a half an hour.
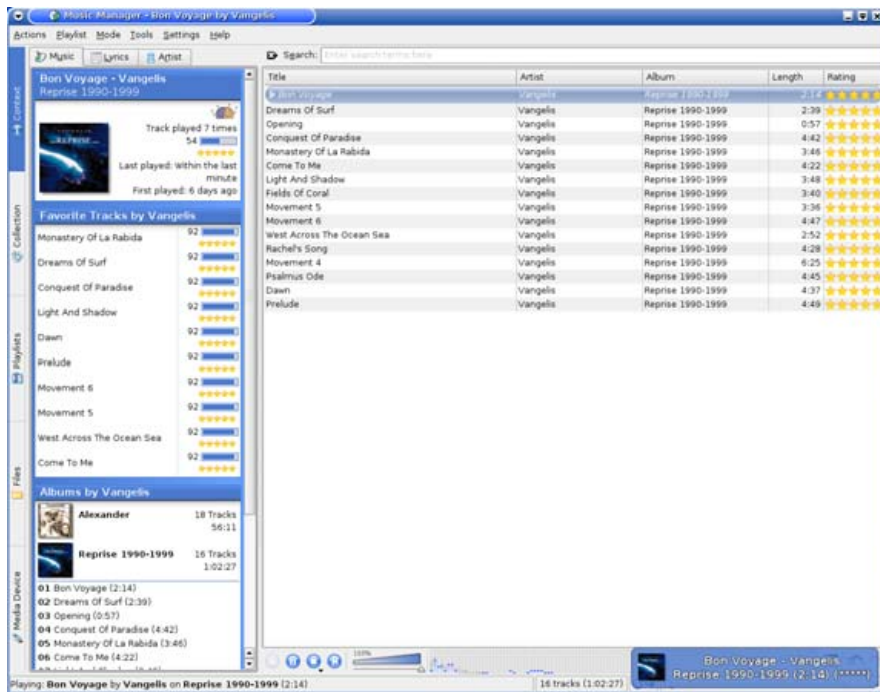
Installation score: excellent

Figure 2. Listen to your favorite CDs or MP3s.

Figure 3. A transparent bar above your taskbar displays music artist and song.

XANDROS 4 IS EXTREMELY EASY TO USE AND VERY CAPABLE

It's hard to imagine how a desktop Linux operating system as easy to use as Xandros 3 could get any simpler, but it has been accomplished. Xandros 4 is marketed as "The Platform for Your Digital Life" due to its enhanced music

management, photo management, Web browsing, security suite, CD/DVD burning, instant messenger, Internet phone, e-mail, office suite, limited Windows compatibility, increased wireless networking, file manager and instant updates. Besides updating numerous programs (such as Firefox, Skype, Thunderbird and KDE) and boosting support for more hardware and wireless devices, the big four programs that make Xandros 4 what it has become are the Music Manager, Photo Manager, File Manager and Security Suite.

The entire Xandros desktop has been given a face lift, and it's absolutely captivating. An appealing swirl of blue, themed throughout every program, is enough to invoke feelings of pride and prestige. You will be proud to display your desktop to friends and family, as it is a breath of fresh air—cool and crisp—very elegant.

YOUR DIGITAL LIFE—THE XANDROS MUSIC MANAGER

The Xandros Music Manager (Amarok) is an audiophile's cornucopia of music tweaked to perfection (Xandros style). With this new tool, you can burn CDs, listen to and organize music, listen to streaming audio, play or import a song from your iPod and generally have a blast listening to your own collection of melodious tunes. Amarok is in a class by itself for music management—a first-rate program that is a must-have.

YOUR DIGITAL LIFE— THE XANDROS PHOTO MANAGER

The Xandros Photo Manager lets you import pictures directly from your digital camera. Scan your pictures, click the one you want to edit, and find yourself immersed in a large assortment of tools enabling you to crop your image, reduce red eye, rotate an image, lighten/darken/tint an image, add captions and
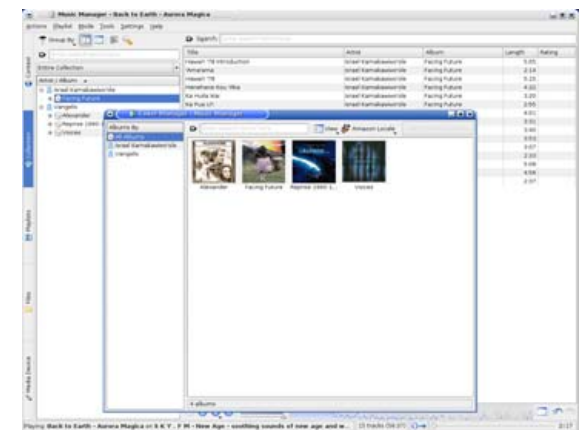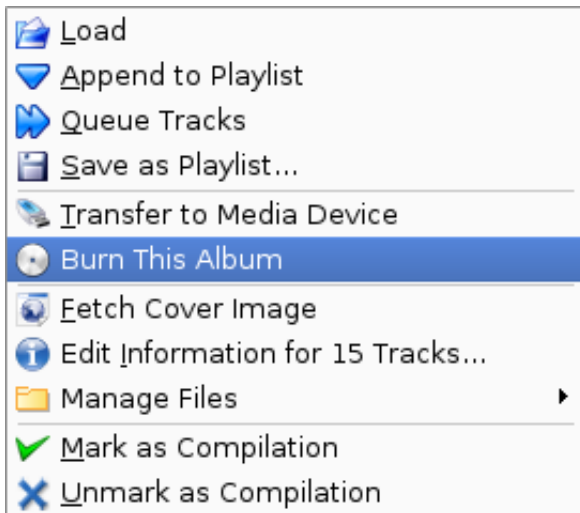

Figure 4. Organize your music with cover art.

