TUX

The first and only magazine for the new Linux user

ISSUE 10 • FEBRUARY 2006

Sonos Digital Music System
Music sharing with no wires

Firefox 1.5
More reasons to love the popular browser

OpenOffice.org 2.0
Delivers New Functionality

Find out how you can use new features to create slick presentations, finish your homework and build easy-to-use databases all thanks to *TUX*.

READERS ANSWER THE $64 QUESTION
TUX explores the true cost and value of Linux software

HYDROGEN ROCKS *TUX*
Bang a gong with an entertaining and easy-to-use drum machine

NEW DIVERSIONS FOR *TUX*
Rock your world with *Neverball*

THIS MONTH'S MANGO PARFAIT:
Mango is back and promises to be the best humble and beautiful genius while she explains how to mount a floppy, fine-tune MEPIS and define new MIME types.

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TUX

ISSUE 10

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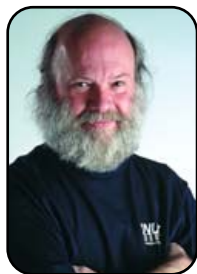- Reviews: Nokia 770, Linspire Mini and the new Pepper Pad
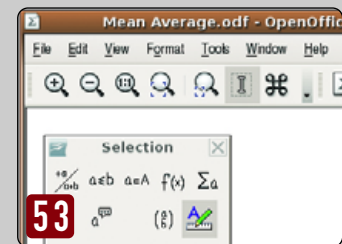
FROM THE PUBLISHER

Linux Everywhere, Taken Literally

Linux adoption is a no-brainer for countries not as rich as the United States.

PHIL HUGHES

In an article in *Brazil Magazine* (http://www.brazzilmag.com/index.php?option=com_content&task=view&id=4170&Itemid=49), there is a description of what I would call Brazil's domination plan for Linux. I am thinking this may be the model the world needs.

The plan is to get hundreds of thousands of low-cost Linux systems into the hands of average citizens. Besides a complete Linux system for no more than $440, there are low-interest loans available and special low rates for Internet connectivity.

This is a government-sponsored program. It's not a give-away, and it makes good economic sense. The government end is really just to assure the systems will meet some minimum requirements and be financeable.

WHY IS IT GOOD ECONOMIC SENSE?
First, access to computers is just a good thing. It increases literacy and also decreases costs of supplying information. That is, you can provide access to anything—including government services—at a lower cost and more quickly with Web access rather than with phone calls and paper mail. This is a big plus.

Outside the US, there is another benefit to this program; the program is Linux-based. If someone buys a commercial operating system, you are basically guaranteed that the commercial operating system we're talking about is made in the US. That increases costs to the consumer, and it also puts money into the US economy, or at least into the pockets of the US company.

If, on the other hand, you are in Brazil or Nicaragua or wherever, buying commercial US software just exports your national currency to the US. Looking at this from the perspective of someone who lives in Nicaragua, I am sure that Bill Gates doesn't need any more money

THE PLAN IS TO GET HUNDREDS OF THOUSANDS OF LOW-COST LINUX SYSTEMS INTO THE HANDS OF AVERAGE CITIZENS.

from Nicaraguans. Thus, even Bill Gates should be promoting Linux here if he has the best interest of Nicaraguans at heart.

So, what's the downside? Well, from the point of view of nationalism, there really isn't any. That is, you get fully functional computers, and you get to keep your software dollars. As this effort grows, the effect snowballs. That is, as the Linux market share grows, more vendors become interested in Linux. It gets easier to buy a scanner that works with your system, and even easier to get your Internet connection set up.

See where I am going? This is that old Linux World Domination angle that Linus mentioned so many years ago. The difference is that when I first thought of it, I lived in the US. Thus, I figured any world domination attempt would have to start there. I totally missed the fact that it was easier and

more economically sound to start it elsewhere.

Okay, back to the numbers. They are projecting 500,000 Linux (and KDE-based) desktops in the first four to six months of the program. That, in itself, is a significant jump in the number of Linux desktops. How significant is hard to say, because you can't simply count licenses (or computers sold) to get the number. If we go with the Linux Counter's (http://counter.li.org) guess of 29 million systems total, we are talking close to 2%. That includes servers, of which there are many.

More important, this could mean a close to 2% increase in systems worldwide with just one country jumping on the bandwagon. If this were the United States or one of the bigger European countries, I would be less surprised. But, this is South America.

If we shift our attention to Asia,

China is the other "Linux country" that is coming of age. China has developed its own CPU for running Linux (Dragon) and its own version of Linux (Red Flag Linux). A recent press release (http://www.redflag-linux.com/jujiao/enews_view.php?id=1000000036) shows that there is cooperation between Linux vendors in China, Korea and Japan. If you could get the number of potential users among these three countries, you will see a huge upside for Linux.

As the majority of *TUX* readers are in the US, let's take this back there. Are you going to get left behind? Well, this is where you have a choice. You are reading *TUX*, so you have at least taken the first step. Although it may be a bit harder for you to get on the Linux World Domination bandwagon than for someone in Brazil or China, it is not that hard should you choose to be involved. Linux is happening all around the world. Linux is the future. I encourage you to participate in that future.■

Phil Hughes is Group Publisher for SSC Media Corp.

FROM THE EDITOR IN CHIEF

Building Momentum toward a Desktop Linux Reality

There is growing support to resolve the main inhibitors that prevent wide-spread adoption of Linux as a desktop. The Open Source Development Lab is working hard to eliminate key problems for independent software vendors.

KEVIN SHOCKEY

Late last year, the Open Source Development Lab (OSDL) announced a new project, Portland, that will be potentially helpful in creating a mass market for Linux on the desktop. For those of you not familiar with OSDL, it is a nonprofit organization dedicated to accelerating the growth and adoption of Linux in the enterprise. It provides state-of-the-art computing and test facilities in the United States and Japan. These facilities are available to developers around the world. OSDL also happens to employ Linus Torvalds, the creator of Linux.

The Portland Project is an initiative of the OSDL Desktop Linux Working Group (DTL). The DTL is working toward making the Linux desktop in the enterprise a reality by identifying and removing barriers that independent software vendors

(ISVs) face in developing on Linux, specifying the capabilities required of the Linux desktop and working with the Open Source community to address these tasks.

The Portland Project is the result of a December 2005 meeting of the DTL architects. This meeting came right after the release of the results of a survey conducted by OSDL during November 2005. With more than 3,300 responses, the survey provided some fresh insight and resolute confirmation of the top inhibitors preventing Linux desktop adoption. At the top of the list was improved application support on Linux. Specifically, this was the reason the DTL formed the Portland Project—to develop a common set of core technical requirements for Linux and open-source software on the desktop. The complete results of the sur-

vey are available at http://www.osdl.org/dtl/DTL_Survey_Report_Nov2005.pdf on the OSDL Web site.

As we have discussed and debated here in *TUX*, there are large groups of aficionados for both the KDE and GNOME desktops. If there is a division seen between fans of these desktops, there is an equal and perhaps more inhibiting division between application developers. The simple problem is that an ISV must choose between KDE and GNOME. The libraries necessary to write applications with KDE and Qt are completely incompatible with GNOME and Gtk. Project Portland will attempt to bridge the divide between these two software development platforms.

If the DTL can achieve their goal, many other inhibitors disappear and a clear path to widespread adoption

appears. If ISVs can write applications that easily run on both KDE and GNOME, more applications will become available for Linux. If there are more applications available with better support, it will eliminate the reluctance of original equipment manufacturers, such as Dell, to build, ship and support a PC running Linux and a full suite of open-source office productivity software. If it becomes easy to purchase and receive support for these PCs, the gates to widespread adoption will be thrown open.

Portland, named I assume for the city OSDL calls home, will address other major issues, including:

- Collaboration within the Linux desktop community on specifications.

- Providing ISVs and developer resources.

- Coordinating focus on drivers.

- Strengthening the ties between the desktop and kernel development communities.

Driver support was another top inhibitor identified in the DTL survey. Specifically, some respondents agreed on the need to simplify the process of installing and managing peripheral devices, including USB. This is also a critical issue for manufacturers of peripherals. Currently, only a few provide Linux drivers for their equipment. Unfortunately, they frequently don't offer assistance for the community to create the drivers. I'll pass on one suggestion that makes a lot of sense. When we decide to purchase new peripherals for our Linux machines, we should favor manufacturers that ship Linux drivers. This will help drive the market as a whole toward increased support for desktop Linux.

In conclusion, I wish the DTL much success in achieving their goal. I know I intend on joining the OSDL and volunteering to work with them to achieve this critical task. I additionally want to acknowledge and recognize the efforts of everyone associated with OSDL. I believe that they are focused on critical work and deserve our support. If you, your company or your school is using Linux, joining the OSDL provides valuable support for the OSDL to continue work on their mission. For more information, please visit http://www.osdl.org/about_osdl/ getinvolved_osdl.html/document_view to learn how to get involved. In addition, as has been mentioned here at *TUX* before, we often forget that much

of the software we love and rely upon is available for little or no money. However, this doesn't mean the projects and organizations that produce and support that software do not need our support. If you are looking for a nice tax-deductible donation, hey April isn't that far off, consider a donation to one of the many fine projects producing the software we use every day. Two other organizations providing great support to free and open-source software are the Free Software Foundation and the Open Source Initiative. Please visit https://www.fsf.org/donate or http://opensource.org/donating.php, respectively, to help support either of these organizations and their important work.

With every new collaboration, working group and project, we are getting closer to the point of widespread desktop Linux adoption. In the meantime, there is no time like the present to make your contribution. When it finally does happen, how exciting will it be to claim that you were there and helped make it happen? I can't think of any better New Year's resolution than committing ourselves to help build momentum for desktop Linux.■

Kevin Shockey is Editor in Chief of *TUX*.

LETTERS

Doing Things with Linux

I've really enjoyed learning about Linux from *TUX. TUX* is great! I'm a semi-clueless newbie. Well, maybe not so clueless—I have been building my own computers since 1984, started at the command prompt in something other than MS-DOS, the oldest file on my hard disk probably dates from before you were born and so on. Also, I have burned and run a couple of LiveCD versions (Puppy was neat!) and sort of poked around (not the kind of "poke" we did back in the Tandy RS days). So, I am still pretty clueless when it comes to Linux, but have some understanding of basic stuff.

However, I want to *do things*. The things I want to do are:

1. Create a Linux-based server to provide a local (parallel port or USB) printer (HPLaserjet 4) to a LAN with different OSes (Linux, Windows and Mac).

2. Have a server provide encrypted storage for backups from LAN with different OSes (Linux, Windows and Mac boxes).

3. Have the server also manage traffic to and from the Internet, inspect packets and handle routing on LAN with different

OSes (Linux, Windows and Mac).

4. Have a LiveCD with the capability to search and quarantine malicious files for all types of OSes (including Win and Mac).

I researched item 4, and it doesn't look possible today, because Windows filesystem are still a hurdle, and there is no antivirus/antispyware that combines all OS signatures in a single dat.

Item 3 would be of great value, especially if the client machine process has to identify itself and be on a whitelist already at the server in order to send anything through the server and out onto the Internet. It could even be strengthened with keys entered manually by an admin at setup.

Item 2 would be even neater if there were a common interface multiple OS backup/encrypt program.

Item 1 means that a Linux-based printer management program has to accept what the various OSes can offer and make it happen—while maintaining sufficient communication with the client machine so that it is satisfied that "printing" happens.

Is there any really good advice as to how someone might go about learning what is possible? Who are the experts and where are they? Will they respond to queries of this type, or should I "buy the book"?

PS: I may have asked a question that inspires a new product. Any rights inuring to me are hereby released to the general public—have at it guys!—and if it can kill an IP patent, even better (with a one-click here and a one-click there, old MacDonald had a farm...).

--
TV

You may want to try Linux Journal *for help doing some of these things.—Ed.*

TUX Appreciation from Serbia

I am writing you from Serbia where Linux is the OS that builds its way to users and slowly becomes the major OS on most home PCs. I am not a new Linux user, but I love to read your magazine for fun—you give great descriptions and news from the GNU world in a very interesting way. What can I say? You are great.

Now, here are some things you could do to get even better. Why don't you write some articles about using Blender, PovModeler or some video editing soft-

ware? I believe that I am not the only one who uses these types of programs on Linux. It would be interesting to show that you can do these operations on Linux, as on Windows, because migrating programs from Win2Lin is major problem for most users who start using Linux.

I often get questions like: "Do I have something like SoundForge in Linux?" or "Do I have Photoshop in Linux?" People don't know about most programs that do the same thing even better, although they are dual-boot users. It would be good for them to know about some things like that.

--
Ivica

Thanks for the kind words, and thanks for the article suggestions. I agree. I bet there are many people potentially interested in those topics. Now comes the hard part, finding someone to write them up for us.—Ed.

TUX Appreciation

I had started reading your on-line magazine since the first issue, and I would like to say THANK YOU for the great magazine.

--
A Linux User

A Print Version of *TUX*?

I have been playing with Mandrake since version 9. I've kept current, re-installing each newer version as it became available. I even considered joining the Mandrake Club.

As of this date, I am still playing. The reason is that there just doesn't seem to be any source *devoted entirely to real newbies or beginners*. I have a box entirely devoted to Mandriva, but my daily excursions have been with another box devoted to Windows 2000.

What little I know about computers and operating systems has been gleaned from the Net itself and most important, a magazine known as *PC Novice*, which has become *PC Computing*. I continue to subscribe after all these years.

The reason I am relating this is that I would love to give *TUX* a try as a hard copy. Your offer of an on-line subscription is most generous, but I (and a multitude like me who live in rural areas) have deplorable phone service. My best connection has a download rate of 2.9 kbs. Yes, that's right, two point nine.

Downloading anything takes forever. Most of my updates and downloads take place at night. I merely start the download and then go to bed. If I am lucky, the phone connec-

tion won't disconnect during the night and my file will be available in the morning.

This is a roundabout way of saying that if you come out with a hard edition of *TUX*, I will gladly subscribe.

--
Owen Berio

SAMBA Basics Already Covered

Having read *TUX* since issue 1, there's one thing that I've continued to fight with, and I wondered about the possibility of an article explaining the basics of Samba. I'd have thought that Samba is the sort of thing that new users might want to try. Plus, although there seems to be an absolute deluge of info out there, so much of it is given in a confusing and over-complicated way.

I would like an explanation on doing a basic network of, say, one Linux system, one Windows system and one printer. Surely that's the sort of setup you might expect to find in an average new user's home.

I know that I'd certainly benefit from such an article, and I suspect that a number of other readers would as well. Keep up the good work.

--
John Davis

Samba has already been covered in the August 2005 issue: "Dancing with Windows".—Ed.

Praise for *TUX* and John Knight

I would like to thank you for this wonderful magazine. I have been a GNU/Linux user for the past four years. I started using it at the age of 15. I especially love John Knight's "The World beyond KDE and GNOME" series [see the September, November and December 2005 issues for John Knight's articles on lightweight desktops]. I hope you review AfterStep. I am still not shifted over to Linux fully, because I can't get my internal modem working. It's a PCTEL HSP56 modem. I use Ubuntu 5.10 (Breezy Badger).Thank you for this wonderful magazine.

--
Vignesh

A Big Thank You for *TUX*

I just wanted to write a note of encouragement to the staff and supporters of *TUX* magazine.

After recently receiving a threatening letter from SBT, our organization has been seriously looking into open software. We are migrating to OpenOffice.org and are

encouraging our employees to consider Firefox and Thunderbird—but we had no intention of moving away from Windows. Windows is so easy, and Linux is for advanced computer users, right?

I was at the airport the other day, and I saw a magazine about Linux. I picked it up and flipped through—it may as well have been written in Chinese. See? Linux is for serious computer heads only. Then I ran across an ad for *TUX* magazine: "The first and only magazine for the new Linux user". I looked you up the very next day and began reading from issue 1.

I got so excited. Linux was beginning to look absolutely doable. Not only is it more cost effective, but it is also more powerful and not so difficult to use after all—if you have the right magazine to help you through the transition. I took your magazine and my enthusiasm to our system administrator.

Today, I'm installing Linux for the first time. If all goes well (and I expect it to), our organization may begin the move away from Microsoft some time in the near future.

A big thank you to our friends at SBT and

TUX magazine for showing us that we have so many options.

--
Jeanne-Marie

Be sure to let us know how your installation went, and I'm glad we could help.—Ed.

RE: Letters—A Love Affair with Linspire and Breakup with OpenOffice.org

Another helpful hint to speed up OpenOffice.org startup, along with the Quickstarter, is as follows [see December 2005 Letters]:

Start Writer and select Tools→Options. From the first branch of options (OpenOffice.org) select Memory. Set the Graphics Cache Use for OpenOffice.org to 32MB (default is 9MB). Select OK. Closer Writer. Close the Quickstarter. Restart Writer, and you should notice a quicker startup.

And now for an unrelated request for an article, could you please run something on podcatching tools? Under Windows, I have used ipodder lemon and FireAnt, much preferring FireAnt, but it is unfortunately not available for Linux.

--
David

In Defense of Mango Parfait

Hmmmm…does she need defending? I must admit, reading some of her comments is a bit like watching those shows that people go on to tell huge audiences about the secrets their husbands/wives don't know about—like not being able to tear your eyes away from a train crash, I just can't *not* read it. Then, when I think, "I'd never write to her", I wonder if I would, just to see what she'd say to me.

I sometimes find her comments confronting (a polite way of saying somewhat rude), but others are *very* funny. My only conclusion is that if you want to read a cool, clear, unemotive technical explanation, she's not your girl.

If you want a clear, technical explanation with chili and a very idiosyncratic presentation, then okay. Like Tigger without his bounce (for those in the know), he's just not Tigger.

My only hope is that people, both new and not so new to Linux, will not be put off, but rather will enjoy how she writes—see it as adding some serious colour to their reading and gain lots of useful information in the bargain.

Overall, I'd say, "Keep it up, Mango." I look forward to being confronted and entertained each month.

--
Patrick Elliott-Brennan

Possible Problem with Klik and Firefox

Okay, I'm biased. I once wrote to Jes Hall before she was famous, and I avidly read her articles. Unfortunately, I experienced a problem that I think others should be aware of (though it is not necessarily the case that everyone will have the same problem).

I downloaded Firefox 1.5 using Klik [see Jes Hall's article "Klik and Run" in the December 2005 issue]. Other apps have worked well, but Firefox borked my desktop install, and I had to uninstall and reinstall it to get it back to working order. I've posted to Klik, and another poster has asked for people to comment if they've have similar problems with this particular application.

In short, if it gives an error regarding "chrome", do not select okay!

Please see http://www.knoppix.net/forum/viewtopic.php?t=22350.

That said, gcompris (for my children) works brilliantly.

--
Patrick Elliott-Brennan

Kudos for Evince

I skimmed over your review of Evince [see the November 2005 issue], referred to as Document Viewer in Breezy, and I was shocked to discover that although it doesn't render your fine magazine as well as Adobe's Reader, it does *remember* where I left off! I was so shocked to discover this that I had to double-check to make sure Adobe's didn't. This is just too awesome! Big kudos to Martin and the guys for such a nice program.

--
Alan

Praise and Thanks

I've just finished reading your newest *TUX* PDF. Great magazine. Very polished and professional. Thank you for the kind words about KDE throughout the magazine. With the recent 3.5 release and all of the associated effort, I'm sure the developers enjoyed all of the coverage.

--
Wade Olson

Re: A Brief Affair with Xandros, a Reader Responds

In the December 2005 issue of *TUX*, a reader asks for an alternative to TurboTax on Linux. I have been using TaxACT for the past four years. I converted to Linux more than a year ago (before tax time last year), and I used TaxACT last year even though I was on Linux. They have a Web version of their service that will allow you either to file on-line or file a paper return (you even can save a PDF version of your return for your records). I think the best thing about TaxACT on-line is that you can start your filing at home, add to it from work and even finish and file from a different location/computer.

