



Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

ISSUE #74 - June 2013



Photo: The Bay Area Bias (Flickr.com)

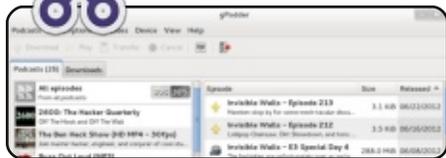
SOFTWARE SHOWDOWN

PDF VIEWERS: EVINCE vs OKULAR

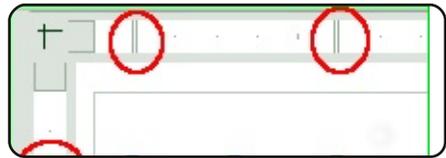


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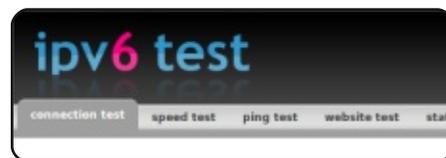
HowTo



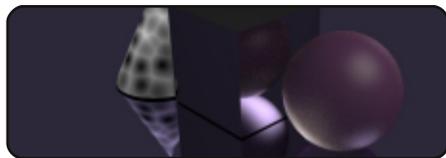
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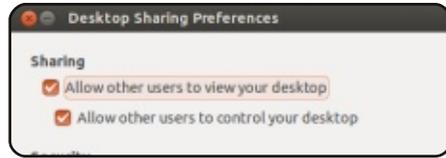
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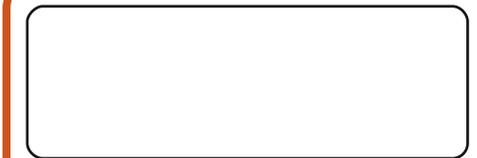


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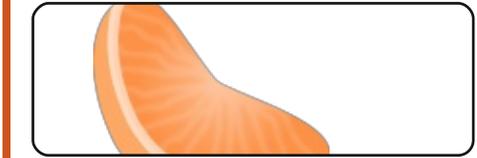
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WELCOME TO ANOTHER ISSUE OF FULL CIRCLE!

The usual LibreOffice, Blender, and Inkscape HowTo's are here, but Greg has had to take this month off. Replacing your regular Python article is an interesting piece on automating Gpodder to become your personal entertainment assistant. Give that a try. And, while you're at it, you can try hooking up to the Internet using IPV6 in this month's other HowTo.

A new addition to Full Circle is the **Software Showdown**. Each month, Tushar will have similar applications compete against each other to see who will come out on top. This month: PDF viewers.

Ubuntu Women has the story of a school which completely switched to Ubuntu and if you enjoyed last month's Linux Lab article about DVD video, then this month's article should tickle your fancy too. This time Charles discusses creating DVD menus.

Gord has tweaked his Q&A column to include links to the most popular questions from AskUbuntu.com. This is something quite a lot of you asked for in the survey.

Now is the best time to submit a shot of your desktop for the My Desktop section as I am now officially out of screens. If you fancy submitting your desktop for others to see, please read the info on the penultimate page of this issue.

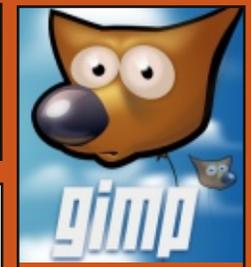
All the best, and keep in touch!

Ronnie

ronnie@fullcirclemagazine.org



This magazine was created using :



Full Circle Podcast

Released monthly, each episode covers all the latest Ubuntu news, opinions, reviews, interviews and listener feedback. The Side-Pod is a new addition, it's an extra (irregular) short-form podcast which is intended to be a branch of the main podcast. It's somewhere to put all the general technology and non-Ubuntu stuff that doesn't fit in the main podcast.

Hosts:

- Les Pounder
- Tony Hughes
- Jon Chamberlain
- Oliver Clark



<http://fullcirclemagazine.org>



AUDIO MP3



AUDIO OGG

Download



MARK SHUTTLEWORTH CLOSES UBUNTU BUG #1

Mark Shuttleworth closes Ubuntu bug #1 with following words: *"Personal computing today is a broader proposition than it was in 2004: phones, tablets, wearables and other devices are all part of the mix for our digital lives. From a competitive perspective, that broader market has healthy competition, with IOS and Android representing a meaningful share...Even though we have only played a small part in that shift, I think it's important for us to recognize that the shift has taken place. So from Ubuntu's perspective, this bug is now closed."*

Full remarks at: <http://fridge.ubuntu.com/2013/05/31/mark-shuttleworth-closes-ubuntu-bug-1/>

Want more on the closure of bug #1? Several news sites blogs covered it, here's a sampling of what they had to say:

Mark Shuttleworth closes the 2004's bug #1 due to today's

realities -

<http://www.iloveubuntu.net/mark-shuttleworth-closes-2004s-bug-1-due-todays-realities>

Mark Shuttleworth Marks Bug #1, 'Microsoft Has Majority Marketshare, As Fixed - <http://www.omgubuntu.co.uk/2013/05/mark-shuttleworth-marks-bug-1-fixed>

Ubuntu bug #1 marked as fixed by Mark Shuttleworth - <http://www.webupd8.org/2013/05/ubuntu-bug-1-marked-as-fixed-by-mark.html>

Ubuntu declares bug #1 -- 'Microsoft has a majority market share' -- closed - <http://www.zdnet.com/ubuntu-declares-bug-1-microsoft-has-a-majority-market-share-closed-7000016129/>

Mark Shuttleworth closes Ubuntu's Bug No. 1 now that Microsoft's hold on computing is declining - <http://blogs.dailynews.com/click/2013/05/30/mark-shuttleworth-closes-ubuntus-bug-no-1->

[microsofts-hold-computing-declining/](http://blogs.dailynews.com/click/2013/05/30/mark-shuttleworth-closes-ubuntus-bug-no-1-microsofts-hold-computing-declining/)

Ubuntu Marks 'Bug No. 1' As Fixed, After Nearly Nine Years - <http://www.npr.org/blogs/thetwo-way/2013/05/30/187318344/ubuntu-marks-bug-no-1-as-fixed-after-nearly-nine-years>

COMMUNITY ON UBUNTU.COM

Daniel Holbach announces the launch of <http://community.ubuntu.com>, which *"is the primary address for interested Ubuntu users to stay involved and get informed about what our community is doing."* <http://fridge.ubuntu.com/2013/05/31/community-on-ubuntu-com/>

MARK SHUTTLEWORTH: HERE COMES THE CARRIER ADVISORY GROUP

Mark Shuttleworth announces that the first meeting of the

Ubuntu Carrier Advisory Group has taken place to help *"figure out how best to shape Ubuntu to meet the needs of the mobile industry."* Of the meeting itself, Shuttleworth also writes: *"We mapped out our approach to the key question I've been asked by every carrier we've met so far: how can we accommodate differentiation, without fragmenting the platform for developers? We described the range of diversity we think we can support initially, received some initial feedback from carriers participating immediately, and I'm looking forward to the distilled feedback we'll get on the topic in the next call."*

<http://www.markshuttleworth.com/archives/1261>

Canonical's announcement: "Formation of Carrier Advisory Group for Ubuntu mobile development" - <http://www.canonical.com/content/formation-carrier-advisory-group-ubuntu-mobile-development>

Finally, several news outlets and other blogs have covered this news, here's a sampling selected by our editors:



Ubuntu phone OS has eight carriers signed on to boost development -

<http://arstechnica.com/information-technology/2013/06/ubuntu-phone-os-has-eight-carriers-signed-on-to-boost-development/>

Ubuntu Carrier Advisory Group Announced -

<http://www.jonobacon.org/2013/06/18/ubuntu-carrier-advisory-group-announced/>

Canonical announces Ubuntu Carrier Advisory Group with LG UPlus, Telecom Italia, Korea Telecom, Deutsche Telekom, etc, as members

[-http://www.iloveubuntu.net/canonical-announces-ubuntu-carrier-advisory-group-lg-uplus-telecom-italia-korea-telecom-deutsche](http://www.iloveubuntu.net/canonical-announces-ubuntu-carrier-advisory-group-lg-uplus-telecom-italia-korea-telecom-deutsche)

8 Major Mobile Carriers Join Ubuntu Touch Advisory Group -

<http://www.omgubuntu.co.uk/2013/06/8-mobile-operators-give-backing-to-ubuntu-touch>

Canonical's Ubuntu for smartphones gets support from eight mobile operators -

<http://www.theinquirer.net/inquirer/news/2276104/canonicals-ubuntu-for-smartphones-gets->

[support-from-eight-mobile-operators](http://www.theinquirer.net/inquirer/news/2276104/canonicals-ubuntu-for-smartphones-gets-support-from-eight-mobile-operators)

Canonical unveils Carrier Advisory Group for Ubuntu phones -

http://www.theregister.co.uk/2013/06/18/ubuntu_carrier_advisory_board/

UBUNTU DONATIONS AND COMMUNITY FUNDING

Specific details about Ubuntu Donations and Community Funding have been announced following a plan prepared by Jono Bacon and approved by the Community Council. Donation periods will occur every 6 months, and the money received in the previous cycle will go to fund the current cycle. Those wishing to apply for funding must submit a form, and it cannot be used for an arbitrary amount of money for a person or a team. A report containing the budget, a list of items where the money was spent, and the remaining balance will be released at the end of the cycle.

<http://fridge.ubuntu.com/2013/06/20/ubuntu-donations-and-community-funding/>

IMPROVING WEB SERVICES FOR UBUNTU

In an effort to improve web services and help address issues from user testing, various services like Ubuntu Single Sign On and Ubuntu Pay are being re-branded under the Ubuntu One name. Information from the various services will soon be available from the same place in order to relieve some confusion. Along with the re-branding comes an improved design and a new user interface.

<http://fridge.ubuntu.com/2013/06/21/improving-web-services-for-ubuntu/>

WELCOME NEW MEMBERS AND DEVELOPERS

At the Developer Membership Board meeting on 2013-06-03 the following individuals joined MOTU:

Matt Fischer - <https://wiki.ubuntu.com/MattFischer> | <https://launchpad.net/~mfischer>

Dmitry Shachnev - <https://wiki.ubuntu.com/DmitryShachnev>
<https://launchpad.net/~mitya57>
<https://lists.ubuntu.com/archives/u>

buntu-news-team/2013-June/001815.html

Many Thanks to the Ubuntu News Team for their contribution this month.

News this month comes from:

<https://wiki.ubuntu.com/UbuntuWeeklyNewsletter/Issue319>

<https://wiki.ubuntu.com/UbuntuWeeklyNewsletter/Issue320>

<https://wiki.ubuntu.com/UbuntuWeeklyNewsletter/Issue321>

<https://wiki.ubuntu.com/UbuntuWeeklyNewsletter/Issue322>





When going through last month's survey results, I was pleasantly surprised to see a number of interesting suggestions, and what seemed to be an overall positive response to C&C. However, I also noticed a few suggestions and requests for topics I have already covered. As such, I decided I'd devote this article to directing those to the past issues, and to also answer some of the quicker questions that were aimed in my direction.

LaTeX: I covered this in C&C in FCM#50 and #52 – where 52 was aimed more at Asian languages in LaTeX.

Virtualbox: Someone asked for advice on how to install Virtualbox in Ubuntu 12.04 because they were having issues. I had a short-lived virtualization series in FCM#38-45, but the short answer is, go to this web page: <https://www.virtualbox.org/wiki/Downloads>

Install the current version of VirtualBox for Linux hosts, then

the Extension Pack. You have to select the VirtualBox package which corresponds to the version of Ubuntu you are using, and 32-bit or 64-bit.

Automation: A surprising number of you seemed to be interested in writing bash scripts to automate things (either for yourself or for family members). I introduced that topic in C&C in FCM#24, but judging by the response, I'll probably be writing another few articles on that at a later date.

Conky: There were a fair amount of requests on getting started with conky. I have covered Conky in the following issues of FCM (in the C&C column): #44, #45, #46, #48, #51. If you have any particular issues with Conky, feel free to email me about it at lswest34@gmail.com. Please put "conky question" in the subject, and include the output of both `lsb_release -a` and `conky -v`

IDEs: Someone asked for a review of IDEs – without knowing

exactly what languages you want to develop for, it would be a fairly confusing article. That being said, I did discuss IDEs in FCM#64.

CLI Coloring: A couple of people asked about styling your prompt and terminal. I have discussed this in FCM#27, #35, #36

Command-line "cookbook": Someone asked for a collection of useful command combinations and I thought it might be interesting to open this up to the readers. If you have a favourite command (or ones you simply find yourself using a lot), feel free to add them to this google doc here: goo.gl/fp09r – please include why the command is useful (i.e. what you use it for). Once we have a list of sufficient length, I'll go through the commands and compile it into an article "cookbook".

And now, on to some questions that were fairly brief and would not have been enough for a whole article in and of themselves.

Create a folder hierarchy with a

one-liner (Bash scripts): First off, this doesn't require a script of any sort. Mkdir (make directory) is the command-line tool Linux offers for this. Usually it will create only a single folder at a time; if you tell it to create a path, it will fail. However, it has a command-line argument "-p" (how I remember this is p=path, so make path, instead of directory), which does exactly what you want. Take this scenario, for example: You want to create a folder Summer in your Pictures folder, with two folders within it called Tahiti and Montreal. This can be done with one single command:

```
mkdir -p Pictures/Summer/{Tahiti, Montreal}
```

The -p argument will literally create directories as needed to reach the directories you want to create. So if Pictures or Summer (or both) are missing, they will be created. The only caveat is that you can't put spaces between the commas. You can certainly make names with spaces though, as you can see below:



```
mkdir -p  
Pictures/Summer/{"Tahiti  
2013","Montreal 2012"}
```

As you can see, you can't place a space between the items and the comma (mkdir understands it as two paths then: Pictures/Summer/{Tahiti 2013 and ./Montreal 2012} – as you can tell, they won't even end up in the same folder). Naturally, this also works on Mac OS X systems, as they offer the typical mkdir command.

Another question I had was to create a bash script to automatically mount a second and third hard drive. Once again, this isn't a Bash problem. Linux offers you a configuration file called /etc/fstab. This is in charge of mounting all your drives on boot-up. It will look something like that shown below.

The following mounts an NTFS drive to /media/Windows while giving permission to access it to

the user lswest and all users in the group users. Edit the uid and gid as you see fit. You'll also need to change /dev/sda5 to the correct partition:

```
/dev/sda5  
/media/Windows ntfs-3g  
uid=lswest,gid=users,dmask=02  
2,fmask=133  
0 0
```

Example of mounting a FAT32 USB stick using UUID – again, change the UUID to the correct one:

```
UUID=47FA-4071  
/home/lswest/USB vfat  
defaults,noatime 0 0
```

If you want to use spaces in the paths, you need to replace the spaces with \040 in the file. Once you edit /etc/fstab, you can test to see if it's working by running:

```
sudo mount -a
```

If the drives show up where you expect, and you can access them, you're all set. You can check UUIDs by running:

# <file system>	<dir>	<type>	<options>	<dump>	<pass>
/dev/sda1	/	ext4	defaults,noatime	0	1
/dev/sda2	none	swap	defaults	0	0
/dev/sda3	/home	ext4	defaults,noatime	0	2

```
sudo blkid
```

Or, if you want the UUID for a single drive/partition, you can use:

```
sudo vol_id -uid /dev/sda2
```

Replace, of course, sda2 with the actual drive you want.

Lastly, there were a few requests for covering GRUB2. While that would be an article in itself, I felt I should at least offer a little bit of information for those who don't want to wait. For GUI-based editing of some settings, there's grub-customizer: <https://launchpad.net/grub-customizer>

If you're just after a different theme, they are discussed at the following links:

<https://help.ubuntu.com/community/Grub2>

<http://askubuntu.com/questions/6183/how-can-i-get-some-nice-eye-candy-themes-for-grub>

<https://help.ubuntu.com/community/Grub2/Displays>

Hopefully I've answered the questions sufficiently. If anyone has any further questions, feel free to email me at lswest34@gmail.com. Please include "C&C" or "FCM" in the subject line. If anyone has any suggestions for topics I should cover, you're also more than welcome to email me about them. Judging by the survey, it seems a great deal of you have suggestions or questions. The problem with some is that they are too specific for an actual article – but if you email me I can probably set you on the right path to fixing it.



Lucas has learned all he knows from repeatedly breaking his system, then having no other option but to discover how to fix it. You can email Lucas at: lswest34@gmail.com.



HOW-TO

Written by Neal Bailey

Gpodder: Your Entertainment Assistant

Podcasting has revolutionized the way we create, share, and distribute content over the Internet. Nearly everyone is aware of programs such as Apple's iTunes, and most people are aware of some of the various open source podcatching alternatives. Several of these applications provide ways to download episodes on a schedule, however, for the most part, these programs usually download every episode of every subscribed podcast. Many people subscribe to far more shows than they could ever actually have time to listen to.

We will introduce a system to download only the specific podcasts we listen to regularly. Our solution will convert video podcasts to audio MPEG-3, so all of our episodes are ready to be copied to a CD, MP3 player, or similar device.

SETUP GPODDER

Gpodder is the podcatching software we will use to manage

our subscriptions. The first step is to install gpodder (which should install the package we really want, gpodder-cli), so we can convert video podcasts to MP3 audio.

```
sudo apt-get install gpodder
lame
```

When you run gpodder for the first time you will be prompted to subscribe to podcasts, import an opml file, or sync with your gpodder.net account.

I recommend creating a <http://gpodder.net> account

because it allows you to subscribe to podcasts from a friendly website interface and, more importantly, it allows you to sync all your subscriptions to multiple computers.

SET UP FFMPEG

One of the core features of our setup includes the ability to extract the audio from video podcasts so, when each download completes, we are left with a set of MPEG-3 audio files which can then be synchronized with our portable

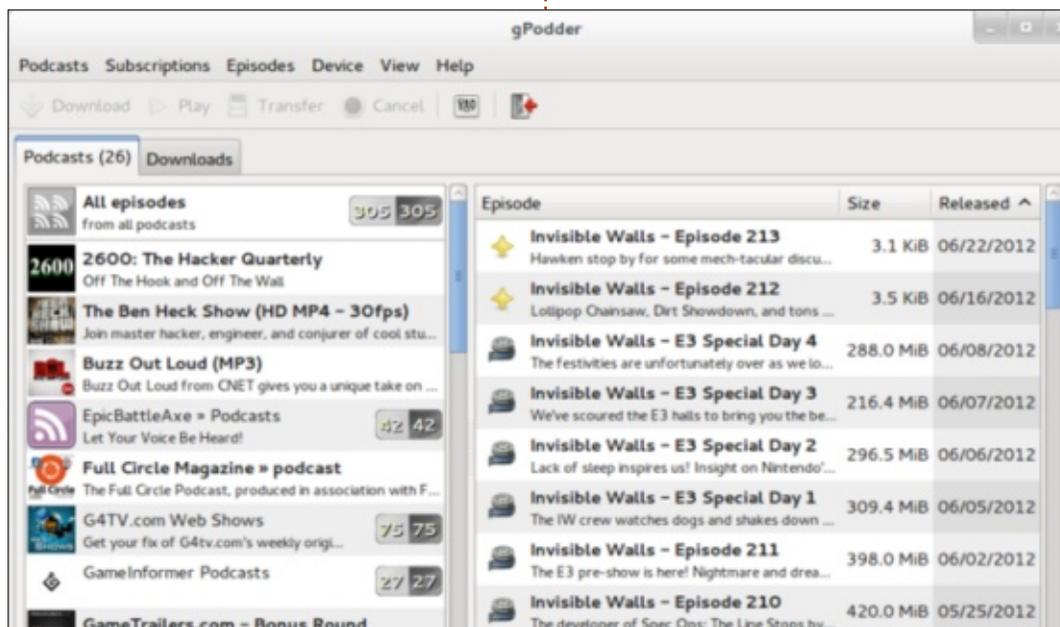
devices (or burned onto CDs for the car). You may want to get the most recent version of ffmpeg. Typically this will require compiling ffmpeg from source.

Please refer to this howto for compiling ffmpeg:
<https://ffmpeg.org/trac/ffmpeg/wiki/UbuntuCompilationGuide>

Or, you could install ffmpeg from the Software Center or using Synaptic.

MANUALLY TESTING THE SETUP

Before we go about creating the bash script and cron job to download and convert our podcasts, we want to run some manual tests to ensure the machine is properly prepared. We have subscribed to EpicBattleCry, a video games podcast from the guys at <http://www.gametrailers.com>. Enter the following commands into the bash shell (skip lines that begin with # as these are comments)



```
# update and download
podcast
```

```
# enter these 2 lines into
the bash shell
```

```
URL=http://www.gametrailers.com/gteba_podcast.xml
```

```
gpo update $URL && gpo
download $URL
```

You should see the latest episodes getting updated and downloaded.

