

REVIEWS: COOL GADGETS AND COOL PROGRAMS



Nicholas Petreley's
Long Look at Linux



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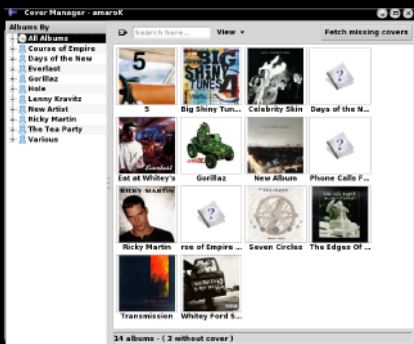
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MAKE YOUR LIFE EASIER

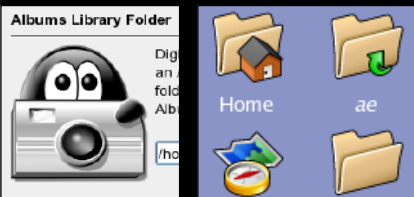
**YOUR LIFE SHOULDN'T BE ABOUT MAKING
YOUR COMPUTER WORK, IT SHOULD BE ABOUT
MAKING YOUR COMPUTER WORK FOR YOU.
THAT'S WHY THERE'S TUX.**

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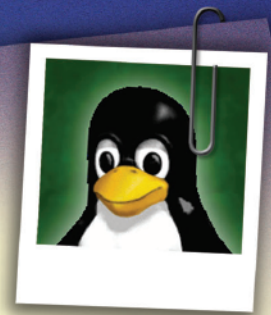


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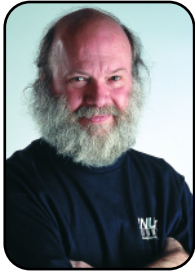
*It's over between us.
I've found someone new.
Someone I can depend on.
Someone who is fun for
a change. Thought you might
like to see his picture.*

-Sandy

TUX

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FROM THE PUBLISHER

TUX Is for You

PHIL HUGHES

Welcome to the first issue of *TUX*. Twelve years ago, I was the Editor putting together the first issue of *Linux Journal*. At that time, the biggest criticism of the idea for starting a Linux magazine was that all the information was available on the Internet. That was true, but the reason for a magazine was that someone needed to organize that information and present it in a convenient format.

As the amount of information grew, it actually became harder for someone to find what they wanted. Back then, however, most people using Linux were quite technical. As Linux evolved, it became a very suitable platform for a user—that is, someone who is not a computer professional but who uses a computer. That use could be in the office, in school, or at home.

If we compare Linux to a car, many more people drive cars than build them or even repair them. Linux is the same. *Linux Journal* is for the people who build and repair. *TUX* is for the drivers. That is, if you simply want to drive Linux and not have to lift the hood, *TUX* is for you.

If, however, you are not a new Linux user, don't run away. New Linux applications continue to appear at an amazing rate. Although you may have used Linux for years, there are likely to be a lot of programs that are new to you. Us old-timers know there usually are many ways to do the same thing. No matter how much experience you have, *TUX* is

going to show you some new ways.

Although much of the information you will find here is available on the Internet, just like the information for the builders and mechanics of Linux was available there 12 years ago, there is still a need for organization and presentation. Fortunately, the tools we have available to use the Internet have changed.

A typical Internet connection offered speeds of about 2,000 characters per second. Today, connections at 10–1,000 times that speed are not uncommon.

With *TUX*, we have decided to take advantage of that change. Besides getting the information to you much more quickly, there are many other advantages of delivering *TUX* to you electronically. Here are a few:

- You will be able to get copies of back issues immediately.
- In addition to what traditionally would appear in a print publication, we can make other material available in different formats including audio and video.
- Also, cutting down trees, making them into paper, putting ink on them and mailing them costs money. We have decided to pass the savings of a digital *TUX* on to you. Although this may be going a little overboard, we have decided to make *TUX* free. That is, no catches, no hidden costs. The only losers are the

PUBLISHER

Phil Hughes, phil@ssc.com

EDITORIAL

EDITOR Marcel Gagné
 EXECUTIVE EDITOR Jill Franklin, jill@ssc.com
 ART DIRECTOR Garrick Antikajian, garrick@ssc.com

For Editorial inquiries, please write to
 editor@tuxmagazine.com

VP OF SALES AND MARKETING

Carlie Fairchild, carlie@ssc.com

MARKETING

DIRECTOR OF MARKETING Rebecca Cassity,
 rebecca@ssc.com
 INTERNATIONAL MARKET ANALYST James Gray,
 jgray@ssc.com

SALES

ADVERTISING COORDINATOR Lana Newlander,
 206-782-7733 ext. 4, ads@ssc.com

For immediate information about advertising in this digital edition of *TUX* or for information about banner and text advertising on the *TUX* Web site, please visit <http://www.tuxmagazine.com/xstatic/advertising>

CIRCULATION

CIRCULATION MANAGER Khris Goldberg,
 subs@tuxmagazine.com

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printing company and the post office.

Why have we selected to distribute *TUX* as an electronic magazine rather than only as Web pages? First, <http://www.tuxmagazine.com> is the magazine Web site. It has articles, comments, polls, and other information. But, current Web technology (and the quirks of various Web browsers) don't offer the type of quality we want with *TUX*. In addition, many of you will want to save your copy for off-line viewing.

WHAT IS IN ISSUE 1?

Enough about what we are doing. Here is what you have right now. We decided that the theme of this issue would be Getting Organized. As technology has crept into our lives, everything that was supposed to get easier, got harder. Remember the idea of the paperless office? Or of not having to get yet another electronic or mechanical gadget fixed?

Well, most of you already are using computers, but is that computer a real organizational tool? It has likely helped in some areas but not in others. So, why not get off on the right foot with your Linux system and get organized?

Right off the bat, two things your Linux system can help you organize are your music and digital photo collections. I mention these first because everyone—not only the Linux user—can appreciate what can be

done here. James Gray explains how to use KAudioCreater as an organizational tool as well as how to pick the right output format to meet your size and quality restrictions. Once you have that audio on-line, Dee-Ann LeBlanc details how to use amaroK to listen to it and a lot more. Finally, Aaron Seigo shows you how to manage your photo collection with digiKam.

Schedules are another area where Linux can help. Lauri Watts shows you how to organize multiple schedules and, if you want, export your calendar as a Web page. This leads into syncing your Palm Pilot, and KOrganizer and KPilot are Jenn Vesperman's tools of choice.

RSS feeds offer a way to stay up to date on the content of many Web sites. Kevin Brandes shows you how to get KNewsTicker configured to manage this job for you.

Many of you likely spend a lot of your time in a Web browser. Articles by Nigel McFarlane and Marco Fioretti help you turn this into a more enjoyable and productive experience.

The KDE environment is here to be your slave, but you need to learn how to ask for what you need. Phil Nelson explains how to get KDE to tell you about your computer, Lew Pitcher shows you how to unclutter your desktop, and Eelen Frisch offers tips on customizing KDE to act the way you want.

Sometimes people see an application running on a Linux system and say, "I can't

believe that comes with Linux." Although there is more than one such application, The GIMP, which stands for GNU Image Manipulation Program, has had people saying that for a long time. Michael J. Hammel introduces you to The GIMP and to his series on what you can do with The GIMP.

Finally, we round out this first issue with an editorial by longtime Linux user and famous columnist Nicholas Petreley and some quick looks at products. We're pretty proud of what we have here, and we hope you find it useful.

WHAT'S NEXT?

We have a basic editorial calendar, but for the most part, that is up to you. *TUX* is about how to do things. We have collected a lot of ideas from computer users we know, but we need more. If there is something you would like to see covered in *TUX*, I encourage you either to send e-mail to editor@tuxmagazine.com or use the Web form at <http://www.tuxmagazine.com/xstatic/editorial/asktux> and describe what you are looking for.

What's important to us is that we want to show you how to do things with Linux. There is a lot written about why Linux is great and some about why it isn't great. That's not the job of *TUX*. Our job is to help you so that you will tell us, and the rest of the world, that Linux is great. ■

Phil Hughes is Group Publisher for SSC Publishing, Ltd.

Choice and Excitement Make a Comeback!

Well-published columnist Nicholas Petreley offers us a long-term view on personal computing and Linux.

NICHOLAS PETRELEY

Remember the thrilling early days of the personal computer and DOS programs? The excitement was driven primarily by rapidly advancing technology and, more importantly, competition in the software market.

Do some of you remember all the choices we had? I leaned toward Lotus 1-2-3 and Quattro Pro from Borland for spreadsheets, R:Base and Ansa Paradox for database work, Borland's Turbo Pascal, Watcom C, Borland C, and Clarion for programming. WordPerfect 5.1 was my first choice for writing with Samna Word a close second. I hated MicroPro's Wordstar, Microsoft Word, and Multimate, but to each his own. Don't forget the dumbed-down PFS-Write, PFS-File, PFS-Deodorant, and all the other PFS applications for people who were smart enough to realize they never needed any more than the half-dozen features these programs offered.

But, when it came to Variety with a capital V, there were more database programs to choose from than John

Sebastian's ants on a Tennessee ant hill (re: "Nashville Cats" by the Lovin' Spoonful). Off the top of my head, I can recall Dataease, Paradox, R:Base, Revelation, Progress, Dataflex, Clipper, Clarion, Q&A, and Magic. There were more.

The market was exciting because companies competed not only on the basis of quality, but on how well they could serve a specific target market. Dataease had almost nothing in common with R:Base, and neither had much in common with Revelation, yet these were all popular database programs because they served the needs of different types of customers. Most of all, it was an exciting time because we had something called choice.

The excitement hadn't quite died when I got a new Everex 486DX2/66 computer equipped with a whopping 32MB of RAM and two SCSI drives. OS/2 ran like a champ on this machine, and even Windows 3.1 ran fast enough to use it, if I had the desire. But even Don Corleone couldn't figure out how

to make me an offer I couldn't refuse when it came to running Windows 3.1. (Although, I admit it was traumatic to wake up next to the chopped off head of my favorite hobby horse.)

It was about this time that Microsoft had spent the past few years whipping the media into an orgasmic frenzy about the coming of Windows 95. Microsoft used Windows' anticompetitive pricing to force IBM to give up on OS/2. It was a

MEMORY LANE

Take a walk down memory lane and revisit the computers of old at **OLD-COMPUTERS.COM** (<http://www.old-computers.com/museum/default.asp>). This nostalgic site makes it fun. Search for an old system or browse by computer or company name. Hey, there's my old Commodore 64!

scary time. Windows 9x was closing in on me. I wanted to like Windows NT, but it was merely a bloated Windows 3.1 that didn't crash as much (not at first, anyway).

In a desperate fit of insanity, I installed Linux on my 486DX2/66 machine and started using it as my default desktop. (I had been using Linux on my servers for a year or more, but this was the first time I considered it for desktop use.)

The flaws were obvious. The fonts were hideous. The file managers were pitiful in terms of ease of use. I loved virtual desktops, but window managers were lame in other respects. I saw limitless possibilities for customizing FVWM, but only if I spent too much time learning the intricacies of configuration files.

I learned enough to make FVWM tolerable. A bazillion applications were available, and a few were good enough to do my work. Netscape worked. And to my amazement, I never encountered an error that forced me to reboot—never, ever. That alone kept me going. And as I kept going, things kept getting better and better.

Fast-forward ten years. Where's the excitement and choice in the desktop market today? I'll tell you. Aside from a few competing

antivirus and firewall products, today's choice on the Windows desktop boils down to, "Should I upgrade to the latest version of Windows and Microsoft Office, or keep using the versions I have?"

Now, let's look at the contrast for the Linux desktop. There are dozens of Linux distributions. I have five installed: Gentoo, Debian, SuSE, Fedora Core 3, and Mandrake.

Right now, I'm using the brilliantly designed, unfathomably feature-rich and highly customized KDE 3.3.1 as my graphical desktop. The fonts are fabulous, as are the drop shadows, fade effects, and transparency options for menus, windows, and other objects. My desktop is enhanced to show me the status of my hardware, weather reports and forecasts, and more. I recently used the KDE file manager to convert an entire audio CD to MP3 files, simply by dragging the CD track icons to an MP3 folder. I even can add my own features to the KDE file manager, such as "convert these Word documents to HTML," and KDE is smart enough to present this option only when I select Word documents.

And, that's only KDE. GNOME is powerful and easy to use, and countless alternative window managers are designed to appeal to dramatically dif-

ferent tastes and needs.

I wrote this column using the KDE-enhanced version of the full-featured office suite, OpenOffice.org. The competitive KDE KOffice suite has a word processor that is terrific for creating frame-oriented documents. When I must, I even can run Microsoft Word on Linux with CrossOver Office. Ironically, I've been using MS Word to coauthor an upcoming O'Reilly book on Linux Desktop Hacks, because the publisher hasn't finished converting its template system to OpenOffice.org.

I use the Firefox browser, but there's Mozilla, Galeon, Epiphany, Opera, and Konqueror, among others. Powerful e-mail clients include KMail, Evolution (an Outlook clone that is superior to Outlook), Sylpheed, Thunderbird, and more. Yes, I know some of the above applications run on Windows. Don't worry. Microsoft is hard at work breaking them with the upcoming Longhorn.

There are many other reasons for the following conclusion, and perhaps we'll get to them sometime. But here's the bottom line. Friends, choice on the desktop, and the excitement that goes with it, is back. And it's all about Linux.■



Nicholas Petreley is an author, consultant, programmer, award-winning columnist, and Linux analyst for Evans Data Corp.

Rip Your Audio Files Down to Size with KAudioCreator

Whether you want to save disk space or create a CD with ten hours of music, KAudioCreator can help you out.

JAMES GRAY

KAudioCreator is the standard, KDE-based tool for ripping and encoding digital audio tracks from your compact discs. “Hmm, ripping and encoding are Greek to me”, you say? Let’s put it another way then. KAudioCreator is a program that reduces the file size of CD-quality digital audio tracks up to ten-fold, using powerful compression

technologies like MP3, Ogg Vorbis, and FLAC. Furthermore, it does this without a substantial loss of sound quality. Smaller files mean you can pack tons more music onto your digital audio player or computer hard disk.

KAudioCreator is one component in a package called kmultimedia3-CD, a suite of audio-related

tools that comes with KDE. In this article, we discuss KAudioCreator Version 1.11, which is included as part of KDE 3.3.

By the way, before you set off looking for documentation on KAudioCreator, let me save you the trouble. There isn’t much beyond a smattering of random Web pages. Never fear, though, because we cover nearly everything you need to know right here. Let’s start by becoming familiar with the technologies involved.

BACKGROUND ON RIPPING, ENCODING, AND FILE FORMATS

Have you ever noticed that each of the audio CDs stacked next to your stereo holds about an hour’s worth of music, give or take a few min-

WHY MP3 AND OGG ARE NEW

You may be thinking that if MP3 and Ogg formats are so much more compact, why were CDs recorded in WAV format in the first place? The answer is simple: advancing technology.

MP3 and Ogg take advantage of compression techniques to analyze the information and compress it. In order to uncompress this information, you need to go through a conversion process. When Compacts Discs hit the market, the technology to perform this conversion—essentially a computer running a program—was not available at the size or price that it could be included in a CD player.

Today, a small, low-power and low-cost computer chip can perform this task so, although CDs remain in WAV format for compatibility, we now have better ways of representing the data.

utes? This is because the songs are in a sound file format called WAV, which offers high-quality digital audio but is a storage hog. WAV files fill about 10MB of disk storage space for each minute of stereo audio.

When you think about music in the context of your stereo, storage space isn’t a consideration. If you want more storage space, you buy a new CD, and you’ve got it. So, the limit on storage space is the size of your house. Today, there are many fun new ways to experience digital music, but they come with an important drawback—limited storage space. On your computer, digital audio player, or real-time audio streaming over the Internet, WAV files

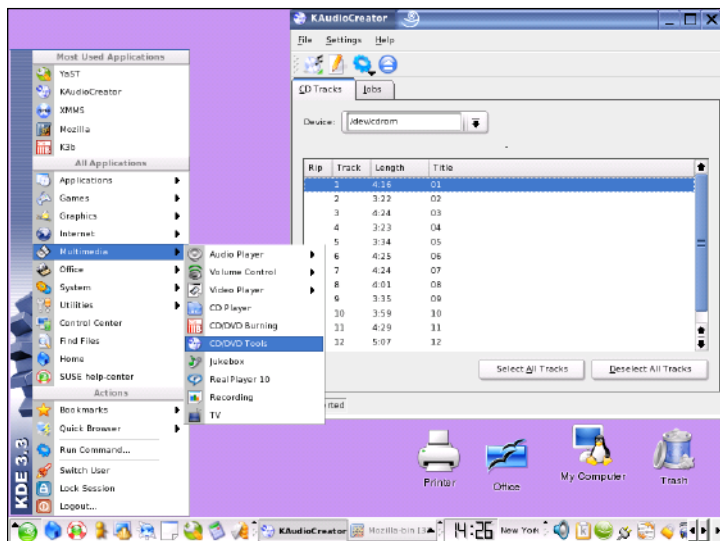


Figure 1. The KAudioCreator interface shown before doing an album (CDDb) lookup on <http://freedb.org>.

are too large to be practical. At more than 600MB per audio CD, how are you going to get your mammoth music collection onto the cool digital audio player you've been eyeing—and still have room for Bing Crosby's "White Christmas"?

Several excellent solutions are at your service, thanks to the wonders of modern technology. What will save you are *lossy* and *lossless* compression techniques, which convert WAV files from your CDs into file formats that are significantly less storage-intensive, namely MP3, Ogg Vorbis, and FLAC. The compression technique that creates MP3 and Ogg Vorbis files is called *lossy* because it eliminates data that isn't

solutions, all of which we hold very dear. MP3, on the other hand, is a closed, proprietary format. Regarding quality, both Ogg and FLAC provide you with superior audio quality vs. MP3, which frees you to base your decision on whether space (Ogg Vorbis) or quality (FLAC) is a higher priority.

Getting to these file formats entails a two-step process, ripping and encoding. The ripping part is the act of obtaining the audio track you want from a compact disc (a WAV file) and getting it ready for encoding. Encoding involves applying sophisticated compression algorithms to the WAV file to convert it to the new file format that's smaller in size. For exam-

MP3 Encoder.) Finally, flac is the encoder for FLAC files.

Okay, I think you've got enough theory under your belt to run with this. Let's move on and get our hands dirty with an example.

SAMPLE PROJECT

Before doing anything else, place a compact disc into your CD drive before launching KAudioCreator. Otherwise, it won't recognize the CD. I put in *Lay It Down* from Cowboy Junkies, but feel free to choose any CD you prefer. Then open KAudioCreator by clicking on CD/DVD Tools, which is located at K→Multimedia. That's the way it looks on my SuSE system. On a Mandrake system, you'll find

Although MP3 is an excellent choice with much sex appeal due to its name recognition, we at TUX support Ogg Vorbis and FLAC, and not simply due to Ogg's awesome name. The myriad reasons boil down to two advantages, freedom and quality. Regarding freedom, both Ogg Vorbis and FLAC are brain children of people who value open-source, nonproprietary, patent-and-royalty-free solutions, all of which we hold very dear.

critical to maintaining a reduced, but still excellent, level of sound quality. Meanwhile, FLAC utilizes a lossless compression technique, which reduces file size considerably, without a loss in sound quality.

With so much choice and so little time, what's a busy music lover to do? Although MP3 is an excellent choice with much sex appeal due to its name recognition, we at TUX support Ogg Vorbis and FLAC, and not simply due to Ogg's awesome name. The myriad reasons boil down to two advantages, freedom and quality. Regarding freedom, both Ogg Vorbis and FLAC are brain children of people who value open-source, nonproprietary, patent-and-royalty-free

ple, the algorithms will shrink a 40MB, four-minute WAV track to about 20MB as a FLAC and less than 3MB as an MP3 or Ogg Vorbis track. How cool is that?

In order to work this trick, several different tools are needed. It helps to know that KAudioCreator is your all-in-one tool that steers the activities of a number of sophisticated, clandestine sub-tools that do the heavy lifting for you, depending on what file format you choose. For instance, if you choose to encode to the Ogg Vorbis format, OggEnc goes to work. On the other hand, if you want MP3s, LAME is called to task. (Yes, it really is called LAME, which cleverly stands for LAME Ain't an

KAudioCreator listed by its own name under Multimedia→Sound.

Those of you who hate manuals will be tempted to start the ripping process by clicking various buttons once you start KAudioCreator. If you hang with me, you'll see the features that this action-packed program has under the hood are worth the wait.

TIP KAudioCreator's program name is **kaudiocreator**. You also can run it by using your quick launcher (press Alt-F2) and typing in the program name.

STEP 1: BEFORE YOU RIP, ORGANIZE THE ALBUM INFORMATION

With a CD in your CD drive and the program launched, you should see an interface similar to Figure 1. KAudioCreator finds and displays your CD-drive address and sees the individual tracks, but it doesn't yet know the artist(s) or song titles. Luckily, though, KAudioCreator has an integrated Compact Disc Database, or CDDB, which makes importing CD information a snap. To do a lookup, simply click on the CD icon located on the far left of the toolbar and voilà, you have yourself a fully labeled CD.

I had some problems with CDDB at first, but then I checked out the FAQ on freedb, the default CDDB provider on KAudioCreator. There, I learned that my port for the CDDB server incorrectly was set to 8080 for the HTTP protocol. Instead, it should be changed to 80, which I was able to do under Settings→Configure KAudioCreator→CDDB configuration. After that modification, the CDDB lookups have been flawless.

What happens if you have an obscure audio CD that is not in the CDDB? Though my obscurest indie CDs worked like a charm, you might have a homemade or foreign disc to rip. In this case, click on the Edit Album icon, the second icon from the left in the toolbar, which looks like a piece of paper and a pencil. Here you can enter new data describing your music, or you can go back and tweak the info downloaded from CDDB, such as artist, song titles, genre, year, and so on.

STEP 2: BEFORE YOU RIP—SELECTING DEFAULT FILE FORMATS AND LOCATIONS

If you plan to rip numerous CD tracks with the same file format, it's wise to select a default to

make your life easier. You always can override the default on the fly later on. Here's how you set the default: click on Settings→Configure KAudioCreator→Encoder Configuration. This brings up the dialog box that's illustrated in Figure 2. As you can see, you set your default encoder to OggEnc for Ogg Vorbis, LAME for MP3, FLAC for FLAC formats, respectively. Let's choose OggEnc for our example.

That same dialog box offers powerful tools for organizing your audio files in an automated way. Click the Wizard button under Encoded File Location, and you get an array of options for determining the storage location for your files. The wizard lets you modify each element in the directory structure. By default, each album is saved automatically in a subdirectory

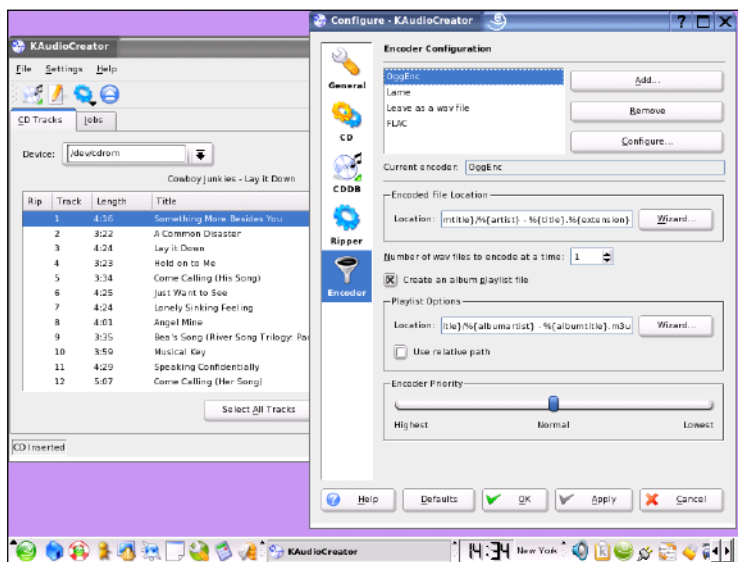


Figure 2. Setting defaults and determining file locations with the Encoder Configuration window.

of your home directory, based on its file format. For instance, I ripped five different albums in Ogg Vorbis format, and each one landed in its own subdirectory in home/JamesGray/ogg. Similarly, the albums I ripped in MP3 format ended up in a different directory, home/JamesGray/mp3.

Finally, this dialog box creates an album playlist file for you and places it in the directory of your choice. If you do nothing beyond checking the box labeled Create an album playlist file, the album playlist is saved by default in the same directory as the audio tracks.

STEP 3: RIP AND ENCODE—STARTING A JOB

As promised, we finally get to rip some files.

Be sure that the CD Tracks tab is selected on the main program interface, and then follow these steps:

1. Select the tracks you want to rip by manually clicking in the column labeled Rip. Otherwise, you can press the button labeled Select All Tracks to select them all.

2. Start the ripping (and encoding) process by pressing the icon with a blue gear on it. Pressing it once gives you the default file format you selected earlier in the preferences. Holding it down overrides the default and lets you choose the encoder you want on the fly.

3. Click over to the Jobs tab to see

how the ripping and encoding is progressing.