Figure 5. Right-Click an album to burn a CD.

much much more. It's easy to detect a digital camera. Simply plug your camera in to an available USB slot, and the Xandros Removable Device window appears asking you where you want to open the attached device (Xandros Music Manager, File Manager or Photo Manager). In this case, simply select Photo Manager, which opens the program to view and download the pictures on your digital camera. Could it be any easier?

YOUR DIGITAL LIFE—THE XANDROS FILE MANAGER

The Xandros File Manager is a powerful tool, allowing you to access/search every file on your hard disk (or removable disks) with absolute precision. Insert a CD and view the contents thereof, or download files to the hard disk wherever you choose to place them. In the case of an audio CD, you can access song files, highlight and drag any that you choose to a
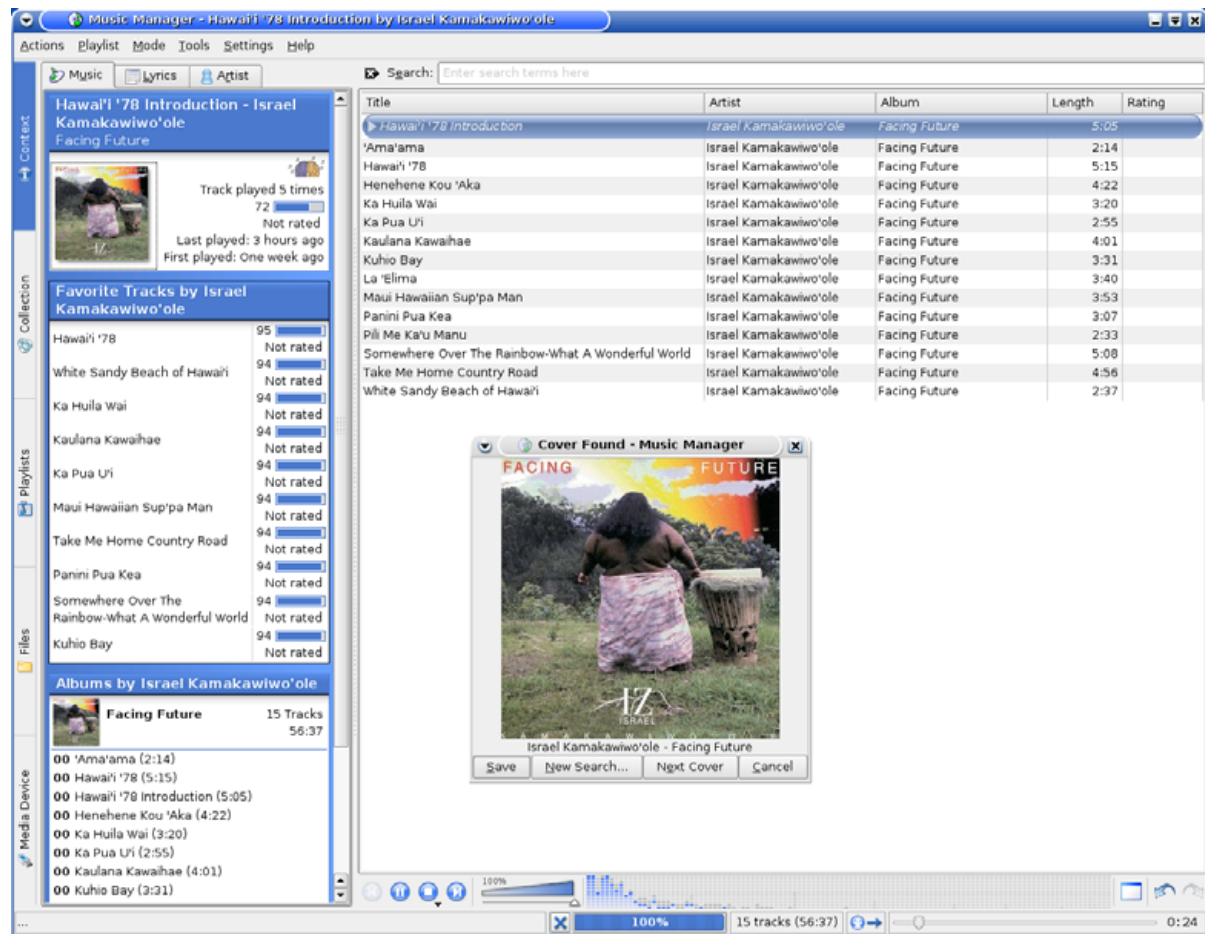

Figure 6. Download cover art for your collections.

file on your drive. You then will be prompted for the file format in which you want the songs saved—either WAV, Ogg Vorbis or MP3. The next time you open the Music Manager, you will be able to import this new collection and download the cover art and/or upload to an iPod or MP3 player.

With the Xandros File Manager, you also can burn CDs or DVDs (assuming you have either a CD or DVD burner). Simply right-click on DVD Writer, choose create an audio or data CD/DVD, and then drag and drop (or copy and paste) the files to add. Click write files to disk, and voilà—it's done.

The Xandros File Manager has another little-known use as well. It also can serve as a Web browser.

YOUR DIGITAL LIFE—THE SECURITY SUITE
Although viruses and spyware are not major threats to Linux systems, it is still nice to know that your Linux system is protected thoroughly, virtually eliminating the threat of spam, spyware, phishing scams and viruses. You also are protected from intruders with a built-in firewall. You can schedule daily updates and/or security checks, and feel secure in the fact that your system is a fortress of safety.