--
Jason Dion

Re: A Brief Affair with Xandros, TurboTax on Linux

I've been reading your magazine since the first issue, and I think it is only getting better. *TUX* and *Linux Format* are the only Linux magazines I have continued to read on a regular basis. In the December 2005 issue, I notice you have a letter from a gentleman who says that he will happily divorce Microsoft if he can figure out a way to do his taxes on a Linux computer, and says that he

uses TurboTax for all of his taxes. Because you did not answer that objection, I feel I should. Great news for all! If you visit http://www.turbotax.com, you will find that you can use TurboTax on-line without downloading anything, regardless of the OS you use. I have used it for the last three years and find it to work wonderfully. The only thing you will miss out on is the ability to import your tax information directly from Quicken; however, if you use GnuCash you can export its files as .qif files. That might allow you to import the information into TurboTax, but I have never tried it, so I can't vouch for it working. Keep up the great work!

--
Bryan E. Parks

An Issue with Sony PSP Compatibility

First of all, let me say that I have been reading your magazine for about six months now, and it's great. It's at least as good as *Linux Format* although not as in-depth.

I just wondered if you would consider doing an article on problems using gadgets with Linux, such as the Sony PSP. I am using Debian Sarge, and although I can access files on the PSP memory stick via the PSP USB cable and write to it, the PSP does

not seem to recognise them as being present. This is not the first time I have had this problem using Linux, and it is frustrating as I long to rid myself of Windows on all my PCs. It's these unexplained incompatibilities that often put new users off, and maybe some publicity would stop them from happening in the future.

--
Reginald Norris

Do We Need a *TUX* Index?

I have been reading *TUX* since the first issue, and as a newcomer to Linux, I find it very interesting and informative.

However, I now have nine issues, and hopefully there are many more to come. Therein lies the problem. I am finding it increasingly difficult to locate/look up articles. I anticipate that this will become a major headache as time goes by and the number of issues continues to increase.

Would it be possible to make available an overall index that would encompass all issues already published? If this could be updated each month and made available alongside the monthly issue, I feel it would be a great help for back-referencing for us all.

--
N.McG.

I know someone that would really appreciate a fully indexed database of TUX *issues. Me! Please drop me a line if you also think this would be useful at ed@tuxmagazine.com.—Ed.*

The Bane and Blessing of Linux

In response to Bill Rowland's question in the December 2005 issue ("A Brief Affair with Xandros"): Bill asked how the Linux community does taxes without something like TurboTax. You can do your federal and state taxes on-line and efile at http://www.taxact.com.

I just started subscribing to your magazine and really enjoy it. I just want to comment on the Linux distro wars. As a fairly newbie, I think the multiplicity of distros is both the bane and the blessing of Linux.

On the one hand, almost everybody should be able to find a distro that suits their needs. I am currently using Kanotix because that was the only one I could find at the time that would find all of the hardware I had in my machine. So, if there had been only one flavor of Linux available, it would have required me to customize and recompile the kernel and do all

the tweaking necessary to support my hardware.

On the other hand, it makes it harder for folks who are not gurus to collaborate. I might be somewhat familiar with where Kanotix (Debian) expects things to be, but I would have a hard time helping a friend who is using something else, like Red Hat. I'm just grateful for resources like you that can help me get up to speed.

--
Dave

Reading *TUX* Magazine on My Nokia 6680 Smartphone

Let me congratulate you for your fine magazine. I have learned a lot from it—thank you!

I travel a lot for my work, without a laptop, so I would like to make use of my Nokia 6680 Smartphone's ability to display PDF files to read your fine magazine on the road.

The problem is the Nokia is capable of loading files up to 1MB in size, and it's limited memory capacity prevents it from loading the whole file to memory.

I would like to be able to convert the files, somehow, so they will load a page at a time and be optimized for 177x208 pixel display. Can you help me?

--
Amichai Rotman

Love the *TUX* magazine!

I have extremely sore wrists at present, and one diagnosis is that it is due to lots of keyboard work. It has therefore been suggested that I use some speech recognition software to help me. And, of course, everyone starts making suggestions that are Windows-based.

But I use Linux; I want to use Linux; I love using Linux; I am more productive using Linux. Well, at least I was *more* productive. But if I am forced to adopt Windows-based voice-recognition software...well, I'd rather not go there! Could you please do me a great service, and review some Linux speech recognition software?

--
P.

With a little research I have confirmed that most speech recognition information on the Web is a little outdated. This definitely is an area that deserves attention.

I believe that most of us could benefit from learning more about accessibility tools for Linux. In fact, the unavailability of accessibility tools within OpenOffice.org helped the opponents to object to the OpenDocument implementation within the State of Massachusetts.—Ed.

Mandrivia for Mobile Wireless Ease

I've been an avid reader of your magazine since the second issue and always have been impressed with the friendliness of your magazine to new users. I was very surprised to see your article on ndiswrappers and wireless networking in the August 2005 issue of *TUX*. I read in fascination as you took us through each step of the process. But for laptop users, there is a much easier way. May I suggest Madrivia 2006 free edition?

Mandrivia claims to be the only Linux distro for laptops, and I have found it to be completely true. I've tried Fedora Core, SUSE, Ubuntu, Debian, Xandros, Linspire and a few others, but only Mandrivia found all my hardware, configured it correctly and—*here's the good part*—ran ndiswrapper as part of the installation. I was blown away with the ease of installing my Broadcom BCN94306 wireless card in Mandrivia. I simply chose to use a Windows driver and browsed to where my .ini file was on my hard drive. Mandrivia took care of the rest and ran me through the connection wizard.

I've been trying to find "my" Linux distro for nearly a year now. I've finally found it with Mandrivia. It is easy to install, easy to set up, and it found *all* my hardware with very little effort from me. All I needed to know was the name of my device and I was up and running.

I cannot recommend Mandrivia enough for laptop users who are having wireless connection problems. I can finally use my HP laptop the way it was meant to be— free and wireless.

--
J. Hudson

Vector Linux Appreciation

If people have an old machine and do not have the money to get a new one, they may want to give a try to a light distro. You also may like to review Vector Linux (http://www.vectorlinux.com). I installed it on my PC, and with less than 1GB, I now am able to hear all my music and watch my DVDs and use OpenOffice.org. So, I encourage you good people at *TUX* magazine to do a review.

--
Minor Morales A

Nokia 770

Now that the Nokia 770, an almost main-stream Linux product, has been launched, perhaps you could do a short (or longer) review on it. It certainly seems to have huge potential to open up completely new markets. It has changed my Web browsing habits considerably. It is certainly not without its flaws, which is exactly why it would make an interesting topic for you to cover. See where it's good and where it's lacking. What works as advertised and what doesn't.

--
Urho Konttori

I'm pretty excited about the Nokia 770 too, so look forward to a review in the March 2006 issue.—Ed.∎

Please send Letters to the Editor to editor@tuxmagazine.com

The $64 Question

In the December 2005 issue, *TUX* asked readers to respond to important questions on the Linux desktop. This special section compiles the responses and ponders the potential cost and value of Linux software.

KEVIN SHOCKEY

We received a lot of great responses to Nicholas Petreley's question to readers in his "What Will You Pay For?" column in the December 2005 issue of *TUX*. I decided that the responses deserved recognition, so we are including as many of them as possible. Often the explanations behind the responses were lengthy and off-topic, so we've trimmed the responses down to the key points.

As you might expect, the responses represent a good cross section of opinions and products. Some of the responses were popular and previously addressed in the Letters section of *TUX*. In summary, it was very common that people would pay for:

- Linux distributions.

- Linux-specific games.

- Utilities that help Linux run applications or games built for Microsoft Windows, such as CrossOver Office, VMware and Cedega.

- Special-purpose applications, such as com-

puter-aided design, genealogy, optical character recognition or tax completion.

A few responses indicated that they would pay for office productivity software, such as EIOffice or TextMaker, but in general, most are content to use existing "free" office productivity software.

Although many responders indicated that they would not buy software, they have or would consider donating to projects. As I have urged in my From the Editor column in this issue, I hope more people using free and open-source software will donate to projects. My gut tells me that far more people say they will donate than actually do. I know, because I'm embarrassed to confess, I donate less frequently than I should. On the other hand, sometimes we overvalue monetary donations and undervalue donations of time, support and effort. I'm also guilty of this. Since discovering free and open-source software, I've donated a lot of time writing, speaking and promoting free and open-source software. For me, the question I have to answer is "Have I donated enough to ensure that the projects or companies that create the software I use, and the ecosystem that sustains them, survive and able to continue to do what they do?"

Without further delay, I would like to share some of the answers to the questions: "Would you actually pay for superior Linux software even if an equivalent 'good enough' program was available for free? If so, what would you put on your list of software products that you are willing to buy?"

Would I pay? Man, that is a tough question. Being so accustomed to getting everything I need for free, plus being so stable, I just don't know. If the software is far superior, runs on Linux and costs $$$, I would definitely consider it over using a Windows platform/application. What is my final answer you ask? YES, I would.—*Matt*

I personally keep my windoze partition intact on the off chance that I want to run *KOTOR 2* or *Guild Wars*, but I spend about 99% of my time in Debian (I know, it's weird to run Debian as a desktop, but I love the power).

I would pay money for native versions of games for Linux. I would perhaps pay more for Linux-only versions of games— $20 for a port and $45 for an exclusive would be about right.—*Aaron Duty*

I too wanted my Linux OS for free. When I saw a couple of months ago that Linspire was giving away copies of its Five-0 desktop, I signed up and got a copy, and planned on reconfiguring it to use apt-get (instead of the pay-for service Click & Run). Instead, I was so impressed with the ease of use of Linspire that I did something I never thought I'd do: I paid for Linux. Yes, I have actually coughed up $35 over the past two months and gotten the CNR Gold subscription plan.—*Kris*

Yes, to paying for a distro. I routinely buy each release of SUSE and would continue to do so (either SUSE or some other distro) provided the price point is in the $50–$100 range and the media includes a paper manual.

Yes, to paying for quality Linux applications. I am more than willing to pay for a Linux application provided it meets my specific needs, isn't already available free elsewhere and is of comparable quality to commercial software for the Win platform. Some examples would be a TurboTax for Linux, a CAD program able to handle auto-cad files and a 100% feature-compatible Excel.—*Scott Leighton*

Up until this point, I hadn't *paid* for any software that I had, and *most* of it was pirated. My life was changed when I started using Red Hat Linux 6.2. I found Linux to be an amazing operating system and have since moved my server(s) and workstation(s) to Linux, and have removed *all* traces of Windows. *All* my software is now either GNU GPL, open source or free (in cost). One thing has changed, however; I now donate to any project that I use and find worthwhile. I am actually "paying" out a lot more money than I was before, but because I want to, not because I'm forced!

In short, I would pay for non-free software, but it would clearly have to be a fair bit better. I would probably sooner donate $100 to a project such as QEmu (a GPL PC emulator) than buy VMware. I am not against people charging, but I guess I'm more inclined to encourage truly free (as in speech) software.—*Todd*

I have already paid for SUSE 6.0, 7.1 and 9.1. I purchased 9.1 after downloading 9.0. I loved SUSE 9. Every piece of hardware I had at the time worked perfectly, and I was so impressed that I went out and bought the PRO version of 9.1. This unfortunately was a mistake. They no longer supported my Intel 815 video chip for installs, and suddenly I have this blocky problem while in KDE (parts of the window are not fully drawn, and it looks horrid), which interestingly enough doesn't show up under GNOME.

I would pay for shared libraries that provide non-Linux functionality, such as a legal version of libdvdcss, a similar library to access iTunes and a bundle of codec libraries so I can view WMA and Quicktime files. I don't want full-blown programs. There are enough applications for Linux, and we don't need the bloatware crap that others add. I just want the low-level interfaces to work with Totem/MPlayer/XMMS/Rhythmbox.
—*Alan*

Your question is one of those "wrong" questions. As soon as software/information has a price, its value is greatly diminished. No, I have not misunderstood the terms. You see, if it is free, I can hand it on freely. I can contribute to it, knowing my small contribution will be free to all others. I know that all small contributions of others will result in vast benefits to me. As soon as so much as a peppercorn is charged for information its value is greatly diminished.

So what will I pay for? I won't. Not a single cent—as a matter of principle. However, I have a growing realization of the value of this free information. It is of great value to me and great value in creating the sort of society I wish to live in. If I go to the shopping mall and spend money, I'm pushing a largish lever that says "More Shopping Malls". And lo and behold, another dirty great shopping mall blights the landscape.

So now I'm going around looking for a levers that say things like "More Libraries. More Free Software. More Free Ezines. More Creative Commons Content". And I want to push on these levers.—*John Carter*

I operate a rudimentary home-office network. Being self employed, any time I spend on sysadmin-type activities takes me away from paying work. I will pay $500 for a Linux system in which I do not have to configure a single piece of hardware and which will remain current for two to three years. At the rate I bill my time, if I spend more than a couple of hours installing and configuring a system, it starts looking real expensive.—*Andy Carter*

I've seen letters from people who are looking for alternatives to Quicken. Quicken was the only program I needed from the MS world. At first I (bought) and used VMware just so I could use Quicken. It worked well, but I cringed every time I had to bring up XP just to run one program. Then I discovered CrossOver Office v5.0. Now I can have my Quicken and dump the MS virus for good. Well worth the $39.95.—*Steven Ahlstrom*

I will surely buy CrossOver Office or VMware. And that's just for running an electronic simulation program for which I can not find a replacement. So, I have to go to my university to run it.

But here in Argentina, there's one big factor that would prevent me from doing it: one dollar is three of our Pesos, which roughly means that my pocket well feel a $60 US order as an $180 US one. And the effort to get 1 dollar is equal to getting 1 Peso (let's say we are even in that).

You may think this is a wonderful scenario for promoting FOS, but it happens to be quite the contrary. The situation has caused only one thing, pirating. And that's a more difficult thing to eradicate. A copy of Linux has the same value (if not more) than a copy of any proprietary software. "Why switch to Linux if I can get all the software I want for almost nothing" is one of the most common phrases you will hear when attempting to show FOS's virtues.—*Lisandro*

First off, being a student, I can hardly afford to buy software, and as such, open/limited-version distros suit me best (I use openSUSE 10). As soon as I start earning a decent salary, however, I will most definitely hit the donate buttons of several of the programs that I use day to day to show my support. But, unless there's proof beyond doubt that the software I'm buying will give me 101% of all the features advertised, with minimal tweaking on my part, I will not buy it and rather I'll stick to the "good enough" versions.—*George*

I would flat out be willing to pay for Cedega for Linux. I'm sure I could get Wine to do what Cedega does, but that will involve work defeating the whole purpose of the fun. I'm just a student with a low-end laptop, so it wouldn't matter till I get a job. My only issue is getting game developers to care. A few games isn't nearly enough. Aside from id and Epic Games, I can't think of any major developers that put out games for Linux. And will having a software package like Cedega discourage developers from developing Linux-native engines, if they see that Linux people are getting it to work in another way? I'm currently a content Ubuntu user, but honestly native Linux game support is practically non-existent. What can we do turn this around?—*Christopher*

TextMaker word processor (http://www.softmaker.de)—$49 regular price. It beats the pants off OpenOffice.org in speed and produces acceptable output in M$ Word format.

Mandriva Linux 2006, seven-CD set from Linux Central (http://www.linuxcentral.com)—about $20 including shipping. Includes the NVIDIA video drivers I need, which (I think) aren't included in the Mandriva download edition.*—David McClamrock*

Using the recommendation of my nephew, who took sympathy on me, I purchased SUSE Pro Version 8.2. I later purchased the standard version of 9.0 and 9.2. After using those for a while, and staying confused most of the time because of lack of support and money spent with little return, I turned to Fedora (at that time FC3). I learned a lot through groups, and what I perceive is greater consistency in operations. I am now using FC4.

Although the majority of my software is downloaded, I have purchased Win4Lin, and I did buy Xandros 3.0. I'm still with FC4. I try to purchase software when possible, because I believe the developers should be rewarded.

As I said, I do believe software should be purchased, and I appreciate the free concept to allow me to use and try and make decisions. This is superior to the Shareware of Windows and what I term advertiseware of Windows.*—Harry DeLong*

I would pay for good games for Linux. My only reason for keeping Windows around is for games such as *Diablo2*, *Doom3*, *Microsoft Flight Sim* (I also run *Xplane*, which does exist for Linux) and the *Rollercoaster Tycoon* series.

I currently run *Xplane* and *America's Army* only on Windows, as that is set up for games. I plan on building another system next year as a dedicated Linux box (currently, I dual-boot) and at that point I will seriously consider purchasing a license for *Xplane* for Linux and well as running the Linux version of *America's Army*.*—John Bucsek*

If there were a really good optical character recognition (OCR) program for Linux in the $100 price range, I would probably buy it.*—David McClamrock*

I would pay for Tax Software that runs natively on Linux!*—Howard*

I'd pay for Ubuntu (or maybe Kubuntu) *with support*. For some reason, I like them better than others I've tried. I guess I'm odd, because I seem to relate to GNOME better than KDE—I've found it easier to configure. I'd pay for support because I'm in need of some installing-and-getting-it-running-right help. I'm shy about asking, once more, for help in the forums, even though I find hints in the archives quite often.

I'd pay for a good CAD system, something like CADKEY, that is, if my consulting required it.

I'd pay for Ancestor Quest genealogy software. I find GRAMPS sourcing awkward. If LDS would port PAF 5 to Linux, they'd have a big-time winner.*—Dave*

In conclusion, depending upon your culture, your politics, your economy or your beliefs, the concept of paying for something that is "free" can be one of the most confusing and divisive issues associated with free and open-source software. For some, this isn't even an issue, and the logic behind their positions is extremely clear—to them. It is challenging not to monetize things when most of us live in societies that are driven by money. For me, the root of this confusion appears to be due to our tendency to attribute a cost and place a value on everything. This situation is complicated further when we over-dramatize the "success" of the software industry as we know it. As one of the replies stated, maybe these are the wrong questions to be asking in the first place. What is most important to me is that we do whatever it takes for us to continue to have choices when it comes to the software we run on our computers. If that solution entails buying, let me get my credit card and start shopping. If the solution requires donating, I'll continue to give my money, time and creativity to ensure we still have a choice.■

Kevin Shockey is Editor in Chief of *TUX*.

Q&A with Mango Parfait

Replace the tubes in your floppy-based computers, fix up Mepis and repair your (cough) innocent Usenet downloads.

MANGO PARFAIT

Hello, it is me again. I hope you had great holidays. I had great holidays. I got almost everything I wanted for Christmas. I am still waiting for someone to buy me one of the Virgin islands. My friend Bunny says she does not want a Virgin island unless it has armadillos. Do the Virgin islands have armadillos on them? I do not know. I hear they have little bugs I do not know how to spell. They are called something like no-see-ums because you do not see them but they bite you. If this is true, maybe I should ask for a Pacific island instead of a Virgin island. I do not know if I want to own an island with invisible bugs that bite.

I make many New Year's resolutions for 2006. My first resolution is to be more humble. I am going to be so humble everyone will be very impressed by how humble I am. People will walk by and say, "Look at Mango. She is such a genius, so beautiful and yet this has not made her head big. She is the most humble, beautiful genius I know." Bunny says I should be proud of myself if I can live up to this resolution. Why does she say "if"? Of course I can do this resolution. I am good at everything I do. You wait and see. I will be the best humble person who ever lived.

I enjoyed your questions. Keep sending me more good questions like these.

Q **I have tried several Linux distros, but I think I have found my home with Ubuntu.**

There is just one thing I am disappointed with when using Ubuntu. I am not able to get permission to write to my floppy media, which has root permission. I can get permission for /dev, but not for /fd0. I have posted on three different forums, and the only replies I received were people that were having the same problems as myself. I am wondering what all the secrecy of writing to a floppy in Ubuntu is about? Can writing to a floppy media in Ubuntu be done?—*Sarah*

A Hi Sarah. I like your name. One of my best friends is named Sarah. She tried to steal my boyfriend Otaku from me, but she couldn't make him like her more than me. I forgive her. She's still one of my best friends.

I cannot write to the floppy in Ubuntu Breezy Badger either if I use GNOME Nautilus. I cannot even make Nautilus mount the floppy drive. Here is something crazy. Nautilus says that the floppy device /dev/fd0 belongs to the root user and root group. This is not true. If you know how to look at the owner of the device /dev/fd0, you will see that it belongs to the root user and a group called floppy. GNOME people tell me the GNOME philosophy is to make a desktop that "just works". Maybe they need to change the motto to "it just barely works", because it does not work with the floppy drive in Ubuntu 5.10.