After KAudioCreator rips and encodes the entire batch of files, the entry disappears from the Jobs tab. This means that your files are ready and waiting for you to use. You can go and find the files in their own directory, organized by album title. In my example, I went with KAudioCreator's default on file placement, which led me to find my Ogg Vorbis files using the Konqueror file manager as follows: file:/home/JamesGray/ogg/Cowboy Junkies/Lay It Down/RespectiveSongTitle.ogg You also can see the results in Figure 3.

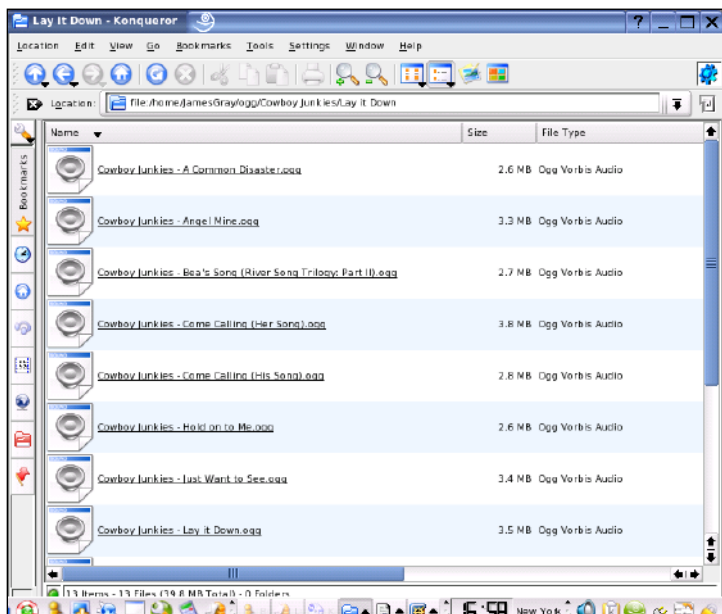


Figure 3. I used Konqueror to locate the ripped files in KAudioCreator's default directory.

STEP 4: ENJOYING YOUR MUSIC

Although the topic of audio on Linux is worthy of its own article, let's go over some of the ways to enjoy your MP3, Ogg Vorbis, and FLAC tracks.

1. Play them back on your computer: play a song by right-clicking on the file in your Konqueror file manager and selecting the Open With option in the resulting menu. Applications that will play the song for you include XMMS, amaroK, kaffeine, and RealPlayer. To play an entire album, launch XMMS by clicking K→Multimedia→Audio Player and selecting Play Directory, which

allows you to select a directory labeled with an album title that contains a series of tracks.

2. Burn a custom CD: the application you want to start to burn your own custom audio CDs is K3b. You can summon K3b under K→Multimedia→CD/DVD Burning. K3b is an intuitive application that walks you through a CD-burning project. As opposed to KAudioCreator, K3b has a solid manual to support you.

3. Download selected tracks onto a digital audio player (aka MP3 player) You can call your playback device an MP3 player, a digital audio player, or even an Ogg Vorbis player after reading this article. The latter name is becoming more realistic because numerous players are now compatible with the Ogg Vorbis format. Whatever you decide to call your player, you now can pack tons more music onto it, thanks to the size reduction afforded by the MP3, Ogg Vorbis, and FLAC formats.

As we conclude, I want to be sure you are aware that KAudioCreator has many other neat features with which to tinker and that we've only scratched the surface. Because you now have solid knowledge of the main features, procedures, and file formats, you should feel confident as you try new things. I wish you much success and enjoyment as you explore this exciting area in digital audio. Rip and encode with confidence! ■



James Gray has worked in marketing and promotion for several Linux companies over the past decade, including SuSE Linux, No Starch Press and *Linux Journal* (his current gig). By night, he is working on his MS degree in Environmental Science, which lets him play with GIS and other cool technologies. He welcomes your feedback at jgray@ssc.com.

RESOURCES

freedb: <http://www.freedb.org>

Ogg Vorbis Home Page:
<http://www.vorbis.com>

Free Lossless Audio Codec (FLAC):
<http://flac.sourceforge.net>

The Amazing amaroK: Let the Music Play

Although a boom box may be cheap, there are a lot of reasons to use your Linux system to play audio. Dee-Ann LeBlanc takes a look at one of the many tools available that takes Linux way beyond what a boom box can do.

DEE-ANN LEBLANC

I don't know about you, but I like listening to music. My tastes are pretty eclectic, and I enjoy taking all of my tunes and mixing them up so I never know what will come on next. I spend a ridiculous amount of time burning songs off of my CD collection, so I can mix and match to my heart's content using my computer.

Many programs exist to handle this task. Rather than cover them all, I focus on the coolest one out there, a program called amaroK (<http://amarok.kde.org>). amaroK (Figure 1) is a music organizer that can play CDs, music files, and streaming audio (Internet radio). Features include the ability to create multiple playlists, automatically search out and display album covers, and more.

SETTING UP AND STARTING AMAROK

Many Linux distributions (including Mandrake 10.1 and SuSE 9.2) include amaroK as part of their offerings. Playing songs and organizing your collection is standard across most versions of amaroK, but some advanced features, such as the album cover manager, are available only with recent versions.

You can start amaroK by typing `amarok` in the run box (Alt-F2) or by locating it in the menus. On SuSE 9.2, it is at `K`→`Multimedia`→`Audio Player`→`amarok`. In most distributions, the first dialog box you encounter is the First Run Wizard. This handy tool walks you through things like

telling amaroK where to find your music files. If it does not appear, have no fear. You can tell amaroK what it needs to know later.

FINDING YOUR WAY AROUND

amaroK's Playlist window (or main window if you elect to keep the program in one piece) has a somewhat complex interface, so it's worth taking a tour to learn where to find everything. Along the left of the Playlist window (Figure 2) are a set of tabs. These tabs are not identical for every version of amaroK, but if you've updated your software recently, you should find a setup at least similar to what is discussed here. Selecting a tab changes what you see in the Playlist window's left-hand side.

In the Context tab (Figure 3), you can see information about the song that is currently playing, including its album cover (if your version of amaroK supports this feature), the other songs on the album, and more. If you're not currently playing music, the Context tab shows the tracks you have played the most often (under Favorite Tracks) and the ones you added most recently (under Newest Tracks).

Below the Context tab is the Collection tab. Here, you can browse through your entire music collection. In the Actions menu within this tab, choose `Configure Collection Folders` if you want to add more folders of music.



Figure 1. amaroK in its two-part mode, where the player and playlist/organizer are separated, with the cover browser visible as well.



Figure 2. The Playlist window with the Playlist tab displayed and the Cool-Streams playlist, full of Internet radio stations, expanded.

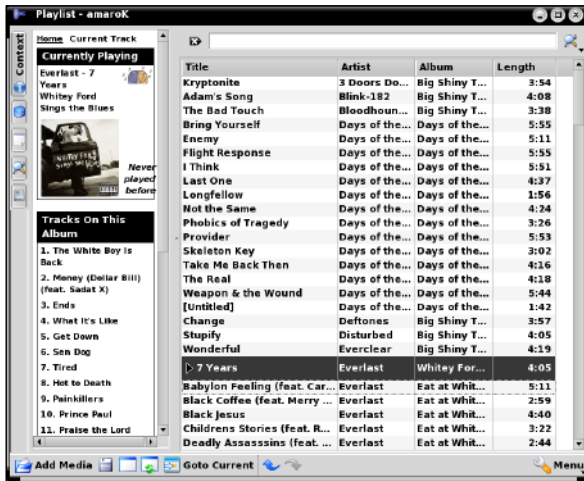


Figure 3. The Playlist window with the Context tab displayed.

You also can select Cover Manager to open the Cover Manager window (Figure 4) or right-click on the main player and select it there. The Cover Manager is a very cool feature that makes it possible to (more or less) automatically download cover graphics to display while the songs are playing. To load these images once you have the window open, make sure you are connected to the Internet, and then simply click the Fetch missing covers button. The album title information is used for a search on Amazon's Web site for images, which are then downloaded and stored in amarok's local database.

Beneath Collection is the Playlists tab, shown earlier in Figure 2; how to use this tab is discussed later in this article. Under Playlists is the Search tab, which lets you search your filesystem—maybe you have some music files scattered who knows where and want to add them manually or move them into your music folder(s). Beneath Search is Files, which lets you browse your filesystem manu-

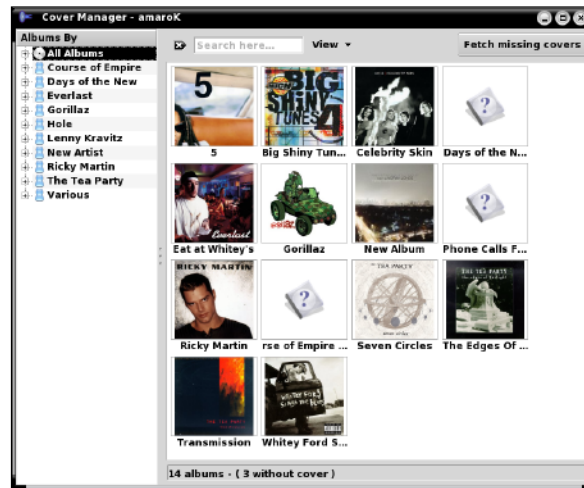


Figure 4. The Cover Manager window with the covers amarok was able to find on Amazon.com.

ally, either by using the browser buttons at the top of the panel or by typing in filesystem paths.

On the lower right of this window is a Menu button (if you don't see one, you can access the menu by right-clicking in the player window as well). Clicking this button shows you the options for repeating particular tracks and whole playlists, along with enabling random mode so songs don't always play in the same order. Configuration entries for various aspects of amarok also are located here, including Visualizations, which pulls up various graphical ways of interpreting the music (I recommend libwmddiscotux.so for a chuckle).

If you want to configure the player's look and feel, open the Menu and select Configure amarok. You can alter things like the fonts used in the windows, the color schemes, whether or not to use On Screen Display (OSD), which pops up a brief window showing you what song is starting to play, and more.

LISTENING TO MUSIC

On the right side of the window is your playlist, once you build one. To put a song in the playlist, drag it from the Collection screen into the right pane. You also can drag a whole folder over to add a whole album, though the album is added to the playlist song by song. To start playing music, simply click the Play button in the player window. The player includes a tiny PL button. Click this button to get rid of the Playlist or to bring it back when you need it.

Once you have a playlist that you're happy with, click the Save Playlist button on the bottom part of the main window. A Save As dialog box appears. Tell amarok where to save the file and what name to use, and then click Save. Two types of smart playlists also are available. The first is made automatically, according to your listening habits. Both of these options are under the Save Playlists tab.

To use the pre-existing smart playlists, look to the bottom section of the Save Playlists tab. There you should see entries such as All Collection, Favorite Tracks, and so on. Browse through these until you find the one you want, and then double-click on it to open its contents into the right side of the window. In some cases, such as the Genres section, you may find that most of your music doesn't have the

NOTE:

As with all applications where development is fast and furious, amarok is undergoing constant tweaks to the interface and to its features. While testing a bleeding-edge development version of amarok, I noticed that the menu had been moved to a top menu bar in the playlist window, in much the same location as you would expect to find it with most applications.



Figure 5. The Tag Editor, for assigning meta-information to your music files.

proper tags applied to it, so when you double-click on Blues there's only one song there. You can fix this problem by selecting the Collection tag, right-clicking the songs to which you want to assign values, and selecting View/Edit Meta Information (Figure 5). Actually, you can right-click and select this option pretty much anywhere amaroK shows you the name of the song.

If you don't want to change all of the meta-information, but instead want to edit only one aspect of an item in your playlist in the right side of your window, right-click that component and choose Edit Tag Inline: *tag*, where *tag* is the entry you want to change. For example, maybe a song's title is misspelled and it's annoying you. Right-click the title in the right-hand listing, choose Edit Tag Inline: Title, and then make your changes without having to deal with extra dialog boxes.

To create a brand-new smart playlist that follows your own criteria, select the Playlists tab and click the Create Smart Playlist button. The Create Smart Playlist dialog box appears, in which you can assign the playlist a name, and then set the various rules for the songs it should contain. From here, you can specify all kinds of conditions, such as the score you assigned the song, its genre, the artist involved, and more, and then have the songs sorted by rules you select. If you want multiple conditions, click the + button to the right of the first set and another becomes available, letting you get as complex as you want. Once you're finished creating your playlist rules, click OK, and then look down in the Smart Playlists section. You'll see your custom list at the bottom. Double-click it, and its contents appear to the right. To start playing what's in your playlist, click the Play button.

Of course, amaroK can play more than music files. You also can use amaroK to listen to streaming audio, like Internet radio. In some versions of amaroK, this feature is in the Playlists tab; other versions have a special Streams tab. If your version has no Streams tab, look in the Playlists tab for the Cool-Streams playlist. Expand this list to see the list of on-line radio stations that amaroK already knows about. You can specify your own favorite station by clicking the Add Media button, typing the URL in the Location text box, and then clicking OK. Double-click a station to listen to it.

Those who have a Streams tab need to click the Fetch Latest Streams button at

the top of this tab to grab the list of stations from the station server. To add your own station to the list, click the Share button to open the Share dialog box, and type in all of the appropriate information about the station (choose Direct Stream from the Type listbox). When you click OK, your station is not added to your own list only, but also is uploaded to the server so other people can see the station in their listings as well. Drag a station over into the top of your playlist, and then double-click it in the playlist to listen to it.

amaroK will hide nicely in your KDE panel's system tray. If you want to get amaroK out of the way, click the X in the upper-right corner of the player's window to close all of the amaroK windows and minimize the tool onto your system tray while your music keeps playing. When it's in the tray, you can single-click the icon to open up the windows you minimized, or you can right-click the icon and select Quit to close amaroK completely.

SOUNDING OFF

If you're like me, life is just missing something if music isn't music playing somewhere. Tools like amaroK can make organizing and enjoying your music collection a lot easier and more fun than using a multi-CD changer or having to sort files into particular directories so you can listen to exactly what you want, when you want to. Given that the promise of computers was that they were supposed to make our lives easier, it's always nice to find a tool that actually delivers. ■



Dee-Ann LeBlanc is the award-winning author of 13 computer books (mostly focused on Linux) as well as an award-winning technical journalist with over two-hundred articles behind her. Her latest book is *Linux for Dummies, 6th Edition*, and you can learn more about her at <http://www.DeAnnLeBlanc.com>.

Managing the Digital Photo Album with digiKam

With conventional photography, a shoe box was the most common organizing tool. In the age of digital photography, we all need a better organizing tool, and digiKam is such a tool.

AARON SEIGO

Consumer electronics have changed how we record and share our life experiences. Home computers, portable digital music players, cell phones, and other devices have taken much of the information that was once available only on bits of paper and plastic and freed them to roam in the digital expanses of our computers and the Internet.

Photography has not been passed over in this digital revolution either. The image quality of consumer-grade digital cameras has improved by leaps and bounds, and prices have fallen steadily. Today, more digital cameras are sold than traditional film cameras. This is not surprising as digital photography is more immediate, flexible, and convenient than traditional photography, and it also is more cost effective as there are no film and development costs.

But this transition to a digital medium for photography has meant changing how we work with the images from our life. With film photography, the prints most often were organized and archived simply by placing them in photo albums, and making prints was as easy as taking the camera to a store that develops film. In the digital age, the role of developer, album maker, and even photo retoucher is being played by software that runs on our home computers.

One of the more advanced and user-friendly

digital photography applications available today is digiKam. digiKam makes organizing and managing collections of photographs easy, and as with most Linux software, it is freely available.

DIGIKAM 101

At the most basic level, digiKam helps organize photographs into albums. The first time digiKam starts, it displays a welcome screen asking where you would like to store these albums. The default location is a folder called Pictures in your home folder. You can choose a different folder or press the OK button to continue. If the folder you select does not exist, digiKam creates it for you.

The main digiKam window appears next, and this



Figure 1. Albums Library Folder

where most of the action happens. This window is split into two work areas, much like a file manager with a list of albums and tags (more on tags later) on the left and a photo viewing area on the right.

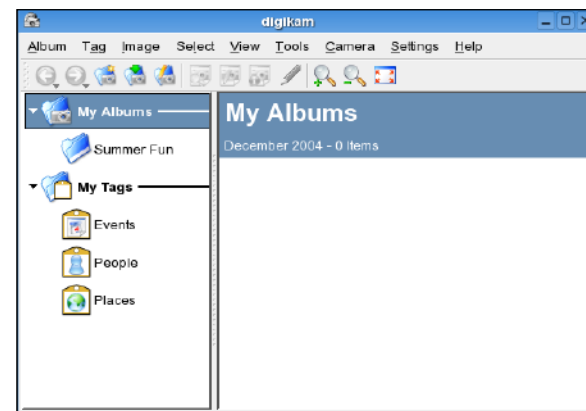


Figure 2. Main digiKam Window

The first task after starting digiKam is to create one or more albums in which to put pictures. We do this by selecting New Album... from the File menu or by clicking the New Album icon in the toolbar. A window pops up asking us to name the album as well as to provide some additional, optional information, such as a comment and a date. Once we have provided a title for the album and press the OK button, the new album appears in the My Albums list.

With an album created, we now can go about the business of putting photographs in it. If the photos are already on the computer, we simply

can click the Add Images button on the toolbar or select one of the Import options from the File menu. Doing so opens the standard file dialog from which you can locate your pictures. This is useful when photographs arrive by e-mail or are saved from a Web site. But what about the pictures stored on our digital camera?

USING A DIGITAL CAMERA WITH DIGIKAM

digiKam makes working with most digital cameras quite easy. First, connect the camera to the computer and turn it on. Select the Add Camera option from the Camera menu and click the Auto-Detect button in the window that appears. This causes digiKam to scan your system for known cameras.

If digiKam doesn't find the camera automatically, clicking the Add button brings up the camera selection window. Simply select the model of the camera you want to use with digiKam from the list on the left. If your camera model does not appear in the list, and it connects to the computer with the USB

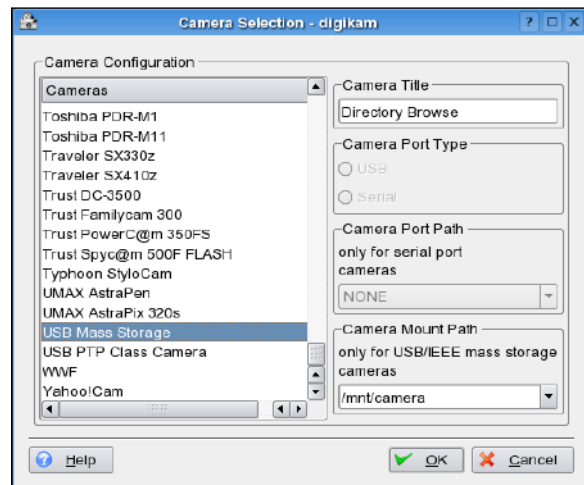


Figure 3. Adding a Camera

port, select the USB Mass Storage option.

If you are using the USB Mass Storage option, you also need to provide the mount point for the camera. The mount point is the folder that your camera appears in as set up by your operating system. This usually is found in either the /mnt or /media folders. Consult the documentation that came with your Linux OS, or browse the /mnt and /media folders with your camera on and plugged in to the computer.

After clicking OK, the camera should appear in the cameras list. Close the configuration dialog, and you now are ready to begin adding photographs to digiKam directly from the camera. To download photos from the camera, open the Camera menu and select the camera you just set up. A window showing the photos stored on the camera appears. Select which pictures you want to download, or simply click the Download button and select Download All. After asking which album to put the photos in, digiKam starts transferring the images to your computer. Once the transfer is complete, you can use the Delete button to remove pictures from the camera to free up space for future photographic adventures.

ALBUMS, PHOTOS, AND TAGS—OH MY!

With our photos in an album, we now can go through them and decide which to keep, which to edit, and which to delete. Selecting an album from the My Albums list brings up thumbnails of all the images in the album in the viewing area.

Hovering the mouse pointer over a photograph's thumbnail shows a floating window that displays various details about the photograph, such as when it was taken, how big it is, and which album and tags are associated with it. This same information (and more) can be viewed by selecting a photograph and clicking on the

GPHOTO2

The magic of reading images from your digital camera under Linux is done in the background by a piece of software called gPhoto2. This all is transparent and hidden behind digiKam's friendly face. As I write this, gPhoto2 currently supports over 530 different digital cameras. To find out if your camera is supported, check out <http://gphoto.org/proj/libgphoto2/support.php> for the current list.

Properties button in the toolbar.

Clicking on an image brings up the image viewer window. Here, you can view the photographs one by one at full resolution as well as perform basic editing functions, such as resizing, rotating, cropping, and printing. The arrow buttons in the toolbar provide a way to step between photographs in the album.

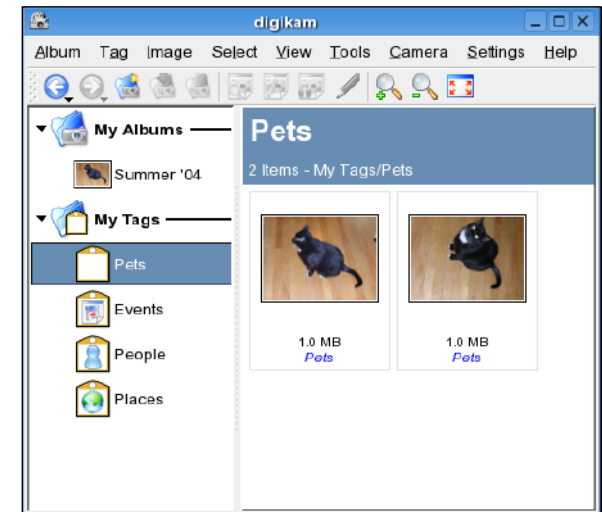


Figure 4. digiKam Tags Window

The Image menu in the main digiKam window provides several additional options for working with your photographs, one of which is to edit the tags associated with an image. A tag is a descriptive category that can be attached to one or more photographs as labels. For instance, we might choose to tag all pictures of pets with a tag called (creatively) Pets. Then, simply by clicking on the Pets tag in the main digiKam window, all the photos of our animal companions appear as if they were in the same album. A photograph can have as many tags associated with it as you like, and photographs in different albums can share the same tags. This is a very handy organizational tool that provides multiple ways of categorizing photographs for quick viewing later.

Although digiKam starts with a basic set of tags, new tags can be added by selecting the New Tag option from the Tag menu. New

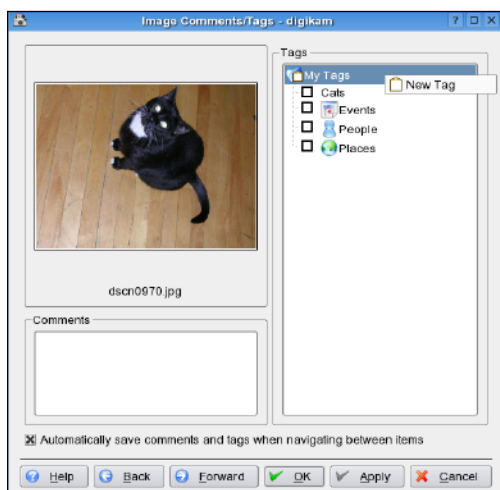


Figure 5. Adding a New Tag

tags appear in the list on the left side of the digiKam window as they are added. Tags can be assigned to images by clicking on an album and then selecting Edit Image Contents and Tags from the Image menu. This brings up the tag editor window, which allows you to add comments and tags to the photographs in an album. You also can drag and drop photographs onto the entries in the My Tags list as a quick way to add tags.

THE DIGIKAM TOOLBOX

digiKam offers much more than downloading pictures from your camera and arranging them into albums. It also provides a number of powerful tools for working with your photographs, and it is here that digiKam really shines.

For instance, in the File menu, an Export submenu where a selection of tools that make sharing and backing up your photos quite easy is found. A CD/DVD creation wizard steps you through creating a CD-ROM, complete with a Web browser-friendly table of contents and navigation, from your photographs. The HTML Export tool also found in this menu lets you create photo galleries with merely a few clicks that can then be uploaded onto the Web.

With a color printer, it's quite easy to make nice photo scrapbooks in digiKam. Select one or more photographs in an album, and then select Print Wizard from the File→Export menu. This wizard steps you through the process of printing out photos in various sizes and layouts. Perhaps even more impressive is the Create Calendar wizard found in the Tools menu. This wizard creates photo calendars

from your digiKam albums that can be printed out right at home. These make wonderful gifts for friends and family alike.

If you don't have a color printer or want to send the results electronically, select Print To PDF as the printer name in the print dialog to create versions of your albums and calendars that can be viewed and printed on most Linux, MS Windows, and Macintosh computers. These files are perfect for e-mailing to family, friends, or taking to a print shop.

The Tools menu also houses several other useful items, such as the slide show creator and the image duplicate finder. But perhaps the most powerful and useful tools are found in the Batch Processing submenu. As the name implies, these tools work on several images at once. You can rename, resize, and covert entire photo albums of images quickly from this menu. Tools for sharpening, adding borders, and applying various image effects such as embossing also are available from the Tools menu. In all, more than 30 different batch processing options are available in digiKam.

ELEGANT BUT POWERFUL

Getting images from a digital camera onto a computer, a CD, or the Web has never been so easy on Linux as it is with digiKam. Whether you take photographs for fun, as a way to record memorable events, or as part of your work, digiKam's straightforward interface and powerful processing tools make working with collections of digital photographs painless. This is one piece of software every digital shutterbug certainly should check out. ■



Aaron J. Seigo is a KDE developer who hails from Calgary, Canada. A UNIX developer since the early 1990s, Aaron is now involved in usability and core desktop issues within the KDE Project.