Other things you can do with your Xandros system include browsing the Net with Firefox 1.5, talking *free* to friends and family with the latest edition of Skype, chatting with friends on Yahoo!, MSN, ICQ, AOL or AIM with an all-in-one instant messenger program,

typing documents in OpenOffice.org 2, sending e-mail with Thunderbird 1.5 and doing most anything you previously could have done under Windows.

As mentioned earlier, Xandros 4 is a reliable replacement for Windows 98, 98SE or ME with excellent community and company support online via the Xandros Forums and/or through e-mail to the Xandros support team. Everything (all programs) are tweaked to perfection, which sets Xandros apart from other Linux distributions that seem to throw a hodge-podge of programs together in duplicate (multiple browsers, e-mail programs and so forth).

Ease of use/capability score: excellent

MAINTAIN YOUR SYSTEM WITH XANDROS NETWORKS
Xandros Networks is a server on the Xandros end that hosts software updates, security

patches and new programs, each available with one click. If updates are available, the Xandros Networks icon at the bottom of your screen alerts you to the fact.

Xandros Networks includes many programs you can download free of charge, in addition to a few others that are available only to Xandros Premium Subscribers. This $39 US membership fee offers you discounts on commercial software like Sun's StarOffice 8 or CrossOver Office (included in the Home Premium edition).

Plus, the Xandros Networks allows you to install any deb/rpm file with one click.

Maintenance score: good

XANDROS 4 USER DOCUMENTATION
The Xandros 4 Home Premium (and other) boxed sets include a lengthy 384-page User Guide written in layman's terms for the new Linux user. If there is anything you need to know about your

Figure 7. Xandros detects removable drives/cameras and prompts you for the program to open.
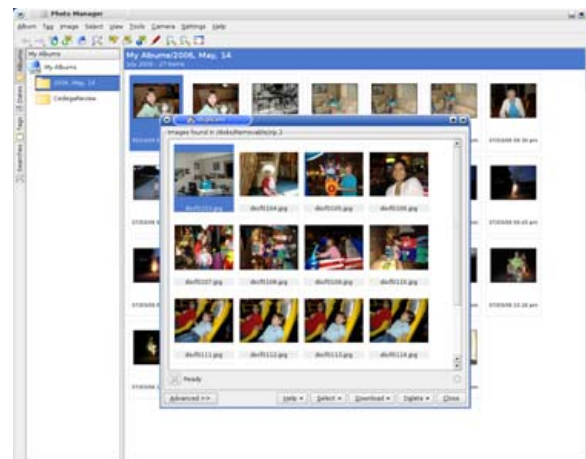

Figure 8. Starting Photo Manager

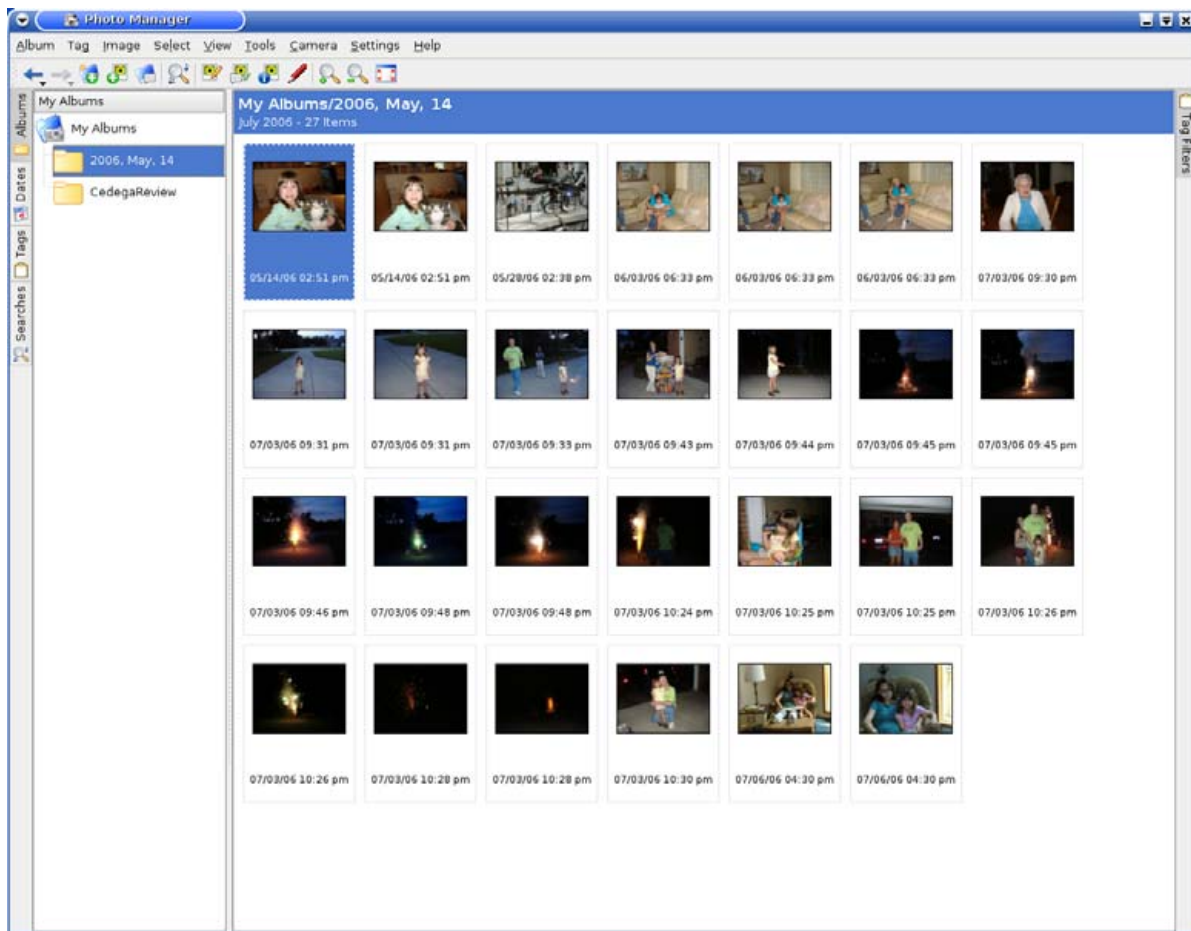**Figure 9. Importing Photos from a Digital Camera**