At first I look for the problem. Then I give up. I ask Otaku

what he thinks. He says if you are still using a floppy drive, then maybe you need to replace one of the vacuum tubes in your computer. I do not understand this answer, so I go back and look for another answer.

Like I say before, the /dev/fd0 device belongs to the group called floppy. Ubuntu automatically sets users to belong to the floppy group. This means you should have permission to write to the floppy. If the device belongs to the floppy group and the user belongs to the floppy group, you should be able to mount the floppy and write to the floppy. I do not understand why this does not work, but I guess that it has something to do with the logical volume manager.

So I find a way around the problem. I will tell you the answer in a minute. First let me tell you some interesting things I find when I search for the problem. When I install KDE on Ubuntu Breezy Badger, KDE can mount the floppy. But it will not show you the files in Konqueror. Konqueror just spins the loading icon and never shows you the files. But I check and the floppy is mounted.

So I try Kubuntu Breezy Badger. Kubuntu Breezy Badger does not have any problems mounting or reading the floppy with KDE! I do not understand this. I thought Kubuntu Breezy Badger was the same as Ubuntu Breezy Badger with KDE. So why does the floppy work in KDE on Kubuntu but not in KDE on Ubuntu? I do not know. Now here is something even more crazy. If you follow the directions on the KDE Web site to upgrade Kubuntu Breezy Badger to use KDE 3.5, you get the same problem you get with Ubuntu and KDE 3.4. You can mount the floppy, but Konqueror will not show you the files.

Are you confused? So am I.

So here is how you can get around the problem. The answer is the same whether you use KDE or GNOME. Press Alt-F2. This lets you type in a command. Type the command:

```
mount /media/floppy0
```

This should mount your floppy. Now, use Nautilus or Konqueror to go to the folder /media/floppy0. If you have files on the floppy drive, you should see them in the Nautilus or Konqueror window. You can drag and drop files to write files to the floppy if the floppy is not write-protected.

Make sure to press Alt-F2 again and type this after you are done:

```
umount /media/floppy0
```

You should not lose any data you write to the floppy if you do this.

This should work for you. If it does not work, check the file /etc/fstab. I think you are using GNOME, because you are using Ubuntu. Open a terminal window and type this command:

```
sudo gedit /etc/fstab
```

Enter your password if it asks for one. Make sure you have this line somewhere in the file:

```
/dev/fd0 /media/floppy0 auto rw,user,noauto 0 0
```

Make sure you have the directory /media/floppy0 on your system too. You can make this directory yourself if it is not there. Stay in your terminal window and type this command:

```
sudo mkdir /media/floppy0
```

You should not have to edit your /etc/fstab file, and you should not have to make the directory /media/floppy0. But I give you this information just in case.

Here is my last advice. Keep your Ubuntu system up to date. Sooner or later someone who works on Ubuntu should fix this problem and you will not have to work around it anymore.

Q Dear Mango, 1) When logging in (init 5) under Simply Mepis (kernel: 2.6.7/2.4.2x) I get an X server with 1024x768 pixels and a resolution of 100x100 dpi. On opening a second X session (console Alt-F2, GUI Alt-F8) I get an X server with 1024x768 pixels and a resolution of 75x75 dpi. This looks much nicer on my Laptop TFT screen. Why is this happening (the difference in resolution), and how can I set the desired resolution myself?

2) Simply Mepis uses KMail or Mozilla Mail and Mozilla as browser. I downloaded and installed Thunderbird and Firefox (also jre). Although one thing I can't avoid is when I open a URL in Thunderbird, I automatically get the Mozilla browser to open, and of course I would like to have Firefox open instead. How do I go about that?

3) I am very pleased with Linux. My scanner, USB keys, digital camera (USB mass storage), USB-multicard reader, external DVD-burner as well as my wireless network (Linksys WPA54G + WPC54G with Broadcom chipset) are all performing without any problem. What pleases me most of all is that I nearly can drop MS Windows, if it were not for my USB-Conceptronic MovieBox, which is an external 40GB HDD with incorporated multicard reader. This is, until now, the only device that I can't seem to get working under Linux, though it is also a USB-mass storage device, which should appear somewhere as a /dev/sd. If you could help me with this, MS Windows is history forever.

Many thanks in advance, and keep up the good work.—*Anonymous*

A I do not do good work. I do perfect work. Even when I am wrong, I am wrong perfectly. That does not happen often. I think I was perfectly wrong maybe once in June of 1999, but maybe I am wrong about that. But if I am wrong about that, I am perfectly right that I was perfectly wrong about that date.

1) I do not know why you get a different dpi setting when you open a second X session. I do know how to change the default dpi setting. That should fix your problem. Click on the K menu and select Mepis Config (OS Center) to start the Mepis OS Control Center. Select Mouse and Display in the list on your left. You should see what you see in Figure 1.

Select one of the settings, Larger, Medium or Smaller. These settings change the dpi parameter that the KDE login manager uses when it starts
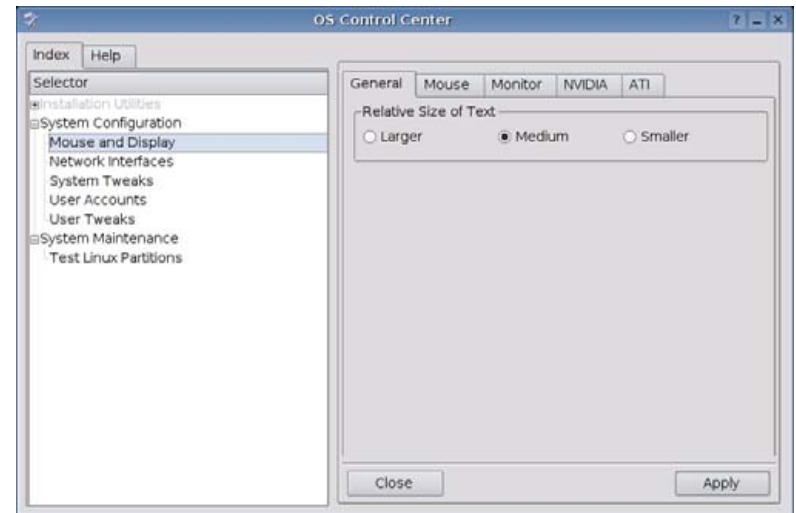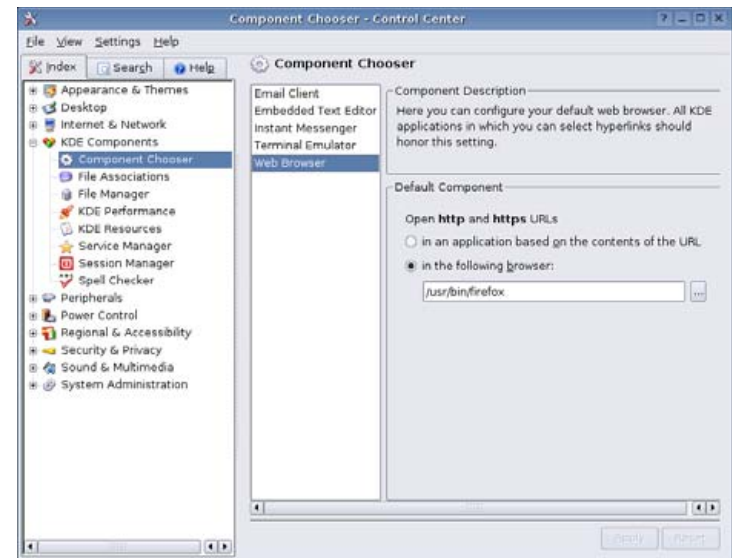

Figure 1. Mepis OS Control Center

Figure 2. The KDE Component Chooser

the X server. If you are geeky, maybe you would like to know that the file it changes is /etc/kde3/kdm/Xstartup.

If it is set on Medium now, try setting it to Smaller. Click Apply. Now you must log out and log in again. I think you will like that setting best. If you do not, then try the other settings. I think maybe Mepis looks at the display resolution before it changes the dpi settings. This is how it works for me. Larger sets dpi to 120. Medium sets dpi to 100. Smaller sets dpi to 75.

2) Maybe you use a different version of Mepis than me. When I click on a URL in mail, it opens Konqueror not Mozilla. My Mepis does not even install Mozilla. I must install it myself. You cannot install Thunderbird from Mepis. You have to get it from a Debian repository. I think maybe you installed many things differently than me. I have Mozilla, Thunderbird and Firefox. When I click on a URL in Thunderbird it opens Firefox.

I think I can answer your questions, even if your Mepis is different from my Mepis.

Here is how to make Thunderbird open Firefox. You must open a terminal and log in as the root user. Edit the file /etc/mozilla-thunderbird/global-config.js. Be sure that you have these two lines in this file:

```
pref("network.protocol-handler.app.http","mozilla-firefox");
pref("network.protocol-handler.app.https","mozilla-firefox");
```

If your Mepis starts Firefox with the command `firefox` instead of `mozilla-firefox`, then you want to change these lines to say `firefox` instead of `mozilla-firefox`.

If you have these two lines below, instead of the ones above, that is the reason Thunderbird is opening Mozilla. Your Mepis probably defines the x-www-browser as Mozilla. You can change this setting in the /etc/alternatives directory, but I like my way better (the one above):

```
pref("network.protocol-handler.app.http","x-www-browser");
pref("network.protocol-handler.app.https","x-www-browser");
```

Here is how to make KMail open a URL with your favorite Web browser. Click on the K menu and select Control Center to open the KDE Control Center. Then click on KDE Components→Component Chooser. What you see looks like Figure 2. Click on Web Browser, and then type the full path to your favorite Web browser. I use a special version of Firefox, so mine says /usr/bin/firefox. You probably will have to enter /usr/bin/mozilla-firefox instead. Click Apply, and then close the Control Center. When you click on a URL in KMail, it should open the URL with Firefox or whatever browser you picked.

3) I do not know what this is, the USB-Conceptronic MovieBox. If you want me to tell you how to make it work, tell the company to send me one, and I will make it work with Linux. Then I will tell you how to do it.

Q **I was wondering, how do you find the MIME types for other file types? I was thinking about adding a right-click to use par2repair for a par2 file, but I am stuck on figuring out the right MIME type.—*Nicholas Maliwacki***

A What are par2 files? Are they not attachment parts of bigger files you download from Usenet? Are you downloading porn movies from the Usenet? Maybe I should not help you do this. Otaku wants to know why I am laughing. I do not worry. You will not find any porn movies of me on the Usenet. I am smarter than Paris Hilton or Pamela Anderson. And prettier too.
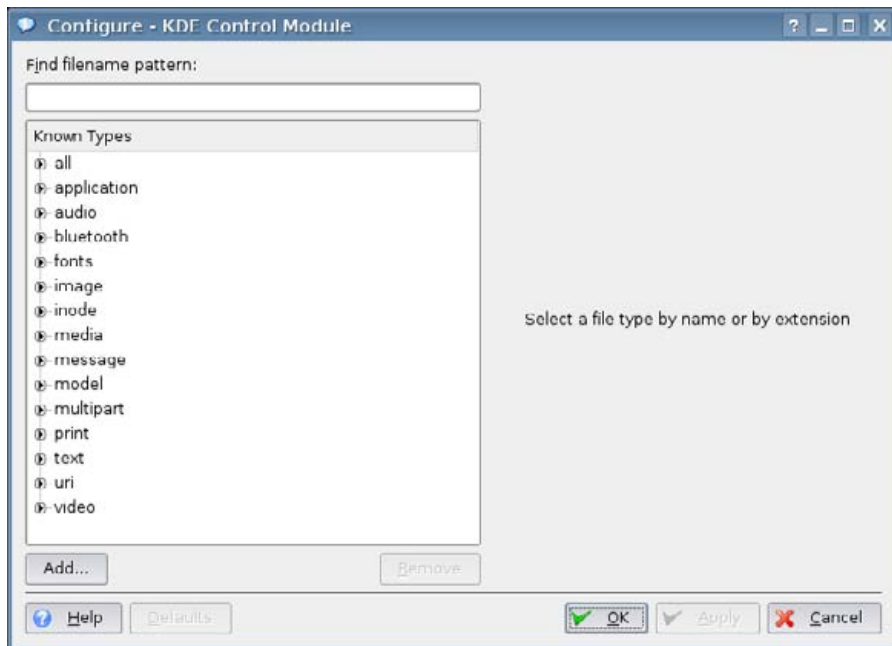
Figure 3. KDE File Associations
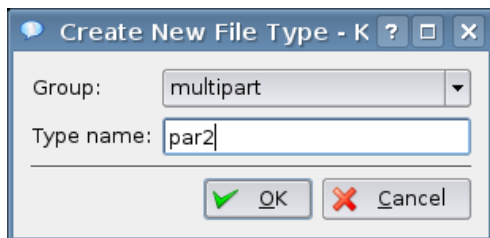

Figure 5. Filled in par2 Definition

Figure 4. Creating the par2 Type

I will think that whatever you are doing is innocent. But I will tell your wife to give you a smack anyway.

You do not really need to make a right-click action if you want to define a new par2 file type. Here is how to do that. On some systems, you will click the K menu then Settings→ KDE Components→File Associations. On other systems, you will open the KDE Control Panel and choose KDE
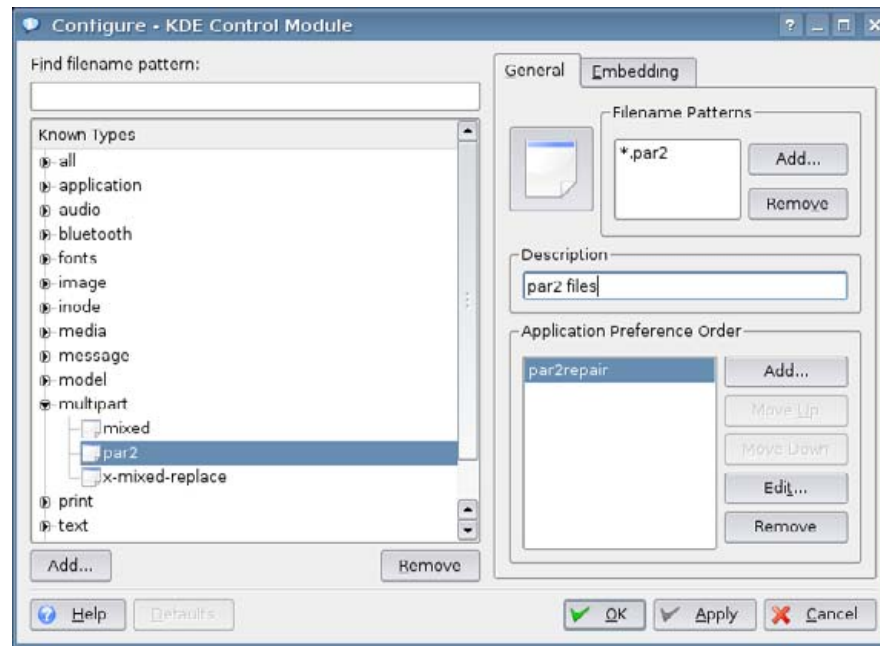
Components and then File Associations from the list on the left. You will see a window like the one shown in Figure 3.

Click the Add button. Select the group multipart, and type `par2` in the edit field (see Figure 4). Click Ok.

Now you will see a window like the one in Figure 5, except it will be empty. You need to fill in the information like I did. It should be easy for you to figure out how to do this.

Now when you click on a file that has the extension .par2 it will automatically run par2repair.∎

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

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Hydrogen—The Home Musician's Free Drum Machine, Part I

I don't want to work, I just want to bang on my drum all day. In this first installment of two parts, John Knight covers installation, basic usage, exploring general functions and making a basic song.

JOHN KNIGHT

For the home musician, the new kid on the block is Hydrogen, an open-source drum machine that caters to the genuine drummer. Escaping the confines of ordinary sequencer-designed software like Fruity Loops, Hydrogen is advanced yet more intuitive for creating standalone drum passages. Available for Linux, Windows and Mac, and combined with programs like Audacity, Hydrogen should be the latest piece in the newly developing arsenal of home musicians.

INSTALLATION

Installation is a breeze. Simply download the binary package at http://www.hydrogen-music.org/?p=download, and click on it. Installation starts and finishes in a few short seconds, with the only other step being a prompt for you to press Enter. A new icon is made on the desktop, and if it's not there, simply look under <your-home>/hydrogen-<version #>/bin/, and click on the file hydrogen-<version #>.

Figure 1. Default Screen

LOOKING AROUND

When Hydrogen first starts, you probably will see four things on screen: the main toolbar at the bottom, the Song Editor, the Pattern Editor and the Mixer.

THE MAIN TOOLBAR

Starting on the left of the main toolbar is a counter showing how long your pattern has been playing. Second on the toolbar are the playback con-

trols, with play/pause and stop, all doing the obvious. However, the fast-forward and rewind buttons jump forward and backward one bar/pattern. The last button turns looping on and off.

Next on the toolbar is the mode switch, which changes between Pattern and Song. Pattern mode plays only the current pattern you're working on, whereas song mode plays through an entire sequence of patterns later defined in the Song Editor. Next in line is the BPM setting; click up or down to decide how many beats per minute the song should have. The bottom button is for toggling a metronome, which plays a click on each major beat.

The last section is more advanced and won't be much use to beginners. The bar marked CPU shows how much strain is being put on the CPU, the Midi-in button allows you to see midi events (too advanced for this article) and Jack Trans. allows Hydrogen to be used by an external program, provided a library called JACK is installed.

PATTERN EDITOR

At the top of the Pattern Editor are options for configuring the pattern's behavior. First on the left is the pattern's number, starting at 0. It is assigned to the current pattern for use later on in the Song Editor. Next is the pattern's name, and then size and resolution. Size determines how many beats long the pattern will be, and curiously, it's divided into half beats. For normal 4/4 time, choose 8; for 3/4 time, choose 6 and so on.

Resolution is the best part about Hydrogen; it allows you to divide each beat into more or less notes at one time. Normally, it will be set to 8 (indicating eighth notes in drumming terminology), which is the standard division for a basic rock bar. If, perhaps, you want to put in an Audioslave-style drum-fill at the end of a bar (tah-kah-tah-kah!), this will require a greater resolution of 16, or sixteenth notes.

For rapid-buzzing military-style snare drumming, or blisteringly fast heavy-metal-style double-kick drumming, choose thirty-second notes (32). Looking further down the resolution list, you will see these numbers again, but with a T. This indicates triplet timing, which is a more advanced timing division commonly found in music like jazz and waltz.

Last on the bar is a section with three buttons. The first toggles the ability to hear notes as you add them. The center button grabs notes if you're playing on the fly via the keyboard, or a midi-keyboard (see next issue's article for more information). The last button, labeled Q, automatically places newly added keyboard notes in line with the grid, which keeps things perfectly in time.

If you right-click on the instrument names on the left, a menu comes up with a choice of Mute, Lock, Solo, Clear Notes, Fill Notes and Randomize velocity. Mute obviously mutes an instrument, and Solo runs it by itself. Lock holds the current instrument's line of notes and keeps it there, allowing you to import another drum kit without touching that instrument or its notes. Clear Notes and Fill Notes lets you either fill or clear the line in one swoop, which can save a lot of clicking. Randomize velocity gives a small variance between how hard each note is "hit" on this line, providing a more dynamic feel.

SONG EDITOR

The Song Editor is where composition really comes into play. The list on the left contains all of the patterns you make in the Pattern Editor, the field of squares on the right is a group of check boxes that determine the sequence in which each pattern will be played.

As for the buttons at the top, the Clear button empties out the boxes on the right, letting you start again. The plus sign creates a new pattern, and the following up and down arrows let you

shift patterns up or down on the list if you are uncomfortable with where they sit. The next two buttons are Select Mode and Draw Mode. The first allows you to click and drag boxes around the field to move them into different places. If you click and drag a box, you can select several at once (holding right-click also does the same thing). The Draw Mode (default) simply lets you click on each square, which is where sequencing begins.

