Full Circle

LINUX LABS:
Pivos XIOS DS
Media Play

REVIEWS OF:
NEXUS 7 & PEPPERMINT THREE
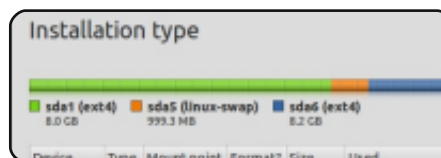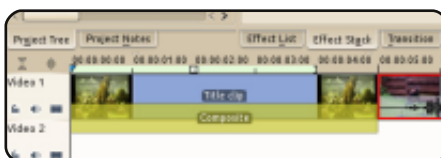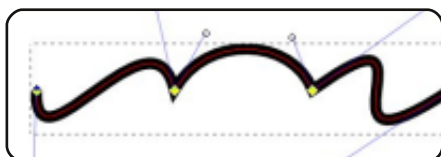
Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

EDITORIAL

Welcome to another issue of Full Circle!

A couple of changes this month. Firstly, Greg has had to take the month off, so no Python this month, but he'll be back next issue. I've created a new 'What Is' column where, after receiving a few emails about it, I've explained (as best I can) what UEFI is, what it does, and where it came from. Please, join in and tell us 'What Is [fill in the blank]'. Details are on page 40. Also, please welcome Pensador Louco who is drawing the Tuxidermy cartoon especially for FCM. The first strip is on page 51.

LibreOffice continues with a brief explanation of its Base (database) component. We also have a quick tutorial on using LaTex, and a lengthy piece on restoring your system – using either a backup or a reinstall. If you're thinking of buying a media player for your mancave, you might want to take a look at Charles's Linux Labs column this month where he explains the Pivos XIOS DS media player. At half the size of a DVD case, it's certainly small! Speaking of hardware, I've included a review of my Google Nexus 7 tablet, and Art has reviewed Peppermint Three (OS) which certainly looks interesting. Oh, and if you've ever had the problem of a PC that won't boot from USB (I certainly have), then you'll want to read Gord's Q&A Tips and Tricks piece on using the Plop boot manager.

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

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LibreOffice — The Document Foundation

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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

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This month, instead of my usual command-line ramblings, I've decided to share with you two very useful pieces of software I've started using: *Wunderlist*, which is cross-platform, and *AirDroid*, which is an Android app. For those of you wondering whether this article is worth reading, I leave that up to you. To save you reading the entire article though, I will explain that Wunderlist is a To-Do list application that offers syncing among most any commonly found OS, and AirDroid is a web-based interface for managing your android device. This is especially useful for tablets like the Asus Transformer (TF101), which doesn't play nicely with Linux due to it using MTP. If you have no need for either, feel free to move onto the next article.

In the recent few months, I've looked for a method of managing To-Do lists on the go. My usual system of Dropbox, a text file, and conky/geekTool (on OS X) is lightweight, but doesn't offer the ability of actual reminders (without extra coding), and, unless I plan ahead and favourite/download the files on my phone, unavailable to me without Internet access. Beside that, not everyone wants to piece together a system like this.

Enter Wunderlist. It's a program available for everything from iOS and Android to Linux and Windows. It requires you to create a free account, after which you can sync your lists amongst any and all systems that you are logged into. It also offers a web-based login, so you can check it from computers outside of your usual circulation (library, public area, work, borrowed computer, etc). The astute amongst my readers may want to point out that Dropbox allows similar access to files, however, I've found formatting issues abundant when using Windows or OS X text editors, due to them using different formats for non-printing characters.

The main menu will drop you into an area called "Inbox"—this is where all of your tasks are listed.

Other options are: Today, Overdue, Starred, Done, Tomorrow, Next 7 Days, Later, No Due Date. You can configure notifications for your important tasks, and forgo it on any less important (or time-sensitive) tasks. The only feature I'd like to see implemented is the ability to see your tasks for today on your lock screen when it comes

to mobile devices, and, possibly, lightweight/minimized views, or widgets, for normal PCs. If, however, you have no issue unlocking your phone to check the widget, or opening the program on your PC/laptop (or leaving it open constantly), you'll find this to be a great little tool to better organize your (work) life.
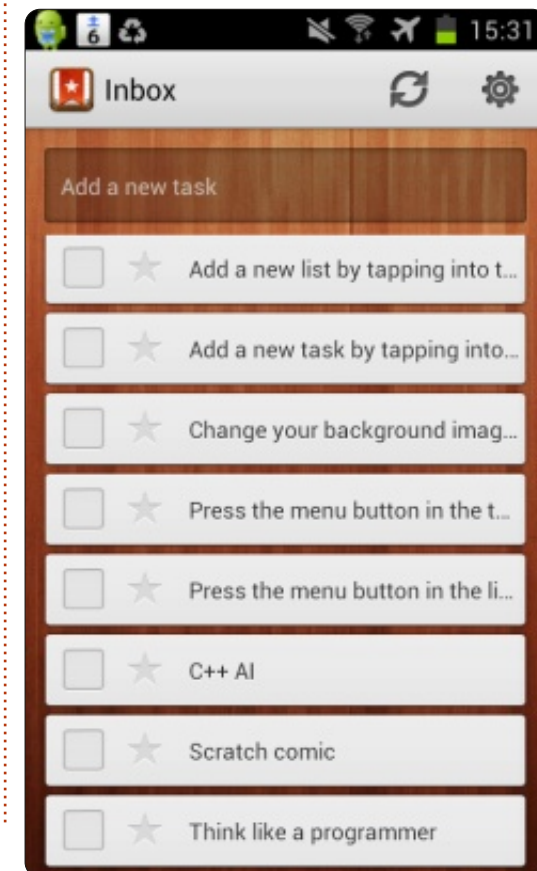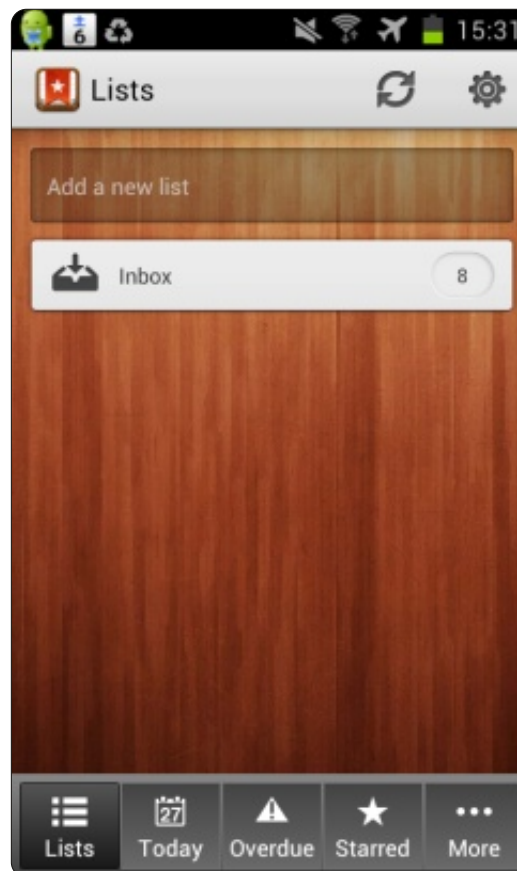
COMMAND & CONQUER

An alternative to Wunderlist is, of course, Remember The Milk. The upside to Remember The Milk is the plethora of third-party, and command-line, software available for it. That being said, I do find the interface on Wunderlist to be a little nicer. If, after continued trial of both options, I make a distinct decision, I will make a note of it in Command & Conquer. If anyone has a preference (or another option I haven't named), feel free to email me about it—see the concluding paragraph for my email.

The other piece of software I want to tell you about today is AirDroid. It's a web-based interface for Android, which allows managing of all multimedia, files and apps on a device. For those of you having a mini heart-attack at the thought of all that information being available on a network—relax, at least a little. AirDroid requires a QR Code to be scanned, or the password from the device to be entered at the login screen. Now, this doesn't mean I would use the program in a publicly accessible network, but for home use, so long as your network is encrypted/password protected, it should be just as safe

as anything else you do online. Transfer rates, of course, depend upon the LAN you're using on either end of the line (sending/receiving), but will generally be slower than USB. That being said, I was able to put a 4 GB movie on my tablet via a regular ol' 802.11g network in about 5-15 minutes, depending on whether my source device was connected via ethernet or wirelessly.

If you're unable to connect your tablet to Linux, or the trade-off of security for ease (no cables) is worth it to you, I highly

recommend giving AirDroid a shot. However, if you're a stickler for security (or have alternatives), I would suggest using something else. As always, if you want the best transfer speeds, using a wired option will serve you best. Lastly, I should note that quitting the app (and killing the server) is done by hitting the back button when at the main window. I, at least, needed a minute to figure that one out.

As always, I hope you've found my opinions useful—and that I've introduced you to some new (and

possibly desperately needed) alternatives/solutions. If you have any comments, questions, or suggestions, feel free to email me at lswest34@gmail.com. If you decide to do so, please include FCM or C&C in the subject line, so that I don't overlook it.

Lucas has learned all he knows from repeatedly breaking his system, then having no other option but to discover how to fix it. You can email Lucas at: lswest34@gmail.com.
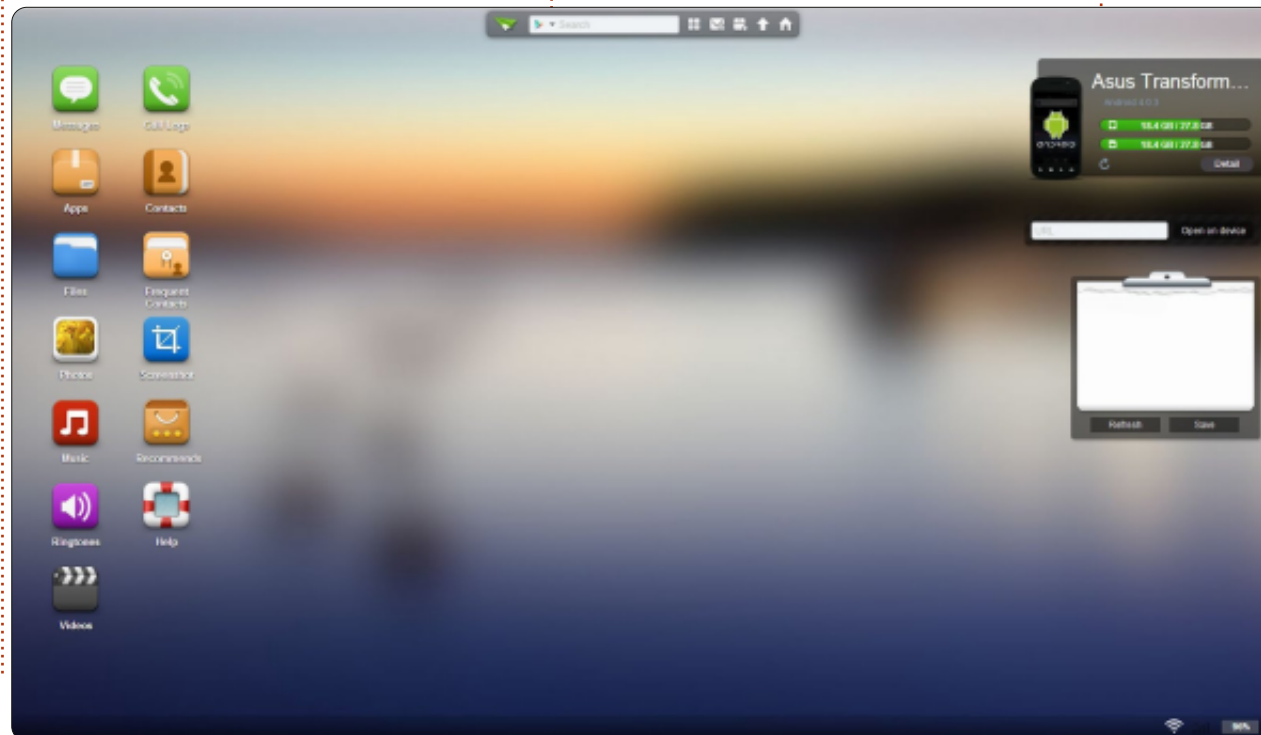
Don't kernel panic Python fans. Greg will return next month.

