

The **NEW** PCLinuxOS Magazine

Volume 30

July, 2009

MiniMe 2009 and
PCLinuxOS 2009.2

The Phoenix Master

Graphic File
Formats

Forum Foibles

Stand By The Man

Using AT&T's Newest
3G Modem With MiniMe
and 2009.1

Scripts-R-Us

Double Take

The Simplest Way
To Rip Audio CDs

Through The Lens

Deep From Within The Blogosphere

Update-notifier

Community Packaging



Table of Contents

<i>Message from the Interim Chief Editor</i>	
<i>The Phoenix Master</i>	1
<i>apturl</i>	2
<i>MiniMe 2009 and PCLinuxOS 2009.2</i>	3
<i>The Simplest Way To Rip Audio CDs</i>	6
<i>Forum Foibles</i>	8
<i>Deep From Within The Blogosphere</i>	9
<i>Testimonial: ex-Windows Convert</i>	11
<i>Community Packaging</i>	12
<i>Update-notifier</i>	13
<i>Georgetoon at PCLinuxOS</i>	15
<i>Using AT&T's Newest 3G Modem With MiniMe and 2009.1</i>	16
<i>PCLinuxOS Gnome</i>	20
<i>ms_meme's little nook</i>	21
<i>The Phoenix Has Risen</i>	21
<i>Through the Lens</i>	22
<i>Scripts-R-Us</i>	26
<i>Testimonial: Keeping my 10-year-old laptop alive and running</i>	33
<i>Graphic File Formats Comparison</i>	34
<i>Disclaimer</i>	



Message from the Interim Chief Editor

Hello PCLinuxOS user,

It's been three years when the idea of PCLinuxOS Magazine was first discussed among a few volunteers over at MyPCLinuxOS. And after three years, it had its share of ups and downs but it held on tight for the wild and crazy ride.

The magazine was loved and shunned; it was longed for and then forgotten. It had its faithful followers and one-time dealers. It was even declared dead but really, it is alive and kicking.

PCLinuxOS Magazine is once again resurfacing from its slumber to bring The Monthly Editions back to you, our beloved readers. We have reorganized our team, and I take great pleasure, as this month's interim chief editor, to introduce to you to PCLinuxOS Magazine's **new Chief Editor, Paul Arnote (aka parnote)**.

In this issue, we have the rise of another project from its ashes, the XFCE Phoenix. We also have contributors who will be writing for our magazine on a regular basis. Check out the Forum Foibles and other new columns such as the Packagers' Portal, Flashback, the Command Line Corner, and many more.

Stay with us from page one through to the last page, and tell us what you think of the NEW PCLinuxOS Magazine. And if you want to just see what's going on in the preparation of each monthly, join us on our **mailing list**. But most of all, don't forget to visit our **website**.

See you next month.



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The NEW PCLinuxOS Magazine is a monthly online publication that is primarily published for the members of the PCLinuxOS community. It is comprised of volunteers from the PCLinuxOS community and PCLinuxOS users who are dedicating time and effort into putting together a monthly online publication containing PCLinuxOS-related articles and materials.

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<http://www.pclosmag.com>

This release was made possible by the following volunteers:

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Kori is one of the newest PCLinuxOS Global Moderators on the PCLinuxOS Support Forum. He is also an Administrator at MyPCLinuxOS as well as project lead of the PCLinuxOS Beautification 2009 Onwards Project.

He exchanged emails with **Andrew Strick** about the PCLinuxOS XFCE, the Phoenix Edition.

How long have you been using a Linux operating system? If any, what Linux distributions have you tried? How can you best compare these other Linux to PCLinuxOS?

I have been using Linux Exclusively about 18 months now. Prior to that I have tried several different Linux distributions. My first taste of Linux was Mandrake 7 but I couldn't get it to connect to dial-up AOL so i binned it. Since then, I have used Suse, Fedora, Mepis and even the rounds with the Buntus. I had previously tried PCLinuxOS but it would never work with my hardware until the 2007 release. And that was it. Once it installed, everything else went. I no longer use Windows on my PC. I do have it in VM. I still have the NTFS drives but I guess until i can actually move that data to another storage, they will stay NTFS for now.

What has made me love PCLinuxOS and stick with it was I didn't have to do anything. Things was already done and were even better than windows. I didnt have to configure a single thing which meant I was able to get on and start using it as a workhorse instead having to repair it all the time like a lame donkey.

It has made my computing life a pleasure just to be able to just get on with things instead of being held back by a super slow machine.

Tell us a little bit about yourself.

My name is Kori I turned 35 last March. I am married and i have been with my wife for 17 years - married for 12. We have 3 beautiful babies although they are growing up fast and hate me calling them my babies. I live on a De-commissioned RAF base, in a little village about 40 minutes north of London.

I work in a software house producing software for schools and Government. I don't really enjoy the work but it pays the bills. I'd much rather be playing with my PCLinuxOS at home. My job is a software support analyst supporting the B2B processes between the schools and the government.

I have always been an artist. I used to be a mad Windows themer and was for many many years. Now, I have found my way to Linux and themeing PCLinuxOS. It is great because it is easy and making artwork is what I enjoy in life. So putting them both together has been a harmonious union. Now my computing life consists of working on my PC instead of the occasional email and playing games.

What made you decide to do an XFCE remaster of PCLinuxOS?

Why did I choose XFCE? I didn't. I was talked

into it by a few people. With the previous XFCE version of PCLinuxOS moving to another base, I realised that the XFCE version would be warmly welcomed. So Phoenix was born; rising from the ashes of being abandoned. I have managed to breath new life into a dead bird.

What has been the most enjoyable part of working on the Phoenix?

Reading back positive posts about what has been created. As an artist, I like creating things and this has been a challenge. And my fruits are showing in how people are responding to the final output.

What has been the most difficult/least enjoyable part of working on Phoenix?

It had to be changing the theme. It was very hard at times to decipher it's code but i am slowly doing it.

What advice would you give to someone who is thinking about doing their own remaster?

Prepare. I was not prepared for this. I would have loved to have had an understanding of what I was about to create. Other than that I enjoyed the ride.

What's your favorite desktop environment?

Well, I have only really used KDE and Gnome. and to me KDE wins hands down but to ask me what my favorite desktop environment is, well, ii is fast becoming XFCE. It is light, it is fast and like her Big Brother, she just works.

apturl is a simple graphical application (a web-based tool) that installs applications on the PCLinuxOS distribution. apturl can retrieve information about a PCLinuxOS packages from official repositories accessible on Firefox and other Mozilla browsers.

On the PCLinuxOS Appstore, it is called Click2Install and this frees a user from installing packages via Synaptic or via the konsole, using apt-get commands. It brings PCLinuxOS closer to top Linux distributions offering installations of their packages through a web browser. Ubuntu's Appnr and Xandros' Click-n-Run (without the costs) comes close to mind.

"What is cool is it will only install what is in the repository so it is safe. The other thing is it will come in handy on the forum when you need to tell someone to install something you can just embed the link into the message with apturl://name-of-package and it will install it right from the forum or any webpage," Texstar quoted on a post on the PCLinuxOS Developers mailing list.

His call for a community project rallied several of our active community developers, namely Neal Brooks and Travis N. just to name a few.

The project is still under heavy development with the Appstore front opening for business.

MiniMe 2009 and PCLinuxOS 2009.2

PCLinuxOS MiniMe 2009 can be best described as a barebones installation of an updated PCLinuxOS 2009.2. MiniMe is mostly used by users who want to populate PCLinuxOS with their favorite applications, building it from the bottom up.

Linuxera did 99% of the work in MiniMe 2009.

Here are screenshots from a VMware virtual machine:



from top-clockwise: The GRUB Bootloader. Bootsplash. KDM

Download new PCLinuxOS releases from the following mirrors:

- <http://ftp.heanet.ie/pub/pclinuxos/live-cd/english/preview/>
- <ftp://ftp.belnet.be/pub/mirror/pclinuxonline.com/live-cd/english/preview/>
- <ftp://ftp.ch.debian.org/mirror/pclinuxos/live-cd/english/preview/>
- <http://ftp.sh.cvut.cz/MIRRORS/pclinuxos/live-cd/english/preview/>
- ... more download links on [page 5](#).



from right-clockwise: KSplash. The PCLinuxOS MiniMe 2009 Desktop. VMware session, KShutdown.



MiniMe 2009 and PCLinuxOS 2009.2

PCLinuxOS 2009.2 is the product of Neal Brook's lead on the Quarterly Updates. It is basically PCLinuxOS 2009.1 complete with the latest updates and artwork.

Here are a few screenshots:

from right-clockwise: The GRUB Bootloader. Bootsplash. KDM Login Manager, and the Desktop.



Download new PCLinuxOS release from the these mirrors:
<http://ftp.nl.freebsd.org/os/Linux/distr/texstar/pclinuxos/live-cd/english/preview/>
<ftp://ftp.pbone.net/pub/pclinuxos/live-cd/english/preview/>
<http://mirrors.lastdot.org:1280/pclos/live-cd/english/preview/>
<http://ftp.leg.uct.ac.za/pub/linux/pclinuxos/live-cd/english/preview/>
<ftp://mirror.internode.on.net/pub/pclinuxos/live-cd/english/preview/>
 ... more download links on [page 3](#).

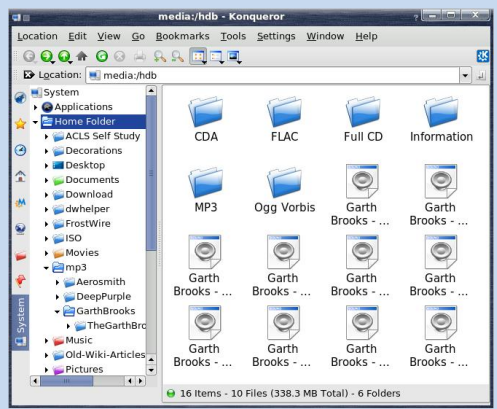
The Simplest Way To Rip Audio CDs

Updated by Paul Arnote
 Based on the original article by lakicsv in the January 2007 PCLinuxOS Magazine

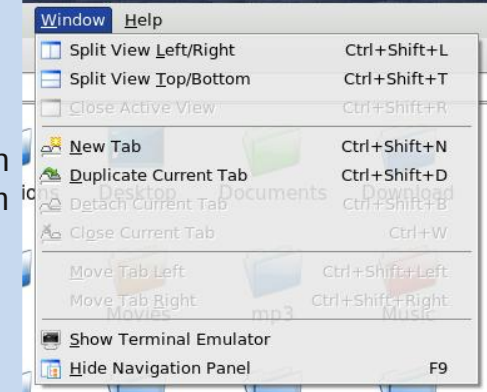
There are plenty of programs to choose from in the PCLinuxOS repositories to rip audio CDs to MP3, OGG, WAV, or FLAC files. However, probably one of the easiest programs to use is something that you have looked at daily while using PCLinuxOS ... Konqueror.