Right-clicking on the list of patterns allows you to Edit, Copy, Delete, Fill/Clear or view the Properties (which only renames the pattern for now). Choosing Edit brings up the Pattern Editor. Copy lets you take the pattern you've just made and add something like a drum-fill, while keeping the original pattern separate and intact. Delete wipes the pattern off the list, and I haven't seen an undo anywhere, so be careful! Fill/Clear allows you either to fill or clear a number of boxes in one go, starting from one number and ending on another, which can be handy for monotonous jobs where you may otherwise need to click many boxes.

MIXER

With the mixer, you can control not only the overall sound, but individual instruments as well. The first thing you'll notice are the vertical sliders; these let you control the peak volume of each instrument. The Master control on the right controls the global volume, and above each instrument are controls for playing each instrument solo, muting it, playing a preview sound or shifting its balance left or right. To the right of the Master control are the Humanize controls. Drum machines have a bland feeling to them, due to all the timing being perfect; Hydrogen's Humanizing option adds a little swing with some random accents or slight imperfections to make the sound more interesting.

Above the Master control is the option to mute

all sound, and below that you can disable/enable the peak cut-off range for the volume. The FX button allows you to add further effects on the sound if you download extra (LADSPA) sound plugins (see next issue's article). If you double-click on the name of an instrument, an extra Instrument editor appears, which lets you change the acoustics of each instrument and add extra sound layers too. Above each instrument's slider are four knobs, which are used in conjunction with the previously mentioned plugins.

MAKING MUSIC

Now that you have all that introductory information, it's time to have some fun and put it to use. First, we'll create a basic rock beat, and revisit some of the previous information in the meantime.

1. Open the Pattern Editor, and if it looks blank, scroll to the bottom. Make sure the size and resolution are both set to 8, and look for the line called Closed HH.

2. Click on the vertical lines for 1, 2, 3 and 4, and the halfway lines after. (If you're running in a lower resolution, you may have to use the scrollbar on the bottom to move right along the page, otherwise some of 4's beats may be off-screen). In drumming, this is counted as 1 + 2 + 3 + 4 +, or one and two and three and four and..., with each + being a minor note after each major note. Click on the play button in the main toolbar, and you'll hear a steady pattern from the hi-hats.

3. On the Kick line, click on beats 1 and 3. The beat will become more interesting.

4. On the Snare Rock line, click beats 2 and 4.

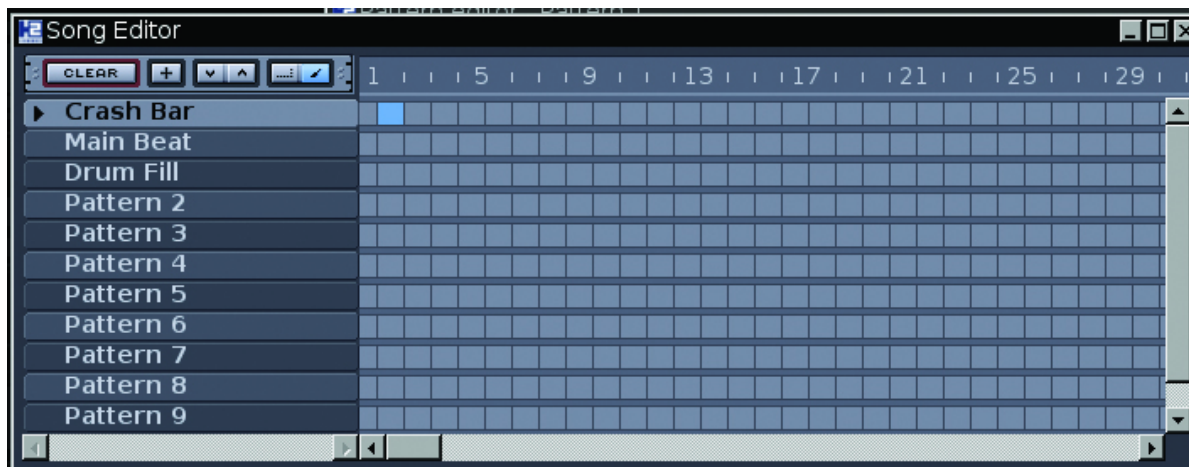   You now have a basic rock beat, but after a

Figure 2. Note the shifted pattern lines.

few runs, it's boring, isn't it? First, we'll spice up the beat a touch, and then we'll get Hydrogen to add a large crash note on the first bar, plus an Audioslave-style drum-fill on the fourth, using a combination of the Pattern Editor, the Song Editor and changing the resolution.

   First, we'll dress up the beat. For a very popular beat, simply add another kick note on the + note after 3. Play it back, and you can see what a difference a note or two can make. Now let's turn it into a full passage:

1. Bring up the Song Editor, and right-click on Pattern 1, click on Properties and rename it to Main Beat.

2. Right-click on Main Beat, choose Copy, and in the new prompt window, call it Crash Bar.

3. Repeat these steps and make another called Drum-Fill.

4. Move Crash Bar above Main Beat and Drum-Fill below, using the move up/down buttons in the top of the window to make these patterns easier to access (Figure 2).

   What we have just done is copy the original pattern, so that we can alter it for Crash Bar and Drum-Fill. Now to make the new bars:

1. Double-click on Crash Bar to bring up the Pattern Editor.

2. Once in the editing screen, click the Crash note on beat number 1.

3. Change to the Drum-Fill pattern (either click up twice on the Pattern number or double-click Drum-Fill in the Song Editor).

4. Remove the hi-hat notes from the two beats 4 +.

5. Change the resolution from 8 to 16 (which allows a quick succession of notes).
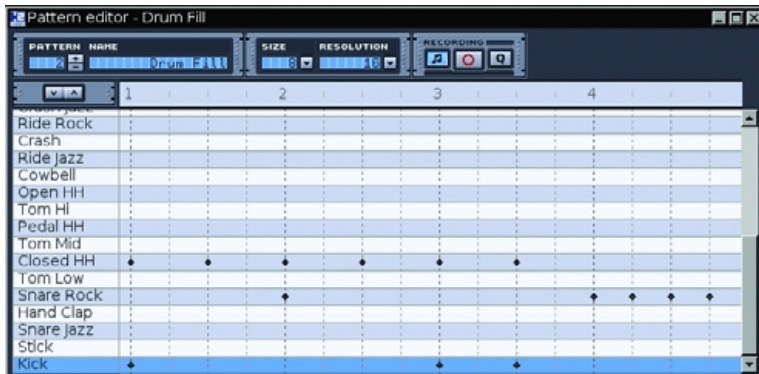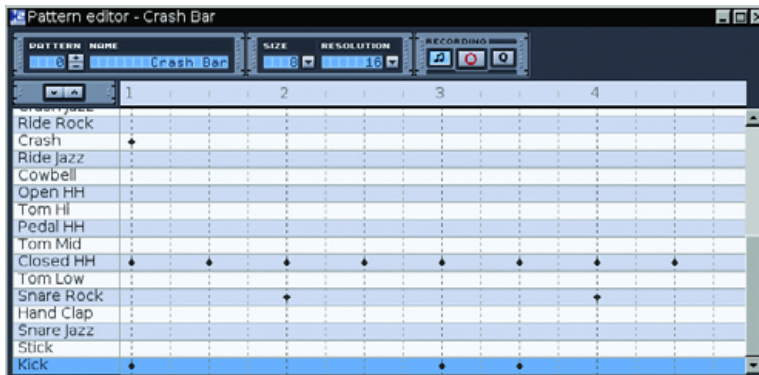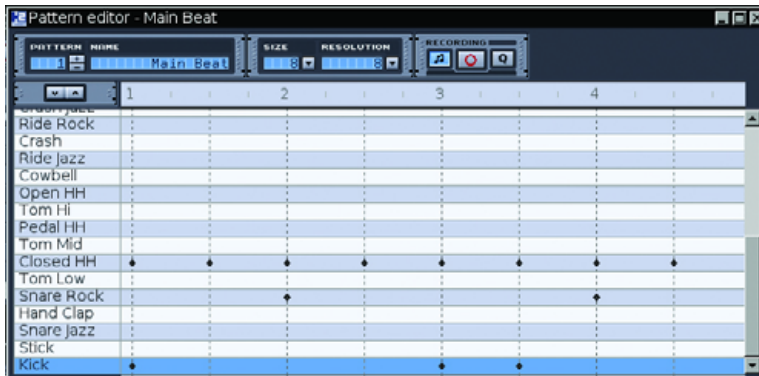
Figures 3, 4 and 5. The Different Note Placements for Each Pattern

Figure 6. The Pattern Order for the New Song

6. On the Snare Rock line, turn on beat 4 and the next three notes (these four notes are usually referred to as 4e+a, or foureeyander).

Now that we have the music out of the way, it's time to bring the three patterns together:

1. Change back to the Song Editor, and make sure you scroll all the way up.

2. Check box 1 next to Crash Bar, 2 and 3 next to Main Beat, and 4 on the line for Drum-Fill (Figure 6).

This will have created a basic rock structured drum passage. To hear the whole result, change the play mode from Pattern to Song on the main toolbar, and click Play. If you want to save this as a file anyone can play, simply choose File→Export song, and follow the prompts, where it will be saved in .wav format.

TAKING THINGS FURTHER

Musically, there's a lot more places you can take your drum patterns, and there's no reason why you can't compose an entire musical piece, using many different patterns and putting them all in place via the Song Editor. Try playing around with how many bars make a passage, different tempos, time signatures, snare or kick placements—the possibilities are endless and are up to your imagination. Next month, we will look at advanced usage, tips and tricks, audio effects, making your own kit and more.■

John Knight is a 21-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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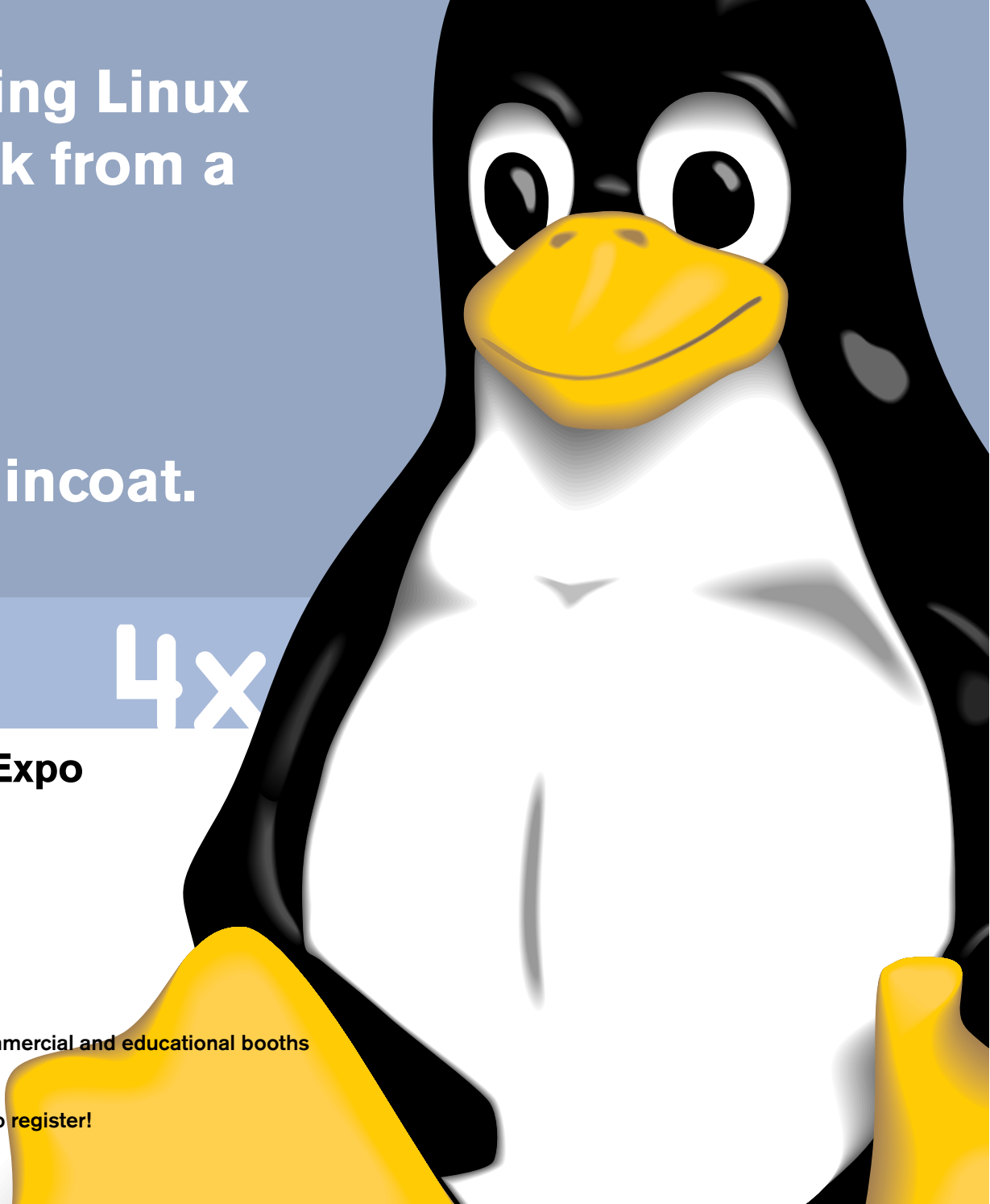
OpenOffice.org Impress 2.0: the Confusing Duckling Becomes a User-Friendly Swan

Although it won't help improve the quality of your presentation slides (at least not yet), the new improved version of OpenOffice.org Impress makes it simple to create advanced presentations.

SOLVEIG HAUGLAND

OpenOffice.org is the free, open-source office suite that runs on Windows, Linux, Mac, Solaris and a host of other OSes like FreeBSD and OS/2. It's Microsoft Office-compatible, and it includes programs for text editing, spreadsheets, presentations, drawings, creating or connecting to databases, and forms and reports. It's got native PDF creation so you don't need Distiller or another program to make a document from OpenOffice.org that everyone can read.

It's a pretty dandy program.

I think the only thing you can do with Microsoft Office that you can't do with OpenOffice.org is create huge, bloated, easily corrupted text files. (Sorry—was that out loud?)

The much-anticipated OpenOffice.org 2.0 came out in October 2005. One of the most significant improvements, along with the addition of the database module, was the revamping of Impress, the presentation program. This article explains how really, really good the new version is, and also covers how to use updated features like the slide transitions, custom animation and the Slide Sorter view. I also include a short walk-through on how to create a presentation from scratch, for anyone who's new to the program with this version.

THE CHANGES IN IMPRESS 2.0

To grok the improvements and jump into this quickly, let's take a look at the old Impress, circa version 1.1.2 (Figure 1).

The navigation between slides was buried in tiny tabs at the bottom; access to different views, such as handouts view, was buried in even smaller icons on the right. Choosing a master page required knowing
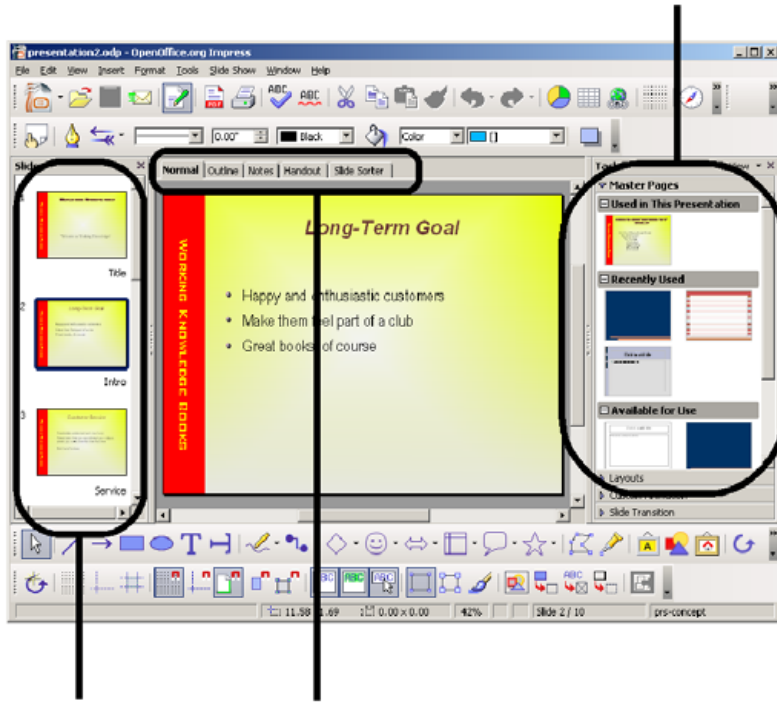

Figure 1. OpenOffice.org Impress Version 1.1.2.

Choosing a master page
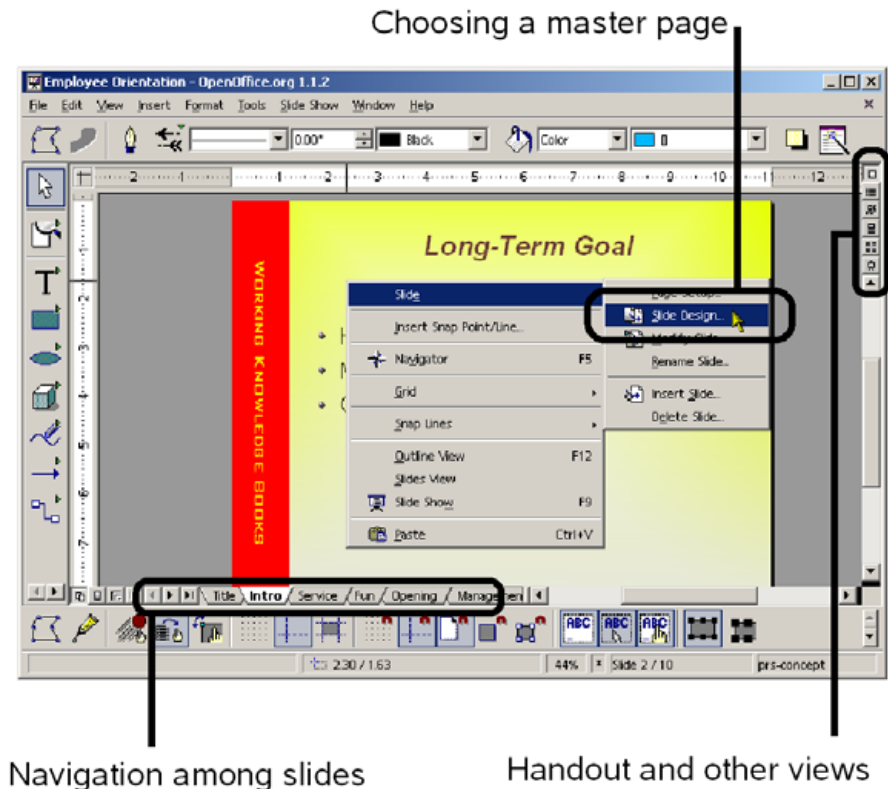
Navigation among slides   Handout and other views

Figure 2. New Improved OpenOffice.org Version 2.0.

that it was called a slide design (not to be confused with slide layout), as well as performing one of the complex navigations to get to the slide design selection window.

Now, take a look at Impress 2.0 (Figure 2).

Everything is sitting there, staring us in the face. There's easy access to each slide in the left-hand pane with really big thumbnails of the slides, easy access to configuration options like slide layouts and effects in the right-hand pane with clearly labeled titles, and across the top, there's

easy access to different views of the presentation.

Some programmers might have merely tried to rework the old design. But, this new version looks like a total rewrite, and it came out beautifully. It's easy to figure out, easy to use, and I haven't found more than a few bugs or design elements to complain about.

This is going to make teaching my Impress classes so much easier—and of course, it will make learning Impress so much easier, not only because it's a nice design, but because it's similar to the PowerPoint design. So, PowerPoint users can download OpenOffice.org in the morning and be bored expert users by lunch.

There are a few issues I'm not wild about—printing handouts, always a bugaboo in the old version, is better but still in no way clear. (Use the Handouts tab at the top of the work area and set the number of slides per page, then choose File→Print, click Options and choose to print handouts.) The "move along a line" feature, which is cool and very useful, seems to be gone, and the "infinite cycle" effect for custom animations is unreliable.