L aTeX is a document preparation system for high-quality typesetting.

Although it is mainly used in the technical or scientific fields, it is suitable for almost any form of publishing.

This short article will take you from program-installation to the production of a typeset document.

The intention is to help those who are unfamiliar with LaTeX to make a start on this interesting journey. Old hands are unlikely to learn anything new here.

First, you need some way of processing your documents. I would recommend an editor. Begin by installing LaTeXila. I use Synaptic, but the Ubuntu Software Center should also suffice. Hard-core Ubuntu users may prefer the

command-line, using apt-get. If you do not know how to install programs on Ubuntu, ask a geek for help, or hunt around on the internet.

I have chosen LaTeXila simply because I am most familiar with it, and it includes everything you need to follow this article. There is also Lyx, Winefish LaTeX Editor, and Texmaker, to name others. Stick with LaTeXila for now.

Now that LaTeXila is installed, open it and do the following:

File, New, Article, Ok.

You should see this in the edit window:

```
\documentclass[a4paper,11pt]{
article}
```

```
\usepackage[T1]{fontenc}
\usepackage[utf8]{inputenc}
\usepackage{lmodern}

\title{}
\author{}

\begin{document}

\maketitle
\tableofcontents

\begin{abstract}
\end{abstract}

\section{}

\end{document}
```

LaTeXila initialises the new article by including the basic instructions required for typesetting. Now you can add text.

Put the cursor between the curly brackets in the title line and give the document a title. For

example: "\title{Learning \LaTeX\@}" but without the quotation marks. Don't forget the space between the "g" of "Learning" and the backslash next to "LaTeX"; also don't forget the "@".

Type the name of the author. For example: "\author{Tex Ryter}". Omit the quotation marks.

Type a few words between "\begin{abstract}" and "\end{abstract}." Such as: "A wonderful way to write good looking documents." Again, leaving out the quotation marks.

"\section{}" is where you type the title of the first section of your document. "\section{The First Step To Learning \LaTeX\@}"

Then, between \section{} and \end{document}, let's paste some text. Use Lorem Ipsum. It is simply dummy text used by the printing and typesetting industry. See http://www.lipsum.com/ for further details. Here is a small sample: "Lorem ipsum dolor sit

amet, consectetur adipiscing elit. Vestibulum id erat sodales sem laoreet euismod." You can use whatever plain text you like, just make sure it is letters, numbers and punctuation like commas and full stops only. Paste about five paragraphs.

Now you want to process your document. First save it. Use a file name without spaces, followed with the extension tex. (filename.tex)

Then press F7. The document should be processed quickly with details appearing at the bottom of the screen, as shown above right.

The warnings are just to let you know that you must compile again. LaTeX needs two passes to process the Table of Contents. (TOC)

What happened to LaTeXila? Let's just say, it's all part of the LaTeX system and LaTeXila is a front-end.

Press F7 again and you should see something like the image shown below right.

A successful compilation.

Now you will want to see your document in all its glory. Press F8. Document Viewer should open, showing title, author, date, abstract, section 1, and the text – covering about two pages.

You will notice that the text is arranged as if a typesetter had done the work. This is the essence of LaTeX. You concentrate on your writing, LaTeX does the typesetting.

This is but a small beginning to what could be a happy working relationship between yourself and LaTeX. Apart from the rubbery things, there is plenty of information on LaTeX available on the internet. As a colleague once said, *"If I can't get something to work in LaTeX, I Google the problem."*

Have patience, persevere, and make LaTeX your friend.

Further information:

http://www.latex-project.org/intro.html

http://en.wikipedia.org/wiki/LaTeX

Many people collect things like sports cards, books, comic books, or butterflies. Sometimes, it is helpful to catalog these collections, so you create a catalog. You decide which characteristic about the items you want to track, you determine that some items share some of these characteristics in common, and you create a system for identifying each item uniquely. Finally, you begin to build your catalog. You can think of a database as a catalog of similar items. You have something you want to track, and what better way to track it than through your computer.

Base is the database module for LibreOffice. Base is not a database engine, but a front end for interacting with databases. By default, Base uses the HSQL database engine, which is an open source engine, but you can connect to other engines like MySQL or Oracle. You can even use a spreadsheet as the basis for a database, as we did in part 7 of this series (see Full Circle issue 52).

When creating a database, you get better results by sitting down and taking some time to plan out how your database will look and behave. You map out the characteristics you want to track, determine the common relationships, and create a unique way to identify each of the items in the collection. Taking the time to plan will save you time and effort later in the process when you begin to build reports and searches for your database.

What Makes a Database
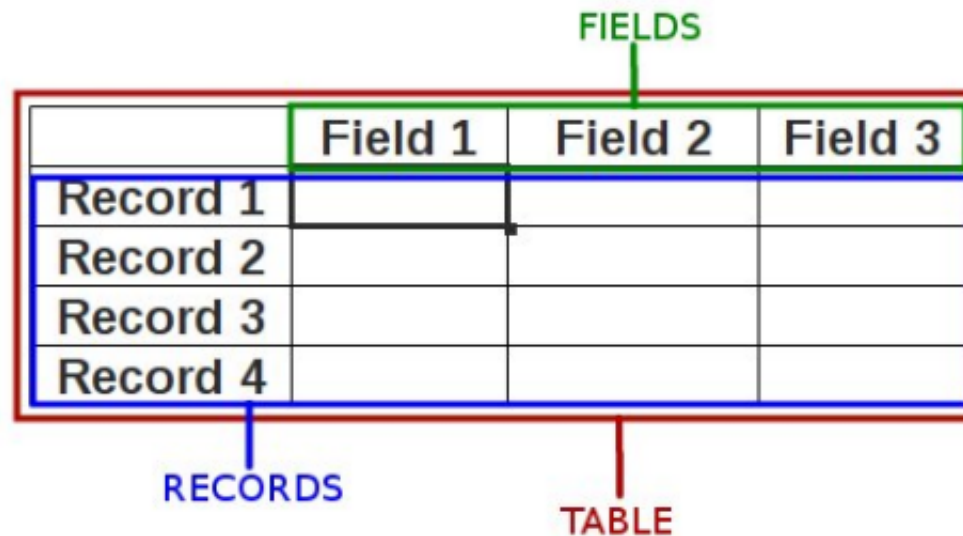
Before we get into the actual planning of a database, let's talk about the parts making up a database. The smallest element of a database is the field. Think of a field as a single characteristic of the object we are defining in the database. A collection of fields is a record. A record defines all the characteristics of a single object we are collecting. We create tables to hold records. Tables define the fields for each record and contains the datum for each field in the records.

Think of a database table as a spreadsheet in Calc. Across the top, you have columns. The columns are the fields. Down the side, you have rows. The rows are records. The entire spreadsheet, containing all the data, is the table.

Planning Our Example Database

Through this series of articles on Base, we will use a database I created for tracking my book collection. I kept the database fairly simple, but including many elements to show the nature and aspects of relational databases, mostly the relational part. In this part, we will track the steps I took for planning the creation of the database. We will use the steps I have mentioned.

What Characteristics to Include

When I began planning my Books database, I knew I didn't want a big complicated thing with information I would never use. I

knew I needed the basics, title and author. However, I decided on including the year of publication, too. With all the different ways to "read" books today, I decided I needed to track the different types of media as well. So, in the end, I decided on these characteristics:
• Title
• Author
• Publication year
• Media type
• Relationships

Relationships put the "relational" in relational databases. When we first look at our characteristics list, we might think we just need a table with four fields. However, we would run into trouble when we have a book that has more than one author, or we own a book in more than one format. We could just stuff multiple authors in one field, but that would make searching for books by a single author difficult. We could create multiple fields for multiple authors, but how many do you create? If it is an anthology, the book could have many authors. The same is true for the media types.

The answer is relationships. Relationships help us link data in different tables to each other. There are three different relationships defined for relational databases.
One to One – For every one characteristic, you have one matching characteristic. As an example, for every one person, you can have one spouse.
One to Many – For every one characteristic, you have many matching characteristics. In our case, for every book, you can have multiple authors.
Many to Many – For many characteristics, you have many matching characteristics. As an example, in a school, you have many students who have many different teachers.

For our database, we have two one-to-many relationships. For every one book, we can have multiple authors, and for every one book, we can have multiple media types. We will take these relationships into consideration as we begin to map our database.

Mapping the Database

It is a good idea to lay out your database on paper, or using a diagram program, before you begin to work in Base. I used the open source program Dia, because it has a Unified Modeling Language (UML) module designed just for programming diagrams. Dia is available in the Ubuntu repositories. You don't need to know a lot about UML to lay out a database. I will walk you through the process in this section.

The main table for our database is the Books table. We know we need the fields Title and Published, but we also need a unique field to identify each record. Since two books could potentially have the same title, we will create an auto generated field named BookID.

For the Authors table, we need a field for the author's name (Name) and a unique auto generated field (AuthorID). Two fields for the Media table, too: MediaID and Type.