Syncing a Palm to KOrganizer with KPilot

Linux offers many tools to sync your PDA with your Linux desktop.

Jenn Vesperman details the use of one of those tools.

JENN VESPERMAN

NOTE:

This article uses KPilot and KOrganizer, which work with most PalmOS handhelds. If KPilot and KOrganizer are not already installed, you can install KPilot and KOrganizer with your package manager. They are in the `kdepim` package for Red Hat, `kdepim3-kpilot` and `kdepim3-organizer` for SuSE, and `kpilot` and `korganizer` Debian packages.

What would you do if you lost your handheld? I know it bugs me every time I'm an hour away from home and realise I left it sitting in its cradle. It's not only the computer, though, it's the information—appointments, contact details, shopping lists. Is it Tuesday or Wednesday that I'm supposed to see the doctor? How can I book a time with this client if I don't know when I'm free? And then there's the nightmare—not only leaving the handheld in its cradle, but losing the information in it. It would take weeks to sort it all out. Of course, the handhelds come with tools to fix that—you back them up to your desktop computer. The catch is that the tools work for Windows and possibly Mac OS, and your computer is running Linux.

There's a solution, of course. Too many programmers run Linux and have handhelds for a problem like this not to have a solution. There actually are several good solutions, and the best three, in my opinion, are KPilot, Gnome-pilot, and JPilot. KPilot and Gnome-pilot link directly to KOrganizer and Evolution (a free Microsoft Outlook clone) letting you synchronise your handheld with your personal information manager application. JPilot has an information manager of its own, mimicking the four primary applications in PalmOS.

KDE puts KPilot in the Utilities menu. Look for the icon of a Palm Pilot in a cradle and the name PalmPilot Tool (KPilot). To run KPilot from the command line, or the Run option under the K menu, use the command `kpilot`.

KPilot needs to be configured before you can use it to synchronise your handheld. The configuration daemon should start auto-

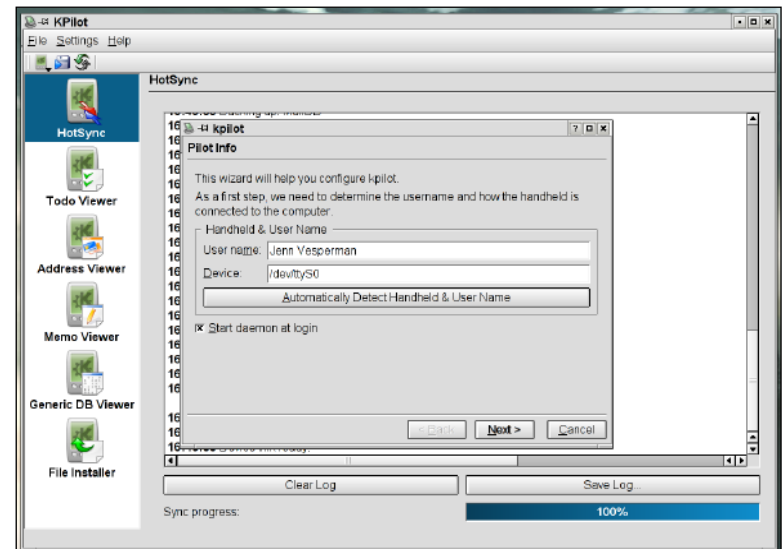


Figure 1. KPilot Wizard

matically at login. If it doesn't, run KPilot to make the daemon start.

Now that KPilot is set up, you can do your first synchronisation. Check that your handheld is in the cradle, then press the Hotsync button. Your address book, calendar, and to-do list information are added to the information in KOrganizer, and the address book information is shared with KMail. KOrganizer also does group scheduling, which is not itself synchronised to the handheld, but calendar events and to-do tasks that are scheduled within the group scheduler are synchronised.

Next, open KOrganizer. The to-do list items are on the left, under a month-view calendar. On the right, is your to-do and calendar tasks for the current week. Below that is your schedule for the week. A normal menu bar and icon bar are at the top, and a status bar is at the bottom. Hover your mouse over the icons for tooltips that tell you what each icon is for. On the top right in the icon bar is a symbol that looks a bit like an open book. If you click

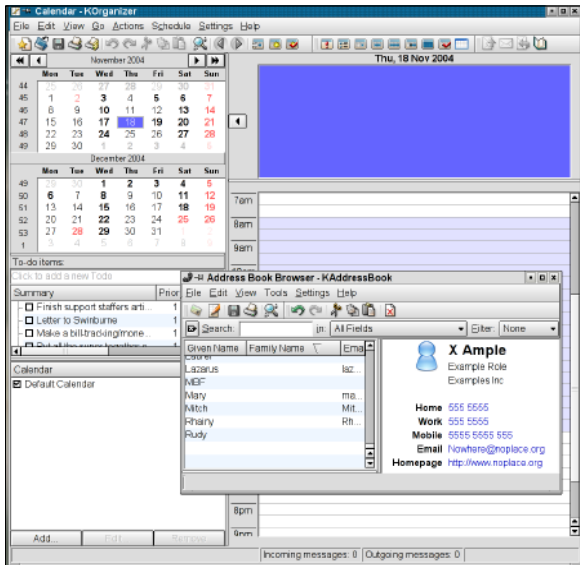


Figure 2. KOrganizer

on that, the address book opens.

Experiment with KOrganizer. Your Palm information is preserved, but KOrganizer allows additional information to be stored with to-do, calendar, and address book entries. Right-click on one of the to-do items, and select edit. The title, priority, category, note, date, and time are preserved, but you can see a row of tabs in the dialog. The tabbed dialogs provide a host of additional information you can store about each to-do entry, such as attachments (similar to e-mail attachments), percentage complete, and attendees (people who also need to know about the to-do item).

Close the to-do dialog, and right-click on a calendar event, such as a meeting. Select edit, and look at the tabbed dialogs. Select Attendees, and enter in people who normally would be involved in a meeting. Either click the New button or the

Select Addressee button—the latter uses your address book to provide you with a list of potential people for the meeting. Once you have at least one person entered, you also can choose a role and a status for each person. Decide whether you want to mail this person with the meeting information; if you select OK, a dialog box opens and asks whether KOrganizer should e-mail the attendees.

Now that you've played with KOrganizer a bit, let's go back to KPilot and synchronisation. KPilot offers three types of synchronisation:

- **Fullsync:** synchronises everything and copies everything to the backup directory, and it is the slowest option.
- **Fastsync:** synchronises only the things that connect to programs on the PC. It doesn't copy to the backup directory, and it is the fastest option.
- **Hotsync:** synchronises changed data and copies the changed data to the backup directory.

In addition, there is an option to back up the pilot data to the PC or to restore from the PC without synchronising with KOrganizer. The backup and restore options must be used with care, as any information on the target system is overwritten by the information on the source. The List Only option lists the databases on the Palm Pilot but does not actually exchange data. There are a lot of synchronisation options, but most of the time, you will need only Hotsync, which is the default. If you want to change your default sync, a drop-down menu under Settings→Configure KPilot→Hotsync can do it for you.

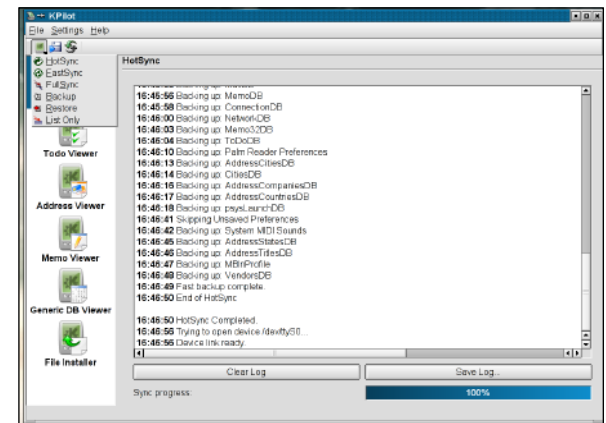


Figure 3. Hotsync

You may want to use Fullsync every month or so, to be certain that everything on the handheld is backed up properly. On the other hand, you may choose to use Fastsync when you're about to run out the door and simply want to check that the appointment list on your handheld is correct. To do these changes of synchronisation type, either right-click on the KPilot icon in your panel or open KPilot. Select the synchronisation option from the Next Sync menu in the panel icon or from the Hotsync button menu or the file menu in KPilot. Then, press the button on your

TIP You also can install a new file or program application to your handheld (these are usually files with a .prc or .pdb extension). Open KPilot and select the File Installer from the icons on the left. Click on the Add File button, which opens a file selector. Select your file or application, click OK, and then synchronise your Palm as normal.

cradle to sync the palm. This changes the next synchronisation, but leaves the default unchanged.

If you lose information from KOrganizer, you can restore it by synchronising from the handheld. If you lose it from the backup directory, you can restore it with the backup synchronisation option. If you lose it from the handheld, you can restore it with the restore synchronisation option. Then there's the real concern, losing it from everywhere. The solution to that is to include your handheld's information in your regular system backup.

With every synchronisation method other than Fastsync, KPilot copies your handheld's data to the directory `/home/username/.kde/share/apps/kpilot/DBBackup/handheld name/`, where *username* is your Linux user name, and *handheld name* is the user name in your handheld. To store your handheld data as part of your regular system backup, ensure that this directo-

NOTE:

`/home/username/.kde` is the usual `$KDEHOME` environment variable. If your data is not there, use the command `env` in a terminal window, and look for the `KDEHOME` variable. Your data is at `$KDEHOME/share/apps/kpilot/DBBackup/handheld name/`, where `$KDEHOME` is the value of the `KDEHOME` variable, and *handheld name* is your handheld user name.

DEVICE SETTINGS

The most common reason for the configuration wizard to fail to locate your handheld is incorrect permissions on `/dev/pilot`. If you have access to the superuser (root) and are the only person who will be using your computer, you can fix this yourself:

- From the K menu, select File Manager—Super User Mode.
- Change the Location to `file:/dev`.
- Find and right-click on pilot, and select Properties. If pilot isn't there, you have other problems and will need to fill in your device manually (discussed later in this article).
- Look at the properties window. It should have a Points to section, which lists the actual device to which your handheld cradle is connected.
- Find and right-click on the device listed under Points to, and select Permissions.
- Change the permissions so that Others is set to Can Read & Write.

If that doesn't fix the problem, you can fill in your user name and device manually. Your user name must match the user name listed in your handheld, which you can find by pressing Home, then Hotsync on the handheld. The name should be in the upper-right corner of the screen.

The next best solution is to enter the actual device into the Device field of the wizard. If you use a serial cradle, the device is somewhere in the series `/dev/ttyS0` to `/dev/ttyS3`, depending on which serial port you've

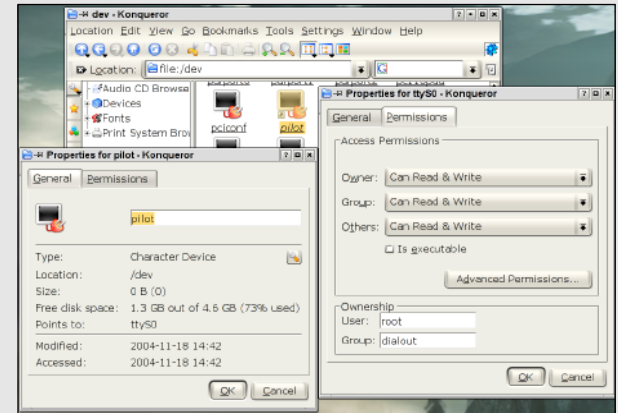


Figure 4. Properties for Pilot

connected to: the first port is `/dev/ttyS0`, the second is `S1`, and so on. If you use a USB cradle, it will be `/dev/USB0` or higher. USB cradles can be a problem, because adding other USB devices can cause the devices to renumber—a cradle that was `USB0` before you added your memory stick may be `USB1` afterward. The ideal solution for the USB renumbering problem is to have your system administrator configure the USB daemon to link `/dev/pilot` to the handheld's cradle. The method for this depends on your USB daemon.

The Device dialog contains a connection speed option, which is relevant only to serial connections. The default should be fine, but if you have trouble getting your handheld to synchronise, you may want to try a slower connection speed. You can try a faster speed—any speed that synchronises successfully is good enough.

KPilot also supports infrared or network connections. Helpful information for these connection types is available from the Help menu, under KPilot Handbook. Check both Device Setup and Special HotSync Questions.

Gnome-pilot and Evolution

There should be a handheld icon in the GNOME control centre that represents Gnome-pilot. If it's not there, install the Gnome-pilot package. Evolution should be in the Office section of the Gnome-foot Applications menu. If it's not there, install the Evolution package.

Double-click on the handheld icon, or add the Pilot Applet utility to the panel. Doing either of these opens the dialog Gnome Pilot Settings, with a Welcome to Gnome-pilot! dialog heading. Click Next.

The first configuration is Cradle Settings. See the Device Settings sidebar in this article for advice on devices. Leave the Name and Timeout options at their defaults, and click Next.

The second configuration is Pilot Identification. If you've ever synchronised this pilot to a desktop computer, even a different computer, leave the setting at "Yes, I've used sync software with this pilot before." If you haven't, set the user name you intend to use with this Pilot. Leave the ID field at the default. Click Next, and let the wizard run its Initial Sync. Follow the instructions, and GNOME will retrieve the user name and ID from the pilot or set it onto your pilot if it's new. Click Next when it's finished.

The next configuration is Pilot Attributes, which sets your backup

directory for your pilot information. Leave the options as the defaults (MyPilot and /home/username/MyPilot). Click Next, and you reach the Success dialogue. Click on Apply.

Double-click on the handheld icon in the GNOME control centre again. You don't get the wizard, but instead you should see a dialog with three tabs: Pilot, Devices, and Conduits. The Pilot tab lets you edit the same information that is in Pilot Identification and Pilot Attributes in the wizard, the Devices tab lets you edit the Cradle Settings, and the Conduits tab is new.

The conduits set what happens during a sync. Click on the conduits tab and set the following:

- Backup Enabled.
- EAddress Synchronize.
- ECalendar Synchronize.
- EToDo Synchronize.
- Everything else should be left at the default.

These settings will give you a backup and synchronise your address book, calendar, and to-do with Evolution. The backup is stored in the location given in your Pilot Attributes and can be saved as a regular file.

ry is included. If you lose the data from both your handheld and your PC, you can copy the contents of this directory from your backup media, back to the PC, and then use the Restore option from KPilot's File menu to restore it to your handheld.

With all the additional tricks and tools KOrganizer offers, the combination of your handheld and your desktop becomes more useful than ever. The wizard runs you through the setup, and synchronising is as easy as pressing a single button. Your information can be included automatically in your general system backup, so there's no reason to lose your handheld's information ever again. Now that you know how easy it is, isn't it time to set up your handheld on Linux?

NOTE:

If you are working on a system that has multiple users, you can use this technique to check the permissions but you should let your system administrator be the one to change permissions.

SAFE AND SOUND

As you can see, your Linux system provides a number of options for making sure that the information on your handheld stays up to date with what's on your system. Furthermore, these tools, when used regularly, should help to ease the quiet dread that all users of a handheld secretly harbor, that someday they will lose the little thing, their schedules, their address books, and everything else in between.

Hotsync, backup, and rest easy.■



Jenn Vesperman is a strong advocate for women in computing and has been the coordinator of LinuxChix for several years. She also has written *Essential CVS* for O'Reilly & Associates, and she works as a programmer, system administrator, and/or writer. Jenn lives in Australia and is owned by two cats.

The Secrets of Juggling Multiple Calendars

Organizing one calendar is easy, but what happens when you have multiple calendars?

Lauri Watts shows you how to organize and even publish them on the Web.

LAURI WATTS

Group scheduling is something of a buzz phrase these days, but most of us don't need a buzz phrase to help us with time management. What we need is a simple way to keep track of multiple schedules with the least amount of fuss. KOrganizer has exactly the tools needed to do it.

Like most people these days, I lead a busy and sometimes complicated life. With a household consisting of two working adults and two children with different school schedules and extracurricular activities, I often need an overview of who is supposed to be where and when they need to be there.

My former calendar-keeping strategy could best be described as "many notes and random pieces of paper on the refrigerator door". This strategy has proven to be remarkably poor. The notes fall off fairly often, usually when my small daughter borrows the magnets to put up her picture of Nemo the fish playing basketball with Superman. I once found a note about a most-important appointment in the freezer when I defrosted it—a month after the appointment had been missed!

In an effort to reform myself, I started using KOrganizer a couple of years ago, and it has been a great tool. Keeping a calendar only for myself is simple. I work partly at home and partly at the office, but my calendar is usually fairly loose. I simply enter specific meetings I must attend as events and any deadlines that are coming up as to-do items. Then, I block out generally the "working in the office" hours. All the left-over working hours, I'm plugging away at home, trying to meet those deadlines and prepare for those meetings. In the first screenshot (Figure 1), you can see a

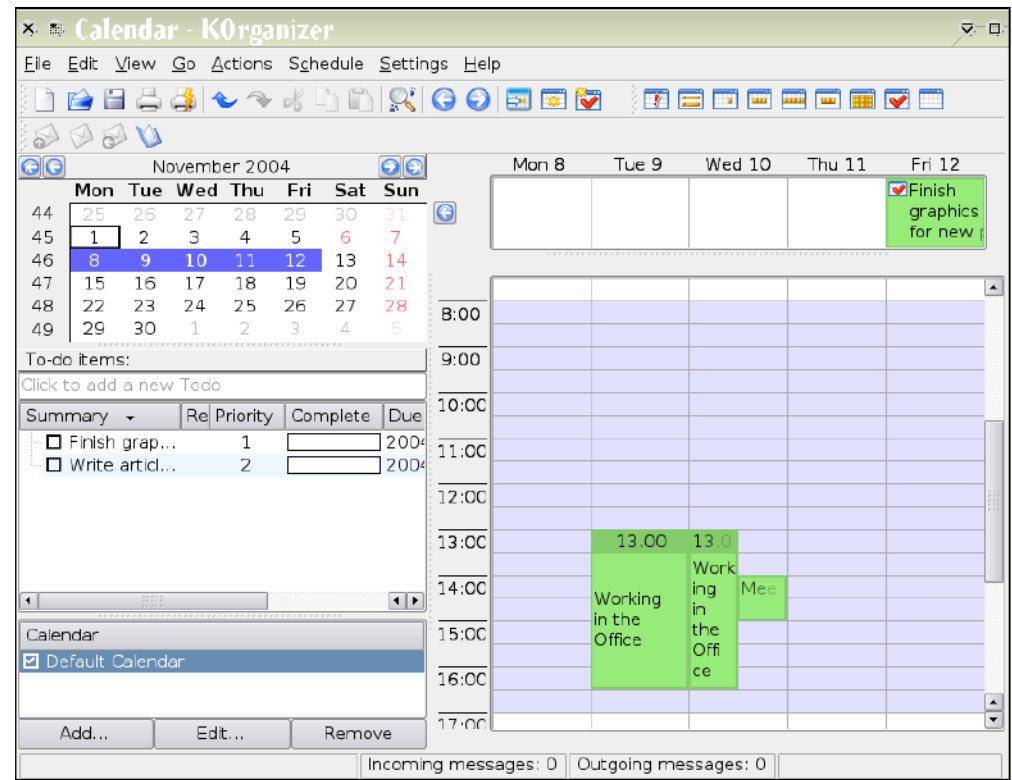


Figure 1. A Typical Work Week as Entered in KOrganizer

typical week for me. If that were all there is to it, however, this article would be much shorter than it is.

First up in my list of people who need to be tracked is my oldest daughter Sam. She's in the 8th grade and has a convoluted class timetable, involving assorted classes in assorted classrooms, sometimes in different buildings. Then there's the study days, random days off school for unfathomable reasons, theme days, school dances, and my personal favorite, the open-house days when I get to go to school with her, and she spends the entire day being horribly embarrassed that her mother is there. All this needs to be tracked, and in a better manner than keeping her timetable on the refrigerator door. KOrganizer to the rescue again!

CREATING AN ADDITIONAL CALENDAR

I could of course, simply put all the school events into my own calendar, and that would work fine. It is, however, rarely the most important thing in my day to know that Sam has a Physics class at 12:10 on Monday, and it is simply visual clutter when too much information is presented at once. The answer, then, is to maintain her calendar separately.

In the lower left-hand corner of a KOrganizer window, you should notice the label Default Calendar. This is, obviously, the default calendar, and unless you tell KOrganizer differently, it's where any events entered are stored. Pressing the Add... button, however, presents the opportunity to create a new calendar.

Various interestingly named formats are listed here, but what we want is a simple calendar file, so I choose the Calendar in Local File option. Choosing this lets me select a name and a file-

name. The name is the one visible in KOrganizer, so I call this one Sam's Schedule and save it as samsschedule.ics in my home directory. Now I'm ready to start adding things to it.

LATHER, RINSE, REPEAT

One of the key features to any calendar, as complex as they may be, is that some of these events repeat. Take Sam's school schedule—although Monday is completely different from Tuesday, every Monday is more or less the same as the next.

Adding these recurring events is about the most complicated task in KOrganizer, but it's still not very complicated. Add an event as usual, by double-clicking somewhere near the time you want, right-clicking and choosing New Event or by using the toolbar—whichever you find most convenient. In fact, this is a good opportunity to try them all and figure out which way is easiest for you, because a school timetable has a lot of events to enter.

I put the name of the class in the Title field, set the time, and enter any notes in the free comment area below the times. I also like to add the classroom number in the Location field; in case I need to fetch Sam at school for an errand, I can find her easily. I also make sure to set the time as Free and that no reminder is set. One isn't set by default, but I once turned them on without thinking, and as little as I need to know that she has that Physics class on Monday afternoon, I need

even less to have a loud alarm sound reminding me of the fact.

Next up is to switch to the Recurrence tab and set up the recurring event. As you can see from Figure 2, the combinations are nearly endless. Mostly though, once you've enabled recurrence, you need to worry only about two things: how often it happens and when it stops. In this case, I know that the 2004/2005 school year ends in the first week of June 2005, so I add the date to the End by: field. I also happen to know that the first week of November is a school holiday, so I added that to the Exceptions section while here.

You can be as careful with exceptions as you like, adding each and every one, so that your calendar is perfect. In this case, because it happens to be the first week of November as I'm writing this, it's not very hard for me to remember to add it as vacation while I have the dialog open. I know

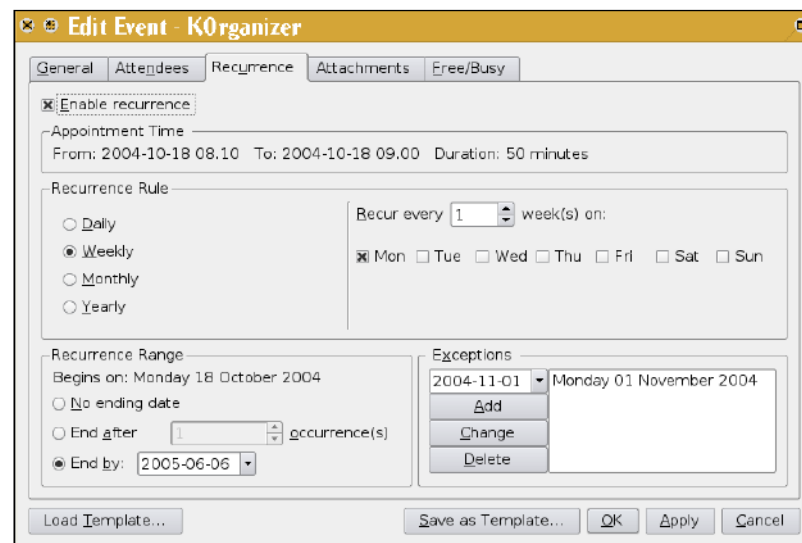


Figure 2. Editing an Event

there is also a school holiday around Christmas time, and one somewhere in March or so. I could go look them up, but I find subtle clues like the phone being busy all day instead of only in the afternoon tend to tip me off to Sam having a vacation, without the need to check that in my calendar. Just because there is a field for you to fill in, doesn't mean you have to. Such space for additional information is there if you want it, and it can be ignored completely if it isn't useful to you—the goal is to simplify your life, not complicate it.

Now that we're all done with the first class of the day, we simply click OK. And an unexpected dialog pops up. Why? Because we now have two calendars, and KOrganizer wants to know in which one you mean to save this item. If I had only one or two things to add, I simply could pick the right calendar from the list given and move on. Doing this can become tedious though, so if you have a lot of entries to add to a specific calendar, the easiest way to avoid being asked all the time which calendar you meant is simply to uncheck the box next to all the other ones. If there is only one calendar that you save entries in, it's automatically the one KOrganizer uses.

Setting up something like a class schedule takes a small time investment. It took me about a half hour to enter them all, including end dates, room numbers, and figuring out the cryptic class codes used in the school schedule, so that I actually knew what to call things. I estimate it has saved me far more than that already in the past week. For instance, I didn't have to rush around trying to get gym clothes organized in the morning before school, having checked the calendar the evenings before and noticed they were needed.

ORGANIZING THE SMALL FRY

Next up is my youngest daughter, Kajsa. Her calendar is much simpler. She goes to preschool 15 hours a week, and I get to pick which 15 they are. Like most small kids, she likes routine, and routine is certainly easier for me, and adding her schedule to KOrganizer is a snap compared to her big sister's.