Aside from that, I'm extremely happy.

For the curious, see the following links for some information on the new software from the OpenOffice.org site:

■ http://marketing.openoffice.org/20/index.html

■ http://marketing.openoffice.org/20/featureguide.html

■ http://www.openoffice.org/product/impress.html

■ http://www.openoffice.org/product/more.html

Enough about my opinion, let's take a look at what you're interested in—how to make a presentation. Next, we'll discuss how to use some of the most useful features like the slide sorter, layouts, master pages, slide transitions and custom animation.
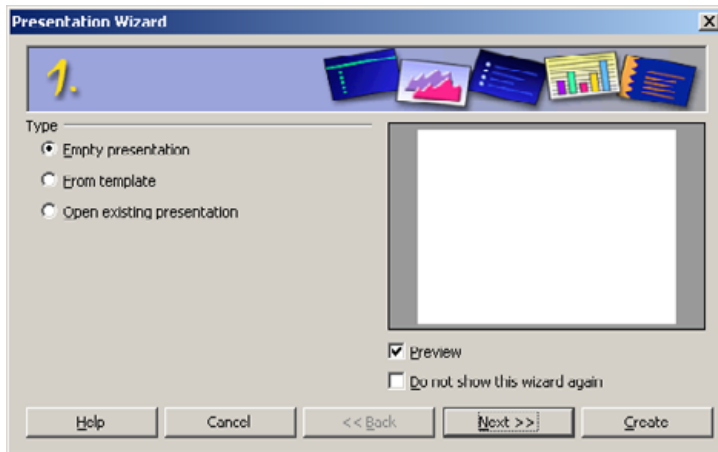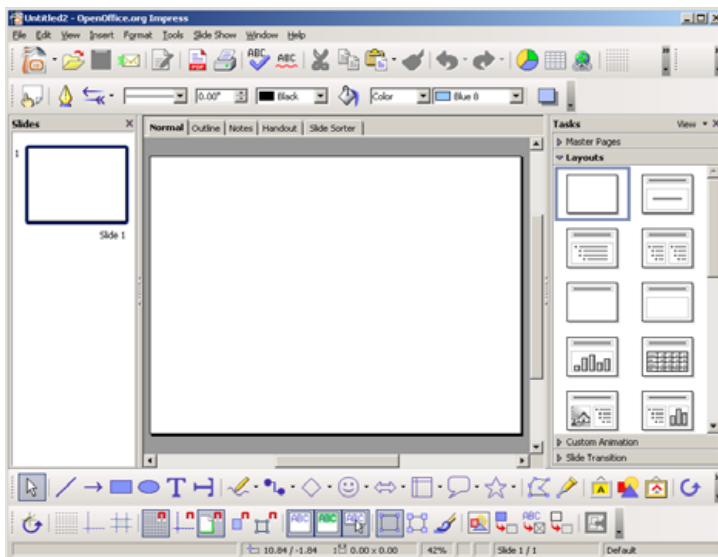
Figure 3. Impress' New Presentation Wizard

Figure 4. Blank Newly Created Presentation

CREATING A NEW PRESENTATION IN IMPRESS 2.0

After glowing about what a great idea it was for the Impress team to start from scratch with the design, I'm forced to back-pedal a little and show something that's still exactly the same. The first window, in fact. Choose File→New→Presentation, and you'll see the same old window with the same old options (Figure 3).

However, they did cut down on the number of not-that-useful windows in the wizard, so now there are only three. I like to select whatever I want, Blank or Template; and then simply click Create in that first Wizard window, skipping the rest of the wizard (Figure 4). From here on out, it's a whole different program.

From this point, it's very simple, because all the elements you need are right there in the interface or are logically located. Just click on the thumbnail slide in the left-hand pane that you want to work with, and it comes up in the middle. Type your content, then go to the next slide and repeat.

Run the presentation the same way as before, by choosing Slide Show→Slide Show or pressing F5.

CREATING SLIDES

To insert a new slide, click on the slide above where you want your new slide, and choose Insert→Slide (Figure 5). Or, you can right-click under the slide and choose New Slide.

To delete a slide, select its thumbnail and press your Delete key. Be forewarned, however, Impress will delete the slide immediately, without giving you an "Are You Sure?" warning.

REARRANGING SLIDES

If you suddenly realize that your Why We Can't Hit the Deadline slide belongs after the Reasons We Need Raises slide, you can change the order easily. In the left-hand pane where you've been working, simply
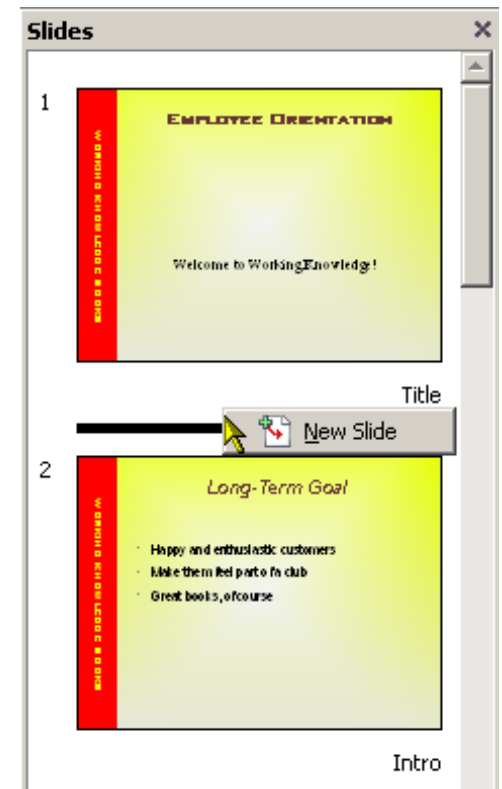

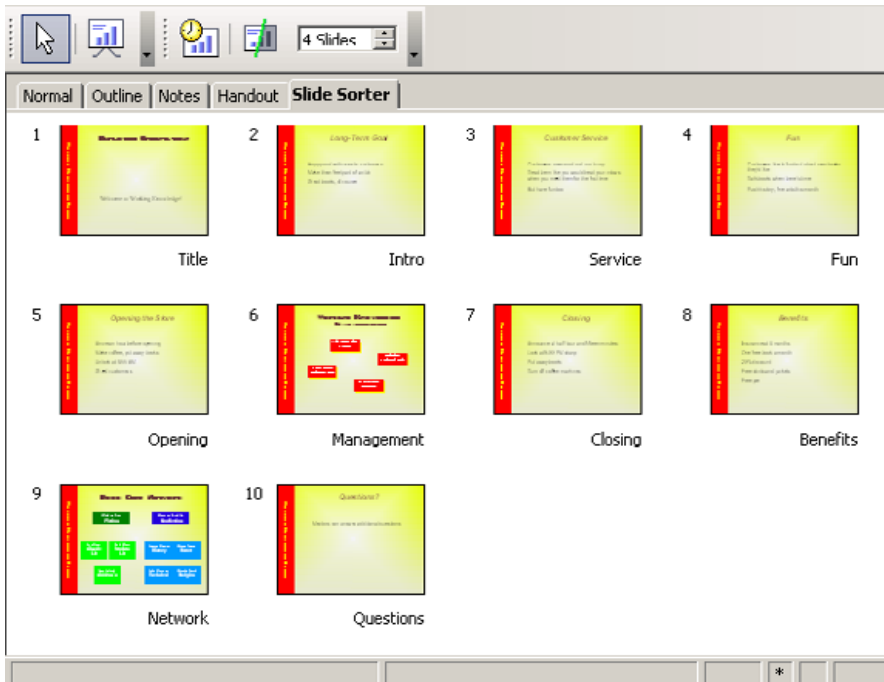Figure 5. Insert Slide Context Menu from within the Slide Pane

Figure 6. Slide Sorter View
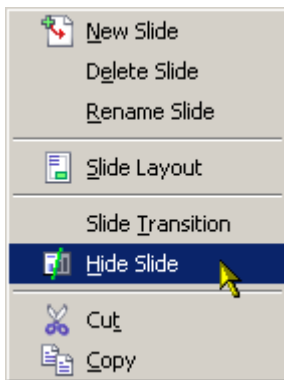

Figure 8. Layout View within the Task Pane

Figure 7. Context Menu within Slide Sorter View

drag the thumbnail of the slide you want to move to where you want it to be.

If you've got bigger changes or want to look at the whole presentation at once, use the Slide Sorter view. Click the Slide Sorter tab at the top, and you'll see this view (Figure 6).

Drag slides around to your heart's content. In addition, your options in this window include setting the slide layout and hiding or showing a slide. You can use the toolbar at the top of the work area, or right-click on one or more slides, to get more options (Figure 7).
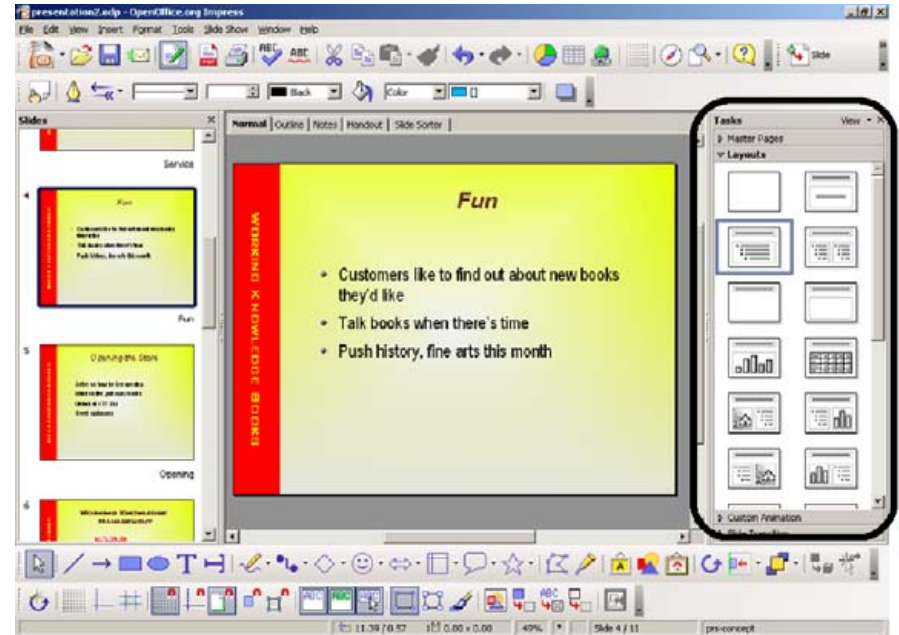
Click the Normal tab at the top of the work area to get back to normal view.

APPLYING LAYOUTS

All slides don't have the same elements—some slides have a place for a title, a place for bullet points, a place for a graphic and so on. If you have a title page, you probably want a place for the title but not for the bullets. If you've got a slide chock full of text information, you're going to need the bullets and not much else. How do you control which elements are in your slides? Simply choose from one of the many slide layouts in the right-hand pane of your presentation (Figure 8).

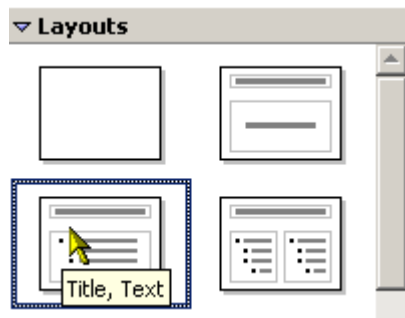(If you use a template, you don't need to worry about this as much,

Figure 9. Example Tooltip for Title, Text Layout

Figure 10. Master Pages View within Task Pane

but if you're making a presentation or template from scratch, this is definitely important.)

If I've added a new slide to a presentation, the program gives me the layout of the previous slide. If that is not the layout I want, I simply find the layout I want and click the design. For example, if a slide has a plain title-and-bullets layout, I click the Layouts title on the right-hand side, and click on a layout that has the tooltip Title, Text (Figure 9). That layout is applied to my slide, and I now can type in the text I want for the title, and I have a place to put bullet points.

APPLYING AND CREATING MASTER PAGES

It's important to apply the right layout, so you have the right places to enter information in your slide. However, now you want to control how this information looks. You could painfully format each slide one at a time, but it's easier to use the master pages, create the formatting once, and apply it again and again to whatever slides need it.

In the right-hand pane, click on the Master Pages title to see the available master pages (Figure 10).

Select a slide, and then select the master page you want for the selected slide. Right-click on the master page, and you'll have the option to apply it to the selected slide or to all

Figure 11. Apply Master Page Context Menu

slides (Figure 11).

To make your own master page, simply format the page, and then apply it as you would any other master page. Choose View→Master→Slide Master, and do the page formatting you want. Choose Format→Page to change the background color, choose Insert→Picture to add a background graphic, or add graphical shapes like a bar on the left side or a line under the title. Of course, format the text and apply the bullets you want. Then, choose View→Normal, and you'll see the new master page in the right-hand pane under the Master Pages title. You can leave it as is so that it's applied only to one slide, or you can right-click the current format now shown in the
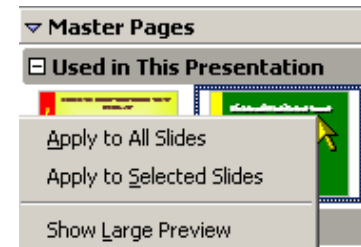

Figure 12. Apply to All Slides Option

Used in This Presentation View and choose to apply the new master page to all slides (Figure 12).

DOING SLIDE TRANSITIONS

Although not strictly necessary, you can add drama or some loud noises to wake up your audience with slide transitions (Figure 13).

The slide transitions, along with most of the other configuration effects, are in the right-hand task pane. Simply click on the Slide
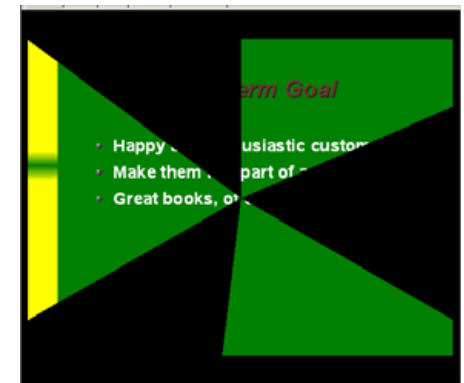

Figure 13. Actual Slide Transition in Progress

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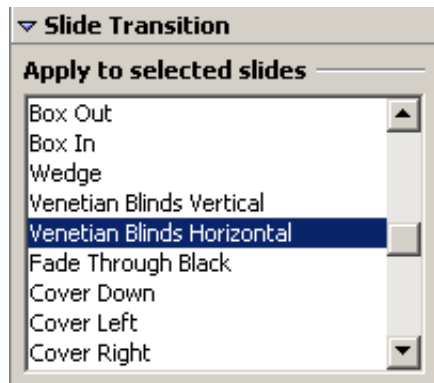

Figure 14. Slide Transition Options

Transitions title, and you'll see your options (Figure 14).

Select the slide you want, select an effect and a preview of the effect will run.

There are hordes of options to set as well (Figure 15). In the lower part of
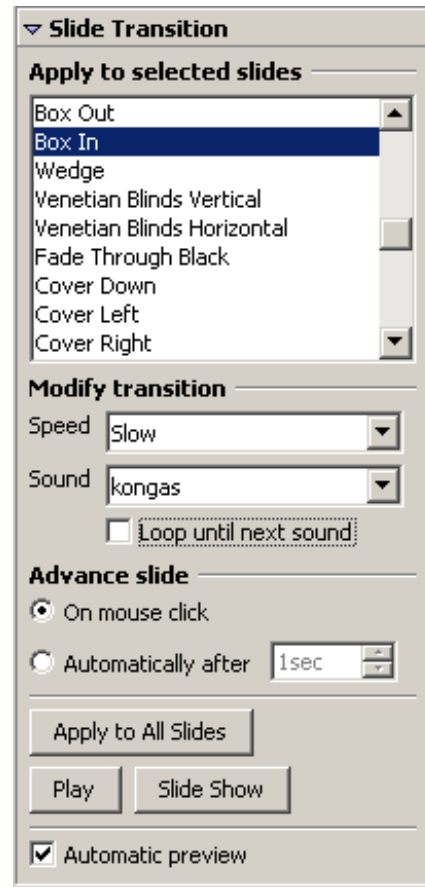

Figure 15. All Slide Transition Options within the Slide Translation View

the Slide Transitions pane area, you can specify speed, sounds, when the effect runs and to which slides the transition applies. Unmark the Automatic Preview if you're using sounds or if you don't want to see the preview every time you make a change.
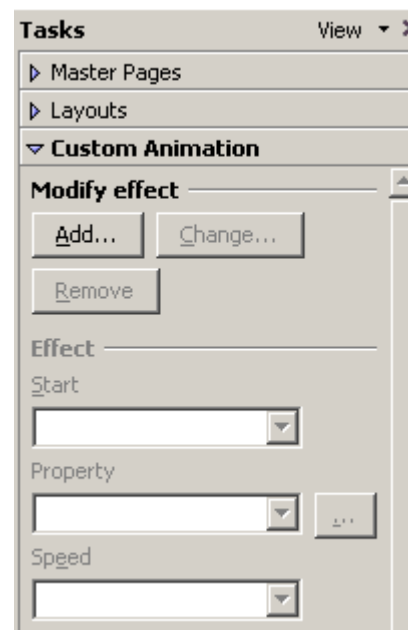

Figure 16. Custom Animation View in Task Pane.

DOING CUSTOM ANIMATION
Let's say you have a slide talking about a balloon release. You've got a picture of a balloon or three, but it would be nice to have the balloon do something. You can do this with custom animation.

Click the Custom Animation title in the right-hand pane, and click Add (Figure 16).

You'll see a window full of possible effects. Click the Add custom animation button, select the transition you want, the speed and any other options, and then click OK
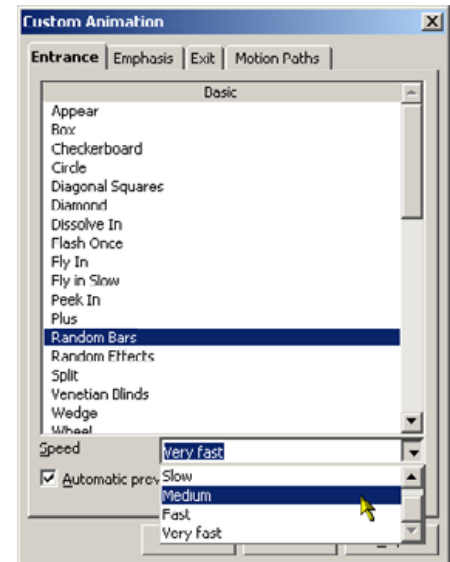
Figure 17. Select Custom Animation Options

(Figure 17). The preview will run; if it doesn't, you can click Play. When you like what you see, click on another slide and insert a new slide.

