Full Circle

MIR
WHAT IS IT, AND WHY DO WE NEED IT?
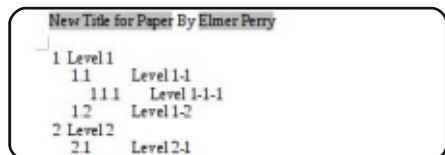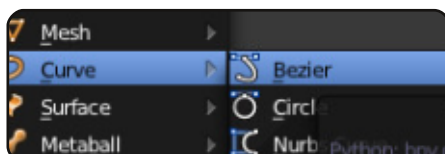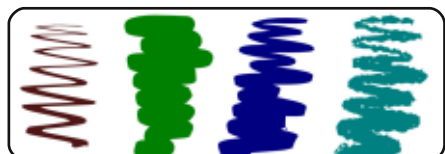
Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

EDITORIAL

WELCOME TO ANOTHER ISSUE OF FULL CIRCLE!

A full house – with Python, LibreOffice, Blender and Inkscape HowTo's. And they're joined by an excellent article on installing Linux using PXE. It's not something I've done, but I can see how handy it would be – especially for that older hardware in your life.

This month marks the four-year anniversary of Greg's Python series. Four years! Forty-eight articles, and still going strong. If you love Python, make sure you email Greg some congratulations and encouragement.

Mir. Other than being a Russian space station, what does it mean for Ubuntu (and its brethren)? Copil does his best to explain it in his 'Ask The New Guy' column this month. I was going to put the display-server diagram on the cover, but then thought against it as it'd just frighten people off with its complexity. Hence, my choice of a nice space photo showing said Russian space station instead.

The review this month is something a bit different; Google Music. And how does that fit into Ubuntu? To be honest, it doesn't really. But, it's a nice service that works on Linux; it does have a Linux upload client, and does have an Android app. If you like your music, then I can highly recommend Google's All Access as I use it on my desktop (while making Full Circle) and on my phone. With unlimited data on my phone, I've no need for an MP3 player.

All the best, and keep in touch!
Ronnie
ronnie@fullcirclemagazine.org

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
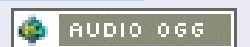
Download

XMIR UPDATE FOR UBUNTU 13.10

Oliver Ries announces that while the Mir team is on track to support native Mir + Unity 8 running on Ubuntu Touch images, they not going to be able to deliver Mir + XMir + Unity 7 as the default experience on the desktop for the Ubuntu 13.10. Oliver says *"Mir has made tremendous progress and is currently available on the Ubuntu archive for use, but there are still some outstanding quality issues that we want to resolve before we feel comfortable turning it on by default"* and links to a Q&A for further information.

https://lists.ubuntu.com/archives/ubuntu-devel/2013-October/037695.html

Several blogs and news outlets covered this news, the following is a selection from our editors:
• XMir Dropped from Ubuntu 13.10 Default Due to 'Technical Difficulties' -
http://www.omgubuntu.co.uk/2013/10/xmir-longer-default-supported-cards-13-10

• High quality and no-compromise standards remain first class citizens in Ubuntu, Mir/XMir will not ship by default in Ubuntu 13.10 -
http://iloveubuntu.net/high-quality-and-no-compromise-standards-remain-first-class-citizens-ubuntu-mirxmir-will-not-ship
• Ubuntu 13.10 Will Not Use XMir By Default -
http://www.webupd8.org/2013/10/ubuntu-1310-will-not-use-xmir-by-default.html
• Ubuntu 13.10 Desktop Will Not Use XMir By Default -
http://www.phoronix.com/scan.php?page=news_item&px=MTQ3NDQ
• Britney-obsessed Ubuntu 13.10 DUMPS X Windows-killer Mir in desktop U-turn -
http://www.theregister.co.uk/2013/10/02/ubuntu_delays_mir/
• Ubuntu holds back on defaulting Mir due to quality issues - http://www.zdnet.com/ubuntu-holds-back-on-defaulting-mir-due-to-quality-issues-7000021435/

WINNERS OF THE 2013 UBUNTU APP SHOWDOWN

Michael Hall announces *"The judging is finished and the scores are in, we now have the winners of this year's Ubuntu App Showdown!"* Michael names the winning apps, congratulates the winners and says *"a big thank you to everybody who participated or helped those who participated, and all of the engineers who have worked on building the Ubuntu SDK, Click tools and app store."*
http://developer.ubuntu.com/2013/10/winners-of-the-2013-ubuntu-app-showdown/

NEXT UDS: 19 - 21 NOV 2013

Jono Bacon announces that the next online Ubuntu Developer Summit is going to be taking place from Tues 19th Nov - Thu 21st Nov 2013 and as ever, the event is free and open to everyone, and accessible at http://uds.ubuntu.com.

Jono lists some improvements such as simplifying the registration process and adding a hallway track for impromptu sessions, and asks that all sessions are proposed by Fri 1st Nov 2013.
https://lists.ubuntu.com/archives/community-announce/2013-October/000014.html

MIR RUNNING NOW ON UBUNTU ON PHONES

Jono Bacon shares the news that with update 90 on the Ubuntu for phone images Mir has been enabled by default. Jono says that there are some bugs but nothing major, and congratulates the Mir and Ubuntu integration teams.
http://www.jonobacon.org/2013/10/10/mir-running-now-on-ubuntu-on-phones/

UBUNTU 13.10 (SAUCY SALAMANDER) RELEASED

Adam Conrad, member of the Ubuntu Release Team, announces the release of Ubuntu 13.10 Saucy Salamander which introduces the first release of Ubuntu for phones and Ubuntu

UBUNTU NEWS

Core for the new 64-bit ARM systems (the "arm64" architecture, also known as AArch64 or ARMv8), and improved AppArmor confinement. In addition to these flagship features there are also major updates throughout.

Find out what's new in this release with a graphical overview:
http://www.ubuntu.com/desktop
http://www.ubuntu.com/desktop/features

In this email to the ubuntu-announce mailing list, Conrad also notes that newest Kubuntu 13.10, Edubuntu 13.10, Xubuntu 13.10, Lubuntu 13.10, Ubuntu GNOME 13.10, UbuntuKylin 13.10, and Ubuntu Studio 13.10 were also released. More details can be found for some of these at their individual release announcements:
  • Kubuntu:
http://www.kubuntu.org/news/kubuntu-13.10
  • Xubuntu:
http://xubuntu.org/news/saucy-salamander-final
  • Ubuntu Studio:
http://ubuntustudio.org/2013/10/ubuntu-studio-13-10-released
    https://lists.ubuntu.com/archives/ubuntu-announce/2013-October/000177.html

There has been a lot of coverage on the release of 13.10! Check out the following sampling of reviews selected by our editors:
  • Inside the Ubuntu 13.10 Linux 'Saucy Salamander' Linux Desktop -
http://www.eweek.com/enterprise-apps/slideshows/inside-the-ubuntu-13.10-linux-saucy-salamander-linux-desktop.html
  • Ubuntu 13.10: It just works -
http://www.techrepublic.com/blog/linux-and-open-source/ubuntu-1310-it-just-works/
  • Ubuntu 13.10 Available For Download -
http://www.webupd8.org/2013/10/ubuntu-1310-available-for-download.html
  • Ubuntu 13.10 (Saucy Salamander) review: Smart Scopes in, Mir out -
http://www.zdnet.com/ubuntu-13-10-saucy-salamander-review-smart-scopes-in-mir-out-7000022022/
  • Ubuntu 13.10 lands on desktops, servers and (er, some) phones -
http://www.theregister.co.uk/2013/10/17/ubuntu_1310_ships/
  • Ubuntu 13.10 review: The Linux OS of the future remains a year away -
http://arstechnica.com/information-technology/2013/10/ubuntu-13-10-review-the-linux-os-of-the-future-remains-a-year-away/

The release of the phone version with 13.10 was also heavily covered by a number of outlets we're not used to seeing included in this newsletter:
  • Ubuntu phones one step closer to the market with Ubuntu 13.10 release -
http://gadgets.ndtv.com/mobiles/news/ubuntu-phones-one-step-closer-to-the-market-with-ubuntu-1310-release-433651
  • Ubuntu OS launched for smartphones and PCs -
http://www.telecoms.com/188922/ubuntu-os-launched-for-smartphones-and-pcs/
  • Ubuntu Touch OS Launches on Galaxy Nexus and Nexus 4 Devices -
http://www.technobuffalo.com/2013/10/17/ubuntu-touch-os-launches-on-galaxy-nexus-and-nexus-4-devices/
  • Ubuntu Launches OS For Touch Smartphones -
http://www.gadgetreview.com/2013/10/ubuntu-launches-os-touch-smartphones.html

QUANTAL, RARING, SAUCY...

Mark Shuttleworth reflects on the 13.10 release and looks at some of the features that will be part of 14.04 LTS. Mark asks "But… what will we call it?" and goes on to announce "I give you, as Seuss would, with hullabaloo, the temperate and thrifty, the talented and tactful but ultimately, and tellingly, trusty tahr."
http://www.markshuttleworth.com/archives/1295

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

News this month comes from:

https://wiki.ubuntu.com/UbuntuWeeklyNewsletter/Issue336
https://wiki.ubuntu.com/UbuntuWeeklyNewsletter/Issue337
https://wiki.ubuntu.com/UbuntuWeeklyNewsletter/Issue338
https://wiki.ubuntu.com/UbuntuWeeklyNewsletter/Issue339

Towards the end of September, I ended up replacing an old SATA 150 500GB hard drive with a Western Digital Blue 1TB drive. Doing so involved cloning it using Clonezilla, and resizing it using GParted. A few days later, I also ended up fixing an unrecognized external hard drive for a friend using TestDisk & Photorec. Seeing as almost every one of these scenarios was requested in some form during the survey, I decided to spend this month covering these tools.

CLONING & RESIZING DISKS

Tools you'll need:
• Clonezilla: http://clonezilla.org/clonezilla-live.php
• GParted (liveCD from here: http://gparted.sourceforge.net/ or any liveCD that contains GParted, such as an Ubuntu liveCD)

STEPS:

• Connect both drives to your computer (for Desktop PCs, internally, and, for laptops, externally should work for the second drive).
• Make sure you can recognize the correct drives (if you have two drives of the same size, make note of the serial numbers). This can be done with:

```
sudo hdparm -I /dev/sda
```

Replace /dev/sda with the actual device you want to check. It would be best to write down the serial number for later reference.
• Once you have the information for both drives, it's time to put the Clonezilla CD in the drive and reboot.
• Once you've booted to Clonezilla (by choosing any of the options in the boot list, though I would recommend the To RAM option), you'll need to work through the following:
1. Language – you can choose any you like, but I'll be working with the English names and choices.
2. Keyboard layout. Default is US, and if you're using anything different, you can choose it from the arch list (i.e. German keyboard: Arch List -> QWERTZ -> German

(Latin)). If you have a french keyboard: You'll need to choose it from the full list instead of the arch list. This is a bug and won't work otherwise.
3. Start Clonezilla.
4. Here you can choose from two options: Device-Device, or Device-Image. If you're backing up/restoring a hard drive, then you'll probably be working with Device-Image. However, for cloning from one drive to another, you'll need to choose Device-Device.
5. Choosing beginner is probably the easiest. If, however, you want clonezilla to resize to the target disk's size, you can choose Expert and the -k1 option. However, I recommend doing this via GParted later.
6. In the scenario I've described, you'll need to choose either disk_to_local_disk, or part_to_local_part, depending on whether you want to clone the entire disk, or simply move a single partition to a bigger drive.
7. Choose source disk – Here you need to find the drive that matches your serial number for the original drive. In my scenario it was the

500GB drive.
8. Choose target disk – Here you need to find the serial number that corresponds to your new drive.
9. Choose if you need to have the source file system checked – If you're copying a Linux partition and you know it needs to be repaired, you can run the check. However, it's should be fine to skip this step (and therefore cut down the time you need). If it's an NTFS/FAT/HFS drive, I would recommend not running the check, as I'm unsure if it supports those types.
10. Now you'll be dumped to a terminal screen, and it will ask you the following:
10.1 If you're sure you want to continue, type "y" (without the quotes) and hit enter.
10.2 If you're sure you want to create new partitions on the target drive, type "y" (without the quotes) and hit enter.
10.3 If you want to clone the boot loader (if this is your primary disk), type "y" (without the quotes) and hit enter.
10.4 Lastly, it will ask once again if you're ready to continue, type "y"

(without the quotes) and hit enter.
11. Now you should be back at a nice Ncurses interface with information on the status of the cloning process.
12. Once the cloning is finished, it will ask if you want to stay in the console (option #1), or if you want to exit/logout (option #2). Most likely you'll want to exit, so hit 2 and then choose an option (poweroff or reboot).
13. I would recommend powering off and removing the old drive, if you plan to get rid of it. Otherwise move on to the GParted steps and reformat the old drive if you want to continue using it.
14. If you've moved to a larger drive, you'll want to boot to your GParted CD now. Once the desktop has loaded, you'll need to open the GParted program. Then do the following:
14.1 Find the correct disk in the drop-down list at the top right.
14.2 Find the partition you want to resize, select it, and choose resize.
14.3 Adjust the size of the partition until there is no free space left (you can simply drag the end of the bar from the diagram to the end of the empty space).
14.4 Hit enter and wait for the process to finish.
14.5 Lastly, make a note of the

device path for the drive (i.e. /dev/sda1), and if you need the UUID, open the terminal from the GParted desktop, and run:
sudo blkid
Take note of the UUID that corresponds to your drive.
14.6 You'll need to adjust your /etc/fstab file as well if you use UUIDs. Device paths should continue working, but, if not, simply jump back to this step. To do so, run the following commands in the terminal:
sudo mount /dev/sda1 /mnt
sudo nano /mnt/etc/fstab
Replace the UUIDs with the correct ones according to blkid. Once you're done, hit ctrl-x, and choose to save the file before exiting:
sudo umount /mnt
14.7 Reboot to your normal GRUB.
15. Now you're ready to boot to your old system on your new drive. However, you will need to manually edit the GRUB entry in order to point to the new disk, especially if you were using UUIDs. To do so, you need to select the GRUB entry in the menu, and hit the "e" key (for edit). Then use the arrow keys to move to the correct part of the entry (UUID or device path), and replace it with the new information. If you're running legacy GRUB (it will say GRUB 0.9.X

at the top), you'll need to hit the "b" key to boot once you've made your changes. In GRUB2, the key is F10. In either case, the keys are listed at the bottom of the menu when editing.
16. If you've done the last step correctly, your system should boot properly. Once there, you'll need to adjust the GRUB entries correctly in the configuration files to make it permanent.
16.1 With legacy GRUB, you simply do the following:
sudo nano /boot/grub/menu.lst
Then find the correct entry and adjust the information as in Step 15.
16.2 For GRUB2 you can either use grub-customizer, by hand:
16.2.1. For Ubuntu (and derivatives):
sudo update-grub
16.2.2. For any other systems:
sudo grub-mkconfig -o /boot/grub/grub.cfg
17. You should be all set!

TESTDISK & PHOTOREC

What you need: To install Testdisk (or run a liveCD that contains TestDisk). In Ubuntu the package is called *testdisk*, and is in the universe repository.

When to use TestDisk: If your drive isn't being recognized as formatted (appears as "RAW" or "UNFORMATED" in GParted) but you haven't done anything to delete partitions. Or if logical partitions have vanished.

What to do before running testdisk: If you're planning to do more than re-create a partition table, you'll want to run the commands on an imaged copy of the drive (see Clonezilla step 4 above, and choose Device-Image). Since partition tables are a table of contents for your drive (in layman's terms), you can freely re-write it as you want without impacting the actual data. As such, doing this on the physical device should be fine, even if it needs multiple tries.

1. Run testdisk from a terminal.
2. You'll be asked about log creation, choose "create".
3. You'll need to now choose the correct drive from the list.
4. Testdisk will automatically identify the partition table type. Do not choose anything but the default option unless you know exactly what you're doing.
5. Choose Analyse, which will scan the partition table, and then look

for partition headers for "lost" partitions.

6. It will then show you the current partition structure – double-check here to make sure the partition you're looking for is missing. If it is listed, then this process won't help you and you can quit. If it is actually missing, continue by choosing "Quick Search".

7. Testdisk will ask you a few questions based on the analysis, so answer them as best you can (suggested values are supplied by TestDisk for those who are unsure).

8. Once the scan is complete, it will show you a list of partitions it found (in green). Select the partition you want to restore (if you want to restore more than one, choose one to start with and complete step 9 for the other partitions as well).

9. Hit the "p" key to list the files on the partition (it should work for most formats, though it failed to do so on the HFS+ partition, claiming it needed to be compiled with that support, though I could find no indication as to the compilation option for this).

10. If these are the partitions you wanted, and the directories/files are listed properly, hit enter.

11. Testdisk will then show you the new table, which you can choose to write to the disk. If, however, something is still missing, you can choose the deeper search option (which works the same as Steps 9 and 10). For damaged files and partitions, you'll need to follow more specific advice, which you can find on the TestDisk wiki in the Further Reading section.

12. Once you've written the table (this worked fine for the HFS+ drive, and as such should work for everything), you may need to reboot before the drive shows up again, though in my case it popped up the moment the partition table was written.

If this doesn't yield results, and you're looking for files to restore (deleted, lost, etc.), you can also try the Advanced option instead of Analyse at Step 5. There are specific instructions on the wiki according to partition type.

If your hard drive is damaged or has been completely reformatted, you can try to recover items using Photorec. However, this results in files named by blocks instead of the actual file names (though Photorec may manage to restore some names, it's better to assume the worst).

1. Run photorec from the terminal.
2. Select your disk and choose proceed (if you have the option, choose the raw device listed as /dev/rdisk as it's faster).
3. Highlight the partition you want to scan (or the whole disk), then:
3.1. Open File Opt in order to select what files to recover (to avoid recovering tons of files you aren't interested in). There are further options under "Options", but the defaults are most likely all you need.
3.2. Choose "search".
4. Select file system type.
5. If your file system is corrupted, you can choose Whole in order to search for files from everywhere. However, if you've only deleted the files and want them back (and TestDisk has failed), you should be fine with the Free option.
6. Choose the location where the recovered files will be written.
7. Patience. Photorec will put them in folders called recup_dir.1, recup_dir.2,... within the folder you chose. Once the scan is running and files are being restored, you can access them even while the scan is running. If you end up interrupting the scan, you can resume it next time you run photorec.