This specific podcast is a video podcast, which obviously won't work on a CD player or standard MP3 player, so we need to extract and encode the audio stream from the MP4 video file.

```
# extract audio from video
file and convert to MPEG-3
```

```
# change the file name to
match a file that was
downloaded in the previous
step
```

```
DLFILE=$HOME/gpodder-
downloads/"EpicBattleCry -
```

```
GameTrailers.com"/skirmish--
186---i-want-to-bite-it.mp4
```

```
# run ffmpeg
```

```
ffmpeg -i $DLFILE -vn -ac 2
-ab 192k "$DLFILE.mp3"
```

AUTOMATING THE SYSTEM

At this stage we have installed gpodder (gpodder-cli) and ffmpeg, and we used the gpodder user interface to subscribe to a podcast. We then updated and downloaded the newest episodes from the command line. Finally we used ffmpeg to extract the MPEG-3 audio stream from the MPEG-4 video podcast.

Obviously, performing these tasks at the terminal is cumbersome and time consuming. Next up we are going to automate the solution so these tasks occur

on their own, based on a schedule.

GPODDER-SYNC

When we are all done with our script, it will look like the image below. Before we can get here though, we'll need to set up the configuration and modify the gpodder settings.

CONFIGURATION

Create a new file called *auto-downloads.conf* and place it where you like. In my setup, it is located in `$HOME/Downloads/Podcasts/`

In this file, paste the Internet URL addresses of each of the shows that you want to auto-update (one per line).

These podcasts can be video or audio podcasts. If they are video podcasts then our script will convert them to audio podcasts for you.

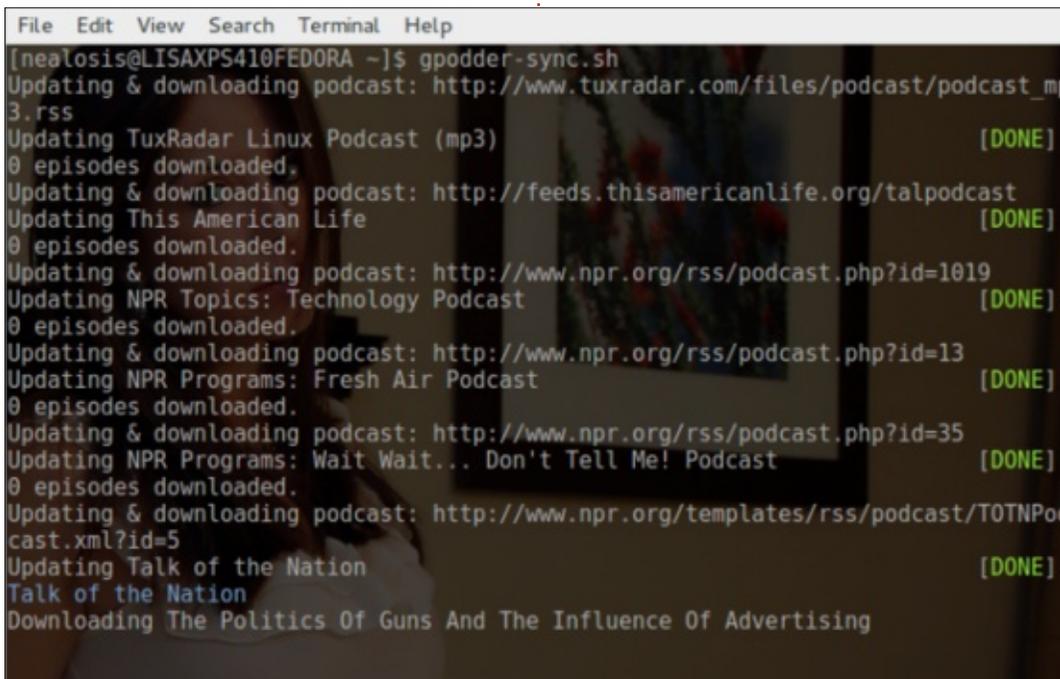
At present, the script handles only MP3 and MP4 files. For the podcasts I download, these appear to be the standard file-types in use. The script can be easily modified to handle more file-types if necessary.

SCRIPT

Download the bash script here: <http://pastebin.com/xyxBMhZ8>, and copy into your home or `~/bin` directory. Open the script in your editor of choice and replace the following values to match your system.

LOG

This is the path and filename to write log messages to. You can change it if you don't want to log to `/tmp`



```
File Edit View Search Terminal Help
[nealosis@LISAXPS410FEDORA ~]$ gpodder-sync.sh
Updating & downloading podcast: http://www.tuxradar.com/files/podcast/podcast_m
3.rss
Updating TuxRadar Linux Podcast (mp3) [DONE]
0 episodes downloaded.
Updating & downloading podcast: http://feeds.thisamericanlife.org/talpodcast
Updating This American Life [DONE]
0 episodes downloaded.
Updating & downloading podcast: http://www.npr.org/rss/podcast.php?id=1019
Updating NPR Topics: Technology Podcast [DONE]
0 episodes downloaded.
Updating & downloading podcast: http://www.npr.org/rss/podcast.php?id=13
Updating NPR Programs: Fresh Air Podcast [DONE]
0 episodes downloaded.
Updating & downloading podcast: http://www.npr.org/rss/podcast.php?id=35
Updating NPR Programs: Wait Wait... Don't Tell Me! Podcast [DONE]
0 episodes downloaded.
Updating & downloading podcast: http://www.npr.org/templates/rss/podcast/TOTNPod
cast.xml?id=5
Updating Talk of the Nation [DONE]
Talk of the Nation
Downloading The Politics Of Guns And The Influence Of Advertising
```

```
log="/tmp/$(date +%Y-%m-%dT%H:%M)-podcast-download.log"
```

DEFS

This is the file containing the URLs of the podcasts to automatically download. This file must exist prior to running the script.

```
defs="$HOME/Downloads/Podcasts/auto-download.conf"
```

PODDOWNLOAD

This is the path where gpodder is configured to download. It is usually ~/gpodder-downloads unless you manually changed this value in the Preferences > Edit Config button in gpodder. On my machine, I have changed the default gpodder download path (to the path you see below)

```
podDownload="$HOME/Downloads/Podcasts/gpodder-downloads"
```

PUBDIR

This is the path to copy downloaded and/or converted podcasts to. It is created if it doesn't already exist.

```
pubDir="$HOME/Downloads/Podcasts/_converted"
```

HISTFILE

This is the path to the file used to record which shows have already been downloaded or converted. It is created if it doesn't already exist.

```
histFile="$HOME/Downloads/Podcasts/_converted/_history.txt"
```

TEST THE SCRIPT

Now that we have updated the script, we need to test that it's working correctly.

```
# make it executable
```

```
chmod +x ~/bin/gpodder-sync.sh
```

```
# run the script
```

```
cd ~/bin && ./gpodder-sync.sh
```

Hopefully the script updated your specified podcasts and then downloaded (and converted if applicable) them to your pubDir folder.

DOWNLOAD SCHEDULING

Now that our script is running and everything is set up, we need to create a scheduled task so the script is run automatically once a day. In the example below, we are running the script every morning at 10:30 am.

```
# open crontab
```

```
crontab -e
```

```
# enter this line into the crontab (replace neal with your username)
```

```
30 10 * * *  
/home/neal/bin/gpodder-sync.sh
```

NEXT STEPS

This process is ideal on a headless server. I've been running this script for a few years now on a Ubuntu server. In this configuration you can set the pubDir to a SAMBA share. Now everyone in the house can sync their devices to the shared folder.

Feel free to send me feedback or questions. I hope you enjoyed this tutorial.



Neal is a software engineer and enterprise services consultant for an international PC firm. He has been using Linux since 1998 as a hobbyist, and loved every minute of it. He can be reached by email at nealbailey@hotmail.com



HOW-TO

Written by Elmer Perry

LibreOffice Pt27: Intro To Draw

The LibreOffice Draw module is a vector graphics application included in the LibreOffice suite. Draw lets you create graphics you can use in your documents. While there are more advanced vector graphics programs – such as Inkscape – Draw provides you with more tools than most drawing packages included in other office suites.

Vector graphics create images by defining geometric shapes such as circles, rectangles and polygons, rather than by pixel points on the screen. Because of this, vector graphics scale without distortion.

As with the other modules in LibreOffice, Draw integrates well with the others, making it the tool of choice when creating graphics for your documents.

THE DEFAULT LAYOUT

The default layout for Draw is rather sparse. You will probably want to modify it to include the toolbars you use most often. The layout includes the basic elements

you need to create a graphic image. The center of the screen is the area where you will create your graphic. To the right, you have the page pane, showing the different pages of the graphic. Multi-page graphics are used mostly for presentations, and I will cover them at a later time.

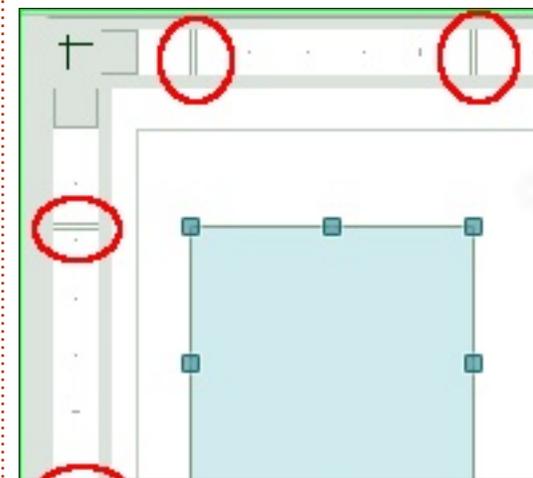
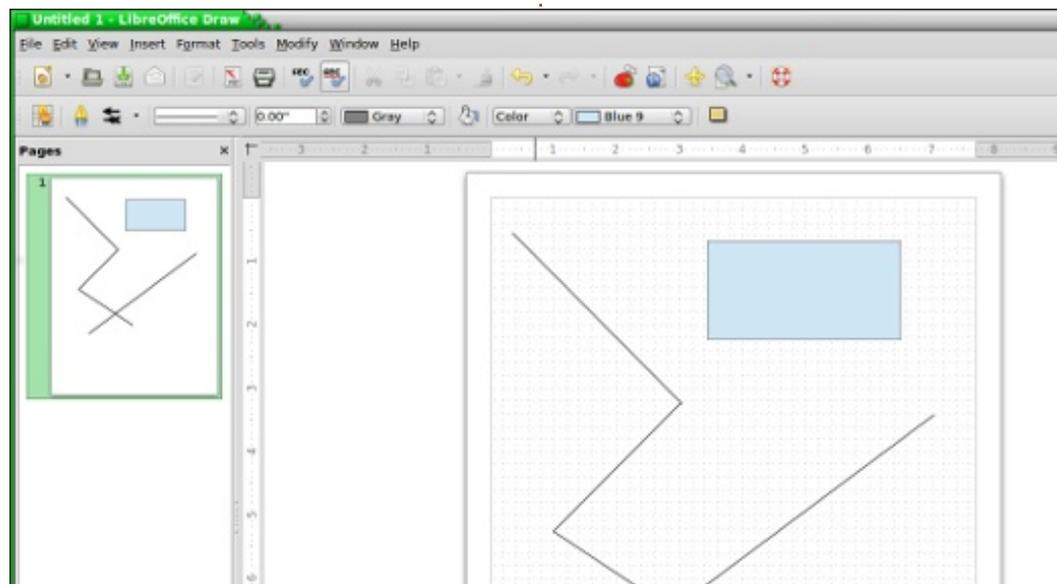
By default, you have three toolbars. The standard toolbar is the topmost toolbar. This is the toolbar you see in most of the LibreOffice modules. It controls the new, open, save, copy, cut, paste, and other functions that pertain to most modules. The line

and fill toolbar sits below it. This toolbar controls how the lines and fill of an object will look. At the bottom of the window sits the drawing toolbar. From this toolbar, you can create most of the objects for your graphic. You can move the toolbars by grabbing the handle at the beginning of the toolbar and dragging it to the location where you want it.

The status bar at the bottom of the window gives you a lot of useful information about the object you are editing. An object's type, dimensions, angle, and other useful information will show up

here. I will refer to the status bar often during the How-tos on Draw.

At the top and along the left edge sit the rulers. The rulers are guides to where you are in the image. If you want to change the unit of measure in the rulers, you can right-click the ruler and select a different unit of measure. When you have an object selected, the ruler shows double lines to indicate the object's position on the drawing.



THE COLOR BAR

The color bar displays the current color palette under the

drawing area. You can use it to select colors for your objects rather than having to use the dropdown list in the line and fill toolbar. The first box – the white box with an X in it – is the no color (or invisible) selection. To display the color bar, go to View > Toolbars > Color Bar. To use the color bar, left-click the color you want for the fill color of the object, and right-click to select the line color.

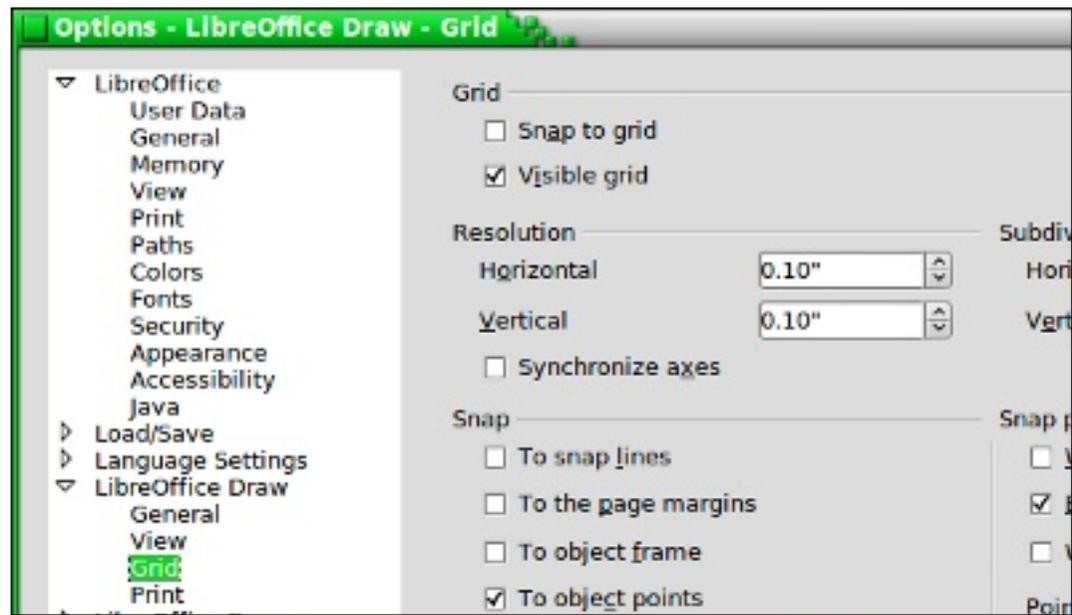
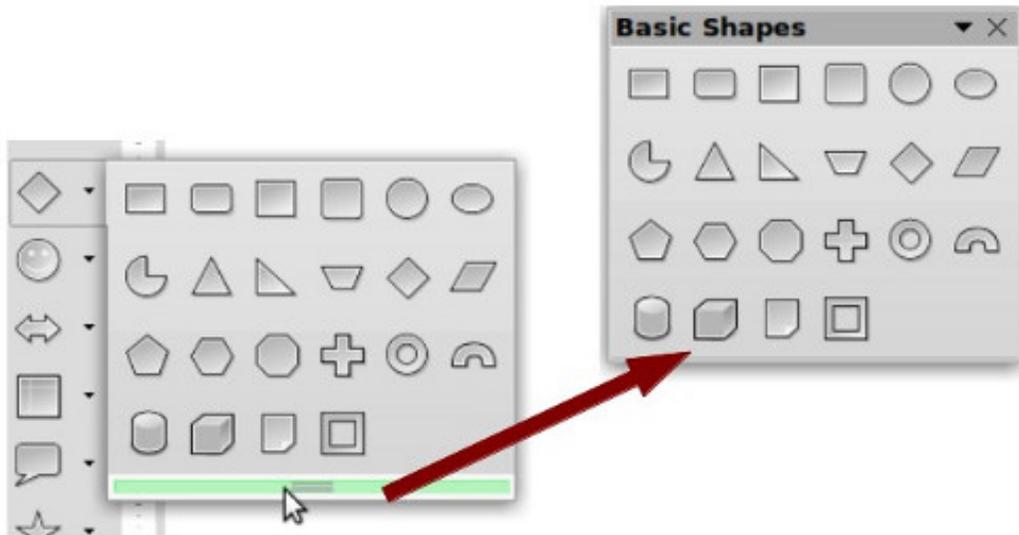
TEAR-OFF TOOLBARS

Many of the icons on the toolbars have a triangle or arrow to the right. This indicates the item is expandable. Clicking on the arrow gives you more choices. You

can detach these items from the toolbar, creating a floating toolbar. When you expand the item, you will see a grab bar at the bottom. Click and drag the grab bar to create a floating toolbar of the items. This is helpful when you need to use the items repeatedly, and is quicker than having to expand the items each time. When you are finished, just close the floating toolbar by clicking on the close button in the title bar.

GRID, SNAP LINES, AND SNAP POINTS

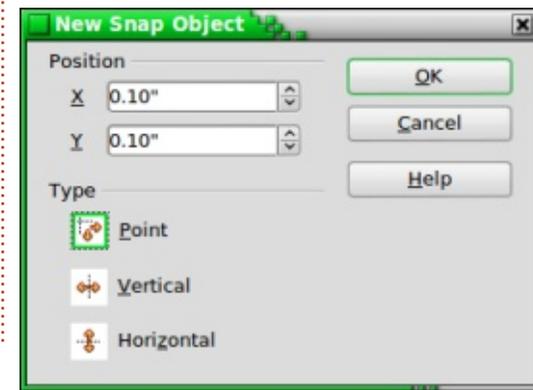
When creating an image, I find it useful to have guides to work from. The grid, snap lines, and snap points are useful for such guides.



You can set the program to snap to these guides, which help you precisely place your objects in the drawing.

To set up the grid, go to Tools > Options > LibreOffice Draw > Grid. If you want objects to snap to the grid by default, check the Snap-to-grid checkbox under grid. You also have the option to make the grid visible by default. Resolution sets the vertical and horizontal settings for the grid. Subdivision sets the number of markers between the horizontal and vertical grid points. The more subdivisions the more precise the changes when snap-to-grid is on. But like most things, a happy medium is usually better

than too much. You can set certain snap options on by default under the snap section, but I recommend leaving these all off by default, and using the options toolbar when you need to turn them on. Use the snap range to control how close to a snap point you are before your object snaps to the point.



Unlike the grid, snap points and snap lines are inserted when you need a more exact location. Snap lines are great for aligning objects vertically or horizontally. To create a snap line or point, Insert > Insert Snap Point/Line from the menu bar. The X position controls the distance from the left of the image. The Y position controls the distance from the top. The type controls whether you are inserting a snap point, vertical snap line, or horizontal snap line. You can also create snap lines by clicking and dragging from either the horizontal or vertical rulers. To delete a snap line, click and drag it back to the ruler. To delete a snap point, right-click the snap point and select Delete Snap Point.

OPTIONS TOOLBAR

The options toolbar contains all your snap options. If it is not showing, select View > Toolbars > Options. On the toolbar, you can

toggle whether your guides are displayed, and toggle on and off the snap options. You might want to dock this toolbar to the bottom or side of your window as I suspect you will use it often to toggle these options.

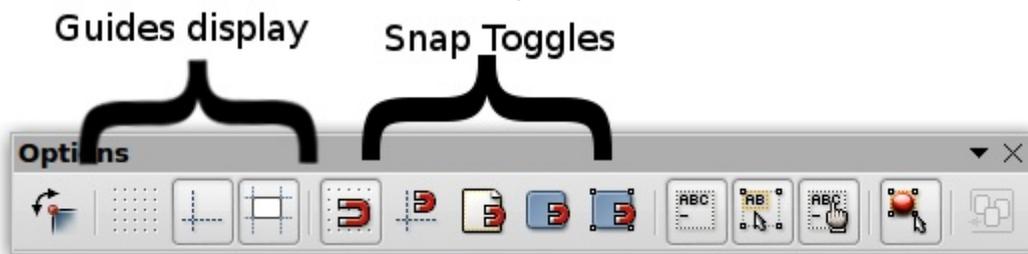
There is one more guide on the toolbar we have not discussed yet. It is the helplines. When you select the helplines on the options toolbar, then, when you move an object, dashed lines appear from the corners of your object to the rulers. The helplines are just one more tool to help you accurately place your objects.

CONCLUSION

LibreOffice Draw is the graphics application of the LibreOffice suite. Draw saves graphics in a vector graphic format for use in your documents created with other applications in the suite. Draw provides you with the tools

to combine text and geometric objects to create your graphics. Guides, and the ability to snap to the guides, help you to precisely place your objects.