Now that we have our three
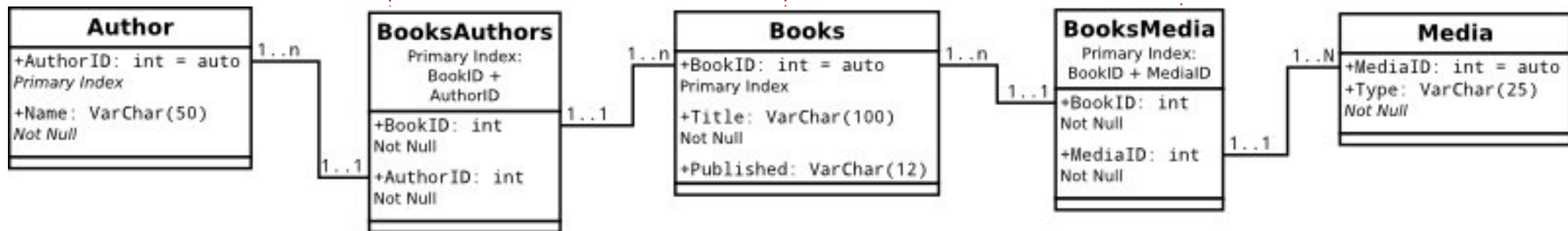
Relational database structure for Books project

tables, we need to link them together. Linking is done by what is known as foreign keys. A foreign key is a field used to create a relationship with a record in another table. Since both of our relationships are one-to-many, we can't just stick a field in the Books table to reference authors and media types. We will use intermediate tables to link the authors and media types together. These intermediate tables will contain foreign keys for the IDs to create the link.

We will need two intermediate tables. We will name them BooksAuthors and BooksMedia. BooksAuthors will have two fields named the BookID and the AuthorID, which link back the the ID fields in the Books and Authors tables. We do the same with the BooksMedia table. Two fields named BookID and MediaID, linking to the IDs in Books and Media.

I created a UML diagram showing the relationships between our five tables. Each box contains a table. The name of the table appears at the top of the box. Underneath, we list all the fields in the table and their types. We will discuss types in the next part of this tutorial. The lines between the boxes show the relationships from one table to the next. The notation 1..1 shows that field has a one-to-one relationship with the field in the other table. The notation 1..n shows that field has a one-to-many relationship with the field in the other table. For example, BookID in the Books table is connected to the BookID in the BooksAuthors tables. On the Books table BookID, the notation is 1..n, meaning this book can reference more than one record in the BooksAuthors table. On the booksAuthors, BookID has a notation of 1..1, meaning this is a reference to one specific record in Books.

With all this planning, we can easily create our database without having to make many changes. We know what tables we need and how they will relate to each other. While this may seem like a lot of work, it saves us a lot of time in the end, because we have actually put thought into how we will construct our database and how it will work.

Next time, we will build our tables and create the relationships in LibreOffice Base. Because of our planning, the process is quick and easy.

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

In this article I want to explain how, with a little preparation and planning, you can reliably and painlessly perform complete system reinstalls while, at the same time, retaining all of your data, apps and settings in the process.

In the past, I have had problems when doing in-place upgrades... it seems that something always got broken in the process, and I ended up having to go the reinstall route anyway. Plus, I like the idea of everything being fresh and clean. With a fresh install, your hard drive is wiped clean and it's as if your drive has been defragged. Also, it gives me a chance to do some housecleaning by eliminating apps that I no longer want or use. Therefore, I have made the decision to forgo in-place upgrades, and just go for the reinstall from the get go. To this end I have developed a process that allows me to do this relatively painlessly.

The methods and processes that I use certainly did not originate with me. The great thing about this community – of which we are a part – is that there are so many tremendously talented and intelligent people who are willing to share their expertise with us common folk. We just have to recognize our need, research the available solutions, select the solutions that fit our requirements, maybe adapt them to our situation, and then implement them. Sure, this involves some work on our part, but the real work has already been done by those talented and intelligent people I mentioned, and we get to reap the benefits of their work.

Every six months a new version of *buntu comes out, and you are faced with making a choice about what to do. First of all: do you even want to upgrade to this version? Maybe you have the current version tweaked pretty much to your liking, and everything is running great, so, maybe you don't really need the new version. However, unless your system is a single-application machine that just runs and runs and never needs an update, then you know that this is not a viable option. Maybe you can skip an upgrade, or two, but eventually you will have to upgrade.

On the other hand, the new version may have some fixes and enhancements that you have been looking forward to, so you definitely do want to upgrade your system. If you do decide to upgrade, now you are faced with another decision: do you do an in-place upgrade of the current version, or a fresh install? When you weigh the pros and cons of these two options, you come up with something like this:

Upgrade Pros:
• simple and quick (if all goes well)
• existing personal files and folders remain intact
• existing programs and settings remain intact

Upgrade Cons:
• doesn't always work properly
• old obsolete apps keep getting carried over (bloat)

Fresh Install Pros:
• everything is nice and fresh and clean
• install only the apps you want/use
• avoids potential upgrade problems

Fresh Install Cons:
• all apps and personal data must be reinstalled/restored
• more time-consuming

As I mentioned above, I have already made the decision to just always go for the fresh install, and, if they are honest with themselves, I think most people would really prefer a fresh install. But, then you fire up the live CD, and select the option to Erase Ubuntu 11.10 and reinstall, and you see the dire warning that says: This will delete all your Ubuntu 11.10 programs, documents, photos, music, and any other files, and your mind screams NO!!!, I don't want to delete all my stuff!

So, how do you get past this mental roadblock? The answer, of course, is reliable backups and a

safe, consistent method of getting all your stuff (applications, data and settings) back to the way it was before the reinstall.

BACKUPS

The first key to the process is having reliable backups. Now, I do not intend for this to be a tutorial on how to make reliable backups; an Internet search will provide you with any number of methods and strategies to accomplish this. You must decide for yourself what works best for you and what you are comfortable with.

If, however, you have been looking for a good backup process I would like to direct you to this excellent article by Mike Rubel: http://www.mikerubel.org/computers/rsync_snapshots/

Mike Rubel's article describes a backup method using rsync that also keeps multiple copies of the backup so you can go back three or four (or more) versions. I am not going to go into a complete description of Mike's methodology; you really need to read and study his article to fully grasp the concept.

But, let me give you a quick overview. Rsync is a very efficient *nix utility for keeping the files in a destination location synchronized with the files in a source location. As with all such utilities, it has a whole bunch of options and settings. Suffice to say, for our purposes, it has the ability to maintain all of the file properties (timestamps, owner, group, permissions, etc). If a source file is modified, it will be synced to the destination; if a source file is deleted, it will be deleted from the destination. And, of course, if a new source file is created, it will be synced to the destination. But, if a source file is the same as the destination file, no action is taken, they are already in sync. In a very real sense, once the initial rsync is done, all subsequent rsyncs are just incremental and you can then rsync your entire file system in a matter of minutes.

Now we come to the real beauty of Mike Rubel's method: the way it makes multiple copies of the backup without consuming tons of disk space. Before going into that, though, we need just a brief explanation about hard links to files. If you have a file, file1, in directory dir1, that file name is not the actual file; file1 is a hard link pointing to some location on your hard drive where the actual file is stored. Using your GUI file manager, if you select file1 and do a ctrl-c (copy), then ctrl-v (paste) in another directory, dir2, and give it the same name, file1, what you have just done is told the file manager to go to the disk location pointed to by file1, copy that information and duplicate it in a new location, and use a new name, dir2/file1, as a link/pointer to this new location.

However, if you use the command line:

```
cp –al dir1/file1 dir2/file1
```

This is telling the system to create a new filename, dir2/file1, but have it point to the same disk location as dir1/file1. While it appears that there are now two files, in reality, there are simply two filenames that both point to the same information on the disk. And this is how Mike Rubel's script creates multiple copies of the backup without using gobs of disk space.

For example: let's say our main destination is called dest-1, and we have just rsynced our entire local file system to dest-1. Dest-1 now is an exact replica of our current local file system. The next time we do an rsync, the script will first execute the command:

```
cp –al dest-1 dest-2
```

As a result, dest-2 (our "backup" of dest-1) will have hard links to the same disk locations as dest-1. We now apparently have two complete copies of the backup without taking up any more disk space than the original used. This not only saves a tremendous amount of disk space, it is much quicker too. At this point, the files in dest-1 and dest-2 are identical. You can access a file in either location and you will actually be accessing the same file because the file names in both locations are just links/pointers to the same file. Any modifications that you make to a file in one location will appear when you open the same file in the other location.

You may wonder what happens then when the next rsync encounters a source file that is modified or deleted. If we modify file1 on our system, and then rsync

those changes to dest-1, aren't those changes also going to appear in the hard linked file that is in dest-2? Not to worry. Rsync will UNlink the dest-1 file before overwriting or deleting it. Now, the dest-2 location still contains a link/pointer to the original file and dest-1 now contains a link/pointer to the new file.

That brings up another point about Mike Rubel's system that is different from the way most folks traditionally think of full and incremental backups and may appear, at first, to be somewhat counterintuitive. Traditionally, you would do a weekly full backup and daily incrementals. If you needed to do a restore, you would first have to restore the last full backup and then restore each incremental backup in sequence, in order to ensure that all files are restored to the latest version. Not so with Mike Rubel's system. You always, always, always rsync to dest-1. Dest-1 is always the full backup and it's always up-to-date. No more incremental restores! Dest-2, dest-3, dest-4, etc, will contain links/pointers to any files prior to when they were either modified or deleted and, additionally, they will also still contain links/pointers to

the files that have not been modified or deleted. So, in essence, dest-2, dest-3, dest-4, etc, are each a complete snapshot of the entire file system as of the time that they were originally created. It's pretty cool and, once you grasp the concept, it just makes perfect sense.

APPLICATIONS

As mentioned; the second key ingredient is a safe and consistent method of restoring all your apps and settings.

One of the absolutely awesome things about *buntu is the package management system for installing apps. I know, I know; *buntu is not the only Linux distro that uses a package manager, but I get excited about it when I think of the environment that I escaped from several years ago. Yeah, you know the one I'm talking about, the one with registry settings, dynamic linked libraries that are always stepping on each other, frequent crashes and reboots, and where a package management system and an official package repository are completely foreign concepts. To be sure, there are Linux purists who

insist on compiling all their apps from source code, but, the package manager has made life in *buntu land simple, quick, and easy for the rest of us.