Yes, you heard me right. Konqueror. That very same program with a serious identity problem. Now you can add ripping audio CDs to its bag of tricks. (This is also reported to work in Dolphin exactly the same way.)

When you first insert your audio CD in the CD/DVD drive, all you need to do is to choose "Open in a New Window." Alternatively, you can simply type audiocd:/ on Konqueror's Location bar. Now you will see the CDs "files" in Konqueror's right pane. The folders and icons represent a psuedo-file system, indicative of the audio codecs installed on your system.



To rip the cd tracks, simply open the folder representing the audio codec you want to use, and copy them to a folder in your /home directory or to your desktop. Konqueror will encode the files "on the fly." The files in the psuedo-file system that aren't in a folder are WAV files. Just copy them!



You could open two separate Konqueror windows and drag the files between them. Or, you could make it even easier on yourself, and select a "Split View" from Konqueror's Window menu. You can choose to split the view left and right, or top and bottom; it's your choice. Make one pane of the split view contain the contents of the audio CD, and the other view of the folder to where you want to copy the sound files. Now, you just have to drag the files between the panes, working only in one window (instead of dragging the files between two windows). The split view will stay active until you select "Close Active View" from the menu.

If you like to use the "Split View" and think that you will use it often, you can add buttons to Konqueror's main tool bar. Simply right click your mouse cursor on an empty spot on the tool bar, and select "Configure Toolbars ...". In the left pane of the dialog box, scroll down until you find the "Split View Left|Right", "Split View Top|Bottom", and "Close Active View" buttons, and add them to the right pane of the dialog

box. Now you can access the split view functions with only a mouse click from Konqueror's main toolbar.

You can even save that configuration for future use. Under the "Settings" menu, you can select "Save View Profile "File Management"..." Give it a name like "CD Audio" and select the "Save" button in the dialog. To use it in the future, just select "Load View Profile," and select it from the list. The added advantage to this is that you can select right click on any of your panels and select "Add Applet." Scroll down the list until you find "Konqueror Profiles," and select it. Now, all your Konqueror "View Profiles" are only a mouse-click away.

If you want WAV, OGG or FLAC files, you don't need to do anything else. But, if you want to rip MP3 files, you will have some extra work to do to get them to come out right. Due to a "bug" that crept into KDE 3.5.10, MP3s do not encode properly. Without the "fix," all your MP3s will be nothing more than static-filled white noise.

All the following steps must be performed as a root user. So, remember: exercise extra care when working as the root user, or risk damaging your system!

First, open up Konqueror File Manger – Super User Mode. Traverse your way to the /usr/bin directory. Find the executable file named "lame." Rename it to "lame-actual" (without the quotes). Then, open up a text editor (Kwrite works well), and create the following script file:

```
#!/usr/bin/sh
lame-actual --big-endian -x "$@"
```

Save the script file with the name "lame" (again, without the quotes) in the /usr/bin directory. Right-click on the script file, select Properties, and under the Permissions tab, check the box marked "Is executable." At this point, you can now exit the Konqueror File Manager – Super User Mode.

Here is how it works (you can skip this part if it messes with your head. It is for those who want to know the nuts-and-bolts of what is going on). When "lame" is called, the script is run, which in turn runs the real "lame" file (which we renamed "lame-actual"). We tell "lame-actual" to run in "big-endian" mode (the x86 architecture reads MP3 files as "little-endian"). The "-x" tells "big-endian" to reverse the byte order, which effectively gives us a "little-endian" encoded file.

With this change, your MP3 files will now come out perfect, and as far as I can tell, this "fix" has no adverse effects on any other CD ripper. You can make additional settings for your MP3 files in the KDE Control Center. Go to the "Sound & Multimedia" section, then "Audio CDs." At the top of the right hand pane should be a tab labeled "MP3." Click on that tab, and you can make all of your MP3 settings that you wish to use.

I never knew how easy it could be to rip audio CDs into digital sound files until I read the original article in the January 2007 PCLinuxOS magazine. Not that it was ever hard to start with, given all the choices a user is given with all the different programs in the PCLinuxOS repository. But now, there's an easy way using a tool that the vast majority of us use on a daily basis.

Did you notice there's a new forum member named **gregholg**? Seems he's a bit of the frog-faced **YoYo** that has trouble deciding on a desktop. He's posted pictures of at least ten great desktops, and then I stopped counting.

Bona has a terrific signature: **BE HAPPY: Linuxers are coming.**

And just to prove **Bona's** right **grnich**, **Archie**, **ambertone**, **trustytrev**, **PaulW** and **kallethen** have all been a braggin' that their kids or grandkids age 8 and under are already Linux Pros. Takes one to know one!

Over heard in topic, **Switched from Ubuntu: PCLinuxOS 2009 is GREAT!!!!**

sammy2fish: "We all must seemingly stray at times"

Not ten lines later.

sammy2fish: "It is too much like home."

Something fishy here. Would you mind repeating that, **sammy2fish**?

A quick look at his profile....male over 40.

Guilty until proven innocent!

Fish stimulates the brain, but fishing stimulates the imagination. Thomas Dewar

Then there's **maddogf16** trying to make connections.

maddogf16: "just for fun....."

Did you vote in **maddogf16's** Sandbox poll, **Connection Speeds**?

Seems he started the thread and never returned. Must of not been any fun.

We are still waiting. How much longer do we have to wait?

On May 21, 2009, 03:42:42 AM, **exwintech** admitted: **I Just Need to Say Something.....** I checked it and I checked it twice looking for something naughty or nice.

exwintech, if you got something naughty to say, you don't need a forum. Get thee to the confessional!

F.Luent in Sandbox:

"When my doctor tells me to cut back on beer, I'll know it's time to find a new doctor."

Lots of forum folks looking for a new doctor.

Take **ms_meme's** sobriety test: Count the number of times the word 'beer' has been used in the forum.

Deep From Within The Blogosphere

We bring you a recent run-in between a Big Bear and a Texas Penguin.

After I tied up “Dusty”, my trusty mustang at the rail I squinted one last time into the evening sun while I shook the dust off. I walked in to the saloon, looking for something to clear the dust from my throat.

I moseyed up to the bar and ordered a grasshopper sarsaparilla . Same color of Windex and leaves your guts streak free. As I pulled out the cash for the barkeep, someone leaned over from beside me and said, "I got this one."

Imagine my surprise when I looked up and saw the one and only Texstar, the fastest dev in the West, buying me a soda.

I couldn't stay long, and neither could he. In the short time while we cooled our heels though, I remembered what we said, and I wrote it all down for you folks.

Q: You have at times been known to pop in to IRC channels, the forums and even responded to emails . Do you have a favorite method of communicating with people? Are you a user of Instant Messaging perhaps? Twitter?

I communicate on IRC, forums, email and mailing lists .

(He didn't comment on the Twitter issue and I didn't push him on it what with that impressive looking wireless mouse hanging from his belt.)

2You created a distro that is based on KDE, obviously, one might take from that you are a KDE fan. Do you like to use any of the other DEs or WMs on a regular basis at all or do you petty much stick with KDE most or all the time?

I use KDE most of the time on my desktop. I use LXDE on my ancient laptop. I do like the Gnome version that Ken and Don did for PCLinuxOS Gnome 2009.1.

Going back to KDE, you have commented in other places that if the day comes that KDE 4.x shows itself to be 'stable' to you, it will make it into PCLOS, Do you see the progress of KDE moving at a good pace or do you see them still floundering in too many key areas to see daylight anytime soon?

KDE 4.2.2 is pretty stable. KDE 4 for PCLinuxOS is being worked on and the KDE4 folder is getting populated. I ran into a problem building it with our old compiler. I hope we can get over that hurdle and finish out the packages soon.

(Of course he's been working on KDE 4.2. Did you really think the KDE Kid would leave it behind for long?)

What did you think of Tuz, the stand in (temporary as it may be) for Tux? Will it really make a discernible impact to the awareness they say they used it for?

I don't know. I'm 100% all penguin myself.

(This is true. As a matter of fact, he was in town on a penguin drive at the time, another reason he couldn't stay long. Them penguins are something else to keep in one place for very long.)

The Linux community is often seen as 'galvanized' into the "Stallman/purist" camp and the "Linus/go with what's working" camp. As you include some 'non-free' apps in the PCLinuxOS release, does that put you more to the Linus camp or do you really pay attention to either of them?

I just pay attention to the PCLinuxOS users and try to make available what they want within reason.

(You mean to tell me there actually are Linux devs who pay attention to the users and not popularity polls?)

You include apt4rpm and synaptic on an rpm-based distro. While I personally find it a terrific notion, do you find that it complicates development issues or does it have any impact at all?

It doesn't complicate development issues at this time. There will come a time when we will have to look at something else as Synaptic is no longer being developed for RPMs.

(No more apt4rpm? That just isn't right. Apt4 dev team, get your butts back on task or we'll stake you down in front of a penguin stampede.)

If people have paid any attention to your posts in the PCLinuxOS forum, they will notice you like to

dabble in experimenting with other distros as much as any Linux Hacker, Outside of PCLinuxOS, is there any distro that's really catching your eye lately?

I found Klinux Linux fun to play with.

Is it true you hate bears? Was it something Yogi did when you were a young'un? Perhaps Smokey frightened you in one of his more 'serious' commercials?

I love bears.

(When he said this, he got this look about him that suggested he was thinking "honey-glazed or barbecued. I changed the topic quickly.)

With the new slew of file systems coming out, do you foresee PCLinuxOS experimenting with ext4 or any other as a default for future releases?

Ext4 is supposed to go stable in an upcoming kernel release. I suspect we will move to it when we do our rebase towards the summer/fall of the year.

If Mandriva were to bellyflop tonight. Where would you first look to rebase PCLinuxOS on, or would you give a whack at rebuilding and updating the base you are on now?

We will rebase on our existing platform. We need to get updated gcc/glibc and then start updating and rebuilding all of our packages.

With that, he clapped me the back and swigged down the last of his own Grasshopper Sarsaparilla.

"Them penguins won't wait all day." he said with a grin and walked out through the swinging doors and onto the next town.

One thing about traveling in Linux Land, you just never know who you'll end up standing next to in any given saloon or massage parlor you happen to step into.

Testimonial: ex-Windows Convert

by demag, May 24, 2009

After years of using (and hating) Mr Gates' products I am now free! Every new version of Windows brought more and more problems with it, from old programs that wouldn't run, the infamous BSOD, slower and slower boot and shutdown times. The list is never ending.