Hopefully this article will help a few readers with recovering lost data or fixing "broken" drives. If you have any specific problems (that aren't explained in the Further Reading section links), feel free to email me and I will do my utmost to help solve these issues. If you have any questions, suggestions, or requests for articles, you're also welcome to email me those. My email address is: lswest34+fcm@gmail.com.

Further Reading:

TestDisk:
http://www.cgsecurity.org/wiki/TestDisk_Step_By_Step

Clonezilla: http://clonezilla.org/

Photorec:
http://www.cgsecurity.org/wiki/PhotoRec_Step_By_Step

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.

Welcome back. It's hard to imagine that it's been 4 years since I began this series. I thought that I'd shelve the media manager project for a bit and return to some basics of Python programming.

This month, I'll revisit the print command. It's one of the most used (at least in my programming) function that never seems to get the detail it deserves. There is a lot of things you can do with it outside of the standard '%s %d'.

Since the print function syntax is different between Python 2.x and 3.x, we'll look at them separately. Remember, however, you can use the 3.x syntax in Python 2.7. Most everything I present this month will be done from the interactive shell. You can follow along as we go. The code will look like this:

```
>>> a = "Hello Python"
>>> print("String a is %s" % a)
```

and the output will be in bold, like this:

```
String a is Hello Python
```

PYTHON 2.X

Of course you remember the simple syntax for the print function in 2.x uses the variable substitution of %s or %d for simple strings or decimals. But many other formatting options are available. For example, if you need to format a number with leading zeros, you can do it this way:

```
>>> print("Your value is %03d" % 4)
Your value is 004
```

In this case, we use the '%03d' formatting command to say, "Display the number to a width of 3 characters and if needed, left pad with zeros".

```
>>> pi = 3.14159
>>> print('PI = %5.3f.' % pi)
PI = 3.142.
```

Here we use the float formatting option. The '%5.3f' says to produce an output with a total width of five and three decimal places. Notice that the decimal point takes up one of the places of the total width.

One other thing that you might not realize is that you can use the keys of a dictionary as part of the format command.

```
>>> info = {"FName":"Fred","LName":"Farkel","City":"Denver"}
>>> print('Greetings %(FName)s %(LName)s of %(City)s!' % info)
Greetings Fred Farkel of Denver!
```

The following table shows the various possible substitution keys and their meanings.

Conversion	Meaning
'd'	Signed integer decimal
'i'	Signed integer decimal
'u'	Obsolete - identical to 'd'
'o'	Signed octal value
'x'	Signed hexadecimal - lowercase
'X'	Signed hexadecimal - uppercase
'f'	Floating point decimal
'e'	Floating point exponential - lowercase
'E'	Floating point exponential - uppercase
'g'	Floating point format - uses lowercase exponential format if exponent is less than -4 or not less than precision, decimal format otherwise
'G'	Floating point format - uses uppercase exponential format if exponent is less than -4 or not less than precision, decimal format otherwise
'c'	Single character
'r'	String (converts valid Python object using repr())
's'	String (converts valid Python object using str())
'%'	No argument is converted, results in a '%' character

PYTHON 3.x

With Python 3.x, we have many more options (remember we can use these in Python 2.7) when it comes to the print function.

To refresh your memory, here's a simple example of the 3.x print function.

```
>>> print('{0}
{1}'.format("Hello","Python")
)
Hello Python

>>> print("Python is {0}
cool!".format("WAY"))
Python is WAY cool!
```

The replacement fields are enclosed within curly brackets "{" "}". Anything outside of these are considered a literal and will be printed as is. In the first example, we have numbered the replacement fields 0 and 1. That tells Python to take the first (0) value and put it into the field {0} and so on. However, you don't have to use any numbers at all. Using this option causes the first value to be places in the first set of brackets and so on.

```
>>> print("This version of {}
is
{}".format("Python","3.3.2"))
```

```
This version of Python is
3.3.2
```

As they say on the TV ads, "BUT WAIT... THERE'S MORE". If we wanted to do some inline formatting, we have the following options.

```
:<x Left align with a width
of x
:>x Right align with a width
of x
:^x Center align with a width
of x
```

Here is an example:

```
>>>
print("|{:<20}|".format("Left
"))
|Left                |
>>>
print("|{:>20}|".format("Righ
t"))
|               Right|
>>>
print("|{:^20}|".format("Cent
er"))
|        Center      |
```

You can even specify a fill character along with the justification/width.

```
>>>
print("{:*>10}".format(321.40
))
*****321.4
```

If you need to format a date/time output, you can do something like this:

```
>>> d =
datetime.datetime(2013,10,9,1
0,45,1)

>>>
print("{:%m/%d/%y}".format(d)
)
10/09/13

>>>
print("{:%H:%M:%S}".format(d)
)
10:45:01
```

Printing thousands separator using a comma (or any other character) is simple.

```
>>> print("This is a big
number
{:,}".format(7219219281))
This is a big number
7,219,219,281
```

Well, that should give you enough food for thought for this month. I'll see you at the start of the 5th year.

Greg Walters is owner of RainyDay Solutions, LLC, a consulting company in Aurora, Colorado, and has been programming since 1972. He enjoys cooking, hiking, music, and spending time with his family. His website is www.thedesignatedgeek.net.

If you work in LibreOffice much, you will find yourself using the same formating over and over. Whether you use it to write letters or to create the next best-seller, you spend a lot of time setting up the same styles over and over again. Templates are the answer to this problem. A template is a document model used to create other documents. All the LibreOffice applications can use templates. In fact, every time you create a new document, LibreOffice is using a default template.

Styles are the key to creating templates. Styles are a preset way of displaying information. I first discussed the importance of using styles all the way back in part 3 of this series, discussing how styles help create a uniform look in your document as well as saving you time. In the spirit of saving you time, we can add one more use for styles, creating templates.

SETTING UP A TEMPLATE

Everything from a business letter to a scientific research paper has a required layout and format. Let us say we are writing a document that requires a numbered outline format with sublevels. Another requirement is that the title and author appear at the top of each page, and the page number at the bottom in the format of "Page # of #".

We will tackle the numbering style first. In a new Writer document, open the Styles and Formatting window. Click on the list styles icon (the last one on the Styles toolbar). Select Numbering 1. Right-click Numbering 1 and choose Modify. On the Outline tab, pick the style that is labeled "Numeric with all sublevels" when you hover the mouse over it. Click the Apply and OK buttons.

Now, to take care of the header and footer. Open the Styles and Formatting window and click on the Page styles icon (next to last on the Styles toolbar). Right-click the Default Style page style and select Modify. On the Header tab, check Header On, then switch to the Footer tab and check Footer On. Click OK to save the changes. Click into the header area of the first page, Insert > Fields > Title. Type a space and "by", then Insert > Fields > Author. Move your cursor down to the footer at the bottom of the page. Type "Page", a space, then Insert > Field > Page Number. Type space "of" space, then Insert > Fields > Page Count.

SAVING THE TEMPLATE

We are now ready to save our template. File > Save as Template will open the Template Manager. Select the template folder where you want to store your template. Click Save. A dialog will prompt you to name the template. Enter the name you want to show for the template and click Accept. Close the Template Manager.
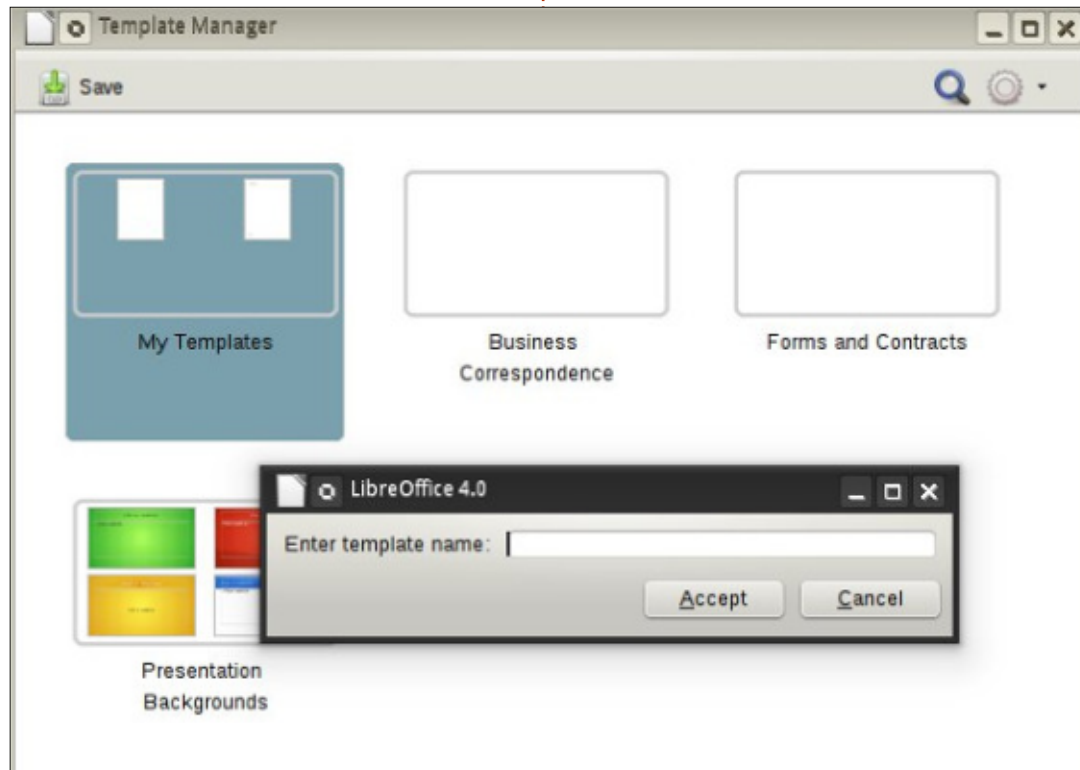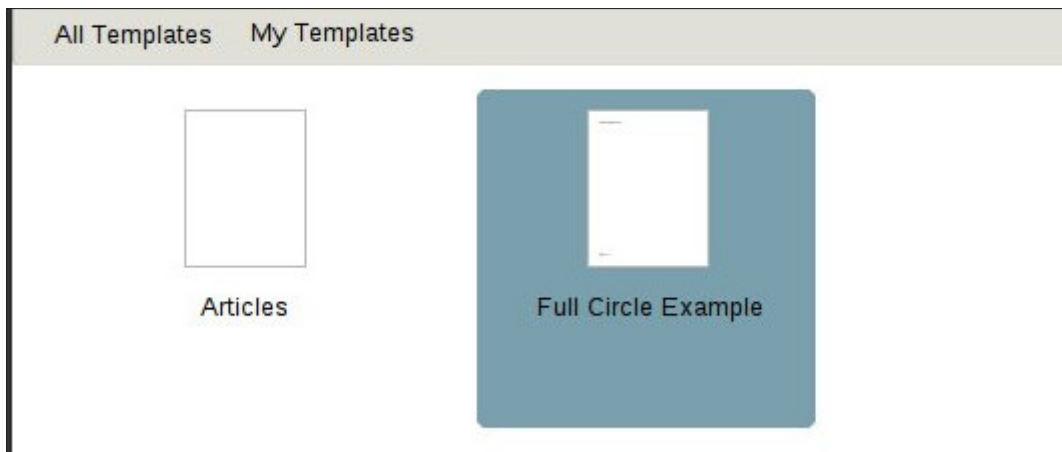
USING THE TEMPLATE

Let's use our newly created template. File > New > Templates. Open the folder where you saved your template and double-click your template. The title shows as the title you gave the template. Let's change it. File > Properties. Select the Description tab and change the title to something else. Click OK. The title in the header will change to whatever you typed in.

Let's try out that outline numbering system. Open the Styles and Formatting, click on the List styles icon, and double-click Numbering 1. Your input will change to the list style we defined for the Numbering 1 when creating the template. Add some text and be sure to add several levels to make sure it is all working. Now, you can save your document like you normally would. This does not save it as the template, but as a new file on your computer.
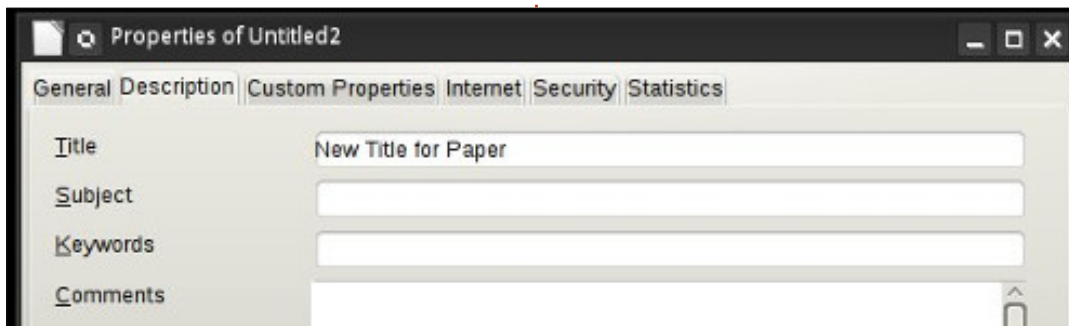
SETTING A NEW DEFAULT TEMPLATE

If you need to use your new template most of the time, why not make it your default template? This is easily done in LibreOffice. File > New > Templates. Navigate to the folder where you have your template and select it. Click on the "Set As Default" button. Now, anytime you start a new document of that type, LibreOffice will use your template instead of the default template that comes with LibreOffice.

DIFFERENT SOURCES FOR TEMPLATES

Creating your own templates is great, but you will not always need to put in all that work. The official template repository at http://templates.libreoffice.org has hundreds of templates for you to try and use. To use individual templates, import them into the template manager.

Some templates are collections. They have a extension of .OXT. To import these templates, you use
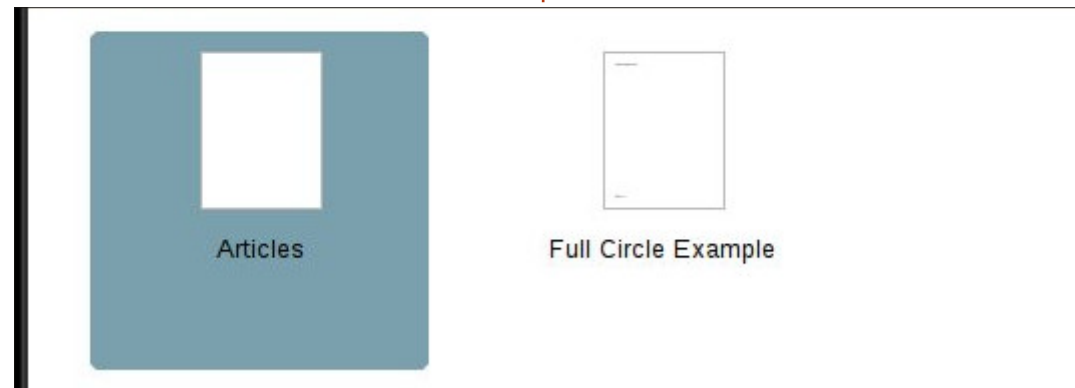
the Extension Manager, Tools > Extension Manager. Click Add, and browse to your downloaded OXT file. Select the file and click Open. The Extension Manager will process the file and add the collection to your Template Manager.

CONCLUSION

Templates are a way to repeat the formatting of a document from one document to the next. Creating and saving templates relies mostly on the use of styles. Though I demonstrated creating a Writer template, you can create templates in the other modules of LibreOffice, too. You can even set your template as the default for that type of document. Templates are just one more time-saving tool within the LibreOffice suite.

Elmer Perry's history of working, and programming, computers involves an Apple][E, adding some Amiga, a generous helping of DOS and Windows, a dash of Unix, and blend well with Linux and Ubuntu. He blogs at http://eeperry.wordpress.com

PYTHON SPECIAL EDITIONS:

http://fullcirclemagazine.org/issue-py01/

http://fullcirclemagazine.org/issue-py02/

http://fullcirclemagazine.org/python-special-edition-issue-three/

http://fullcirclemagazine.org/python-special-edition-volume-four/

http://fullcirclemagazine.org/python-special-edition-volume-five/

http://fullcirclemagazine.org/python-special-edition-volume-six/

PXE can be considered as one of the ways to load the operating system on a computer.

The Preboot eXecution Environment (PXE, also known as Pre-Execution Environment; sometimes pronounced "pixie") is an environment to boot computers using a network interface independently of data storage devices (like hard disks) or installed operating systems.

When the computer has PXE capabilities, the BIOS allows the user to choose among the possible devices to load the operating system, and thereby boot from the network.

If this option is selected, the firmware PXE uses DHCP to configure an IP address on the network adapter and locate a server (the "boot server") via TFTP to download a file, storing it in RAM memory.

This file is then executed, thereby booting an operating system.

In standard mode, the DHCP server does not directly provide the boot server, but acts as a "PXE redirection service", which redirects the client to the available PXE server.

The PXE server is a modified DHCP server, which uses UDP port 4011 and provides the client with the IP address of the boot server and the name of the network bootstrap program (NBP) to download.

In practice, usually the PXE firmware is able to directly receive the necessary parameters from the DHCP server to identify the server and the boot file to download, and you can configure a standard DHCP server to provide the necessary parameters to boot via PXE.

```
sudo apt-get install tftpd-
hpa dhcp3-server netkit-inetd
lftp
```

Modify the /etc/default/tftpd-hpa file as shown above right.

The last row will have a verbose

```
RUN_DEAMON="yes" TFTP_USERNAME="tftp"
TFTP_DIRECTORY="/var/lib/tftpboot"
TFTP_ADDRESS="0.0.0.0:69"
TFTP_OPTIONS="-l -v -v --secure"
```

log.

Now we work on the files related to the DHCP Service:

```
vim /etc/dhcp3/dhcpd.conf
```

and type the text shown below.

Clearly, the IP addresses are totally invented; you must insert the correct ones.