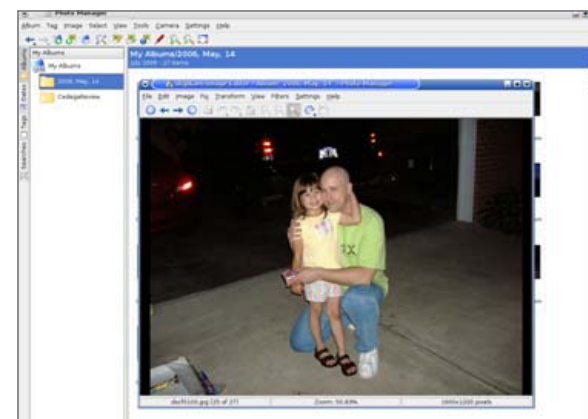Figure 10. View, organize and edit your digital photos.

Figure 11. Right-Click a photo you want to edit.

Figure 12. Feel secure with Xandros' built-in firewall, and constant checks against spam, spyware, phishing schemes and viruses.

system, it's in there. Also included is a much shorter nine-page Getting Started Guide for those who want to dive right in to installing their Xandros 4 system. Both guides are professional in appearance—as would be expected from a company as prestigious as Xandros.

Documentation score: excellent

PRICING STRUCTURE OF XANDROS 4

Xandros 4 is presently available in both Home Edition and Home Edition - Premium boxed sets (recommended for User Guides) or downloads from Xandros. The price for the Home Edition is $39.99 US, and the price for the Home Edition - Premium is $79.99 US. What's the difference between the two?

Home Edition - Premium (the subject of this review) includes the Xandros Music Manager (with the ability to create MP3s on the fly and iPod compatibility), the
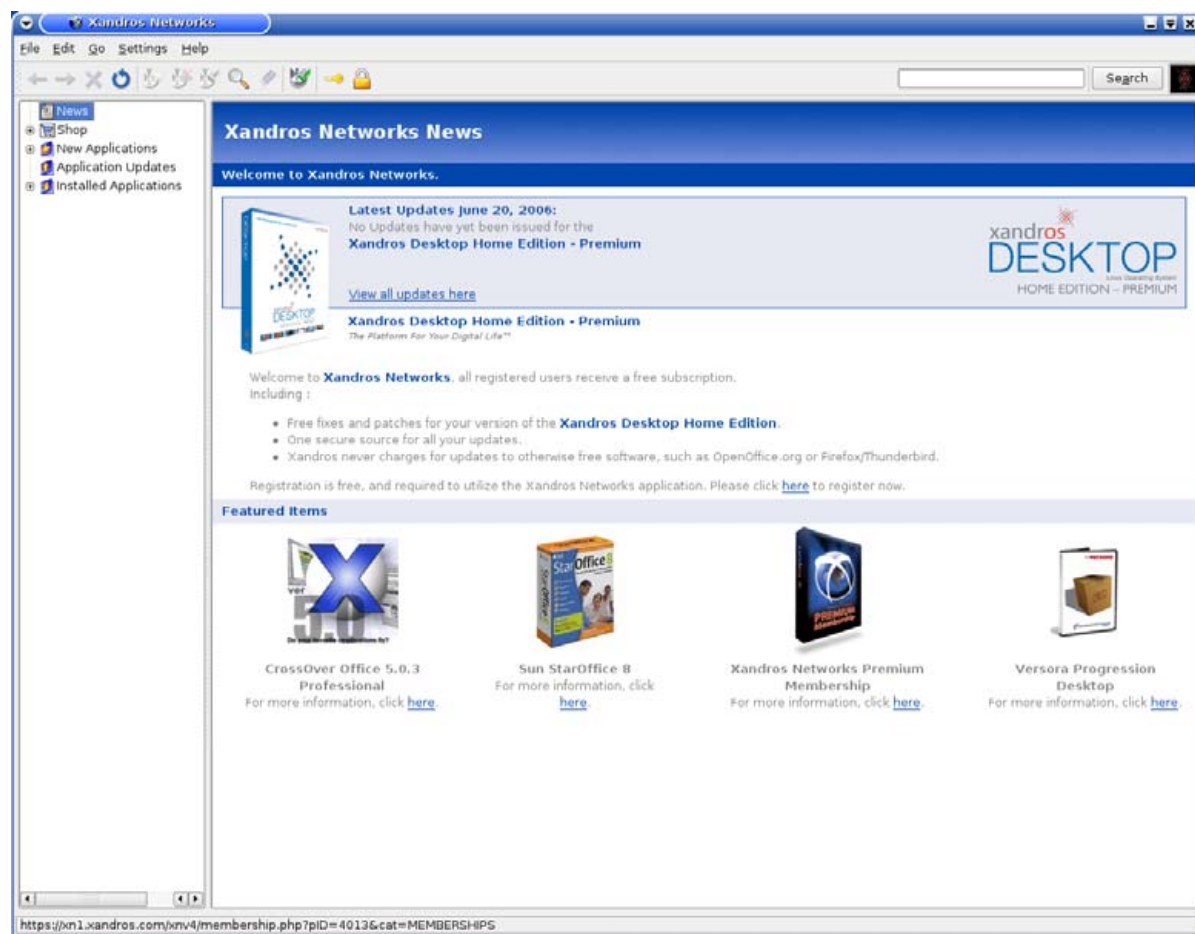
Figure 13. Xandros Networks keeps your system updated.