In the next LibreOffice How-To, we will look at creating basic objects in Draw.



Elmer Perry's history of working, and programming, computers involves an Apple IIE, adding some Amiga, a generous helping of DOS and Windows, a dash of Unix, and blend well with Linux and Ubuntu.



The Ubuntu Podcast covers all the latest news and issues facing Ubuntu Linux users and Free Software fans in general. The show appeals to the newest user and the oldest coder. Our discussions cover the development of Ubuntu but aren't overly technical. We are lucky enough to have some great guests on the show, telling us first hand about the latest exciting developments they are working on, in a way that we can all understand! We also talk about the Ubuntu community and what it gets up to.

The show is presented by members of the UK's Ubuntu Linux community. Because it is covered by the Ubuntu Code of Conduct it is suitable for all.

The show is broadcast live every fortnight on a Tuesday evening (British time) and is available for download the following day.

podcast.ubuntu-uk.org



The 2008 Beijing Summer Olympics brought IPv6 to the attention of the technical crowd, with further reminders on World IPv6 Day, 8 June 2011, and World IPv6 Launch Day, 6 June 2012. We are, for the most part, informed that the current IP (IPv4) address space is running out, and that sometime in the short to middle term we will need to get to using IPv6 addresses and connectivity to the Internet.

This is not quite yet the case for most people. Internet Service Providers have not rolled out native IPv6 access in many countries. Most servers still have only Pv4 access, with the exception of Internet giants such as Google, Facebook and several others. Much of the hardware available (specially in the domestic category) still handles only IPv4. But things are changing, and we will need to get to it. Going dual-stack, i.e. having both IPv4 and IPv6 activated at the same time, is a nice way of making the transition.

Luckily for us, Debian, Ubuntu and most other GNU/Linux distributions are well up to speed as regards IPv6. The Linux kernel itself handles IPv6 quite well, GNU user-land applications have been adapted or ported to IPv6, and most widely-used GUI programs are now capable of making use of IPv6 connections - actually, when both IPv6 and IPv4 are present, they tend to prefer IPv6.

So, in a way, Ubuntu is ideal to make a first contact with this new, IPv6-enabled version of the Web.

CONNECTING TO THE INTERNET WITH IPV6

Supposing we do not have a native connection to the IPv6-enabled Internet, we shall need the services of a tunnel broker. This is the equivalent of an Internet Service Provider, but instead of giving access to the Internet for individual lines or devices, it gives access to the IPv6-enabled Internet starting from a normal IPv4 address. We will be

creating an IPv6 tunnel from our computer to the tunnel broker, through the IPv4-only fabric that lies between us.

Several tunnel brokers are available, both free and commercial. Two in the former category are SixXS (<http://www.sixxs.net>) and Gogo6 (<http://www.gogo6.com>). In both cases, the necessary software is open, free, and readily available from the Ubuntu repositories.

For Gogo6, we need to sign up for their Freenet6 IPv6 access service, at <http://www.gogo6.com/freenet6/account>. Each of their servers works independently from the others, so remember which one you are on (choose the one you think is best accessible from your country). Once we have confirmation of being registered, we need to install the software:

```
sudo apt-get install gogoc
```

Naturally, we could also use a graphical program such as

Synaptic, Ubuntu Software Center, or Muon.

We then need to edit the configuration file `/etc/gogoc/gogoc.conf` with the username and password the server gave us, and restart the service with

```
/etc/init.d/gogoc restart
```

We should then be able to see the tunnel with the `ifconfig` command:

```
ifconfig
tun      Link encap:UNSPEC
HWaddr  00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
          inet6 addr:
2001:db8::101/128
Scope:Global
          UP POINTOPOINT
RUNNING NOARP MULTICAST
MTU:1280  Metric:1
```

In this example, our IPv6 address would now be `2001:db8::101`. Since this is just an example, I chose a (relatively) simple address—real IPv6 addresses may need be written with up to 32 hexadecimal digits,



HOWTO - CONNECTING TO IPV6

grouped into eight four-digit groups.

If we choose SixXS as our tunnel broker, the registration process may be slightly slower (it took slightly less than an hour for me) since it is not completely automated: real human beings process our request. We can then request a tunnel be activated for us, and, optionally, an IPv6 address subnet. The tunnel is all we need to access the IPv6 Internet on a single computer; the subnet is needed if we chose to connect a complete local network through our machine.

For SixXS, the appropriate software package is aiccu:

```
sudo apt-get install aiccu
```

When we have edited configuration file `/etc/aiccu.conf` with the username and password given by SixXS, we can restart the service:

```
/etc/init.d/aiccu restart
```

and we should then be able to see the tunnel with the `ifconfig` command:

```
ifconfig
```

```
sixxs Link encap:UNSPEC
HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
          inet6 addr:
fe80::40:fe00:229:2/64
Scope:Link
          inet6 addr:
2001:db8::101/64 Scope:Global
UP POINTOPOINT
RUNNING NOARP MULTICAST
MTU:1280 Metric:1
```

This one is configured in a slightly different way than the Gogo6 version (note the /64 segment, instead of a single host /128 address), and uses identifier "sixxs" instead of "tun".

If things have gone well so far, either with Gogo6 or with SixXS, we can now use the IPv6-activated versions of network tools to check connectivity, such as `ping6` (instead of `ping`) and `traceroute6` (instead of `traceroute`). Other tools, such as `host` and `ip`, work in the same way both for IPv4 and IPv6. So:

```
host ipv6.google.com
ipv6.google.com is an alias
for ipv6.1.google.com.
ipv6.1.google.com has IPv6
address
2a00:1450:4001:c02::63

ping6 -c 3 -n ipv6.google.com
PING
ipv6.google.com(2a00:1450:400
1:c02::68) 56 data bytes
```

```
64 bytes from
2a00:1450:4001:c02::68:
icmp_seq=1 ttl=51 time=228 ms
64 bytes from
2a00:1450:4001:c02::68:
icmp_seq=2 ttl=51 time=228 ms
64 bytes from
2a00:1450:4001:c02::68:
icmp_seq=3 ttl=51 time=229 ms
```

Since we now have IPv6 connectivity with the Web, we can browse IPv6-only web pages. Some classical destinations to try out IPv6 are the dancing turtle at <http://www.kame.net> (it dances only if we connect through IPv6), or the test pages at <http://www.test-ipv6.com> or <http://www.ipv6-test.com>.



DIFFICULTIES WITH IPV6 AND UBUNTU

We have just set up a dual IPv4 and IPv6 stack; our computer is connected directly to the IPv4 Internet through our usual Service Provider, and indirectly to the IPv6 Internet through the tunnel broker. But if we had not set up or do not activate the tunnel, our computer can be in a situation in which it has a working IPv4 connection, but not so with IPv6.

Ever since most modern operating systems activate IPv6 by default, this has given rise to some confusion. Many programs are capable of handling dual-stack access, they prefer to use IPv6 if possible and if not fall back to IPv4. But other programs cannot handle this, which usually ends up causing delays that annoy the user. Some programs even complain about "not being able to connect to the Internet" - even though a perfectly good IPv4 connection is up.

This is now more-or-less fixed for software on Ubuntu, though with previous versions it was

sometimes necessary to deactivate IPv6 at kernel level. One option was to blacklist the ipv6 kernel module, as mentioned by Robert Clipsham way back in number seven of FCM. Another possibility with recent kernels is to disable IPv6 through the proc interface:

```
echo 1 > /proc/sys/net/ipv6/conf/all/disable_ipv6
```

However, it should be stressed that these difficulties should no longer come up under Ubuntu: whichever order in which a program chooses to connect to the Internet, it should be able to do so through one route or the other. Not so in other operating systems, specially with commercial software.

WORLD-REACHABLE ADDRESSES

The nice thing about IPv6 is that Network Address Translation (NAT) and private addresses, ubiquitous in the IPv4 world, are no longer used. The reason is that since there are so many public IPv6 addresses available, it will not be necessary to re-utilize them many times over in the form of private addresses that are not routable through the Internet.

The corollary is that the computers we connect to the Web using IPv6 are directly reachable from all over the Internet. Nothing stands between us and the wild world out there.

This can come out as an

advantage. Consider, for example, the hoops some of us jump through in order to reach our home machines from outside, while on the road. Or to get into our work machines from home (though systems administrators may frown on this, and rightly so). With IPv4, we need to open a port in our router to enable access from the outside, and activate Destination NAT (DNAT) to make packets we actually send to our router's external address be resent inside towards a specific PC. And we must achieve this rather complex setup while at the same time taking into account system security.

With IPv6 and world-reachable addresses, this is no longer necessary. If, for example, my home computer has global address 2001:db8::101 and an Apache web server running, I can connect to it directly from outside my home by simply pointing any browser to the corresponding URL, `http://[2001:db8::101]`. If I set up a personal mail server, it can also be directly reached and mail sent to me from the Web.

But having our computers directly reachable can also



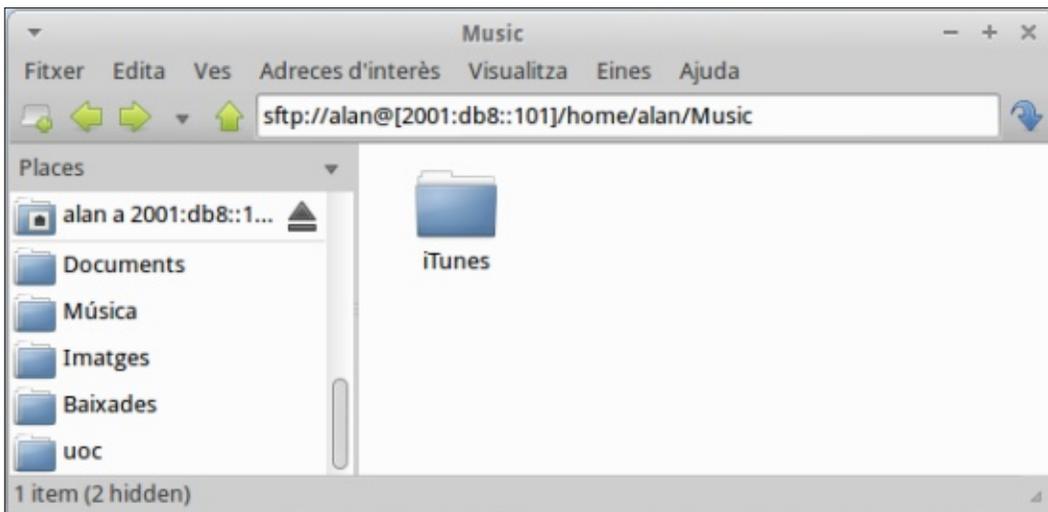
HOWTO - CONNECTING TO IPV6

constitute a serious security risk. So we need to be really careful about what kinds of traffic we let in.

To protect my home computer, I can use my global IPv6 address to set up a SSH or OpenVPN virtual private network (VPN). This way, full communication can be set up for all protocols through an encrypted and authenticated channel. Even if somebody in between may see my packets as they pass through, they cannot decrypt them and view the data contained within. So we have a strong argument in favor of setting up a secure VPN, and making sure our services can be accessed not directly from the Internet, but only through the VPN.

Naturally, Ubuntu has all the necessary tools in the repositories, both for the client and for the server sides of the VPN. The corresponding software packages are `ssh-server`, `openvpn` and `network-manager-openvpn` – though, as usual, other possibilities also exist.

Luckily, the Linux kernel firewall is also well up to the job, though it



does need to be correctly set up. The command-line way of doing this is probably not for the faint of heart, as it is relatively easy to leave out a rule and make things too easy for the bad guys—or being over cautious and inadvertently blocking yourself out. So a GUI tool such as `firestarter` may be a wise choice to begin with.

If we set up some services we wish to share with friends—or just use for ourselves—we should also bear in mind the security implication of having a port open to the world. Special attention should be given to securing access, especially when sensitive data can be accessed, e.g. though file sharing. If all we want is access to

our files while on the road, SFTP is probably the easiest service to set up. Basically, all we need to do is install package `openssh-server` on our home computer. We can then access it from any file manager that knows about SFTP (such as Gnome's `Nautilus`) using URL `sftp://username@server_ip :`

Since SFTP is actually based on SSH, it may be considered quite secure, especially if no-password, public certificate-only access is used.

For road-warriors, several apps can be found that do SSH and SFTP, both for iOS and Android. Unless, of course, you choose to go with Ubuntu on your phone or tablet, in which case finding suitable client software is simply a matter of choice.



Alan teaches computer science at Escola Andorrana de Batxillerat. He has given courses at the University and currently teaches GNU/Linux systems administration at the Open University of Catalunya (UOC).

The KAME project

1998.4 - 2006.3



Dancing kame by [atelier momonga](#)



HOW-TO

Written by Nicholas Kopakakis

Blender - Part 6b

Last month we used Cycles Render to create the image shown below left.

Let's create a similar image (below right) with the Blender engine.

The first thing that we notice (at least me) is shadows. The shadows that our point lamp casts, with blender render, are almost black. This phenomenon is happening because in Blender renderer, the light is been emitted by the lamp only. This isn't realistic, as in the real world every

object emits or reflects light.

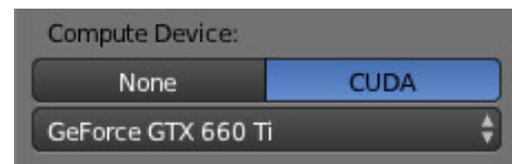
On the other hand, Cycles renderer calculates the light that every object has from the surroundings. You can observe the cone and see how the shadow from the cube smoothly fades (contrary to the cone from the Blender renderer), and we have a mirroring ground and a shiny metal cube in our scene.

One other thing that is very crucial, and a main difference

between Blender and Cycles, is more technical.

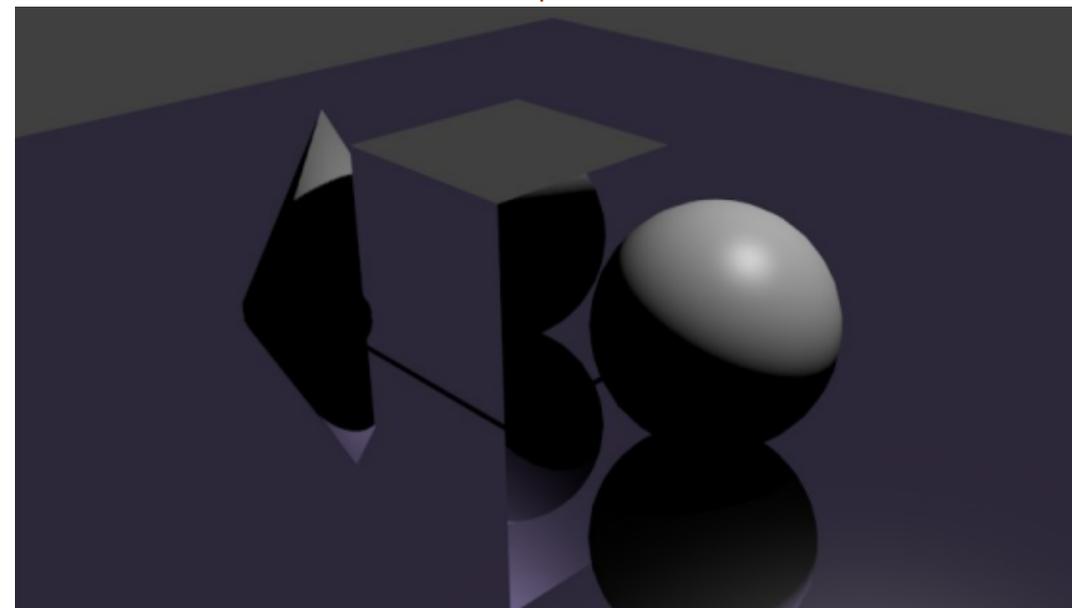
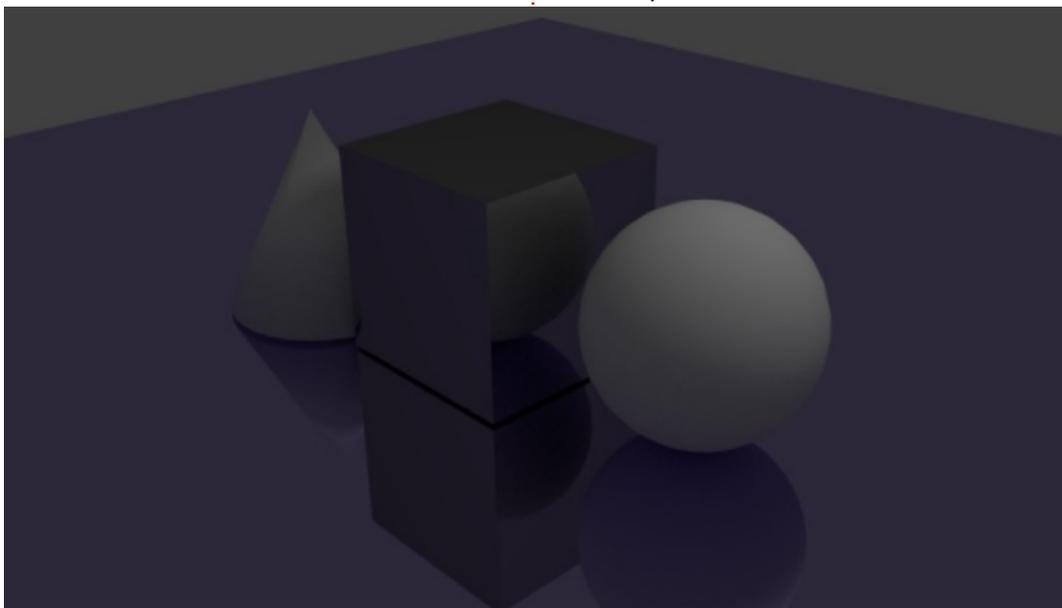
Navigate to File > User Preferences > System (above).

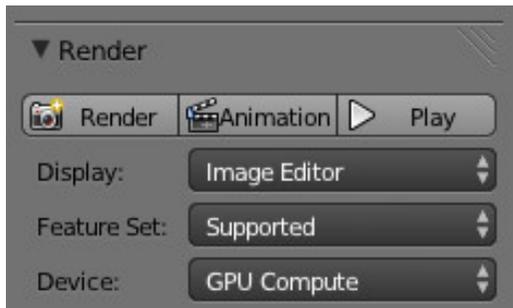
At the lower left corner of the System Tab you can check if your computer has Nvidia CUDA support under Compute Device



My GPU has CUDA support so I can enable it. You can also check it at the official CUDA support url: <https://developer.nvidia.com/cuda-gpus>

If you are lucky and have an Nvidia CUDA card, you have to enable it under the Compute Device Tab that I mentioned before AND under the Properties Panel, Render Tab -> Device -> GPU Compute in order to have the full power for your rendering.

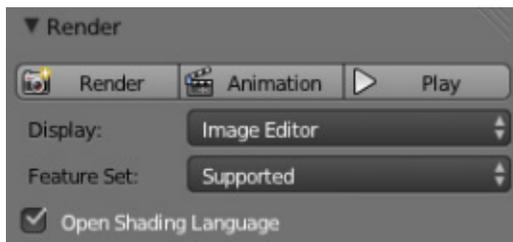




Cycles can use your GPU CUDA cores to render, and is much faster than the CPU. Check out CUDA at wikipedia :

<http://en.wikipedia.org/wiki/CUDA>

If you don't have a CUDA GPU, you can use Open Shading Language, but it's a little bit buggy and I couldn't recommend this method of rendering, for now. In the near future I have a feeling that it's going to be much faster than the CUDA render procedure.



But enough with the technical stuff.

Let's see another great thing

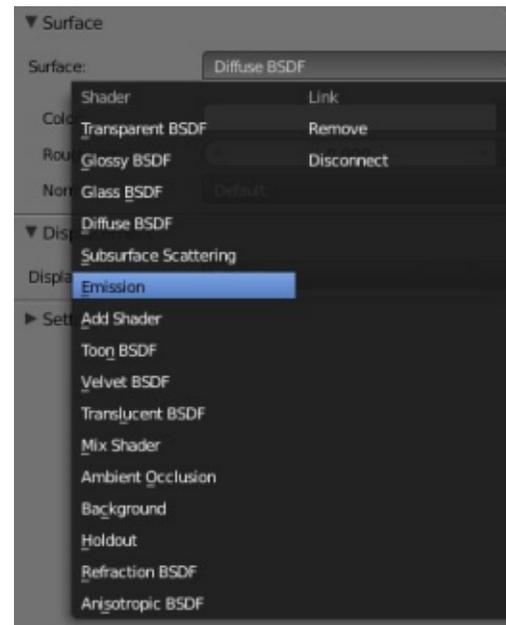
about Cycles. Open the .blend file that we started last month, or just create a new one. Don't forget to check that the Cycles Render at the top is selected



Also change one of your 3d view windows to show the rendered result.