The filename parameter is usually pxelinux.0, but can be modified at will by placing it where it is convenient for you.

It is not over yet with DHCP...

```
vim /etc/default/dhcp3-server
```

and specify the interface to use with the INTERFACES directive.

We put in /var/ lib/tftpboot an Ubuntu distribution netboot version taking it from here:

```
lftp -c "open
http://archive.ubuntu.com/ubu
ntu/dists/lucid/main/installe
r-i386/current/images/;

mirror netboot/"
```

```
option domain-name-servers 8.8.8.8;
default-lease-time 86400;
max-lease-time 604800;
authoritative;
subnet 113.112.117.0 netmask 255.255.255.0 {range
113.112.117.118
113.112.117.250;
filename "pxelinux.0";
option subnet-mask 255.255.255.0;
option broadcast-address 113.112.117.255;
option routers 113.112.117.1;
next-server 113.112.117.118; }
```

Then we start the services:

```
sudo /etc/init.d/tftpd-hpa
start
```

```
sudo /etc/init.d/dhcp3-server
start
```

and we pass to the configuration of the PC terminal on which it will be installing the operating system.

Usually, modern BIOSes have the boot option set to the F12 key, but I recommend the classic RTFM ... to dispel any doubt.

The computer that will be used as a terminal seeks the IP address via DHCP, and once it has obtained this, will allow access to the folder of the tftp server to show the typical GRUB installation.

I usually work with server versions of Ubuntu, but it could happen that the desktop version, using the graphical installer, does not allow the proper display of the options, especially if the machine on which you want to proceed is a bit old and has not large-capacity video graphics. In this case, edit the

```
/var/lib/tftpboot/ubuntu-
installer/i386/boot-screens
```

and write

```
wget
http://archive.ubuntu.com/ubu
ntu/dists/hardy/main/installe
r-
i386/current/images/netboot/u
buntu-installer/i386/boot-
screens/boot.txt
```

```
wget
http://archive.ubuntu.com/ubu
ntu/dists/hardy/main/installe
r-
i386/current/images/netboot/u
buntu-installer/i386/boot-
screens/splash.rle
```

This will allow you to boot using older machines.

Calogero (aka 'Kalos') is an open source enthusiast, whose favourite GUI is the tty. He specialises in DevOps, technical writing, mind maps and open knowledge.

LIBREOFFICE SPECIAL EDITIONS:

http://fullcirclemagazine.org/libreoffice-special-edition-volume-one/

http://fullcirclemagazine.org/libreoffice-special-edition-volume-two/

http://fullcirclemagazine.org/libreoffice-special-edition-volume-three/

INKSCAPE SPECIAL EDITIONS:

http://fullcirclemagazine.org/inkscape-special-edition-volume-one/

http://fullcirclemagazine.org/inkscape-special-edition-volume-two/

As I promised for this month, we will introduce Bezier Curves.

Bezier curves (named by the French engineer Pierre Bezier) are used in computer graphics to set the coordinates for a smooth curve really easily.
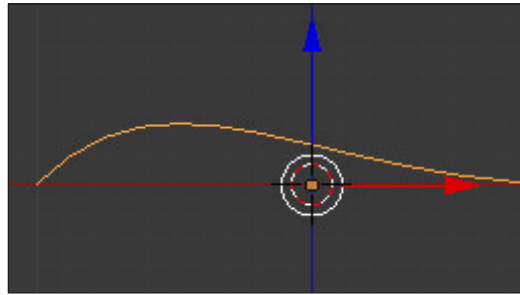
Lets see what we are talking about. Start a new project in Blender and get rid of the cube (select the cube, press X to delete and confirm).

Now, press Ctrl-A to add a Curve-->Bezier
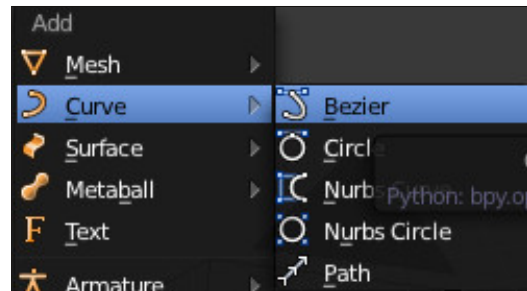
Press R for rotation, X for the X-axis, and 90 for the degrees of the rotation. Then, press Numpad-1 for Front view and Numpad-5 for orthographic view.

You should have something like the image below

Lets press the Tab key to enter the edit mode. You can see a strange looking shape of something like a fish skeleton or pointing arrows – whatever you prefer to call it …
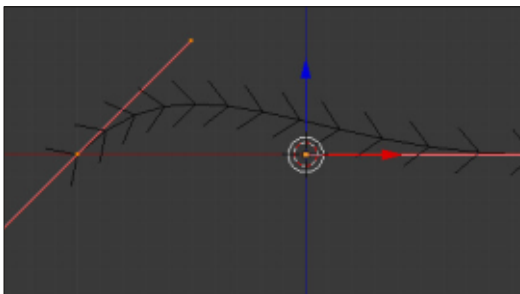
The interesting stuff is the two pink lines representing the edges of the shape (this "shape" is the actual segment of the curve). Let's focus on the right pink line. Press the A-key to deselect everything.

Select the middle vertex (called control point) as shown below:
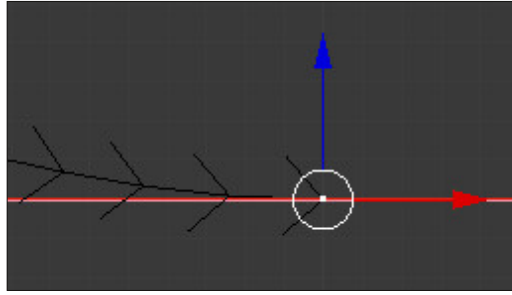
Notice that the other 2 vertices (called handles) are selected as well. Press the G-key to move the control point. Your curve's right edge moves. Press the RMB (right mouse button) to cancel or the LMB (left mouse button) to confirm the movement. Now, select the right-most vertex (handle for now on). Move it as we did earlier with the control point.

The control point stays in place but the handles are moving. Also, the curvature of the curve is changing! Moving the other handler also changes the curve. Moving the handler towards the control point changes the curvature of the curve respectively.

With the right control point selected, press Ctrl+LMB. You create another control point and actually extrude your curve. The newly created control point is the last now, the last one represents where your curve is finished. If you want to extend your curve from the starting edge, select the starting edge and press Ctrl+LMB to add a new control point as the starting edge. If you want to close the curve, select the two edges and press the F-key to add a closing segment. This is all we need in order to create our logo with Bezier curves.

For more details about Bezier Curves go to http://wiki.blender.org/index.php/Doc:2.6/Manual/Modeling/Curves

Our goal is to create a three-dimensional logo from a two-dimensional logo, and we will start from an easy one. My favorite Greek team is Panathinaikos, so let's google to find the team's logo.

I came across this jpg that is just

fine for the work.

I don't really care about the text so if I want to I can crop it using Gimp. It's fine for my purposes, so I'll leave it the way it is. The good thing is that we have to model just a clover. An easy task for bezier curves.

So start a new project, remove the cube, and have a Front Orthographic view on your 3d view window.

One powerful tool is the ability blender gives us to have as a blueprint an image at the background, for easy modeling.

Press N-key to toggle hide/unhide the right side panel (properties panel) at the 3d view window. Leave it unhide, scroll it down, and "tick" the Background Images
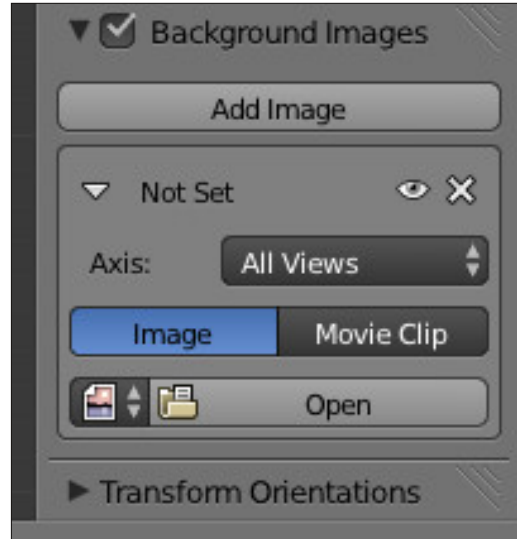
Press the Open button and navigate to the location that you downloaded the image. Select and open that image.

The image appears at the background. You can alter some of its properties (the transparency or the position, for example) from the panel that appeared just below the open button that we pressed earlier.

Tip: The background images are visible only at orthographic view and only at precise angle (front, left, top etc). At a later stage, I can show you techniques to handle images as 3d objects viewable from any angle and any view.

Now, add a Curve-->Bezier. Press Tab-key to go to edit mode and using the Ctrl+LMB to add the necessary control points, create an outline of the clover as shown at the image below. Use the handles in order to create the curves that you need:

After that, we don't need the background image. Untick it at the properties panel or press the X icon just below and to the right of the Add Image button.

Up to now, we have a two-dimensional shape, and we have a little more work to do for the third dimension.
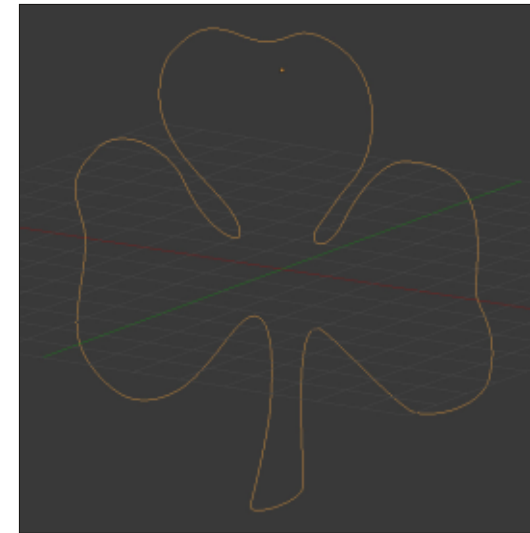
To be continued...

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

Last time I traced a sketch of my comic strip character, "Frankie", using the Bézier tool. First I used the standard SVG stroke, which creates a smooth outline of constant width. Then I converted the stroke to a path in order to vary the width of the outline manually. Finally I used Inkscape's "Shape" option to create variable width outlines.

In addition to the Bézier tool, Inkscape offers a couple of other methods for drawing variable width outlines. I've split these out into their own article because, in my experience, they both particularly benefit users of graphics tablets and can be difficult to use effectively with a mouse. The first is referred to variously as the Pencil tool or the Freehand tool. The keyboard shortcut, on English versions of Inkscape at least, is either F6 or "P" – so "Pencil tool" is a better mnemonic.

The Pencil tool (left) is best thought of as a freehand version of the Bézier tool. With the latter you place nodes at specific locations and Inkscape draws a path that connects them. With the Pencil tool, however, you draw a path and Inkscape places the nodes for you. The few items on the Pencil tool's control bar are very similar to those of the Bézier tool: you still have the Shape pop-up, with its limited list of options, if you want some variability in the path's width; but you also have a "Smoothing" control that's specific to this tool.

When you draw a line using the Pencil tool, the Smoothing value determines how accurately the final path will follow your scribbles. Setting this to a low value will create a path with lots of nodes which accurately records every bump and h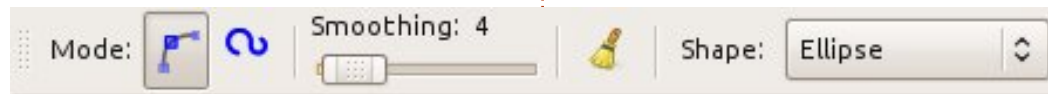iccup that you make as you draw your line. Conversely setting this all the way up to 100 will result in a path that only honors the start and end points of your line, with a curve that vaguely corresponds to the direction of your movements.

This example shows my efforts to trace Frankie's nose using a mouse, with the Smoothing set to 1, 25, 50, 75 and 100. The paths clearly become smoother with each increase in value, but in doing so, the finer detail of the shape is lost. By checking the status bar when each path is selected, the reason becomes clear: increased smoothing results in fewer nodes in the path. In this case the paths have 548, 70, 8, 4 and 2 nodes respectively.

I find that it's usually easier to produce a smooth line with a graphics tablet than with a mouse, so stylus users may be able to get away with a lower smoothness value and still produce acceptable results. Remember that you can always simplify the path using CTRL-L, so it's often better to keep the smoothness value a little on the low side, and tidy up the results afterwards.

One very satisfying use of this tool – at least for those of us who can't draw particularly well – is to set the smoothness fairly high and the shape to "ellipse", then freely sketch with a stylus or mouse. The smoothing turns your jittery paths into swooping impressions, and the ellipse shape gives something of a brushwork feel to the image. You probably won't sell the results at a gallery, but it does make for a quick and easy way to create a rough sketch that you can then refine using other tools. Here you can see the results of two minutes
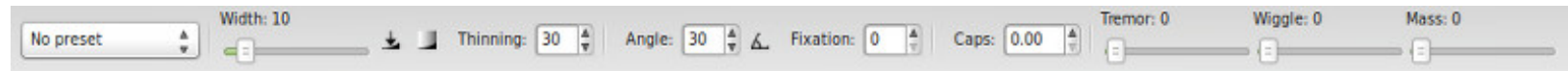
spent playing with a graphics tablet – I'm sure many readers will be able to do much better.

Whereas all the options for the Pencil tool can be used with a mouse, the Calligraphy tool (CTRL-F6 or "c") has options that are available only if you use a graphics tablet. To be able to use all its features requires a tablet and stylus that measures both pressure and tilt angle – effectively limiting the tool for anyone who doesn't have an expensive Wacom tablet. The tool can still be used with a cheaper tablet, or even with a mouse, but not all the features will be available.

The Calligraphy tool (left) does not produce simple, clean Bézier curves. Instead, it produces complex filled paths that often have hundreds of nodes. Making a change to a path drawn with this tool is not for the faint hearted. The control bar (above) has a lot of buttons, sliders and options, reflecting the complexity of this tool and the range of effects it can produce.

A good starting point is the selection of presets. These can be found in the pop-up menu on the left, offering presets called "Dip Pen", "Marker", "Brush", "Wiggly", "Splotchy" and "Tracing". The last option, "Save…" allows you to add your own choice of settings as a preset. As you can see from this image, the first four presets give quite different effects. These were scribbled using a cheap graphics tablet that tracks pressure but not tilt angle. You can see that increasing the pressure as the line moves from top to bottom results in thicker lines for three of the presets – "Marker" pays no attention to pressure.

I've omitted the "Splotchy" preset from that collection because I think it's fairly useless with its default settings. In particular, the width slider is set all the way up at 100, which results in extremely thick line ends that are too large for practical use. Dragging the width down to a lower value produces a far more usable result – but then it's no longer "Splotchy" and you may as well just save your own preset with a different name. In this test image, the black line uses the standard Splotchy width of 100, whereas the red line is set to 25. One thing to note is that this preset doesn't use the tablet's pressure – the thinning of the lines is dictated by the speed at which you draw.

The final preset, "Tracing", does something a little different to the others. Rather than the thickness of the line being dependent purely on how you draw, it also depends on what else is on the canvas when you draw. As you draw over darker objects, the line will become thicker, and over lighter objects it will be thinner. Unfortunately it never quite drops to zero, so you'll always have thin wispy lines even on the whitest of backgrounds. Here's an example in which I've just scribbled over my scan of Frankie. While my scribbles are over the white background, the line width is at its minimum, but as soon as I hit part of the character the line width thickens, resulting in a blobby approximation of the image beneath.

Although the presets give a good idea of the range of effects that can be produced with the Calligraphy tool, you can, of course, tweak the controls to create your own individual pens and brushes, then save your favourites as presets. Unfortunately, there's no way to delete a preset within Inkscape, but if you really need to remove one you can edit the Inkscape preferences file in a text editor to delete the relevant section of XML data. On a Linux system, the file is ~/.config/inkscape/preferences.xml, and if you search for the name of your preset you'll find a section that looks something like this:

```
<group
      id="dcc7"
      width="44"
      mass="0"
      wiggle="0"
      angle="30"
      thinning="30"
      tremor="10"
      flatness="0"
      cap_rounding="1"
      usepressure="0"
      tracebackground="0"
      usetilt="1"
      name="Medium Splotchy"
/>
```

With all copies of Inkscape closed, first make a backup of the file, just in case. Then remove everything from the opening "<group" string to the closing "/>". Make sure not to delete parts of the other "group" sections around it. Finally, save the file. When you next start Inkscape you should find that the preset has gone.

After the presets pop-up, the next widget on the tool control bar is a slider to alter the nominal width of the line. As with other sliders in Inkscape, there's a right-click context menu with some presets, but usually it's easier to just drag the slider to approximately the width you want. The reason this is only a nominal value is that the line's thickness can be changed by any or all of the next three controls on the bar.

The first button switches pressure sensitivity on, which is useful only if you have a tablet that reports pressure. With this enabled, light pressure on the stylus will produce thinner lines, and strong pressure will produce thicker lines – but only up to the value set by the width slider.

The second switches on the feature we saw with the "Tracing" preset whereby the line thickness changes depending on the darkness of the objects you're drawing over. Tracing over light objects will create a thinner line, while tracing over dark objects will create a thicker line. Tracing over a black object will result in the thickest line – the size set by the width slider. This image shows a line with a width of 50 drawn over a white-to-black gradient with the tracing option first disabled and then enabled.
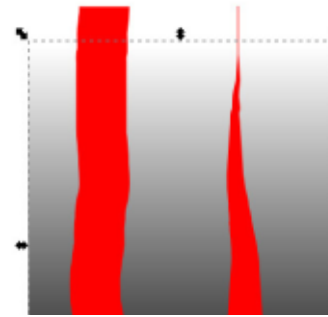
The "Thinning" control could equally have been called "Fattening", as it can produce either effect. For any non-zero value, the line thickness is changed according to how quickly you are drawing. Positive values will reduce the thickness, negative values will increase it. Again there is a context menu with some sensible values. This feature is most commonly used with positive values to simulate a brush or fountain pen, where fast strokes tend to produce thinner lines as less paint or ink is deposited on the page.