Many, if not most, folks are content to simply use the GUI tools for installing apps (Software Center or Synaptic Package Manager), but the real power and flexibility is in using the command line (apt-get). I confess to using the GUI myself to browse or search for apps, but then I always use the command line to actually install them. The reason I install with the command line is because I want to make sure I have the package name spelled correctly because, when a new package is installed, I immediately add the package name to my "list." My list contains all the apps that I currently have installed above and beyond the apps that are included as part of the distro. It's not just a list though, it is in the form of an apt-get command line. As you may know, the apt-get command can be used to install multiple apps in one fell swoop. Here is what my list looks like:

```
sudo apt-get install asunder
apache2 audacity bum calibre
```

```
dconf-tools devede dvdrip
easytag filelight fldiff
gconf-editor geany geany-
plugin-macro gftp gimp gnome-
rdp gnucash growisofs
imagemagick imagination
keepassx lame libgtk2.0-dev
libmysql-java libreoffice lsb
mysql-server mysql-workbench
nfs-common ntfsprogs openssh-
server openssh-client pdfedit
php5 phpmyadmin psutils putty
shutter vinagre winff xsane
```

Sometimes, there are glitches with this method; if I'm switching from one *buntu to another, I may find that I am missing an important app because it used to be part of the distro in the previous version but it is not part of the distro in the new version. No problem... I just sudo apt-get install it, and then add it to my list. Sometimes, though, a package gets dropped from the official package repository. In this case, I have to either find an alternative app, or find someone who has a PPA for the app.

In spite of the occasional minor glitch, though, this method will generally get all of your apps back. But... it takes personal discipline to keep your list up-to-date whenever you add or remove apps on your system.

I should also note that the file where I keep my list is where I also make notes about special cases. For example: if I need to install an app from a PPA, as mentioned above, I will have the command lines in this file so that, later, all I have to do is cut and paste them in a terminal session.

A SHORTCUT

However, it is possible to completely eliminate having to restore your data and application settings in situations where you are simply upgrading or refreshing your system. This is a HUGE time saving because your data is usually far and away the biggest slice of your disk space, so restoring it from backup takes a long time. The way you eliminate having to restore it is by NOT deleting it during the system reinstall. And the way you accomplish this is by partitioning your hard drive so that the /home directory is on a separate partition.

If you are performing a disaster recovery or migrating to a new hard drive or computer, then you will, of course, still have to do a full restore, as explained later.

Many folks, when doing a reinstall as opposed to an in-place upgrade, simply tell the *buntu installer to use their entire hard drive for the installation. It's the easy way, and does have the advantage of not forcing you to decide how you want to partition your hard drive or how big each partition should be, etc. Designating too much space for a partition means that there will be unused, wasted, space that might be needed by another partition. On the other hand, if you don't designate enough space for a partition, especially the root partition, you may run out of space and might even crash the system.

If you want to establish a starting point for your partition sizes, use a disk space analyzer such as Filelight to see how much your current /home directory is using. Use the df command to see how much total space you are using. The difference is how much space everything else is using. Add a comfortable margin to this and use this as the root partition size. You also need a swap partition equal to the amount of physical RAM you have in your computer.

Use the remaining space for /home.

The following will help illustrate this. Note that I am using VirtualBox running on my laptop so that I can get screenshots of some of these steps. The partition sizes shown are not meant to be recommendations. I am using a relatively small 16 GB virtual disk, and simply split it into three partitions to use for this illustration.

Select the Something else option when asked about which installation type you want. This will allow you to create separate partitions for root, swap, and /home.

If you currently have everything on a single partition then the next screen is where you will add your partitions.

Highlight the device, /dev/sda, and click Add... In the next screen specify the file system type and select / as the mount point for root. Add another partition for swap. Then add another partition and select /home for the mount point
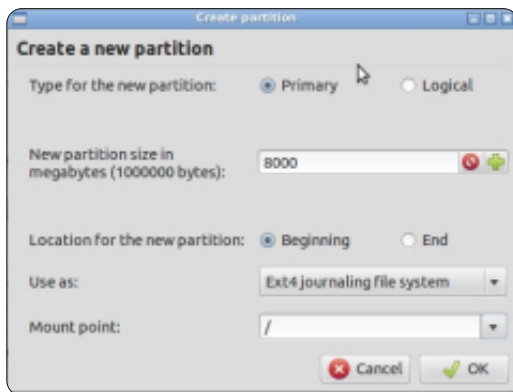
Now your Installation Type screen looks something like the one shown below left.

Since this was a single partition disk that we are splitting into three partitions, both the / and the /

home partitions will be formatted, as indicated by the check marks.

Continue with the rest of the installation. Because this is the first time you have split your drive into multiple partitions, you will be required to fully restore everything to your /home partition because it has been newly formatted.

But, in the future, when you get to this step, here is what your Installation Type screen will look like the one shown below right.

It has found all your partitions that were set up previously, but

the installer does not know what you want to do with them until you give it specific instructions.

Select the partition that you had originally set up as the / (root) partition, /dev/sda1 in my case, and click change... Here you will have to tell it, again, what kind of file system to put on the partition and where you want it mounted. Also, make sure the format box is checked.

Then select the partition that you had originally set up for /home. Specify the type of file system and the mount point, but

MAKE SURE THAT THE FORMAT BOX IS UN-CHECKED.

Now continue with the reinstallation. Because this time we did NOT format the /home partition, all of our data and application settings remain intact, giving us most of the advantages of doing an in-place upgrade since none of our /home stuff has to be restored from backup.

THE PROCESS

Okay, let's assume that you have been faithful in your backups and in keeping your "list" up-to-

date, and it is now time to reinstall your system, whether it be an upgrade to a new version, or a new distro, or a disaster recovery, or you simply want to refresh your system. Here is the process:

Make a note of your computer name – generally, you will want the new system to have the same name as the old system. However, changing the computer name should not cause any problems. Usually, you can just open a terminal and the computer name will be displayed at the command prompt. Mine looks like the image shown above right.

So, Lubuntu-D620 is my computer name. As you can see, I am running Lubuntu on a Dell D620. The D620 is not the most up-to-date hardware and I was looking for something "lighter" than Ubuntu, and have settled on Lubuntu... for now.

If you normally use a wireless network connection, you might want to instead use a wired network connection for the install. In my case at least, the wireless always gets broken when I reinstall because the Broadcom drivers are not included in the distro. You will
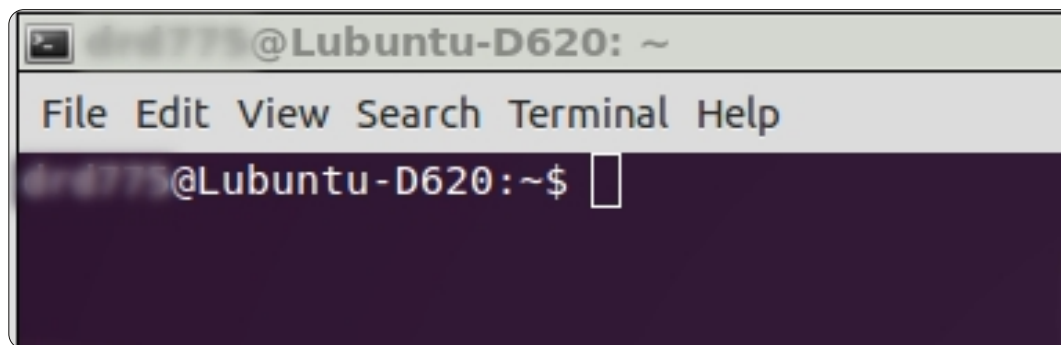
probably need a network connection before your installation is complete, so don't take a chance, just plug it in now.

Pop the live CD in, and reboot from the CD, and select the 'Something else' option described above to either set up your partitions, or to format just the root partition while leaving the /home partition intact. Here is where you will have to enter your computer name and your username. You definitely want to use the same username that you had in the old system so that the installation will use your existing home directory rather than creating a new user directory in /home, and so that the permissions for all your data remain intact. Let it run, and reboot when complete.

After the reboot, run Update Manager to get all the updates and

patches for your new install.

If necessary, restore your home directory from the backup. You need to do this step only if you are migrating to a new hard drive or to a new computer, or performing a disaster recovery. If you are simply reinstalling the operating system, and have your drive partitioned as explained above, then all of your data and application settings are still in your /home partition, and you do NOT need to restore anything. In either case, whether you restore your home directory or use the existing /home partition, your home directory will contain all the hidden files that have the configuration settings for all your apps. In my case there are also some other files that I restore outside of my home directory: /var/www (for my local web sites), and /lib/firmware/b43 (for my wireless). I have another rsync script that I run to restore all these

things at once.

I like to reboot again at this point just to make sure that my login is now using all the system settings that I had previously defined.

Run your sudo apt-get install command to reinstall all your apps. Now is the time to review your list to eliminate any apps that you no longer use or want. Since all of your application settings (hidden files) are already in your /home directory, the package installer will find those settings and use them. In most cases, the reinstalled app will be configured just as it was before. If you do decide to eliminate apps from your list, the configuration settings files will still reside in your home directory. Don't be concerned about that; they don't take up much space, and later, if you decide you want that app back again, you can sudo apt-get install it and the settings will still be there.

At this point I usually reboot one more time. The system should now be fully operational and should look and feel pretty much as before, but you may have to do some minor tweaking. For

instance, I always have to manually reinstall my printer since there is no official package for my Epson Artisan 730 printer drivers in the repository. I have a .deb package that is in my Downloads folder, so I just have to manually install that and then go into CUPS to add the printer. I also use MySql and have to manually import all my databases from backup. These are the kinds of things that you will want to keep track of in your notes in the file where your "list" is kept.

CAVEATS

No process is foolproof; do not just dive into this without thoroughly testing everything. Hard drive prices being what they are, it is relatively inexpensive to have a spare drive on hand for testing this. Just remove your system drive and pop in a spare. If things don't work as they should, you have not jeopardized your system in the least.

Alternatively, you could set up VirtualBox on your computer and create a VM for testing the process. Admittedly, this is not as fast because the IO of a VM is not as efficient, but, for testing

purposes, it does have the advantage of being able to quickly undo a mistake if you make snapshots of the VM at critical stages of the process.

CONCLUSION

My goal in this article is to show that it is possible to have the perceived advantages of an in-place upgrade and the very real advantages of a reinstall. Once you are familiar with the entire process, and confident in your ability to perform it, you can have peace of mind in knowing that if your computer is lost, stolen or damaged, you can quickly and easily recover from any catastrophe.

Hopefully, this article will stimulate you into doing some planning and preparation for your next upgrade so that you will have the tools and expertise in place when you need it.

16x16 SUDOKU

Numbers 0 to 9 and letters A to F are to be filled into the 16x16 grid so that every row, every column, and every 4x4 box contains 0 to 9 and A - F.

D	8	2	B		A		3		F		5				
	3				B	7	8	A	E		9				6
F		6						D	8			B	3		A
			1	2	4					B		D	8	E	
	D		4	7				3		0	8	1		2	
	C				D		F		7						8
	0	F		4	3	8	1					7		A	
	A		6	9				2	D			4	E		3
9		0	D			A	C				E	8		F	
	7		8					0	6	A	F		2	B	
B					6			9		8				1	
	6		F	E	8		7				2	A		9	
	F	5	0		7					D	C	6			
8		A	9			D	6					1			2
C				8		5	4	E	B	6				D	
				B		3		1		5			E	C	8	7

Solutions are on the second last page.