Now I have three calendars, and I simply can uncheck the box next to Kajsa's Schedule and Sam's Schedule to revert to my nice uncluttered calendar view. When I want to plan for appointments, for instance, schedule a meeting at the office on the days I'm not normally there, I simply can check the box again and see the two schedules at once. What if I get an e-mail asking

TIP Do you need *fast* access to a calendar? Left-click on the clock applet in the lower right-hand side of your panel and a handy little calendar pops up. You can jump month to month or year to year with a single click. Left-click again and the calendar disappears.

me to move that meeting I had planned for Monday to later in the week? I can see that I don't want to set it for Thursday, because both Kajsa and I were supposed to be home that day, and I have a deadline on Friday that probably will keep me busy that day, so I move it to Wednesday, during my usual office hours.

The calendar is looking rather busy and cluttered at this point, so you probably can see why I don't want to overload myself with all this information all the time. Scheduling appointments for the kids, though, is where it really pays off.

For instance, I just got the children's annual dentist check-up reminders, and I need to schedule an appointment for each of them. It makes the most sense to have them together, so I turn on both kids' schedules, and I quickly can see that Wednesday morning is good—I'm free, Kajsa is home, and Sam has a long break between her first and

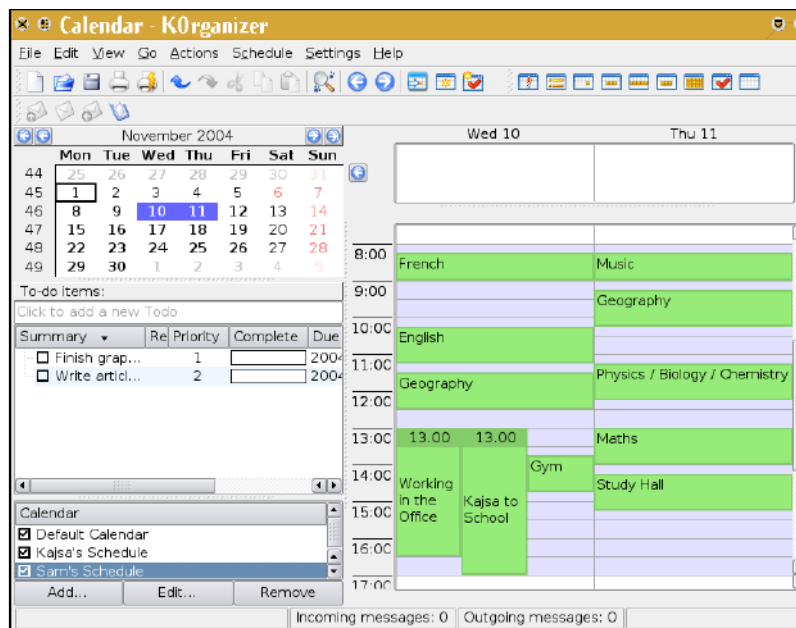


Figure 3. Viewing Three Calendars

second class. Because the dentist office is only a block away from her school, that's perfect. Kajsa and I can meet her at school, visit the dentist, and have her back in time for her next class.

Unfortunately, a phone call to the receptionist tells me that Wednesday morning is booked solid, but there is a spot free at 10:30 on Thursday—with KOrganizer still open, I immediately can see that appointment fits in just as perfectly, so I booked the time. I'm sure the girls will be immensely pleased! For this kind of thing, I simply block that time into my own calendar, and I can turn off the other two, safe in the knowledge that disorganization and tooth decay have been held at bay for yet another week.

AND NOW WE SHARE

So far, it's all been me, me, me. Time to share the love, or at least, the calendars. Sam is old enough to be checking for herself that she has gym clothes for the next day or to make sure her homework and textbooks are in her book bag for all the lessons she has tomorrow. On the other hand, I don't necessarily want her editing her school schedule or adding her shopping dates with her friends to it. This turns out to be quite simple. She also keeps her own calendar, with what's important to her, and I put the school schedule I just made into a shared folder on our file server that everyone can read.

Moving the calendar from my end is simply a matter of selecting it, choosing

edit, and editing the file location. KOrganizer copies the file to the new location. This leaves the older version intact, in case something goes wrong, such as you gave a location that you don't have write permissions for. You simply can delete the old file, or you might want to keep it as a backup.

From Sam's end, she simply chooses Add..., exactly like I did when creating a calendar, but instead of inventing a file-name, she can browse to the shared folder and choose it there. Because she can't edit it, she can check the Read-Only box, so that when she adds items to her own calendar, KOrganizer doesn't have to ask her which one or try to write to a file she can't edit.

Now we can get even smarter. A couple of Sam's school friends use KDE, and they have the same class schedule. If I put the calendar file somewhere accessible on the Web, they also can use it. They don't even have to download it locally—KOrganizer happily loads up a file directly via a Web link, and you even can tell it how often to check back and reload it in case of changes. For the school schedule, that's not until the end of the school year, so it's sufficient to load the file once when KOrganizer starts. For something less static, like my work schedule, it might be more useful to check it once an hour in case I added a new appointment.

GETTING DOWN TO BUSINESS

You probably already can see how this

feature is useful for a small office, where people usually don't need to set up appointments for one another, but do need a way to see when everyone else is busy or out of the office.

I've already used the examples of a shared directory on a file server, and a Web server, but you also can load calendars from almost any kind of remote source. This includes FTP servers, using KDE's fish:// protocol to access a remote machine using ssh, or using webdav if you have it available. You even could use the kpf applet (KDE's personal file server) in the panel to share your calendar directly via a local Web page.

Do consider the privacy implications of making your calendars publicly accessible. You probably will need to protect them in some fashion, by placing them in a directory that is accessible only from the local network or by using a password. It's also worth your time to think about backup strategies. Burning a copy of the calendars to a CD-RW once a week or keeping an archive of them on another machine are probably sufficient for most situations.

A final option for sharing calendars is perhaps one of the simplest. KOrganizer provides a nice export to HTML (you can find it under the File menu). It's highly configurable, allowing you to choose the span of time to export, whether or not to show to-do items, among other things. If you need to share a schedule with a broad group of people, nothing beats a Web page. ■



Lauri Watts is a long-time KDE contributor and herds cats for relaxation.

Up-to-the-Minute News, on Your Desktop

The Internet has brought access to news a click away. But, the sheer volume has created an organizational disaster. KNewsTicker will help you get the news you want under control.

KEVIN BRANDES

So, it's early in the morning, and you decide to read your newspaper. You pick it up and flip through it a bit. The International section falls out. While trying to put it all back together, it decides to explode out the other side.

Have you ever noticed how Internet news seems to do the same thing? If you're like me, you visit ten or more news sites a day. When you go to them, you find either that they don't have anything new or that nothing interests you. Wouldn't it be nice if your news sites patiently stood in line, and one at a time told you their headlines? Then, if you ever wanted to hear more, you could stop the parade and ask. That's exactly what KNewsTicker can do for your KDE desktop.

KNewsTicker is a desktop applet that's part of KDE. It shouldn't take any extra installation to get it going, because it's included in recent versions of KDE. It can go pretty much anywhere on your desktop, including as a part of your standard Kicker (the panel at the bottom of your screen). As pictured below, it's on a separate panel below the kicker.

To set up KNewsTicker like this, you first need to add a child panel to your Kicker so that it has somewhere to go. Click on the small arrow above the divider as shown in Figure 1, and then navi-

gate to Panel Menu→Add→Panel→Child Panel. This creates a new panel along the left side of

the monitor. Click on the panel and drag it toward the bottom center of the screen (Figure 2).

This places the child panel below the main Kicker panel. Because it doesn't need to take up as much space as it does by default, set its size to tiny by right-clicking on the child panel, and then clicking Size→Tiny (Figure 3).

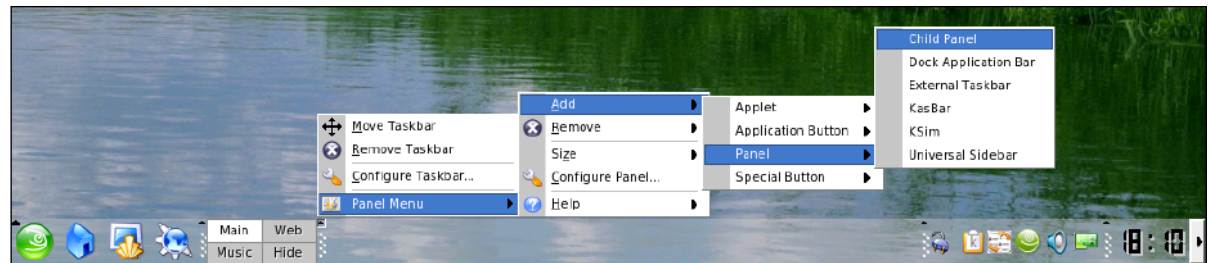


Figure 1. Adding a Child Panel



Figure 2. The New Panel

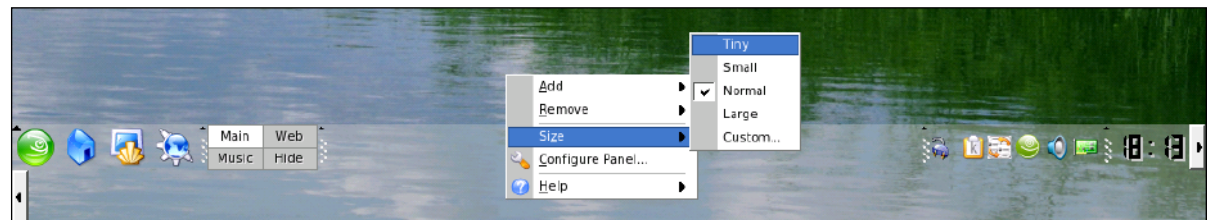


Figure 3. Adjusting Panel Size

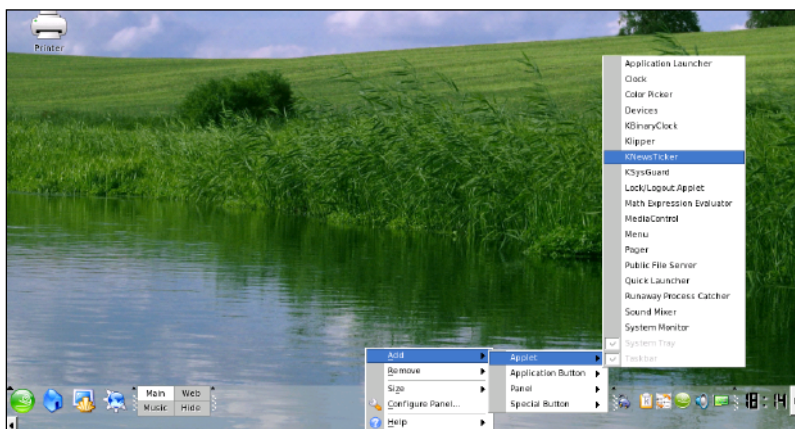


Figure 4. Adding KNewsTicker

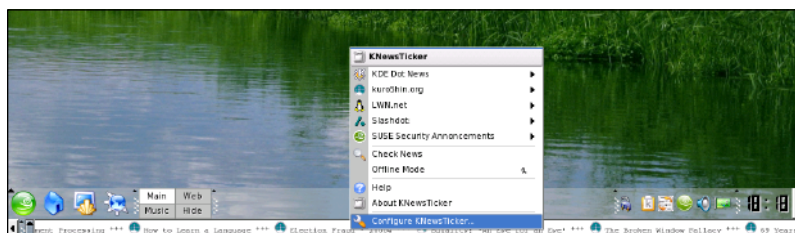


Figure 5. Configure KNewsTicker

TIP

Got a mouse with a scroll wheel? Here's a great trick to try out. With your mouse cursor over the KNewsTicker applet, rotate your mouse wheel up or down. Scrolling down with the mouse wheel speeds up the flow of news, letting you quickly scan through the headlines. Scrolling up slows down the feed and even reverses it, in case you missed something.

Now that the panel is all set up, it's time to add KNewsTicker. Right-click on the new child panel again, and select Add→Applet→KNewsTicker (Figure 4).

Now you should have a list of headlines scrolling to the left at the bottom of your screen, exactly as in the first picture. If one of the headlines interests you, simply click on it, and a new Konqueror window opens up with the news story in question staring you in the face. Isn't that better?

Although that's all fine and dandy, it won't do you much good unless it can show you the news you're interested in. To configure KNewsTicker to grab the news from your favorite sites, right-click on the ticker itself, and select Configure KNewsTicker (Figure 5).

In the new window that pops up, you can change many facets of KNewsTicker's behavior. To change where KNewsTicker gets its news, click on the News Sources tab. A bunch of news sources are listed here already, and if one you want to use is there, all you have to do is check the box next to it, and KNewsTicker will place it in the line of news sources once you click OK at the bottom right of the window (Figure 6).

If your favorite site isn't on the list, it's a bit more complicated. Click the Add button toward the bottom right of the window. Now you're going to need the location of the site's RSS feed. Most sites that have an RSS feed try not to hide that fact. For instance, if

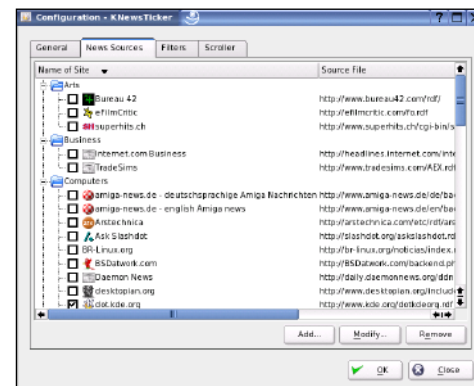


Figure 6. News Sources

you run a search for RSS on <http://www.time.com> using their search tool, you'll find a page of links to their RSS feeds. This page is located at <http://www.time.com/time/nation/article/0,8599,635219,00.html> at the moment, if you're having trouble finding it. If you click on the Top Stories feed, you'll be staring directly at the RSS feed. Copy the location of the page you're viewing, and place it into the Source File field in the Add News Source window by highlighting the address, right-clicking, selecting copy,

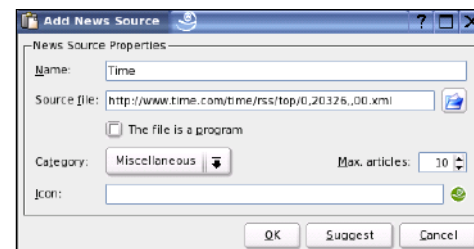


Figure 7. Adding a News Source



Figure 8. Configure Panel

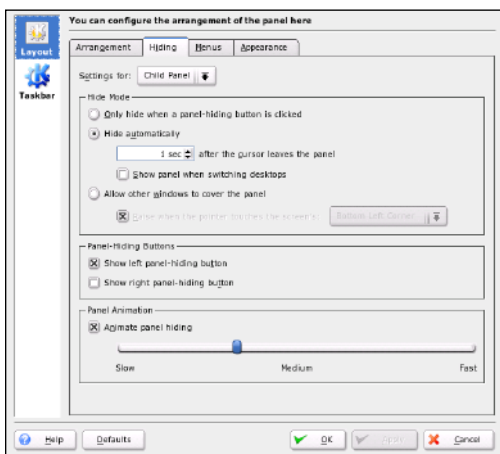


Figure 9. Hiding the Panel

Wouldn't it be nice if your news sites patiently stood in line, and one at a time told you their headlines? Then, if you ever wanted to hear more, you could stop the parade and ask. That's exactly what KNewsTicker can do for your KDE desktop.

right-clicking on the Source File field, and selecting paste. An example of what your Add News Source window should look like is shown in Figure 7.

Once you click OK, your news source is added to the list of available news sources and already is checked for inclusion in the news parade. Once you click on OK for

the main configuration window, you will see headlines from your new news source scrolling happily along the bottom of your screen.

So, now that you know how to make KNewsTicker show you the news you want to read, let's see how to make it fit into your life, instead of forcing you to deal

with what it wants to do. The screenshots I'm showing you are from a laptop computer. I really don't have much screen space, so I'd prefer that the headlines not always take up my precious space, unless I'm interested in reading them. One way of accomplishing this is to have KNewsTicker's panel hide itself.

Click on the arrow pointing up, on the left side of the child panel, and select Panel Menu→Configure Panel (Figure 8).

In this new window, select the Hiding tab, and click the circle next to Hide automatically (Figure 9).

Click OK toward the bottom right of the window. Once you click on your desktop, it should look like you never added a child panel or KNewsTicker in the first place. When you want to see your news headlines, all you have to do is move your mouse cursor to the bottom edge of the screen, and KNewsTicker slides up from the bottom edge. This trick can be done with any panel, not only with the KNewsTicker panel (Figure 10).

I hope this article helps you enjoy your Internet news surfing a little more. You can configure KNewsTicker in countless ways to suit your needs—don't be afraid to poke around. Until next time, keep that newspaper in one piece. ■



Kevin Brandes is 21 years old and is proud to help others join the Open Source movement. He lives in rural Oregon with his partner of three years, where he studies Software Engineering.



Figure 10. The KNewsTicker

Hardware Discoveries with the KDE Information Center

Want to know all about your hardware? The KDE Information Center goes way beyond what you can find out from the specification sheet or by grabbing a screwdriver.

PHIL NELSON

So you've got your Linux system installed and your shiny new KDE desktop looks great. You are just beginning to enjoy your experience when someone starts asking probing questions: maybe they want to know your IP address, how much memory your system is currently using, or even what type of processor you have. To most folks, what is inside that box you've paid all that money for is a bit of a mystery. Do you reach for the screwdriver, or panic that you may be forced to learn the dreaded command-line interface?

Don't worry, help is at hand in the shape of the KDE Information Center. This useful little tool, supplied as part of the base KDE installation, answers all these questions and more.

The first thing is to find this little gem. On my SuSE 9.1 Pro system, it can be found in the menu system as **K**→**S**ystem→**M**onitor→**I**nfo Center. I looked on a couple of other distributions, and it appeared under **K**→**S**ystem→**I**nfo Center. If you can't find it in the menu system, all is not lost. Simply bring up the Run Command dialog box (pressing **Alt-F2** does this or using the menu system **K**→**R**un...), type the program name, `kinfocenter`, and press Run. You should be greeted with a screen something like that shown in Figure 1.



Figure 1. KDE Info Center

This main screen gives a short description of all the different types of information available. You can drill down into any of these areas by clicking on the hypertext link for each of the types or on the name field in the index tree panel on the left-hand side of the window. Some of the types of information is a bit technical, so let's look at some of the least scary options first. Click on the Processor link, and you'll see more information than you'll ever need about the

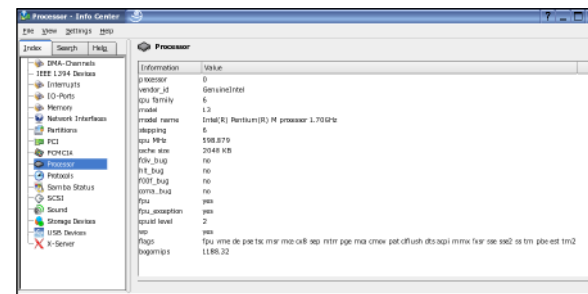


Figure 2. Processor Information

beating heart of your system. Figure 2 shows what I see on my laptop.

I'm pleased to see that what is actually inside the box is what was advertised when I bought it. I'm also intrigued by the fact that although this is a Pentium M 1.7GHz, the CPU MHz is reported as somewhere just short of 600. And what on earth are BogoMips? Now, I did say that it would be easy to get the information, but I never promised that the information provided always would make sense or be easily understood. (For the insatiably curious among you, the frequency difference is due to the fact that I'm writing this in Starbucks, on battery power, and my CPU has been scaled back to the minimum frequency to conserve power. And BogoMips? These are a rough estimate of processor speed, explained fully in a How-To document at <http://www.ldpmirror.ssc.com/HOWTO/BogoMips.>)

USB DEVICES

The next thing we look at is how to find out more details about all those other devices you have plugged in to your machine. You know what I mean—printer, scanner, digital camera, USB memory stick, DVD burner, and so on (that's my inven-

tory as I look around me—yes, I’m back home now). All of them are plugged in to USB ports, or in some cases Firewire (IEEE 1394), parallel, or serial ports.

You also know that each of these gadgets came with a CD with drivers on it, and you never could find anything on them relating to Linux. Never fear—simply file those CDs away in a safe place in case you should ever need them. Modern Linux systems support the vast majority of hardware straight out of the box, without the need for any additional driver disks. And, the Information Center allows us to see more detail than we’ll ever need about the internals of these devices. Take a look, for example, at the screenshot of the USB tab (Figure 3).

I’ve just plugged in to the two USB ports on my laptop my Jumpdrive (a little USB Flash memory device) and my Olympus digital camera. You can see that Linux has identified both of them correctly, without any external assistance.

It gets even better, however. When I plugged this little beauty in to my USB port, Linux didn’t merely identify it correctly, but it made it instantly available for use by calling its hotplug facilities. If I switch to the Storage Devices section of the Information Center, I see two new devices on the

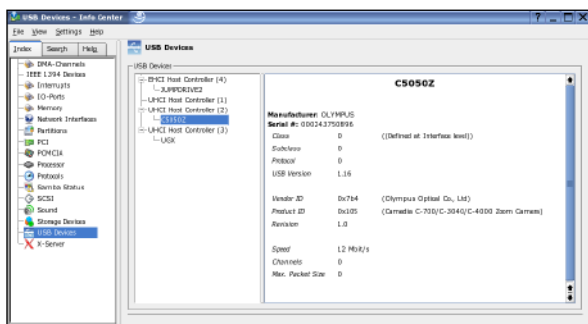


Figure 3. USB Devices

menu, matching the Jumpdrive and the camera. In this case, the new devices have been made available as `/media/sda1` and `/media/sdb1`. This varies depending on what distribution you are using; here, I was using Ubuntu Linux. We are given information about the device, mount point, total capacity, and free space.

I should explain what I mean by device and mount point. On a Linux system, almost everything is represented as a file. This may sound a bit weird at first, but it actually makes dealing with Linux systems easier for everyone, from developers to end users. Every item of hardware attached to the system is associated with a special type of file known as a device. Normally, all the available devices are found under a directory called `/dev`. In times past, you used to have an entry here for every possible device the system could support. On more modern systems, entries are added to `/dev` as needed. The device is a very low-level interface to the piece of hardware. When the hardware is a storage device, such as a disk, you don’t want to deal with it at this low level. By telling Linux the filesystem type to use and giving it another location in the directory structure through which to access it, you can see the disk contents in the more normal mode of files and subdirectories. This process of associating the low-level device with a position in the directory structure is known as mounting, and the position you choose for attaching the device is known as the mount point. Linux supports not only its own filesystem types but almost every other type of computer filesystem ever invented. Thankfully, the process of identifying the file type, working out a suitable mount point, and doing the mount is all taken care of by modern Linux distributions. Normally, you’ll find removable devices under

HISTORICAL NOTE:

The expression, “Everything is a file”, is a rather famous line and one you may encounter more than once in the Linux (and UNIX) world. The quote is attributed to Ken Thompson, the original developer of UNIX.

either `/media` or `/mnt`.

So, where did Linux get the names `sda1` and `sdb1`? This is another good example of how the designers of Linux have used a degree of abstraction to make life easier for everyone. The `sd` is an abbreviation for SCSI Disk. “But”, I hear you say, “you plugged your Jumpdrive and camera in to USB ports didn’t you?” Quite correct, but you’ll find that USB disks (also disks, CDs, and DVDs plugged in to Firewire and parallel ports) are treated as if they were SCSI disks. This saves having to write multiple sets of code to do virtually the same thing, making the task of maintaining the system and adding new devices simpler.

And now for the pièce de résistance: click on one of the devices (Figure 4) and a little menu appears. One of the options is labeled Open in File Manager. Choosing this opens KDE’s file manager, Konqueror, and you immediately are able to work

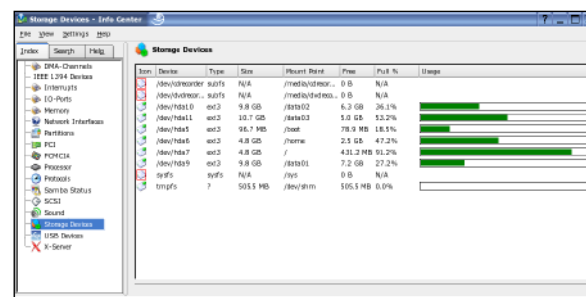


Figure 4. Storage Devices

with the files on your device just as you can any other device.

The SCSI and IEEE 1394 (Firewire to the rest of us) tabs on the Information Center work in an equivalent way to the USB tab we just looked at.

MEMORY: A NUMBERS GAME

The next information we look at is the Memory tab of the Information Center. Figure 5 shows the current state of my laptop.

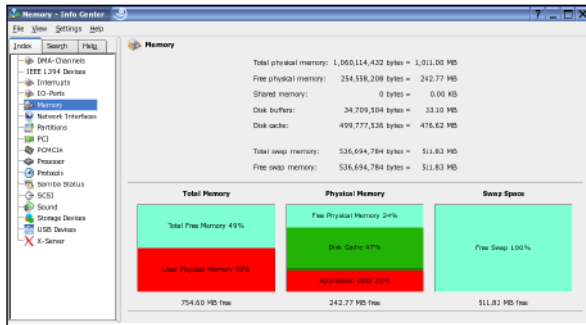


Figure 5. Memory

It's good to know that I actually have some memory free. I guess some things need an explanation, however. Physical memory is the amount of RAM (random access memory—the memory chips inside the machine) that is available. But, the total amount of memory available to the system is greater than this. An area of the hard drive, called swap space, is set aside to augment the physical memory when it becomes exhausted. When I started using Linux, the recommendation was that you should set aside an area of disk twice as large as your physical memory for swap space. As memory became cheaper, the ratio recommended decreased, and currently I'm running with a swap file size of 1GB of memory. And, even that is

probably excessive, as I've never seen any of it being used. The next thing you should notice is the large green area labeled Disk Cache. Because reading from memory takes an order of magnitude less time than reading from disk, Linux holds recently accessed disk pages in memory if physical memory is available. Then, if you need that page again, it is accessed much more quickly.