Figure 14. Install deb/rpm files with Xandros Networks.
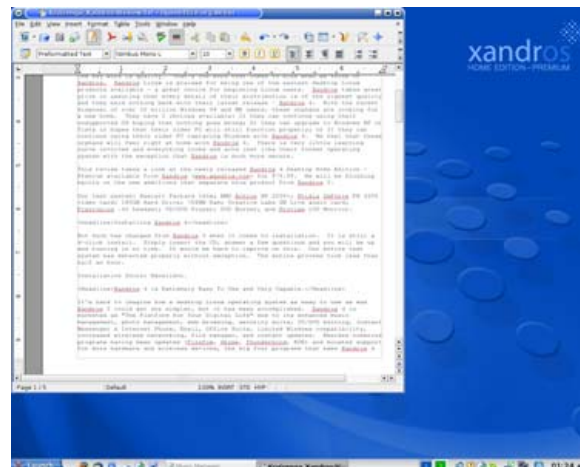
Figure 15. Run Microsoft Office 2003 and more with CrossOver Office.

Xandros Photo Manager, the latest edition of CrossOver Office (enabling you to run select Windows programs such as Microsoft Office, Adobe Photoshop or Quicken from your Linux desktop), the ability to write files to NTFS partitions, the Xandros Security Suite with antivirus and home folder encryption, Xandros PPTP VPN, a second applications CD

included in the box (which saves time downloading on slower connections), a printed user guide, and the Versora Progression Desktop for Xandros CD.

With the Versora Progression Desktop CD, you can migrate e-mail, calendars, address books, bookmarks, desktop, files and other settings from your Windows PC. Keep all your wallpapers,
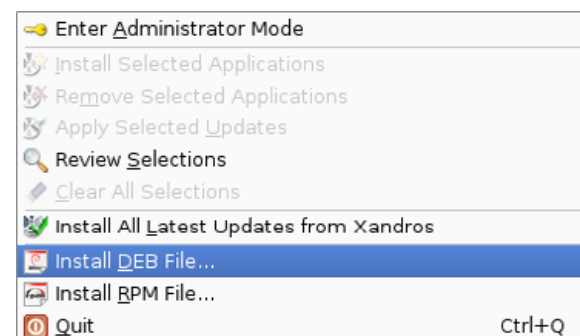
screensavers, sounds, e-mail and other important settings intact. This CD alone will save you much time in re-entering all this information into your new Xandros system—quite a value.

So you can see that the Home Edition - Premium is a much better value with all the included extras.
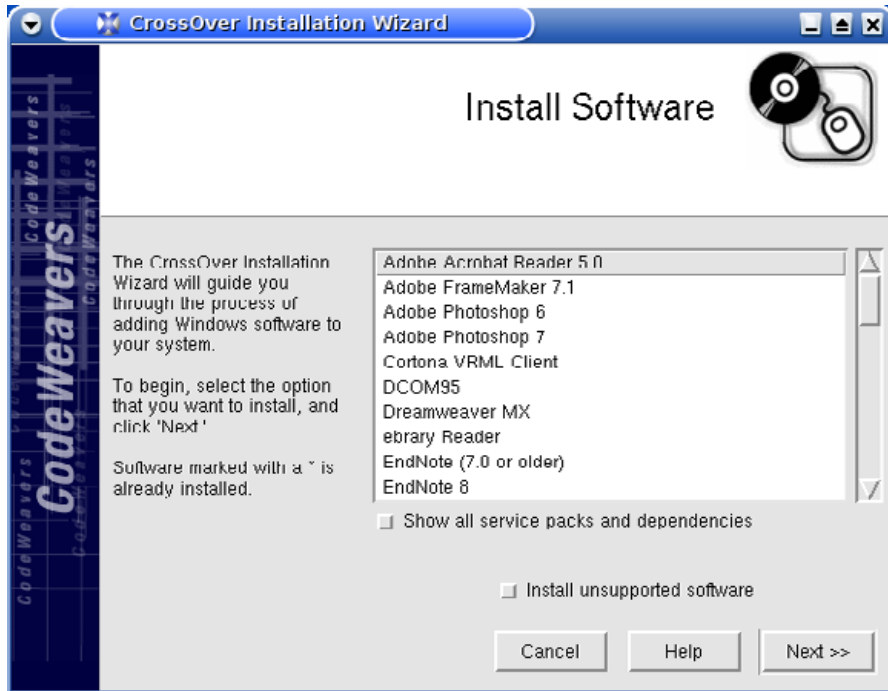
Price score: good

Figure 16. Install select Windows programs with CrossOver Office.