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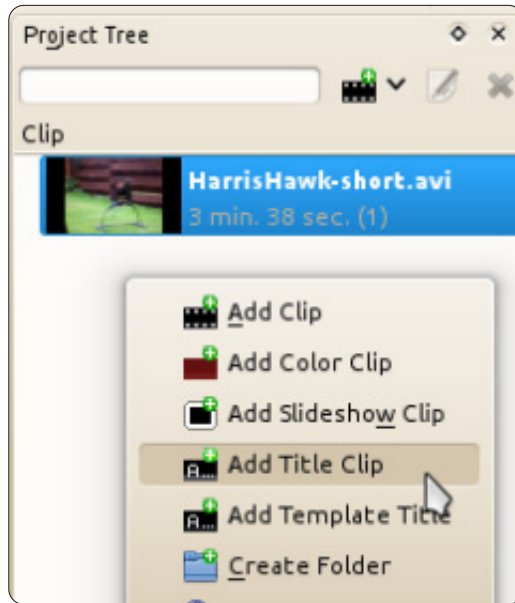This month we'll talk about adding intro/ending credits to your videos.

If you right click in the clips holding area, you'll see the option to 'Add Title Clip'.

Clicking that will give you a new window (shown right) with a blank title ready for editing.

At the top left of the window (below the menu) are icons that let you move items, add text and so

on. Below that are options to choose/change font properties. Vertically down the right side are options to change the duration (of this title), then rotation/alignment options. Finally, you have two tabs to edit the background or animate items.

We'll keep it simple for now – I'll add an image, then some text – using the buttons at the top left of the window (shown below right), and put a black background using the 'Background' tab and opacity
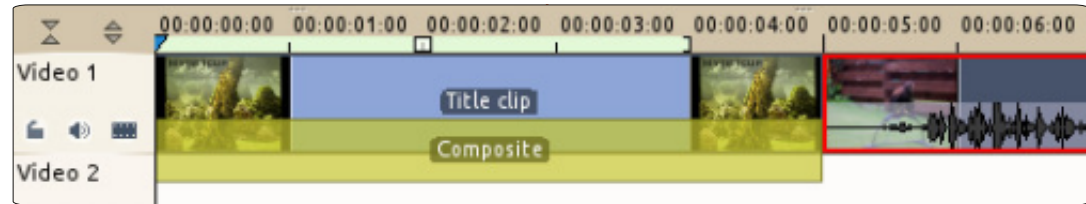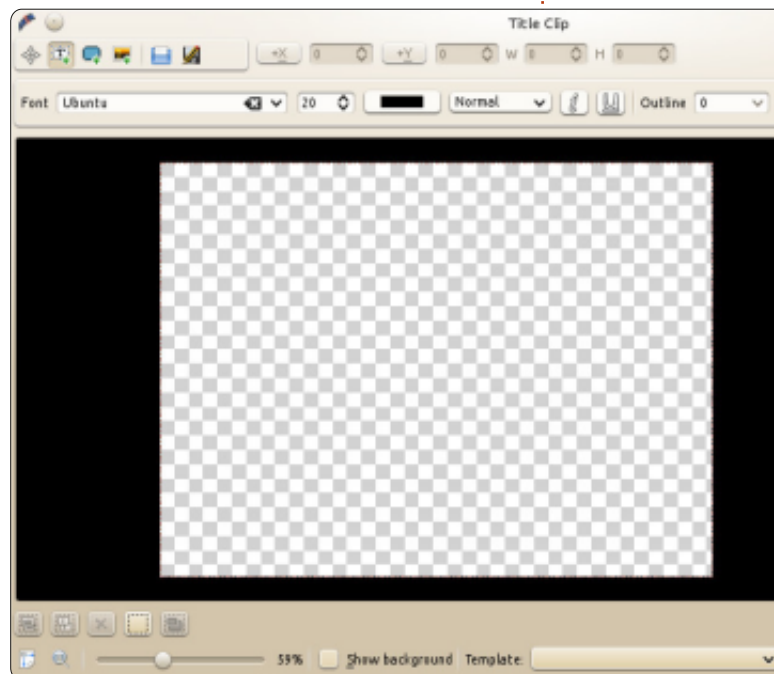
slider. I'll keep the 'Duration' at 00:05:00 (five seconds) and click OK.

The title clip I've just created is listed in my clips storage area (shown above) ready for dragging into my video:

You can't treat the title clip just like you would any other clip, so no effects/transitions are allowed. But, as you can see below the title clip in the 'Video 1' track, there is a 'Composite' box. Click that to edit the properties of how the title clip behaves. First, overlap a video with the title clip. I'll go for a two
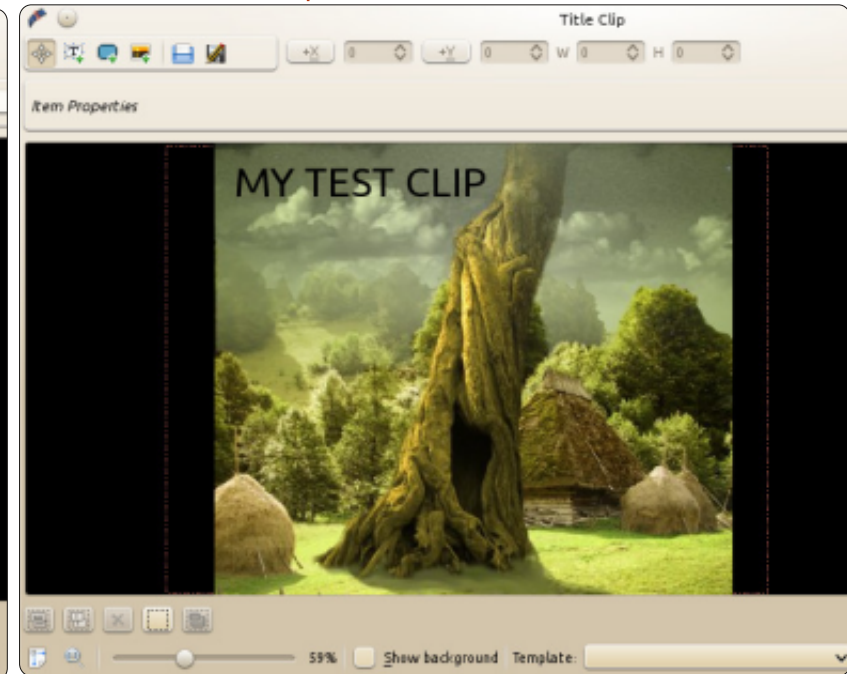
second overlap.
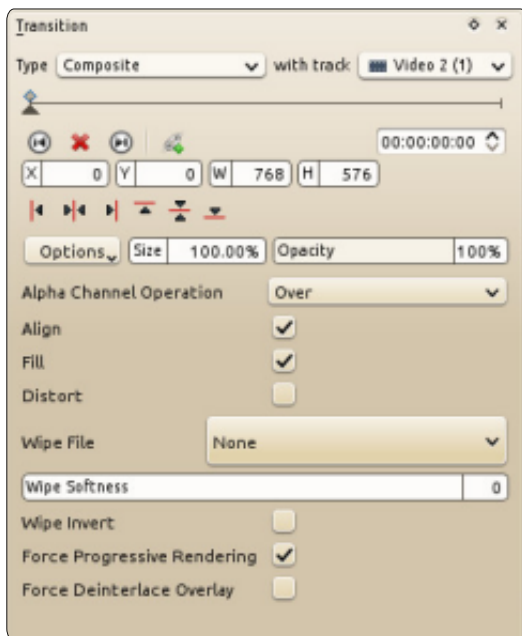
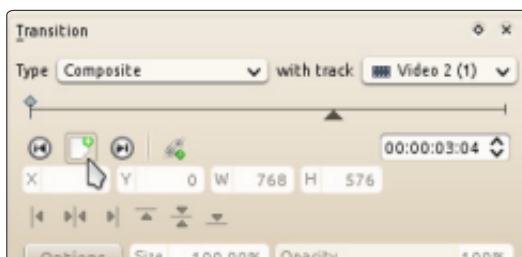You have many options under the 'Type' drop-down menu (top right), but just change the 'with track' drop-down to say 'Video 2' (in my case). Now drag the small black up-arrow along the horizontal line to where you want a dissolve to begin (three seconds in, and lasting for two seconds). Click the 'Add keyframe' button:

and leave those settings as is. Now, drag the pointer to the end of the line, and create another keyframe. This time drag the opacity of that keyframe to zero:
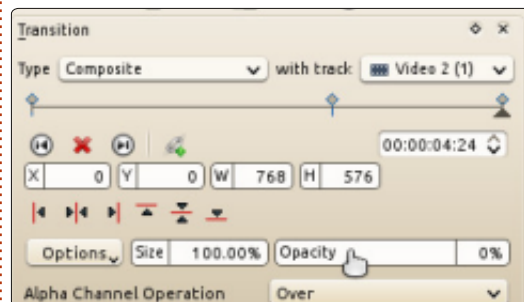
Voila! Our title clip fade-out begins at the three second mark, and lasts for two seconds.

If there's anything you'd like to see covered in this series, please drop me an email at: ronnie@fullcirclemagazine.org.

Next month, we'll look into more advanced uses for effects.

Ronnie is the founder, and editor, of Full Circle, an official Ubuntu member, and part-time artist whose work can be seen at: http://ronnietucker.co.uk

CODEWORD

Every number in the grid is 'code' for a letter of the alphabet. Thus the number '2' may correspond to the letter 'L', for instance. All - except the difficult codeword puzzles - come with a few letters to start you off

Solutions are on the second last page.

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This instalment is going to introduce the most powerful of Inkscape's drawing primitives: Paths. I say 'introduce' because paths can be created, used and manipulated in many different ways, so we'll come back to them time and time again as these tutorials progress.

But, this month, we'll keep it simple and start with the Line tool (SHIFT+F6, or "b").

Select the tool, click once on the canvas, then move the cursor to another part of the canvas before double-clicking to finish your path.

You've just created the simplest type of path there is: a straight line. Try giving the stroke a color and thickness using the Fill and Stroke dialog or the tools on the status bar that we've covered previously. Now, switch to the Selection tool (remember you can just hit SPACE as a fast shortcut), and confirm that you can resize, rotate and shear it just as you would expect. Double-click on the line to switch to the editing mode and you'll notice something a little out of the ordinary: whereas a double-click on a rectangle, ellipse or star will switch to the appropriate tool, double-clicking on a path switches instead to the Node tool (shown left) .