Custom animation has far more options than the slide transitions we saw earlier. If you have three balloons to apply effects to, for instance, you can set them up to run with different effects, sequentially, at different speeds. You can even have the first balloon's effect run when you click on an entirely different object, and have each balloon in succession run its effect three times, then fade to a different

Figure 18. Change the Order of Custom Animation Effects

color, or simply disappear. There are a lot of options and they're not just cool looking. If you're trying to demonstrate processes, from a fire drill to a Gantt chart to a UML sequence diagram, you can really serve your audience well with some clear, vivid information

Figure 19. Browse Icon for More Effect Options

in your presentations.
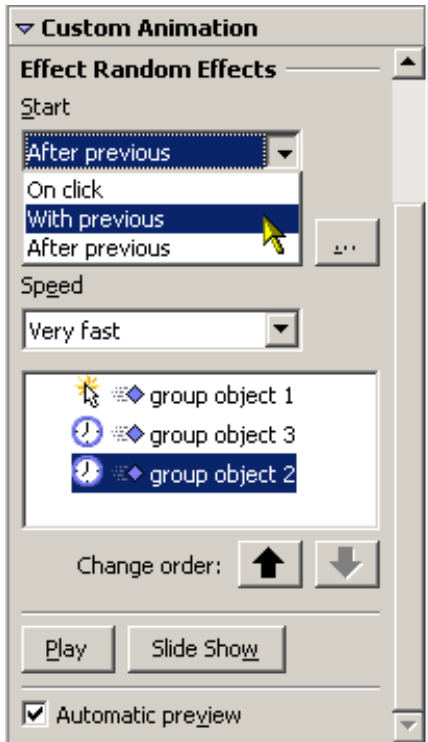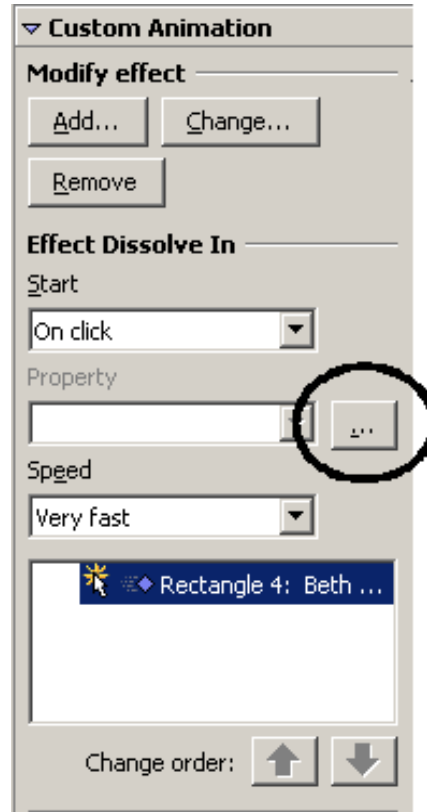
Add all of the effects you want, then specify the basic order for how your effects should run in the lower part of the custom animation view (Figure 18).

To get to a host of more effect options, click the browse icon next to properties; it's kind of easy to miss (Figure 19). The additional effect options include things like controlling what happens after the effect runs, and also provides timing options, like how many times to run the effect.

WHAT NOW?

If you haven't upgraded to OpenOffice.org 2.0 yet, by all means, do it now (2.0.1 is the latest version). If you've tried to convert reluctant managers, IT folks or PowerPoint users with the 1.x version, try again with 2.0. Impress 2.0 is easy for new users or PowerPoint fans, it looks great and it opens Microsoft Files beautifully.■

Solveig Haugland is an instructor, author and course developer near Boulder, Colorado. She got started with StarOffice and OpenOffice.org while working in Sun Educational Services, and wrote her first book there, *The StarOffice 5.2 Companion*. She is now an independent instructor and author, teaching everywhere from Winnipeg in December to Houston in August. When not teaching, blogging, writing or haranguing passersby about how cool OpenOffice.org is, Solveig can be found swing dancing at the Mercury, skiing at Copper and playing poker at Larry's.

IF YOU HAVEN'T UPGRADED TO OPENOFFICE.ORG 2.0 YET, BY ALL MEANS, DO IT NOW (2.0.1 IS THE LATEST VERSION).

RESOURCES

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Learn how to get OpenOffice.org or StarOffice training for your organization at Solveig's Web site: http://www.getopenoffice.org.

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KDE Instant Messaging

For KDE enthusiasts, Kopete is a general-purpose instant-messenger client compatible with all major services. This article offers a quick introduction to Kopete's flexibility.

JES HALL

Kopete is the KDE instant-messaging client. It supports a wide range of protocols and ships with a great deal of plugins to extend its functionality. Integration with KDE is one of its strongest points, with support for linking contacts to KAddressBook entries to integrate IM functionality with Kontact. With the coming of KDE 3.5, it even supports Webcams on MSN and Yahoo.

Most aspects of Kopete's appearance and behaviour can be customised. This flexibility can sometimes make Kopete's configuration dialogs seem a little overwhelming. This article takes a look at how to demystify some of Kopete's configuration options as well as how to get set up with some common accounts.

SETTING UP ACCOUNTS
Kopete supports most popular IM protocols, including MSN Messenger, Yahoo Messenger, ICQ, Jabber and AIM. It also has basic support for IRC.

The first time you launch Kopete, it takes you straight to the Select Messaging Service dialog where you can create an account. To reach this dialog again, select Configure... from the Settings menu, and in the dialog that appears, make sure you have Accounts selected in the icon bar to the left. Then click the New... button.

Let's take a look at adding an MSN Messenger and a Jabber account. Setting up the other protocols is a similar process.

MSN MESSENGER
In our on-line worlds, most of us have buddy networks that span the globe and probably include all popular services and operating systems. So it is inevitable that ultimately we will have to communicate with loved ones who

Figure 1. The Add Account Wizard

are using Microsoft Windows. To set up Kopete to connect to the MSN Messenger network, you'll need a Microsoft Passport. If you already have one, skip straight to the next section.

In the Select Messaging Service dialog, highlight MSN Messenger and click Next. If you don't have a Microsoft Passport already, Kopete can help you create one. Click the Register New Account button, and your default browser will launch to take you to the Microsoft Passport page.

You can use any valid e-mail address to sign up for a Microsoft Passport. If you don't already have an e-mail address, you can optionally sign up for a Hotmail account from this page. For this example, I'm going to use my Gmail account.

Click continue on the Microsoft Passport page to start the registration wizard. Fill in all of the details, and click submit. The next step asks you to read and agree to the Passport Network Terms of Service and the Passport Network Privacy Statement.

If you used something other than a Hotmail account to sign up, you'll need to confirm your e-mail address. After completing the sign up process, you should have an e-mail waiting for you in the account you used to sign up with. After following the instructions there, your e-mail address is verified for use as a Microsoft Passport.

SIGNING IN WITH YOUR MICROSOFT PASSPORT

Enter your MSN Passport ID and password into the appropriate forms on the wizard, and click Next. Click Finish on the next screen, and Kopete will connect to the MSN Messenger service.

JABBER

Jabber is an open, secure alternative IM protocol. Jabber works a little differently from MSN or AIM or other proprietary protocols. Most of those services have a single centralised set of servers that you connect to, controlled by the owners of the protocol. There are hundreds of open Jabber servers to choose from, or you could even run your own. People on different servers are able to contact each other.

Creating a Jabber account is usually done within your Jabber client. In the Accounts configuration dialog, select New... and choose Jabber from

Figure 2. Registering a Jabber ID

the list of messaging services. In the Account Information dialog, click Register New Account. In the dialog that appears, you can browse a list of public servers by clicking Choose. I already know a server I'd like to try, kdetalk.net, a KDE Jabber server for users and developers.

Fill in the name of the Jabber server you've selected and the Jabber ID you would like to have as well as a password. Jabber IDs usually take the form of username@server, much like an e-mail address. Here, I'm choosing canllaith@kdetalk.net. If that user name is already taken, the server will prompt me to try another one.

You can optionally turn on Use protocol encryption to encrypt your traffic to the server. Click Register and then Close. Back at the Account Information dialog, optionally tick the box to have Kopete remember your password and click Next. Click Finish, and Kopete connects to the new account.

ADDING BUDDIES

To add buddies or contacts, you'll usually need to know their e-mail addresses or user names for the service to which you want to add them. To add a buddy, either click the second button on Kopete's toolbar (usually depicting a star) or select Add Contact from the File menu.

If the person you want to add has an entry in your KDE address book, tick the box Use the KDE address book for this contact to enable linking the address book entry to your Kopete contact. Select the address book entry for this contact (this step is skipped if you leave

the box unticked), and click Next. Enter the name you want your contact to have on your contact list—this can be whatever you like. If you want to create a group in which to put your contact, you can do so here with the Create New Group button.

Click Next, and select the account to which you'd like to add the buddy. Here, I'm adding a Jabber contact. Enter your contact's ID on the next screen and click Next, and then click Finish to see your contact added to your list.

SENDING MESSAGES

To send a message to a contact, simply click on his or her name in your contact list. Kopete obeys the global KDE settings for single- or double-click. By default, messages received show up as a small bubble above the Kopete icon in your system tray. If you prefer behaviour more like Gaim, you can disable the bubble and the message queue in Appearance→Events.

CUSTOMISING THE MESSAGE WINDOW

Most aspects of Kopete's message windows can be customised. The toolbars can be customised or removed, and the formatting of messages can be modified with stylesheets, fonts and different emoticon sets.

Kopete includes several chat window styles, and more can be downloaded from http://www.kde-look.org, under the Kopete Styles section. To install a Kopete style you have downloaded to disk, select Configure... from the Settings menu. Select Appearance from the
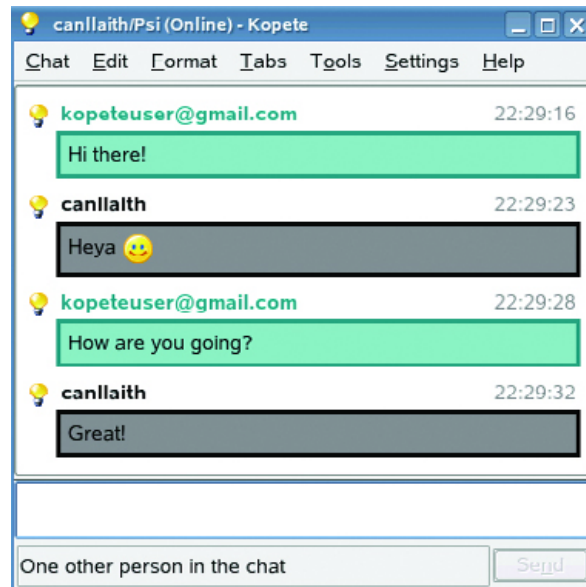

Figure 3. Kopete's Messaging Window

icon bar to the left and then go to the Chat Window tab. This is where you manage your chat window styles.

Click Import underneath the preview window, and then in the dialog that appears, select the XSL file (or the tarball containing it) that you downloaded. If the style is valid, Kopete imports it and then displays the style in the preview window. Click OK to apply the new style.

If Kopete displays an error message, it usually means the style isn't valid. Unfortunately, this happens sometimes with user-contributed styles,

so simply try another one. If you sort the styles by rating on http://www.kde-look.org, generally the highest-rated ones are well-formed XSLT.

Emoticon themes also can be downloaded from http://www.kde-look.org and installed in much the same way. Once you've downloaded an emoticon theme, you then can install it using the Install theme file... button underneath the emotion preview under Appearance on the Emoticons tab.

"That's all pretty nice", I hear you say. "But Gaim does tabs!"

Kopete also has this functionality, but it's not enabled by default. You can enable them in Behaviour→Chat, by modifying the Chat Window Grouping Policy. It's extremely flexible, allowing you to define whether you want messages from all contacts to open in tabs in the same window, as Gaim does, or whether you want to tab contacts together based on which group they are in or what account they are added to.

Kopete has a wide range of configuration options not covered here. For more information, try the Kopete handbook or talk to the developers on irc.freenode.net in #kopete.∎

Jes Hall is a UNIX systems consultant and KDE developer from New Zealand. She's passionate about helping open-source software bring life-changing information and tools to those who would otherwise not have them.

OpenOffice.org Base

Looking for a simple, yet powerful, tool to help organize your work or life? The new OpenOffice.org component Base may be just what you need to gain control over your photograph, DVD or CD collections.

KEVIN SHOCKEY

Back in the early nineties, I fell in love with a new personal computer database product, Access. After spending many years working with Dbase and Paradox, working with Microsoft Access was a real joy. It provided superb integration with Microsoft Office and thus provided new-found functionality and reach for small and home offices. With the OpenOffice.org 2.0 Base module, it is now possible to create and use small database applications easily with Linux. By simply learning how to use the wizards available in Base, it is possible to create a simple application with forms and reports.

As Microsoft Access matured, it became a favorite for independent software vendors and helped launch many young companies into business. From what I have seen, OpenOffice.org Base may be ready for that same future. Combined with OpenOffice.org basic and a little bit more development from the community, Base could become an even more valuable addition to the OpenOffice.org suite.

In this tutorial, I present a simple and fast way to create a single table application using the wizards available within OpenOffice.org Base. In addition to the wizards, Base delivers full editing capabilities for Tables, Views, Queries, Forms and Reports. These editors provide complete control over the powerful features available in Base; however, they are beyond the scope of this tutorial.

For those *TUX* readers who might have a new exercise program as part of their New Year's resolution, this tutorial will help you create an easy-to-use exercise log to keep track of your progress. Through this tutorial, I explain how to create a new database, a new table and a data-entry form to track your exercise routine.

ESSENTIAL ASSUMPTIONS

To complete this tutorial, you need to have version 2.0 or higher of the OpenOffice.org multilingual office suite installed. The Base component is one of the new features of version 2.0, and it allows for the seamless integration of database access within OpenOffice.org 2.0. Base permits access to a wide range of native database formats or enables creation of databases using Base's internal HSQL database engine.

Those familiar with the operation of databases can skip this brief introduction to database functionality and proceed to the first step of creating a new database. To simplify, a database is like a collection of one or more spreadsheets, which are composed of rows and columns. Each row should be uniquely identifiable, which enables searching for specific records. Each record typically consists of the unique identifier and one or more columns, and each column has a unique name and may contain a wide variety of data. It is possible to relate multiple spreadsheets (tables in database terminology) by associating records from one table to a column of another table. This feature of databases gives them the power and flexibility to capture complex data relationships and makes the data easy to combine and manipulate. For this reason, databases are an essential component of any application, which explains their popularity in software development.

CREATING A NEW DATABASE

From any OpenOffice.org component, select File→New→Database, and OpenOffice.org presents the OOo Database Wizard. The Database Wizard guides the database creation process. The process consists of two main steps: select a database and then save and proceed. In the first step of the process, you decide whether you want to create a new database, open an

Figure 1. OpenOffice.org Base Database Wizard, Select Database

Figure 2. Step Two in the OpenOffice.org Database Wizard

existing database or connect to an existing database (Figure 1).

For this tutorial, we use the Create New Database option, but it is useful to know that OpenOffice.org Base also can serve as a data-entry and reporting tool for other popular databases natively. These databases include MySQL and Oracle using JDBC, and OOo Base also can connect to popular e-mail client databases from Mozilla Thunderbird or Evolution. With the latter connectivity capabilities, it is simple to complete a mail merge using a contact database. With the additional query functionality, Base provides accurate control over address selections.

To begin the database creation process, leave the Create a new database option selected, and click the Next button. The Database Wizard displays the second step in the process, which requires deciding two things. First, decide whether you want to register the database within OpenOffice.org and second what you want to do after creating the database. Registering the database informs OpenOffice.org, among other things, of where to locate the
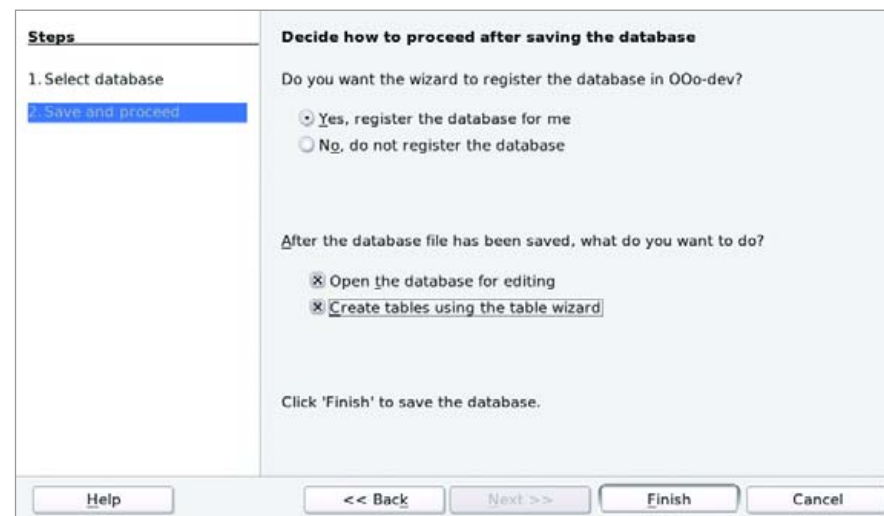
data and how it is organized. Registering the database also makes the data available to all of the OpenOffice.org components. If you don't register the database at this time, you always can register it later using the Tool→Options→OpenOffice.org Base→Databases→New option. From this dialog, you can administer all databases within OpenOffice.org. To access a database from within another OpenOffice.org component, use View→Data Sources. To proceed with our tutorial, I recommend leaving on the default option of registering the database.

The second decision you need to make is fairly self explanatory. I recommend selecting both options—to open the database for editing and create tables using the Table Wizard (Figure 2). Click on the Finish button to continue. The Database Wizard then prompts you for a filename and location. Enter the desired name, select a location and click the Save button. OpenOffice.org saves the database file, opens the new database and starts the Table Wizard.

CREATE A NEW TABLE

The Table Wizard consists of four steps: selecting fields from sample tables, setting the types and formats for the selected fields, setting the primary key for the table and creating the table. The first step in the wizard provides a wide variety of sample tables for choosing the desired fields of your new table. First, choose whether you want to select fields from categories of tables useful for business or for personal purposes. When you choose a category, the list of available tables changes accordingly. There are 22 different sample tables to choose from within the business category, including Orders, Projects and Transactions. Within the personal category, there are 15 sample tables, with options such as Exercise Log, CD Collection and Recipes.

After you select a category and a sample table, the Table Wizard displays a list of available fields. You can use the > or >> buttons to select individual fields or all fields. Use the < or << buttons to remove individual fields or all fields, respectively. You also can mix fields from multiple sample tables to create a table that meets your exact needs, and you can reorder the selected fields using the up and down arrows.

Continuing with our exercise log database, select the personal

category, select the ExerciseLog table from the list box, select all fields using the >> button and then individually remove the CaloriesBurned and DistanceTraveled fields. I also rearranged the order of the fields— placing the LogId first, the PersonId second and moving the Notes field to last. Due to the flexibility of databases, the order of columns is merely cosmetic, because you always can reorder the fields with views and queries, or from within the form designer or the report designer. When complete, your dialog should resemble Figure 3. Click on the Next button to advance to the second step of the process.

In step two of the Table Wizard, you determine the names, types and lengths for the fields selected in the first step. In addition, you also need to determine whether the fields will use the AutoValue feature and whether data entry is required for the fields. Each of the fields already will have the defaults inherited from the original sample table. All fields are set by default not to use the AutoValue feature and not to require data entry. From this dialog, you also can delete fields from the field list using the minus button and add new fields using the plus button. The up and down arrows let you move between the different fields. This step is illustrated in Figure 4.
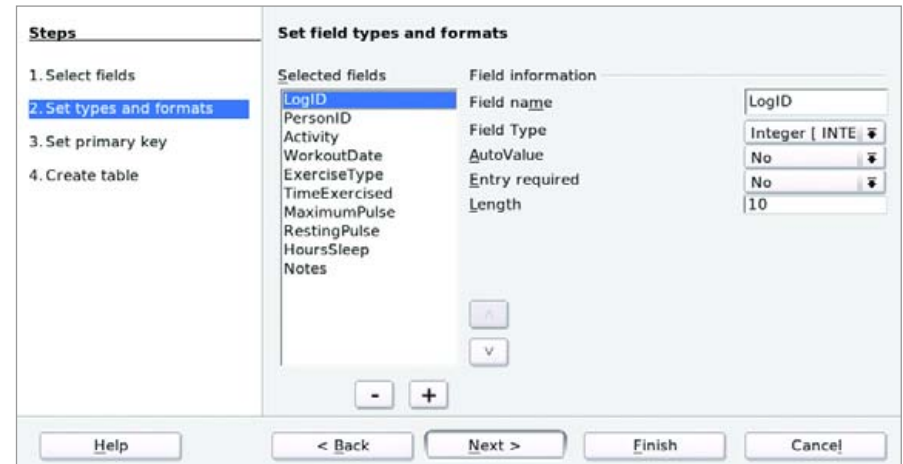

Figure 3. Step One in the Table Wizard

Figure 4. Set Type and Formats Step in Table Wizard

Figure 5. Set Primary Key

Figure 6. Create Table and Finish Table Wizard
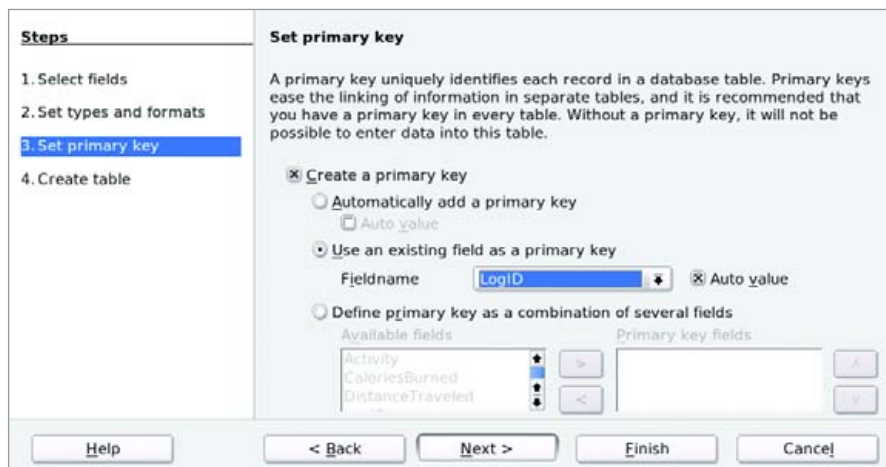
In our exercise log database, I recommend keeping all of the default types and formats. To ease the table creation process, change the LogId field to use the AutoValue feature. This helps us create a unique identification value for each new record we insert into the table. As you will see in the next step, this simplifies selecting a primary key. With the LogId field selected in the Selected Fields list, choose Yes from the AutoValue list box. This automatically changes the options. Because AutoValue ensures that the field will be auto-incremented, it will always have a value. So instead of the Entry required field information option, the wizard automatically changes the option to Auto-increment statement with a value of IDENTITY. It is important that you do not alter this value, or it will cause an error in the create table step. Click the Next button to advance to the next step.