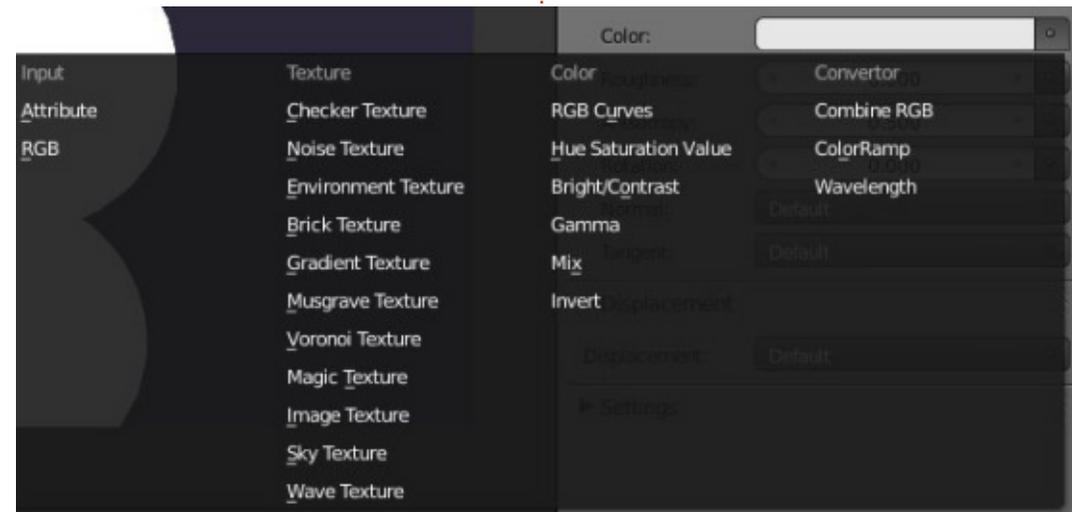


Select the sphere, navigate to the Properties Panel and change the Surface shader from the default Diffuse BSDF to Emission.



You can check in the Preview window the cool effect that we create. You can adjust the Color and the Strength of the light that your object emits. Also for every shader you can adjust a lot of other things (as textures, for example) by pressing the little dot right next to color and strength values.

Select our metallic-looking cube, press the little dot next to color, and change its texture to Brick Texture. Check the result in your 3d view window and select different textures until you find something that you like.



TIP: The little dots are in every shader, not only emission, and I personally find them very useful to quickly create interesting stuff.

Another interesting shader is the Mix Shader. As you can easily understand from its name, this is a shader that you can use to mix other shaders. Two other shaders to be more precise. So, let's select our cone and change the Diffuse BSDF shader to Mix Shader. Add a Glass shader and a Diffuse shader or a Glossy Shader and an Anisotropic Shader to our cone. Change the value of the Fac parameter to adjust the percentage of the second shader (0.000 means 0% while 1.000 means 100%)

Check the result on your preview window and adjust the settings as you like.

Another thing that I want to mention in this tiny little introduction on the Cycles Renderer, is the use of planes instead of lamps.

Most people working in Blender and Cycles use planes to illuminate their scenes. Looks like more "real

world" lighting, and I have no reason to argue with them.

Below is where I am so far.

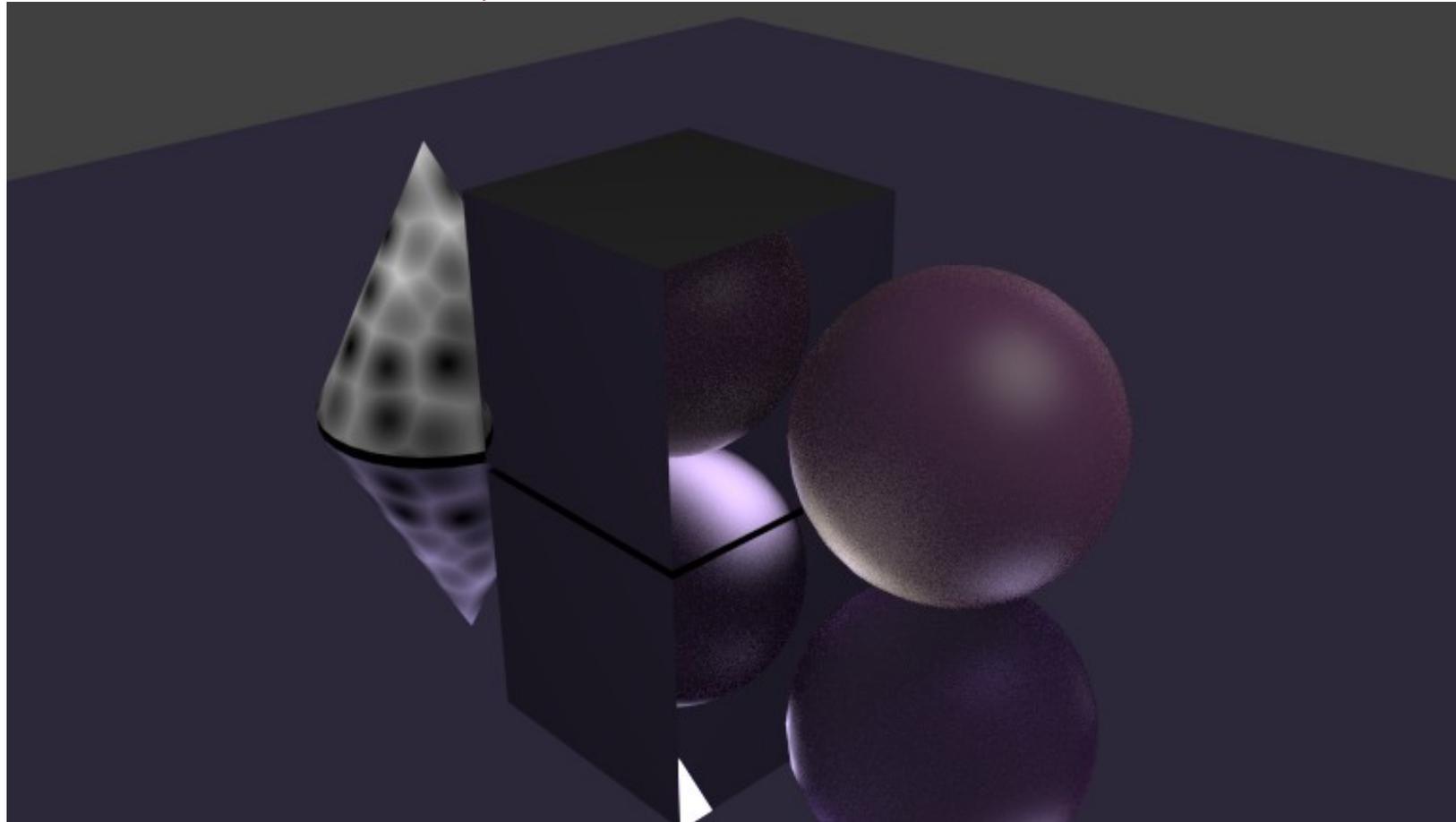
For this month, follow this link <http://vimeo.com/68010380> to enjoy a wonderful work by 3 people and Blender (congratulations goes to Javier Trapiella, Baol Bardot Bulsara and Robert Green).

Also visit www.blendernews.org to enter and share with thousands of professional artists!

http://blendernews.org/xe/?mid=Feature_Articles&document_srl=1274



Nicholas lives and works in Greece. He has worked for a post-production house for several years and migrated to Ubuntu because "it renders faster." You can email him at: blender5d@gmail.com





HOW-TO

Written by Mark Crutch

Inkscape - Part 14

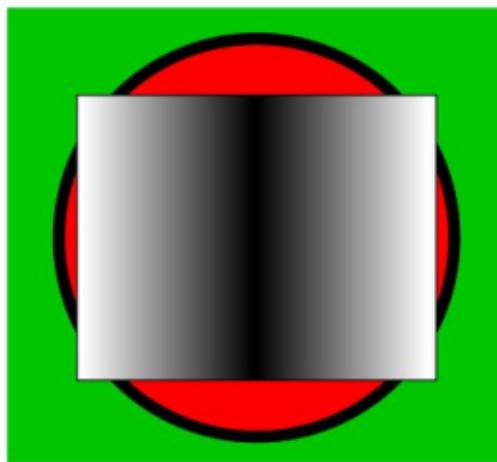
Transparency – or its counterpart, opacity – is such a fundamental concept in Inkscape that it was one of the earliest topics covered in this series. Back in Part 3 you were introduced to the Opacity spin-box on the status bar, which gives you the ability to set a single transparency level for a whole object, or even a group of objects.

If you want a single object to have varying opacity – such as completely transparent at one end, and opaque at the other – you can use a gradient for the fill and stroke. But what about doing the same for a group of objects? You could set suitable gradients on each individual item in the group separately to get the desired effect, but if your group contains lots of objects, then that approach becomes tedious very quickly.

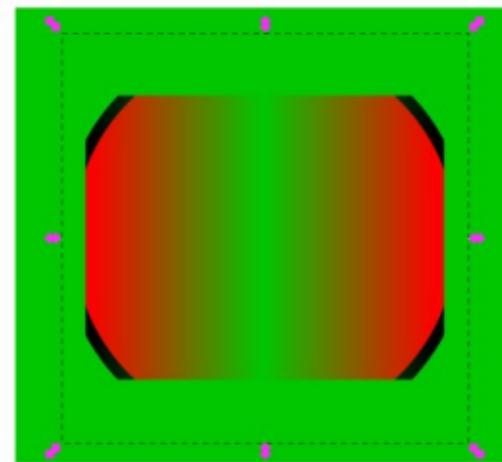
The solution to this problem is masking. This is a technique that uses a grayscale image as a means of specifying the opacity of another object or group. Any white sections in the image cause that

part of the masked object to appear opaque. Black sections cause that part to appear transparent. And grays in-between result in varying levels of opacity.

Let's look at an example. In this image (below) I've placed a solid red circle on top of a solid green background. The green is there mainly to show the effect more clearly. On top of the circle is a rectangle with a white-black-white gradient. Using this rectangle as a mask for the circle gives the result of a clipped circle that fades from opaque to transparent and back to opaque.



Note that anything outside the mask is clipped. In that respect, masking could even be used as an alternative to the clip paths that were introduced in the previous part of this tutorial. Draw your mask entirely in white – or in solid shades of white and black – and any parts of the masked object which lie outside the mask, or which are colored black, will be clipped. Usually I recommend using a clip path in preference to a mask if you simply want a hard clipped edge, but, as we will see later in this article, there are times when it's easier to use a mask.

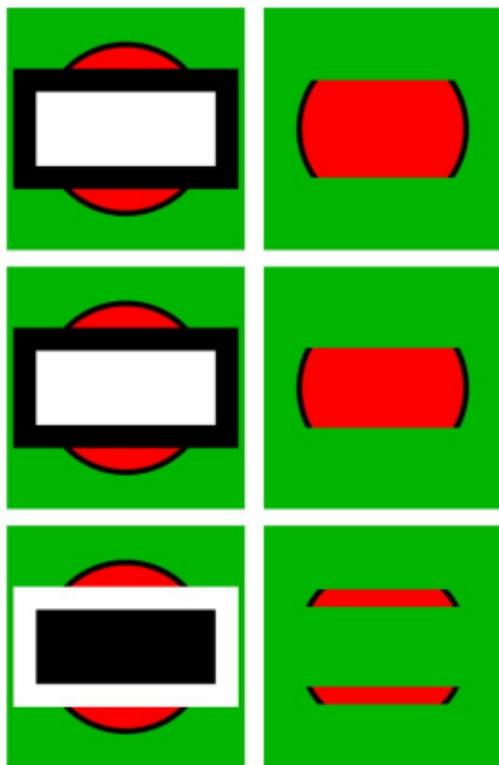


You may recall that the fill and stroke of a clip path are irrelevant to the final effect on the clipped object. With masks, however, the opposite is true – the color of each individual pixel is taken into account when calculating its effect on the masked object, so fills and strokes have significance.

Did I say pixel? In a vector format? In practice, there are few cases where an SVG file is actually used as a purely vector format. If you want to display an SVG file on a computer screen, or print it to an inkjet or laser printer, it is ultimately converted to pixels. Masking takes place during this final output step, so although the mask may be made up of vector objects, and the item being masked is also a vector, the final result is really generated only at the point that those vectors are converted to individual pixels for display or printing.

Using a thick-stroked rectangle and strictly black or white pixels, it's easy to see the difference between a clip path and the use of

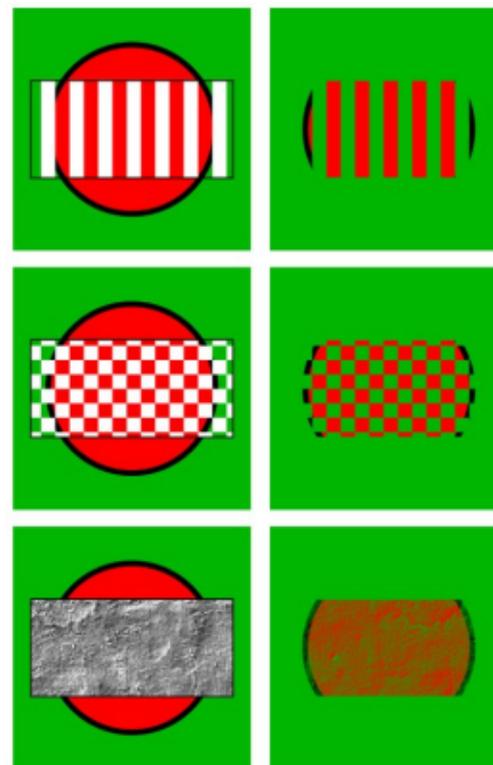
a mask to simulate clipping. In the top pair of images, I've used the rectangle as a clip path, and you can see that the result is aligned with the center line of the stroke. The second and third pairs of images show the rectangle being used as a mask, with only white parts remaining and black parts becoming transparent. It's especially clear in the last pair that the stroke has an effect.



By now it should be clear that clipping and masking are similar operations, so it's not really surprising that Inkscape exposes them with the same user interface. Just as with clipping, the masking object must be on top of the object to be masked, in terms of the z-index. You then select both items and choose Set Mask from the context menu, or Object > Mask > Set from the main menu. Releasing a masked object is as simple as selecting it (it will be described as "Masked" in the status bar) then choosing Release Mask from the context menu, or Object > Mask > Release from the main menu. Just as with clip paths, it is possible to edit masks using the node tool without releasing them first, but generally there's little benefit to doing so as you can edit only the outline shape of the path, not its color.

As you've seen, using a grayscale gradient as a mask gives you some control over the opacity of the masked object. You may also recall that Inkscape offers a selection of black and white patterns in its Fill & Stroke dialog, plus a few grayscale bitmap fill patterns. These may previously

have seemed rather limiting, but their monochrome nature makes them perfect for use as a mask.



The checkerboard pattern is a good example of a situation where it's easier to use a mask than a clip path. This same effect could be achieved by clipping with a complex path, but it's probably not worth the extra effort. Looking closely at the checkerboard, you'll notice that the fill isn't made up of black and white squares, but rather white and transparent. Using white and transparent can sometimes

make it easier to see what parts of an object you are masking: white areas will remain visible, and transparent areas will be clipped. A translucent white area will have the same effect as a shade of gray. It may seem counter-intuitive to cover the parts of the object that you want to keep, and expose the parts that will be hidden, but that's the way that masking has been defined in the SVG specification, so that's the way it works in Inkscape.

Because clip paths are defined by a boundary and a concept of what's inside and outside that boundary, it's possible to use only a single path or object to define a clipping shape. Masks, on the other hand, are concerned with only the color of pixels, so it doesn't really matter whether your mask is made up of a single object or a whole load of objects inside a group. This allows you to create complex arrangements of colors and patterns which would be impossible to reproduce using a single path.

This example uses a group made up of a few random objects as a mask. You can see that the repeating radial gradient of the rectangle, made up of a white-to-

transparent transition, results in a similar pattern being visible from the masked red circle. But by adding extra black and white features to the mask group, you can “override” the pattern with explicit sections of transparency and opacity. One thing to note is the place where the black line crosses the white one: because the black line is on top, the pixels at that position are black, so that part of the masked object is transparent. It doesn't matter what's going on within the group, all that matters is the color of the final pixels. This may not be the best piece of abstract art in the world, but it would have been a lot harder to draw without using masks.

Although you can use masks to create complex arrangements of clipping and transparency, probably the most common use is simply to add “feathering” to the edges of a group so that it fades into the background. In that case all you need for your mask design is a strongly blurred white ellipse, as demonstrated in this wholly unseasonal greeting card design.

Throughout this article I've referred to masks as being grayscale images. That's not strictly true – a mask can be any combination of colors that you want. However, anything other than white, black or gray will be converted into a grayscale image before it's used as a mask. This can make it difficult to predict the

exact effect of a color on the resultant opacity, so I recommend using pure grayscales when drawing your masks in almost all cases.



Mark has been using Linux since 1994, and uses Inkscape to create two webcomics, 'The Greys' and 'Monsters, Inked' which can both be found at:

<http://www.peppertop.com/>





GUIDELINES

The single rule for an article is that **it must somehow be linked to Ubuntu or one of the many derivatives of Ubuntu (Kubuntu, Xubuntu, Lubuntu, etc).**

RULES

• There is no word limit for articles, but be advised that long articles may be split across several issues.

• For advice, please refer to the **Official Full Circle Style Guide:** <http://url.fullcirclemagazine.org/75d471>

• Write your article in whichever software you choose, I would recommend LibreOffice, but most importantly - **PLEASE SPELL AND GRAMMAR CHECK IT!**

• In your article, please indicate where you would like a particular image to be placed by indicating the image name in a new paragraph or by embedding the image in the ODT (Open Office)

document.

• Images should be JPG, no wider than 800 pixels, and use low compression.

• Do not use tables or any type of **bold** or *italic* formatting.

If you are writing a review, please follow these guidelines :

When you are ready to submit your article please email it to: articles@fullcirclemagazine.org

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REVIEWS

GAMES/APPLICATIONS

When reviewing games/applications please state clearly:

- title of the game
- who makes the game
- is it free, or a paid download?
- where to get it from (give download/homepage URL)
- is it Linux native, or did you use Wine?
- your marks out of five
- a summary with positive and negative points

HARDWARE

When reviewing hardware please state clearly:

- make and model of the hardware
- what category would you put this hardware into?
- any glitches that you may have had while using the hardware?
- easy to get the hardware working in Linux?
- did you have to use Windows drivers?
- marks out of five
- a summary with positive and negative points

You don't need to be an expert to write an article - write about the games, applications and hardware that you use every day.





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ASK THE NEW GUY

Written by Copil Yáñez

Hi, everyone! Welcome back to Ask the New Guy!

If you have a simple question, and you think Ubuntu Bug #1 is some kind of flying roach, contact me at copil.yanez@gmail.com.

Today's question is:

Q: How do I connect to my Ubuntu desktop using my Android phone?

A: Right this way, Mr. Bond! Q Branch has been working on some new toys for you. How about this? It's a combination martini shaker-slash-Taser. No? Well, then, perhaps this combination cufflink-slash-Taser. Or this, it's a combination Taser-slash-Taser. Not very imaginative, I know. Sorry, sir, we're a little underfunded right now.

Nothing says "I want to be Daniel Craig or Jennifer Garner" like accessing your Ubuntu desktop from your mobile phone. What's funny is that if Hollywood were doing it, there would be multiple

cascading menus and screens along with some kind of eye-tracking digital Heads Up Display and virtual keys you'd have to press in the air like a method-out orchestra composer.

Quick detour: why is it that every tinseltown movie shows people working with virtual GUIs suspended in front of them? I get exhausted just lifting my hand to turn off the monitor. Forget about hacking an enemy server, can you imagine typing an email on one of those? Are there NO ergonomics experts in Hollywood? End detour.

As usual, Ubuntu's way is easy and sexy. Not sexy as in actually sexy. Accessing your desktop remotely isn't likely to get you a date with Halle Berry or Javier Bardem. But it might impress Miss Linux Kernel 2013 and keep stray Luddites from wandering onto your lawn.