I had played around with Linux for a few years and had tried a few distro's like Mepis, Puppy, Fedora and others. Much as I liked them, they all seemed to have their own little problems and I never really thought "yes, this is the one!"



Then earlier this year when Internet Explorer had once again slowed to an absolute crawl I decided that I had to seriously do something to rid myself of the problem. I looked around and read various reviews for a few weeks and installed Fedora 9 on a backup PC I had. It was OK and probably the best distro I had used at the time but it still didn't have that spark I was looking for.

Then reading more reviews, I noticed one about PCLinuxOS and its suitability for migrating Windows users. I had already downloaded the 2007.1 ISO last year and decided to bite the bullet and try it. After installing it on my PC, I knew straight away that I liked the format of it but I was having graphics problems and asked on the forum for help. Eventually I was advised to download 2009.1 iso and as soon as I did all the problems vanished.

I am indebted to all the hard working people on here as I now know I will be using PCLOS for a long time to come. This distro is what I have been looking for all these years!

Community Packaging

by Neal Brooks

Have you noticed something different, while perusing the PCLinuxOS forums? Perhaps it was the **Packagers** area of the forum. You haven't seen it yet? From the forum home page scroll down almost to the bottom of the page and have a look. It is right there in the section called **Developers Corner**. This is the place where some of the magic of our distro happens.

PCLinuxOS is a community distro. It should come as no surprise then that there are community packagers. These packages are all members of the community. They are people you know. Go ahead. Have a look. Read through some of the threads. You'll see several things going on there - a strong sense of community, a giving of time and effort, a sharing of knowledge and a willingness to learn. Do you see more? Good! Yes, they're open. Open as in "Open Source." This is packaging done by the people of the community for the people of the community.

So how open is this community of packagers? Could you get involved? First off, they are right there; before your eyes they are packaging RPMs. Second, if you have an interest in packaging and are willing to learn, it is as easy as it can be.

To start off, go to the **Packagers** area and read the stickied topics. You'll find the links for reading online or downloading the RPM tutorial, tips to get you started

and more information that will bring you up to speed. Next, read through some more of the threads on various packages. Pay careful attention to the problems posted and the solutions found; learn from the experience of other packagers. Check out Texstar's tips on packaging in the **Living Wiki** at MyPCLinuxOS. This will get you well on your way to becoming a packager.

Now that you're ready to start, go to the **Package Suggest** area and choose a package to get started with. Look for something simple and easy. If your first choice seems too difficult, try another. Until you are sure you can package the application, it would be best not to respond to the suggest thread. Don't worry about someone else doing it. For now, you are practicing. If you are successful at creating the RPM, go to the **Packagers** area and start a thread about it. Use a title like "Name-of-App Ready for testing." If you are running into problems creating the RPM, you can start a topic on it and get some helpful input from others. Be sure to be as complete as possible in reporting any errors and other information.

Those are the steps necessary to become a community packager. Enjoy packaging for yourself and others.



Update-notifier

by Paul Arnote

One of the more recent and most talked about additions to the PCLinuxOS repositories is the **update-notifier**. It is similar in function to update notifiers in other Linux distros, and automatically alerts a user of the availability of updates right on the PCLinuxOS desktop.

Now, instead of opening up Synaptic, hitting Reload, then clicking Mark All Updates, update-notifier does it all automatically, at boot, and every 6 hours thereafter. When you first install update-notifier, you will have to start the program manually. Go to the PC Menu > System > Configuration > Packaging and select update-notifier. Now, every time you boot your computer, update-notifier will automatically start when you boot your computer.



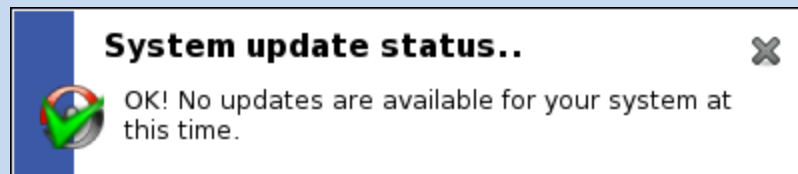
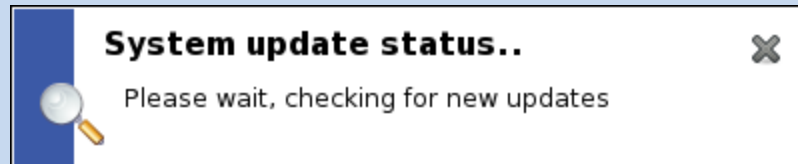
The icon on the right indicates that updates are available.



The icon on the right indicates that your system is up-to-date.

Update-notifier was the brainchild of Maik3531, along with the joint efforts of the PCLinuxOS community. Contributions were solicited and made by quite a number of members of the PCLinuxOS Packager's forum and Software forum. Update-notifier truly is a

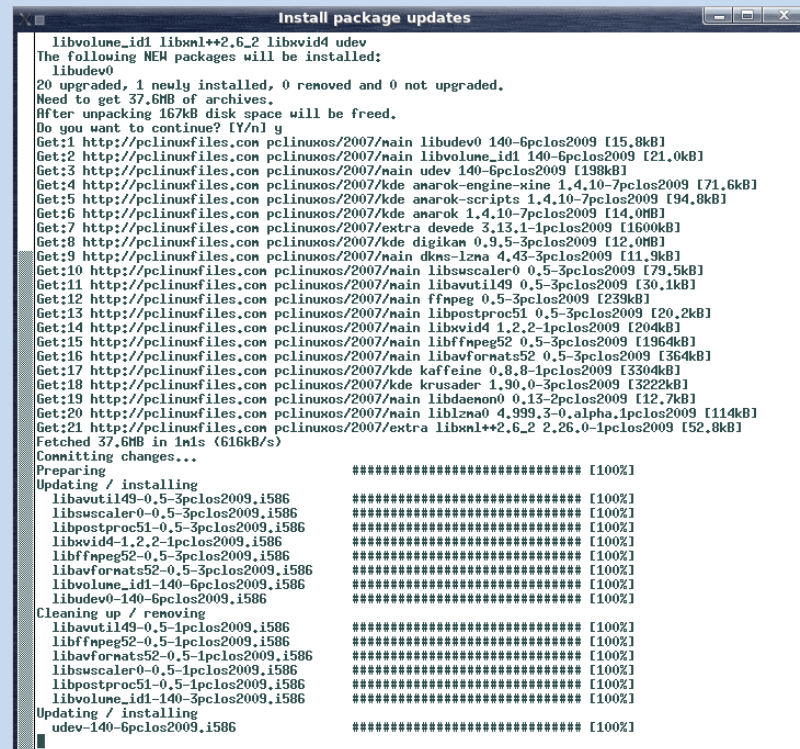
product of the PCLinuxOS community. Forum members Neal, old-polack, texstar, jrd, travisn000, Joble, pinoc, DutchWolfie, Leiche, musonio, JohnBoy, lucas, and melodie were all openly involved in the forums to help bring update-notifier to your desktop.



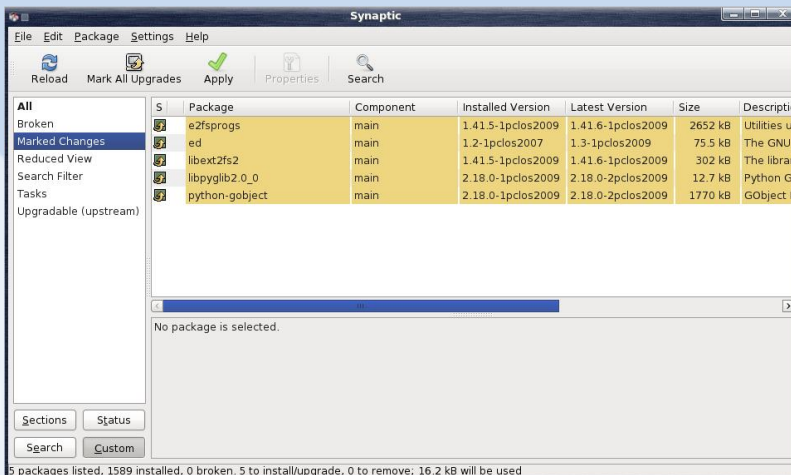
Update-notifier looks for updates to your currently installed packages and alerts you when updates exist for those packages. You can then choose when to install those updates, simply by clicking on the update-notifier icon that resides in the "system tray" section of your main panel. Update-notifier gives you different options about how to update. You can choose to update via Synaptic, or via apt get in a terminal window. It's your choice. You can also choose to see a list of the packages that are scheduled to be updated, so you can determine for yourself how important the scheduled updates are for your system. Update-notifier uses your current sources.list, thus it also uses your currently selected repository that you would normally use in Synaptic.