In step three, the Table Wizard guides you in creating a primary key for your new table. A primary key is the index a database uses to access records directly within a table. It is a shortcut that helps the database find specific records within a table. Although the Table Wizard makes it appear that creating a primary key is optional, it will cause an error if

you attempt to save the table without creating one. Because we made the LogId field use auto-increment, selecting the primary key for our table is simple. Select the Use an existing field as a primary key, and select the LogId field from the list. Keep the AutoValue option selected. When complete, your dialog should resemble Figure 5. Click the Next button to proceed to the final step of the wizard.

The final step of the Table Wizard requires selecting a name for your table and deciding what you want to do next. In the first part of the dialog, the text box should contain the name of the sample table if one was used. After choosing a name for your table, you have provided all of the information necessary to create your table. The final option determines what you want to do next. You can open the table in grid or spreadsheet form and immediately begin to enter data, you can open the table editor and fine-tune the design of your table or you can invoke the Form Wizard using the table you will create.

Because we based our table on the ExerciseLog table, that should be listed as the name for our table (Figure 6). Type in a new name or a more descriptive one if desired. We intend to create a data-entry form

for our table, so select the Create a form based on this table option and click the Next button. OpenOffice.org should save the table and launch the Form Wizard.

CREATE A NEW FORM

The OpenOffice.org Form Wizard seems complicated, but it is fairly simple. Although it contains eight steps, only five steps are necessary for most forms. Excluding the creation of forms that include forms (subforms), the steps to create a form using the Form Wizard are selecting the fields, arranging the controls, setting the data-entry mode, applying styles to the form and setting the name.

The first step here is nearly identical to first step of the Table Wizard. The big difference is the source for the fields must be either from tables or queries that exist in the current database. Otherwise, the same buttons are available to select or remove fields from the form. All of the fields chosen must be available within one table or query. As we launched the Form Wizard from within the Table Wizard, the ExerciseLog table is chosen by
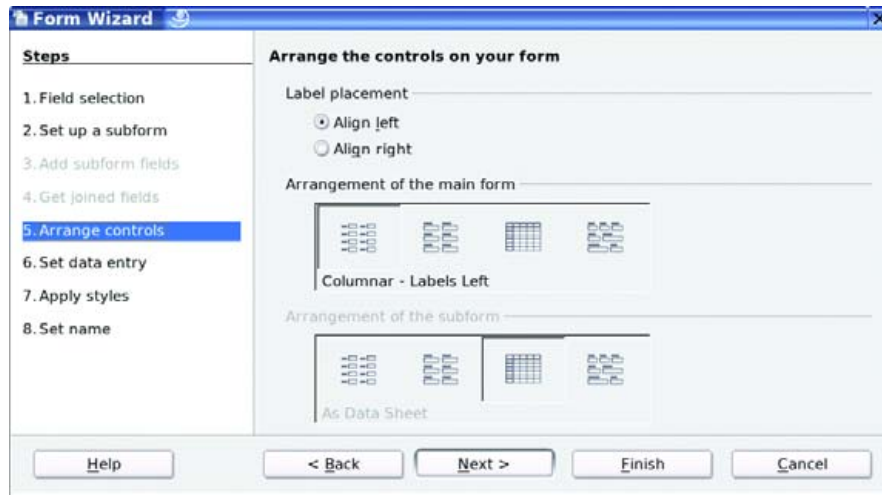
default. Select all of the fields using the >> button, and then remove the LogId. Because it is incremented automatically, it is not required for the form. Click the Next button. The Form Wizard presents the next step in the process. As subforms are beyond the scope of this article, simply leave the Add subform check box blank. Click the Next button, and the Form Wizard jumps to the arrange controls step.

With the fields selected, the next step requires arranging the fields on the form. The Form Wizard uses only simple text controls. There are four options, and the order in which they appear, from left to right, is Columnar - Labels Left, Columnar - Labels on Top, As Data Sheet and In Blocks - Labels Above. If your selection is Columnar - Labels Left, you also can choose the label placement. Although the labels remain on the left of the data, you can

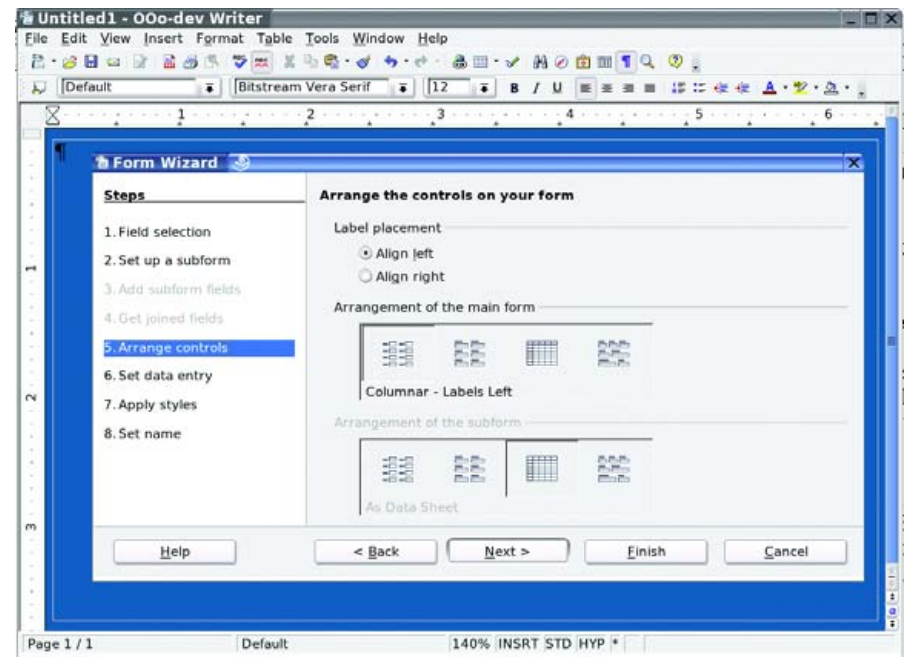Figure 7. Arrange Controls Step in the Form Wizard

Figure 8. Apply Styles Dialog

choose whether you want the labels aligned flush left to the edge of the form or right against the data itself.

With our exercise database application, I chose the Columnar - Labels Left with the labels aligned left. Click on the first option in the Arrangement of the main form section. Align left should be selected by default (Figure 7). Click the Next button to set the data-entry mode.

Building multiple forms to handle only data entry and only data modification is beyond the scope of this article. For our purposes, we want the simplicity of adding, modifying and deleting records from within our exercise log form. Select The form is to display all data option, and leave all of the sub-options blank, allowing us to add, modify or delete data. Click the Next button to select a style for your form.

The form dialog contains two options. First, choose a color style. In the Apply styles list box for our exercise log form, I selected the Bright Blue option. You also need to select a style for the field border. The mutually exclusive options are No border, 3D look and Flat. If not already select-ed, click the 3D look. You may have noticed that as you select options, the form changes in the background to reflect your choices. Figure 8 illustrates this effect. Click the Next button to complete the final dialog and create the form.

Finally, enter the name of your form in the Name of the form text box and choose what you want to do. Click on the Work with the form option and click on the Next button. If the form creation process is successful, your form should resemble Figure 9.

The form that results from the Form Wizard, as illustrated in Figure 9, is actually displayed using OpenOffice.org Writer. In a following article, I'll cover the importance of this feature, which also shows up in the reports functionality as well. By combining these features, OpenOffice.org brings new-found simplicity to common home and small-office tasks. One example is the new Mail Merge Wizard that combines Base with Writer to provide powerful new functionality. I'll con-clude my discussion of this application and also explain how to use the new Mail Merge Wizard in the March issue.■

Figure 9. Completed Exercise Log Form

Kevin Shockey is Editor in Chief of *TUX*.

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Gadget Guy: Your Music, without Wires

SEAN CARRUTHERS

One of the sad ironies of this new world of wireless multimedia sharing is that although many gadgets out there use an integrated Linux OS to get music from point A to point B, very few of them actually allow Linux users to indulge in music-sharing fun. Enter the Sonos Digital Music System.

The Sonos system is called a system for a couple of reasons. First of all, it's split up into components rather than being an all-in-one solution. The basic setup consists of a wireless base station, known as the ZonePlayer, and a portable handheld remote control, known as the Controller.

Second, it's designed to be a multiroom solution. You can place up to 32 ZonePlayers and Controllers around your house or workplace and stream different tracks to each of the different zones.

THE ZONEPLAYER ($499 US EACH)

The ZonePlayer is the heart of the system. It's designed to connect to your home network, stream music from shared folders on your local home network and communicate wirelessly with other ZonePlayers in your house.

The first ZonePlayer you hook up in your home must connect to your home network using an Ethernet connection; additional ZonePlayers then will connect wirelessly through the first ZonePlayer using a proprietary wireless networking system called Sonosnet, in order to minimize interference from other wireless equipment in your home. If you want to place the first ZonePlayer in a room that doesn't already have an Ethernet connection, your choices will be fairly limited, but you can get around the issue with a pair of powerline networking adapters.

Whereas most wireless music systems are designed to be connected to an audio system that's already in a room—whether it's a television, home theatre system or just a boombox—the

Sonos ZonePlayer

ZonePlayer is designed to be used without such external audio/video equipment. The bad news is you'll need a set of speakers for each ZonePlayer you set up. The good news is that you can use a set of standard speakers you already have, so long as they connect via bare wire at the ends. (If you don't have speakers, you can buy matched sets from Sonos too.)

Although each ZonePlayer can stream a different song at the same time, you also can link more

WHEREAS MOST WIRELESS MUSIC SYSTEMS ARE DESIGNED TO BE CONNECTED TO AN AUDIO SYSTEM THAT'S ALREADY IN A ROOM—WHETHER IT'S A TELEVISION, HOME THEATRE SYSTEM OR JUST A BOOMBOX— THE ZONEPLAYER IS DESIGNED TO BE USED WITHOUT SUCH EXTERNAL AUDIO/VIDEO EQUIPMENT.

than one of them together to act as a single entity. In other words, you can link up the player in your living room with the one in your dining room, or link the one in your workshop with the one in the garage. You even can link all of them together in party mode so that your music plays throughout the house. Or, of course, you can play different tracks in each of your defined zones.

Adding additional ZonePlayers is a fairly easy process. You go to the System Settings option on the Controller, choose Add a Zone Player, and then press the buttons on the front of the new ZonePlayer. Then you select a name for the new ZonePlayer, and you're done. Simple.

THE CONTROLLER ($399 US)

To make the ZonePlayers work, you'll need at least one Controller module. The Controller is exactly what you'd think—a mobile remote control unit that allows you to control what music is playing in what zone. You can use a Controller in each room, or you can control your whole network of ZonePlayers from a single Controller unit.

If you've ever used an iPod, you'll find the interface on the Controller to be amazingly simple—like the iPod, it has a circular wheel for scrolling, with a button in the center for selecting your choice. There are also player controls (play/pause, back and forward), volume controls, a mute button and menu buttons for selecting your zones and accepting commands.

The key to the Controller module is a large color screen in the middle of the front panel. The screen makes it easy to sort through your music library, choose between multiple zones in your house and set up the system. You can even display album artwork on the screen, if you have it saved in your music library.

The controller has a built-in rechargeable battery, and it comes with an AC power adapter. If you want to invest a bit more, you can get a wall-mountable charging cradle for $50 US, which also

will help ensure that the Controller doesn't get misplaced between uses.

THE SYSTEM

The ability of the Sonos system to play music in multiple zones around the house is already impressive enough, but the thing that impressed me the most was the way that the system finds and retrieves music.

With most wireless music players, you're typically limited to streaming your music from a single

Sonos Controller

computer, and most of the time it has to be a Windows machine. The Sonos system, on the other hand, can retrieve music from up to 16 different sources on the same network, and it doesn't matter whether those shared folders are on a Windows machine, a Mac, a Linux box or even a Network Attached Storage drive. The only requirement is that the folders have to be shared, and they have to be on the same network that the first ZonePlayer is connected to.

The one downside for Linux users is that a bit of manual setup may be required. Although the Sonos system ships with client and setup software for Windows and Mac, the Linux installation is a bit trickier. That said, I was able to set it up myself in about an hour, and I'm pretty much still a newbie when it comes to understanding what's going on behind the hood on a Linux machine. In other words, if you're willing to spend a bit of time on it, you can do it too, even if you're still a newbie.

MANUAL CONFIGURATION FOR LINUX
If you go to the Sonos Web site (http://www.sonos.com), you can search the FAQ documents under the Support section for the term "Linux", and one of the documents that will pop up shows you how to configure a Red Hat system manually. Other distributions will vary and aren't officially supported by Sonos, but you can use the find files option from your version of Linux to locate the files you'll need to edit.

The first thing you'll need to do is log in as a system administrator and change the permission on your music folder so that it's readable by all users, even on other computers. (From the command line, this would be a `chmod 0755` command

on the folder itself.) If your music is scattered throughout your Linux machine, you may want to consider consolidating it in one place to make this process easier.

After doing this, you need to ensure that the Samba file-sharing protocol is turned on, and that it launches every time your system boots up. Samba is what the Sonos system uses to retrieve data from computers or network drives, and luckily it's a part of recent Linux distributions. You'll also need to add a network share for your music folder in the Samba configuration file. The exact text you'll need to add is listed in the support document at the Sonos site, so you don't even have to worry about figuring out the syntax. In fact, the hardest part, if you're a Linux newbie, will probably be figuring out how to save the changes to your config file once you've added the extra text! (As is standard practice when you're playing around with system files, make a backup first, and if you're new to the editors found on a Linux machine, play around with a few fake files first to make sure you know how everything works, before you go messing around with crucial files.)

If your distribution of Linux comes with a built-in firewall, you'll also want to figure out a way either to turn the firewall off altogether or to punch a hole through the firewall specifically to allow Samba file sharing. Turning off the firewall isn't generally considered stellar security practice, but it may be an option if you're using a dedicated box that's already behind another hardware firewall. If you'd prefer simply to punch a hole through the firewall, you may be able to find support documents telling you how to enable Samba for your distribution simply by Googling

"Samba firewall [your distribution name here]". One example can be found here, for the SUSE desktop: http://www.novell.com/coolsolutions/feature/11952.html.

THE VERDICT
The ability to pull from Samba shares alone may be worth the investment for music fans who love Linux—or is that Linux fans who love music?—because with minimal hardware investment, you can build a Linux box specifically for sharing your music and then tuck it away in a closet somewhere so that your music is always available, even when your main workstation is powered down.

Yes, the Sonos system is expensive. Yes, a bit of manual configuration probably will be required if you're using Linux. Yes, it probably will be a bit confusing for the Linux beginner.

But, if you have a bit of mad money to spend, it's well worth the investment. The ability to stream to and from multiple locations (at least when using a small number of ZonePlayers—I couldn't wrangle up 32 of them, alas) seems to work exactly as advertised. ∎

Sean Carruthers is a freelance technology journalist from Toronto. He spent six years at Canada Computer Paper, first as Products Editor at *The Computer* and later at *HUB Digital Living* magazine. As a freelancer, he has written for the *Globe and Mail*, http://globetechnology.com, *HUB Digital Living*, *Computer Dealer News*, *Homefront* and *CE-Biz*. Although a relative newbie with Linux (SUSE, thank you very much), he has extensive experience with tech gadgets of all sorts and is enjoying figuring out which ones are compatible with Linux.

Mozilla Firefox 1.5

Recently, the Mozilla foundation released Firefox 1.5, a major update to our favourite Web browser that benefits from a large number of bug fixes, enhancements and interesting new features.

The first new feature introduced in this new version is an automated update system that looks for the latest release or revision to the browser, and if one is available, it automatically downloads it, installs it and migrates your browser settings to the new version.

This feature does make a little more sense on the Windows platform than on most Linux distributions, because the package manager on your Linux distro will automatically download the latest version and install it for you the next time you run it. Windows cannot and likely will never be able to update and support third-party packages (Google Pack appears to be pretty good at doing this for a hand-picked selection of packages, though).

The real benefit of this feature is that when a new security vulnerability is discovered that targets Firefox, once a patch for that vulnerability is released, a vast majority of Firefox deployments will be updated so quickly that exploits for this vulnerability will become obsolete.

Another, more obvious, benefit of the automated update system is that when a new major version of the browser is released, users immediately can benefit from all the cool new features, bug fixes and enhancements of that latest release.

Another very neat addition to Firefox 1.5 is the Clear Private Data tool that basically offers you a way to specify which possible private data you would like to be able to delete through the tool, and then have it clear only those elements when you run its shortcut.

If you frequently clear the same elements on your browser, this allows you to automate this process completely. The components available for you to select are cookies, browsing history, saved form information, cache, saved passwords, download history and authenticated sessions.

On the enhancements side of things, I have noticed some serious performance improvements in terms of rendering time for very large pages, to the point where it makes many other browsers seem very slow to surf with in comparison.

Another enhancement you easily will spot is the face lift that was applied to the Preferences dialog, which features a completely new layout and makes things a little easier to configure.

If you are just now discovering Firefox, another major feature that Firefox 1.0 was already providing, and that you will also find in 1.5, is a very powerful extension system that allows you to download and install extensions for the browser.

The Flashblock extension, for example, is one I find very useful, because it disables all Flash animation on any Web page not on its whitelist and replaces it with a graphic of the same dimensions so the layout of the site does not get broken by the removal of the Flash animation. If you want to see the animation, simply click on it, and if you want to add it to your whitelist so Flash animations from that site always show up, simply right-click on it and add it to the whitelist.