The next three controls on the toolbar all need to be considered together. They alter the angle of the simulated calligraphy nib that is at the heart of this tool. Think about the wide, flat shape of a broad nibbed fountain pen, and about the effect that has on the line you draw. By changing the angle of the pen, you affect the shape of the line, and these controls attempt to mimic that.

The first directly sets the angle of the nib between -90° and +90°. If you have a suitably professional tablet, you can enable the button to the right of the Angle control to allow the nib's angle to be set by the tilt of the stylus. But it's the third control, "Fixation", which affects the line the most. With this set at zero the angle is constantly changed to match the direction you're drawing in – resulting in a fixed thickness of line. With Fixation at 100 the angle is entirely set by the Angle spinbox and Tilt button – resulting in a line that is thick when drawn perpendicular to the nib angle, and thin when drawn parallel to it. Setting this control to

values in-between affects how much of the angle is governed by the direction of the stroke, and how much by the Angle and Tilt controls.

The best way to get a feel for the Angle and Fixation controls is simply to experiment with them. As usual they have context menus, and selecting the menus' default values of 30° angle and 90 for the fixation produces a passable fountain pen style for signatures or calligraphic flourishes.

The Caps control allows you to define how rounded the ends of your lines will appear. A value of zero will produce a square line end, with increasing values making the ends bulge out to semicircles, and ultimately to long ellipses. As usual the context menu has some sensible default values labelled, the effects of which you can see in this example.
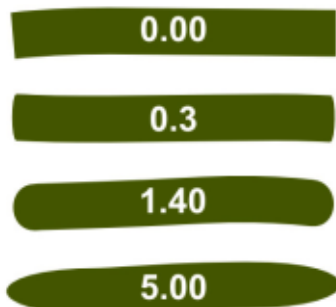
Finally we come to the Tremor, Wiggle and Mass controls. Let's get Mass out of the way quickly, as it's the least useful of the three. Essentially it tries to simulate some inertia in your calligraphy pen, by making the line you draw lag a little behind your mouse or stylus movements. It can help to smooth out erratic hand movements, much like the Smoothing control of the Pencil tool. Unfortunately, the range of values far exceeds anything that is likely to be useful. Although you can drag this control all the way up to 100, anything over about 10 results in so much lag that it's almost impossible to produce the shape you want, rendering 90% of the scale essentially useless!

Tremor and Wiggle are far more useful controls. On the surface they both produce similar results – adding some degree of randomness to your line. But whereas Tremor introduces randomness in the thickness of your line, Wiggle randomizes the position a little – wiggling the line up and down. The two are both dramatically affected by the speed with which you draw and can, of course, be combined to introduce a large amount of randomness.
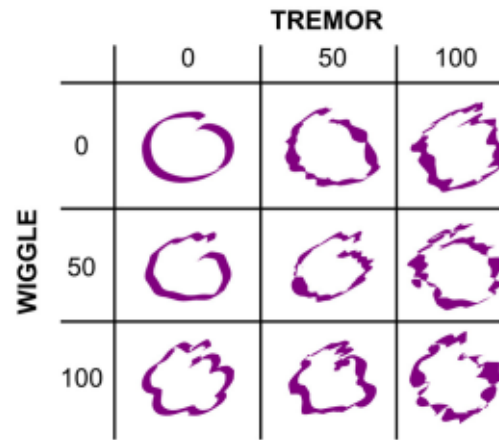
The Calligraphy tool can produce some interesting artistic effects, especially when used with a graphics tablet, but the results can be very difficult to edit. Consider something as simple as a little swirl, drawn with a stylus:

The version on the left is a simple Bézier path with a stroke, drawn using the Pencil tool. The one on the right was drawn with the Calligraphy tool, and is a filled path. The difference becomes clear if you look at the status bar, or switch to node editing mode – whilst the Pencil tool has produced a simple path with only four nodes, the Calligraphy tool has resulted in 42!

The Pencil and Calligraphy tools both add more options to your arsenal when using Inkscape to manually trace an image. They can, of course, also be used as creative tools in their own right – especially if you have a graphics tablet and some artistic talent. For those of us with very little artistic talent, however, I'll be delving into Inkscape's tools for automatically tracing bitmaps in the next instalment.

Mark's Inkscape created webcomic, 'Monsters, Inked' is now available to buy as a book from http://www.peppertop.com/shop/

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 <u>not</u> 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

TRANSLATIONS

If you would like to translate Full Circle into your native language please send an email to ronnie@fullcirclemagazine.org and we will either put you in touch with an existing team, or give you access to the raw text to translate from. With a completed PDF, you will be able to upload your file to the main Full Circle site.

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

ASK THE NEW GUY

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

If you have a simple question, and Linux is so confusing to you that you think "home folder" refers to a shut-in origami enthusiast, contact me at copil.yanez@gmail.com.

Today's question is:

Q: A lot of people seem to be unhappy with something called Mir. What is it and why the drama?

A: I know, right? So much duh-raaamaaaaa, it's getting like an episode of *Glee* around here. I half expect Mark Shuttleworth to break into a Mariachi rendition of Missy Elliott's Work It:

Is it worth it?

Let me work it.

I put my thing down, flip it, and reverse it.

Actually, in reference to today's question, the above lyrics are weirdly accurate. Let me explain.

Mir is a display server, a piece of software that sits between you and the Linux kernel in Ubuntu. It takes your input, routes it to the right place, and then returns the output to your screen. If you're married, Mir is like your spouse, taking your dinner invite to the neighbors whose name you can never remember, and reporting back their refusal because of your tendency to get drunk and act out the Empire State Building scene from the original King Kong.

If that's not clear enough for you, below is an extremely simple diagram I found to help explain what a display server does.

See? Simple.

Okay, so that's what Mir does. Still doesn't explain why everyone's treating it like the new kid in school who cuts his own hair and smells like pork products all the time (we called him Ricky Bacon).

Well, Mir was chosen to replace the X window server, the existing display server in Ubuntu. Canonical, the lead Ubuntu developer, and the company in charge of all final decisions with regards to what default programs appear in Ubuntu, made the choice to move away from X. Why? X had been serving the needs of Linux users for almost three decades. If it ain't broke, don't fix it, right?

ASK THE NEW GUY

The problem was that X wasn't up to the challenge of delivering an operating system on all appliances a user might have. Actually, that's not entirely true. X was up to the challenge of delivering to your Internet-enabled toaster, it just couldn't do it the way you were most familiar with.

The thing is, most of us know what an operating system should look like on a small screen. We use our thumbs to navigate from one screen to another, pinching and zooming as fast as our minds can handle. And there's the real problem with X. Modern phone users have been conditioned to expect an experience that's been dubbed "f 'n f," fast and fluid. If your favorite OS appears on your phone, you want it to look enough like your desktop that it's like kissing your boyfriend's twin brother: different, yet similar. But you most definitely want it to behave like every other phone OS you've ever seen: fast and fluid.

Okay, so X wasn't going to be f 'n f, so what to replace it with? The smart people at Canonical put their heads together. And they chose Mir, right?

Nope.

They chose a program called Wayland. Actually, Wayland is a "protocol," a series of instructions defining how input and output should be handled. At this point I just sat down and cried because I was pretty much over my head about five minutes ago.

Upon further evaluation, Canonical decided Wayland wasn't going to do the trick either. So they did what every amateaur woodworker does when his wife tells him they need a new picnic table for the backyard: they built their own.

Here's the thing about homemade furniture. No one, except people who make furniture for a living, actually know how hard it is to make furniture. But everyone's used furniture so we all think we have enough knowledge to judge and criticize. Oh, this table is too scratchy, you should have sanded the edges more. Oh, this table isn't long enough, you'll never get your whole family around it for dinner. Oh, this table isn't really a table, it's a piece of plywood resting on cinder blocks and my mother was right, I should

have married Derrick!

Canonical set about designing the next generation display server, codenamed Mir, thereby angering a lot of people, not least of all fans of old Soviet space hardware, a pretty tough bunch, in case you didn't know.

Mir is meant to offer the familiar Ubuntu experience using a window server that can handle the f 'n f demands of modern users.

What's not to like?

Well, if you believe that Canonical puts too much emphasis on this idea of convergence, that people want the same OS from device to device, or if you doubt that users are going to ditch desktops and laptops in favor of phones and tablets, you might not be too excited.

But I think the frustration with Mir is simply a manifestation of a different concern.

When Ubuntu came on the scene, the skies opened up and angels heralded its arrival. Here was an open source OS that finally had the resources to push forward

on multiple fronts simultaneously. Uptake skyrocketed and suddenly the Linux desktop seemed more viable than ever before.

Diehard Linux enthusiasts, the ones who tattooed Tux on their biceps, continued to use the command line and roll their own distros. Me, I was thrilled to use an OS that did everything I needed, didn't cost a cent, and didn't stalk me like a psycho ex to update bloatware programs I never wanted installed in the first place.

Ubuntu just worked, and it did it with style. It was so beautiful, many of us were willing to ignore that, hey, Canonical is a business, not a charity. It offers B-to-B services for companies who want a stable, powerful and scalable OS. They incorporate the efforts of developers working for free, into a product they charge corporate users to support. They even (shudder) trademarked the Ubuntu name.

Then came Unity and scopes and the whole Amazon.com kerfuffle, and people began to realize what should have been apparent all along: you can't run a company forever without revenue.

When Canonical got around to discussing Mir in detail, it made it clear that contributions to Mir from the community could be re-licensed by Canonical as their own.

That's when things went all Game of Thrones.

People far smarter than me have some serious concern, and I will listen and learn and try to understand the issues as best as my little gerbil-powered brain can.

But I'm not worried. Here's why.

I've never misunderstood my relationship with Canonical or Ubuntu. I recognize that there are financial concerns that will drive decisions about Ubuntu's development. And so long as Ubuntu is a free product from a corporate entity, I'll remember the warning that if I'm not the customer, I'm the product. It's similar to the relationship I have with Google, and I recognize the potential pitfalls. The real cost to use free products from profit-seeking entities is eternal vigilance.

I am willing to support Ubuntu, warts and all, for the same reason I use a Kindle and buy Amazon products despite what I've seen happen to my beloved independent booksellers: they are pushing for the kind of future I want to see.

I believe convergence is where it's at, one device that behaves as both desktop or "pockettop." I believe Ubuntu has the potential to challenge Android and iOS, not only offering more competition in the marketplace, but pushing those other OSs to do things they would never have tried without Ubuntu breathing down their necks. I believe that having Ubuntu gain a real foothold in mobile could mean the end of that market's oligarchy, a revolution that could eventually run the other way, growing the Linux piece of the desktop pie.

And I believe Mir is a key component in making all this possible.

But the biggest reason I'm not worried about Mir, or Ubuntu, or the idea that Canonical is methodically co-opting the Linux community, is because you simply can't un-smell a fart. Believe me, I've tried.

You cannot simultaneously introduce millions to Linux and FOSS and then make everyone ignore that they exist.

In other words, I know more about Linux now because of my interest in Ubuntu. And if Ubuntu ever stopped innovating, stopped pushing the envelope, stopped trying to do grand things and drawing the criticism boldness begets, I would do what Ubuntu taught me to do, a fresh install.

Ultimately, I am wary of any argument against Ubuntu that sounds like hipster-speak, as in, "I was totally into Ubuntu before its auto-tune, Euro-trance, psychedelic phase." And I won't be scared away by the drama. You think this is drama? I was in a high school jazz band. You don't know drama, son.

So in answer to the question, What is Mir? Mir is a rorschach test. People will see much in it that simply isn't there. It will likely reinforce their existing beliefs until it comes into better focus and we can test it in the wild. Until then, I'm willing to give Ubuntu and Canonical the benefit of the doubt, that and vigilance are the price I pay for their amazing product.

Oh, and what about those Missy Elliott lyrics?

Is it worth it?
Let me work it.
I put my thing down, flip it, and reverse it.

Translation:

Is Mir worth it?
Let me work with it.
I'll tweak it, fork it, or reverse it.

I totally knew Missy was a closet Ubuntu enthusiast! Her early song *Linus Torvalds is a Pimp!* should have been a dead giveaway.

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).

Last month I decided to buy myself a new tablet. My initial impulse was to buy a Google Nexus 7, but, after looking around, I settled on the Acer Iconia B1-710 tablet. I shouldn't really say "settled" since I'm happy with the B1, though I expect anyone looking for a super quality tablet would not be. I found the B1 new for $100 less than the Nexus 7. Price seems to vary from country to country, and, in the U.K., it seems to be higher than most places. If you are considering an Acer Iconia B1 and a Google Nexus 7, and they are close in price, there is no question you should buy the Google Nexus 7–it simply blows the B1 away in almost every single way.

Besides saving $100, what I like about the B1 is the performance. It is not going to play high end OpenGL games because it does not have the kind of GPU the Nexus 7 has, but its Dual Core 1.2 GHz processor is more than enough to handle most streaming video and games like Fast Racing 3D.

Variations of the B1 seem to exist, mine has 1GB of RAM, but I have seen the B1 listed with 512MB of RAM on several U.K. websites. The look is slightly different as well. Mine is black with a silver band and white on the back, while others are black with a tinge of blue (insert joke about the Nexus 7 beating it up, black and blue). Inside the box are the tablet, a USB cable, and the charger plug. The tablet uses a micro-B USB style cable, so if you lose your cable you will not pay a premium price to get a new proprietary cable.

A great feature of the tablet not found on a lot of budget tablets is the microSD expansion slot; adding a microSD card will get you up to 32GB more storage space. Unfortunately, the slot is behind a rather cheap piece of plastic on the back. It is not that the build quality feels terrible, the Iconia B1 actually feels okay in my hands, but you can tell it is not the best-built tablet. It feels a little better than a lot of the budget tablets out there, but not as good as high-end tablets.

If I could ask Acer one question about the Iconia B1, it would be "why did you bother including a front facing camera?" At 0.3mp, the front facing camera takes extremely poor pictures, worse than most webcams. There is no rear facing camera. I suppose it was included for applications like Skype, but 0.3mp, really? I wasn't looking for a camera, so for me the lousy camera wasn't a deal-breaker.

Lots of other reviews slag the Iconia B1 for the screen, but I found it acceptable at 1024x600. It is at least enough that I can reasonably enjoy a movie streaming from our entertainment system. High end features like an HDMI port are also missing from the B1.

My Iconia B1 came with Android 4.1.2, one of the older versions of Jelly Bean, but new enough that I

really did not lack for applications. The stock set of applications was nice, Acer did not load the B1 with a ton of junk applications. And, since I use a lot of Google applications, I fell in love with all the included apps for managing Google services, particularly the contacts application which also shows recent social media activity.

The Acer Iconia B1 is not the Lamborghini of the 7" tablet world. It is more like a Chevrolet Chevelle – it has some horsepower behind it, but it is not as flashy as its Google cousin. If all you need is a basic tablet, the Acer Iconia B1 is not all that bad. It has a fairly solid body, decent CPU performance, and can be expanded with a microSD card. But, if your needs

are a bit more demanding, there are much better tablets on the market. As far as budget tablets go, it is one of the best, but be aware there are a couple on the market (one with 512MB, one with 1GB), and the price is not always that far from more powerful tablets.

Charles McColm is the author of *Instant XBMC*, and the project manager of a not-for-profit computer reuse project. When not building PCs, removing malware, encouraging people to use Linux, and hosting local Ubuntu hours, Charles blogs at http://www.charlesmccolm.com/.

contents ^

MY STORY

Written by Gabriele Tettamanzi

I'm almost 50 and my professional curriculum is solely as Supply Chain and Production manager. Currently, I'm plant director for a food company. I'm neither an IT professional nor a smart young digital native. My experience might be interesting for others who are interested in nature, not young any more, and interested in Linux, but might be worried to attempt something new.

I became familiar with Linux for the first time about 30 years ago. At the time, I was a university student. My very first access to a computer was on a microcomputer running Unix; text mode only of course. Counting my university term (5 years) and my 15 months of service as an officer for the military navy–they were using Unix too–I've being using Windows PC or AS400.

At the beginning of 2000, I ran into an issue I was not able to solve on my PC, which was running the unlucky Windows Millenium. The office suite MS Works stopped running and I could not find a solution. Looking for an alternative to MS Works, I discovered open source software by downloading the OpenOffice suite. I was strongly impressed by that office suite. It was so much better than Works and it was free.

At more or less at the same time, an IT advisor working for my company gave me a Knoppix live CD. It was a very nice and rich in functionalities. Nevertheless I was not capable of solving problems I had in setting up an internet connection via winmodem.

I continued discovering and using open source software and tools like Gimp, Firefox, Thunderbird, OpenOffice, Hugin became my standard home computing tools, but I was still a Windows user.

A few months ago, after the last antivirus update and the last consequent performance reduction of my notebook, a Lenovo Thinkpad T43, Pentium M, 2.13 GHz, 2 GB Ram, running Windows XP, I decided to test some Linux distros, because I read on the internet that most of them just work on notebooks and were able to boost old hardware performance.

I downloaded a free guide from Makeuseof.com indicating Ubuntu was a good solution for renewing old hardware. I started from that interesting guide where I found my very first piece of information. Another very good source was Distrowatch (www.distrowatch.com) where I have studied the reviews of the distros which were tested.

I took the time to use Unetbootin and to test live distros booting from a usb pendrive including: all the 4 flavours of Ubuntu family (Gnome wasn't still official), Mint 14 Cinnamon and Mate, Fedora 18 Xfce, Debian 6 Gnome, Mageia 2, Fuduntu, Bodhi Linux. My test was:
• Live run with full hardware recognition.
• The readiness of setting up a mobile broadband connection–the only way I have to connect to the web.
• The performance of my notebook.
• The appeal of the desktop.

After this first selection, I chose Xubuntu 12.10, Bodhi 2.3, Mint 14 Mate and Ubuntu 12.04. I was not convinced by Lubuntu, even if it was really light and therefore fast on my pc, because there is no LTS version and I did not find a compelling explanation of this difference with the other three *buntus. Bodhi is a rolling distribution, for sure not the best for a newbie, but the distro website has very good documentation and this convinced me.