Figure 17. Firefox, Thunderbird and Skype

XANDROS—THE ROLLS-ROYCE OF LINUX DISTRIBUTIONS

Our test system was able to install and use every program mentioned, with no problems whatsoever. Xandros 4 is of the highest quality, which explains why it took so long for this version to be released (more than a year and a half)! The painstaking devotion of the Xandros development team is obvious to even the casual observer. If you want an easy-to-use system that outperforms your greatest expectations with rock-solid security, you owe it to yourself to try Xandros 4. We think you'll agree that Xandros really is The Platform for Your Digital Life.■

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.
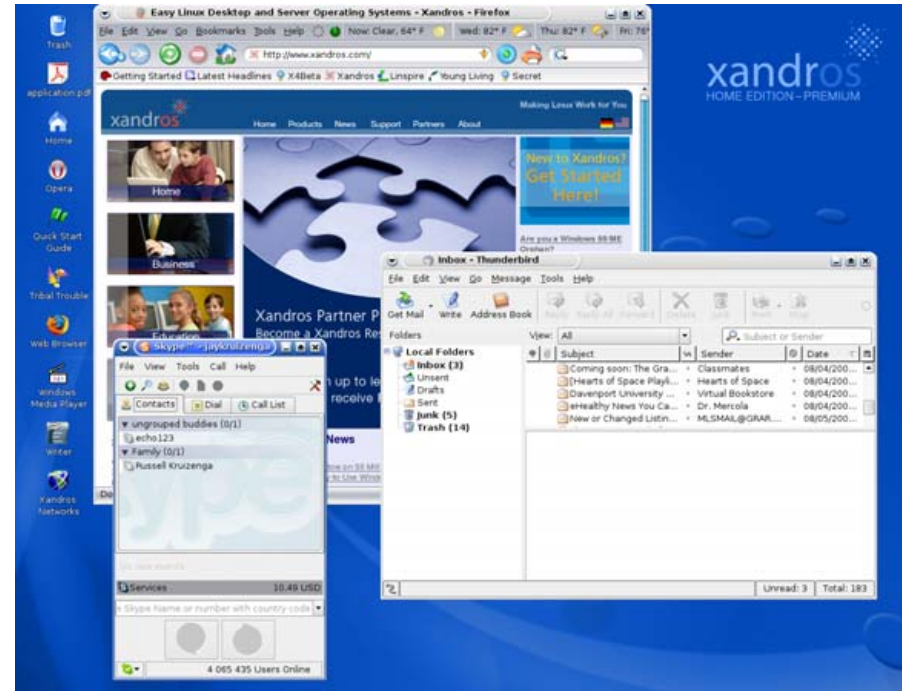
SUMMARY

INSTALLATION SCORE: excellent

EASE OF USE/CAPABILITY SCORE: excellent

MAINTENANCE SCORE: good

DOCUMENTATION SCORE: excellent

PRICE SCORE: good

OVERALL SCORE: excellent

Freespire 1.0.2

Freespire 1.0 Beta looks great and shows promise, but it still needs time to mature and build community support.

COLIN MCGREGOR

Freespire 1.0.2 is a spin-off from the Linspire commercial Linux distribution. This is somewhat like what Red Hat did when it split Fedora Core away from its server offering. The idea is that if you want the professional support and some commercial software goodies, you can have it with Linspire, for a price. If you can live without the support and some of Linspire's extra software, go with Freespire. For the Linspire people, Freespire offers a number of advantages. It helps promote Linspire, it offers a platform where they can test new ideas for use in future versions of Linspire, it provides a new market for support services and it expands the market for the add-on software Linspire sells.

So, what is under the hood? Freespire is based on Debian Sid, the latest part of the Debian family. On top of Debian, Freespire has included a number of extras taken from Linspire. Along the way, Freespire includes a number of drivers/programs that the Debian people will not include because they are not free, such as drivers for the NVIDIA video cards.

Through the Click and Run (CNR) package management software, you can do updates with a point-and-click interface. With CNR, you also can purchase commercial software via the Linspire warehouse. For example, OpenOffice.org deals with almost all office needs, but StarOffice covers most of the exceptions. You can download and
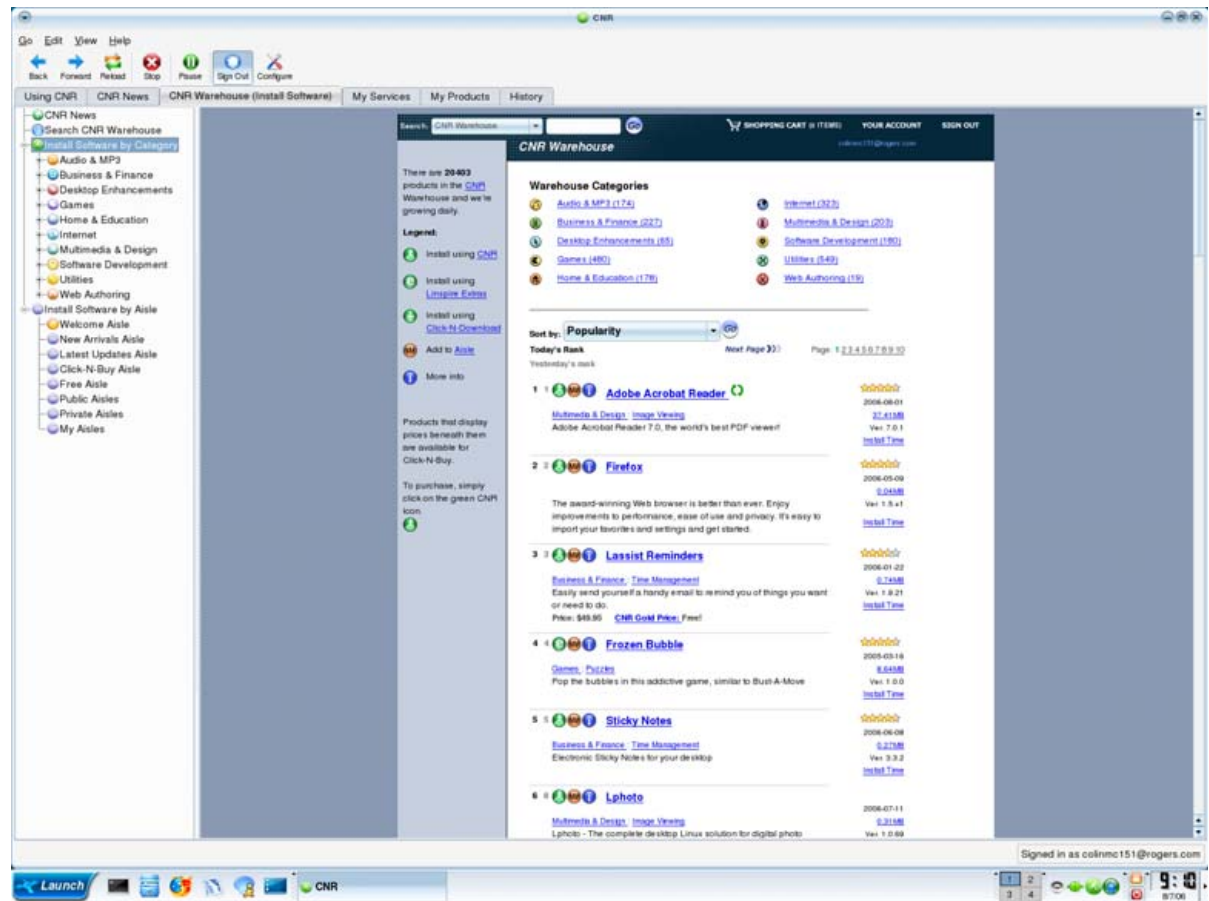