This is extremely useful because of the ridiculous amount of virtual memory Firefox
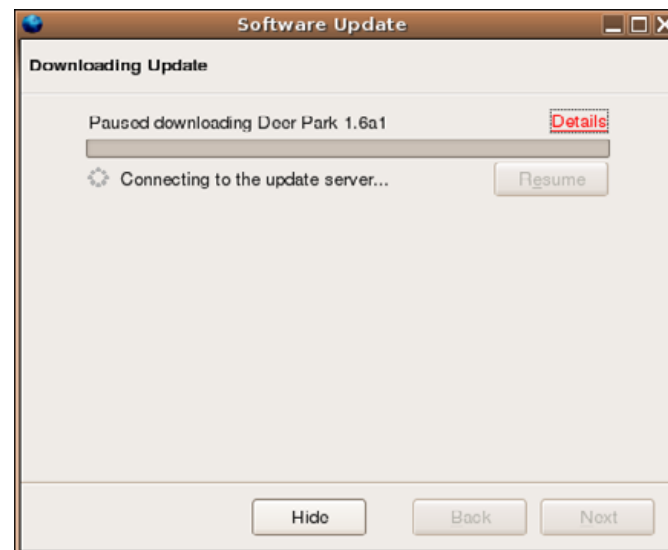

Figure 1. The New Automated Update System
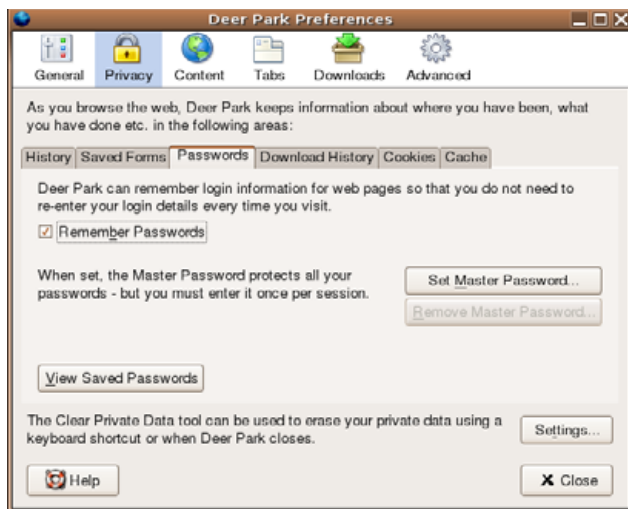

Figure 2. Clear Private Data

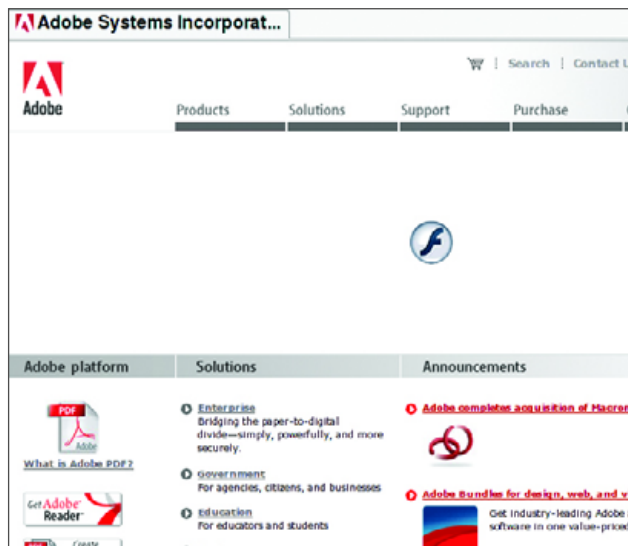Figure 3. New Privacy Tab in the Preferences Dialog

Figure 4. Kill annoying flash banners with Flashblock.

consumes when you are browsing pages with Flash animations, so although I don't mind the performance hit if I am looking at the animation, this is not a sacrifice I'm willing to make if the animation is advertising that I am not even going to look at.

Another cool extension you should try out is FireFTP. When enabled, this extension allows you to turn Firefox into a complete FTP client. The interface is easy to use, and the application is surprisingly responsive and reliable.

—Xavier Spriet

Mozilla Firefox 1.5

- **License:** Netscape Public License (NPL), Mozilla Public License (MPL), GNU General Public License (GPL) and LGPL
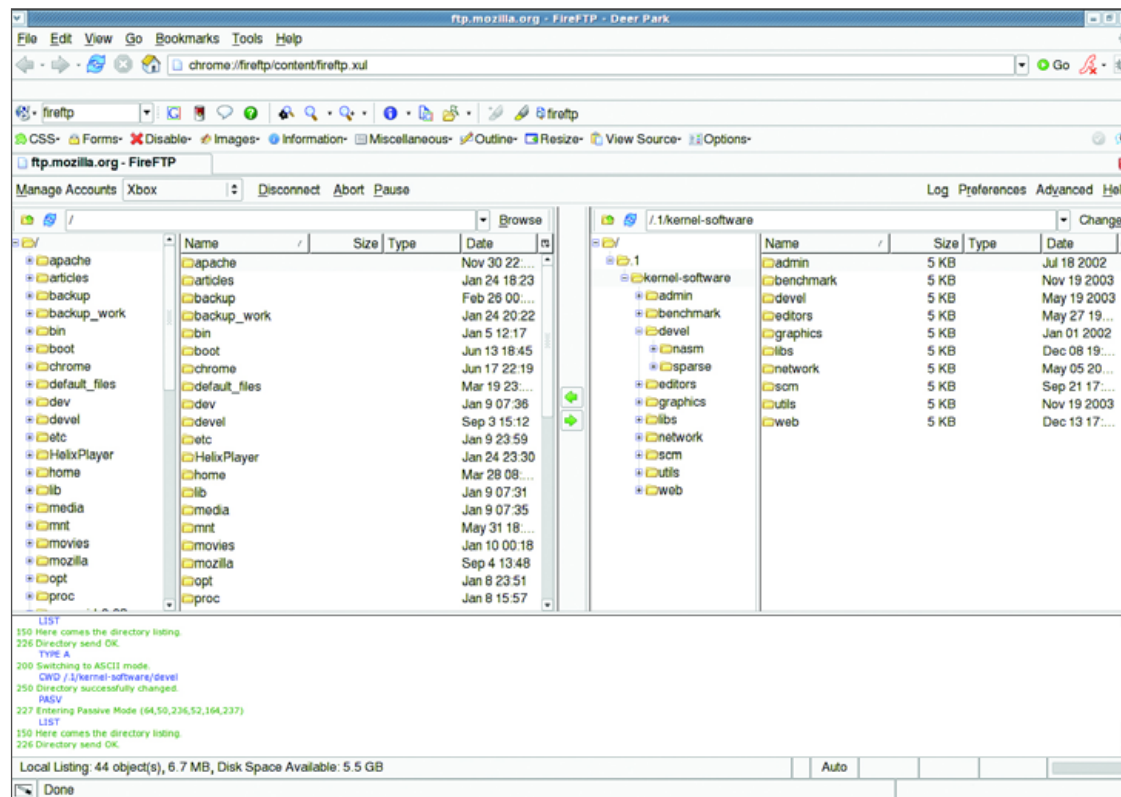- **Web site:** http://www.mozilla.com
- **Price:** Free

Figure 5. FireFTP

OpenOffice.org Math 2.0

The computer keyboard is the best compromise between usability, reliability and productivity for people to provide input to a computer, and it is especially well suited for entering text and numbers, but you may have noticed that some characters are simply missing.

The written constructs used in mathematics do not exist on our keyboards, which makes it particularly difficult to represent any formula or equation you want in your documents. This constraint can be especially frustrating if you are currently studying statistics, calculus or physics, for example.

Fortunately, an application such as OpenOffice.org Math offers you ways not only to create and manage representations for formulas or equations using any common construct and symbol, but it also allows you to use these formulas in any OpenOffice.org document.

If you are studying science or are working frequently with statistics, for example, Math 2.0 allows you to port your formulas into your class notes, archives or even presentations and Web pages.

Math 2.0 allows you to create formulas in three different ways:

■ By clicking on buttons represent-ing symbols in the selection box.

■ By right-clicking in the text input area (bottom) and selecting the construct you are looking for from the context menu.

■ By entering special marked-up representation of the constructs.

The "tagged" representation of any formula is visible from the main window, so whatever input method you feel like using, every time you work with a formula, you will learn a little more about the tags and easily will be able to use them to create formulas later on—it's a lot faster than clicking on all the buttons for a complete formula.

Another important thing to note is that hovering your mouse cursor over any of the buttons in the selection box for about a second reveals a tooltip explaining what that symbol is. You are not expected to know exactly what each button is simply by looking at it.

Let's look more closely at an example we've all been exposed to in some shape or other. We will use OOo Math to create the formula to calculate the mean average of a set. We will create that example using the selection toolbox and then look at the text represen-tation of it. Then, we'll embed this formula in an OOo Writer document.

To create this formula, follow this short set of instructions:

■ Click the Attributes button on the top part of the selection toolbox.

■ Click the line above button (second line of the bottom part of the box).

■ In the textbox, you should see the string <?> highlighted. Replace it with the letter x.

■ Still in the textbox, enter a space, the equal sign, followed by another space.

■ Click the Operators button (last in the first row of the top section of the toolbar).

■ Select the Sum entry, and notice that the <?> in the text area is highlighted, leave it selected.

■ Click the Unary/Binary Operators button (first on the left in the top section of the toolbox).
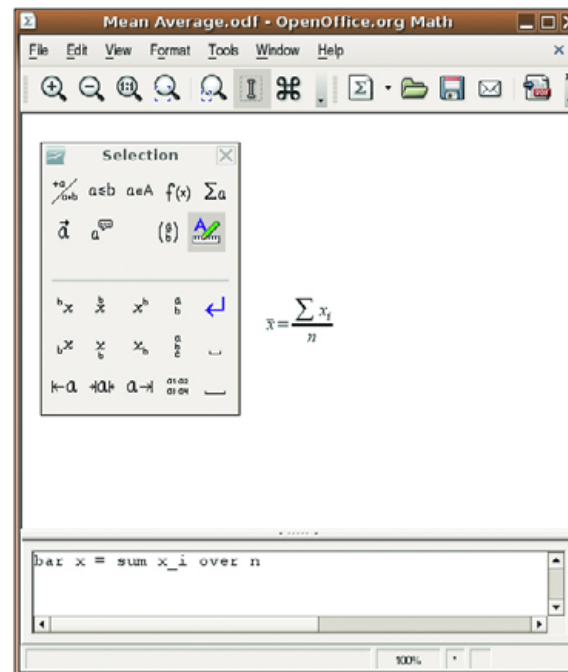
■ Select the division (Fraction) entry

Figure 1. Calculate the mean average of a set.

from the bottom of the toolbox. Notice that Math added over <?> to the formula. The first <?> still should be highlighted.

■ Click the Formats button (last in the second row of the top section of the toolbox).

■ Select the Subscript Right entry. Notice that it replaced the <?> with <?>_{<?>}. Now let's replace all the place holders with variables and finish the formula.

- Replace the first <?> in the text area with the letter x, and replace {<?>} with the letter i.

- Replace the last placeholder with n.

This method of creating formulas is straightforward but a little convoluted. It would work out just fine if we rarely had to translate formulas in documents, but it is inefficient if you need to create new formulas frequently. Fortunately, you may have noticed that the text area updates every time you make a selection, so you can see what the mark-up language looks like.

In the context of our example, the generated mark-up representation of our formula looks like this:

bar x = sum x_i over n

The mark-up is actually pretty simple for this formula, and it is also rather straightforward. You also can fine-tune the formula by implementing brackets, exactly as you would in traditional mathematics.

The documentation for OOo Math 2.0 also covers some of the mark-up constructs, but I found experimentation to be the quickest way to learn them in this case.

Now that we've created a formula, we need to save it so we can store our entire library of formulas for use in all kinds of documents. Simply click on the File menu, and select the Save As entry to save your file.

Let's provide some context for our new formulas. First, open OOo Writer 2.0 and start a new document. Once you have Writer loaded, there are two ways to insert formulas into your document. The first one involves loading a formula you have previously saved in your library, and the second involves creating the formula right from the context of your document.

Click on the Insert menu entry, then the Object menu entry, and select the Formula entry at the bottom of the list. A new instance of OOo Math will start within Writer and allow you to create a new formula. If you intend to create this formula from within Writer, you can do so at this point, but you will lose the ability to save your formula, so if you intend to re-use this formula later, I would recommend creating it in OOo Math and saving it first.

While still in the new formula, if you would like to load an existing formula, click on the Tools menu, and select the Import Formula entry. Then select the file associated with the formula you had previously created with Math. Your formula now is inserted automatically in your document.

In Figure 2, we have added a little bit of context to illustrate how formulas are aligned. Although when a formula is selected inside Writer, the formatting toolbar changes to allow you to change the alignment, the border style and colour, and even the background image of the formula. If
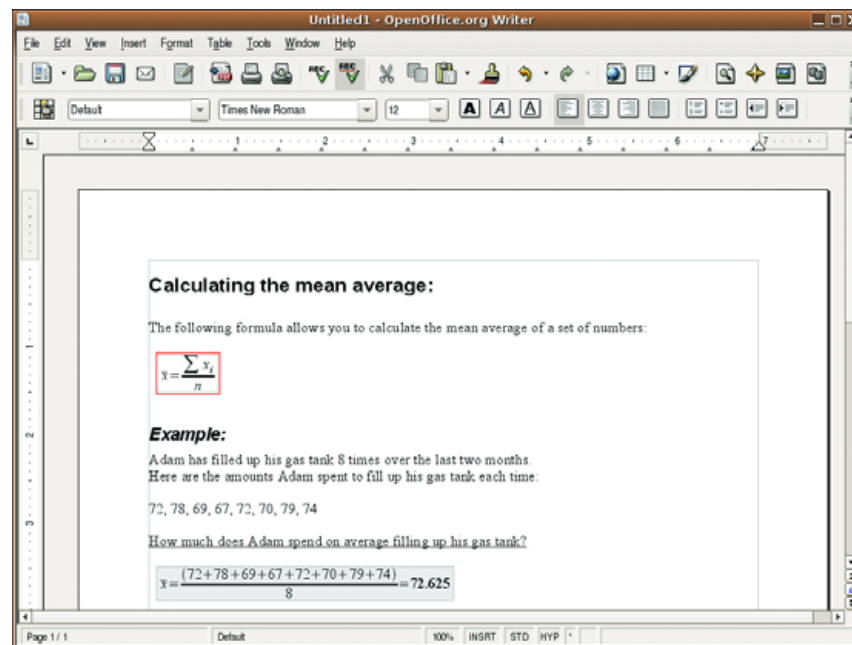

Figure 2. Formulas Embedded in the Writer Document

you would like to customize the formula object further, you can right-click on it and click the Object entry in the context menu. You won't be able to change the font colour from there, but you will have access to a lot of additional options. If you want to edit the formula, you can right-click on it, and then click on the Edit entry in the context menu.

Now that we have created a working document featuring a couple of formatted formulas, we can use OpenOffice.org's Export function (from the File menu) to export our document to a PDF format or print it.

This should cover the needs of students who want to store their lecture notes as documents as well as professionals who need to include formulas in their documentation.

—Xavier Spriet

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OpenOffice.Org Math 2.0

- **License:** Sun Industry Standards Source License (SISSL), GNU General Public License (GPL) and LGPL
- **Web site:** http://www.openoffice.org
- **Price:** Free

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Neverball

Nail-biting world-tilting action with *Neverball*.

JOHN KNIGHT

On the free gaming scene for the last couple of years, *Neverball* is a popular 3-D puzzle/arcade game in the style of *Marble Madness* and *The Labyrinth*. The basic idea of the game is to move the ball in the center of the screen around a maze, collect a certain number of items and make it to an exit within a certain time limit. The hard part is that you tilt the world instead of moving the ball, and the controls are more sensitive than Lucille Ball in a maternity ward!

The controls are quite simple. The (hypersensitive) mouse moves the world around, and the left and right mouse buttons rotate the camera. F1, F2 and F3 also change between chasing camera angles, with Chase, Lazy and Manual. Graphically, *Neverball* is quite pretty, especially for a free game. There are constant translucent effects, including see-through platforms, and many of the animations, even the ball itself are see-through! The color is always cartoony, which helps keep a fun atmosphere, and the sky is simple, serene and often changing.

Of course, these effects don't come easily, and you will want somewhere around a GeForce 2 onward for a proper experience. The amount of smoothness/clunkiness also directly
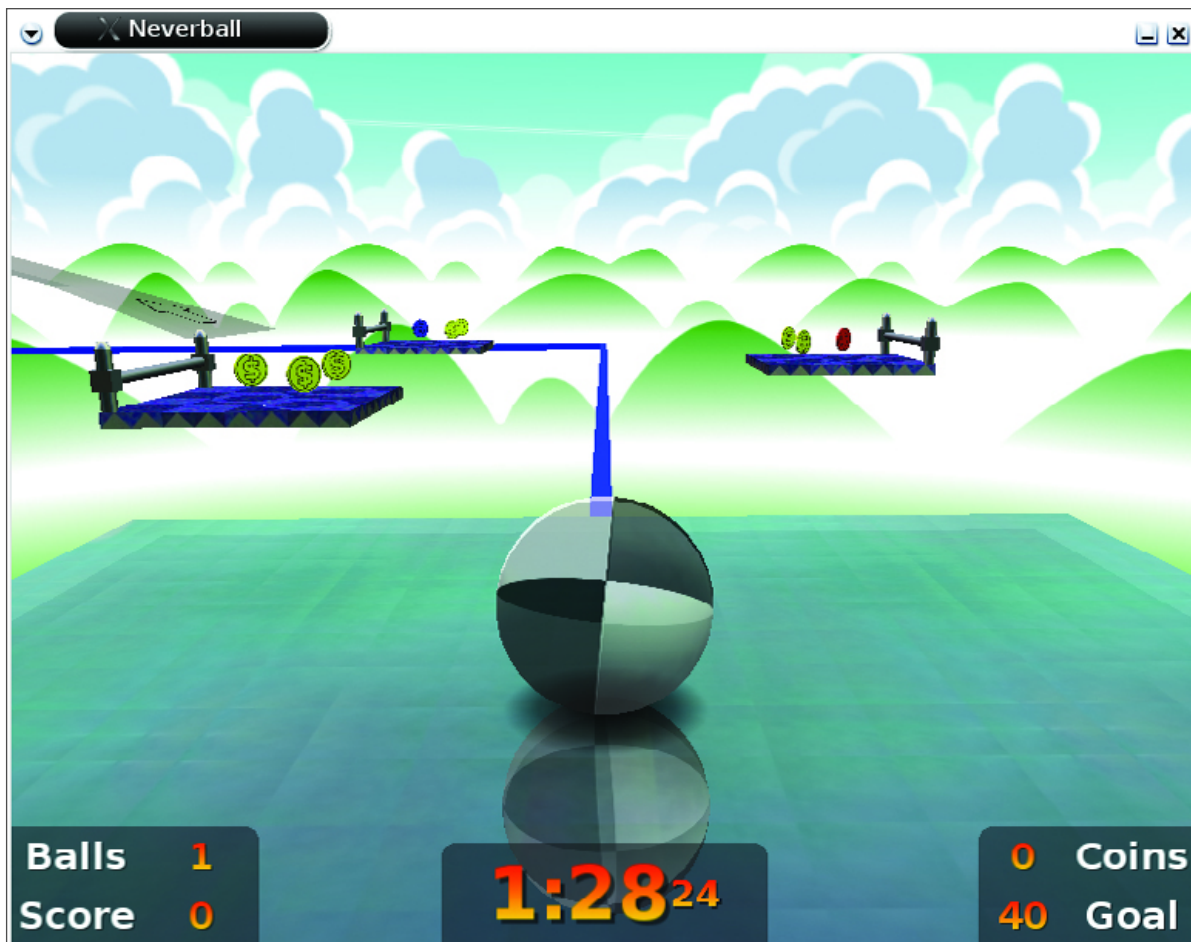

Guiding Neverball into a Halfpipe

affects game play, as it tends to govern how smooth/clunky the controls are (an added incentive to buy a proper graphics card). Don't let that put you off though, as the game certainly holds its rewards.

This is one of those games that's annoyingly

In the Clouds with Neverball

every time I passed a level I'd been working at a dozen times, and I'm sure you will too. And for the pièce de résistance, you can save a replay of the level you just finished and show your mates!

With a large variety of novelty, and an environment that always stays fresh and original with lots to toy with, *Neverball* is sure to impress. If you're the kind of person that really gets off on nail-biting play, this is certainly the game for you, and with a Windows version also available, you can give it to some un-enlightened windoze friends as well.■

John Knight is a 21-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.

GAME INFO.

Neverball **Site:** http://www.icculus.org/neverball

Command: `neverball`

There's a chance it already comes with your distro, so have a gander in your Games menu or try the command before you download the game.

abundant in tense moments and can be downright frustrating, but the worst thing is it's incredibly addictive! You'll find yourself *almost* making it constantly, and the urge to have one more go is always too strong and will keep you playing. I found myself laughing like an idiot