I took Parted Magic–in my opinion really a wizard distribution–and I made room on my hard disk for testing the four distros, installing them alongside Windows XP. I resized the Windows XP partition, setting up a new swap and a new empty partition for the new system.

MY STORY

First test was Ubuntu 12.04. It has a very easy installation process, but it is a bit resource consuming and it slowed down my PC. The software that came with the standard installation was older than the versions I was using on Windows XP. After some updates from ppa, I decided that I preferred some system stability issues in return for the availability of newer software versions. I have tested VirtualBox and I hae set up a Windows XP virtual machine. By the way, after the unavoidable very first confusion of being a long-term Windows user, I liked Unity DE.

Second was Mint 14 Mate. It had the same easy installation as Ubuntu, very nice look, very easy to use for a long-time Windows user like me, but still a bit heavy on my slow hardware. I have been using this distro for a week and I never rebooted XP. Instead, I installed Virtual Box and used the VM I made during Ubuntu 12.04 testing.

Third was Bodhi Linux. Something went wrong during the installation. My system halted after the interactive part of the installation and I was not able to complete the process. I abandoned this distro. It was fast and nice. As soon as I am more experienced I will try it again.

Fourth was Xubuntu 12.10. It has the same easy installation process as Ubuntu 12.04. It is comfortable to use for a newbie like me and runs fast on my notebook. In my opinion, it does not have much eye candy, but it looks elegant. There are only a few software packages with the standard installation, but the Ubuntu software collection is the largest in the Linux world.

Conclusion: Xubuntu 12.10 is my choice.

After the installation and the updating, I installed Ubuntu-restricted-extras, Calibre and FBReader (ebook manager and reader), Gimp 2.8, LibreOffice 4.0, Hugin (panorama picture composer) and Luminance HDR (HDRI photo tool), VirtualBox, VLC (media player), Vuze (bit-torrent client),Wammu (managing tool for the broadband mobile modem), Wine from the Ubuntu software repository or from the official ppa or from the web and then by GDebi of each package. I have updated the file manager Thunar to the 1.6 version because of the nice tabbing feature missing in the older version installed is standard. I made a few aesthetic modifications to the icons, the fonts and the system bar.

There are only two minor issues I was not able to overcome in a pure Linux way with my Xubuntu installation. Because of my iPad and Kobo, I have set up a Virtualbox virtual machine running Windows XP.

Kobo: Calibre, a very efficient ebook manager, works smoothly with my Kobo, but if I want to update the firmware, I need the specific Kobosetup software, and I was not able both to setup the unofficial Linux release of it, and to run the Windows version of it under Wine. At present, I have installed the Windows version of Kobosetup in the XP virtual machine. Another way to get a solution is to find a wifi spot and upgrade the firmware via wifi, but my PC wifi card does not support wifi access point.

iPad: I have no problem if I want to access the apps repositories; Gigolo does an excellent job and I see my iPad directories in Thunar. But, if I want to access the standard Music, Video and Picture repositories on iPad, I see them as if the titles of the songs or video or picture were encrypted and if I want to update the iPad OS I need iTunes – that runs decently only under Windows or Mac OSx. At present I have no idea on how to have complete control of my iPad without iTunes, therefore iTunes is installed in the XP virtual machine. Workarounds: for the OS updating, I should find a wifi hot spot; for the standard repository access I should test the tools available for iPod.

My PC looks like new. It starts up fast, it runs fast, and it is affordable. After more than a week of testing, the system is now stable and I'm feeling comfortable in my home daily working.

This is the beginning of a new era of learning and experimenting for me. I have a lot of things to learn about Linux. I am planning to test Lubuntu, because, during the tests mentioned above, I realized that my way of using a PC and software does not need 'long term support' (for my use I just need the back-up of my data), and soon I will be back again testing Bodhi.

My move from Windows to Linux started in the middle of March after I had to re-install Windows 8 Pro on my Toshiba C660-15R notebook and it refused to Activate. I could have gone down the route of downloading an Activator, but as I had the Ubuntu 12.10 disk, and an Ubuntu 13.04 Development Release Daily Build disk – along with an OpenSuse 12.3 DVD lying around, I decided to give them a go. I was a bit hesitant, as my Kodak ESP 1.2 AIO wireless printer has only Windows and Mac OSX drivers.

I first tried Ubuntu 12.10 for 30 minutes. Then I tried Ubuntu 13.04 Development Release for the same amount of time as 12.10. Next, I tried OpenSuse 12.3 for about 3 minutes and then re-installed Ubuntu 13.04 Development Release. The reason I decided to use Ubuntu was due to the fact that OpenSuse 12.3 did not pick up the wired or wireless connection to my network, and, therefore, had no connection to the Internet right out of the box. Both Ubuntu 12.10 and 13.04 picked up my wireless

and wired connection. With the help of the Ubuntu forums I was able to get my Kodak ESP 1.2 Wireless AIO Printer running (but I had to use the Kodak Hero 3.1 AIO driver to get it working, as the one that was suggested did not work for me).

You might be wondering why I chose the potentially unstable Ubuntu 13.04 Development Release over the more stable Ubuntu 12.10. The simple reason for my decision was that I will probably end up upgrading to 13.04 when it is released. It made more sense to work my way up from Development Release to Beta Release to Final Release using Software Updater than having to download and burn the Beta Release to disk, then backup my data to Install 13.04 Beta, and have to do the same when the final release comes out.

The Ubuntu Forums even helped me to restore the Hibernate function that is not enabled by default.

The only software that I would like to use – that I am unable to until there is a way to get it to work in WINE – is Microsoft Office 365 Home Premium. I have been unable to get it to work in PlayOnLinux, and Crossover Office was not available for 13.04 at the time of me moving to 13.04. I've not had the chance to try Crossover Office (as at the time of writing I only just found out that it had become compatible with 13.04), so I've been using the web version of Office 365 Home Premium combined with LibreOffice. Currently, the only piece of Software I'm using via WINE, thanks to PlayOnLinux, is the excellent script and novel writing package, Celtx. I'm sure as I become more proficient with Linux, I'll probably be able to install the native Linux version of Celtx.

I'll have to see how many of my Windows native games work via PlayOnLinux at some point, but I've already purchased a couple of games since using Ubuntu 13.04. My first one was Bastion, that I got when it was in the Humble Bundle

Weekly Sale. My second was the very addictive Kerbal Space Programme that I purchased directly from the Kerbal Space Programme website, as it was much cheaper than purchasing it on Steam.

In the time that I have used Ubuntu 13.04 development release, then beta, I've been very impressed with how much faster my Notebook has become, and how much free HDD space I had post install along with how much more productive I've become compared to when I was using Windows.

I'm looking forward to finding free and even Open Source versions of all the applications that I'm used to using on Windows, along with learning how to program in one or more of the various programming languages that are available on Linux.

Like many people, I enjoy listening to music, and having my music with me everywhere is important -- and I have a large music collection to draw on. Trying to have everything with me at all times is a bit of a problem, though, considering how much music I have. Right now I own a number of portable MP3 players, two of which are full of music that I carry with me. My pockets can get very full that way, though, and while I like listening to tracks I own, what about finding new stuff? My MP3 players have never suggested anything to me. This is where the cloud services come in.

My first cloud service was Pandora. I could listen to it on a computer using Pithos, or on my phone with the Android app. Pandora is like a radio station that plays the kind of music you like. You give the service the name of an artist, and it builds a channel for you based on that style of music. It finds other artists it considers "similar" to the one you named, and builds a playlist around that. I find that roughly every 5-8 tracks it plays something from the artist you named, with the rest being the "similar" artists. It's not bad, and you can use it for free if you don't mind ads and use it only 40 hours per month. I elected to go ad-free and unlimited and pay $36 per year (also available for $3.99 per month). I generally pay for apps when I can to support services I rely on.

Pandora was good in its way, but you cannot control it precisely. Sometimes I know exactly what I want to listen to, or I want to check out an artist I just heard about. So I got an account with Spotify. Spotify is a service that has most of the recorded music available for you to stream, and lets you create playlists. A paid account is $10 per month. It is fantastic for things like putting together a playlist of every song a particular artist has recorded, or making playlists to suit a particular need or mood. It has a very large library, but not everything is there. A number of very high profile artists have refused to license their music to Spotify, such as The Beatles. I happen to be a big Beatles fan, and I have their albums on CD and have ripped them to Ogg or MP3 as needed, but that doesn't help on Spotify.

Then, 2 years ago, Google got
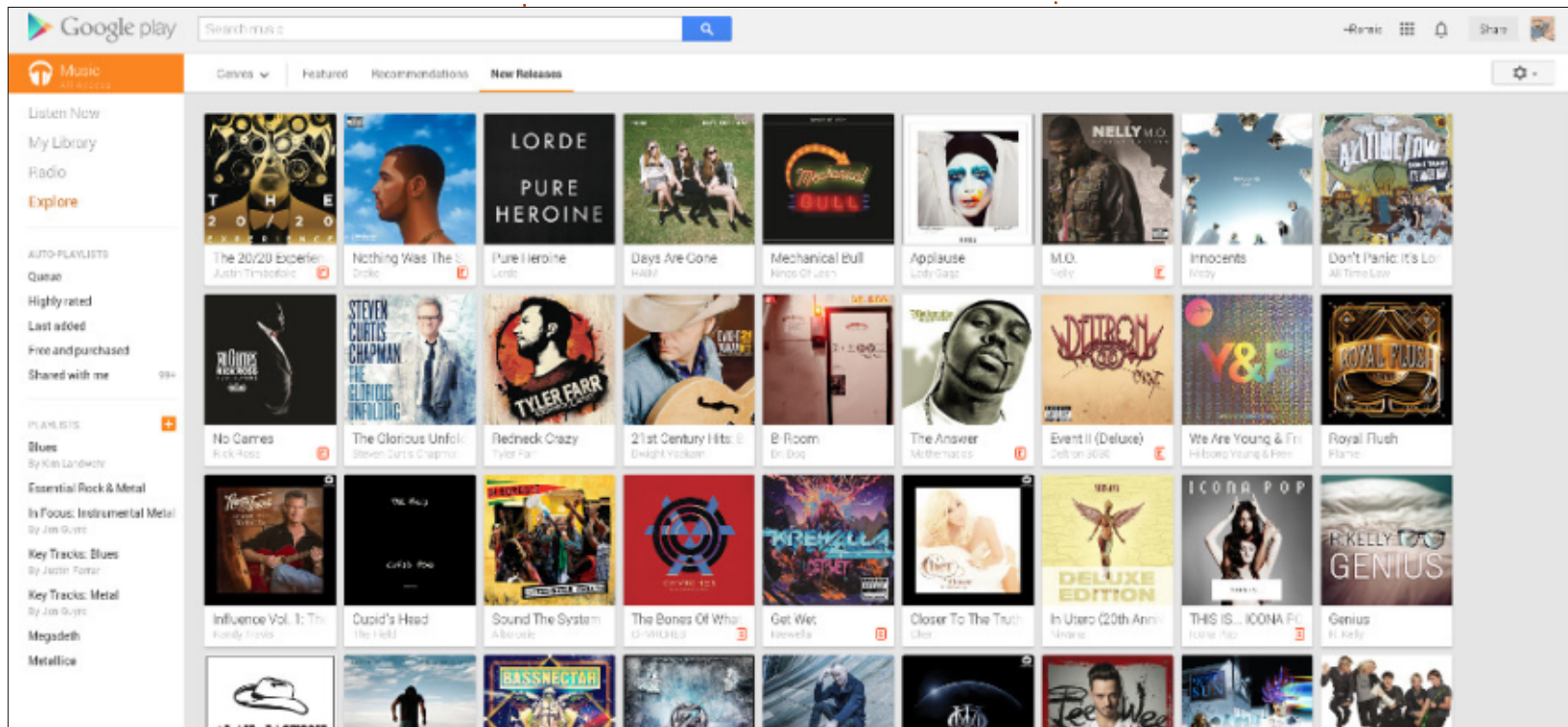
into the competition. Their initial offering was based around a music store much like the iTunes store or Ubuntu One, but had an interesting feature that let you upload your own tracks to their servers from which you could stream those tracks to your devices. So I could upload all of my Beatles CDs to their servers, and listen to them all I want. That was great, and I could also upload those rarities that would otherwise be unavailable (bootleg tracks, for instance, or direct sales tracks from bands like Phish that sell concert recordings direct to the fans). This is a great feature, and I signed up for my Google Music account. In addition, I could buy tracks from Google Music which would automatically be added to my account, and I could easily upload tracks I purchased from Amazon or from eMusic.

So now I had three different cloud services each doing different things. I liked them all well enough, and among them they pretty much covered everything I wanted. But then Google raised the bar. It created a new service, Google Play Music All Access, which combined all of the above into a single service for $10 per month. The

new Google Play Music All Access was recently released, and for your monthly fee you get access to a large library of music you can stream in addition to all of your own tracks. You can do this by creating playlists, in which the tracks can come from Google's library or from your own. And you can create radio stations similar to Pandora. After trying this for a week, I canceled my Pandora and Spotify accounts, because I now get it all for less money. And for whatever reason, I find I am listening to music even more often now with Google Play Music All Access. So how does it work?

GOOGLE PLAY ALL ACCESS ON YOUR ANDROID PHONE

Google Play is the name for Google's all-in-one online store. It offers music, movies, TV, books, magazines, apps for Android, and even Google-branded hardware like Nexus and Chrome. So it combines in one place everything you might ever want to buy from Google. For this review, we'll focus just on the music section, but chances are that if you have an Android phone you have visited Google Play Apps either on your

phone or in your browser. The Play Music app has an icon like a pair of headphones.

All Access is what you get when you sign up for the $10 per month plan. It gives you all of the above services. Open the app on your phone and you will see the following sections:
• Listen Now - This is where you can search for tracks in Google's library, plus all the tracks you have uploaded, plus suggestions based
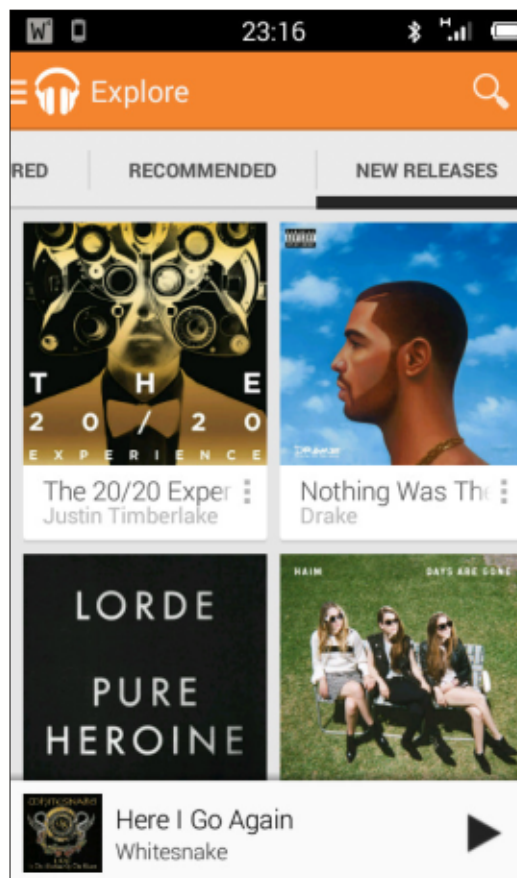
on your tracks, and even suggestions based on playlists you have created.
• My Library - You can start with the tracks you have uploaded, but you can also add any tracks you find in Google's library to your own "My Library". But note that this does not mean you can download any of them, this is purely streaming from Google.
• Playlists - Here is where you access any of the playlists you have created. This is very like Spotify, for instance.
Radio - You create "stations" here by giving an artist or track and telling Google to build a dynamic playlist of what it considers "similar" tracks. This feature is very like Pandora.
• Explore - Here you can browse by new releases, particular genres, or check out curated playlists offered by Google.

Now, because we are talking about streaming, you should definitely be thinking about whether this is using your mobile data. Because I don't want to hit any caps, or be deprived of music in a poor coverage area, I always load a couple of gigabytes of tracks onto my phone from my purchased music collection. A good

thing to do is to go to your Settings menu and set it to stream over Wi-Fi only if you are concerned about being hit with a big data bill.

You can also "pin" certain tracks to your device for offline listening. Open the track you would like to "pin", and look for an icon that looks like a pushpin. If it is at an angle, that means it can be downloaded to your device. If it is vertical, it means it has already been downloaded. But note that you can download a track only twice. It really is meant to be a streaming service. Note too, that in the settings you can specify to download tracks only via Wi-Fi.

FULL ACCESS ON YOUR COMPUTER

Actually this has become a favorite for me. I have some decent speakers connected to my media computer, and with Google Chrome open to the Play Music app, I have all of the same access. And perhaps because I am a bit older than most of the readers, I don't find managing everything on my cell phone quite as convenient. So I created my playlists in my
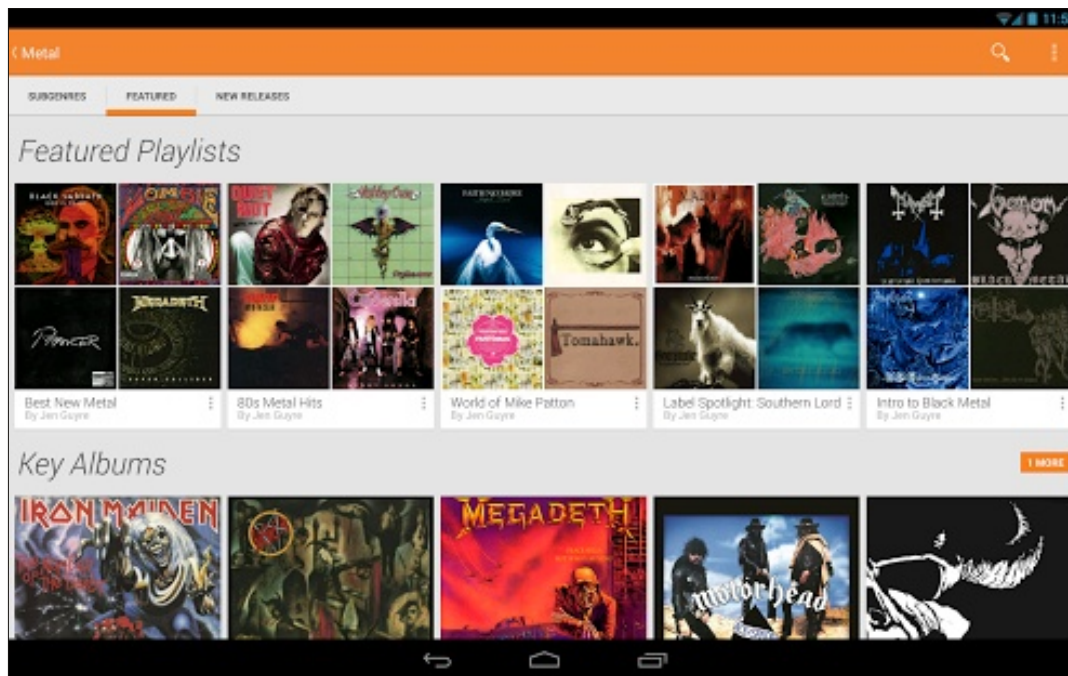
browser on my computer. Of course, you have to be logged in to Google to do this, but all of your settings are synced through your Google account. To open this, log in to Google using Gmail, Google+, or any other Google application. When you do this, Google places the black menu bar of all of their applications at the top of your Window. Select Play in this black bar, and then Music in the menu bar on the left.