To access your Ubuntu desktop from your Android phone, you'll need the following:

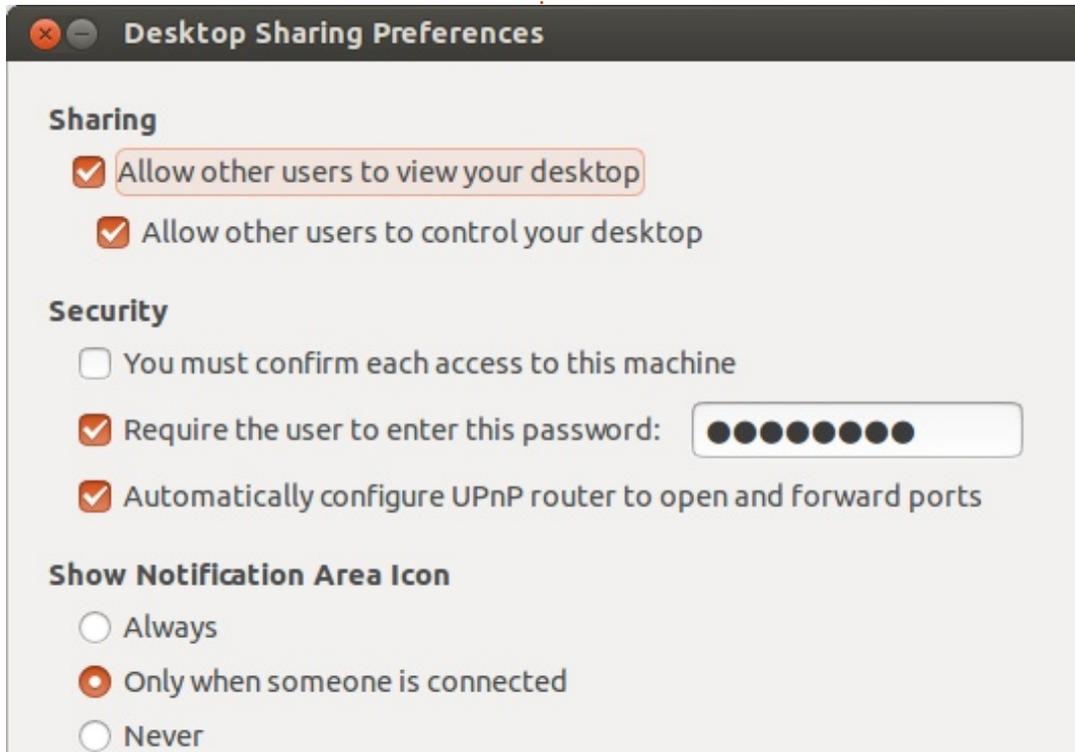
1. An Ubuntu PC (I'm on 13.04) - make sure it's connected to your home network
2. An Android Phone (I used an HTC Droid Incredible II running Gingerbread)
3. Someone to shout "*Hallelujah!*" when you're finished (this is key, people, don't skimp)

Okeedokee, got everything ready? Good. Go to your PC and click on the Ubuntu symbol to

open the Unity search field. Type DESKTOP and you'll see a Desktop Sharing application. Click on that to open it.

Here is how I configured my preferences in order to give external access to my Ubuntu desktop:

The Desktop Sharing window asks for a password that must be



entered in order for someone to connect from the outside. Use something you can easily remember, like the name of the gaffer on Star Trek II: The Wrath of Khan (Romolo Aquistapace, as if you didn't know).

You'll notice I left blank the "You must confirm each access to this machine" option. You might want to keep this box checked. It's never a good idea to leave your machine accessible to the outside world, even if you're requiring a password. I have it toggled OFF for ease of use, but, honestly, do as I say, not as I do. And, as a general rule, you should never take security advice from someone who revels in his ignorance.

Oh, if you currently have your app bar along the left side of your screen set to auto-hide, change that to the default so that it's always visible. If the app bar auto-hides, it's more difficult to access it from your phone. Also, if you have your computer set to sleep after a certain amount of time, you might want to change this setting so that your PC doesn't go to sleep, and thus disconnect you, in the middle of a connection.

You'll also need your desktop PC's IP address. Ubuntu makes this dead simple. Just right-click the network icon and click on Connection Information. Note the IP address listed there, you'll need it in just a second.

Okay, now it's time to get your phone ready.

Fire up your Android phone and head over to the Google Play Store. You're going to need a VNC client. That's the software that will connect your phone to your PC. I'm not sure what VNC stands for, probably just the initials of the

white-haired wizard who captured this sorcery and gave it away on the Internet.

I should probably take a moment to explain what a VNC client does. But I'm not gonna. Life's too short, you know?

The VNC client I used is called android-vnc-viewer, and it's free. Once you've downloaded the software, press the icon to run it. You'll see a window with empty fields. Let's fill those in and solidify your status as Alpha Nerd/Nerlette among your peers (which, if they mainly consist of villains named Hans with world

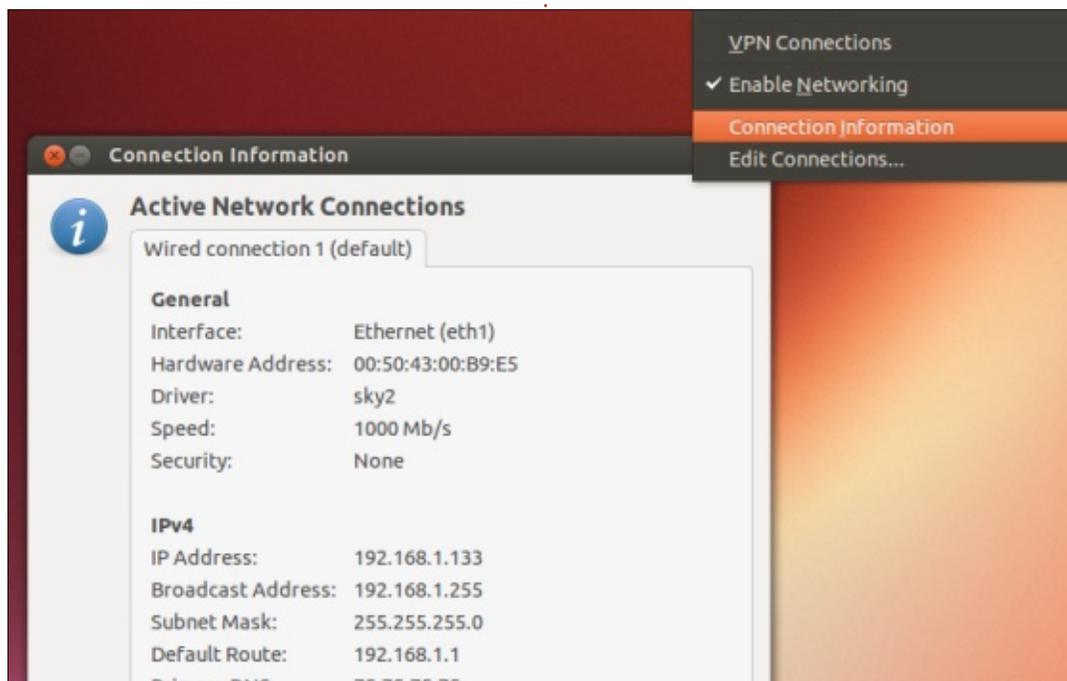
domination fetishes, you should consider ditching).

In the Nickname field, type something catchy, like Space Wolf or Super Tramp. You're being totally badass right now, your nickname should reflect this.

Next, type in the password you set up on the Desktop Sharing application. Finally, type in the desktop PC's IP address. Your screen should look something like that shown on the following page.

Ready? Time to see if your Hallelujah shouter is up to the task. Also, if there are any annoying neighbors who keep trying to explain fantasy football to you, invite them over. Payback time!

Click Connect. Hallelujah! Feel free to lift your arms up Moses style and scream "Behold!" In a few moments, your smartphone screen will fill with a lower resolution version of whatever is on your desktop screen. Your phone's screen will now act like a laptop trackpad. Wherever you move your finger, your cursor follows. Tap the screen on an Ubuntu app icon and watch it open.



ASK THE NEW GUY

Pretty cool, right?

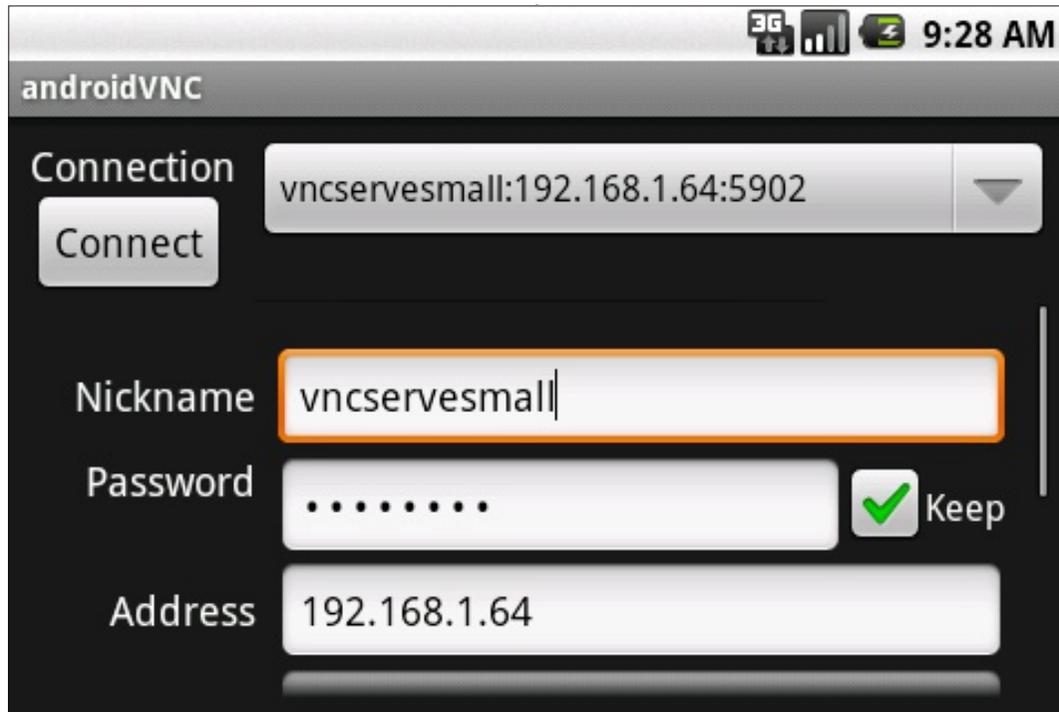
What can you do with this? The options are endless! You could access your PC and email yourself a file you forgot to put into the cloud. Or click on your webcam and do a quick security check of your home office. Or make people believe you've just hacked into a bad guy's world domination system and are shutting down his nuclear weapons lab with a few keystrokes. Ladies, you'll be all the rage at the next LAN party!

Go ahead, indulge your inner Sydney Bristow or James Bond.

Good luck and Happy Ubuntuing!



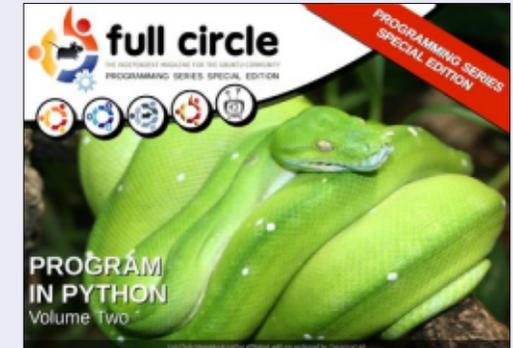
Copil is an Aztec name that roughly translates to "you need my heart for what again?" His love of women's shoes is chronicled at yaconfidential.blogspot.com. You can also watch him embarrass himself on Twitter (@copil).



PYTHON SPECIAL EDITIONS:



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Video is everywhere these days. Our phones, tablets, digital cameras and notebooks all have video capable cameras in them. Whether you're taking a family video or producing a documentary, it's nice to put some polish on the video. There are a lot of video editing tools for Linux: Lives, Cinelerra, OpenShot, Pitivi, and Kdenlive to name a few. These editing tools will help you put the polish on your actual video, but what do you do about creating a polished looking DVD menu?

In FCM#73, I mentioned DeVeDe and KMediafactory. DeVeDe is great for creating simple menus if you're in a hurry, but menus look text heavy. KMediafactory was great at one time, but it hasn't been developed in several years and the templates are limited. Enter DVDStyler. DVDStyler is a cross-platform free DVD authoring application for the creation of professional-looking DVDs.

DVDStyler is available in the universe repository of Ubuntu and

can be downloaded with a simple

```
apt-get install dvdstyler
```

DVDStyler has a number of xine video-related dependencies.

When DVDStyler starts, it prompts you to create a new project or open an existing project. If you create a new project, you'll want to adjust some of the project title, DVD size, video quality, video format, aspect ratio, and audio format for your region. In North America we use NTSC. I chose the

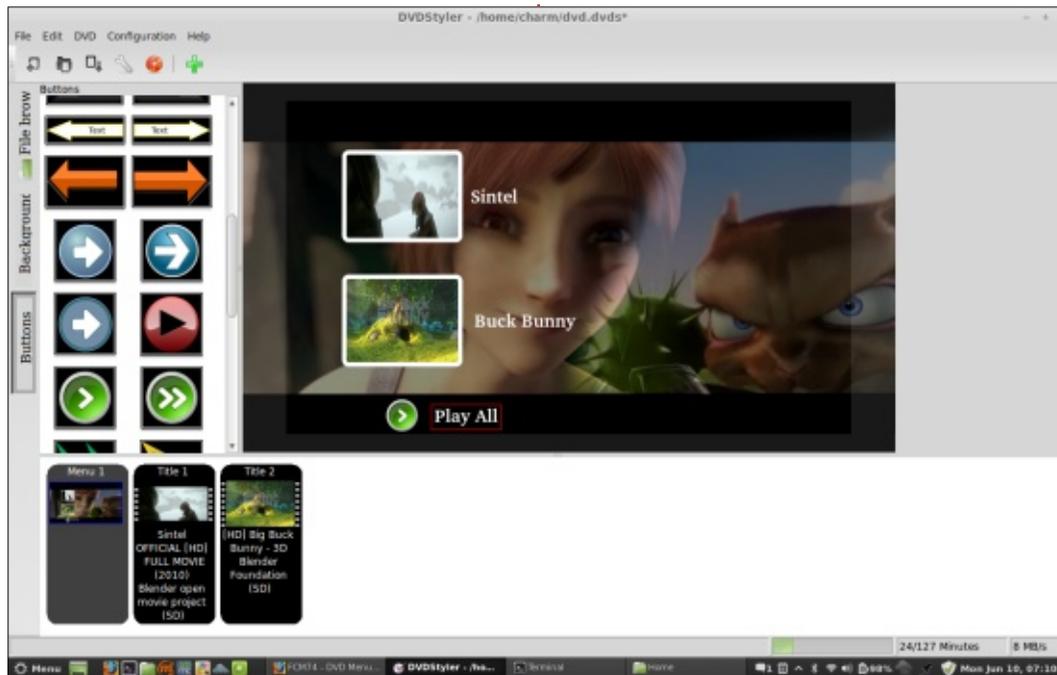
16:9 rectangular aspect ratio and stuck with the default AC3 audio.

Next you're shown a number of templates and asked to select a template. You can choose a template or simply click the no-template button. There are a selection of backgrounds on the left hand side to choose from, but, by right-clicking in the blank space and selecting properties, you can choose your own image and audio track for the menu. If you select an audio track, be sure to click the

loop check-box to have it play more than once (you, too, can have that eventually annoying repeating music track that seems so cool when you first hear it).

Once you have your background and audio track, it's time to add some content. In this instance, I kept it simple and added two videos by clicking on the File Browser tab on the left side and dragging two videos to the menu page. To add text beside the videos, right-click near the videos, select add, then select text, and type in the text (Sintel for example). Once the text is on the page, you can select it and change the text properties including font size, style, fill, outline color, outline size, background color and location.

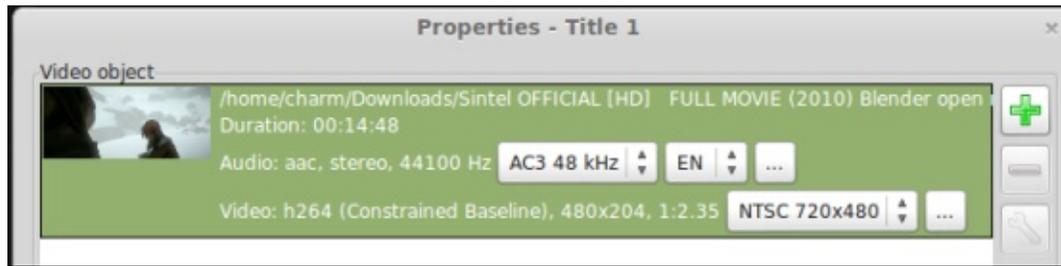
I wanted an option to play both videos back-to-back, so I added a button from the buttons tab on the left. I changed its properties by right-clicking on the button, selecting properties, then clicking on the Play all titles check-box.



Buttons need not be tied to videos. You can also add sub-menus by clicking on the DVD menu option then clicking add and menu. This creates a second menu which you can link a button to by choosing menu 2 (in the image above I just have one menu called Menu 1) from the Jump to drop-down dialog (instead of title 1 in the example illustrated). Sub-menus can be used to create a menu for chapters, subtitles or audio.

A good example of how you might use a second menu is if you want to provide a menu for specific chapters of a video. Don't worry if your video is one long video, you can create chapters by right clicking on the video (title 1 for example), selecting properties, and entering the time for the second, third, fourth, etc. chapters in the chapters field.

In the buttons along the left hand side, there is a square blank button above an elliptical blank button. The square button displays an image once dragged to the menu space. On the second menu, drag out enough square buttons to match the chapters you've created (remember chapter 1 usually starts



at position 0 in the video, so, although our screenshot shows 5 times, we have 6 chapters). Add text below or beside each chapter. By default, all the square buttons will be linked to chapter 1. To change this, right-click on each square button, choose properties, and from the Jump to drop-down, select the correct chapter for each button. Don't forget to add a menu button and link it back to menu 1 (our top/main menu). With a little work you can get some neat results.

DVD Styler is a great program, but, during the making of several menus, I bumped into a few problems. First, text appears to be limited to 10 characters. Second, although I was able to resize the video buttons, the 'keep aspect ratio' button didn't work as expected and seemed to squish the video buttons so they didn't look correct. Although it's not a problem, it would be nice to have guidelines in addition to the grid option.



When you've imported all your videos and created all your menus, click the File, then click Burn DVD and OK to make an ISO image of your DVD. Use Brasero, XFBurn or K3b to burn the ISO to DVD.

If you're feeling particularly adventurous, and are not afraid of a little XML, you can even create your own buttons for DVD Styler. A guy named Mike created a detailed blogger post about how to add your own buttons to DVD Styler here:

http://mikesgeneralblog.blogspot.ca/2006/08/creating-new-buttons-for-dvdstyler_04.html

You can find the DVD Styler documentation and other links on the DVD Styler web site at: <http://www.dvdstyler.org/en/>

Happy DVD menuing!



Charles is a step-father, husband, and Linux fan, who hosts a not-for-profit computer refurbishing project. He maintains a blog at: <http://www.charlesmccolm.com/>



It has been about 6 years since I took my first dive into the ocean of open source. The first open source operating system that I was introduced to was OpenSolaris. I was very eager to know about Linux and Unix systems when I was completing my 11th standard in high school. (In India, graduation starts after 12th standard.) Until now, I was mastering in Installation & Troubleshooting of Windows. I loved to fix my friends' systems as I am crazy about operating systems.

I love to have a challenge, find solutions to problems, fix systems, and try new things. I was well known in my school days and college days among classmates and senior students for having IT skills. In the first year of my engineering at Government Eng. college, Dahod, I loved to stay in the internet lab till it closed. Once my head of department professor found out about my IT skills, he gave me the responsibility to maintain the system health of all computer systems in the Internet lab. As a reward, I got systems for testing and trying out new things.

At that time, internet connections were very limited to a few colleges and enterprise organizations, and there were slow and unstable dial-up connections.

I was looking for an operating system more powerful than Windows. At that time in India, the word "Linux" was heard by a only few IT geeks. Linux was used rarely in giant enterprises in India. I tried out OpenSolaris, but I didn't find it better than Windows.

In September 2009, I came across the Ubuntu website while Googling about Linux. Ubuntu was different than what I had heard about other Linux distros. I found Ubuntu more user friendly than any other Linux distro—with a nice GUI and powerful security features. I began to gather more and more information about Ubuntu. Due to the slow and unstable internet speed (max download speed 15 kbps) at that time, I could not download Ubuntu 9.10. It would take 3 to 4 days to download it, and bandwidth was also costly at that time.

Around October 2010, when Ubuntu 10.10 was launched, I decided to download Ubuntu 10.10 anyhow. Internet speed was good enough but there weren't stable internet connections yet. We could hardly download up to 150 MB per day. After downloading 5 consecutive days with a mobile dial-up connection, I downloaded Ubuntu 10.10 successfully on my friend's desktop. We tried to make a WUBI installation, but failed. I decided to install Ubuntu by creating a new partition and have a full installation. Finally, I got Ubuntu installed within just 20 minutes on a P4 with 512 MB RAM. This was my first installation of Ubuntu. I had seen Ubuntu just in screenshots before. Within 3 days I explored the whole system. My friend was confused about how to use the system, but I taught him Ubuntu. My friend was very happy with Ubuntu because now he had a virus-free system with all required software preinstalled. We got every device working with Ubuntu from a camera to 3G modem without installing any additional drivers. My whole computing world

changed. I was entering the world of Ubuntu.