You'll become familiar with the Node tool soon enough, but, for now, just select the Line tool again. This time, click in several places on the canvas before finishing off with a double-click. You've just created a path with multiple line segments. The chances are that you've got an 'open' path – one in which the two ends are separate.
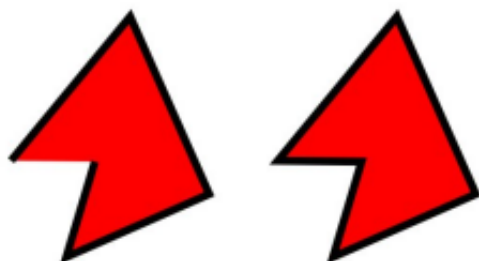
If you draw another multi-segment path, but double-click back at your starting point, you'll create a 'closed' path. The difference between them becomes apparent when you add a fill – and it should remind you of the effect we got when creating arcs back at the start of this series.

As you can see, if you apply a fill to an open path it will be drawn as though there's a straight line that closes the path. That can sometimes be a handy feature, however it works only when there's a single break in the path – as soon as you introduce another (we'll see how to do that next month), the fill disappears entirely.

Let's return to the Node tool by double-clicking on one of the paths, or by pressing the F2 or "n" keys. The double-click will switch tools and select your path; if you opted for the keyboard shortcut, you might have to click on your path to ensure it's selected. You should see a small diamond-shaped handle marking each transition between line segments. These are called 'nodes' and, as you might imagine, the Node tool is what we'll use to manipulate them.
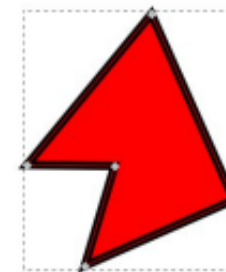
Try dragging one of the nodes around with the mouse. Now hold down SHIFT as you click on several nodes to select them – they are colored yellow when they're selected – and drag all of them around as one. Do you want to move the nodes at either end of a segment? Simply click on the line that joins them. Hold down SHIFT as you do so to add both nodes to an existing selection. You can also press "!" (SHIFT-1 on my keyboard) to invert the selection, which can be especially useful when dealing with very complex paths. Finally, try dragging a 'rubber band' selection box over some of your nodes by clicking on the canvas and, keeping the mouse button pressed, dragging out a rectangle that covers some of your nodes. Release the mouse button and the nodes within the box will be selected (or added to your

selection, if you also held SHIFT).

Of course there's more that you can do with nodes than just move them around. Select a few then enable the 'Show Transformation Handles' button (shown left) on the tool control bar. You'll see the familiar move/resize handles around your nodes; clicking on one of the selected nodes will switch to the rotate/skew handles instead. These operate in the same way as the handles you get with the Selection tool, but the transformations are applied to the selected nodes rather than the whole object.
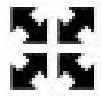
Think back to the previous article when you were editing gradients directly on the canvas. Adding a new gradient stop was as simple as double-clicking on the line where you wanted it to appear. Adding a new node to a path is similar: just double-click on

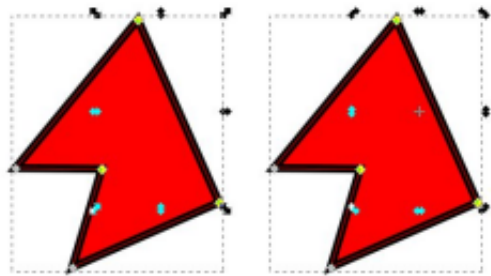the path. If you want it exactly halfway along a segment, then select the nodes at either end (remember, a click on the segment itself will do that), and press the INSERT key or click on the button on the tool control bar. The new node will automatically be added to your selection, so you can repeatedly press INSERT or click the button, shown left, to add several nodes to a line segment.

Let's get a little more curvy. Click and drag the middle of one of your line segments to quickly turn it into a 'Bézier curve'. The nodes at each end of your curve should have circular handles attached to them via thin lines. Rough curves can just be dragged out from straight line segments, but you can fine tune them by moving these circular handles around.
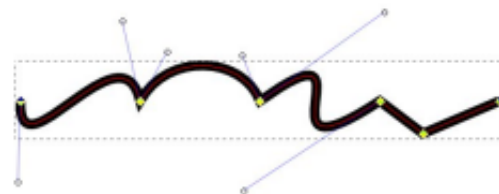
If you decide that you want to change your Bézier curve back into a straight line, you first need to select the end nodes, then press

SHIFT-L or use the button on the tool control bar (shown left). There's an adjacent button (or SHIFT-U) for converting a straight line to a curve, but most of the time it's more useful to just drag the line segment to get the approximate shape you want, then fine tune it with the Bézier handles.

The little diamond-shaped nodes that we've played with so far are just one of four types of nodes that can be used in paths. These nodes allow the path segments on either side to extend in any direction, allowing you to create corners in your paths. Sometimes, however, sharp corners are the last thing you want, so, for those occasions, there are three other node types: smooth, symmetric and auto-smooth. You can cycle through the various node types by CTRL-clicking on a node, or you can directly change to the type you want by selecting the node(s) and then using the buttons on the tool control bar:
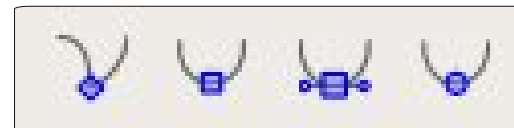
Here's a quick summary of the four node types:

Corner – Allows the line segments to meet at an angle
Smooth – Ensures that the gradient remains constant from one segment to the next
Symmetric – Like Smooth, but also ensures that the two handles are the same length
Auto-smooth – Moving this node, or its neighbours, will keep the line smooth. If you adjust the handles on this node, however, it will revert to a simple Smooth node.

Of course the best way to understand the differences between these four types is to simply draw a line with a handful of nodes and play around with them.

Drawing a series of segments from scratch using the Line tool is just one way to create a path, but Inkscape has several others. One of the most common approaches is to convert another object into a path. This lets you easily transform a rectangle, ellipse or polygon into a path whose nodes can be moved and modified freely. The downside to this freedom is that the object loses its original identity – you won't be able to use the Rectangle tool to change the corner radius once its been converted into a

path, or the Star tool to adjust the number of sides to your polygon. You also won't be able to convert your path back to the original object type, even if you haven't made any changes to the nodes: conversion is a strictly one-way affair.

With those warnings in mind, let's draw some objects and convert them to paths. To start with, you just need to create a few shapes, following the instructions in the earlier instalments of this series. An ellipse, rectangle, rounded rectangle, and a star, for example. Then select each object and use the Path > Object to Path command at the top of the menu (or CTRL-SHIFT-C if you prefer). Double-click on each path so that you can see where Inkscape has created corner nodes, and where it's created smooth nodes.
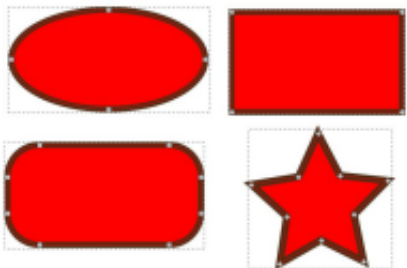
Try manipulating these paths: move some nodes, change them from corner to smooth and back, drag the line segments, and adjust the Bézier handles. Add some nodes with a double-click or by selecting a segment and pressing INSERT. Of course you can also delete nodes by selecting them and pressing DELETE (or clicking the button, shown left, in the tool control bar), but there's a bit of a catch to that: Inkscape will try to preserve the original shape of the path as best it can, even though there are now fewer nodes. If you want it to just delete the node without trying to preserve the shape then you need to press CTRL-DELETE. The difference becomes clear when you want to just remove one corner from a rectangle:

If you go too far with your node editing (or with anything else in Inkscape), you can always use the Edit > Undo menu (CTRL-Z) to roll back your changes. Inkscape maintains a history of all the edits you make in a session, so you can Undo repeatedly if you want to. Take a look at Edit > Undo History if you really want to travel back in time.

On the whole, Inkscape is a fairly stable program, but it will occasionally crash. In my experience, this happens most when you're editing paths, and usually when you try to use the Undo facility. Fortunately, it also does a pretty good job of saving your work to a backup file if it can. If Inkscape presents you with a dialog to tell you that it's crashed then usually that will show the path and name of the backup file. Generally, the file is in the same directory as your drawing – or in your home directory if you haven't saved your drawing yet – and will have a name that's based on your file's name but with a numeric date and time string appended to it. Usually you can just open the backup file, save it with a different name, and carry on working as though nothing had happened. As with all computer files, however, it pays to backup regularly – I usually start each of my Inkscape sessions by using File > Save As… to create a copy of my image with a slightly different name so that I can never lose too much work to an Inkscape crash.

Now that you can convert Inkscape's shapes into paths it's time to make your snowman look a little less pristine. Convert his elliptical head and body, then add a few nodes and move them slightly to produce the lumps, bumps and asymmetry of a typical snowman. You can also add a bit more character to his carrot nose by drawing cuts and marks and by making it a little wonky in parts. The horizon benefits from a little waviness to imply drifting snow. Although you could create more twiggy arms and crush his hat, I'm going to leave those alone for now and deal with them next month when I'll cover some methods for creating and manipulating complex paths quickly and easily.
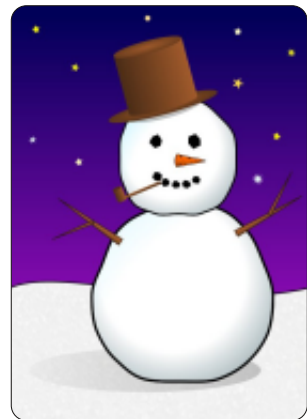
Mark has been using Linux since 1994, and uses Inkscape to create two webcomics, 'The Greys' and 'Monsters, Inked' which can both be found at:
http://www.peppertop.com/

Last month we started our CRUD off strong. We didn't go into details by design. I am very fond of teaching by example, and everything in part 1 will start making complete sense now that we are starting to get into JavaScript/JQuery and CSS.

I strongly suggest you learn as much as you can about JavaScript. It is a very powerful language, and I guarantee you cannot get away with being a web developer without a strong understanding of it. I am going to give you what I can, but your learning of this language cannot involve just me.