This will open by default to the Play Store, where you can purchase tracks. But if you select My Music, you will get a list of options similar

to the Android app:
• Listen Now - This is a combination of tracks you have uploaded, tracks you put in playlists, radio stations you have created, etc.
• My Library - All of the tracks you have uploaded.
• Radio - The stations you have created.
• Explore - Popular new albums and tracks, and playlists by others that Google has selected.
• Auto Playlists - Playlists generated algorithmically by your actions.
• Playlists - the Playlists you have created.

One neat feature is that you can drag-and-drop any track into a playlist. A good example is using the Radio feature to find tracks you might not have known about previously. If you hear a track you like, you can just drag it onto a playlist and it is added.

BROWSER SUPPORT

I generally listen to Play Music on my Kubuntu desktop computer using Google Chrome, but I have also used it with Firefox, and at work I have used Internet Explorer (though Google complains that it is too old and some features may not work). But because the service is entirely browser based on computers, it is inherently cross-platform, and I think any Linux user should have a good experience.

SHARING

Of course, Google is all about the social these days, so sharing music is built in to Google Play Music. You can share playlists (see https://support.google.com/googleplay/answer/3140173?hl=en) with your friends, or with the general public. Just open a playlist you want to share, and you will see the

Share Playlist button. Click on that to get your Sharing options.

The default for every playlist is for it to be private. But if you like, you can change that to "Public". When you do this, a Google+ button appears, and this lets you select who you would like to share your playlist with. You can share it with the "Public", which in practice means anyone who follows you on Google+, or you can select specific people. They do need to be on Google+, though, for you to share with them. And if anyone shares a playlist with you, you can subscribe to the playlist, and if they add tracks later, those tracks will be added to your subscribed copy.

AVAILABILITY

Google Play Music All Access depends on making licensing deals with the record labels, so, as you might expect, it is not available everywhere just yet. Here is what Google says on their website about it:

All Access is available for Google Play Music users on Android 2.2 and above. All Access isn't available everywhere yet, but we look forward to expanding to more countries around the world.

What this means in practice is that it rolled out first in the United States. It was then offered in Australia and New Zealand. And on August 9 it was announced that it was now available in 9 European countries as well (Austria, Belgium, France, Ireland, Italy, Luxembourg, Portugal, Spain, and the UK). And I would assume that Google would like to achieve global domination, so it should be appearing in other countries in the months ahead. But, if you cannot wait, I have heard rumors that they mostly depend on a credit card address, and don't inquire too closely into the validity of that address as long as the charges clear.

So I hope this article has piqued your interest in this music service that I have found to be very attractive. And if you want find me, I am **+Kevin O'Brien** on Google+.

With our computers being portals to new universes, we often wish to take a picture of the screen - a screenshot. Most Linux users rely on the 'Print Screen' button or basic software such as gnome-screenshot or KSnapshot (the defaults in GNOME and KDE respectively) while some achieve this task through the trusty GIMP using File->New . While writing these articles I stumbled upon another alternative - Shutter.

THE VISION

Mario Kemper, the creator of Shutter, explained his reasons for creating a new screenshot tool:

"Well, I am a computer science student working as a QA person in my free time. When I started to do the QA work, I was looking for a neat screenshot application, because we are doing a lot of documentation for the developers as well.

There were some apps like ksnapshot, gnome-screenshot, etc, but they all focus on a single screenshot; no editing features, no session, no nice effects, etc. So I started to develop Shutter (formerly gscrot) with these features and goals in mind.

There is another big point, though: we all spend much of our time in forums, wikis, chats, etc. From time to time we need to do some screenshots and upload them so we can share them with other people, so I wanted to have a built-in function to upload a screenshot with nice link-formatting so you can post the generated link directly in the forum, wiki, etc.

(reposted from Launchpad Blog blog.launchpad.net/projects/shutter by Canonical Ltd ; licensed under Creative Commons)
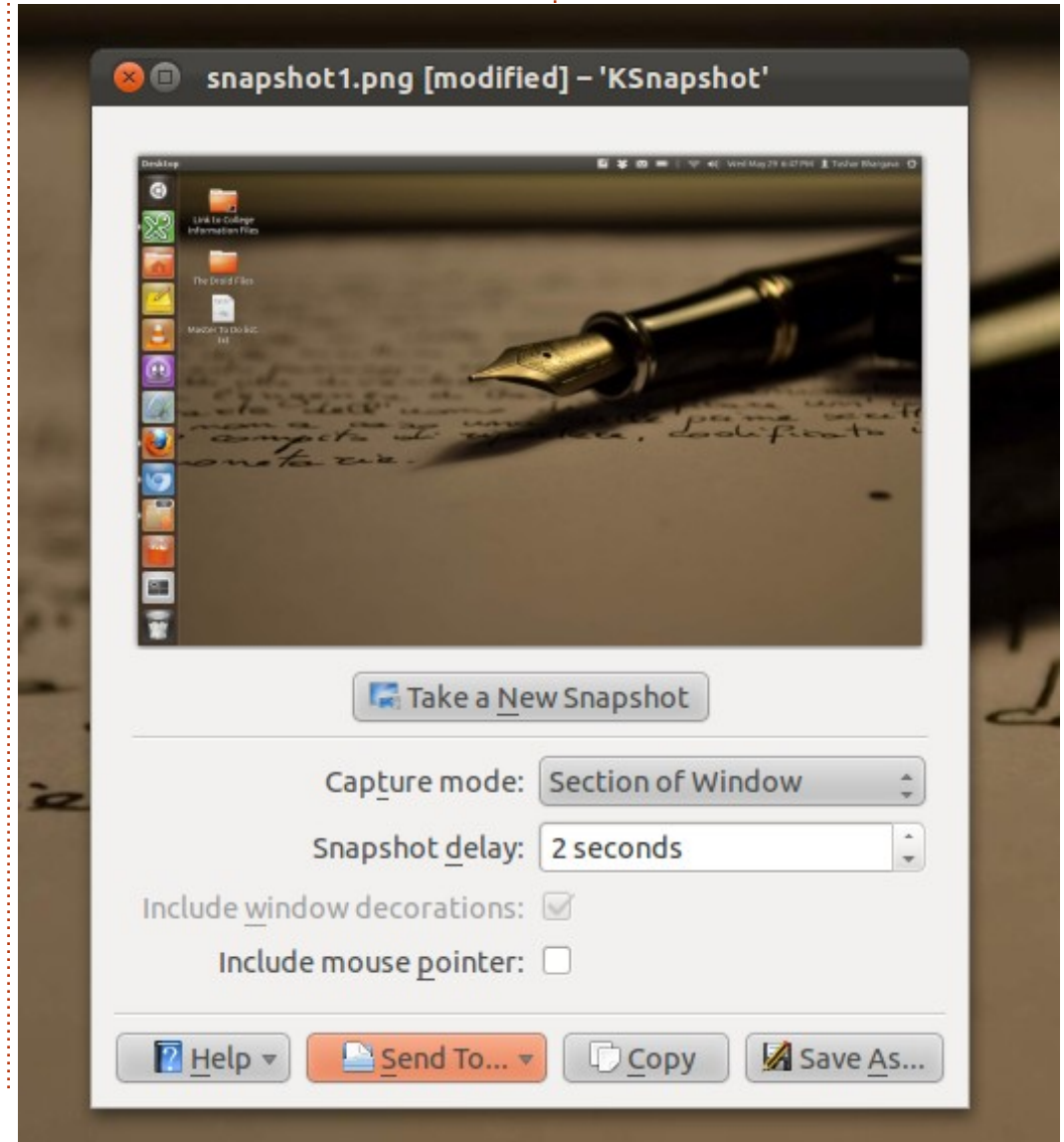
Ambitious goals, but does Shutter deliver on this promise? Time to test the claims.
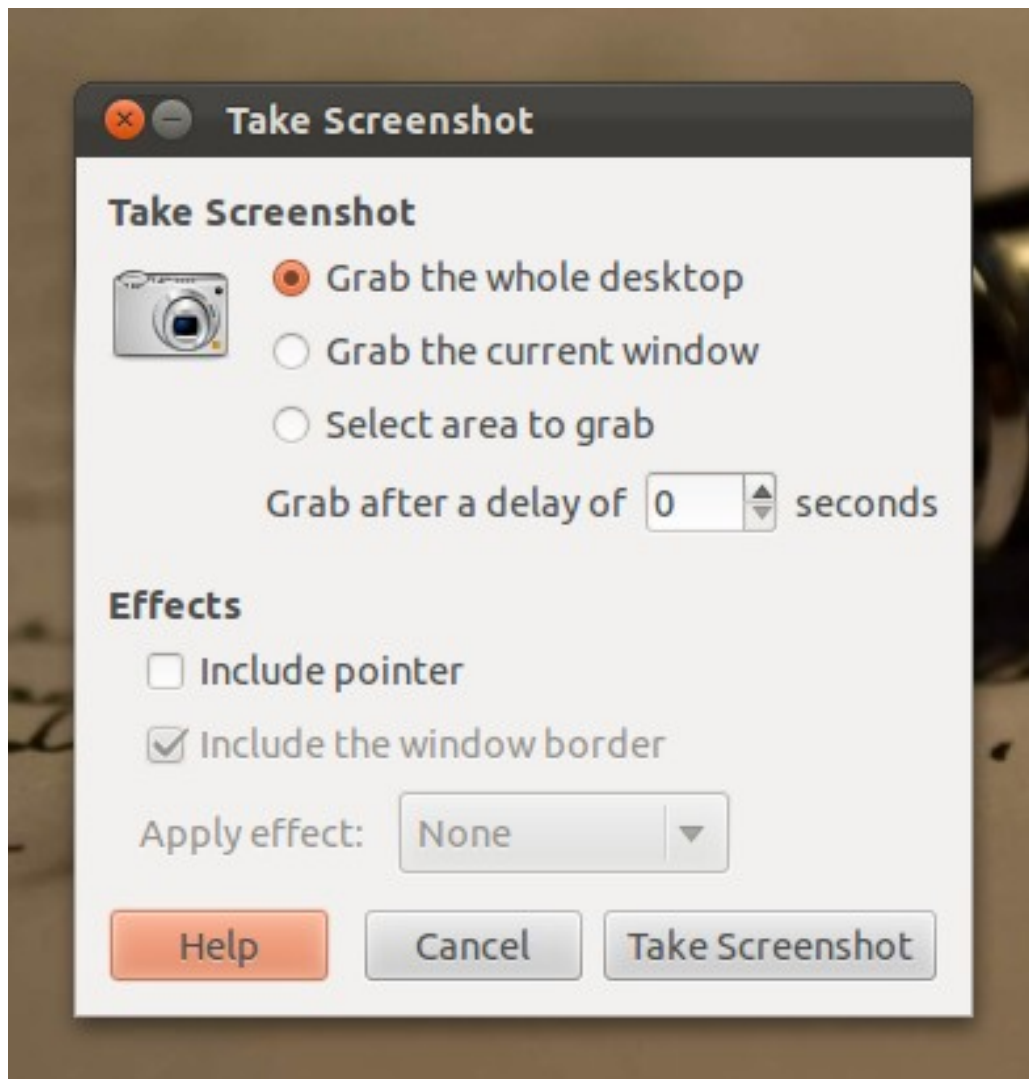
USER INTERFACE

KSnapshot has a deceptively simple user interface (UI). There's a preview window with a button below to take a new screenshot if you're dissatisfied with the first, a drop down menu to select the capture mode, and a delay timer. At the bottom are four buttons:
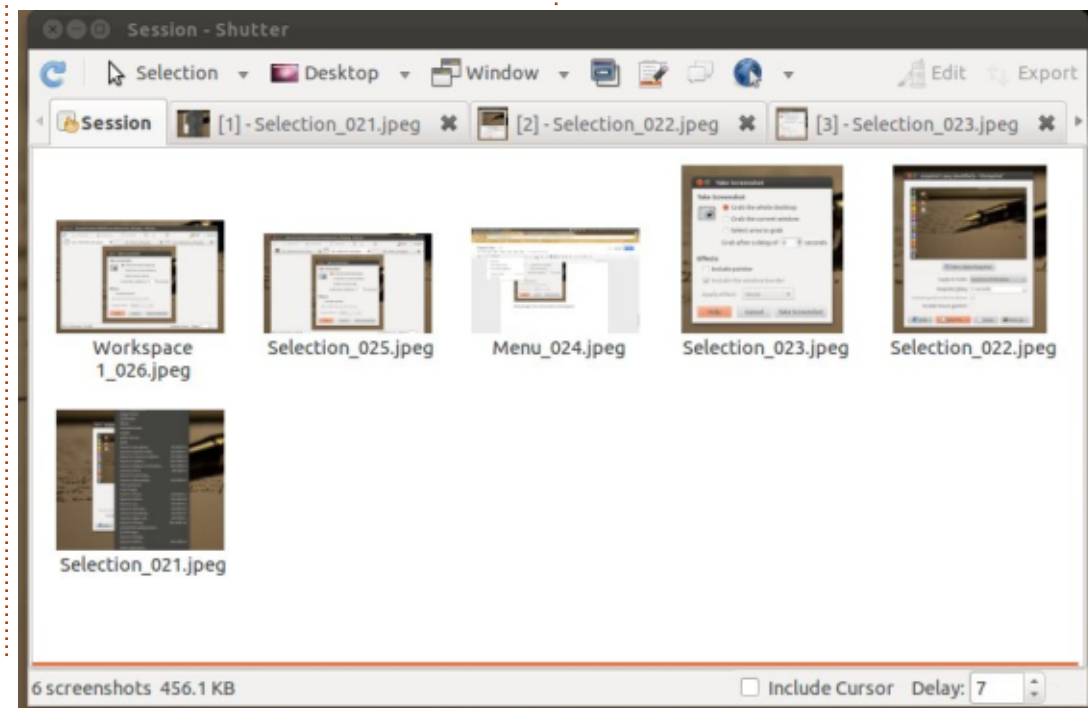
Shutter has a bigger UI but is still quite intuitive and well designed. You have the familiar options to take a screenshot of a selection, the entire desktop, or a window. You also have the ability to take screenshots of menus, tooltips, and even websites! One can't help but be impressed. There is a built-in editor, an export button, and a delay timer. For all the features it incorporates, Shutter's UI still remains beautiful and easy on the eyes.

SAVING, EDITING AND

EXPORTING

KSnapshot can save the screenshot in a variety of formats including .png, .jpeg and .bmp. It has no built-in editor, but can send the screenshot to GIMP. Its export options are the most comprehensive; in fact I was forced to include a screenshot as listing them by hand would have taken too long.

Gnome-screenshot falls on the other end of the spectrum. It doesn't offer you any editing options, and allows you to save

'Help', 'Send To', 'Copy' and 'Save As'.

Gnome-screenshot has an even more straightforward UI. There are 3 radio buttons which allow you to choose whether to 'grab' the

whole desktop, the current window, or a specific area. You can also specify the delay and whether to include the pointer or not. There are also a 'Help', 'Cancel' and 'Take Screenshot' buttons at the bottom.

SOFTWARE SHOWDOWN

screenshots only in the .png format. Export options are completely lacking. Of course, it was meant to serve as a basic screenshot tool, but a few more file formats would have been appreciated.

Shutter allows you to save images as .png, .jpeg or .bmp. However, the format to save to has to be decided beforehand in the 'Preferences' dialog. Shutter also allows you to export pictures as PDFs, a feature that's extremely useful. The built-in editor is elegantly designed and will be more than sufficient for most users. It is one of the best built-in editors I have seen, with a perfectly understandable UI and a plethora of features. Add to this a series of plugins like 'Sepia' and 'Grayscale' and you realize you'll seldom have to leave Shutter. If only your camera had such software! If, however, a screenshot needs even more editing, Shutter can hand the reins over to GIMP. Shutter can make your screenshot perfect, but if you want to show it off to the world, you'll have to put in the effort yourself. My version's export options were limited to 'imagebanana','imageshack' and Ubuntu One.

CONCLUSION

Shutter's advanced feature set and clean UI separate it from the rest of the pack. It truly delivers on its original promise. If you need more export options, you can't go wrong with KSnapshot. And if you don't want to scroll through never-ending menus, or tweak under-the-hood settings, you may appreciate the simple and straightforward gnome-screenshot.