IP ADDRESS: YOUR HOME ON THE INTERNET

Now, let's move on and look at the Network Interfaces tab. Sooner or later someone is going to ask you something like "What's your IP address?" Your response to this might well be "What is an IP address?" Let me briefly explain. When a computer attaches to the Internet, or any other network, it has to have a unique identifier, its IP address. If you are not permanently connected to the Internet (for example, if you are have a dial-up connection), your ISP normally allocates you an IP address from a pool, so you are likely to get a different IP address every time you connect. Often, if you are having difficulty with your network connection, you'll be asked for this information. Network connections also are given a name, based on the type of connection you are using. For example, dial-up connections (using a protocol called PPP) normally are called ppp0, whereas a LAN connection (Ethernet) normally would be eth0. You also should see a special type of network connection called lo, the loopback interface. This is a virtual network connection back to your local machine and is used by many programs to send information back and forward internally.

RIDING THE PCI BUS

We're going to end with a look at the tab labeled PCI. Inside your machine, all the devices need a

way of moving data back and forth. It's a bit like the highway network—if we didn't have highways, it would be much more difficult to get from one place to another. This highway inside the computer for the interchange of information is known as a bus. And just like a real highway, everyone has to stick to certain rules or there would be chaos. The PCI standard is the set of rules that nearly everyone uses. Every device that wants to send or receive data is given an identifier, which is then used to ensure that the data goes to the right place. After all, it wouldn't be much use if you tried to send a file to your printer and it ended up getting delivered to your sound card. Listed under the PCI label is every device that has made itself known to the PCI bus. A look down there will satisfy even the most curious people's desire for information about what is inside their machines—a lot of detailed information is given.

So, that brings us to the end of our little tour. A few tabs have not been covered here, which are beyond the scope of this introductory article. However, I hope you now have all the information at your fingertips that you'll need next time any of these probing questions are asked. ■



Phil Nelson lives near Edinburgh, Scotland. He's a graduate of Edinburgh University, majoring in Physics and Electronic Engineering. He is a Database Consultant, specialising in the DB2 family of databases from IBM and spending a lot of time working with DB2 on Linux. He currently is Assistant Editor of

IDUG Solutions Journal, an independent DB2 magazine (<http://www.idug.org>) and a regular speaker at database conferences worldwide. He can be contacted at teamdba@scotdb.com or through his Web site (<http://www.scotdb.com>).

Clear the Desktop Clutter with Virtual Desktops

One of the greatest tools available to desktop Linux users sits quietly in your panel, two or more unassuming squares just waiting to be unleashed. Learn to harness the power of virtual desktops, and you'll wonder how you ever lived without this easy-to-use application.

LEW PITCHER

I haven't seen the surface of my desk in about two months. Three layers of documents litter my work surface, along with assorted tools like a calculator, a couple of writing pads, a dictionary, a stapler, and a telephone. It's not that I'm normally a messy person; I simply don't have a desk big enough to permit me to organize my materials properly. It doesn't help that I have three projects on the go at any one moment and need quick access to just about everything on the desk.

I keep my computer desktop in much better shape. I have the same problem of too many documents open at once, all important enough to keep readily available while I work. The good news is that I have a number of virtual desktops on my computer, so I can spread my work out. Even better is that each of these virtual desktops hides away when I don't need it, so I don't see the clutter but always can get to something with only a mouse click or two. Let me show you what I mean by virtual desktops.

VIRTUAL DESKTOPS

If you look at a Linux desktop, it looks like the working surface of a real desk. With a window or two open in the foreground, and few minimized windows, it's not yet cluttered or unusable. But all it takes is a few more open windows and this neat desktop can start to look more and more like a real, cluttered desk.

But a standard Linux desktop has something special, virtual desktops. It's like having your working surface spread across multiple monitors, but without the extra hardware. With virtual desktops, you can have several separate work areas available at your fingertips, and you can spread all those open applications across them. The trick is that you work in only one of these areas at a time, and the rest of the areas are hidden away from sight.

Your working desktop has all the normal icons and menu bars that you'd expect it to have. However, it only has those windows you've explicitly opened or moved to that desktop. All of the other windows you have open are hidden and show up only when you change to one of the other virtual desktops. You can think of this as having several desks, but being able to see only one desk at a time.

In KDE, the panel supports a Pager applet that gives you an overview of your virtual desktops. These show up as four squares labeled 1 through 4 (Figure 1). Some distributions start you off with only two virtual desktops, but I'll show you how to change that shortly.

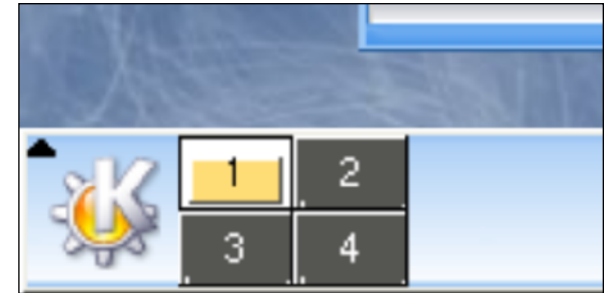


Figure 1. The KDE Pager Applet

Click one of the buttons of the Pager applet, and KDE switches to display the desktop associated with that button. Click on another Pager button, and you move to a different desktop, and the windows associated with the previous desktop disappear to be replaced by the windows associated with the new desktop. Don't worry, though; the old windows still are open and active. They simply are now on a desktop that's been hidden from view. Any windows opened in the virtual desktop stay with that desktop until they either are closed or moved.

The number of virtual desktops is configurable through the configuration context menu. Right-click on the virtual desktop applet in your panel and select Configure Virtual Desktops. A window appears from which you can select additional virtual desktops. You even can give them individual names at this point (as opposed to numbers).

The window manager also provides a window context menu option (usually through a right-click of the window title bar) that allows you to move the associated open window to a new desktop. This context menu option gives you a list of the virtual desktops available, and the desktop you select here is the one on

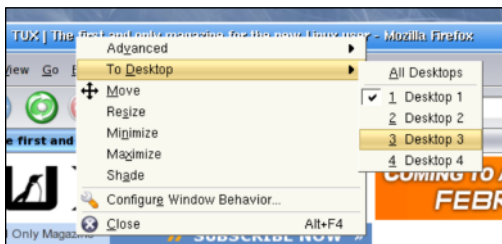


Figure 2. Desktop Selection in the Window Context Menu

which your window appears.

With these two tools (the pager and the context menu), you can unclutter your desktop by moving related windows to their own virtual desktops, out of sight but readily available. Unfortunately, there still is one problem to conquer: how do you find a window once you've moved it off of your current desktop?

WHERE, OH WHERE, DID MY WINDOW GO?

Some environments have tools that give you a miniaturized view of all your virtual desktops. These viewers usually reproduce the contents of all the windows, on all the desktops, in miniature. The KDE Kpager tool serves this function, but unlike the Pager applet, Kpager sits on your desktop in its own window (Figure 3). This window sticks to your desktop so that, no matter which virtual desktop you move to, you always have a detailed visual reference to all the available desktops. To start the KDE Pager, right-click on the virtual desktop applet in your panel and select Launch Pager from the pop-up menu.



Figure 3. The Kpager Virtual Desktop Viewer

GETTING FANCY WITH KOMPOSÉ

Advanced users who want more than what Kpager offers, should take a look at Komposé, written by Hans Oischinger and hosted by the BerliOS Project at <http://kompose.berlios.de>. Similar to the view through OS X Exposé, Komposé builds a composite view of all your desktops into one big window that takes up the whole screen. Note that Komposé isn't installed on your system by default, so this is a program you'll have to add on your own.

THROUGH THE GLASS, CLEARLY

There's no doubt that it is difficult to keep yourself organized when working on many different things at once, especially when space is limited. But, unlike the world of paper and pen, we can organize the Linux desktop so that there is a place for everything and everything is in its place. We



Figure 4. The Komposé Mini System Tray Icon

also have the advantage of tools like Kpager and Komposé that can help us find those concealed windows with little effort. Get cozy with your virtual desktops, and you'll wonder how you ever managed to work without them. ■

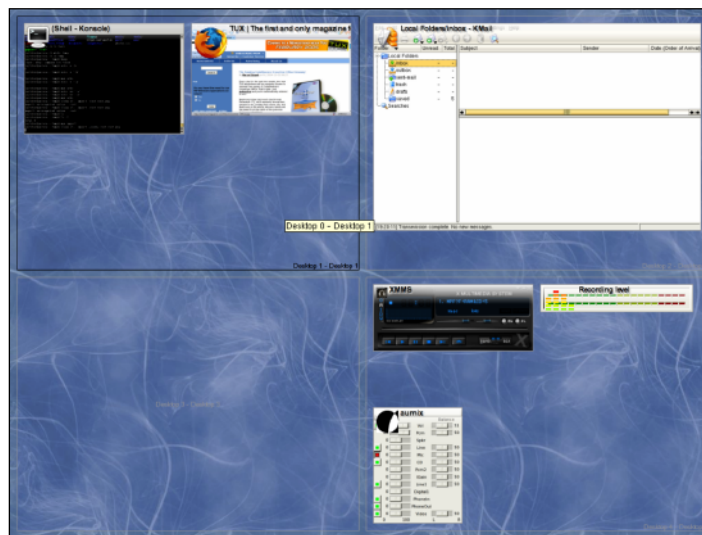


Figure 5. A Grouped Desktop View through Komposé



Lew Pitcher is Canadian by birth and lives in Brampton, Ontario. He is a career techie working at a major Canadian bank. For more than 27 years, he's programmed on all sorts of systems, from Z80 CP/M home computers up to z/OS mainframes. Primarily, he designs z/OS MVS applications for banking services and has incorporated Linux into his development environment.

Customizing Your KDE Work Environment

Although the Linux desktop comes with a default configuration, it is very easy to modify it to better address your needs. Aileen Frisch shows you how.

AELEEN FRISCH

Today, two desktop environments dominate the Linux world, KDE and GNOME. In their standard forms, both of them make it easy to perform virtually any computer task using convenient graphical tools. However, they can be made even more efficient if you take the time to customize the various features for your specific tasks and the way you like to work. After all, it is your desktop, and you should be able to make it your own. In this article, we look at some of the ways the features of the KDE work environment can be modified and configured. You will find that customizing KDE is very simple. In many cases, changing the way things work is as easy as dragging an item from one place to another.

KICKER, THE KDE PANEL

The toolbar that appears at the bottom of the KDE desktop is actually called Kicker, but most people call it the panel. The exact configuration of the panel varies quite a bit between different Linux distributions. Figure 1 illustrates the default configurations currently provided by Red Hat Linux (the uppermost panel), and SuSE Linux (the middle

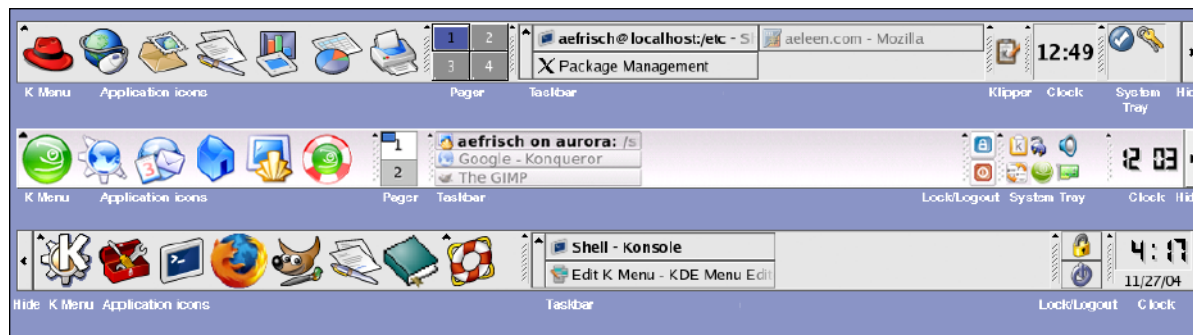


Figure 1. The Default Red Hat and SuSE KDE Panels, Along with a Customized Panel

panel), along with one of the customized panels that I use.

The panel is constructed from a series of smaller subsections, any and all of which can be customized. The main parts of the panel are:

- The K menu, typically located as the panel's leftmost icon. The default icon is illustrated in the bottom panel in Figure 1. However, as the other two example panels indicate, distributions often replace this default with one of their own. Red Hat has a red fedora, and SuSE uses a green chameleon face to provide the button.
- A series of application icons typically are located to the right of the K menu. Once again, the specific applications that are included differ depending on the Linux distribution you're using. You also can add, move, or remove these

application icons.

- The Taskbar generally is located in the middle of the panel. It is subdivided into a series of rectangles, each of which corresponds to an open application. You can decide whether you want the rectangles for multiple instances of the same application to be combined or to remain separate within the Taskbar. The default is the former. For instance, if you have three copies of the OpenOffice.org word processor running, the three instances will be combined into one rectangle with a small down arrow indicating that there are multiple programs running there.
- One or more additional applets—small programs designed to perform one specific task—also may be present in the panel (for example, dictionary lookup, weather applet, logout but-



Figure 2. Some Optional Panel Applets

ton, and so on). The illustration shows quite a few of the possibilities.

There are many ways to customize the KDE panel. You can change the order and/or the size of the various component sections by clicking and dragging on the series of vertical or diagonal lines or dots found on each one's left edge. You can change the size and/or placement of the panel itself by right-clicking on the panel and selecting Configure Panel.

The panel's right-click menu also provides an easy way to add or remove items from it, by using the Add and Remove items, respectively. Each of these contains a submenu with the following items:

- Applet: allows you to add or remove applets from the panel. Figure 2 illustrates some less-familiar panel applets, and Table 1 describes the most important applets currently available (an asterisk and double asterisk indicate applets illustrated in Figures 1 and 2, respectively).
- Application Button: adds or removes an icon for an application that is present in the K menu (see below). You

also can add an icon for a K menu application simply by dragging it from the K menu to the application icon section of the panel.

- Special Button: adds or removes icons for non-KDE applications and other system functions (for example, browser bookmarks, printer configuration and management, and recent documents).
- Extensions: allows you to create additional panels.

When you are adding a new icon, each of these items lists all of the available choices of that type. For example, the Application Button submenu contains all the application groups present in the K menu. On the other hand, when you are removing an icon, only those items currently present in the panel are listed in each submenu. That way, you don't have to sort through a huge list just to remove something you no longer need.

APPLETS

Some of these applets are covered in greater detail elsewhere in this magazine. Check out [Low Pitcher's article on virtual desktops](#) for an in-depth look into your panel applet's capabilities. Then, stay up to date on all the news that is news by using the [KNewsTicker applet](#), covered in [Kevin Brandes' article](#).

TABLE 1. USEFUL PANEL APPLETS

| Applet | What It Does |
|--------------------------------|---|
| Application Launcher** | Runs a single shell command. The Alt-F2 key sequence performs the same function in the KDE environment. |
| Clock* | Shows the time and optionally the date. Also includes a pop-up calendar. |
| Color Picker** | The applet's top icon (the eyedropper) can be used to sample any visible color; the RGB and HTML values are displayed and optionally can be copied to the clipboard. The bottom icon (the colored circle) contains a history of sampled colors. |
| Dictionary | Looks up the definition of a word or phrase or searches dictionary definitions for a string. If your Internet connection is always on-line, this is a great tool to have at your disposal. |
| KcharSelect** | Copies special characters to the clipboard. The list of characters can be configured by the user. |
| Klipper* | Provides access to the system clipboard. |
| KMix Applet | Sound mixer applet. |
| KNewsTicker | Displays clickable news headlines, mostly related to KDE. |
| Lock/Log Out Applet* | Contains icons to lock the screen and to log out. |
| Media Control | Play, Stop, Pause, and other buttons for controlling sound and/or video playback. |
| Pager (AKA Mini-Pager)* | Switches between available virtual desktops. |
| Quick Launcher | Contains tiny application icons, providing a more compact (Windows-like) alternative to the usual application icon collection. |
| System Monitor** | Displays three bar graphs indicating current system CPU, memory, and paging performance data. |
| System Tray* | Contains icons for various management functions. Different Linux distributions tend to use this applet in different ways. For example, Red Hat Linux places an icon indicating whether there are any pending software updates, while SuSE Linux provides access to the volume control and power management facilities here. |

THE K MENU

I've already mentioned that the K menu provides access to a wide variety of applications and other system functions. Figure 3 illustrates its structure as well as its default configuration on Red Hat Linux systems. This is my way of saying that your menu may look different than mine. Different distributions may have things laid out differently. Default setups aren't forever. For starters, you easily can customize the top three sections of the menu.

The heart of the K menu is located in the second section from the top in the illustration. This section of the menu provides access to virtually every KDE-compatible graphical application present on the system. The various applications are divided into groups by their general type. You can customize

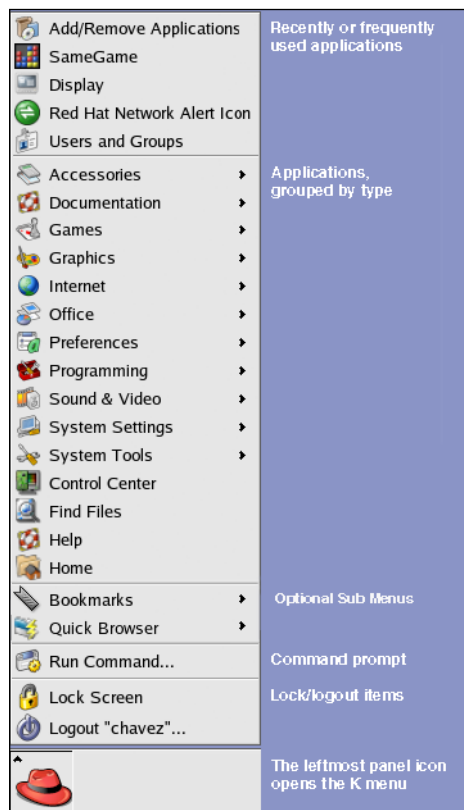


Figure 3. The Structure of the K Menu

the list of applications and their orderings and groupings as extensively as you like. The simplest way to do so is to drag various items to different locations within the menu hierarchy. However, if you want to make significant modifications to the contents or structure, the menu editor utility is really the way to go.

Start the menu editor by right-clicking on the K menu and selecting Menu Editor. You also can select K, then Run Command, and type `kmenuedit` for the command name. This menu editor is illustrated in Figure 4.

When you select an existing menu component in the list box at the left, you can drag it to a new location, change its name or other characteristics, using the fields in the right half of the dialog, or remove it using the corresponding toolbar icon. You also can add new submenus or menu items using the toolbar icons. For exam-

ple, in the illustration, we are adding a new item named System Performance Overview to the System Tools group, which will run the program `/usr/local/bin/xosview` (this is merely an example; we could use any program we want).

What about those other two sections in the K menu? Well, the uppermost K menu section, as well as the section immediately below the application groups (the third section from the top in Figure 4), are customized using the Menu tab of the panel configuration utility (you can reach it by right-clicking on the panel and selecting Configure Panel). This dialog is shown in Figure 5.

The top section of the dialog specifies which items are included in the Optional Submenus section of the K menu. You can select the items you want on your menu by clicking or clearing the check box next to each one.

This dialog also allows you to select whether the applications listed in the

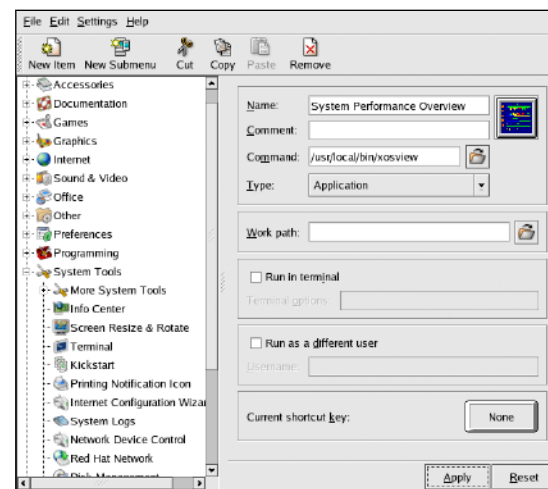


Figure 4. Modifying the K Menu

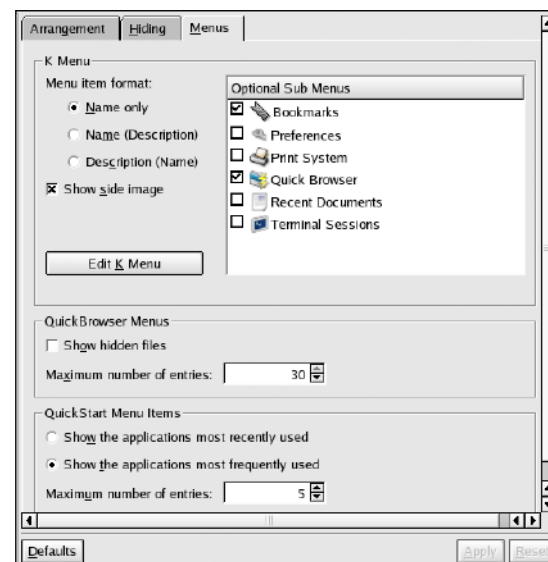


Figure 5. Configuring the K Menu's Optional Submenus and Used Applications Sections

top section of the K menu are the ones that were most recently used or the ones that are most frequently used. You also can specify the maximum number of applications that are included in this section; specify a value of zero if you want to eliminate the section altogether. Remember, it's your desktop and you can do as you please.

TIME TO ADD SOME DESKTOP ICONS

If that super-clean looking desktop is a little too clean for you, have no fear. You also can make a variety of modifications to the icons on the KDE desktop itself. For example, you can rearrange the standard icons simply by dragging them around. More sophisticated rearrangement schemes can be performed by right-clicking on an open area of the desktop to reveal the desktop's context menu and then selecting one of the items from its Icons submenu.

Removing an icon is equally easy. Simply right-click on the icon, and select Delete from the menu, or select the icon, and then press Shift-Delete.

TIP When deleting icons from your desktop, you also have the option of simply dragging the icon to the trash bin. The trash bin is essentially another folder from which you can bring back things you deleted. If you want to get rid of things but still want the option of bringing it back (at least until you empty the trash bin), choose this over Delete.

There are several ways to add new icons to the desktop. If you want to add an icon for an application that is included in the K menu, all you have to do is navigate within the menu to the desired application and drag it to desktop. When you

release the mouse button, a small menu consisting of Copy Here, Move Here, Link Here, and Cancel appears; select Copy Here in this case. The new icon then appears on your desktop and is ready to use.

Icons for other types of items can be created by right-clicking in an open area of the desktop, selecting Create New from the menu, and then choosing the desired type of item from its submenu. For example, I like to have icons for CD/DVD-ROM and USB Flash disk devices on my desktop, but the standard configuration contains only an icon for the system's floppy drive. Creating the first icon involves right-clicking on the desktop and then choosing Create New→CD/DVD-ROM Device.

Figure 6 shows the dialog that results from this selection. It has four panels, but I need to modify only two of them in order to create my icon. In the General panel, I specify the text I want to be displayed along with the icon. In the Device panel, I select the device interface file corresponding to the system's CD-ROM drive. On most Linux systems, the CD-ROM drive is preconfigured, so the proper device is listed in the corresponding menu, and you'll be able to identify it without any trouble.

Creating an icon for a USB Flash drive involves a similar procedure to that of a CD-ROM drive,



Figure 6. Adding a Desktop Icon for the CD/DVD-ROM Drive

but it may require some special preparation (see the sidebar for details).

Creating an icon that opens a folder also is straightforward. If you want to create a new folder on the desktop, you can right-click and select Create New→Directory, specify the desired name, and the new folder appears. (This action has the effect of creating a subdirectory with the given name under \$HOME/Desktop.) If you want to create an icon for existing folder, you can do so by navigating to the desired location using the Konqueror file browser, dragging the desired folder onto the desktop, and then selecting Link Here.

Figure 7 shows the some of various forms that desktop folder icons can have. The Home and Start Here icons are provided by default on current Red Hat Linux systems. They open Konqueror windows for your home directory and a virtual directory containing a variety of commonly used items, respectively. The other two icons in the illustration were created in the manner just described. The Articles icon corresponds to a new folder created on the desktop, and the ae icon corresponds to an existing folder. The green arrow on the latter icon indicates that it is a symbolic link to the specified folder rather than a folder that actually resides on the desktop.