Just about everything we do inside programs involves data. Different types of data have different declarations. For example: 42 is a number, "answer to life" is a string of text, and "TRUE" is a boolean. These types of data will normally be seen in something we call variables. You can think of variables like your old pre-algebra math classes. x = 42, y = 13, solve for z (x + y = z).

```
var answer = 42;
```

Declaring variables is a pretty simple idea. The above shows an example of the variable "answer" being declared and set to the number 42. The text 'var' is telling JavaScript (JS) that this is a variable declaration happening here, and that the next word is the name of the variable which we are declaring. The equal '=' sign here is very important. The following sentence should be read a few hundred times until it is pounded into your head. The single equal sign '=' is a setting operator. Anything to right of the '=' operator, is now being stored in the variable declared on the left side of it. The last character of this line, and by far one of the most important things to learn, is the semi-colon ";". The semi-colon is an identifier for JS that this is the end of the line. At this point, we have just been talking about a number, what if we want to declare other things?

```
var answer = 42;
var connection = true;
```

```
var swVersion = 1.3432
yar imageType = "jpg";
var message = "This is a
longer string message";
```

Now as you can imagine, this can get really repetitive and somewhat annoying. It also allows for more room for typos. I purposely left two mistakes in the above example and want you to look closely at finding them. Notice that each of these lines ends with a semi-colon. Each line is a statement, and therefore it needs to be ended. JS allows us to clean up our variables by declaring them all at once in one var statement, with one end. Let's clean up this code (shown below) and declare these same variables, then go over what is going on.

If you didn't catch the two typos, it was a missing semi-colon

on the swVersion declaration and a yar instead of var in the imageType declaration. Debugging your code is very important, and, later on, you're going to appreciate learning this skill. As for the cleaned up example, we start off the declaration with a var as normal, but instead of ending it on the first line, we have a comma ",". the comma tells JS that there are more declarations coming. When using the comma, you may (but are not required to) have the next declaration on a new line. However, you may not make the new line after anything other than the comma. For example, the following code will not work:

```
var answer = 42, connection
    = true;
```

Declaring variables this way

```
var answer              = 42,
    connection          = true,
     swVersion          = 1.3432,
     imageType          = "jpg",
     message            = "This is a longer string message"
;
```

makes JS interpret each line as the first example when we only declared one variable. Therefore, it allows us to put the semi colon on a new line as well so we can clean up and see that the declaration of variables has clearly ended. This also allows us to not worry about where the semi-colon is when adding more variables.

The next thing I want to go over is how to make sure your variables are set. This will also help in debugging, and just making sure your code is doing what you expect it does. I am going to show you two ways you can go about this, but the end goal is displaying your information so you can "fact check" as your program moves along.

```
alert(answer);
console.log(answer);
```

Both of the lines above are displaying information to you. Even though they are doing two very different things to give you the information, they are both giving you that information nonetheless. I know a lot of developers who prefer the alert route. However, I believe it is better practice if you use console.log. Both of these functions are native to JS, and both of them are acceptable means of checking your code. Whichever one works for you, stick with it. From here on out, I will be using console.log and will be showing you how to use it.

The alert function will bring up a dialog box for your attention, requiring you to press "ok" to see

the next one or move forward with your program. However, the console.log function will run your code, throwing anything in that function right to a JS Console. The JS console can be found in most of the major browsers. In Chrome, simply press the wrench button, click on tools, and then click on JavaScript console.

The console.log function can take just about anything in its parameter and display all sorts of data in a variety of different ways. I want you to use your main.js script to add variables, and console.log the answers to the JS Console. Play with the alert function as well to give yourself the freedom of choice. So, you will be adding variables to main.js, and opening your HTML file in a browser, while

watching what happens in the console. Be sure to do your homework; next month we will be using variables pretty hard core in comparisons, if's, and loops.

If you have any questions regarding variables, alert, or console.log, feel free to send it to me via twitter: **@aliendev2**.

Michael Youngblood has been in the industry of web design and development for 13 years. He has been working for a world wide wireless tech corp for six years and is working on his bachelor's of science in mobile development.

12.10 (Quantal Quetzal) is out!

ubuntu   kubuntu   xubuntu   lubuntu

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.

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

Today's question comes to us from **Joe P.** who asks:

Q: How do I update programs in Ubuntu?

A: Good question, Joe!

Any thorough discussion of this topic begins, as it should, with the final scene in Chinatown.

Jake Gittes spends the entire movie trying to figure out how the world works – only to meet with misery. While trying to give Gittes some perspective on his woes, his partner Walsh delivers one of the most famous lines in movie history:

"Forget it, Jake, it's Chinatown."

That's how I feel about software updates.

"Forget it, Copil, it's package management."

Sure, it doesn't have the same dramatic oomph, but you get the idea. A process that should be straightforward is LITERALLY like skiing through a revolving door. It can't be done! It's simply impossible to understand, Joe, and you shouldn't even try. Do what I do. Throw your hands in the air and put on an episode of Here Comes Honey Boo-Boo. You'll feel better, trust me.

I mean, if it's really important to you, I guess you could simply burn a new .iso, and re-install Ubuntu every time you need to update some minor solitaire game. Easy peasy, lemon squeezy.

Oh, fine, Joe, if you're going to be such a defeatist, and say my solution seems unreasonable, then I'm forced to take you through the ugly process so you can see for yourself.

I warned you, Joe, you're playing with fire, you're walking into the mouth of madness, you're buying discount condoms at the Dollar Store. This won't be pretty.

WHAT'S A PACKAGE?
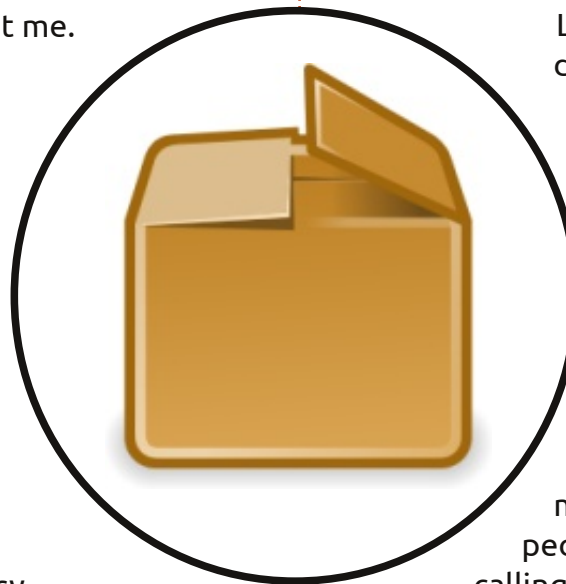
Let's start by defining terms. For some insane reason, Ubuntu refers to programs as packages. Leave it to the evil cabal behind Linux to rename everything. I mean, do these people go around calling their ears "hearing eyes?" Well, they shouldn't.

Hey, I just looked this up and it turns out Linux talks about packages because, when you want to install a program, there are usually a bunch of files and programs that are necessary to make it run.

So, why aren't those files already included in a typical Ubuntu install? Because if you included the universe of programs and files needed to make ALL software run (even stuff you'll never, ever use), Ubuntu would be as bloated as my Aunt Gertrude after burrito night at her Canasta club.

Instead, Linux programs are "packaged" with all the bits you need to run them. If homebuilt guillotine kits worked this way, you'd get a free Front-of-the-Line pass for the emergency room. So I guess this is kinda smart if you think about it. Probably just an anomaly, though. Don't worry, Joe, the rest of this will be unintelligible, I promise.

ADD PACKAGES USING UBUNTU SOFTWARE CENTER
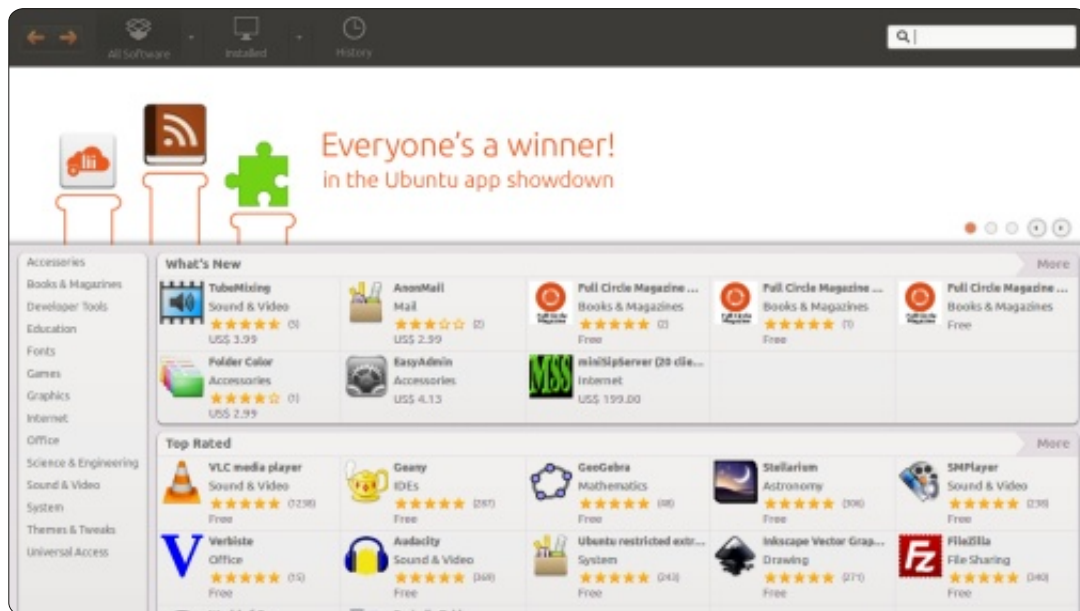
Okay, so let's look at adding a package (then we'll move on to updating it). First, find the Ubuntu Software Center. In Ubuntu 12.04 you can type Software in the Dash field.

Type the name or description of what you're looking for (eg: text editor) in the top-right search field. Choose the software you want from the results, and click INSTALL. Once you give it your root password, the program installs.

Hmm, I must be doing something wrong because that was completely painless. And it even downloaded all the extra bits I needed to run the program without me lifting a finger.

Well, the fun ends here because keeping that bad boy up-to-date is like wearing sandpaper contact lenses (which I used to do until they upgraded my health plan at work).