In November 2010, I assembled my own desktop with Core i3, 2 GB RAM, 500 GB HDD, and Ubuntu. Many questions arose in my mind: How is Ubuntu being developed? How do contributors work together? What does this wonderful system consist of? After spending some weeks on the Internet, I got my answers. I checked out the whole Ubuntu history and came across the Launchpad platform, Ubuntu forums, wiki, and Ubuntu documentation. I was also introduced to other Ubuntu derivatives like Backtrack, Linux Mint, and Linux Deepin.

Ubuntu proceeded with 11.04 Natty, 11.10 Oneric, 12.04 Precise, 12.10 Quantal. I have enjoyed every Ubuntu distro and never had faced a problem during installation. For the last two years, Ubuntu has grown and improved a lot. After the launch of Ubuntu 11.10 Natty, many users didn't like Unity, but I never faced any

MY STORY

problem with it. Unity became stable in 12.04 and fixed problems with other users also. I joined Askubuntu in April 2012 and have a good reputation there.

As a student of Electronics and Telecommunication Engineering, I was interested only in the telecommunication part and have a keen knowledge of technologies in my field. Now I am interested in Linux servers as they are a core part of telecom networks and IT Enterprises. I decided to learn about Linux servers and move towards system administration. I came across many Linux server distros like Red Hat, Fedora, Gentoo, Arch Linux, Centos and Debian. Most of all I love to work with Ubuntu Server and Debian.

It took time to learn about servers due to a busy engineering schedule. During the time, I remained connected with the Ubuntu world using newsletters and news sites like Omgubuntu and www.ubuntu-news.net. In time I came across FCM. I downloaded previous issues. After that, every month I download FCM and never miss a single issue. I introduced lots of friends to Ubuntu by installing on their laptops and

desktops.

In December 2011, after completing my 7th semester exam, I started my journey with Ubuntu Server. Within some months I self-learned Ubuntu Server. I also got command of Red Hat, Fedora and Centos. Currently I am working as a Linux System Administrator in an IT organization at Surat, Gujarat, India. Thus, Ubuntu has played an important part in changing my life and showed the way to my career. The Voyage has been just started, we have to build Cloud Computing platforms within a few months.

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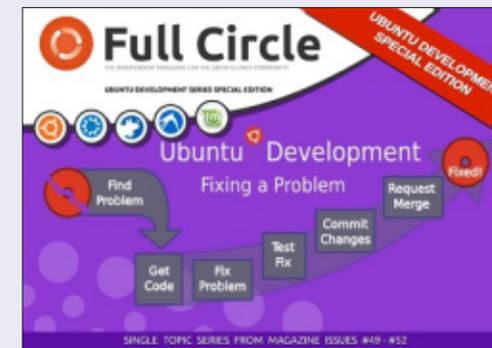


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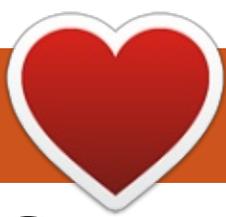
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Several years ago I purchased an Acer Aspire One ZG5 for the relative bargain of £85. It served me well as a netbook for a couple of years, I replaced the default Linux Operating System with Ubuntu 10.10 Netbook edition and enjoyed using it. System resources were relatively sparse having an Intel Atom 1.6GHz processor, 512MB RAM and an 8MB Video card. However, courtesy of severe butterfingers, I managed to break the screen. I could have replaced it, but this would have cost me half of the original purchase price of the machine, and I had a Dell Latitude E6400 laptop to use while travelling, so the netbook simply got filed away in a drawer for a few months.

After around 6 months, I decided to reboot the netbook using a TV as a monitor, to see whether it still worked at all, and it did! I had a spare 1GB memory chip lying around from a previous PC upgrade, and decided to install that into the netbook, to see whether performance improved. It did, but things still weren't

lightning fast. I had heard about XBMC previously, and installed it. Even with the extra memory, the whole system seemed slow. I was aware of Ubuntu derivatives such as Lubuntu, Kubuntu and Xubuntu, and decided that I would install one of them to see how much better things were.

I opted for Lubuntu 12.04, installing from a USB CD drive as I has trouble encouraging my machine to boot from USB stick. Once Lubuntu was installed, I connected via ethernet to the adjacent router, and installed XBMC 11.0, and selected a few plugins for XBMC, the iPlayer plugin being of the most interest to me. I also installed the Quartz skin as I knew that this was a lighter skin than the default.

The install was flawless, and before long I was experimenting with the plugins, some of which were more polished than others. I purchased a Microsoft branded Wireless keyboard and mouse, and these were simply plug and play, as was a USB infra-red remote control

purchased from ebay for £3. This little netbook has been quietly soldiering on in this arrangement for the last 6 months. I have set it up so that I can now stream audio and video from a shared drive in the house, and have even used it for a barbecue party in my garden.

Because of the very limited hardware of this machine, it would be unrealistic to expect super High Definition at all times, but I can stream video from almost any data source. Spotify for Linux works without issue. Video is connected via VGA to my television, and audio via phono cable to our surround sound. If there is ever anything that we would like to play that XBMC cannot handle, we can simply launch Chromium and play via the browser.

On paper, this little netbook ought to be almost useless, but, for the princely sum of £20, I have resurrected this little workhorse, and it is now at the centre of my family's viewing experience.

Full Circle Podcast Episode 34, Raspberry Jamboree 2013

Your hosts:

- Les Pounder
- Tony Hughes
- Jon Chamberlain
- Oliver Clark
and Freaky Clown



from the Blackpool (UK) LUG
<http://blackpool.lug.org.uk>

Welcome to the first of a 2 part conference special, in this episode the presenters reflect on the first ever **Raspberry Jamboree** held at the Manchester Central Conference Centre on 9th March 2013

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REVIEW

Written by Devyn Collier Johnson

Clementine

Clementine is a popular music player for Ubuntu systems. This music player makes a great alternative to Rhythmbox and Banshee. Clementine has many great features and abilities as well as a nice layout. It is not only a music player but a music manager. Clementine allows users to edit tags, create and edit playlists, and convert (transcode) music. Clementine can even retrieve cover art and missing tag information. With Clementine, users have a choice between using the application through the app indicator or as a full window. Clearly, Clementine is a flexible and multi-functional music manager that many Linux users may want to try because of its many features.

The latest version, at the time of writing, is version 1.1.1. This version is very stable. For example, Clementine does not crash or freeze; the program completes tasks successfully without issues. In my opinion, Clementine is much more stable than Rhythmbox and Banshee. The program starts up

quickly when executed, and closes swiftly when closed. Clementine does not require any loading when performing many tasks. However, Clementine does require some time to convert audio files, download cover art, rescan music libraries, or lookup tag info. These tasks require time because converting is a complicated process, networks have limits to their speed, and the library must

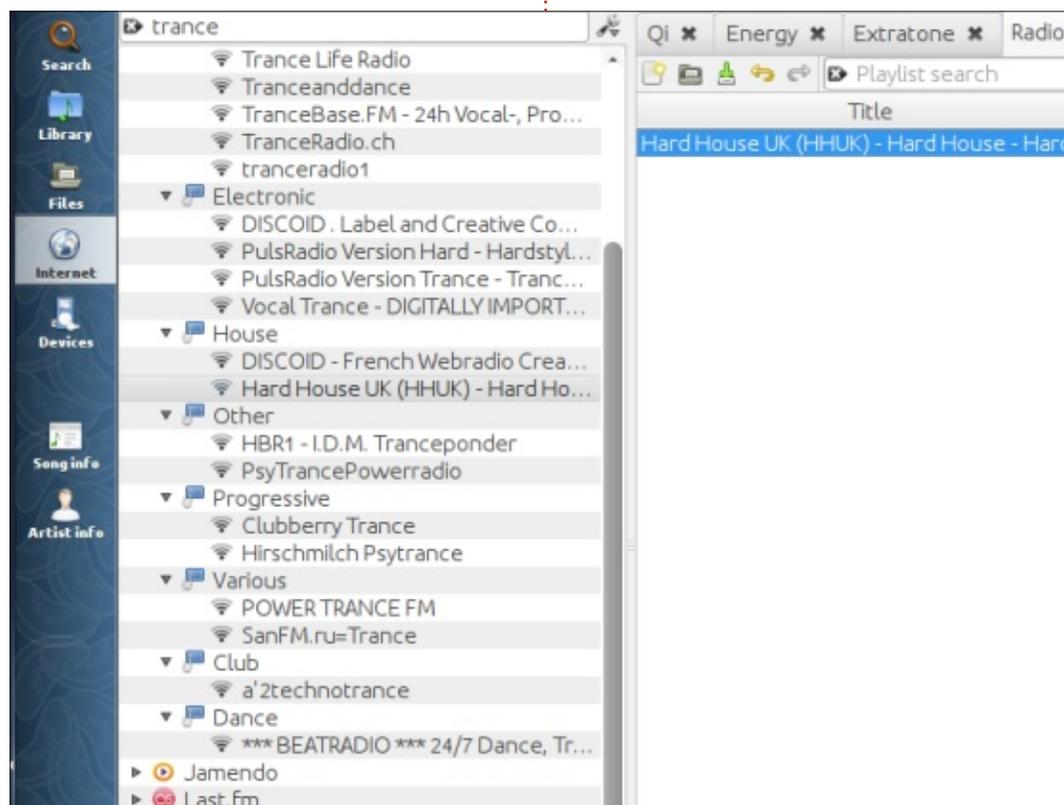
be created and indexed carefully.

Clementine allows users to control the player with the keyboard. For instance, I can press F7 to stop the music and F10 to make it louder. This allows users to perform one task without needing to switch windows to control Clementine. Many music players like Smpayer, VLC and Mplayer do not support this feature.

Clementine responds to these key-commands without delay.

The program's layout and graphics are set up wonderfully. To the left, users will see their music, Internet radio stations, artist info, song info, and search results – depending on the clicked icon on the far left column. To the right, users will see the playlist contents. Clementine displays the different playlists as tabs. Just as web browsers like Firefox permit users to have multiple tabs with a webpage in each, each playlist is a tab. At the bottom of the playlist box, users will find the controls for current playing music and the progress bar. In the bottom left corner of the application, the cover-art is displayed with the music title. The icons and buttons are carefully placed to provide a compact appearance. This gives the playlist and library box more room to list the music files.

Clementine can be used as a tag editor. If a user has an mp3 file that does not have the information about the artist or genre,



Clementine's tag editor will help. After a user right-clicks the music file to be edited, they can click "Edit track information". This causes a window to appear with two tabs. After clicking the tab titled "Edit tags", the user will see the tags that can be edited. If the user is unsure about what information should be typed into the tags, they can click "Complete tags automatically" to make Clementine search the Internet for information. This ability would work only with music made by well known musicians and not individuals that post home-made music free on the Internet. Clementine can gather tag information only if online databases list the song.

Playlists are easily created and exported with Clementine. The first step is to right-click a song in the left box when "Files" or "Library" is highlighted. Then, select "Open in new playlist". For the songs that come next, right-click and select "Append to current playlist". After that, right-click the playlist's tab and click "Save playlist". To finish exporting the playlist, pick a playlist format and a save location. Once chosen, click "Save". Clementine makes this

process very easy. Other playlist creators can be difficult or time-consuming to use. Clementine allows users to save the playlist in numerous formats. Many playlist makers do not have a collection of choices as large as Clementine's list of formats. This allows users to easily make a playlist to use with any device or music player program.

Clementine has another feature that makes it a powerful application: converting audio. Clementine can convert between a few formats. The conversion window can be opened by clicking "Tools" in the menu bar and selecting "Transcode Music". Next, click "Add" to pick music files to convert and configure the options. The converting feature is very convenient and easy to use. For example, the converting window itself is self-explanatory.

Clementine even has a moodbar

and a large variety of color sets. A moodbar is a colored progress bar used instead of the plain default progress bar. However, a moodbar is not just a colored bar. The colors are based on the "mood" of each section of the song. The different color sets are alternate colors used to display each mood. To understand what a strip of the song is like, it helps to know what the color means for the active mood color set.

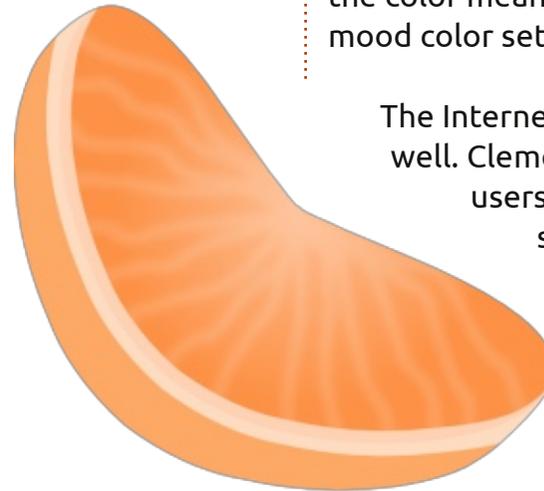
The Internet radio works very well. Clementine provides users with a large selection of radio stations for any genre of music. The collection is not sparse; even Icecast alone is extensive.

Clementine has no difficulties playing Internet radio stations. The sound quality is superb and clear, and the loading is swift. It seems as if the music is coming from local files.

Clementine has an extensive list of visualizations. They can be found and activated by clicking "Tools > Visualizations". The

window that appears contains options for the visualizations. Users should be able to find the perfect visualization that they enjoy viewing while listening to music. The visualizations have a clear, sharp appearance. The moving images are not blocky or pixelated.

These many features make Clementine a great music manager. This is a powerful music player that still retains excellent performance. This application can satisfy the needs and wants of many users while still being easy to use. The program is pleasing to the eye and does not require time to figure out the layout. If users decide to try a new music manager, or they dislike Ubuntu's default music manager, Clementine may be a player that they may wish to try.





SOFTWARE SHOWDOWN

Written by Tushar Bhargava

PDF Viewers

In this article I want to tell you about two Linux native, open source PDF viewers that can match almost all of their Windows counterparts (and have quirkier names too!).

THE CONTENDERS

If you use Ubuntu, you must have come across **Evince** (below left)—if not necessarily by that name. The rather sterile sounding Document Viewer that Ubuntu ships with is also known as Evince. According to Carlos Gracia Campos, the current project lead, Evince was, "created by Red Hat to

provide a consistent way to read any kind of paginated documents". Evince's tagline reads—"Simply a Document Viewer."

Okular (below right), KDE's counterpart to Evince, however, came into being from KPDF—as the name suggests a KDE PDF viewer. The change of name to Okular was both logical and pragmatic. When I asked Albert Astals Cid, the project lead, about the switch, he told me, "KPDF 'has' to be a PDF viewer because of the name, while Okular not so; we could support more file formats like we do now." Indeed, Okular's

tagline proudly boasts that it is "More than a reader."

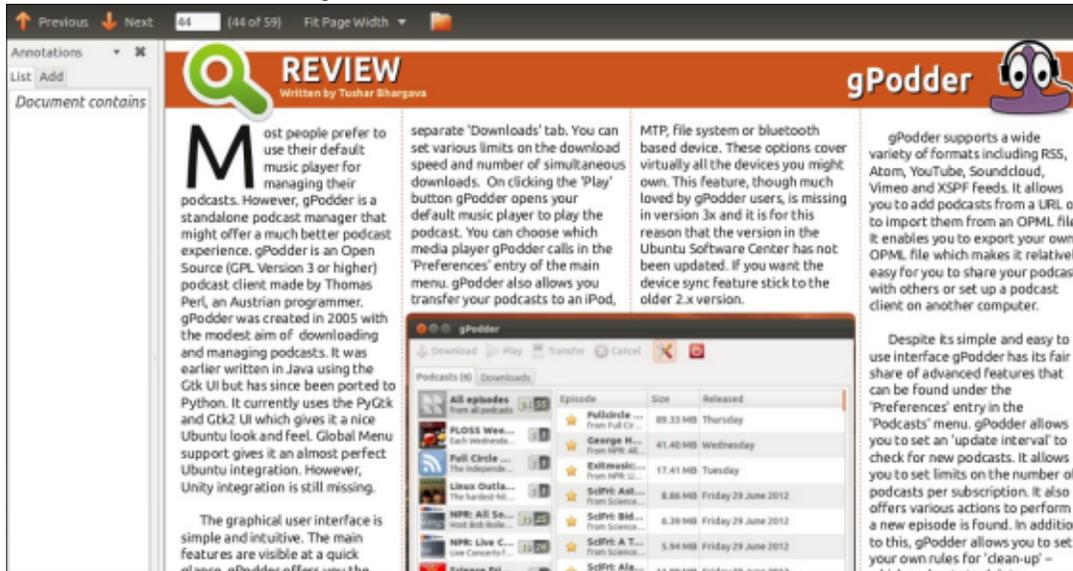
So, Evince and Okular, though part of the same large family that is FOSS, are driven by starkly different philosophies. However, do these philosophies actually dictate the development? Or are they merely descriptions of the team's vision? I decided to fire up both and load the same document (incidentally a back issue of FCM) to find out more.

THE USER INTERFACE

The screenshots below show

the file opened in the two different readers.

At first glance, some things are evidently clear. Evince—which belongs to the GNOME project—is perfectly at home in Ubuntu. It has Global Menu support and its appearance compliments the Ambiance theme on my setup. The menu bar is simple and intuitive, it includes up and down arrows for navigating the document. The current page number and total number of pages are also shown—they help you get your bearings and are useful in large documents. The other important



option included is the “Zoom” percentage. “Fit Page Width” and “Best Fit” are handy options that save you the effort of estimating the right percentage. The menu bar also has an option to show the parent folder to which the document belongs, which can be surprisingly useful for certain use cases (eg: browsing the FCM archive on my hard drive).

Evince has a two-column UI, the first column is extremely unobtrusive and the focus is clearly on the document—extremely clever design. The first column though serves an important purpose other than just thumbnails, it also shows the bookmarks and annotations (you have to select these from a drop-down menu).

Now to Okular. A perfunctory glance at the screenshot and you would think that Okular acquits itself well in strange waters (it's part of the KDE project, remember). Sure, the UI isn't as elegant or as simple as Evince's UI, but it's still fairly straightforward. The navigation bar has the standard “previous” and “next” buttons, a small difference from Evince—they're horizontal. And

that tiny detail makes a significant difference, somehow browsing doesn't seem as intuitive as it did on Evince. The rest of the items on the navigation bar more or less match Evince's. There's a “Zoom” option with “Fit width” and “Fit page.” An added advantage are the simple “Zoom in” and “Zoom out” buttons that allow you to circumvent the percentage dilemma and simply go on clicking till you're comfortable. There's a “Browse” button that doesn't do much in particular. There's also a “Selection” tool that is simply awesome. But more about that later, let me first complete the UI description.

Okular's UI can be referred to as a three-column interface. The first column has four buttons—“Contents,” “Thumbnails,” “Reviews” and “Bookmarks.” Choosing one of the four determines the contents of the next column, which, uhh, shows the thumbnails, bookmarks or annotations. The final column shows the document, again it's larger than the other two but perhaps places slightly less emphasis on the document than Evince. Having said that, the three-column view has its advantages—it

makes accessing annotations and bookmarks much easier, avoiding the drop-down complication of Evince.

PERFORMANCE

Just as we shouldn't judge a PDF by its cover page (sorry but I love bringing familiar sayings to the 21st Century), we can't be satisfied merely by analyzing the GUI of both Evince and Okular. The question is how do they perform with a large, picture-filled PDF file like an FCM edition? But, before I answer that question, a short detour.

Okular, under “Settings,” has an option called “Configure Okular.” And under that there is a “Performance” tab. And in that tab lies Okular's hidden (literally) ace—memory usage modes. You can choose “low” memory usage if your machine is slow, “Normal” is the default. But if your computer is fairly modern and has RAM greater than 512 MB, choose “Aggressive.” Congratulations, you now have a PDF reader on steroids. In the comparison that follows my Okular was in “Aggressive” mode.

I loaded FCM, edition #63. I then started browsing rapidly. Evince didn't much care for my style of reading, after a few pages it would show blank pages and display a rather apologetic looking yellow loading sign, accompanied by a spinning progress wheel. The delay was only a few seconds, but irritating nonetheless. In sharp contrast, Okular on opening the PDF informed me in a business-like gray message box that it had loaded the 59 page document. And it really had. I could browse through as fast as I wanted. The searches in Okular were sniper like, Google-esque—super accurate and super fast. It managed to find my name in the magazine (sorry for ego surfing) literally within seconds.