Update-notifier's selection dialog



Update-notifier using apt-get

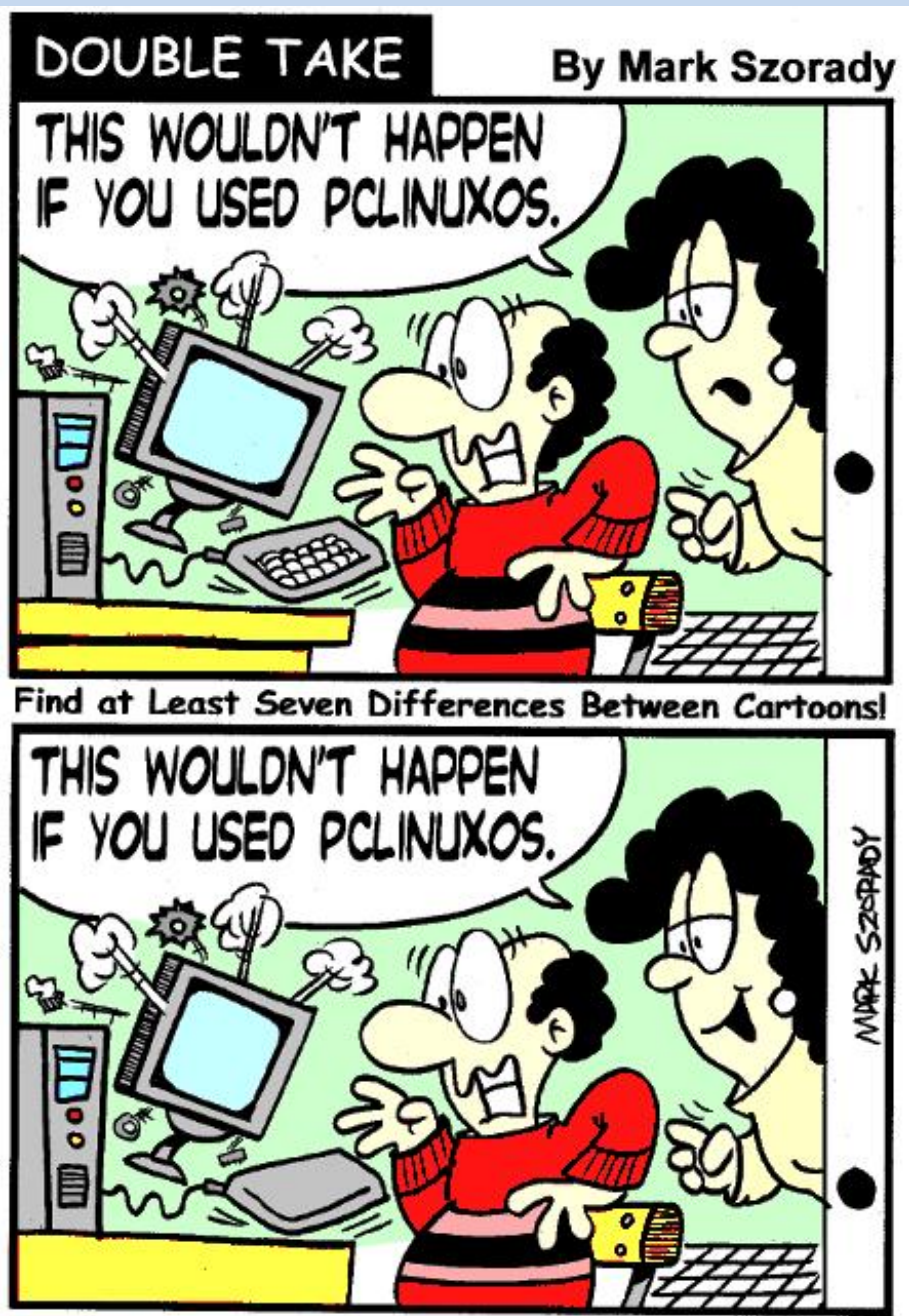


Update-notifier using Synaptic

What update-notifier does not do for you is tell you what packages are new to your system; that is, it only looks at what you already have installed on your system and offers up those particular updates, if available. To see what's "New In The Repositories," you will still have to open Synaptic, click "Reload," followed by "Mark All Updates." Then, you go looking for those new packages just as you've always done.

Answers to Mark Szorady's Double Take: (1) Woman smiling; (2) Doorknob lower; (3) Man's hair shorter; (4) Shirt stripes different; (5) Monitor smaller; (6) Key missing from keyboard; (7) Table different

Georgetoon at PCLinuxOS



Find at Least Seven Differences Between Cartoons!

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Mark Szorady has drawn his George comic strip for 20 years! It started as a very popular college comic strip feature with the Ohio State Lantern newspaper. After graduation, and drawing the strip five days a week for nearly four years, Mark spent time refining George and all its characters. In 1990, George entered weekly syndication with King Features. After nine solid years at King, Mark moved George to the prestigious DBR Media syndicate!

In 2008, Mark moved George and all his comic creations to georgetoon.com.

Mark also draws Double Take, Word Pile, and George's Word Ladder. And he exclusively created his newest feature, I Knew That! for georgetoon.com. I Knew That! is a fun trivia feature. The hook is, this is trivia EVERYONE should know. Hence the name, I Knew That! Like George, I Knew That! and all of Mark's features are sure to entertain readers of all ages!

Georgetoon.com syndicates the cartoon features of Mark Szorady and Polly Keener.

Email Mark at georgetoon@yahoo.com

Answers are at the end of the Repo Spotlight article, Update-notifier, on page 14.

Using AT&T's Newest 3G Modem with PCLinuxOS Minime and 2009.1

by Galen Seaman

My wife and I like to go to the Washington and Oregon coasts. Unfortunately for me, this includes antique stores, thrift shops and outlet malls, in between visits to the ocean. We've worked out an excellent compromise. I get to write web pages or view the PCLinuxOS forums while she shops, but when we are sight-seeing, I put away my laptop and join the fun.

I've was using a Sierra Wireless USBConnect881 Aircard with AT&T's 3G cellular Internet service. I pieced together information from the PCLinuxOS forums to get it up and running. It wasn't exactly radically simple™, but it was not too difficult either.



Recently, I damaged the Aircard. In my opinion, it is quite fragile. However, they no longer offer the same item to replace it. I was stuck. I had to buy a used Aircard and hope that it would last longer than the first one or try to get a newer, hopefully sturdier device and try to get it to work without any support.



Well, I'm not afraid of being on the cutting edge. So, I got the AT&T USBConnect Quicksilver, made by Option. Then, I checked [AT&T's page](#), and didn't find any help. The local sales representatives and the telephone technical support person were both very friendly and supportive but they did not have any information to help me. I checked the [PCLinuxOS Support Forum](#) and did not find any discussion about

this particular modem. I was not able to get information from the manufacturer's [homepage](#) either. So I Googled several different keyword combination until I found this site:

[The AT&T Quicksilver and Linux](#)

I was encouraged, but a long way from having all the information I needed. I had to take pieces of information from several other sites to get this to work, which is why I thought there may be a need for this howto. Hopefully, someone else will want to try the Quicksilver or already has one and wants to try to get it working in PCLinuxOS. The PHARscape site has information on many other cellular modem models, and might be a good site reference for the Ripper Gang to get more of these devices working right out of the box.

[Press Release](#)

**AT&T and Option Launch AT&T USBConnect Quicksilver
New USB Mobile Broadband Device Is Stylish, Small and Very Fast**

DALLAS and LEUVEN, Belgium, Oct. 14 /PRNewswire-FirstCall/ -- AT&T Inc. (NYSE: T) and Option (Euronext: OPTI; OTC: OPNVY) today announced the availability of the AT&T USBConnect Quicksilver, a new USB mobile broadband device with an award-winning design. The Quicksilver is the newest addition to AT&T's High Speed Packet Access (HSPA)-capable lineup of LaptopConnect devices on the nation's fastest third-generation (3G) network.

AT&T has the nation's fastest 3G network, delivering LaptopConnect customers typical downlink 3G speeds between 700 kilobits per second (Kbps) and 1.7 megabits per second (Mbps) and typical uplink 3G speeds between 500 Kbps and 1.2 Mbps.

...

Here's how I got my new AT&T Quicksilver to work in Minime 2008 and 2009.1. This should work in 2007.

Disclaimer: This howto installs unsupported software. It works for me, but you take a chance anytime you install software outside of the standard software repositories.

1. You need to have *gcc* and *make* installed to build the software.
2. Install the kernel headers for the kernel that you are running. I used this: `kernel-headers-2.6.24.4.tex`3. You can determine which kernel you are running by typing:
`uname -r`
3. On my original install I downloaded and built this ownload and built this driver: [hso-1.6.tar.gz](#). With 2009.1 you do not need to build this driver just use Synaptic and install `dkms-hso` and skip to 3b.
Uncompress the hso tar.gz file.
`tar -xzf hso-1.6.tar.gz`
`cd hso-1.6`
Get root privileges to build and install the driver.
`su`
«enter root password»
`make`
`make install`

Install the newly created driver:

```
modprobe hso
```

```
ln -s /dev/ttyHS0 /dev/modem
```

Creating the link /dev/modem is necessary because the current version of kppp can't find /dev/ttyHS0.

4. Download and run software that disables the Zero-CD capability: [udev.tar.gz](http://www.pharscape.org/Quicksilver.html).

Zero-CD allows the device to be read like a CD to provide the windows install routine. This must be disabled before the device can be used as a modem. The repositories include hso-rezero and usb_modeswitch to provide this feature, but I was not able to get it to work. According to <http://www.pharscape.org/Quicksilver.html>, ozerocdoff replaces rezero and usb_modeswitch.

Uncompress the udev.tar.gz file.

```
tar -xzf udev.tar.gz
```

```
cd udev
```

Get root privileges to build the program.

```
su
```

«enter root password»

```
make
```

In order to run the program, you need the device ID. You should have already run "modprobe hso". Plug the modem into a USB port. Now you can find the ID by typing:

```
[galen@localhost udev]$ lsusb
Bus 007 Device 004: ID 0af0:d033 Option
Bus 007 Device 001: ID 0000:0000
Bus 006 Device 001: ID 0000:0000
Bus 005 Device 001: ID 0000:0000
```

```
Bus 004 Device 001: ID 0000:0000
Bus 003 Device 001: ID 0000:0000
Bus 002 Device 001: ID 0000:0000
Bus 001 Device 001: ID 0000:0000
[galen@localhost udev]$
```

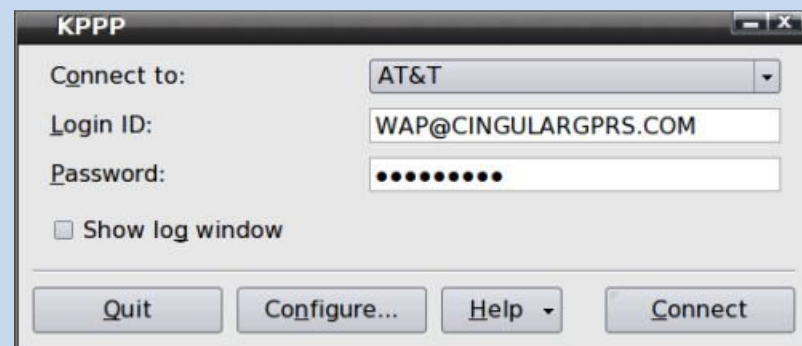
For Bus 007 Device 004, 0af0 is the manufacturer's ID, and d033, is the device ID.