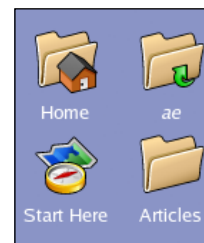
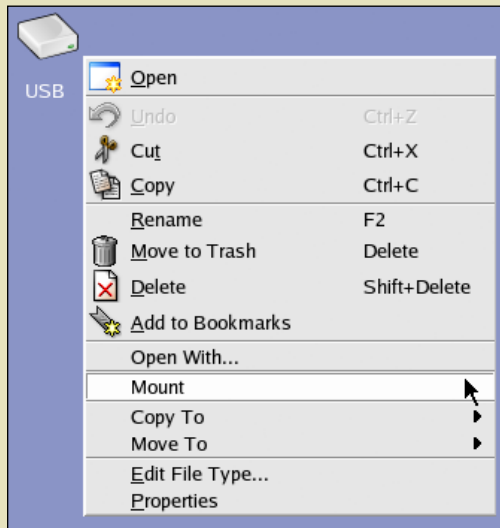


Figure 7. Varieties of Desktop Folder Icons

Many other kinds of icons also can be created on the desktop using different selections in the Create New submenu. I am sure that you will find it enjoyable to explore the remaining options on your own.

ICONS FOR USB DEVICES



Mounting a USB Flash Drive

A few preliminary steps may be necessary in order to create desktop icons for USB Flash disks, and these steps must be performed by the system administrator. First, a mount point must be created, as in this example:

```
# mkdir /mnt/usbdisk
# chmod 755 /mnt/usbdisk
```

Next, you must edit the filesystem configuration file, `/etc/fstab`, and add a line like the following:

```
/dev/sda1 /mnt/usbdisk auto noauto,user 0 0
```

SELECTING ALTERNATE ICONS

We'll end this whirlwind tour of KDE customization options by considering one trivial but frequently requested item: modifying the icon images associated with desktop or panel items. In general, you can modify the icon that is displayed for almost any item.

This entry specifies that the Flash disk should be mounted at the directory we created in the previous step, that its filesystem type should be determined at mount time, that such disks will have to be mounted manually, and that any user is permitted to mount them (rather than limiting this ability to the root user). The example entry uses the device `/dev/sda1`; this is the interface file typically used by the first USB device provided that there are no SCSI disks present on the system. If your system contains SCSI disks and/or additional USB devices (such as a scanner), you'll need to change this file to the correct one for your situation.

Once these preliminary steps have been completed, you can create a desktop icon for the USB Flash drive by right-clicking on the desktop, selecting Create New→Hard Disc, and then modifying the same fields as for the CD-ROM drive. Once the icon has been created, you can right-click on it in order to mount and unmount a USB Flash drive. Double-clicking on the icon before you have mounted the Flash disk results in a confusing and essentially erroneous error message stating that only root can mount it.

Finally, be aware that on some systems, USB devices are handled in an altogether different matter, through the Hotplug facility. The preceding method may or may not work in such cases.

This is accomplished by accessing that item's properties (typically by right-clicking on it), and then clicking on the large icon button found within its configuration dialog, as illustrated at the top of Figure 8.

The red arrow beginning at the icon button leads to the dialog that results when

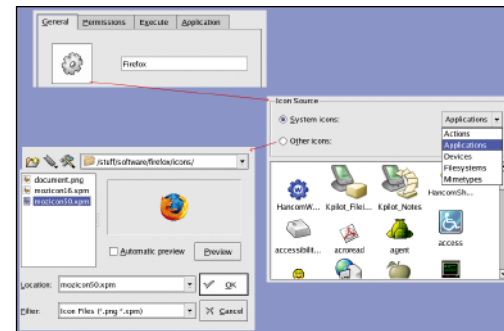


Figure 8. Selecting Custom Icons

you click it. The Icon Source dialog contains two radio buttons. The first, System icons, provides access to the collection of icons provided with the operating system. They are organized into a series of categories that are selected using the pull-down menu.

The Other icons radio button provides access to any additional available icons not included within the system categories (not all Linux distributions provide them). In addition, you can use this selection to specify a custom icon file for an item. Clicking the Browse button (hidden underneath the system icon category menu in the figure) results in the dialog in the lower-left corner of the figure. You can use it to navigate to and select the specific icon file you want to use.

Using custom icons is a lot of fun and is one of the best ways to express your personality on your desktop. There are several utilities you can use to create your own icons if none of the ones provided with the system suits you. Be careful, though, as creating icons can be both incredibly time consuming and addictive. ■



Aileen Frisch has been a system administrator for nearly 25 years. Her current responsibilities center on looking after a very heterogeneous network of Linux, UNIX, Mac, and Windows systems. She is also a writer, teacher, Webmaster, marketing consultant, and occasional database programmer. She has written eight books, including the best-selling *Essential System Administration*, now in its third edition (O'Reilly), and *Exploring Chemistry with Electronic Structure Methods* (Gaussian, Inc.). Aileen is a native Californian living in exile in Connecticut. Her free time is mostly monopolized by her cats Talia, Lyta, and Susan, but she also makes time for various mosaic and book arts projects. She can be reached by e-mail at aefrisch@lorentzian.com.

Parrot on Your Shoulder: Exploring the Mozilla Sidebar

Hiding below the familiar face of your browser is one of the most underused tools at your disposal. Almost every browser sports some kind of sidebar that sits waiting, only a keystroke away. Neglected? Perhaps, but what precisely is this wonderful thing for? Nigel McFarlane explores the Firefox and Mozilla sidebars.

NIGEL MCFARLANE

Why do people surf the Web? That has to be one life's great questions—a question not too distant from that other great life question, where did I put my keys? Whatever the reason, Web browsers, especially Mozilla ones, aim to help you cruise the Web in style. They include all kinds of nifty features designed to ease your travel from this page to that. In this article, we take a look at the Sidebar—one of the major helper features of both Web browsers built by the Mozilla Foundation. These two browsers are the Mozilla Application Suite, which is at about version 1.7 these days, and the Firefox Web browser, recently released and at about version 1.0. Other browsers, like Konqueror, may adopt Mozilla technology soon as well.

It's often said that using the Web is all about The Search. To me, that's a rather narrow view. When I jump onto the Web, sure I'm looking for content, but I'm also trying to connect together information in a way that aids my creativity, fires my passion, or completes my life-strategy-of-the-current-minute. At least it fills a few colourless empty hours and staves off boredom. Such activities are not as simple and single-minded as "Did I find it yet?", and so Google and LookSmart can help only so much.

It would be nice if there was some kind of smart parrot on your shoulder while you surfed the Web. When hyperlinks don't help, and you have more bookmarks than you ever can find anything in, the parrot would skwark: "Ship to starboard!" That would break you out of your dead-end and stimulate you with some ideas from an alternate point of view. Sidebars have a similar goal; they're there to complement the main activity that you do with the browser, in a way that's hopefully useful.

INTRODUCING THE FIREFOX SIDEBAR

Firefox comes with two sidebars installed, the History Sidebar and the Bookmarks Sidebar. Here's a picture of Firefox with the History Sidebar shown. Make it appear by pressing Ctrl-H or with the View→Sidebar→History menu item (Figure 1).

In my case, I've installed Firefox under KDE just today, so the list of my prior Web surfing is short and covers only one day. Up to nine days of history is shown with the default Firefox setup.

The Firefox History Sidebar is handy because of its search function. When you know that you recently visited a Web page relevant to your current activities, but you can't remember where it was, it's the History Sidebar to the rescue. You

NOTE:

Sidebars aren't unique to Mozilla browsers. Konqueror has a hidden sidebar that you can turn on and off by pressing F9. Opera, another popular browser, has several configurable sidebars (or panels, as they are called here). To show or hide panels, click View and select Panels.

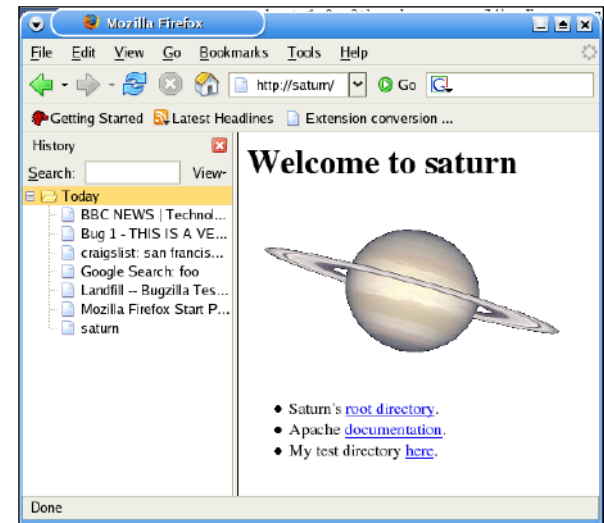


Figure 1. History Sidebar

TIP The number of days browser history is kept is controlled by a setting called `browser.history_expire_days`. You can set that preference using the page displayed by the special URL, `about:config`. That system, which allows you to change a huge number of internal browser settings, is an article on its own.

also can sort the recent history with the view button. Click any item in history to see it retrieved into the main part of the window.

The Bookmarks Sidebar provides another display option for bookmarks. If you don't like the Bookmarks Toolbar, and you don't want to take up a separate window with the Bookmark Manager, opening the Bookmarks Sidebar with Ctrl-B is the way out. This display of bookmarks also is made useful by search. If you've landed on a Web page whose topic is close to your heart, simply highlight a word with the mouse, move the mouse cursor to the search box in the Bookmark sidebar and middle-click. Any pages that you've visited with the keyword in the title are listed automatically. Click on any bookmark to display its page, but don't click on the bookmarks in the Quick Searches folder. They have a special purpose, which is to support keyword searches in the main Location Bar (the spot where you type URLs).

BIGGER AND MORE POWERFUL—THE MOZILLA SIDEBAR

The Mozilla Application Suite (MAS) is essentially Firefox's older sibling. This powerful application that contains a browser, an e-mailer, Web page editor, and chat client, also comes with a Sidebar. It's integrated with the Mozilla browser (Navigator) in a similar way to the Firefox case, but it allows you to see the different Sidebar options stacked as a vertical set of tabs. Turn on the Sidebar by pressing F9, and select which Sidebar tabs should appear by clicking on the Tabs drop-down list at the top of the Sidebar panel. The Application Suite is a larger product than Firefox and comes with four sidebars instead of two. Figure 2 shows the powerful What's Related Sidebar.

This Sidebar really has the spirit of a shoulder-dwelling parrot. Whatever you have on display in the

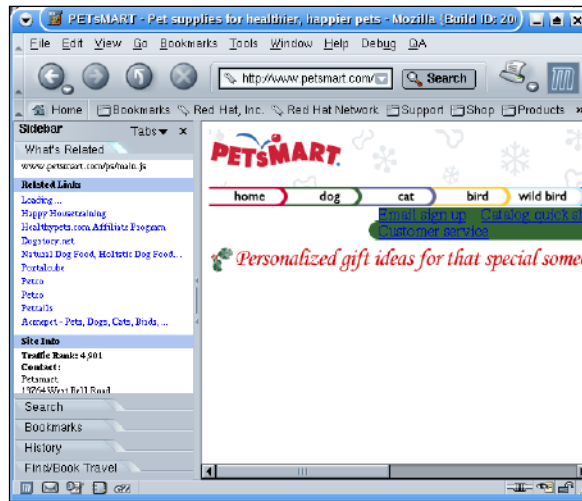


Figure 2. What's Related Sidebar

main part of the window, the What's Related Sidebar reaches out over the Web and finds similar sites that you might be interested in. It's a sort of automated referral system, except that those other sites are referred anonymously to you, rather than the other way around. If you're on a dial-up link, What's Related can take up a bit of extra network time. You probably want to use it only occasionally, not all the time. When you're shopping for specialty goods, and you've found one Web site that you like, it's a great way of seeing who the competitors are.

Sometimes, the sidebar-tab action takes a bit of getting used to. If you click on a tab, it doesn't go to the top. Instead, the set of tabs opens up where the clicked tab is. The upshot is that sometimes sidebar tabs are displayed above the current sidebar content, sometimes there's tabs below that content, and sometimes there's both.

You can see in Figure 2 that four tabs appear at the bottom of the Sidebar. The last of these,

Find/Book Travel, is a custom tab. It's an extra that has been installed separately to the standard Mozilla products. For the older MAS browser, you can go shopping for more sidebars by clicking on the Tabs drop-down list and choosing the menu item Sidebar Directory. Doing so reveals a Web page in a new window—a Web page that lists zillions of potential sidebars. The secret's out—the sidebar also can be used to display an ordinary Web page specially designed to fit. The What's Related Sidebar is an example. To install one of these sidebars, simply click on its link, and Mozilla does the rest.

Firefox doesn't have a special Firefox Sidebars Web page, but there's somewhere else to shop. Start the Extensions Manager or simply visit <http://update.mozilla.org>. There, you'll find a heap of extensions that can be added to Firefox. Some are menu items, some are toolbars, and some are sidebars. To see what's what, read the extension descriptions. Some sidebar-enabled extensions include cookiebar, oneclick, quicknote, and the more developer-oriented editcss. If you can't find a given extension at <http://update.mozilla.org>, have a look at <http://www.mozdev.org>, which is where projects in progress often hang around until they're sufficiently polished.

Sidebars aren't everyone's piece of cake, but then there's no rule that says we all have to like the same things. If you need a buddy while you Web surf, a sidebar could be exactly the lifestyle option for you. ■

Nigel McFarlane (<http://www.nigelmcfarlane.com>) is the Mozilla community's regular and irregular technical commentator focused on education, analysis, and a few narrowly scoped bugs. Nigel is the author of *Firefox Hacks* (O'Reilly Media) and *Rapid Application Development With Mozilla* (Prentice Hall PTR).

Stop the Browser Fireworks!

Some Web sites make you feel like you have lost control of your browser because of pop-ups and more. Marco Fioretti shows you how to use the tools you have to get control back.

MARCO FIORETTI

Several Web browsers for Linux, besides being fast and good looking, can save you quite some time and annoyance while surfing the Web. If you already have used the Internet for more than ten minutes, you've also already suffered from what I call browser fireworks. Theoretically, the World Wide Web should help you find and use only the information you need, as quickly as possible, shouldn't it? In practice, all too often you type a URL, or click on a link, and July 4th happens: extra windows that you never wanted to open pop up everywhere, proposing unwanted on-line polls, last-minute discounts, and what not. Other Web sites are more "advanced", offering the same (dis)service all in one window—20% information, 80% assorted clip art and advertising banners.

Something else, less evident but potentially more threatening for your privacy, may be happening in the background. You see, Web servers want to keep a record of all the visits you make. They do this by sending strings of text, called cookies, to your browser. Every time you return to a Web site, your browser transmits back the corresponding cookie as an identification token. Now, sometimes you *do* want this to happen: when shopping on-

line, for example, you want to buy more items at a site after one visit, and you want to be recognized as a person who deserves a discount after spending his or her whole paycheck there last week. When, instead, Webmasters use cookies to profile your on-line habits, violating your privacy, it's an entirely different matter, isn't it?

DON'T SHOOT YOURSELF IN THE FOOT!

The right Linux browsers can help you save time and protect you and your family's privacy. It might be in your interest, however, not to help yourself too much. Turning off pop-ups, banners, and cookies altogether could be a bad idea. First of all, some on-line services that you *do* need might not work anymore (banking, subscriptions to on-line fora, and so on) if you disable everything. In the second place, servers and bandwidth cost money. Often, that money comes only from those very banners and pop-ups we are going to block in a second. Filtering too much might stop the only source of income for some of the Web sites you like. If there are more pop-ups and banners than useful information, please consider writing a polite request to the Webmaster to make the site lighter.

Enough preambles, let's start blocking pop-ups with Konqueror, the default browser and file manager of the KDE desktop. The Web scripting language used to manipulate browser windows is JavaScript. Select Settings→Configure from the main menu, click on the corresponding icon on the left, and you're in the Java and JavaScript Konqueror panel, shown in Figure 1.

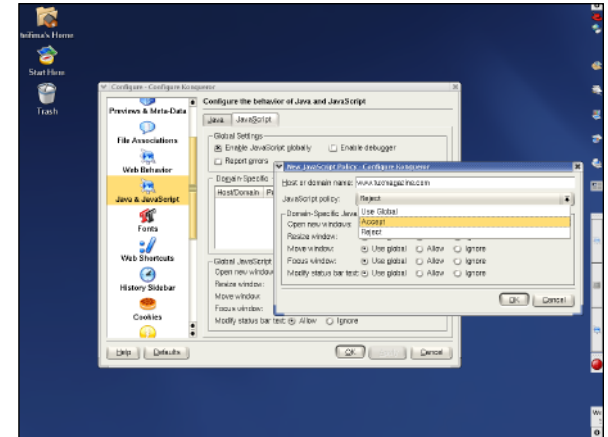


Figure 1. Java and JavaScript Konqueror Panel

What's going on there? Here, I'm telling Konqueror what the Web pages of <http://www.tuxmagazine.com> should be allowed to do whenever I visit the site. Can you see, for example, the several move, open, and resize options? And, have you noticed the global keyword? That's the best part of it. You can define a default (global) policy for unknown Web sites, and then set up different stricter (or more relaxed) rules for each Web domain. Basically, you can decide who can yell at you and when—makes you long for a similar panel in real life, doesn't it? You also can tell Konqueror to ask you every time whether new windows can be opened. Alternatively, the smart option is to allow the creation of new windows, but only as a consequence of an explicit user action, like clicking on a button or submitting a form. Unsolicited pop-ups always are blocked in this case.

Another popular browser, Firefox, goes even further to keep your desktop clean. Look at Figure 2. This is what you get the first time you point Firefox to any site with pop-up windows. Note the yellow stripe right below the tab titles; that's not part of the page, it's a warning from the browser: "Firefox prevented this site from opening two pop-up windows." Yes, that's exactly what it is. By default, Firefox never lets a Webmaster clutter your desktop, unless you explicitly say so. This is what the drop-down menu on the right is for. Left-click anywhere on the yellow stripe to open it. From there, you can open the pop-ups manually, allow the Web domain to do it from now on, or fine-tune the pop-up blocker behavior.

In fact, if we select the second option, we get to the same window shown in the rightmost part of Figure 3, the one titled Allowed Sites. To get there without surfing, simply select the Edit→Preferences entry from the main menu, and then click on the Web Features icon. Unlike

Konqueror, Firefox has a dedicated check box only for pop-ups, separated from the one dealing with Java and JavaScript. In other words, pop-up blocking in Firefox is faster to reach, but it gives you less options than the one in Konqueror—no smart blocking or asking for confirmation here. Another advantage of Firefox is that, being cross-platform, you could share the same pop-up blocking configuration across all your computers. I say "could" because to test it myself I should run other operating systems, but I don't.

What about Mozilla, which is also cross-platform? This heavyweight of the browser world is the direct ancestor of Firefox. Practically speaking, this means that we find the same options and functionality of Firefox in Mozilla, as far as pop-ups and JavaScript are concerned, only arranged in a different way. Therefore, select Edit→Preferences, and you should see something similar to Figure 4, coming from Mozilla 1.7 for Linux. The pop-up blocking options are the same as before, with a

more verbose explanation (which, if you paid attention so far, you wouldn't need anyway).

TESTING YOUR SETUP BEFORE GOING LIVE

There is an easy way to be sure that you have figured out exactly how to stop pop-ups without risks. Play with the several configuration options while visiting one of the test sites listed in the Resource section. Some are offered as a service by vendors of commercial pop-up blocking software. They all contain pages made on purpose to test a browser's resistance under pop-up overload. Once you can configure a browser to withstand all their attacks, consider yourself graduated in Advanced Browser Pop-up Prevention.

WHAT ABOUT COOKIES AND BANNERS?

Let's go back to the Konqueror cookie management interface, shown in Figure 5, and click the two icons below the Java and JavaScript one we used before. As with pop-ups, you can define, for

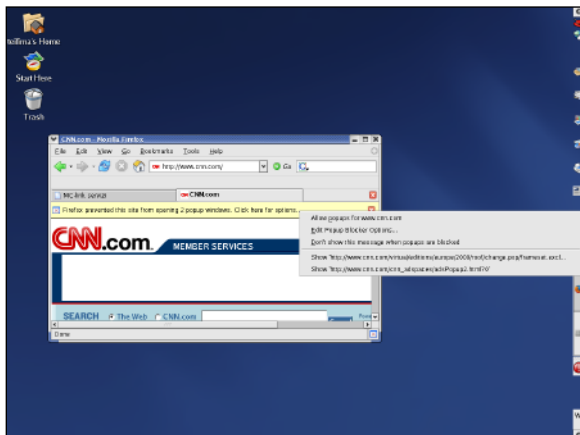


Figure 2. Pop-up Options in Firefox

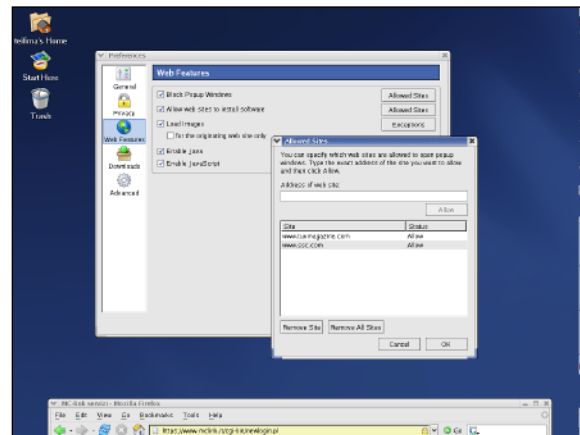


Figure 3. Fine-Tuning Pop-up Behavior

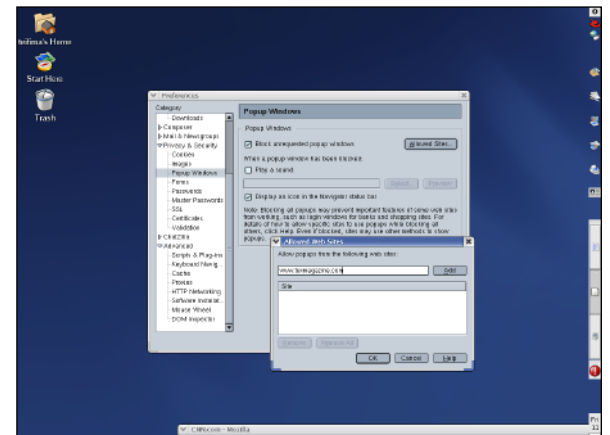


Figure 4. Pop-up Preferences in Mozilla

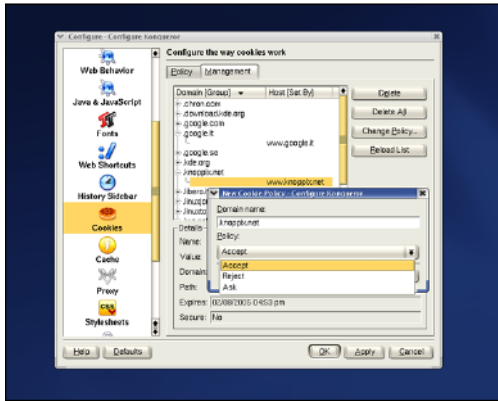


Figure 5. Konqueror Cookie Management

any Internet domain, different cookie policies. In this example we have said that we want to accept all cookies from <http://www.knoppix.net>, the home of the finest Linux Live CD-ROMs around.

The Firefox configuration panel (Figure 6) deals with cookies inside the Privacy section. In this browser, you can specify exceptions for different Web sites and view the exact values and expiration dates of each single cookie. Again, Mozilla has a similar interface, so I won't show that to you. One advantage of Mozilla and Firefox over Konqueror (version 3.2.0, the only one I had available while writing this piece) is the capability to block

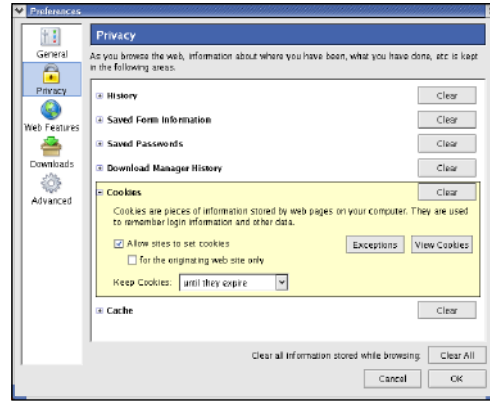


Figure 6. Managing Cookies in Firefox

all images from a given server. Place the cursor over an image and right-click. In Mozilla, one of the choices is Block Images From This Server. In place of the last two words, Firefox shows the Internet domain from which the image comes. Of course, before actually blocking anything, remember what I told you at the beginning. Within reasonable limits, banners are essential for many free Web sites to survive.

CONCLUSION

All the configuration parameters we have discussed are stored in plain-text files. In Konqueror, for example, have a look at

`~/.kde/share/config/konquerorrc` in your Home Directory. You even can look at the file using Konqueror. In the Location field, type `~/.kde/share/config/konquerorrc` and press Enter. The file will show up in your browser window. To give you an idea of what it contains, here is what my version of that file says about the TUX Web site:

```
[www.tuxmagazine.com]
javascript.EnableJavaScript=true
javascript.WindowFocusPolicy=0
javascript.WindowOpenPolicy=3
javascript.WindowResizePolicy=0
javascript.WindowStatusPolicy=0
```

The equivalent file for Firefox (alas, with a different syntax) is called `hostperm.1`, and it sits somewhere in your default Firefox profile (look in the `~/.mozilla/firefox/` directory, again by using your browser). The same applies to Mozilla, if you skip the firefox part from the previous path.