Figure 1. The CNR Program

Figure 2. The Default Freespire Desktop

install StarOffice via the point-and-click interface, but you will have to pay a modest fee for this. Likewise, after an initial trial period, there is a modest yearly fee to get access to anything other than security updates via CNR. If you want software without CNR, you have to use the command-line apt-get command.

If you want to try Freespire, you have two options. If you have a high-speed Internet connection and a CD-ROM burner, you can go to the Web site: http://www.freespire.org. Once at the download page, you will find instructions on how to download the Freespire CD image via BitTorrent or FTP, then simply burn it to a CD-ROM with your favorite burning software. If you don't have a high-speed Internet connection and/or don't have a CD burner, http://www.osdisc.com will burn and ship a copy of Freespire to you for a modest fee.

When you boot the Freespire CD-ROM, you will see a menu with four items on it. The first choice is to install on the hard drive. The second is
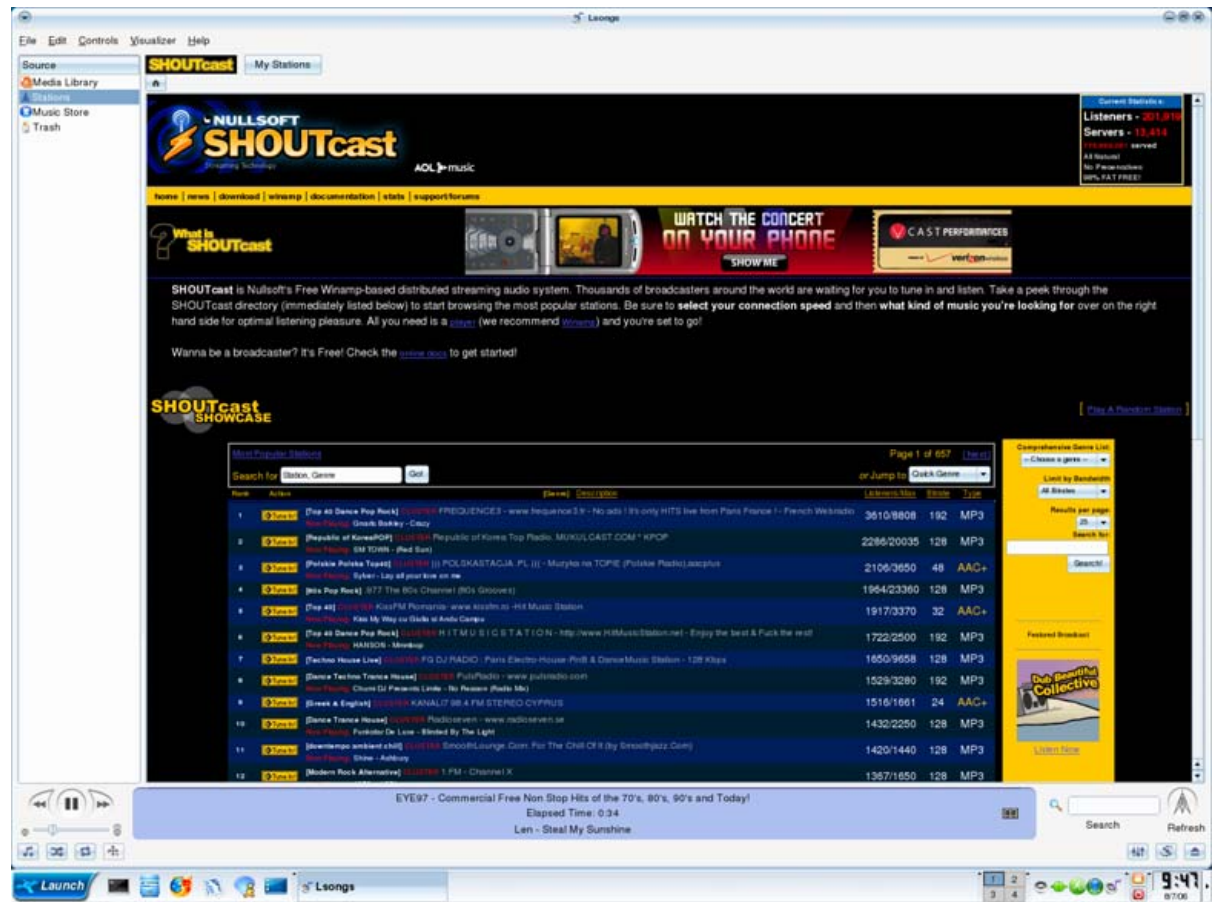