The command to turn of Zero-CD is `./ozerocdoff -i 0xXXXX`. The uppercase X's represent the device ID. If your modem has a different ID, just put the correct ID number in the place of the X's.

```
./ozerocdoff -i 0xd033
```

5. Now I had to setup kppp to dial out. PCLinuxOS treats this as standard modem, only faster. ;)

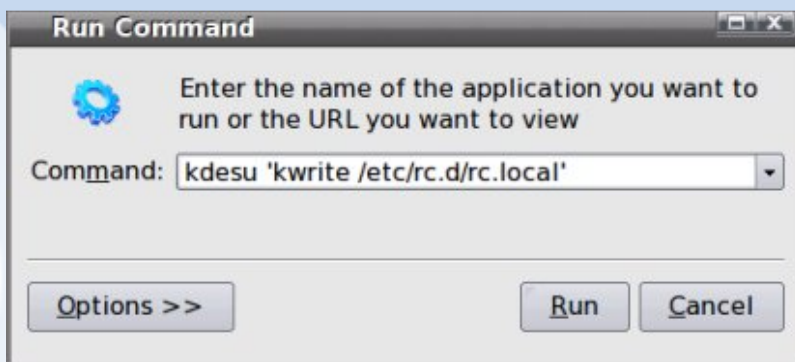
PC (Menu) -> Internet -> Remote Access -> KPPP - Internet Dial-Up Tool ->



After you've started kppp, this is how to create the connection:

- A. Configure -> Accounts -> New -> Manual Setup -> Connection Name -> AT&T
- B. Add -> Enter a phone number -> *99#
- C. Ok -> Modems -> New -> Modem name -> WWAN
- D. Modem device -> /dev/modem
- E. Modem -> Modem Commands... -> Initialization string 2 -> AT+CGDCONT=1,"IP","WAP.CINGULAR"
- F. Ok -> Login ID -> WAP@CINGULARGPRS.COM
- G. Password -> CINGULAR1
- H. Connect ->

6. Almost done! Make sure the modem driver get installed and the ozerocdoff program is run each time the computer boots up. I added the these lines to /etc/rc.d/rc.local. A shortcut to edit this file is to go to:

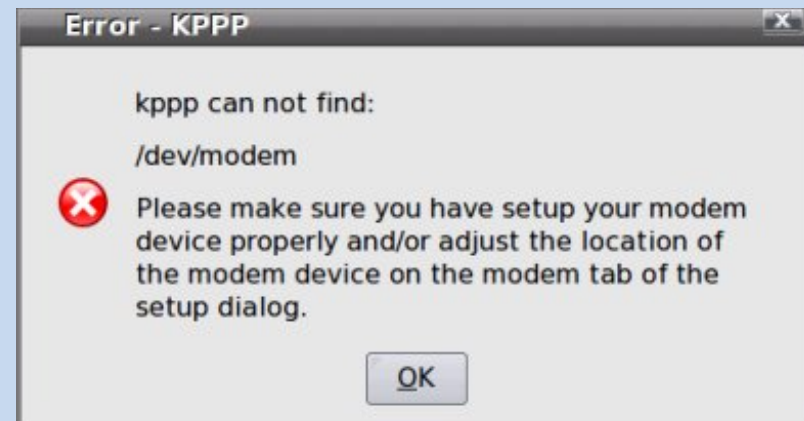


PC (Menu) -> Run Command... -> kdesu 'kwrite /etc/rc.d/rc.local' -> Run ->

Add the following two lines to the end of the file and then save.

```
ozerocdoff -i 0xd033
modprobe hso
```

7. If the modem has been removed or you get the following error message, you need a script with these two commands. I've found that if the device is connected when booting, you may have to run these commands again.



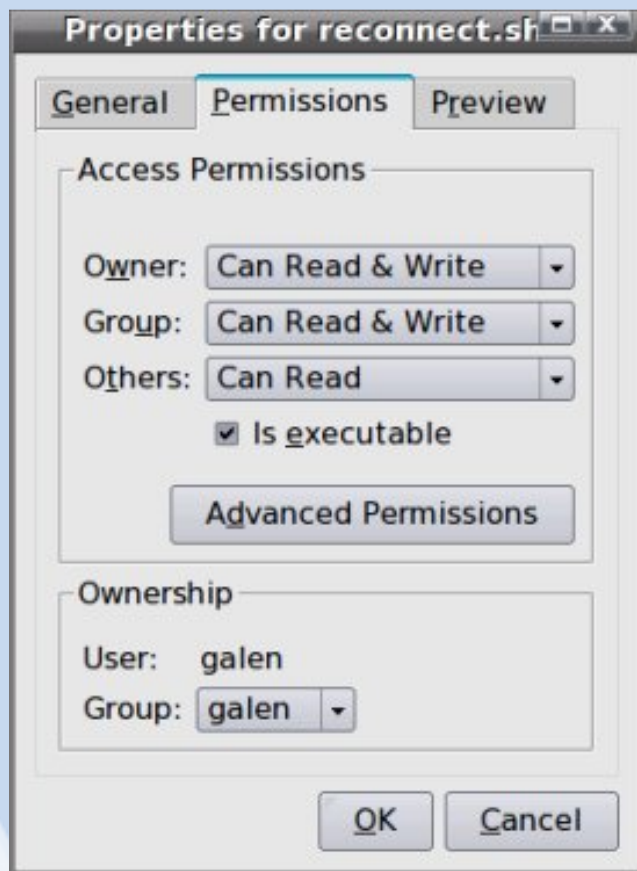
A. To create the script open kwrite or your favorite text editor, add these two lines and save:

```
ozerocdoff -i 0xd033
modprobe hso
```

B. You can use whatever name you want as long as the name is not already used. I use reconnect.sh.

You need to make the script executable. Right click on the file in Konqueror:

Properties -> Permissions -> Is executable -> Ok ->



C. If the modem is inserted after I boot up, then I click on "reconnect.sh", I enter a root password and the script executes. Finally, I start KPPP and connect. I've been trouble free ever since.



PCLinuxOS Gnome is a community project of the original PCLinuxOS.

Even though PCLinuxOS is primarily a KDE distribution, some prefer the GNOME as a default desktop install. This makes ones that may be new to linux in general to have a ready made GNOME desktop without the inconvenience of downloading, installing and configuring the whole GNOME desktop from a PCLinuxOS (KDE) install. Most PCLinuxOS Gnome packages are from the original PCLinuxOS repositories with added custom made packages for the GNOME version.

Since this is a community driven operating system most of the ready made installed programs are requested by the community for our community users. The PCLinuxOS Gnome distribution is totally free to download, use and install on a compatible pc. If you are new to GNU/Linux and would like to know more about this operating system I encourage you to visit the forum read and understand more about this operating system.

Stand By The Man

Sometimes it's hard to be a user
Giving all my RAM to just one man
I'll have good times, he'll have bad times
Always giving me a new command

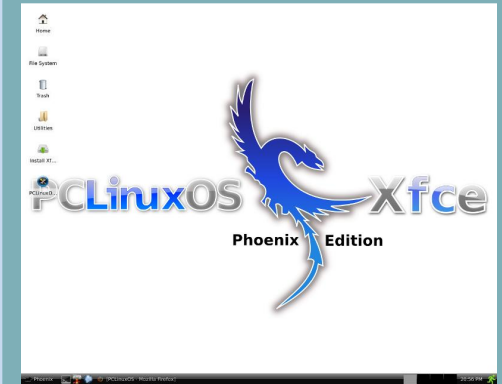


I never look at other distros
His is not hard to understand
And if you choose it, be proud to use it
Cause after all it's made by THE MAN

Stand by THE MAN
Download all of his updating
He'll know I'm always waiting
When the shell is cold and lonely

Stand by THE MAN
He gave us something good to cling to
Gave me something new to sing to
I'm standing by THE MAN

The Phoenix Has Risen



PCLinuxOS Global Administrator, Sproggy [announced](#) at MyPCLinuxOS.com on Sunday, June 14 the availability of PCLinuxOS XFCE RC1 codename Phoenix. "She isn't finalized yet but she is on her way there." When asked, "Why Phoenix?", Sproggy replied, "Everyone thought that the XFCE version had died with the old version of XFCE joining another base. So as with the Phoenix rising from the ashes, PCLOS XFCE is rising from the ashes of being abandoned. Also, I love mythical beasts and I think each release with be name after one." Read more on [The Phoenix Master on page 1.](#)

by Patrick G. Horneker
<http://www.horneker.com>

What is "Through the Lens"?

Through the Lens is a column about digital photography using the PCLinuxOS distribution. There are many books, magazine articles and websites that cover digital photography, but many of these publications use only tools and techniques under Windows and Mac OS-X. Only in the past couple of years has there been any mention of Linux in digital photography.

This column covers digital photography, but with tools and techniques that use software and hardware running on PCLinuxOS, as I strongly believe that Linux in general is a great platform for digital photography and the digital arts in general.

I chose PCLinuxOS as it is best suited in terms of software available for digital photography and artwork. It is one of the easiest distributions to configure and administer, so the digital photographer can spend more time on photography, and less time on system administration.

As a result, the digital photographer will get a stable, fast and secure environment to work on, and at the same time, be able to be as productive in their work as if they were on an iMac or a Windows PC.

Digital photography is resource intensive. Though PCLinuxOS only requires 256MB of RAM to run, I recommend at least 512MB, preferably more if you can afford it. The more RAM you have in your system, the better the performance of the digital photography software.

As for disk space, I recommend at least 20GB of disk space. This allows for the PCLinuxOS installation on the hard drive, which I also recommend for

performance as running Linux on the hard drive is much faster than running it off a CD/DVD or even a USB flash drive.

Let's Start With the Basics

As far as the CPU goes, I have been able to do digital work on a 500Mhz Pentium III, and even a 266Mhz Celeron (Coppermine) machine. You can get by on such a machine if you do not attempt to manipulate images larger than a postcard.



For serious photographic work, I recommend at least a 1Ghz machine (Pentium 4 or newer) with at least 1 GB of RAM, preferably more. My laptop has 2GB of RAM, a 250GB hard drive with all of the disk allocated to PCLinuxOS, and a Intel Duo Core processor, of which PCLinuxOS treats as two 32-bit processors.

Now that we have covered the CPU, let us cover the other essentials for digital photography.

You will need a quality color printer, and preferably a photo printer. Though you can use any color printer to make photographs, a printer designed to print photographs will yield better results than a general-purpose color printer.

For PCLinuxOS, you cannot go wrong with a Hewlett-Packard printer. In fact, Hewlett-Packard is one of the major companies that has invested significant money in Linux development, and their HPLIP package has support for almost every printer they manufactured.

Yes, Epson does manufacture some great photo printers, and support for older Epson models such as the Stylus Photo R260 is excellent. However, support for the newer all-in-one models is lagging. In fact, you will need to download and install a [proprietary driver](#) (called iscan) for Epson's all-in-one models. (There is a version of the driver for PCLinuxOS on that website.)

As for the other brands, it is a hit-or-miss situation. In fact, Kodak [is promising](#) to provide Linux support for their newest all-in-one devices.

Most likely, you have a collection of photographs (stored in albums, shoe boxes, or framed on walls). You will need a scanner to digitize these images. The [SANE project](#) provides support for many image scanners and all-in-one devices, and is the definitive guide you must check when you consider the purchase of a scanner.

I recommend Hewlett-Packard's all-in-one devices as they are supported by the HPLIP driver, of which there is a SANE driver that is part of the package, and you can fulfill the printer and scanner requirements with one device, saving you both money and desk space.

Choosing a Digital Camera for PCLinuxOS

Of course, you could not have digital photography without a digital camera. While you may use commercial photofinishing services to obtain digital images from film, a digital camera is the most convenient way to get digital photographs.

Which camera you use depends upon your needs, and that is a subject already covered on numerous websites and books on photography. Thanks to the [gphoto](#) library and applications suite, most any digital camera made should be compatible with PCLinuxOS.