ANNOTATIONS AND OTHER GOODIES

Things go downhill for Evince from here. PDFs are quickly replacing books and traditional paper documents; you want to be able to make annotations on them. Evince scored very poorly in this category. The only annotation possible is adding a small note. And in case you typed that note

wrong, you can't delete it. Yes you heard me right, Evince informs you that it can't delete annotations as of now. In a nutshell, it is simply a document viewer.

Okular, on the other hand, really is more than a reader. Its annotation tools prove that its boast was not an empty one. Press F6 or "Review" under "Tools," and a plethora of icons shows up on the left-hand side of the document. Each icon depicts an annotation operation. You can make a note, make an in-line note, draw freehand, highlight, make ellipses and rectangles, and even put a stamp (Okular logo with your name) on the document. Further, the "Selection" tool in the navigation bar makes selecting text or images a snap. After you select them, you can either copy to the clipboard or directly save them in a file. It works flawlessly and is one of the most efficient ways of extracting data from a PDF that I have seen so far.

Both document viewers had a "Presentation" mode that would certainly come in handy, Evince's offering was again a tad better designed.

CONCLUSION

In the end however, there can only be one default PDF viewer. And that is Okular! Despite Evince's better, slicker UI, Okular's superior feature list and blazingly fast "Aggressive mode" makes it the PDF viewer of choice for FOSS fans.

HOWEVER..

Having said that, I would like to put forward a small addendum. While interviewing the project leads of both Evince and Okular, I realized that the projects share a close relationship. In fact they both work together on "poppler" the PDF rendering library that powers both viewers.

Mr. Cid told me, "Most of the 'bad attitude' comes from user(s) than from developers." While Mr. Campos pointed out that advanced annotations may be lacking in Evince as of now, but only because of "lack of manpower" and to remember, "that all Evince contributors are volunteers."

Whichever document viewer you choose, don't forget that a lot

of effort goes into developing and maintaining both Evince and Okular. More importantly, both belong to the FOSS family and deserve appreciation—no matter what their shortcomings. Show your gratitude by dropping them an email (or even better, offering to contribute) at okular-devel@kde.org (Okular) and evince-list@gnome.org (Evince).

SUMMARY – EVINCE



The Good

- Intuitive, simple and elegant user interface
- A great professional looking Presentation mode
- A great guide to using Evince under 'Help' > 'Contents'

The Bad

- Lackluster performance with large PDF files
- Lack of annotation features and the inability to delete a simple note
- Issues while selecting text, which the guide itself describes as a hit and trial procedure

Website -

<http://projects.gnome.org/evince/>

SUMMARY – OKULAR



The Good

- Efficient and fast performance especially on a large PDF file
- Amazing annotation options
- Great text or image selection tool, in fact the best I've ever seen on any OS
- Extremely powerful searches especially in the 'Aggressive' mode
- The option to choose memory management modes makes it adaptable to computers of all types

The Bad

- A bit clunky User Interface
- Sometimes the menu options don't work
- May take up a lot of memory on GNOME environments as it needs the KDE dependencies

Website - <http://okular.kde.org/>

The Winner is: Okular!



Tushar is a 17-year-old Indian who loves Ubuntu/FOSS. He programs in Java and C++, enjoys writing, and making Android apps. Email him at tushar1995@gmail.com with 'Software Showdown' in the subject.

```
#!/bin/bash
echo -n "What is the issue number of the first Full Circle Magazine to download? "
read firstissue

echo ""
echo -n "What is the issue number of the last Full Circle Magazine to download? (> or =
the previous number) "
read lastissue

cd ~/Downloads/fullcircle # ~ brings you to the home directory of the user and from
there I wanted to use my folder 'Desktop'

for a in `seq $firstissue $lastissue`
do
    wget -U Mozilla "http://dl.fullcirclemagazine.org/issue"$a"_en.pdf"
done

echo ""
echo "Complete!"
```

DOWNLOAD SCRIPT

One way for people to download Full Circle is if they have the downloader script on their computers. They can use that to download any issue(s) directly. I'm doing this right now.

Listed above is the text of the script, in case people don't have it.

Something to note about this script. It will download it to the current directory--regardless of the cd command in the script. At

least that was my experience. And the user will have to change the translation code (en) to whatever is relevant (if available).

Patrick. Dickey

PYQT

I really liked the Qt Designer tutorial in FCM#73. I have a good command over Python, C++ and Java, but I really don't know much

about creating GUIs. I know you've covered wxPython and Boa Constructor, but I'd really appreciate it if someone does a dedicated tutorial series on PyQt or on Qt in general.

Rohan Pinto

Ronnie says: *It might take a few months, but Greg is going to look into it for you.*

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linkedin.com/company/full-circle-magazine



ubuntuforums.org/forum-display.php?f=270

FULL CIRCLE NEEDS YOU!



Without reader input **Full Circle** would be an empty PDF file (which I don't think many people would find particularly interesting). We are always looking for articles, reviews, anything! Even small things like letters and desktop screens help fill the magazine.

See the article **Writing for Full Circle** in this issue to read our basic guidelines.

Have a look at the last page of any issue to get the details of where to send your contributions.

LIBREOFFICE STYLING

I have been using Ubuntu for the last 3 years and I wouldn't change it for anything else. Full Circle Magazine is a great magazine to supplement what is new in Ubuntu.

My job requires me to produce specialist manuals and the styling paragraph titles is most important to be able to refer. Just as an example, it would be something like this

1.0
1.1
1.1.1
1.1.1.1

with different font styles and font sizes. The problem is that I cannot find a way to save this set of styles in LibreOffice to be re-used consistently throughout various manuals.

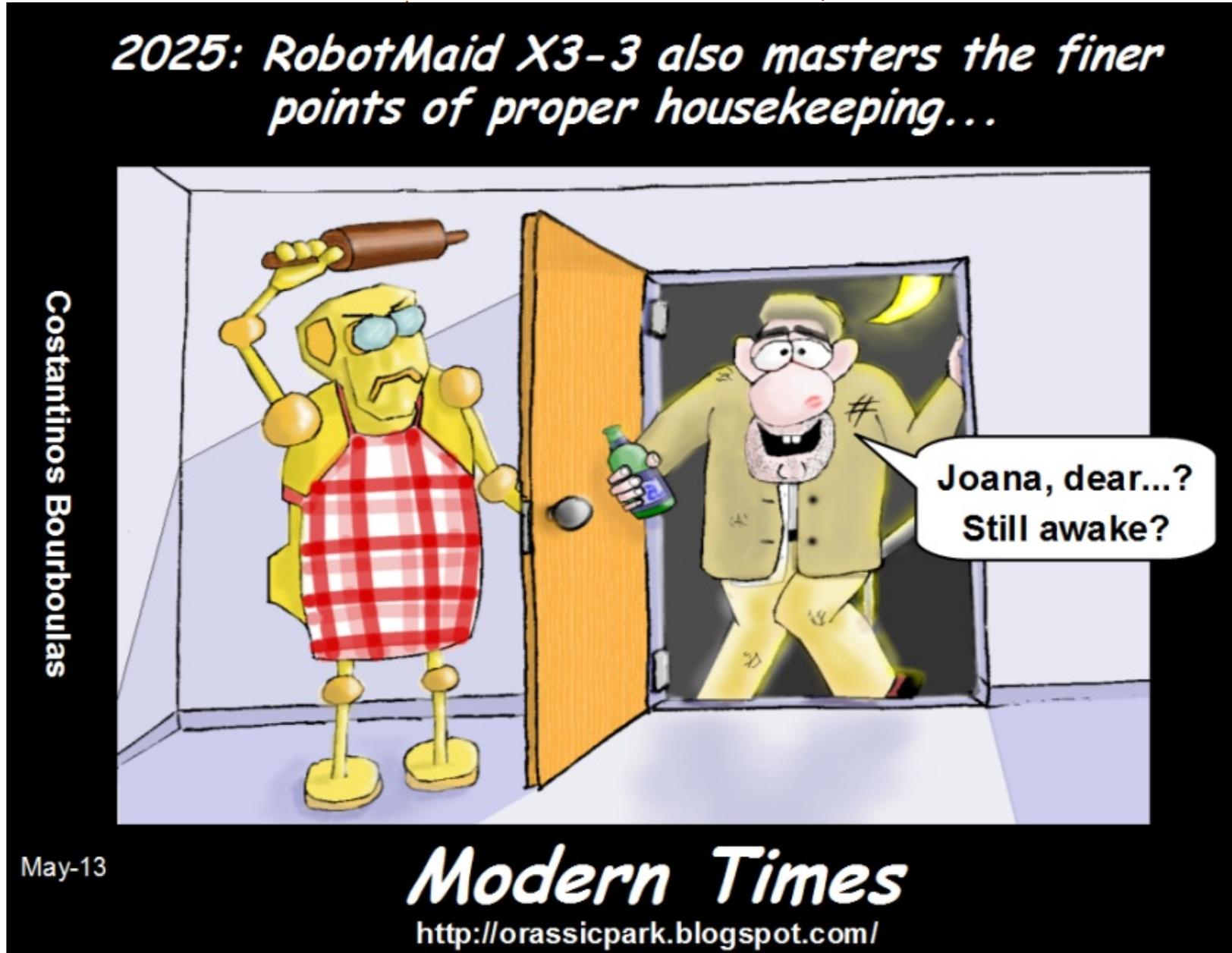
While we are in the same subject would you please recommend an XML editor that uses DITA in Ubuntu linux environment?

Christian Gauci

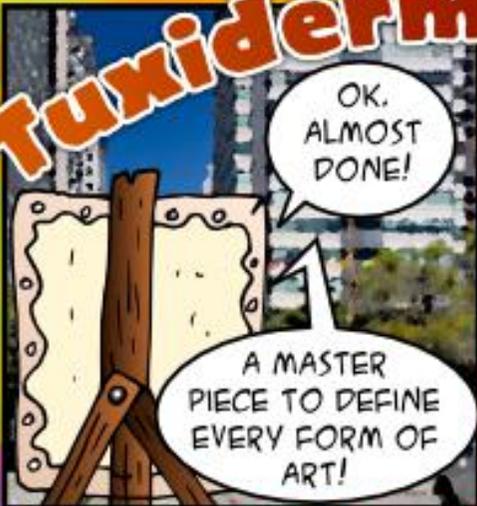
Greg & Elmer say: *For XML, I use gedit by hand.*

Elmer says: *Saving the style to the default template seems like the way to go, but have never tried it.*

The answer may be a template but not the default template. I will look into it.



Tuxidermy





Q&A

Compiled by Gord Campbell

If you have Ubuntu-related questions, email them to: questions@fullcirclemagazine.org, and Gord will answer them in a future issue. Please include as much information as you can about your problem.

Q I recently installed Ubuntu on my system, which has an Asus M5A99x Evo motherboard, and I can't figure out how to get the drivers to work. I'm new to Linux.

A Drivers work very differently in Linux than what you are used to. Most drivers are included with the kernel, so it "just works." If you have installed Linux and everything works, you have no need to chase after drivers.

Since your motherboard is very new, older versions might not work as well as 13.04. Even with 13.04, it's possible some bits won't work, such as the Ethernet port.

Wireless adapters are a special case, some just work, some work if you say the appropriate "shazaam," some work after quite a struggle, and some never work. Webcams and printers are similar.

My entire system "just works," including all of the above, also a scanner.

Video cards usually just work,

but then you can get better performance by installing an "additional driver," which is done via the Ubuntu Software Centre.

Q In Ubuntu 13.04, how can I get the background to change every few minutes, so the wallpaper becomes a slideshow?

A (Thanks to **Maverick Meerkat** in the Ubuntu Forums) Right-click on the desktop. Select "Change Desktop Background." A group of thumbnails will appear, the upper-left one has a white clock drawn on it. That is the background slide-show.

Q Machine is a FitPc3, running Ubuntu 64-bit 12.04. The new version of Skype doesn't play nice.

A Install multiarch-support.

Q I'm trying to use WiFi in a hospital, but the connection drops every few minutes. I can

reconnect, but then it drops again.

A (Thanks to **praseodym** and **steeldriver** in the Ubuntu Forums) Sometimes the problem in 'campus' type networks is that they have multiple access points sharing the same ESSID. That can make the wireless device go crazy trying to roam to the nearest / strongest access point. Run this command: `sudo iwlist scan`

Add the MAC-address of the nearest access point into the field "BSSID" in the network-manager applet. (You'll need to change it if you move to a different location in the hospital.)

Q My Ubuntu Server works great, and now I need to make a Livecd in order to copy the server to some other machines with the same hardware.

A (Thanks to **Shrek01** in the Ubuntu Forums) Hi, have you met Clonezilla? <http://clonezilla.org/>

Q I have a multi-boot PC. When I installed a new version of Linux to play with, it became the grub default. How can I change this?

A Boot into the version of Linux you want as your default, then issue this command:

```
sudo grub-install /dev/sda
```

Q In Ubuntu 13.04, my wireless doesn't work: Broadcom Corporation BCM4313 802.11b/g/n Wireless LAN Controller (rev 01)

A (Thanks to **chili555** in the Ubuntu Forums) Enter these commands:

```
sudo apt-get remove --purge bcmwl-kernel-source
```

```
sudo apt-get install linux-firmware-nonfree
```

Then reboot.



Q & A

Q I want to be able to rename multiple files?

A Install gprename.

FROM THE UBUNTU NEWS DIGEST, ACTIVE AND TOP QUESTIONS AT ASKUBUNTU:

* Is there a way to restore Nautilus' split screen (F3) feature?
<http://goo.gl/NOzhq>

* Dependency error while installing Google Chrome on Ubuntu 13.04
<http://goo.gl/VQGMA>

* Why is the life of Ubuntu 13.04 so short?
<http://goo.gl/ceaPM>

* Did I just delete everything with find -exec mv?
<http://goo.gl/T7lTo>

* Jupiter or similar power saving app for 13.04?
<http://goo.gl/zy4JE>

* Does encrypting the hard drive

affect file sync with programs like Dropbox, Ubuntu One, Spider Oak, Insync, and others?

<http://askubuntu.com/questions/295349/>

* How do you get an hourly talking clock for Ubuntu 12.04?

<http://askubuntu.com/questions/295792/>

* How do I set Facebook, Twitter and GMail accounts in the Ubuntu 13.04 online accounts?

<http://askubuntu.com/questions/296455/>

* Backspace in insert mode in vi doesn't erase the character

<http://askubuntu.com/questions/296385/>

* Remotely turning on computer?

<http://askubuntu.com/questions/297198/>

* Update available message after installing update

<http://goo.gl/0kgGe>

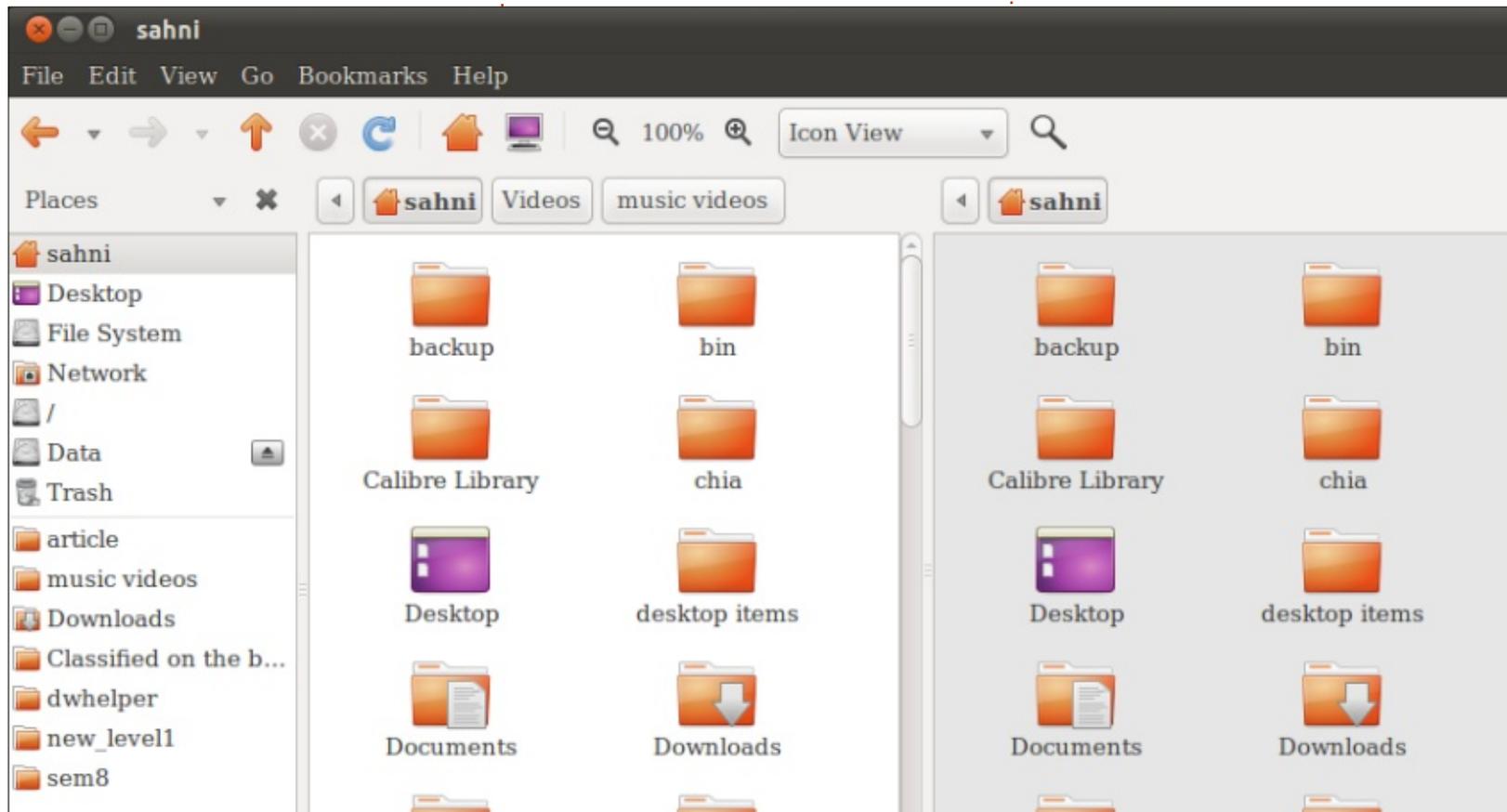
* Desktop shows a white or black background instead of wallpapers

<http://goo.gl/Jml6i>

* Where can I look for malware that may have been installed on my machine?

<http://askubuntu.com/questions/298992>

* How do I obtain and install larger mouse pointers - I am slightly



visually impaired

<http://askubuntu.com/questions/298842>

* Does it make sense to create swap partitions for new installations nowadays?

<http://askubuntu.com/questions/299417>

* How do I switch between English and Greek Polytonic?

<http://askubuntu.com/questions/298708>

* How to use wildcards for string conditionals using bash?

<http://askubuntu.com/questions/299710>

* Run same command again but as sudo

<http://goo.gl/nyMik>

* How to sandbox applications?

<http://goo.gl/YHz8r>

* Does the Ubuntu 13.04 disk image fit on a CD?

<http://goo.gl/6LLbD>

* How to post reviews on apps.ubuntu.com?

<http://goo.gl/GStZj>

* Can I run Steam as its own

standalone session?

<http://goo.gl/xbUjt>

* Computer running very slowly under 13.04

<http://goo.gl/TM2Xt>

TIPS AND TECHNIQUES Server? Really?



Almost from the beginning, people have had the option of installing Ubuntu Server rather than Desktop.

Only one problem: you need to do everything from the command line, and some things are just a lot easier if you have a graphical

interface. So what does the Server version buy you?