And, now one last bit of advice. Remember to include all the configuration files of your browser(s) in your regular backup plan (you do have one, don't you?). It would be really depressing, after a hardware crash or other catastrophe, to lose your bookmarks and see all the browser fireworks again. ■



Marco Fioretti is a hardware systems engineer interested in free software both as an EDA platform and, as the current leader of the RULE Project, as an efficient desktop. Marco lives with his family in Rome, Italy.

RESOURCES

Firefox: <http://www.mozilla.org/products/firefox>
 Konqueror: <http://www.konqueror.org>
 Mozilla: <http://www.mozilla.org/products/mozilla1.x>

Pop-up Test Sites: <http://www.popup-blocker.info>,
<http://www.kephyr.com/popupkillertest/test>,
<http://www.popupcheck.com>, and <http://www.popupptest.com>

Touring The GIMP: The GNU Image Manipulation Program

Whether you're working on the family album or an art-house masterpiece, there is one tool no Linux user should be without: The GIMP.

MICHAEL J. HAMMEL

The GNU Image Manipulation Program is the most powerful interactive image processing application for Linux. Its user interface is based loosely on the Adobe Photoshop image editing package. Recent releases of GIMP have taken it to levels both amateur user and expert artist will appreciate.

The GIMP provides many of the same features as Photoshop, from layers and vector paths to blend modes and text manipulation. It also goes beyond Photoshop by providing cross-platform versions (Linux, Mac, and Windows) as well as support for multiple scripting languages, which makes GIMP perfect for Web-based animation production. And, the wealth of image filters—from blurs to clouds to impressionistic generators—that come standard with the base GIMP distribution can handle editing tasks both large and small.

GIMP supports very large images through the use of a configurable tiling scheme that makes optimum use of available memory. The native XCF format allows you to save all your work in layered format. Plugins are available that allow GIMP to integrate easily with your digital camera, scanner, and printer. Add Inkscape, a vector graphics pro-

gram, and Scribus, a Quark Xpress-like layout program, to your editing pipeline to make any print publication a thing of beauty.

Most recent Linux distributions now include GIMP version 2.0. Though GIMP is not built using the KDE environment, it works happily under it.

In this article, I introduce you to the what and where of GIMP to provide a road map to the user interface. In future articles and tutorials, I'll dig deeper into the how and why of GIMP to show not only how various effects and tasks are performed but also why they are needed.

THE ENVIRONMENT

The working environment for GIMP consists of three main pieces: the Toolbox, image windows, and the working dialogs. The Toolbox is the main window and the only window in The GIMP that remains open all the time. It contains a set of icons for activating basic features such as selections, painting, and transforming images. It also holds a menu at the top, the foreground and background color selectors, the active brush, pattern and gradients, and an optional window dock.

Image windows are where all the editing takes place. Many image windows can be open at any time. Each window is a composite view of an image, based on which layers in that image currently are marked visible. Image windows have many features. I cover these in more depth a little later in this article.

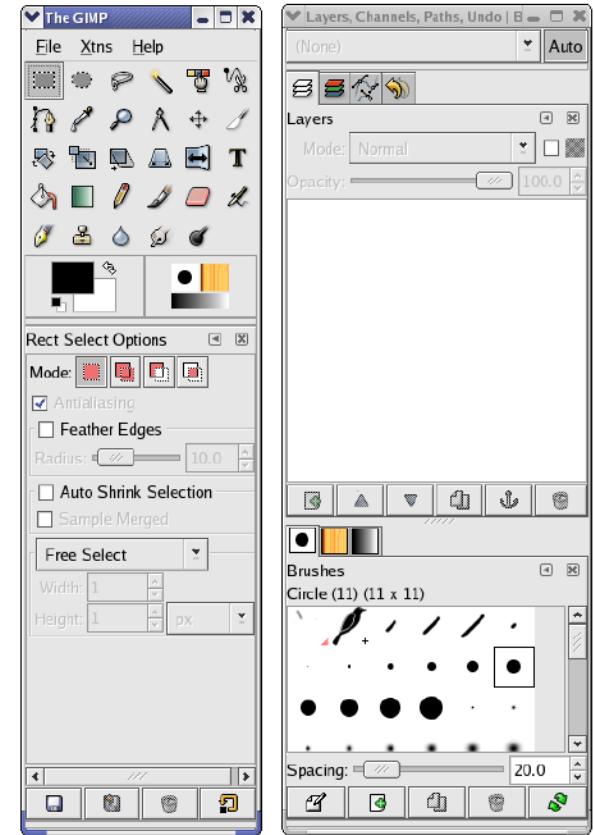


Figure 1. The first time you start GIMP, it runs through a number of setup windows. Once that finishes, this layout is displayed: The GIMP Toolbox and a vertical set of dock windows.

Working dialogs are windows that let you work with a variety of GIMP tools, many of which are not directly accessible from the Toolbox icons. This includes layers, channels, paths, the undo history, and the document history.

GIMP offers plenty of configurable preferences: full-screen mode, conservative memory use for resource-limited systems, tear-off menus, even

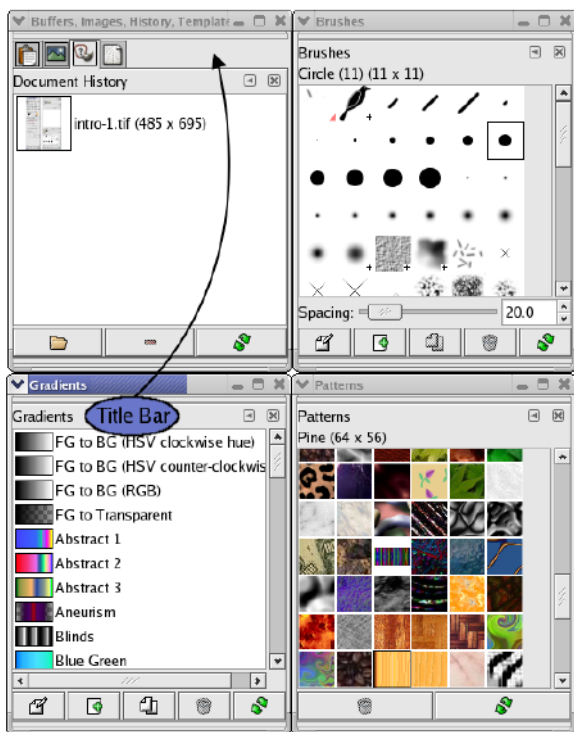


Figure 2. Any dialog box can become a dock. Simply drag dialog title bars onto a another dialog title bar. This adds a tab with an icon to the dock. Using docks, you can keep multiple dialogs open and accessible with a click of a tab while freeing up desktop real estate.

dynamic configuration of keyboard shortcuts. Most of these options can be set using the Preferences dialog (File→Preferences from the Toolbox). Full-screen mode for any image window can be toggled on or off by pressing F11 or by using the View→Fullscreen menu option from the Image Window menu bar.

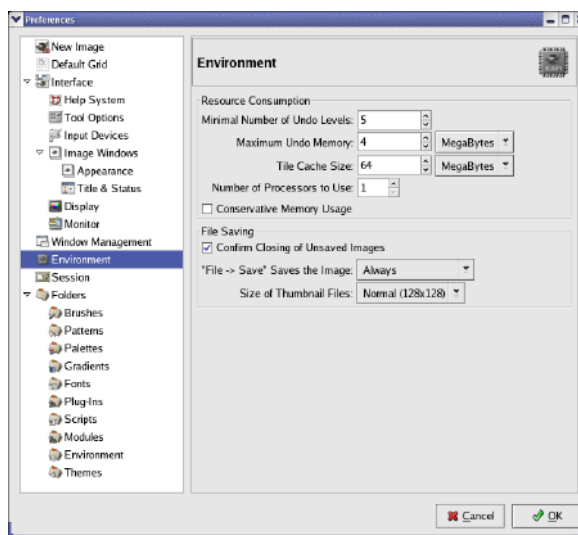


Figure 3. A slew of configurable options are available in the Preferences dialog. For slow machines or ones with memory under 256MB, be sure to look at the Environment options. For example, setting fewer undo levels reduces memory consumption.

THE TOOLBOX

The Toolbox is initially a vertical window of icons attached to a single dock. The icons represent the basic set of artist tools. These include tools for drawing and painting; creating and editing selections; performing various transformations such as scaling, shearing, and adding perspective; and choosing the active colors, patterns and brush types. Clicking on an icon in the toolbox activates the tool and, if the Tool Options dialog is open or docked, displays the Tool Options for that tool.

The Toolbox also has a menu bar with three

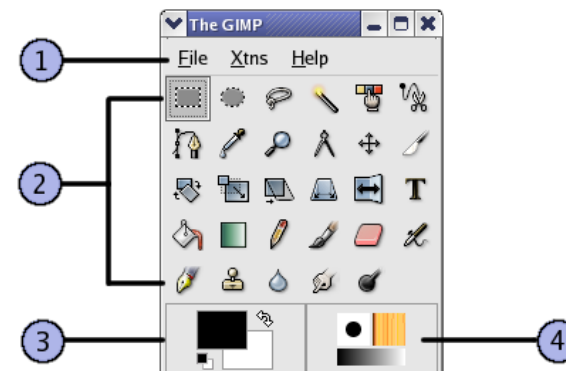


Figure 4. The GIMP toolbox consists of four main areas: 1) the menu bar, 2) the tool icons, 3) the foreground and background colors, and 4) the active brush, pattern, and gradient indicators. GIMP 2.2 adds an additional preview, showing the currently active image window to make it easier to identify at a glance which window will be modified by the next change you make.

menus: File, Xtns, and Help. Xtns is primarily for plugin developers, although you also can generate predefined text logos using the Xtns→Script Fu→Logos menu. The built-in Help system is thorough, but be sure you have The GIMP Help files installed for your language.

The layout for The GIMP Toolbox is configurable. Stretch the window vertically and horizontally to suit your needs. Attach more docks or detach them—the design intent was to make GIMP’s environment as comfortable as you need it to be.

A window dock allows you to group multiple dialogs into a single window. Dialogs (see File→Dialogs from the Toolbox main menu) are available for many of GIMP’s features not

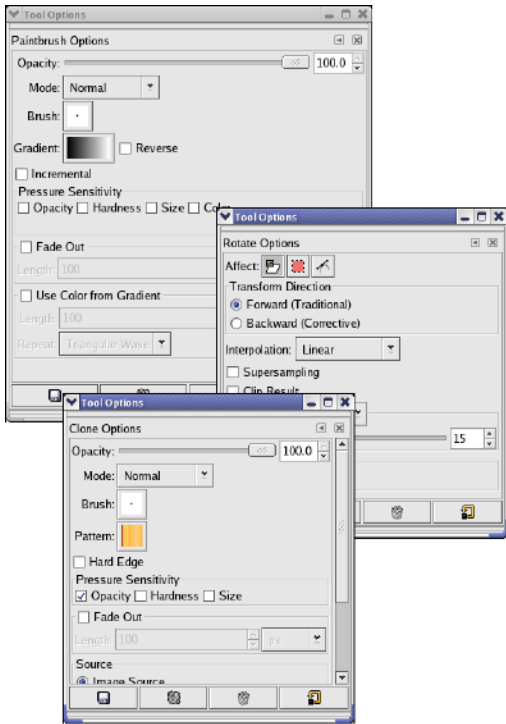


Figure 5. Tool options allow you to configure tools. The options are kept between uses, so using a tool and making a change, then switching to another tool, does not cause the first tool to reset to its default settings.

directly accessible through the Toolbox. You can drag the dock handle (where the dialog title is displayed) in any dialog and drop it into any dock. The Tab menu (left-pointing arrow icon) in a dock allows you to detach dialogs.

The first time you start GIMP, you get

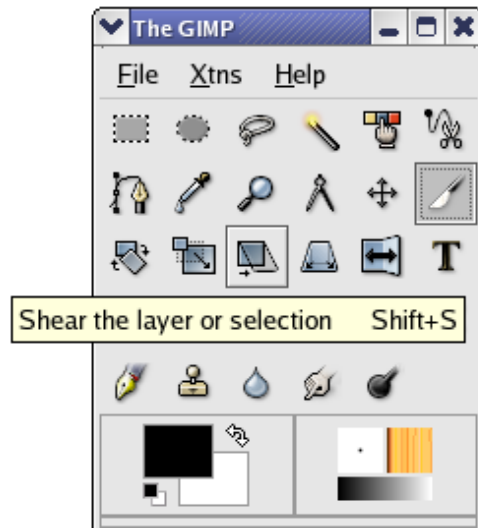


Figure 6. The toolbox tooltips describe the icons. Tooltips are offered up in various other places in GIMP, though these can become annoying after you're familiar with the program. Disable them in the Preferences when the time is right.

both the toolbox and an additional dock window containing two docks. This window safely can be closed if you need the extra screen space. The tabs in the docks can be dragged to the dock in the toolbox if you prefer to keep them available at a mouse click. All the tabs are dialogs that also can be accessed at any time from the File→Dialogs menu in the toolbox.

Leaving the mouse cursor over a tool for a few seconds pops up a tip window, better known as a tooltip, explaining that tool's basic purpose and use. Tooltips are active

on many features in GIMP. Experienced users can disable tooltips from the Preferences dialog.

THE IMAGE WINDOW

The toolbox, dialogs, and docks are tools for doing work. The place you actually do that work is an image window. Image windows consist of a menu bar and a menu button, scrollbars, rulers, a status area, and the image display area. The image display area shows a composite image. Composite means all layers and channels that currently are marked visible are combined, in order from bottom to top, to create the visible image. Changes made to any layer or channel are displayed immediately in the composite image.

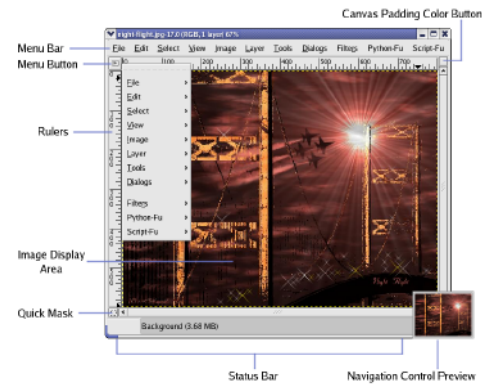


Figure 7. The GIMP image window can hide all of its features except the image display area. It also can be displayed in full-screen mode, which is useful for large print projects.

NOTE:

In this article, I often refer to the image window as a canvas window. The term image is somewhat abused by The GIMP community and easily can cause confusion when not put in the proper context. Canvas window is fairly unique and easily references the GIMP image window as a whole, including all associated layers and channels. The on-line documentation for GIMP, however, still refers to this as the image window.

NOTE:

All visible features of an image window (except the image display area) can be hidden from view. Check out the options under the View menu in the image window menu bar.

Because not all images you create will be wide enough to show the entire menu bar, you might not want to use it. It can be hidden from view using the View→Show Menubar option in the image window. Once it's hidden you still can get to the same menus by using the menu button or by pressing and holding the right mouse button while the mouse is in the image display area. Having multiple ways of reaching the same menus is another way The GIMP allows you more control of your working environment.

Rulers are provided that show the width of an image in pixels. The rulers play a double role in that you drag guides from them. A guide is straight line, horizontal or vertical, that can be used for alignment of layers or as straight edges for drawing and selection tools. Dragging a guide back into a ruler removes it from the image window.

The status bar lives at the bottom of the image window. It can display a variety of useful information in a configurable format (see the Preferences dialog under the Interface→Image Window→Title and Status section, and check out the on-line documentation for configuration options).

To the right of the status bar is the navigation control. The icon is a double arrow. When the image is zoomed or larger than what the image window can display, you can use the

scrollbars to navigate around the image. Alternatively, the navigation control lets you move around the image interactively. If you work on large images, such as those destined for print publications, the navigation tool tends to be a much easier way to bounce around the image than the scrollbars.

THE FILTERS

Most image editing programs provide basic tools for drawing lines, changing colors, and scaling images. What makes tools like The GIMP exciting is the use of filters, also known as plugins. Filters add features to GIMP either by providing some functionality that doesn't exist in the core GIMP toolbox or dialogs—say mapping an image to a 3-D shape, such as a cube or cylinder—or that exists only as a series of steps with existing tools.

Image scaling, rotating, and desaturating (that is, removing all the color and leaving an image black and white) can be applied to a series of images in a directory. If the same process needs to be applied to every image, it would be a time-consuming project to do it all one step at a time. Filters let you turn this process into a single dialog with a point-and-click interface.

GIMP comes with a large set of basic filters. These are divided into menus of closely related filters with titles such as blurs, artistic, distorts, and render. Filters are either programs or scripts, the latter coming in flavors of Perl, Python, and Scheme. Filters written as scripts are similar to Photoshop actions but far more versatile. If you expect to do much work with animations (such as those used on the Web) chances are good that you'll want to learn at least one of the

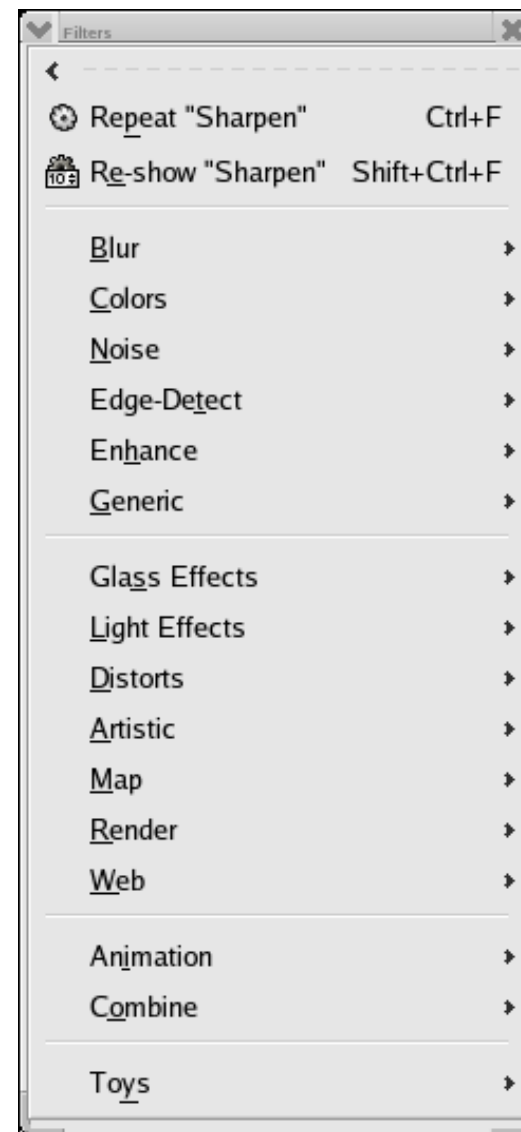


Figure 8. The Filters menu is where you find editing tools that are less interactive in general, but more sweeping in effect, than the toolbox tools.

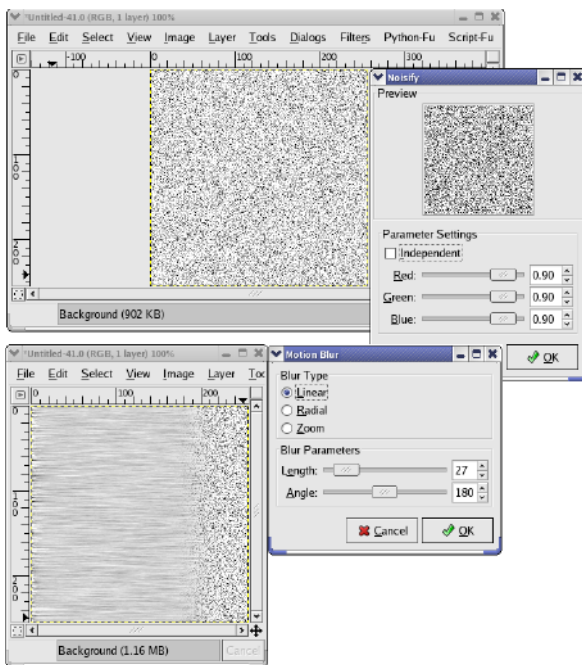


Figure 9. Noise is a good starting place for textures. Add a motion blur and you get the beginnings of a brushed metal effect.

available languages.

Some of the most commonly used filters include the Gaussian Blur (Filters→Blurs→Gaussian Blur RLE) to simulate depth in photographs, Noisify (Filters→Noise→Noisify) for aging photographs or as the seed for complex effects, and Sharpen (Filters→Enhance→Sharpen) for use with scanned photos.

When you're in need of a specialized effect or a good starting point for an image, try looking at the Render filters. The Plasma filter (Filters→Render→Plasma) is often used for cre-

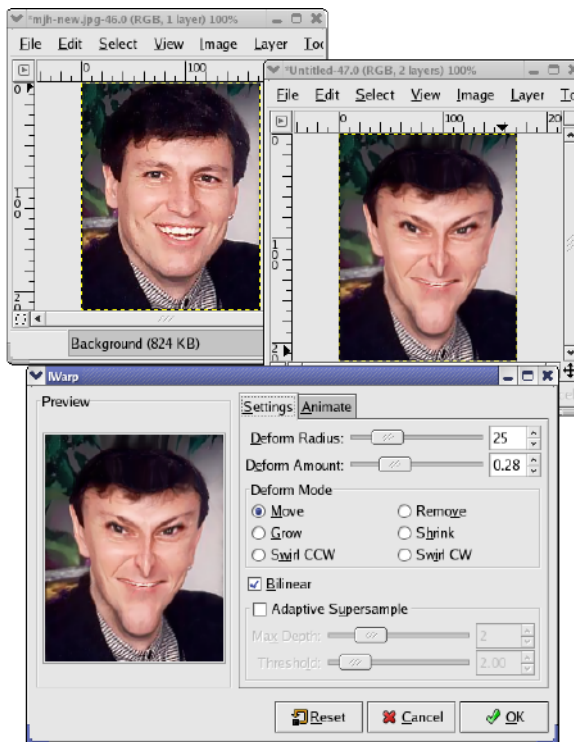


Figure 10. What could be more fun than going from good to evil with only a few mouse clicks? The iWarp filter lets you do exactly that.

ating clouds in a sky, and the Solid Noise (Filters→Render→Solid Noise) filter is good for simulating smoke.

Emboss (Filters→Distorts→Emboss) can turn a 2-D image into 3-D with little effort on your part. Page Curl and Wind also often are used and are easy-to-understand Distort filters. Probably the most fun of the bunch is iWarp, which can distort family photos into the true aliens we see in our relatives.

RESOURCES

The primary source of information for The GIMP is the Web site, <http://gimp.org>. Here you'll find an on-line manual (in multiple languages) as well as tutorials and various helpful tips. A developer site (<http://developer.gimp.org>) is available for anyone needing information on writing filters for GIMP. Various on-line tutorials also are available from users with their own Web sites, as well as a slew of GIMP mailing lists for both end users and developers.

All the currently available books on the GIMP are based on a previous version. Expect to see new books on the GIMP 2.x series later this year.

The truly nice thing about The GIMP is that, although it isn't an exact feature clone of Photoshop, the basic functionality is quite similar. This means many of the tutorials you can find on-line for Photoshop and in texts easily are mapped to features found in GIMP.

Then again, if you'd rather read tutorials written specifically for The GIMP, stay tuned to this column. I'm just getting started! ■

Michael J. Hammel is an author, graphic artist, Web designer, and software developer currently working for RLXTechnologies in Houston, Texas. He has spoken at the ALS, LinuxWorld, and SXSW conferences, and chaired multiple conferences on Linux in Colorado. He is the primary maintainer for the MiniMyth build system, and he runs XEUS, his own development site for XNotesPlus, Ximba Radio, and other open-source software. He can be reached at mjhammel@graphics-muse.org, and his blog is at <http://www.ximba.org/wordpress>.

The Pepper Pad 2: First Impressions

What's bigger and more capable than a PDA but smaller than a desktop computer? Meet the Pepper Pad 2.

DAVID HITRYS

So you've finished dinner and the family is enjoying a rare moment of downtime in the living room, and then it happens: "Does anyone know the weather for Saturday?" "What field is my soccer game on?" "Is Dad's flight coming in on time?" "What's the name of that Italian restaurant?" "Did Amy send an e-mail about her party yet?" "Is that new movie any good?" Suddenly, there's a race for the home computer. Somewhere—most likely in a different room—a computer is being booted up. Downtime is over; the living room is emptied.

What has happened here is that the answers we need to day-to-day questions now are available almost entirely from the family computer. Its power as an information vehicle and communication medium has woven itself into our lives. The problem, though, is that using a computer is not an impulse activity. Computers are "destination" devices. That is, they occupy a specific location, and using one is a "scheduled" activity. To get an answer to a question or to fire off a quick message, one must place oneself in front of it, boot it up, log in, and launch an application. Afterward, one must shut it down or log off, and often the machine requires updates and maintenance. It doesn't need to be this way, and in the near future, it won't be.

Indeed, the computer hasn't strayed much from its original position as a task station. Its design has been driven largely by its use as an office tool where new applications and evolving standards drove concerns about flexibility and upgradeability.

The result: a general-purpose design with modular components (including choice of operating system—Linux, of course).

The power and productivity afforded by e-mail, instant messaging, and access to the sum total of human knowledge on the Web, however, was unavoidable, and computers wedged their way into our homes. We found ourselves forced to adapt our schedules and even the layout of our houses to accommodate this design of computers into our lives. Over the last decade or so this was tolerable, because we shared many of the concerns of business users.