SUMMARY

KSnapshot

★★★☆

The Good:
• Ability to save to most image formats
• The best export options

The Bad:
• UI not as beautiful or simple as other two

Website:
http://www.kde.org/applications/graphics/ksnapshot/

gnome-screenshot

★★★☆☆

The Good:
• Uncomplicated and simple - does the job

The Bad:
• Ability to save in different formats lacking (you can save in .png only)
• No export options
• No inbuilt photo editor or option to invoke GIMP

Website:
https://git.gnome.org/browse/gnome-screenshot/

Shutter

★★★★☆

The Good:
• Ability to save to the three most common formats
• Amazing inbuilt screenshot editor
Clean, simple and understandable UI

The Bad:
• Limited export options

Website: http://shutter-project.org/

THE WINNER OF THIS SOFTWARE SHOWDOWN IS

Shutter

Tushar is a 17-year-old Indian who loves Ubuntu/FOSS. He programs in Java and C++, enjoys writing and, recently, making Android apps. If you enjoyed this article, his blog is at tusharbhargava.wordpress.com for more articles.

LETTERS

```bash
#!/bin/bash
#by GrouchyGaijin
echo "This script is for getting the current exchange rate "
echo "I called it exrate."
read -p "Enter the symbol of the currency you want to go from: " var1
read -p "Enter the symbol of the currency you want to go to: " var2
read -p "Enter the amount you want to convert: " var3

wget -q -O - "http://www.google.com/finance/converter?a=$var3&from=$var1&to=$var2"|grep
"<div id=currency_converter_result>"|sed 's/<[^>]*>//g'
until false; do
    echo "Press R to run the script again or Q to quit. "
    read x
    if [ "$x" = "R" ]; then
    exrate
    elif [ "$x" = "Q" ]; then
        echo "Going down"
        killall exrate          break    fi     done
```

SCRIPTS

I was thinking it would be cool to have a section in Full Circle devoted to reader written scripts. What do you think?

I'll start off with one (above) that I use to check the exchange rate for different currencies. I call the script from a QuickList in Ubuntu's dock-like thing on the left.

John Niendorf

CLARIFICATION

I saw my letter titled *Debian* published on the last FCM issue, in the Letters section; thank you for giving me room, but I have a small claim on editing.

I understand that editorial requirements overtake what we readers write, so letters are edited and cut, but the editor has cut out too much: one phrase has, in the edited version, a completely different meaning from my intention.

I read in FCM#77 "But, big but, I find myself a bit confused when I see that Unity desktop environment." but I wrote "But, big but, I find myself a bit confused when I see that Unity DE it's only Ubuntu while I've tested Gnome 3 over Ubuntu, Debian, Fedora and Opensuse"

My accent was on the fact that Unity is only on Ubuntu, and Gnome or XFCE is used by many distros. I did not want to deprecate in any way Unity or to express my confusion in using it.

Gabriele Tettamanzi

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.

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'm not a programmer, where should I get involved to help promote Linux?

A Get involved with StartUbuntu! Moving people from Windows XP to Lubuntu seems to be a natural transition.

Q How can I resize the top panel?

A (Thanks to *CatKiller* in the Ubuntu Forums) Alt-Super right-click.

Q I will have an extremely rare chance to use high-speed Internet for a weekend. My phone has Internet access, so I can use Google, but it can't handle heavy-duty downloads. I want to use Ubuntu for application development and playing with sound files. What programs should I install?

A Here's Gord's list for you: install Ubuntu 12.04, get all updates, then add: Restricted Extras, build-essential, GIMP, Audacity, VLC Media Player, ffmpeg. I'm not sure if Python is installed by default, if not, get it. That should give you enough stuff to play with to keep you busy for many months.

Q I installed VirtualBox from the Ubuntu repositories, and I'm having a problem....

A VirtualBox is one of the few exceptions to the rule. Install it from www.virtualbox.org

TOP NEW QUESTIONS AT ASKUBUNTU

* How do I know what files are executed when I open an application?
http://goo.gl/Bl1gd9

* How do I install Ubuntu Server 13.04 (step-by-step)
http://goo.gl/wf2Z5J

* Replacement for mplayer?
http://goo.gl/lXWu1b

* Why doesn't Steam start?
http://goo.gl/rOst5l

* How can I extract images from a raw email?
http://goo.gl/FqB71o

* Typing "|" (upwards arrow) with a keyboard shortcut
http://goo.gl/bGuEKT

* My Ubuntu Macbook Pro feels warm, can I solve this?
http://goo.gl/jwyGIE

* Will installing Ubuntu to dual boot with Windows 8 slow down Windows?
http://goo.gl/JvDKN0

* Closest alternative to Times New Roman
http://goo.gl/g5Wlis

* Are updates released all at once or ad hoc?
http://goo.gl/zfpVrx

* Change default guest session

launcher applications?
http://goo.gl/rsPvZZ

* .exe files getting downloaded when asked to install `ubuntu-restricted-extras`
http://goo.gl/SfZDi9

* Can Unity be used as an independent interface in a custom non-ubuntu build OS?
http://goo.gl/Cto25Y

* How can I prevent programs from switching workspaces?
http://goo.gl/FGOKvt

* Color picker for entire screen
http://goo.gl/gzBYMC

TIPS AND TECHNIQUES

Distro Screening

To my mind, the differences among different versions of Linux come down to four factors:
• the desktop (appearance and how it works),
• the file manager,

Q & A

• how much work I have to do after installation (installing the programs I use and setting preferences),
• the political factor: do I approve of the behaviour of the organization.

I feel there are only two significantly different desktop styles: Unity/Gnome, and KDE/Cinnamon/LXDE/XFCE. Within the two groups, the differences are minor. I always install my own wallpaper, so there's no brown vs blue vs green debate on my systems.

I find the Windows XP/7 style user interface is most productive for me, so there's no way I would use Unity or Gnome as a daily driver. (I do have the LTS and latest versions of Ubuntu installed in Virtualbox in order to answer questions.)

Many Kubuntu users rave about its file manager, but it makes me crazy; I can't figure out how to do what I want to do. I find the file manager in Lubuntu (LXDE) far too stripped down, but the one in Xubuntu does the job. However, for everyday use I prefer Nemo (Mint) or Nautilus (Ubuntu).

Mint with Cinnamon requires the least work after installation, in order to do the things I want to do. Most lightweight Linux distros do not include Libreoffice, and I can't live without it. I also want to view Youtube videos and listen to MP3s.

I am a huge fan of Canonical and Mark Shuttleworth, even if they have had some recent missteps in dealing with the community. Desktop Linux would be nowhere without Canonical, and I am grateful. Also, I have the impression they have a long-term vision for the future. But I still find Unity counter-productive.

I'm also a big fan of the Mint team. Again and again, they seem to ask the question, "what do the users want," and come up with the right answer. Users don't care about the future, they just want to get stuff done today. That's me in a nutshell.

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.

As this is a big announcement for PC gaming, I would like to share this news with all you readers and speculate about this fresh news and what may come of it.

If you are unfamiliar with Steam, think of it as a service like ITunes, but for video games – with a friends list with chat and joining your friends' games. It started off on Windows, but now it is branching out into different operating systems. Linux is going to be playing a big part with the new Steam Box and the new operating system Steam OS.

Valve took its time delivering the three announcements, each connected with the Steam Box, which has been rumoured since March 2012, but Valve has seesawed on the existence of the alleged hardware until now.

Steam OS

Monday September 23rd, Steam OS is revealed.

Steam OS is a Linux-based operating system built to stream Windows and Mac games, music, TV and movies from a computer to the big screen, along with support for Linux games. Steam OS will also allow users to stream over their home networks and onto their TVs. To top it off, Steam OS will soon be available for free.

Valve writes *"In Steam OS, we have achieved significant performance increases in graphics processing, and now we're targeting audio performance and reductions in input latency at the operating system level."*

"Game developers are already taking advantage of these gains as they target Steam OS for their new releases." Valve talks about working with well-known media services for music, TV and movies on Steam OS. The new service incorporates Steam Family Sharing, allowing users to share their game libraries with friends and family, and will include robust parental controls.

Steam Box

Wednesday September 25th, The Steam Box exists.

Valve revealed the Steam Box under the name "Steam Machines." These boxes will come in multiple forms and from different manufacturers in early 2014, but all Steam Machines will be shipped with Steam OS.

Valve is prototyping the Steam Machines by sending out 300 prototype boxes to Steam users for free to test. Steam has created an eligibility scheme so that you can be in the running to get a Steam Box to test (I have personally done this). So, if you would like to be in the run for a Steam box and have a steam account, login and join the "Steam Universe community group" and see if you are eligible, or how to become eligible, but this must be

UBUNTU GAMES
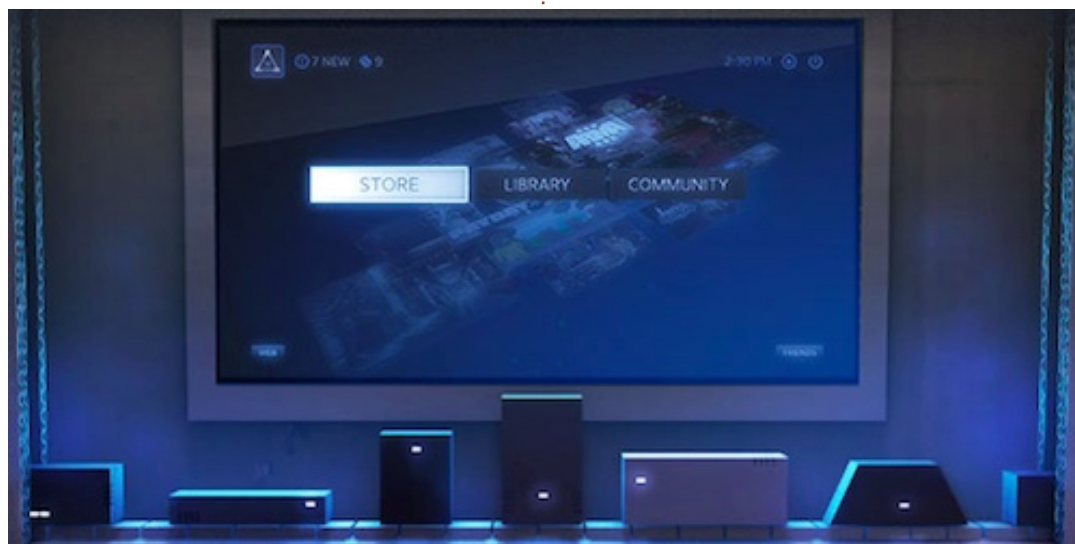
done before October 25th.

"Entertainment is not a one-size-fits-all world," Valve writes. "We want you to be able to choose the hardware that makes sense for you, so we are working with multiple partners to bring a variety of Steam gaming machines to market during 2014, all of them running Steam OS."

STEAM CONTROLLER

**Friday September 27th**, the bold Steam controller.

Valve revealed a new controller optimized for Steam and the upcoming Steam Machines, concluding the string of announcements aimed at bridging the gap between PC gaming and the living room. The controller will support the entire catalogue of Steam games released to date, and

will include legacy support for the older titles that lack controller support.

Instead of using a well known method for a controller, Valve's peripheral uses two track pads rather than thumbsticks and a directional pad. Balancing the lack of physical sticks, the controller uses haptic feedback, "allowing precise control over frequency, amplitude and direction of movement."

The controller has additional features, such as a touch-enabled surface with a high-resolution screen. The screen can also be clicked as a button. When a player taps the touch screen, it displays
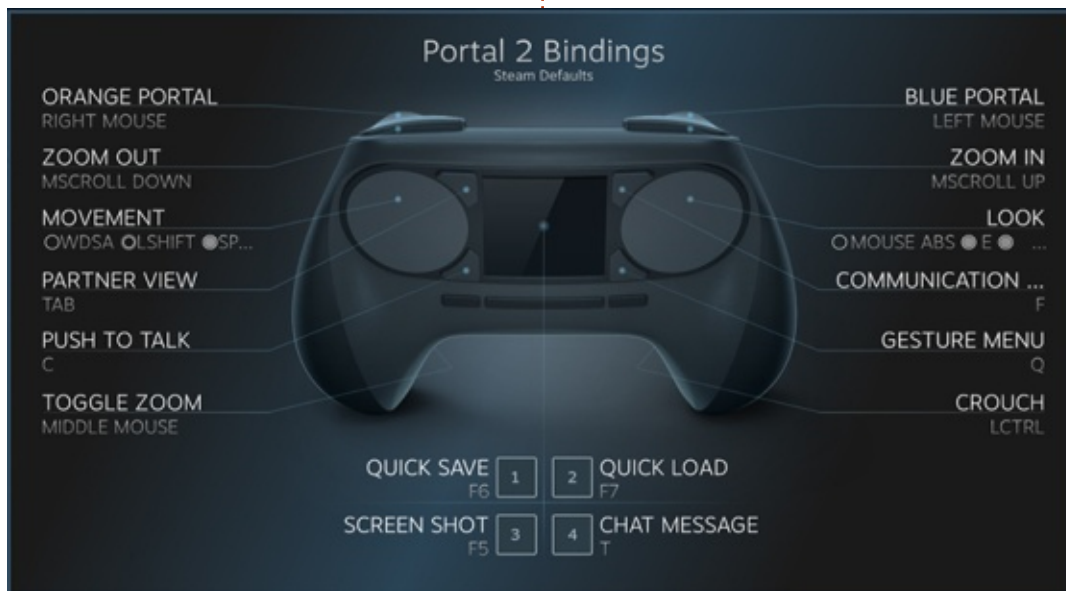
an overlay on top of the game itself, so there will be no need to look down at the controller during gameplay. Valve also says, "The screen allows an infinite number of discrete actions to be made available to the player, without requiring an infinite number of physical buttons."

With all the announcements made, there are still so many unanswered questions about the Steam Box, OS, and the controller – how much will it cost, etc... I will keep you up to date will all the Valve news, and if I am a lucky tester of the Steam Box. If any of you readers are lucky enough to get your hands on a machine, please write in to let us know how

your experience is on a Linux gaming system.

Sources:

http://www.bbc.co.uk/news/technology-21677119 (video)

http://www.theverge.com/2013/9/25/4762374/steam-box-hardware-spec

David is a relative newcomer to the Ubuntu scene and really enjoying it so far. He loves games and is pursuing a career as a Games Designer. You can follow his exploits at: rhysforward.carbonmade.com

Game Dev Tycoon is a simulation game where you play as the proprietor of a game software company. You start off as a coder in your garage. With luck and perseverance, you'll eventually end up with a legion of fans and a crack team of programmers to help you make AAA games.

INSTALLATION

The installation could not be simpler. After you buy the game straight from Greenhart Games (greanhartgames.com), you'll receive an email with a link to a tar. After downloading and opening the tar, you will be given a choice of an x32 or x64 game. Once you make your choice, the Ubuntu Software Center will open up and help finish the installation.

GAME PLAY

Game Dev is a little meta because you are making a game within a game. The game takes you through the ages of gaming history, starting roughly in 1984,

and all the way up to 2015. And, when I say "roughly", I mean it, because time is not based on the Gregorian calendar. Time is measured in years from when your avatar started programming games.

This game appealed to me in several ways. For one, I have always been a sucker for simulation games, and managerial games doubly so. Secondly, I have a history of programming and make a living off of it – when I'm not writing reviews.

With that being said, this game is not like prancing through a bed of poppies in order to get to Oz. In fact, the biggest thing that can kill your career plans is an extremely successful game – for, when that happens, everyone will judge you more harshly. You can also sandbag yourself by hiring too many underlings, or underlings who are asking for a wage that you cannot afford. Lastly, your game engine could be outdated. As a result, all of your games are also outdated.

A problem with the game is how it rigorously follows gaming history. Though the names are changed, it is not hard to guess that a Japanese company, who broke into the US market with its TES system, is going to make a new system called the Super TES. The game platforms are too easy to predict and guess.

Game Dev Tycoon has been an experience that allowed me to pretend that I am a malevolent boss of a game company. It's very challenging, and forced me to

make sure that the next game was not going to break the budget and that I had just enough people for the job. With that being said, the game goes through very predictable turns that can have "unseen" events that can be avoided without any problem. It is a good game, but after you finish a company or two, you'll be tired of it.

★★★☆☆

One of Valve's most successful games to date, "Portal", was made available for Ubuntu early this summer. Although originally released for Windows and Mac back in 2007 as part of "The Orange Box," it was not until July 2013 that Valve ported "Portal" to Ubuntu through its Steam game engine. We are now delighted to be able to play the highly successful, puzzle-solving, first-person shooter, one-player game on Ubuntu.

INSTALLING PORTAL

All you need to play the game is the Steam game engine, which can be installed through the Ubuntu Software Center. Once you have a Steam account, and you've installed the Steam game engine, then you can search for "Portal" and buy it at the current price of only $9.99. If you do not already have Steam, let me reassure you that it will be one of your most used applications; if you plan on doing some gaming on Linux, you will not regret it.

PLAYING "PORTAL"

"Portal" is not your average First-Person Shooter. For those who have never played "Portal," it may come as a surprise that there are no enemies to kill, no blood, no running away to hide, no reloading of guns, no grenades, etc. Instead, when you acquire your first shooting device, which looks and feels like an ordinary video game gun, you will be shooting holes in walls, these holes are called portals. However, you are not just limited to shooting at walls; you can also shoot at the ceiling, or at the floor. You can create portals out of almost anything, and learning how to use them to get from point A to point B is the real purpose of the game.

The game takes place in the Aperture Laboratories, where you are one of many test subjects, or "lab rats." "Lab Rat" is the name of an online comic that tells the story of "Portal" and can be found at the "Portal" website. When you first begin playing, in the early levels, the portals have already been created for you. Like most games, the early levels are sort of tutorials showing you how the concept of portals works. It took me a while to understand what was going on the very first time I played this game. The basic premise is that you go through a blue portal in one room, and you come out of an orange portal in another room. After only a couple of levels, you acquire your first shooting device, the blue portal gun. From this point on, the orange portals are stationary, and usually close to exits (or leading to an exit), and it is up to you to figure out where to create a blue portal and how to go through it successfully so that you can come out through the orange portal. These are the basic mechanics of the game. You go in through a blue portal and you come out of an orange portal, or vice-versa.