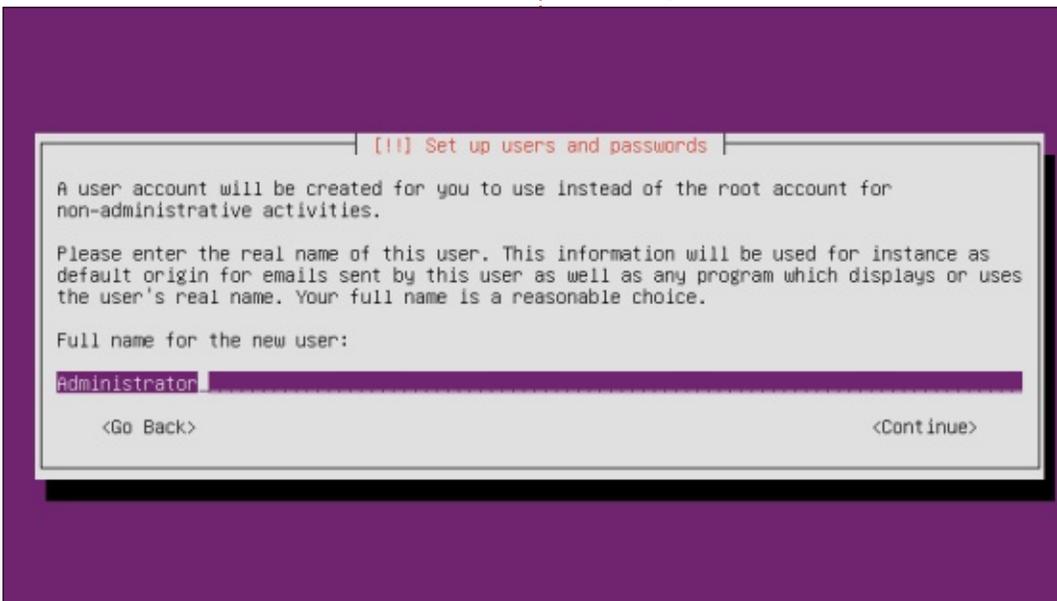
For starters, it needs less memory than the Desktop version. It also runs faster, and that's important if you are running a high-volume website or a busy database server. Those needs sound pretty corporate; if you're installing a server in your house, it's unlikely that you will need that little bit of performance.

The cost of a server computer which can run a GUI is minimal. Where I live, there are computer stores which sell off-lease computers. For example, a system with an Intel Core 2 Duo, 2 GB of memory and a small hard drive

goes for \$130 -- and it will run Xubuntu like gang busters. For a household server, you will probably want lots of disk space, so you'll replace the hard drive with a 2 TB model: \$95 gets you a pretty decent one. We're up to \$225, which is pretty cheap as computers go.

Running Xubuntu, most of the system tools you are used to are right there; you don't need to use Google every time you want to do something. You can install everything which might be part of a server system, and it all works. Website? Check. Sharing Files? Piece of cake. Media server? Yup. Databases? No problem. Well, no more than you would expect with databases.

And yet, I still see questions which begin, "I'm running Ubuntu Server, version ..." And I wonder why.



After a long career in the computer industry, including a stint as editor of Computing Canada and Computer Dealer News, **Gord** is now more-or-less retired.



UBUNTU WOMEN

Written by The Ubuntu Women Team

Emma Marshall: Can you tell us a little bit about yourself?



Diane Leikvold (above): I am the network administrator, desktop support, and technology coordinator at Longmont Christian School in Longmont, Colorado. I also teach keyboarding to 4th and 5th graders, and Google Docs to middle school students and teachers. My hobbies are biking, Zumba, camping, being outdoors in the sun. I have been married for 24 wonderful years to my husband Kurt, and we have 2 grown boys.

EM: How did you discover

Ubuntu?

DL: My husband introduced me to Ubuntu in the summer of 2010. Our school was still using Windows 2000 due to budget constraints. Since Windows 2000 was losing support that summer, we were looking for a replacement. My husband showed me Ubuntu during our camping trip to South Padre Island, and I fell in love with the operating system, so we made the decision to convert the whole school that summer.

EM: How do you use Ubuntu in your daily routine? Work or recreational or both?

DL: Both. After I converted the school, we also converted our home. I use Ubuntu exclusively in our home.

At school, I have approx 120 laptop/desktop computers running Ubuntu. I have two labs, and the rest are teacher and classroom machines.

I have also donated laptop

computers installed with Ubuntu to missionaries in Kenya. There were a couple of missionaries who came to the U.S. for a visit at our church. I spent a whole dinner telling them about Ubuntu and how successful it is at our school. I sent an Ubuntu laptop home with them so they could play with the operating system and see if it would work in their schools. After introducing them to Ubuntu, they continue to use it in their missionary schools there locally. I continue to send more laptops with Ubuntu to them as they become available through donations.

EM: You recently shared your success about the Longmont Christian School transition to Ubuntu with the Colorado Ubuntu Team, can you share your success with the community?

DL: I started teaching application software in the high school at Longmont Christian School in 2000 with 12 computers throughout the school (nine being in my lab) with a dial-up

connection. The next year, we networked the school and doubled the amount of computers. By 2009 we were up to 63 computers running Windows 2000. In 2010, I wrote a proposal and presented our desire to change to Ubuntu to the principal of the school. After gaining his approval, I imaged all of the computers in the school with Ubuntu 10.04, wrote training material for the teachers, and sent an email out to notify the teachers of the upcoming changes and training dates. The week before school started, I trained all of the teachers and staff on Ubuntu and boldly started the year on the new platform.

I was truly amazed at how smoothly it went for such a large change. The teachers embraced the new operating system and continue to enjoy using it today. Through the years, I brought what I was teaching in the high school down to middle school and then elementary. I truly believe that what we have at Longmont Christian School is pretty awesome!

I have 26 teachers, most were technology challenged and fearful, but they all love using Ubuntu and are doing so well. I have over 120 laptops/desktops dispersed throughout the school all installed with Ubuntu. I would love to get the word out to Canonical and Boulder County to spread the word even farther on how Ubuntu is a great solution.

EM: What influenced you to take on such a large project? What's the most rewarding aspect of the Longmont Christian School project?

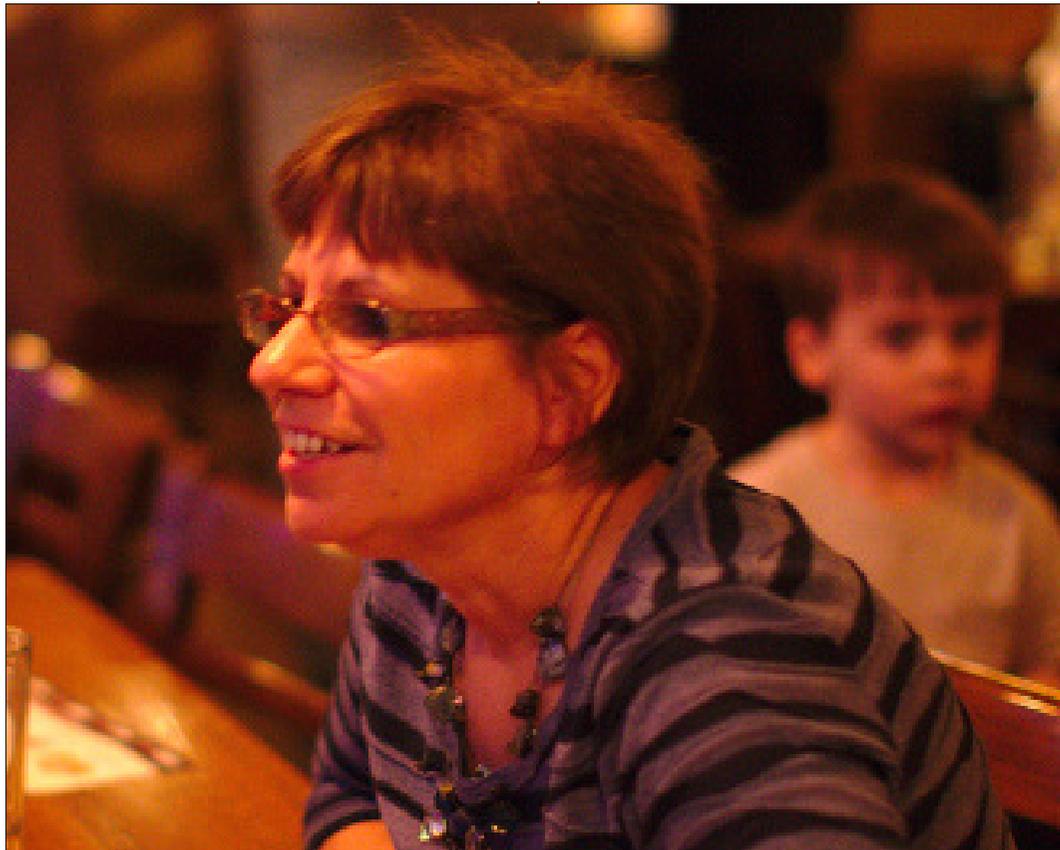
DL: The school was using Windows 2000 and the support was up in the summer of 2010. We needed to upgrade our operating system, but the school was very budget constrained, so, with my husband's encouragement, we looked into Ubuntu. The rest is history.

The most rewarding aspect for me is how smooth the transition happened at our school and how easily the teachers adopted the new operating system. I am even able to support teacher curriculum through Wine in Ubuntu.

EM: If you could influence every school in the country to transition their computer labs to run Ubuntu, what would be your #1 reason to convince them?

DL: It is easy to use and maintain. I have found that my support hours were reduced once I switched the school from Windows to Ubuntu. It is very well packaged and is pretty easy to maintain.

If I could have a #2, the second



would be cost. I use donated hardware with a zero cost operating system and zero cost software. For a small, private school, this goes a long way to reduce overall cost of the school and helps lower tuition for the parents.

EM: What do you hope to achieve in the future in your efforts to promote Ubuntu?

DL: This summer I am planning

on providing free training in Ubuntu for our parents.

EM: What other Ubuntu projects/groups are you involved with?

DL: I supported the Ubuntu lab at a TIE (Technology in Education) conference in 2011. I recently became involved with the Colorado Ubuntu Users Group as well.

For people looking to get involved in Ubuntu, who aren't interested in learning how to code, what advice can you give to help them get started?

My advice is to share their Ubuntu successes with people around them—to help spread Ubuntu to a larger community.

EM: Is there anything else you'd like to add?

DL: Once I started using Ubuntu, I fell in love with it. It is my desire to continue to work with and to promote Ubuntu.



Gratuitous Space Battles is a space-based RTS made by Positech Games. It is unusual in that there is no resource exploitation, and, once ships are issued orders, the player has no control over the outcome of the battle. This sounds like a simple concept, but, in execution, the game is phenomenally difficult at times.

Players can create their own ships from the ground up. There are pre-built ship designs if you want to use them, but it behooves you to learn how the ship design mechanism works. Every empty hull is a blank slate that allows you to create ships as fast or as powerful as you think you'll need.

Each battle starts simply: you are given a certain amount of resources and pilots, and can create a fleet within those guidelines. Your opponent also has the same limitations. Once you lay out your fleet and give orders, you press the fight button and the fleet is deployed.

You can watch the battle take place, but you can't intervene. It's incredibly fun to watch your ships follow their orders, and the 2D graphics are incredibly well done. At the top of the screen is a communications panel which displays messages about the battle from the point of view of the pilots. Sometimes these messages are humorous, and it's worth looking up to see what's being said. If you're impatient, you can speed the battle up to 4 times the normal speed.

Each battle is different, and it'll

take a lot of trial-and-error before you figure out exactly how to design and deploy a fleet in order to emerge victorious. For each victory, you win honor points which can be used to unlock components and new playable races. You can replay battles and win even more honor by using fewer ships and pilots.

This game is not for the casual game player. It requires a lot of thought and planning in order to win each battle, especially as the game advances. Gratuitous Space Battles is certainly not for

everyone. If you're a fan of strategy games, though, you should definitely check it out. My only complaint about the game is the repetitiveness. After you master ship design, the game becomes easier and easier.

Currently, the Linux version is available from Steam and Desura for \$14.99. Unfortunately, none of the downloadable content (DLC) is available for Linux. (The Positech Forums do have discussions on how to make the DLC work in Linux. Your mileage may vary).

Pros:

Great 2D graphics, fun battles, decent background music.

Cons:

Repetitive Game Play



Joseph is a Comms major at Keystone College and is the Director of Technology for Gamers Against Bigotry. You can follow Joe on twitter (@dogboi) and find his blog at jeiohaneman.com





I'm unemployed, and where I live, as I think is also the case in a lot of countries, I need to make a number of job applications a month. Now, I'm also the organised type and I like to keep all my applications nicely foldered away in their respective months. Hence, I have a folder hierarchy as follows:

```
unemployed --> applications
--> jan, feb, may (it's been
some time now) --> job_name
```

Now, of course, when I log in, I arrive in the home directory, and because of my meticulous folder architecture :), it takes some time to navigate to the said month or even application upon which I'm working. In the window (point & click), I have set up a shortcut, but as I like to use the terminal, I'd like to set up a link in my home directory which will jump to the month where all my current applications are stored. Now how do I do that? With a symlink.

WHAT ARE SYMLINKS?

Basically, a symlink is a file

which points to another file.

THE CODE

So we know I need one. We know what it is, well in theory at least. Now how do I create one? In generic terms there are two possibilities:

```
Possibility 1: ln [options]
file link
```

```
Possibility 2: ln [options]
files directory
```

The first noteworthy item is that setting a symlink isn't a default option for the `ln` command. You need to pass `-s` to the `[options]` section, otherwise you'll create a hard link.

Now to create the link to the application I'm working on. Presently it's May and all my applications are in my May folder (some of my desktop is organised in German so it's written Mai). Also I want to create a link to a folder, not a file. My first attempt. Navigate to where I want to place the link (in my case in my

Documents folder), and type:

```
ln -s
/home/rpwitt/Documents/unempl
oyed/applications/NPAB_Mai/
new_link
```

To repeat, `/home/rpwitt/...` is the location to which I want the symlink to jump to, and the name of the link is `'new_link'`. Now if I `cd` or `ls 'new_link'`, I get the contents of my `NPAB_Mai` directory.

EDITING SYMLINKS

Now I only used the name `'new_link'` for demonstrative purposes and also it's not going to be May for ever. At some point, in the not too distant future, I'm going to be sending applications in another month. So I need to be able to change the name of my symlink, and also the location to which it points. First, change the name. This is as simple as one would imagine it might be. Simply change the symlink name as you might a filename:

```
mv new_link may_app
```

Now I would like to change the location to which the link points. Just repeat the code above, but pointing to a new location:

```
ln -s
/home/rpwitt/Documents/unempl
oyed/applications/NPAB_Jun/
jun_app
```

Anyway, I hope that helped, and if you are a seasoned symlinker or have just put together your first, like me, please write to let me know your ideas. I would love to hear about how you use symlinks.

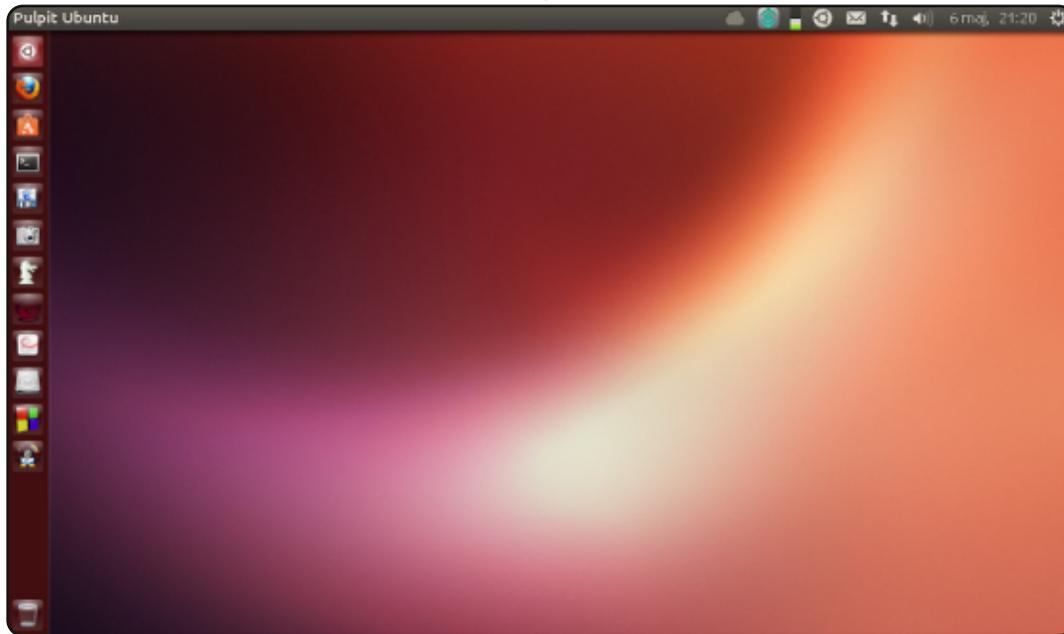


Richard Philip Witt, 30, living in Switzerland. I've been using Ubuntu desktop and server for roughly 2 years. But only for the basics. Now I want to discover its capabilities. Any mentors out there? Email me: chilledwinston2@hotmail.com.



MY DESKTOP

Your chance to show the world your desktop or PC. Email your screenshots and photos to: misc@fullcirclemagazine.org and include a brief paragraph about your desktop, your PC's specs and any other interesting tidbits about your setup.



My netbook:

Model - ASUS Eee PC 1001 PXD
BIOS Revision - 0601 02/18/11
Operating System - Windows 7 and Ubuntu 13.04 (default)
Desktop Environment - Unity
Processor - Intel Atom CPU N455 @ 1.66GHz × 2 (32-bit)
Graphics - Intel IGD
Memory - 2 GB
Hard Disc - 250 GB

Leon Miklosik



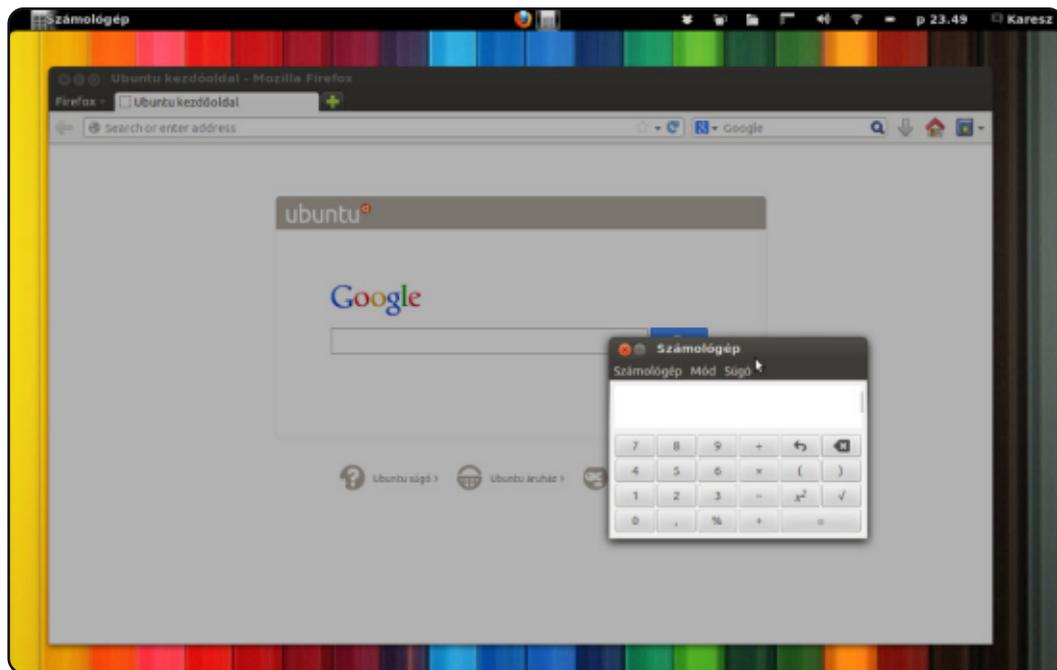
I use Linux Mint 13 "Maya" Cinnamon (32 bits). I moved my task bar at the bottom to the top! About the girl in the background, her name is "Faith" and she is the heroine of the game "Mirror's Edge" (Link to download the background image : <http://www.jeuxvideo.com/downloads/fonds-ecrans-wallpaper/images/0001/19294-976-mirror-s-edge-pc-fond-ecrans-4028.htm>)

At the bottom of the screen, I use Avant-Windows-Navigator with all my favorite applications.

My equipment:

Motherboard: ASUS A8V VM-SE, CPU: AMD Athlon 64 3500+ (2.20 GHz), OS: Linux Mint 13 "Maya" Cinnamon (i386), RAM: 1 GB, Graphics Card: ATI Radeon HD 4600

Khalif ADAM



I have been using Ubuntu since 2008.

At the moment I use Ubuntu 12.04 LTS with Gnome Shell 3.4. I modified the stock GUI because I think it is not practical enough. I used only official Gnome Shell Extensions (available in <https://extensions.gnome.org/>).

My hardware:

Lenovo R400,
Processor: Intel® Core™2 Duo CPU P8600 @ 2.40GHz × 2
Graphics: Integrated Intel, Intel Graphics Media Accelerator (GMA) 4500MHD
Memory: 4 GB
HDD: 160 GB
Display: 1280 x 800

Károly Nagy



That's all folks. I'm all out of My Desktop screens. If anyone wants to submit their desktop, feel free to email a screenshot (but no wider than 900 pixels, and in JPG format) with the appropriate information to: misc@fullcirclemagazine.org. **Thanks!**

If you sent a desktop screen and it hasn't appeared in FCM then it means you either didn't submit any/enough information, or your screenshot was too large. Feel free to resubmit.



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... or you can visit our **forum** via: fullcirclemagazine.org



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