Today, more computer users than ever have no idea what is going on under the hood nor do they want to know. They have been satisfied with the performance of their home computer for several years and feel no need to upgrade. More importantly, some of these users have found that the vast majority of their computing time is focused on a small set of applications including e-mail, Web surfing, and instant messaging. For these users, the dust has settled, and the time has come for computers to morph into devices that fit better into their lives and better address their day-to-day needs.



Figure 1. The Pepper Pad 2

WHAT WE NEED IS A LITTLE PEPPER

Enter the new Pepper Pad 2 from Pepper Computing, Inc. (<http://www.pepper.com>). I had the opportunity to test-drive a Pepper Pad recently and found it to be possibly the best thought-out peripheral home computing device I've ever seen. The people at Pepper Computing were kind enough to invite me in to take a look this rather cool, Linux-based personal computing platform. You should know up front that the unit I looked at was a pre-release model with production units expected to appear in



Figure 2.
The Pepper Pad
2's specifications

stores sometime before this magazine appears. Consequently, this is more a reflection of my first impressions rather than an out-and-out review.

Focused on the everyday needs of the residential computer user, the Pepper Pad 2 is designed from the ground up to provide an instant-on, trouble-free, easy-to-use wireless computing device that's always within reach. About the size of a thick magazine, the device looks much like a small flat-panel television, complete with built-in stereo speakers. The presence of a small QWERTY keypad (cleverly divided in half by the 8.4" LCD screen), stylus pen, scroll wheel, and the gently curved, rubberized frame, though, portend that this is an interactive device that's meant to be picked up, held, and used. Once lifted, the two-pound device fits neatly into the hands, with thumbs falling naturally onto the keypads. On the brightly lit touch-sensitive screen are colorful icons that show the most commonly used applications. Touching the Web icon instantly opens a Mozilla browser. E-mail and Instant Messenger (AOL-compatible) are also

available, as are a number of other applications, such as a word processor, MP3 player, streaming Internet radio, a photograph organizer, scrapbook, games, and even a video player. More applications (Pepper Packages) are available for download at the company's Web site.

Opening a number of applications at the same time reveals another strength of the design of the Pepper Pad—the screen never gets cluttered. All open applications are represented by a small tab at the top of the screen and are available by a single click (or touch of the stylus). The drag-and-drop metaphor is used extensively throughout, making it easy to organize address books, music libraries, photographs, videos, and to create custom scrapbooks that can be shared easily with friends. Further fulfilling its role as the gotta-have device for the family room, the unit even includes software and an infrared port allowing it to function as a master remote control for your TV, CD player, and other equipment. The built-in speakers produce crisp, clear sound, effectively making the

unit double as a high-quality, Internet-connected table radio. For a close-up look at all the bells and whistles on this unit, have a look at Figure 2.

People with experience using small keyboards on PDAs or Blackberry devices will find typing an e-mail message, Web address, or other text into the Pepper Pad to be easy and straightforward. For others, a few minutes of practice may be required. The keys provide a crisp feel and are backlit for easy viewing. Even after 45 minutes of Web browsing and e-mailing, the Pepper Pad continued to feel comfortable to use.

Battery life is estimated at several hours, and the battery (lithium polymer) recharges rapidly. It also can be plugged in to AC power and run indefinitely. The unit I looked at included Wi-Fi (802.11b), IR, a 20GB hard disk, an 8.4" color LCD screen, QWERTY keypad, Bluetooth, USB 2.0, and a memory card slot that accommodates SD/MMC. To ensure reliability and eliminate maintenance issues, neither the operating system (Linux) nor the files for core applications (written in Java) are accessible directly by users.

The Pepper Pad 2 should be available in January of 2005 (certainly by the time you read this sneak-peek preview), and the company is accepting orders at its Web site. The price is expected to be about \$800 US and includes a three-month warranty.

It is clear that at some point in the very near future, people will not be required to disrupt their daily life simply to access basic computing needs. Instead, dedicated, easy-to-use and maintenance-free wireless computers will be found sitting on end-tables and nightstands in most homes and apartments. Will it be the Pepper Pad? With its clean design and laser focus on the core applications that most people use everyday, it appears that the Pepper Pad is going to be huge hit. ■

David Hitrys can be reached at dhitrys@rcn.com.

The Gadget Guy

Who says you can't take it with you? Contacts, appointments, music, and all your data are totally portable. Plug 'em in, load 'em up, and head 'em out! Sean Carruthers reviews four great gadgets that may soon be finding a home on your computer's USB port.

SEAN CARRUTHERS

TUNGSTEN T5

palmOne: <http://www.palmone.com>

Estimated price: \$399 US / \$599 Canada

Palm handhelds have long been trusted companions for those who need to stay organized. The Palm operating system has come a long way since the very first Palm Pilot, but the handhelds continue to offer the same ease of use and stability that made that first early entry into the PDA space so valued.

The Tungsten series is the executive line of handhelds currently available from palmOne, and the new Tungsten T5 is the newest and brightest. This time around, there even have been a few core changes to how the device works.

First of all, the Tungsten T5 comes with a whopping 256MB of memory onboard, four times the amount found on the T3 model. Even better, that's Flash memory, which means that when you finally run out of battery power, which almost every Palm user has done at some point, you won't lose all of your data.

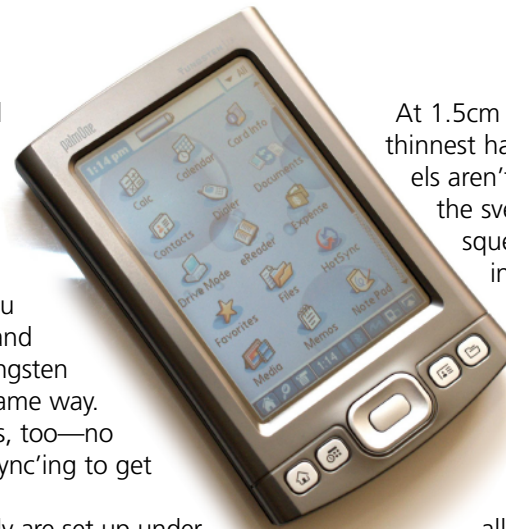
It also means you can use the T5 as a removable USB drive with any computer that supports external USB drives natively; 160MB of the T5's total memory

is set aside as an internal Flash drive. To turn the handheld into a removable drive, there's a new icon on the Palm called Drive Mode. Once you're in Drive Mode, you can drag and drop files and applications onto the Tungsten or remove them in the same way. That's right—applications, too—no more of that pesky HotSync'ing to get new apps onboard.

Four categories already are set up under the Files menu, including Applications, Documents, Music, and Photos & Videos. Simply drag your files into the appropriate folder, and they'll show up in the appropriate place. Music files are accessible from the Real Player, photos and videos from the Media application, and applications from the regular applications menu, though you need to select INTERNAL from the drop-down category menu. (You also can get to your files with the touch of the Files launch button, on the far right of the five-way navigation button below the screen.)

This is a nice feature for Linux users for a key reason: if your version of the operating system automatically recognizes external USB drives, you don't have to install specialty apps on your box just to get files onto the Tungsten T5.

If you want to synchronize your calendar and address book, you still have to find and install the proper applications. (Personally, I don't bother with a computer at all when it comes to managing my calendar and contacts; I prefer to enter everything directly into the Palm and back up my data to a SecureDigital card.)



At 1.5cm thick, the Tungsten T5 isn't the thinnest handheld out there, but thinner models aren't thinner by all that much. Despite the svelte design, they've still managed to squeeze a lot under the hood. That includes the same 320X480 screen found on the T3, with an onscreen Graffiti pad that pops up only when needed (or requested); the screen can be flipped from portrait to landscape mode with a tap of the stylus.

The T5 has built-in Bluetooth, allowing you to connect to the Internet if you have a Bluetooth-enabled phone (and a suitably robust data plan). There's even a SecureDigital slot, for extra storage or SDIO-compliant peripherals.

As with previous models in the Tungsten line, one of the main complaints about this one is the internal battery. Sure, if you're not using Bluetooth all the time, it'll last you quite a while, but as with all batteries, eventually it'll poop out. Worse, once it's finally gone to battery heaven, you'll have to send the unit in for a costly service call, instead of being able to replace the battery yourself.

Something that may be surprising is the move from the synchronization cradle to a fairly standard USB cable, especially with the higher-end models. The good news is you won't have to find a place to put the sync cradle; the bad news is you'll have to plug in the T5 manually every time.

If you're in the market for a stylish and powerful new handheld, these may be small concerns. The T5's new drag-and-drop method of file transfer is a great new feature, especially for those running Linux.

GIGA-COOL: ONE GIGABYTE USB FLASH DRIVES

What's over 700 times the capacity of a floppy disk and also about one-tenth the size? A 1GB USB 2.0 Flash drive, of course. Removable USB Flash drives have been on the market for a few years now, but recently they've shot up in capacity even as the price has dropped sharply.

I recently had the chance to look at two new 1GB drives, one from Imation (<http://www.imation.com>) and the other from Iomega (<http://www.iomega.com>). Both drives are quite slim, and both feature attached swiveling caps that protect the USB connector when the drive isn't in use. More importantly, both are recognized automatically as removable drives by newer distributions of Linux.

Imation's USB 2.0 Swivel FlashDrive is about the size of a typical house key, with a protective cap that swivels to the side when the drive is in use and clicks down over the USB connector between uses. It comes with a lanyard and a USB extension cable. There's a write-protect tab at the end of the drive to make sure you don't accidentally erase important files. The drive is also available in 128MB, 256MB, and 512MB capacities, and Imation recently also has announced a 2GB version—impressive. The downside—at the time

of this writing the 1GB drive is a hefty \$289 US. Because the 2GB version is expected to debut at \$300 US, it's probable that the prices of the lower-capacity models will drop.

Physically, Iomega's Micro Mini is even smaller, with a body that's barely larger than the USB connector



itself. In fact, the protective cap can spin all the way around the drive. Each Micro Mini drive comes with three caps (orange, blue, and charcoal), a lanyard, and a USB extension cable. There aren't any bonus features here, 1GB of storage in an ultra-compact design. The price is right, though, at \$180 US. The Micro Mini is also available in 64MB, 128MB, 256MB, and 512MB capacities.

GOING MICRO WITH THE MUVO—MUVO MICRO N200

Creative: <http://www.nomadworld.com>

For those looking for a compact Flash memory-based MP3 player, Creative's MuVo line has long been attractive. The original MuVo was a small two-piece player that consisted of a battery module and a USB Flash drive that also had player controls. Stick the Flash drive into your computer's USB port and you could drag your digital audio files straight onto the player, as well as any other files that could fit (JPGs, documents, whatever). Slide the Flash drive into the battery pack and you had an MP3 player that ran on a single AAA battery.

The newest member of the MuVo line is the Micro N200, and it has shunned that two-piece design in favor of an even more compact form factor. Now, instead of a separate battery pack, the AAA battery goes right inside the drive, and instead of placing the USB connector on the end of the Flash drive, it requires a separate cable. This change is certain to disappoint people who loved the ability simply to remove the MuVo from the battery sleeve and plug it straight in to a USB port, sure. On the other hand, the smaller design will be a real plus for those

who need to travel light, whether it's for exercising or for smuggling into boring meetings. Because the player still is treated as a removable drive, you can load up your MP3s and move your files from computer to computer, whether you're using new versions of Linux, Mac, or Windows.

The player handles MP3 and WMA files, has an FM radio and a voice recorder built in, and even records the radio. It comes with a flexible clip-on case and a sports armband, but it's small enough that most users can tuck it into a shirt pocket. One really nice improvement with the Micro N200 is the headphones. They actually sound good this time around, so unless you're particular, you probably won't feel the need to buy a replacement set.

The MuVo Micro comes in eight fun colors, including white, pink, orange, red, lime green, light blue, dark blue, and basic black. It also comes in four different capacities to meet your budget: 128MB (\$99 US), 256MB (\$119 US), 512MB (\$129 US), and 1GB (\$199 US). ■



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*. While 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.

Bidwatcher

eBay is a popular auction portal that lets visitors search for used or new products at a reduced price and bid on those items. It also can be extremely addictive and time consuming. Because of the tremendous popularity of eBay, the site features, at any point in time, several millions of items, and it is quite tempting to bid away on several items and lose track of your bids.

Bidwatcher is a friendly little program that just might save you both time and money. It allows you to track eBay auctions, whether or not you are bidding on them. All you need to start using Bidwatcher is to grab the item number for the item you

| Number | Current Bid / BuyItNow | Time left | Bid | Description | Seller | Feedback |
|-------------|------------------------|----------------|-----|---|--------------|-------------|
| 4591419512 | Buy \$25.32(0) | Purchase only | | Python 2.1 8.0x9x6cm | negamedidpot | 4579 99.5% |
| 4720398082 | \$295.59(20) | Auction ended | | Apple iPod 20GB MP3 Player - 20 GB 3rd Gen. + 65MB | transy018 | 5 100.0% |
| 4217469125 | Buy \$295.00(0) | Purchase only | | AMD Athlon 64 3500+ 512K Cache 64bit socket 939 He | l1cb | 1283 99.5% |
| 45718194980 | \$112.50(18) | 2 hrs, 51 mins | | New 1024MB PC3200 480MHz DDR Row 1024MB PC3200 Mem | quallityrox | 8024 98.3% |
| 4500107174 | \$6.50(9) | 1 day, 0 hrs | | Design Patterns Cd by Erich Gamma, John Vlissides, vthuru | | 9 100% |
| 7110853854 | \$20.99(0) | 1 day, 1 hrs | | DB2 Universal Database SQL Developer's guide | hpcb-online | 52465 99.6% |
| 572624346 | \$55.00(8) | 2 days, 1 hrs | | Sharp Zaurus SL-C750 Handheld PDA | gioten1n | 91 97.9% |
| 4500763937 | \$0.00(1) | 4 days, 3 hrs | | Design Patterns Explained by Alan Shalloway, James | huettenrhop | 3 100% |

Bidwatcher Tracking Several eBay Auctions

want to track, enter it in Bidwatcher's input field, and the item is added to the list of items you are watching.

Additionally, Bidwatcher allows you to place a bid on an item directly from the program, synchronize the list of items you are watching with your eBay account, as well as to create snipes.

What in the world is a snipe, you ask? Sniping is an efficient way to tell Bidwatcher to place a bid on a particular

item a few seconds before the auction expires. This functionality potentially can save you a lot of money, especially if you are competing with a large number of bidders on an item.

The user interface is easy to use. The toolbar on the top part of the window allows you to access the preferences menu (this is where you need to provide your eBay account info), synchronize the program with eBay's official time, update all

About Bidwatcher:

- **License:** GNU General Public License (GPL)
- **Price:** Free
- **Home Page:** <http://bidwatcher.sf.net>

your bids, and add a new bid to your list.

All operations on individual bids are performed by holding the right button of your mouse on an item, which opens up a new context menu for that item. This menu allows you to place a bid, create or cancel a snipe, display information about an item, or simply open a browser window on the eBay listing for that item. ■

—Xavier Spreti

Kivio

An interesting member of the KOffice family of products is Kivio. Kivio is a flow-charting application that allows you to create all kinds of diagrams and flow charts. The purpose of this kind of diagram is to express an idea or a process in a logical and professional layout.

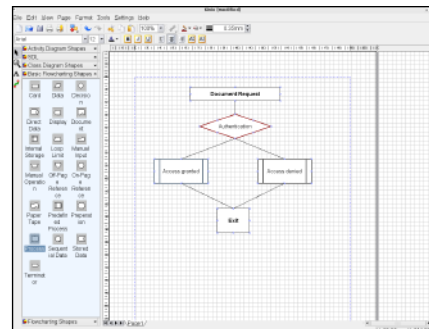
Kivio ships with a fair amount of stencils, which you can use while creating your diagrams, but it also has the ability to import stencil sets from Dia, another popular diagramming application. Additionally, you can find more stencils on the Net or purchase specific



Kivio's Stencil Categories

stencils sets from theKompany.

Creating diagrams with Kivio is trivial. Objects, by default, snap to the grid in a non-intrusive way, allowing you to lay out elements professionally, and the text style for the content inside any object can be modified in any way, which gives you even more control over



Basic Flow Chart in Kivio

the visual aspect of your flow charts and diagrams.

The Kivio Handbook provides an extensive amount of documentation on how to work with the application, and

the configuration dialog allows you to change a few aspects of Kivio's behavior.

You cannot export a Kivio diagram as a Dia diagram because only the Kivio-specific formats are supported for import and export. One alternative is to take a screenshot realizing that the result will be a bitmap rather than the line drawing format that Kivio offers.

Kivio is tightly integrated into the KOffice suite, which makes it easy to use Kivio objects and diagrams inside any KOffice document. You simply create a new Kivio frame within a KWord document and create your flow chart directly inside your document. ■

—Xavier Spreti

KWord

Many times you don't need the advanced features of a word processor such as found in the OpenOffice.org suite. That is, something less complicated with the side benefit of starting very fast better fits your needs. KWord is an example of a well designed and quite intelligent word processing program that is reliable, user-friendly, and surprisingly fast.

The most obvious issue any KWord user will encounter is the fact that its MS-Word filter does not support export. This means you cannot save a document in MS-Word format. Fortunately, KWord makes up for this problem in several key areas.

KWord Is Fast

Although it cannot export to MS-Word format, KWord has no problem opening a Word document, and it does so very fast. So fast, that I actually have set up my e-mail client to open all word files with KWord by default. Documents are opened and rendered on your screen in the blink of an eye.

KWord Is Intelligent

KWord features an impressive Auto-correction module that allows you to specify how you

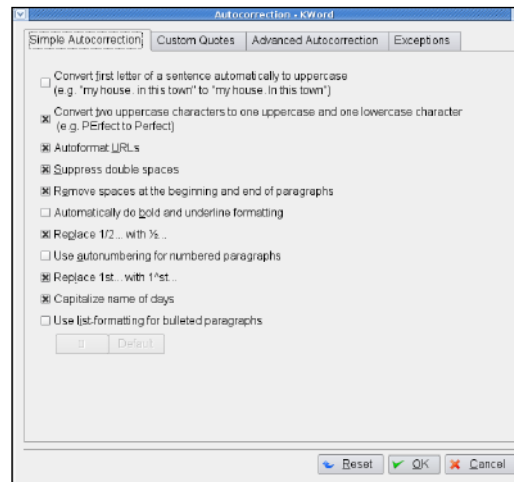
want KWord to behave. This has the benefit of being non-intrusive, because you tell the application what it should correct for you, yet practical, as most common typing errors can be corrected automatically. For example, KWord can convert any word that has the two first letters in uppercase, to having only the first letter in uppercase (for example, THIS replaced by This). It also capitalizes names of days (and because KWord is fully internationalized, it recognizes names of days in your language too), suppresses double-spaces, and has a list of the most common typos and useful corrections for your language.

KWord Is Intuitive

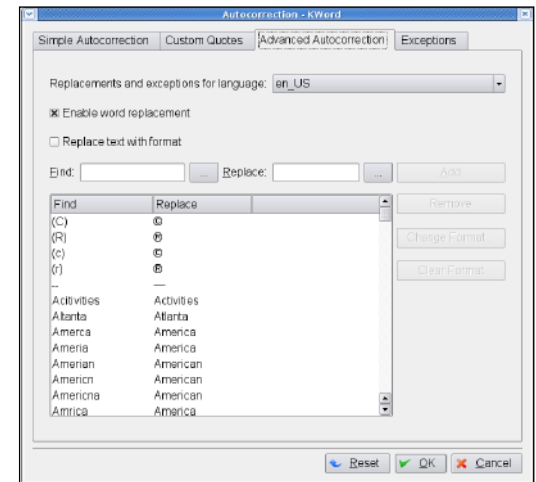
The main user-interface window of KWord is simple to use. The toolbar is not overly filled with advanced alignments and object manipulation buttons, and the formatting bar

focuses on the most common formatting operations (font changes, borders, standard alignment, colors, and so on). This makes creating new documents a breeze, and because I mostly export my documents to PDF instead of MS-Word, I have no problem authoring and distributing documents created with KWord.■

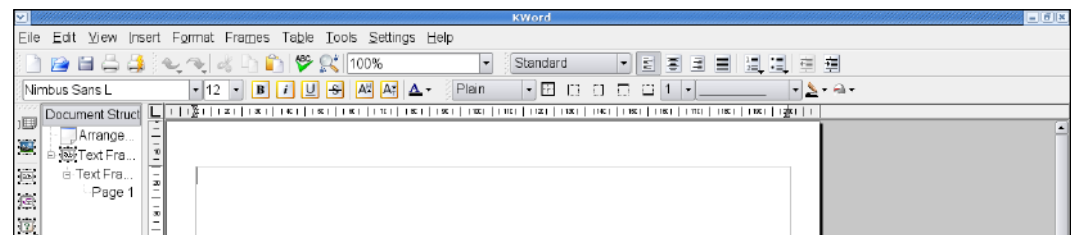
—Xavier Spriet



KWord's Simple Auto-Correction Settings



KWord's Advanced Auto-Correction Settings



KWord's Main Window

About KWord:

- **License:** GNU General Public License (GPL)
- **Price:** Free
- **Home Page:** <http://www.koffice.org/kword>
- KWord is distributed as part of the KOffice suite of products.

TUX is the first and only magazine for the new Linux user. In each digital edition of **TUX**, we explore every facet of the modern Linux desktop, providing a new breed of Linux user with the tools and information to make their Linux desktop experience complete.

A new breed of Linux user has emerged, the Linux consumer. **TUX** delivers to this powerful and rapidly growing economic force by offering many advertising opportunities for both its digital edition and its web site.

UPCOMING ISSUES INCLUDE:

May 2005

The HOME ENTERTAINMENT Issue
Welcome to your Linux home entertainment center. Use your PC to watch TV, record programs, and more. This month, **TUX** looks at MythTV, Freevo, and other personal video recorders (PVRs). We'll also take a few Jukebox servers out for a spin so you can play music anywhere in your house from the comfort of your PC. And did we mention radio? Movies, music, and more, in the May 2005 issue of **TUX**.

June 2005

The LIVING WITH WINDOWS Issue
Is yours a house (or office) divided? With Linux PCs here and Windows PCs there? In the June 2005 issue, **TUX** shows you all you need to know to share files and folders between these different systems. We'll also look at tools that make running Windows on Linux (and vice versa) easy.

July 2005

The MONEY Issue

If money makes the world go 'round, this is a well rounded issue of **TUX** as we explore financial applications in the Linux world. We'll cover home finance programs that provide simple cheque book functions as well as those that do it all. Join us as we explore expense trackers, stock tickers, and business-ready accounting software. Ka-Ching!

August 2005

The EDUCATION Issue

TUX goes back to school in the August 2005 issue. Linux systems are a great solution for cash strapped schools, but they offer much more than inexpensive, stable, and secure systems. Kids will find software to challenge their minds and have fun doing it. From Linux at school, to educational programs, to educational games, it's Linux for kids of all ages.

September 2005

The SWITCH Issue

Finally, it's time to help those in need. Yes, we're talking about people running something other than Linux—those poor unfortunate souls who deal with adware, spyware, and system crashes every day of their lives. **TUX** will look at great Linux business tools, live Linux CDs (to introduce your friends and family), and transitional applications (Linux programs that are available for Windows) so that even if they continue to run something else, they can at least get some of the benefits of Linux.

October 2005

The LINUX AUTOMATION Issue

Whatever happened to computers making our lives easier and giving us more free time? Maybe it's because they weren't running Linux. This October 2005, **TUX** will show you how to put your Linux system to work while you sleep! Let Linux take care of

business and watch over things while you tend to other, more important things. In this issue, **TUX** will look at home security, webcams and video surveillance, maybe even a robot or two.

November 2005

The PERSONAL COMMUNICATIONS Issue

As the end of 2005 approaches, talk is hot again and Linux makes it easy. The year 2000 has come and gone, but picture phones are finally here, instant messaging is everywhere, free long distance is a reality, and everybody is reaching out and touching somebody somewhere. Get into the instant messaging, Voice Over IP, text messaging, and just plain talking action in the November 2005 issue of **TUX**.

The image shows the cover of the TUX magazine and a screenshot of its website. The magazine cover features the title 'TUX' in large letters, with a small illustration of a penguin. Below the title, it says 'THE FIRST AND ONLY MAGAZINE FOR THE NEW LINUX USER!'. The main headline on the cover is 'MAKE YOUR LIFE EASIER' in large, bold letters. Below this, there are several sub-headlines: 'YOU'RE NOT SUPPOSED TO BE ABOUT MAKING YOUR COMPUTER WORK, IT SHOULD BE ABOUT SOLVING YOUR COMPUTER PROBLEMS FOR YOU!', 'PLUGS! WHY? HERE'S WHY!', 'HOW TO GET THE MOST OUT OF YOUR LINUX SYSTEM', 'HOW TO GET THE MOST OUT OF YOUR LINUX SYSTEM', 'HOW TO GET THE MOST OUT OF YOUR LINUX SYSTEM', 'HOW TO GET THE MOST OUT OF YOUR LINUX SYSTEM'. The website screenshot shows the same 'TUX' logo and a navigation menu with options like 'Home', 'About', 'Contact', 'Subscribe', and 'Advertise'. There are also several articles listed on the website, including 'Managing the Digital Photo Album with digiKam', 'Listen to the Music with Foobar', and 'Get the Most Out of Your Linux System'.

Contact the **TUX** team today to have a media kit sent to you. E-mail ads@tuxmagazine.com or call 206-782-7733 ext.4