Figure 3. Lsongs

to boot the machine as a live CD, so you can see what Freespire is like without touching the hard drive. The third option is to change the partition setup, where you can make one hard disk appear to be multiple hard drives. The fourth option allows you to tweak the system settings.

The live CD option has been available for some time with other distributions, such as Ubuntu and Knoppix. With a live CD, you can try Freespire before you install it on your computer's hard dive. The live CD option allows you to see the look and feel of Freespire without committing to an installation. You also get a chance to test Freepire's compatibility with your hardware setup—in other

words, it's a way to test the video, sound and other parts. The live CD option also allows the install CD to act as a rescue CD, so if your system has a serious problem and you have some expertise, you can fix those problems without having to reinstall everything.

If you do decide to install on the hard drive, you will be asked a series of questions, starting with on which drive to install Freespire. You also will be asked for a computer name, and then for a user name, real name and password.

From there, simply sit back and watch the progress bar across the bottom of the screen while advertisements for features in Freespire pop up on the screen. At the end of the install process, you will have to agree to a software license, and then you can tweak various settings, such as your current time zone and/or screen resolution. In summary, it's a straightforward install process.

Of particular note, the test machine I used for the install had an older NVIDIA-based 3-D video card. With typical Linux distributions, NVIDIA cards cause a modest, but definite amount of grief. Freespire automatically detected, painlessly supported and dealt with that video card. I then shut the machine down and replaced the NVIDIA card with an early ATI 3-D video card. At boot time, a menu popped up regarding the change in video cards and asked for confirmation. I selected the redetect option, and from there Freespire dealt with the change automatically. This isn't quite as nice as, say, Red Hat's Kudzu, which autodetects hardware changes, but pretty painless none the less.

With the installation complete, upon booting, you'll notice that Freespire has paid attention to appearances throughout the package. For example, all of the graphics are very polished. It's hard to miss—this distribution just looks good everywhere.

Two particularly interesting applications that are included with Freespire are Lsongs and Lphoto.

The Lsongs program is a very slick audio player that will play your MP3 files as well as connect to AOL's SHOUTcast to allow anyone with an Internet connection to listen to more than 12,000 audio servers worldwide—everything from spoken word to classical music to the latest techno tunes. Although SHOUTcast clearly favors high-speed Internet connections, a few sites work with 56K modem connections.

Lphoto is a free and fairly comprehensive digital photo organizer that includes such goodies as red-eye removal, cropping images, burning images to a CD-R and directly imports images from more than 700 models of digital cameras.

So, why am I not dropping my current favorite Debian distribution that I wrote about in the April 2006 issue of *TUX* and replacing it with Freespire? Well, there are issues with Freespire, many of which I expect will be resolved over time. Remember that as of this writing, Freespire is only at version 1.0.2, so there are still some rough edges. KDE is the only available window manager for Freespire, thus GNOME fans are out of luck. If you want to install Freespire in a language other than English, or on a non-Intel x86-compatible CPU, you also are out of luck. Although I know the Linspire people need to make a living, I am not thrilled with CNR's current fee arrangement, which starts at $19.95 US/year. With Debian, when there is a problem, there is a great deal of support Web sites to help—something not yet available for Freespire. Also, Freespire's focus is just the desktop; it is not looking toward a server version, which is a point of view I have mixed feelings about.

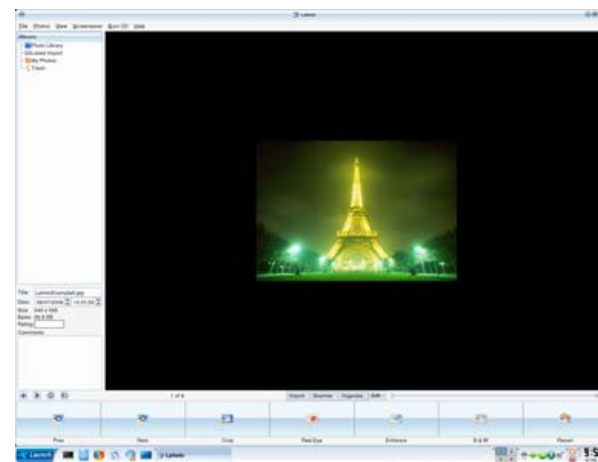Still, although Freespire is not yet ready for

Figure 4. Lphoto

serious work around my home office, this is a Linux distribution to watch, as it quickly could turn into a serious contender against desktop-oriented distributions like Ubuntu or Fedora Core.■

EDITOR'S NOTE:

On August 9, 2006, Linspire, Inc., announced the immediate availability of Freespire 1.0. Hopefully, a few of the issues Colin identifies here have already been fixed. Ahh, the magic of community-led open source.

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 the Greater Toronto Area Linux User Group and is moderator of the Unix Unanimous user group.