Many digital cameras made over the past seven years (as of this writing) have a USB Mass Storage setting such as the one shown here. This allows your

camera to connect to your PCLinuxOS machine as if it were another storage device such as a flash drive or an external hard disk. Though you do not need



gphoto in this case, I recommend installing the gphoto package from Synaptic to ensure that all applications that use the gphoto package (such as DigiKam and F-Spot) have access to your camera. In addition, gphoto supports cameras that connect as a USB mass storage device.

If your camera has a PTP (or Picture Transfer Protocol) mode enabled, you will need to have the gphoto package installed. Though many PTP-enabled cameras are listed as supported by gphoto (including Apple's iPhone series), gphoto includes a generic PTP driver that should work with any PTP-enabled camera.

Now that we have covered the basics of digital photography, there is some additional hardware that you may need.

Most digital cameras store images on memory cards such as SD/MMC or Sony's MemoryStick Duo Pro (the two most common types of memory cards in use). While you can connect these cameras with a USB cable, it is more common to use a card reader/writer to

transfer images to your PCLinuxOS machine. Not only is it a convenient method of file transfer, you can use the memory cards to order prints from a photo kiosk at your local major discount retailer or drug store chain that does one-hour photo processing. Also, you can use the memory cards to print photos to all-in-one devices that are not supported by PCLinuxOS such as Kodak's ESP series of all-in-one devices.

Of course, you can use most any USB keychain drive (sometimes called flash drive), external hard drive, or an internal or external CD/DVD burner. These devices are generally supported by PCLinuxOS, either as ATAPI or SATA devices, or as USB mass storage devices.

Some of you are saying, what about floppies and Zip disks. At one time, these devices were used for storage and transfer of photographs, and they are well supported by PCLinuxOS. However, these devices are deprecated by the aforementioned keychain drives, external hard drives and even the CD-R, though you can use them if you are transferring small size images, e.g. 1024 x 768 resolution or smaller.



Download it from mirrors near you!

The PCLinuxOS Installation

PCLinuxOS comes with the GNU Image Manipulation Program (aka GIMP) and DigiKam already installed on the KDE version. If you are using the MiniMe version of PCLinuxOS, you will need to run Synaptic to install the GIMP and DigiKam. This is not to say that you cannot install other programs for digital photography. In fact, the entire PCLinuxOS repository (accessed through Synaptic) contains some great applications usable for digital photography.

If you like to have multiple desktop installations on your PCLinuxOS machine, i.e. GNOME, WindowMaker, XFCE, AfterStep, and FluxBox in addition to a full KDE installation, you would like to download and install these applications and have them available. With Synaptic, you can do just that (as I have done on my laptop).

Each application has its good qualities, and its not-so-good qualities. It also allows you to try each application and then you can decide which photographic application is right for you.

Some people prefer to use DigiKam, while some others prefer F-Spot, and some others prefer Picasa. While most of us would use the GIMP for photographs, some would prefer to use Adobe Photoshop running on Wine (mainly because it's what they are used to).

GIMP is the most essential piece of software for digital photography under PCLinuxOS (or any other Linux distribution for that matter).

What's Next?

I have covered the basics of what you need to do digital photography under PCLinuxOS. This article is the beginning of a series of articles that cover digital photography under PCLinuxOS (and Linux in general). The techniques, software packages, supported hardware, and other topics are discussions for future articles in this series.

About the Author

Patrick Horneker has worked with computers since the early 1980s, with his first hands-on experience on an Apple II+. He has graduated with a Bachelor of Arts degree from Valparaiso University in 1989 with a Mathematics/Computer Science major, and a Liberal Arts background including exposure to Fine Arts.

Patrick spent the first six years of his working life in the credit reporting industry where he was the information technology guru. Among the tasks he performed were custom programming of credit reporting applications, network maintenance, workstation repair and rebuilding, and technical support for software packages.

Back in 1998, Patrick setup a freelance consulting operation which still operates to this date, in addition to his current job in retail.

Photography has been a his hobby since 1977. A thirty-two-year hobby. He currently works with both film and digital cameras.

His current photographic equipment roster consists of a Canon EOS Rebel X as the sole film camera. For his digital dossier, he uses a Sony Cybershot DSC-H10, a Hewlett-Packard Photosmart M22, and a Cobra 8MP (aka the Black Friday special because it was available dirt cheap on the busiest day in retail).

This is Patrick's debut article for PCLinuxOS Magazine.

Introduction

What are scripts?

Scripts are plain text files where we put together any number of commands. Of course, those commands require to be ordered in a specific form, but the good side of this is that the syntax that we have to learn is relatively simple, as long as our aims are not too ambitious.

What can a script do for me?

It can sort out in different folders a list of selected files; it can output through a pop-up the fan speed at a given moment; or it can send a daily e-mail to the present administration of the United States telling them about the disasters of our local economy. The beautiful thing about scripts is that it lets you fully customize your environment and occasionally share the scripts you have written to make other people's life easier.

In this issue, we will provide a very simple script (with two variants) that allows us to extract any number of archives that we select in Konqueror.

This script has two main advantages: it is an alternative to ark's service menu, which does not seem to handle well multiple extractions; it identifies correctly (as opposed to ark) which files are password protected and asks us to input the password. However, the most important goal is to get acquainted with the basics of bash scripts.

PART 1: Understanding a sample script

In order to understand how the sample scripts work, we are going to explain briefly what the commands used actually do, and how they are used.

basename

It outputs the name of a given file, not its full path. It can also echo the name of the file without the extension, provided that we specify the extension in the command line.

Example: if we have a file the full path of which is `/home/john/download/random.txt`, we can execute the following command:

```
$ basename random.txt
```

This will give us the following output: `random.txt`

If we want to get the name of the file, but removing its extension, we specify the extension after the name of the file preceded by a dot:

```
$ basename random.txt .txt
```

This will give us the following output: `random`

FOR (DONE)

FOR is a command (actually a loop) that tells the interpreter to run the commands that follow for each member of a group. What is this group? It could

be group of files selected in konqueror (as we will see in the sample scripts), a group of files specified in a list (as in the example below), a list of names, a sequence of numbers, etc.

Example:

```
for i in ( random.txt michael.pdf
lars.odt ); do
    cp $i /home/john
done
```

This script would copy all the files in the group enclosed in parentheses to /home/john. However, it would not do so as a bulk, but rather one by one.

This is because FOR is a loop, that is, it starts a cycle with all the elements that have been selected. In the above example, it would first take random.txt, copy it to /home/john, take michael.pdf, copy it, etc.

Although this is certainly useless as is, the advantage of the FOR loop is that it allows you to process each file in turn: it can be used it to sort out different types of files in directories, remove certain files and make backups of others, etc. (This will prove useful in our sample script).

What is important here is that in the first line, we have assigned to *i* the value of what is after the = sign. In each loop, the expression *\$i* will represent each of the elements. In the first run *\$i* will be equal to random.txt, in the second run, it will be equal to michael.pdf, and so on.

The expression done indicates the the loop has finished and that, if it restarts, *\$i* will be reset and will take on a new value.

IF (THEN); ELSE, ELIF

As its name suggests, the **IF** command states a condition that has to be satisfied for something else to take place; for instance: if a given number is even, then call you mother-in-law; if a given file is empty, then remove it; if the temperature of the hard disk is above 50°, then output a warning. It is always closed by **FI**.

ELIF / THEN provides a second condition to be satisfied if the first one hasn't, and then specifies what to do if this second condition is satisfied. For instance, this will be useful in the sample script to do the following: we take a group of archives selected in konqueror which we want to extract; the if command will specify that *if* the file is a .rar archive, then it has to do something; *else, if* the file is a .7z archive, it has to do something else.

ELSE instructs what to do in case none of the conditions previously stated by the if (or if+elif) statement is not satisfied, without specifying any further conditions.

Example: we have 15 files, 5 of them are .rar, 5 are .tar.gz, 2 are pdf, 3 are txt. We write a script that specifies the following: IF a certain file is a .rar archive, then extract it: ELIF the file is a .tar.gz archive, then extract it and remove the original archive; ELSE, move

the files to another directory. This last statement will apply to all the files in the input that do not satisfy any of the conditions stated by the IF and ELIF statements.

Example:

```
for i in ( random.txt michael.pdf
lars.odt morris.png morris.jpg ); do
    if [[ $i == *.txt ]]; then
        cp $i /home/john/Text_files/
    elif [[ $i == *.pdf ]]; then
        cp $i /home/john/pdfs/
    else cp $i /home/john/other_files/
    fi
done
```

Explanation of the scripts

This first script extracts all selected archives in the current directory, provided that they are .zip, .rar, .tar.gz, .tar.bz2 or .7z archives (regardless of whether the names of the archives or its extension are in upper or lower case).

SCRIPT 1

```
1  #!/bin/bash -x
2  FILE=$1
3  cd "${FILE%/*}"
4  for i in "$1"; do
5  echo -e "\n\nTrying to extract
$i"
6  if [[ "$i" == *.*[Rr][Aa][Rr] ]];
then
7  unrar x -ad "$i";
```

```
8  elif [[ "$i" == *.7[Zz] ]]; then
9  7za x "$i";
10 elif [[ "$i" == *.zip ]]; then
11 unzip "$i";
12 elif [[ "$i" == *.ZIP ]]; then
13 unzip "$i";
14 elif [[ "$i" ==
*.[Tt][Aa][Rr].[Gg][Zz] ]]; then
15 tar -xf "$i";
16 elif [[ "$i" ==
*.[Tt][Aa][Rr].[Bb][Zz][2] ]]; then
17 tar -xf "$i";
18 fi
19 done
```

Let's explain what the most important lines in this script do.

1) #!/bin/bash

This first line is mandatory in every bash script. It instructs what interpreter to use (in our case: bash).

2) FILE=\$1

3) cd "\${FILE%/*}"

These two lines tell the script to move its focus to the directory where the selected files are (If we didn't do this, all files would be extracted to your home dir).

\$1 stands for the first element in the input; in our case, the first of the selected files. However, it stands for the full path of the file (/home/john/download/random.txt), not

only its basename (random.txt) or its path (/home/john/download/).

So what we have done here is assign that input to the variable **FILE** that we will use in the next line.

The second line strips the name of the archive from the full path of the input and leaves only the directory where it is located; hence,

```
cd "${FILE%/*}"
changes directory to the path of the input file
```

4) for i in "\$1"; do
This is the start of the **FOR** loop.

\$1 becomes the total input (all the files selected through konqueror), and i becomes the value taken in each loop. In our case, the FOR command will restart the loop for each of the files we have selected, processing each of them separately.

5) echo -e "\n\nTrying to extract \"\$i\""
Prints out a message that takes the value of \$1 in each loop.

6) if [["\$i" == *.[Rr][Aa][Rr]]]; then
Here starts the **IF** statement.