The picture shows me looking down at mysefl through the orange portal I made

A few levels later, you acquire
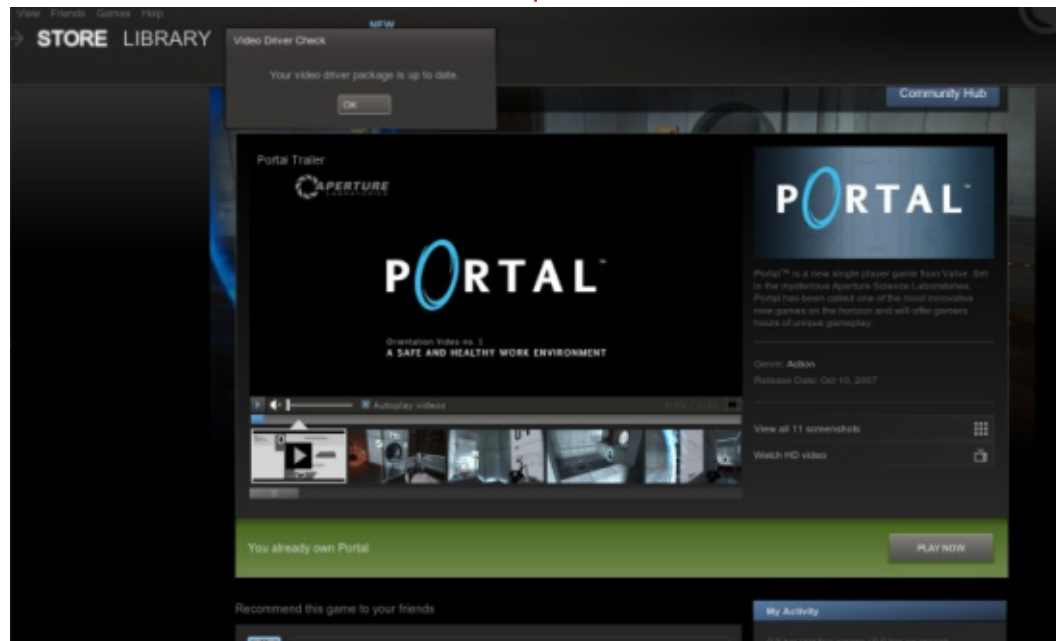
the orange portal gun. Now your equipment is complete, you can create blue or orange portals by using either left or right mouse buttons. From this point on, it is all about physics. If you walk into an orange portal you will walk out wherever the blue portal was placed. However, if you jump from up high and go through an orange portal on the floor, you have the potential to gain lots of speed and come out flying through the blue portal, which, if placed in the correct spot, will help you get to places that otherwise would be unreachable. Some of these levels are confusing to solve, but that's what makes this game so addictive. "Portal" is now available through Steam, and I know I am not the only one waiting for Valve to release "Portal 2" on Ubuntu.

My Gaming Setup

I played "Portal" with my custom made desktop PC consisting of an AMD FX-6100 3.3GHz CPU, an Asus M5A97-EVO motherboard, a Sapphire Radeon HD 5770 graphics card, 8GB of Kingston Hyper X RAM, and a 1TB Seagate Barracuda hard drive. The software used was Ubuntu 12.04.1

LTS with Unity desktop and AMD 13.1 proprietary graphic drivers. The game-play was very smooth and the graphics were phenomenal. No glitches and no problems whatsoever. All in all, it was certainly a delight playing "Portal" on Ubuntu.

Conclusion

Steam is doing wonders for Linux gamers, so it should come as no surprise that one of Valve's greatest hits, "Portal", is now one of the best games available for Ubuntu.

Pros

• Graphics are as good as they can get for a six-year-old game.
• The dialogue from the "Aperture Laboratories" computer during game-play is very funny to listen to, and sometimes it can even give you hints to solve puzzles.
• The keyboard and mouse work very well with this game. The latency, if any, is as good as it gets.
• The concept of the game is unique and becomes addictive when you understand what it is that you're supposed to accomplish.
• Ease of installation couldn't be any better. Without sounding too redundant, Steam is finally making games "just work" with Ubuntu.
• "Portal" has a high replay value.

Cons

• To play "Portal," it is recommended that you use the proprietary AMD graphics drivers, which for some FLOSS purists might be unethical.
• Steam has the "Portal" minimum system requirements posted for Windows and Mac, but not for Linux, even though the Linux Tux Penguin logo is shown on Steam's "Portal" page indicating that the game is supported on Linux. This leaves the average Ubuntu user in the dark about what the minimum/suggested requirements are, thus having to guess or estimate based on the Windows and Mac requirements.
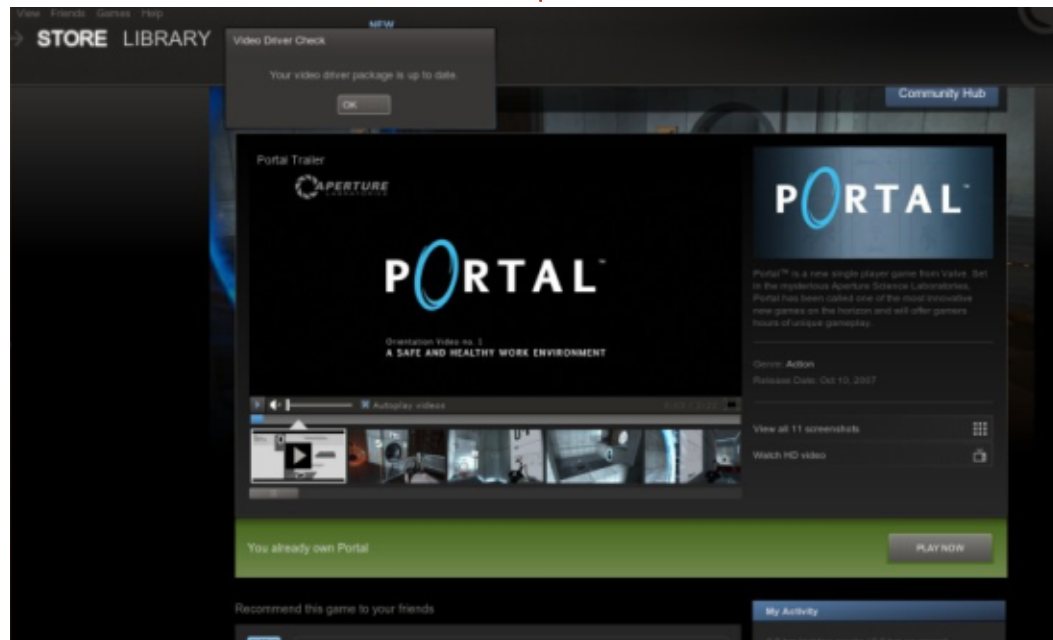
Oscar graduated from CSUN, is a Music Director/Teacher, beta tester, Wikipedia editor, and Ubuntu Forums contributor. You can contact him via: www.gplus.to/7bluehand or email: www.7bluehand@gmail.com

Yes, yes, I know: this game came out in 2009, but, because of the rumors of a Left 4 Dead 3 coming soon (hopefully not in Valve time), and the release of all the Valve games going native to Linux recently (or in Beta), I decided to make this review.

SUMMARY

If you do not like zombie games... you should probably skip this review. This game had me hooked since I saw the amazing first cut scene leading to the menu. Left 4 Dead 2 is unique in my book because it not only has numerous unique campaigns, but by the fact that every single one of the campaigns can be played with up to 4 friends, or, if you are tired of campaigns with friends (or just want to fly solo), there is also a single-player campaign mode. But that isn't the only thing they have: Left 4 Dead 2 also has: Versus, in which two teams play alternating between being Infected and Survivors; Survival is a mode where – as the title implies – survival is to stay alive as long as you can; Realism reinforces the teamwork spirit that Left 4 Dead 2 was designed for – by deleting the halos (outlines) around your teammates so that you may not see where they are unless they are in your line of sight; Realism Versus is a combination of Realism and Versus game modes, and Scavenger is a game mode where you must gather up as many gas cans as possible to fill up a generator (or car) – again the Infected and Survivors alternate positions.

The good
The fact that this game was co-op pretty much sold me immediately, but the idea of it being a zombie game turned me off. But, after a couple of hours, I couldn't stop playing. The community is very well integrated; looking for a game was quick and painless, and, if you really don't like to play games or even if you love it but want to add a touch of yourself, you could create a piece of clothing or a weapon and add it to the Steam Workshop, and, if it's popular, you can make money from it. Also, this game isn't an intense game for a modern computer, so almost everyone can play. And did I mention add-ons? They can add hundreds more hours of game time.

The Bad
The community was one of the worst things... a few campaign games I joined were very dangerous for beginners as in, if you didn't know the map, they would leave you for dead without batting an eye. So, I would really recommend that you do the campaigns with friends or alone before you venture into a random game.

THE VERDICT

I really enjoyed this game with friends, playing Versus in a random game is really fun. An Infected and I have played 20+ hours total (as of this editorial), and I have completed three co-op campaigns, and I am showing no sign of stopping. You can get this game on Steam for $19.99, but this game frequently goes on sale.
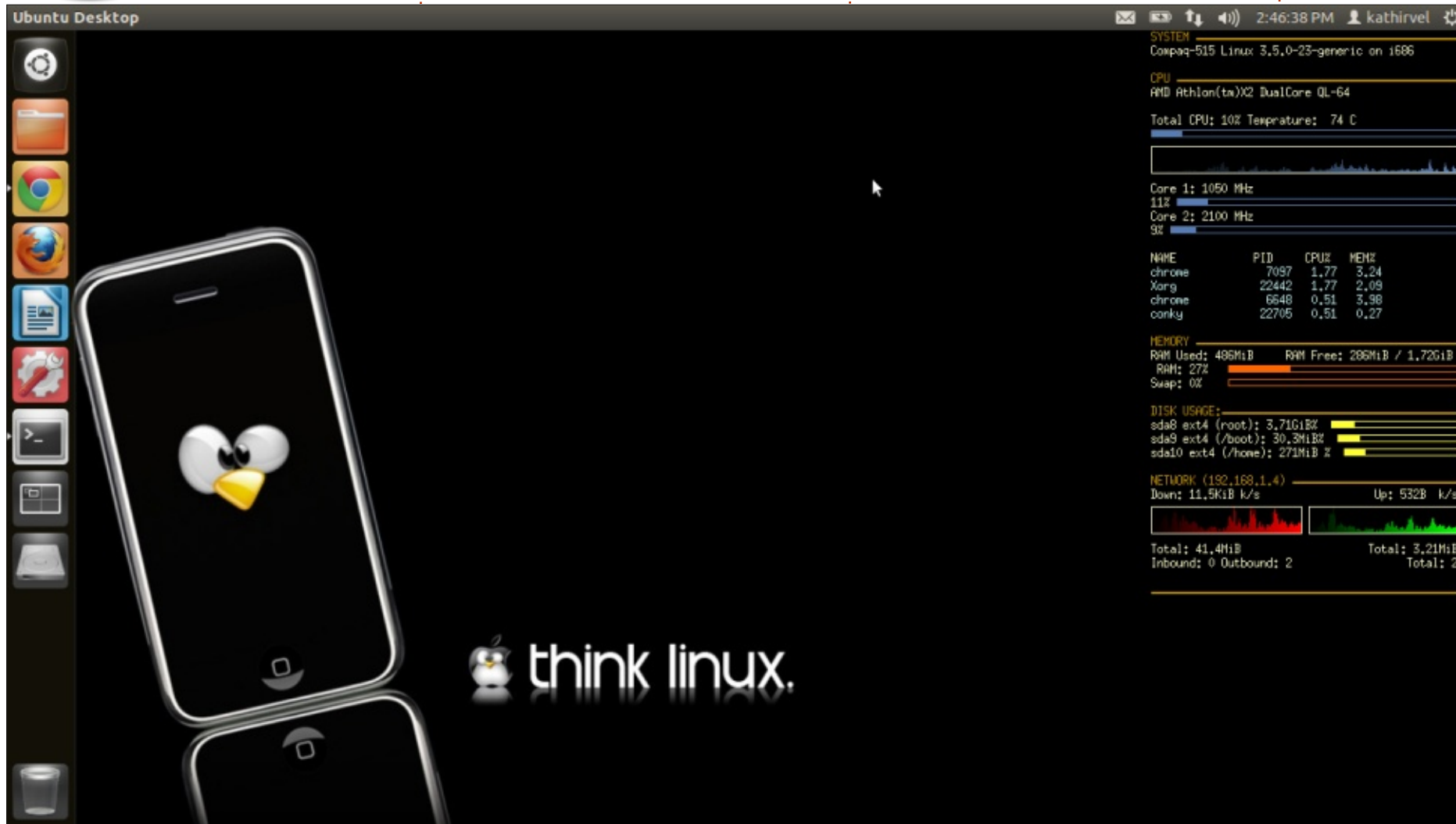
★★★★☆

Gabriel is Canadian video game enthusiast. He started using Ubuntu this year is loving it, and really enjoys the international community always willing to help. Feel free to tweet him: @bestindawork

MY DESKTOP

My system configuration:
Notebook model: Compaq 515
Operating systems: Windows 7 and Ubuntu 12.04.2 LTS
Desktop Environment: Unity

Processor: AMD Athlon X2 Dual Core QL-64
Graphics : ATI Radeon 3200
Memory : 2 GB
Hard Disk: 160 GB

R.KATHIRVEL

MY DESKTOP

I started reading FCM at issue 67 and I am a great fan of it.

It has been a year since I started using Linux. I started with Ubuntu 12.04 and later switched to Linux Mint 13 Maya Mate Edition. Currently, I am using Linux Mint 15 Mate (Olivia). I love the simplicity of Linux.
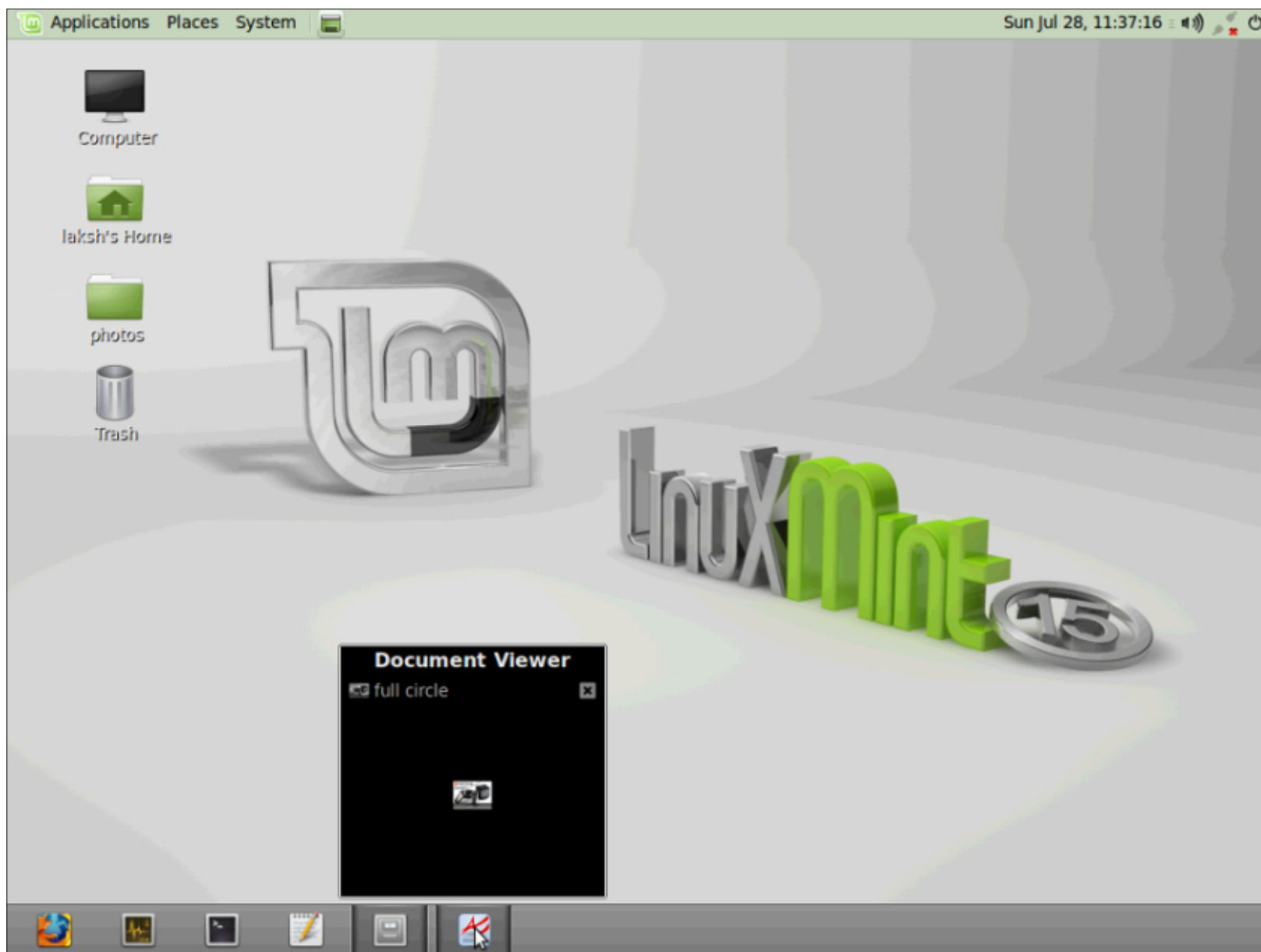
My Hardware
Processor: Intel Pentium 4, 2.4GHz
Memory: 1 GB RAM
Hard disk: 80 GB
Monitor: 15" crt (1024x768)

I use the green laguna theme with gnome menu at the top. At the bottom I use dockbarx which makes it easier to switch among the windows that are open.

Laksh

MY DESKTOP

Ubuntu 13.04 running on my Toshiba Satellite Z830 Ultrabook. Core i5, 4 GB ram, 128 GB SSD.

Currently, I am dual booting with Win 7 for work purposes, but I am about to go back to single boot as I no longer need Windows.

Robbie Huxley

MY DESKTOP

I'm running Linux Mint 12 "Lisa" on a 5 year old HP Pavilion DV6700 Notebook with a 500 GB Harddisk and 4 GB RAM. Processor is an AMD 64 Athlon X2.

The Desktop shows a Ferrari GTO "Novotec Rossi" (a German Tuning Company). The Mint Logo and Mint application were added by me using GIMP. I love the clear, uncluttered design of this desktop.

Charlie

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