IF the input file is equal to *.rar or *.RAR or *.rAr, etc. (the square brackets help to tell the interpreter that the condition is satisfied when any of the combinations of the enclosed letters

appear in the extension of the archive),

THEN do something, in this case:

```
7) unrar x -ad "$i";
This commands extracts the .rar file
(represented by "$1") in the current directory.
```

Now comes a third element in the FOR command: ELIF, which stands for "ELSE IF". What does it do? If the first condition is not satisfied (that is, if the file is not a .rar file), it will present another condition to be satisfied:

```
8) elif [[ "$i" == *.7[Zz] ]]; then
What this and the rest of the following lines do
(lines 10-17) should be now clear. In this case
we are saying that, if the first condition was not
satisfied but this one is, THEN:
```

```
9) 7za x "$i";
Extract the .7z file.
```

```
18) fi
This line closes the IF statement
```

```
19) done
This line closes the FOR loop.
```

Although the previous script is perhaps the most useful and simple alternative, it has one drawback: if the person who compressed the archive did not organize the files into directories, your current directory

could end up looking like a complete mess.

To avoid that problem, you can use the following script.

SCRIPT 2

```
1  #!/bin/bash -x
2  FILE=$1
3  cd "${FILE%/*}"
4  for i in "$1"; do
5  echo -e "\n\nTrying to extract
"$i""
6  if [[ "$i" == *.*[Rr][Aa][Rr] ]];
then
7  unrar x -ad "$i";
8  elif [[ "$i" == *.7z ]]; then
9  file_base_name=`basename "$FILE"
.7z`
10 echo -e "\n\nCreating directory
$file_base_name"
11 mkdir "$file_base_name"
12 cd "$file_base_name";
13 7za x "$i";
14 elif [[ "$i" == *.7Z ]]; then
15 file_base_name=`basename "$FILE"
.7Z`
16 echo -e "\n\nCreating directory
$file_base_name"
17 mkdir "$file_base_name"
18 cd "$file_base_name";
19 7za x "$i";
20 elif [[ "$i" == *.zip ]]; then
21 file_base_name=`basename $FILE
.zip`
22 echo -e "\n\nCreating directory
```

```
$file_base_name"
23 mkdir "$file_base_name"
24 unzip "$i" -d "$file_base_name";
25 elif [[ "$i" == *.ZIP ]]; then
26 file_base_name=`basename $FILE
.ZIP`
27 echo -e "\n\nCreating directory
$file_base_name"
28 mkdir "$file_base_name"
29 unzip "$i" -d "$file_base_name";
30 elif [[ "$i" == *.tar.gz ]];
then
31 file_base_name=`basename "$FILE"
.tar.gz`
32 echo -e "\n\nCreating directory
$file_base_name";
33 mkdir "$file_base_name";
34 cd "$file_base_name";
35 tar -xf "$i";
36 elif [[ "$i" == *.TAR.GZ ]];
then
37 file_base_name=`basename $FILE
.TAR.GZ`
38 echo -e "\n\nCreating directory
$file_base_name";
39 mkdir "$file_base_name";
40 cd "$file_base_name";
41 tar -xf "$i";
42 elif [[ "$i" == *.tar.bz2 ]];
then
43 file_base_name=`basename $FILE
.tar.bz2`;
44 echo -e "\n\nCreating directory
$file_base_name";
```

```

45  mkdir "$file_base_name";
46  cd "$file_base_name";
47  tar -xf "$i";
48  elif [[ "$i" == *.TAR.BZ2 ]];
then
49  file_base_name=`basename $FILE
.TAR.BZ2`;
50  echo -e "\n\nCreating directory
$file_base_name";
51  mkdir "$file_base_name";
52  cd "$file_base_name";
53  tar -xf "$i";
54  fi
55  done

```

Let's comment on some of the new lines:

```

6) if [[ "$i" == *.[Rr][Aa][Rr] ]]; then
7) unrar x -ad "$i";

```

The command unrar (when used with the modification **-ad**) extracts the content of the archive with a full path. However, other archive types don't have that option. So, what we will do is make a directory with the same name as the archive, change directory and extract the files there.

```

8) elif [[ "$i" == *.7z ]]; then
9) file_base_name=`basename "$FILE" .7z`

```

Here we are assigning to the variable `file_base_name` the results of running the command called `basename` to the present instance of `i`.

We have enclosed `$FILE` in quotes so as to avoid problems if the name of the file has spaces.

If the selected file which is now being processed is `/home/john/download/polka.7z`, the result of `basename "$FILE" .7z` will be `polka`. Now `file_base_name=polka` (but only for this run of the loop).

```

11) mkdir "$file_base_name"
12) cd "$file_base_name";
13) 7za x "$i";

```

What we do here is evident: we create a directory with the name of the present value of the variable we defined before; we change to the new directory and extract the files there.

The following lines (14-53) do the same as before for the rest of the archive types. (Every line is duplicated because the command `basename` does not work well with extensions in square brackets).

PART 2: Putting the script in action

What do we do now?

a) Create the script

1. Create an empty text file.
2. Paste the contents of one of the above scripts into the file.
3. Save it (for example: `multiple_extract_nofolder.sh`).

4. Make it executable. The simplest way to do this is: right click on the created file and select “**Properties**”. In the tab “**Permissions**” choose “**Is executable**”.

5. Create a directory where you will store a backup of your scripts. (eg: `~/scripts`)

6. Copy the script to that directory and to `/usr/local/bin` (you will have to be root to do that).

b) Create a service menu to run the script

1. Go to `~/kde/share/apps/konqueror/servicemenus`

2. Create a new text file and call it “multiple_extract_nofolder.desktop” (or whatever you want, provided that you use the extension “.desktop”) and open it with an editor (kate, kwrite, etc.).

3. Open the new file and paste the following:

```
[Desktop Entry]
Actions=Extract_Multiple_nofolders
ServiceTypes=all/allfiles
X-KDE-Priority=TopLevel
```

```
[Desktop Action Extract_Multiple_nofolders]
Name=Extract archives here
Icon=package
Exec=konsole -e bash
multiple_extract_nofolder.sh %U
```

4. Save the file.

5. Go to a directory where you have more than one archive.

6. Select the archives to extract, right click on the selection, choose “**Extract archives here**”.

NOTE 1

A useful alternative when testing scripts is to modify the exec line to look like this:

```
Exec=konsole --noclose -e bash
multiple_extract_nofolder.sh %U
```

The `--noclose` option will, as is evident, leave konsole open so that you can see the output of each command and determine where things went wrong, in case something has failed.

NOTE 2

In the .desktop file we placed the following line:

```
X-KDE-Priority=TopLevel
```

This line places the service menu in the first column that appears as soon as you right click on a file. If we remove it, the service menu will appear under “Actions”. The choice will depend on how often you will use the script.

NOTE 3 (Dependencies)

Both scripts depend on the following applications (available through Synaptic):

```
unrar unzip p7zip tar
```

If they are not installed, you can get them via pasting the following in the command line as root:

```
$ apt-get install unrar unzip p7zip tar
```


Links:

Introductions to Bash

<http://www.tldp.org/LDP/Bash-Beginners-Guide/html/>

<http://tille.garrels.be/training/bash/>

http://www.linuxtopia.org/online_books/bash_guide_for_beginners/

<http://linux.die.net/Bash-Beginners-Guide/>

Creating KDE Service Menus

<http://developer.kde.org/documentation/tutorials/dot/servicemenus.html>

[http://wiki.kde.org/tiki-](http://wiki.kde.org/tiki-index.php?page=Tips%20and%20Tricks&pagenum=23)

[index.php?page=Tips%20and%20Tricks&pagenum=23](http://wiki.kde.org/tiki-index.php?page=Tips%20and%20Tricks&pagenum=23)

Testimonial: Keeping my 10 year old laptop alive and thriving!

by fluxlizard, April 04, 2009

A big thank you to the devs of PCLinuxOS GNOME Edition.

It's running smooth and fast on a laptop that is about 10 years old – an IBM ThinkPad A21M, 700 MHz Pentium 3 Processor, 256 Mb RAM, 4 Mb Video card. It has a sticker that says "Designed for Microsoft Windows 98". Thanks to PCLinuxOS GNOME Edition It runs quite fast, and everything I can throw at it from the repos runs very well.

I tried everything I could find including all the "lite" versions of Ubuntu, which were much too slow on this old hardware. I used DSL and Puppy but disliked them because they feel like hacked together distros with old kernels, apps and libs and have a very small software selection. I used Zenwalk for a while and it was fast like PCLinuxOS GNOME Edition, but again the software selection in the repos was limited and using the repos was horribly chaotic. If a package isn't found, select the next repo, and repeat the search through it again.

Then I found PCLinuxOS GNOME Edition 2008. It was fast and best of all, it had a full repo, and *Synaptic* and uses *GNOME*. It's a full-featured distro that still worked very well on this old laptop.

I was a bit worried when the 2009 Edition came out. Would it be fast enough and light enough for the minimal specs on this old computer, or would I have to go back to using Zenwalk or Puppy?

I was delighted to find that not only does it still run on this old laptop, it actually has seen some speed improvements. This is especially true with DVD and streaming video like YouTube. Video is faster and smoother and in 2008 I had sound problems from time to time but they are gone in 2009.

This old laptop has been a great investment, and it's still going strong 10 years on.

File Formats Comparison

by Paul Arnote

Graphic files come in all kinds of different formats. For some, it's a difficult task to know what to expect – performance-wise – how each of the different graphic file formats performs, much less to know which format to use to save their work. Hopefully, this brief overview will help sort out which graphic format is most useful for your use.

First of all, graphic file formats come in two different flavors: raster graphics and vector graphics. Raster-based graphics (also known as “bitmaps”) represent a pixel-by-pixel representation of an image. That is, the image is divided up into small “square” pixels, each representing a color in the image. When these are all put together, an image is formed when viewed at a normal viewing distance. Vector-based graphics, on the other hand, use geometrical shapes (lines, polygons, circles, etc.), represented by mathematical equations.

As a result, raster-based graphics do not fare so well when they are scaled. That means, whenever you enlarge or shrink an image that is raster-based to a size different than the original, there will be some compromise in the quality of the final product. (By the way, they shrink much better than they enlarge). If you attempt to enlarge a raster-based graphic too much, you will be able to see each pixel of the original, since each pixel gets enlarged. This “blocky” effect is called pixelation.

Vector-based graphics, however, are very scalable. That is, they can be enlarged or shrunk without any significant loss of quality. This is most evident when you attempt to enlarge a graphic that is vector-based. Since vector-based graphics are based on mathematical formulas, your view will be just as clear when you enlarge it 1000% as it was in its original size.

Before we go any further, this is not a debate (nor is it intended to start a debate) over which type of graphic (raster vs. vector) is best; they both have their place in your graphics arsenal. In fact, you will frequently find some artists using both, working with them both to produce a graphic. But it is important to understand the differences between the two so you can choose which is best for your needs.

So let's start off our discussion with raster graphic formats, which are probably the most widely used of the two graphic types.

Raster-based Graphic Formats

There is some terminology we must cover before getting into each specific file format. Many raster-based formats use compression to be able to store the information efficiently and to reduce the file size. Some raster-based formats use no compression at all. Of course, with no compression, the file takes up a large amount of space, but does not suffer from being saved (re-compressed) again and again.

That compression can be either lossy compression or lossless compression. Lossy compression algorithms take advantage of the limitations of the human eye, and discard “invisible” information. Most “lossy” algorithms offer variable compression levels, and at higher compression levels, the loss of image quality becomes quite noticeable. The loss of quality is commonly referred to as “compression artifact.” Attempting to save a graphic file over and over again, using lossy compression, results in what is called “generational degradation.” That is, the image is re-compressed each and every time the image is saved. Formats that use lossy compression value file size over picture quality.

Lossless compression, on the other hand, utilizes a compression method that does not diminish image quality. Because image quality is not sacrificed, the file size is not as small as you would get if you used a lossy compression method. When you value image quality over file size, lossless compression is the type of compression you should use.

Graphic files are also classified according to their “color depth.” An 8-bit graphic is capable of reproducing a maximum of 256 colors, while a 24-bit graphic is capable of reproducing 16 million colors, or what is commonly referred to as true color.

With a clearer understanding of the terminology involved, let's look at individual file formats. Note that we will only discuss some of the most popular image file formats here. There are many, many more out there, as well as some that are extensions of the ones we will discuss. Trying to cover every image file format

out there would not only be inexhaustible, but would also require so much more room than we have available in the PCLinuxOS magazine.

JPEG, JPG (Joint Photographic Experts Group)

The JPEG file format, which was standardized in 1992, is probably the most common and popular file format today. The JPEG format is (mostly) a lossy compression format. You can find JPEG files all over the internet, as well as being used in most of the popular digital cameras (to increase the practicality of digital cameras so more photos can be stored on the limited amount of storage medium). Typical JPEG files can compress images 10:1 with a minimal, unnoticeable loss of image quality.

The advantage of the JPEG file format is that it saves files in a minimal amount of space. At low levels of compression, the sacrifice in image quality is largely unnoticeable, while saving storage space at the same time. The JPEG file format is commonly referred to as a 24-bit graphic file, since it supports the reproduction of 16 million colors.

The disadvantage of the JPEG file format is that it suffers from generational degradation. If you edit a JPEG file, save it, edit it again, re-save it, repeatedly, each generation will be re-compressed, and more and more image quality will be sacrificed. To minimize this generational degradation, you can convert the JPEG image to a file format that uses lossless compression, make your edits, then convert back to the JPEG file format after all your editing is finished.

The JPEG file format also does not support transparency (as in transparent backgrounds), and nor does it support animations.

GIF (Graphics Interchange Format)

The GIF (pronounced JIF, as like the famous and popular brand of peanut butter) file format was formally introduced to the computing world in 1987 by CompuServe. The GIF file format sports 8-bit color depth, enabling it to reproduce a maximum of 256 colors.

In 1993, the makers of the patented LZW compression algorithm discovered that the GIF format used the compression algorithm, without paying royalties for its use. CompuServe had used it as the compression algorithm without knowledge that the patent existed. This resulted in an agreement in late 1994 that basically said that all commercial on-line informational systems companies using the LZW compression in the GIF file format to license the use of that technology from Unisys, it's maker and patent holder.

The result was outrage and campaigns sprouted up, urging users to "burn the GIF." In fact, many web sites of the time did stop using the GIF file format, their web masters fearful that they would have to spend some serious money to license the use of LZW. As a result, the PNG file format (see below) was formed as an open source solution to circumvent the licensing fees and restrictions placed on the GIF format.

Fortunately, the US patent on LZW expired in 2003, and

in the rest of the world in 2004. As a result, the GIF file format may now be used freely.

The original GIF file format introduced in 1987 was called 87a. Two years later, CompuServe introduced 89a, an enhanced version that added support for multiple images in a stream, interlacing, and storage of application specific metadata. It is the latter version that is commonly used to create many of the common animations we have all seen gracing many different web pages.

The GIF file format is most suited for sharp edged line art with a limited number of colors. It is also an excellent choice for simple animations, or low-resolution film clips. The LZW compression algorithm is lossless in its compression.

The primary disadvantage of the GIF file format is its support for only 256 color palettes. As a result, it is not considered a good choice for displaying photographs, where the increased color depth of the JPEG file format and the PNG file format make the photographs appear much more realistic and life-like.

PNG (Portable Network Graphics)

The PNG file format came about due to the patent of the LZW compression algorithm used in the GIF file format. PNG began its life as an open source replacement for GIF, not only to circumvent the licensing issues of the LZW-laced GIF format, but to also address some of GIF's other shortcomings, namely its limitation to 256 color palettes.

Precursory discussion for the PNG file format standard started via the internet newsgroups in January 1995. By October, 1996, the first PNG specification was released. Then, in 2003, it gained international standard status (ISO/IEC 15948). As a result, nearly all current web browsers can properly display graphics utilizing the PNG file format.

One of the PNG file format's strengths is that it employs lossless compression. That mean, no matter how many times you edit, save, re-edit, re-save, re-re-edit, re-re-save a graphic saved with the PNG file format, there is no quality loss with the image. Thus, the PNG file format does not suffer from the JPEG file format's generational degradation. This makes PNG the perfect file format for the storage of photographs. Many users of the PNG file format will make – and save – their photographic edits in the PNG file format, and then convert the edited PNG file to the JPEG file format to minimize the size of the distributed file.

Even though the PNG file format came about as a replacement for the GIF format, it was decided that the PNG file format would be for single images only. As a result, it does not have the ability to do animations, as the GIF file format does. And, despite being an extensible file format, there is no formal agreement on an animated PNG file format. There are a couple that exist, but they are unofficial and have not been officially adopted.

TIFF (Tagged Image File Format)

The TIFF file format has been with us since the mid-

1980s. It was put into place to provide a standard for the then-manufacturers of scanners to use, in an effort to keep each of those said scanner manufacturers from coming up with their own proprietary formats.

The TIFF file format was originally copyrighted by Aldus. But Aldus was purchased by Adobe, who now owns the copyright on the TIFF file format.

The TIFF file format also has provisions for LZW compression, and (as we've already discovered) the compression scheme can be used freely since all the patents expired on LZW in 2004. This makes the TIFF file format lossless. But it can also be considered a lossy file format, too. The TIFF file format can also serve as a container for multiple images, and if those images are of the JPEG file type, then it's considered a lossy file format.

Some digital cameras can save in the TIFF file format, using the LZW compression algorithm to help save space on the storage medium. And, while not widely supported by web browsers, the TIFF file format remains widely accepted as a photographic file standard in the printing business. Additionally, the TIFF file format can handle device-specific color spaces, such as CMYK color separations for use on color printing presses. The TIFF file format is also commonly used by OCR software packages, which in turn produce a monochromatic TIFF image for scanned text pages.

BMP (Windows Bitmap, a.k.a. DIB or Device Independent Bitmap)

The BMP file format became popularized by the Windows operating system, and has been a staple there since Windows 3.0. It is well documented and free from patents, so most any operating system can read and write them.

The BMP file format is uncompressed in most cases, although RLE (Run Length Encoding) compression has been applied to it for special applications. In either case, a file in the BMP file format has a relatively large file size. Because of the lack of compression, the BMP file format is considered lossless (RLE compression is lossless), and they compress very well (down to only 10% of their original size) with external compression routines or utilities, such as ZIP.

RAW

RAW is not a single file format. Rather, it is a family of raw image formats used by some digital camera manufacturers. The raw formats are not standardized, and in many cases, they are poorly documented. In fact, raw formats may differ from one camera manufacturer to another. Most of these raw image formats use lossless or near-lossless image compression, which results in a smaller file size than what is achievable with the TIFF file format on the very same camera.

As a result of the lack of a raw image format standard, many graphic editing programs may accept some or

none of them. Indeed, some of the older raw image formats have already been orphaned. Attempts are underway by Adobe, through its Digital Negative specification, to standardize the raw image format to be used for digital cameras.

There are several programs in PCLinuxOS to deal with raster-based graphic files. Probably the most widely known, most versatile, and most powerful program is the GIMP. There is also Krita, a part of the Koffice suite, as well as a host of smaller programs, each with their own host of features and niche uses.

Vector-based Graphic Formats

Unlike with raster-based graphics, there are fewer vector-based file formats. Just as with the raster-based graphic file formats, we will only cover the most common ones here.

CGM (Computer Graphics Metafile)

The CGM file format is designed for 2D vector graphics, raster graphics, and text. It is an international standardized format (ISO/IEC 8632). Like most vector graphic files, the graphical elements of the CGM file format can be specified in a textual source file that can be compiled into a binary file.

Designed to be independent from any particular application, system, platform, or device, CGM

provides a means of graphics data interchange for computer representation of 2D graphical information. The CGM file format has been somewhat adopted in the areas of technical illustration and professional design. But it is being superseded by our next vector-based graphic format.

SVG (Scalable Vector Graphic)

The SVG file format has raced to the forefront and has supplanted much of its competition. Under development by the World Wide Web Consortium since 1999, it is an open standard to address the need for a versatile, scriptable, and all-purpose vector format for the web and otherwise. While it does not have a compression scheme of its own, it can be compressed quite well with gzip. Due to the repetitive textual nature of the XML language that makes up the SVG file format, the file can often be compressed to only 20% of its original file size. When gzip is used to compress an SVG file, its file extension is sometimes changed to SVGZ to reflect the compression.

The SVG file format is able to be displayed by all modern web browsers, except Microsoft's Internet Explorer. IE requires a plug-in to be able to display SVG files.

The SVG file format is designed to be extensible, and can be scripted to react to user interaction or for animations. The extensive specifications for functionality are many – far too many to list here. Leave it enough said (for here, anyways) that the scripting functions of the SVG file format's XML scripting even

permit it to be able to create web applications.

Just as for raster-based graphics, there are several programs in the PCLinuxOS repository to deal with vector-based graphics. Inkscape is probably the most popular of these. Also popular are Xara Xtreme and Open Office Draw. Even the GIMP can import SVG files as either paths or rasterized bitmap images.

Hopefully, this introductory guide will help you choose which type of graphic is best suited for your needs, and helps demystify the often confusing world of computer graphics.

March onward, and unleash the artist within!



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