UPDATE PACKAGES USING UPDATE MANAGER

See, packages added from the Software Center get updated using the Update Manager.
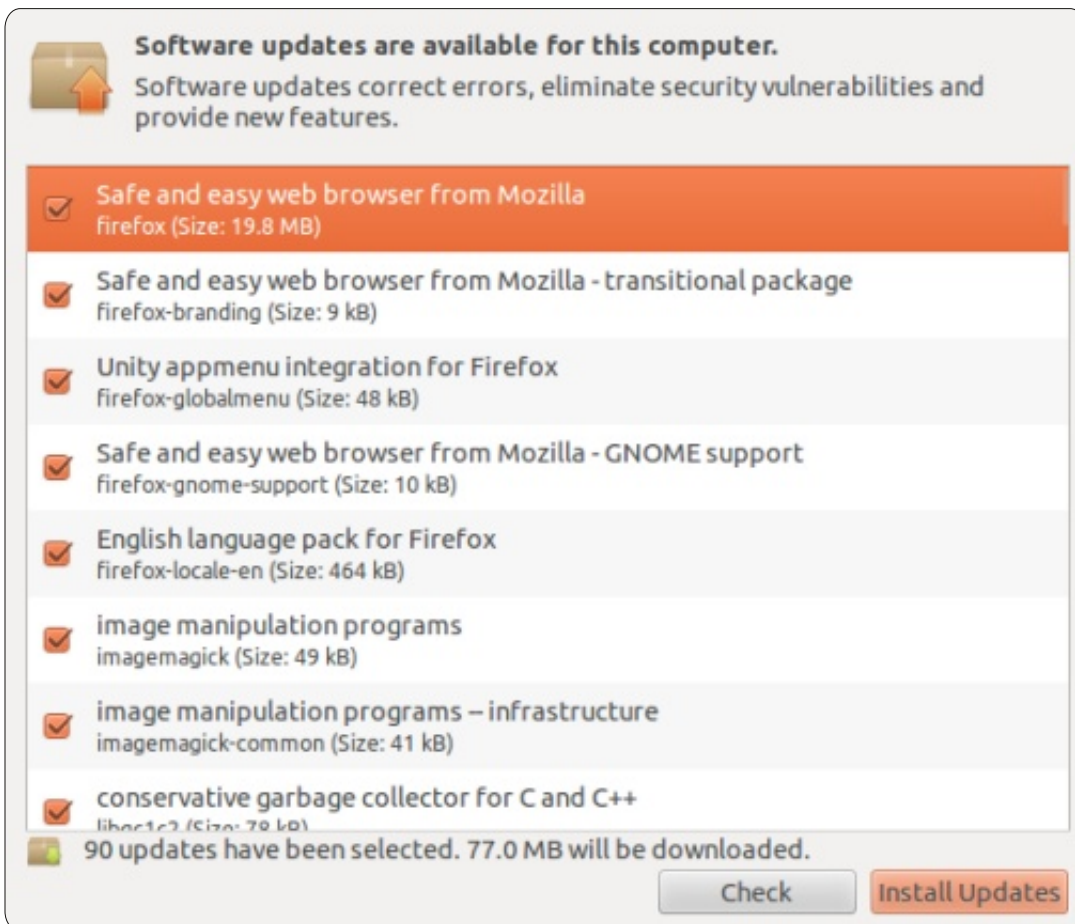
The Update Manager alerts you when there are updates for your installed packages. To apply the changes, you click the INSTALL UPDATES button. I mean, c'mon, what am I, a brain surgeon?!

Again, there must be a step missing because that wasn't so bad.

Well, it's all uphill from here because it's time to try doing this stuff at the command line. Hide the children and the elderly, it's about to go Human Centipede up in this hizzy.

STEP 1: UPDATE THE PACKAGE INDEX

So get this. Before you go

ASK THE NEW GUY

installing programs, Linux suggests you update something called the Package Index. Da Hell?!

Well, we know what packages are. But an index of packages is probably some kind of compendium of cray-cray. Right?

Wait. No, I just checked and it's just an index. Of packages. My bad.

So the Package Index simply lists all the packages I can choose from? When you put it that way, I guess it makes sense to update it from time to time so I have the most current list of packages.

Fine, here's what you type:

```
sudo apt-get update
```

Sudo gives you root access, apt-get is the command that installs/updates packages, and update tells the apt-get tool to update the Package Index.

Now that we have a current list of available programs, our luck has come to an end. It's time to install a package.

STEP 2: INSTALL A

PACKAGE

Let's say you want to install a program called ProgramName (original, huh?). Take a look at this horrible stew of rancid commands:

```
sudo apt-get install
ProgramName
```

Wait. . .this just seemed so complicated in my mind, you know?

STEP 3: UPDATE THE PACKAGE

The only thing left to do now is update the program you just installed. Leave it to Linux to give us, like, a bajillion ways to do it. I picked one at random, and you won't believe how complicated it is. Have a hankie ready in case your eyes bleed:

```
sudo apt-get install
ProgramName
```

That's the command line entry for INSTALLING a package! Do you think I'm stupid, Ubuntu?!

Ah, I see now. Running this command when the program is already installed causes Linux to update the package to the latest version. Even I have to admit, that's pretty cool!

No, NO! FOCUS! This is NOT easy, don't get distracted by Ubuntu's shiny ways and charming demeanor. It will kill you in your sleep!

Here's a scenario Ubuntu can't fake its way out of. Let's say you installed a package a while back. But you forgot its name. All you remember is that you wanted to update to the newest version. I DON'T KNOW, maybe someone hit you on the head with a cricket bat and you got selective amnesia! Work with me, people!

In this completely plausible scenario, here's what you type:

```
sudo apt-get upgrade
```

Wait, what? And you say it also upgrades ALL YOUR PACKAGES, not just the one you couldn't remember? Oh.

Let's recap.

Packages are programs plus all the bits you need to run them.

To Install/Update Packages using a Mouse:
1. Find and install the packages you want from the Ubuntu Software Center
2. Update all installed packages using Update Manager

To Install/Update Packages using the Command Line:
1. Update the list of packages: sudo apt-get update
2. Install the desired program (or update it if it's already installed): sudo apt-get install ProgramName
3. Upgrade all installed packages to latest versions: sudo apt-get upgrade

Whoa. That all looks pretty easy! But I thought Linux was HARD! Are you as confused as I am?

Forget it, Joe, it's Ubuntu.

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).

Measuring just 4 inches by 4 inches, the Pivos XIOS DS Media Play packs a lot of hardware into a tiny Android-based box. The XIOS DS supports a large number of audio and video codecs, HDMI out, a microSD slot that supports a microSD card up to 32GB, and 3 USB 2.0 ports. Best of all, the cost with the standard remote control is just over $100 U.S. Unfortunately, the XIOS DS is not as user-friendly as it could be, and doesn't beat a dedicated PC running Ubuntu + XBMC as a media center. However, for the cost and features, the XIOS DS is a hard value to beat.

The XIOS DS is packed in a 6.25 inch by 6.25 inch box. The Android roots of the XIOS DS are clearly obvious with the Android droid appearing on the top and 3 of the 4 sides of the box. Interestingly, one of the sides shows the XIOS DS measuring 3.3 inches by 3.3 inches when in fact it measures slightly larger, 4 inches by 4 inches. Inside, the XIOS DS is packed snugly in a form-fitting piece of styrofoam.

Below the XIOS DS are the remote, an HDMI cable, and the power adapter. Other than the sides of the box, both inside and out, there is no paper documentation for the XIOS DS, and this is one of the main shortcomings of the device, a lack of usable documentation.

The XIOS DS has an ARM Cortex A9 CPU, a Mali-400 graphics processor unit capable of 2D and 3D acceleration at 1080p, and 512MB of DDR2 RAM. Onboard, the XIOS DS has 2GB of Nand flash, but the microSD port and the 3 USB ports on the side allow for a lot of extra storage. Both wired (10/100MB/s ethernet) and wireless (802.11 b/g/n) are supported, but, oddly, not turned on by default.

The remote control that comes with the XIOS DS, and the optional sense remote, both resemble the

kind of wheel remote that's currently popular. The standard remote uses a standard round 3 volt lithium battery (CR2025) that you find on motherboards. The optional sense remote is charged via a micro-USB cable. Both the Pivos forums and a number of Youtube videos recommend buying the optional sense remote, and I agree that it's almost necessary. One of the stumbling blocks I ran into is the fact that the included remote control isn't enough to control all the options of the XIOS DS. The optional sense remote control moves the cursor when you move your arm, much like the Nintendo Wii. Unlike the standard remote, there are no navigation buttons on the sense remote, nor is there a power off button, something that makes it necessary to have both remotes. The fact that the Android user interface is touch oriented is painfully obvious when you try to navigate the interface using only the included remote.

I mentioned the lack of usable documentation earlier. The XIOS DS does in fact come with

documentation, online documentation available on the device itself. However this documentation is extremely slow to load, and difficult to read because it doesn't parse smoothly. The documentation was so slow to load that I just gave up reading it and attempted to learn by doing. On a positive note, Pivos maintains a knowledge-base and forums to support the XIOS DS. The Pivos forums are actively maintained, and information about the latest firmware appears first on the forums. Pivos also maintains an online support ticket system where you can send in bug reports or support requests.

I couldn't figure out where all the applications were until I used the sense remote to navigate to the top right corner. None of the standard remote control buttons could be used to bring up the applications until they were added to the virtual desktops. My XIOS DS came with Android 2.3 Gingerbread, but I quickly found the Android 4.0 Ice cream sandwich firmware on the Pivos site, and upgraded through the Gingerbread interface. The XIOS DS has a couple of ways to upgrade/downgrade the firmware, one through the Android interface (using the sense remote, click on the tiny squares in the top right, then click the Upgrade application), and one through the hole on the bottom of the XIOS DS.

To upgrade to Ice Cream Sandwich you need to download and unrar the firmware to a microSD card, then use either the Gingerbread interface or upgrade through the button on the bottom of the box. I had a couple of microSD cards from my phone.

The Ice Cream Sandwich (ICS) firmware upgrade also has a group of additional applications available that can be added through the same interface, but forum consensus is it's better to add applications one by one through the Google Play store. Initially, I added the extra applications but found I preferred navigating fewer applications.

The default set of applications included with the Ice Cream Sandwich firmware includes: AppInstaller, for installing apks (Android Packages) from disk, Browser, a Google Chrome-ish web browser, Calculator, an almost

windows 8ish-looking calculator, Calendar, based on Google Calendar, a Clock, Downloads, an Email application, a file browser, a gallery application, a perhaps misnamed messaging program that's really only good for sending email (a moot point since there's already an email application), a movie player, a music playing application, a network application, the Google Play Store, a search application, settings controls, and an upgrade application.

I tested all of the included applications and found minor annoyances, like having to refill my Google Account information. This is understandable when you consider the XIOS DS is Linux-based and Linux always has more choice of applications. However, this is where other platforms shine by making little things like the default apps less complicated. Some applications didn't work correctly. The included calendar refused to display any of my Google Public Calendar items. Both the email and calendar applications also crash from time to time with no apparent reason. The network application I couldn't get to display anything other than "Searching... waiting" after waiting 5 minutes. It seemed to be populating a device list. My guess is that it searches for wireless access points, but the built-in wireless scanner, accessed through settings/wireless, works much better. Other applications, like the Movie Player, work very well. The Media Player played almost everything I threw at it.

Applications and widgets (much the same type you might see in a KDE desktop) can be dropped on any one of 4 virtual desktops. Navigating the interface is much easier with icons on the virtual desktops; however you'll need the sense remote to drag applications and widgets to the desktop. Using the sense remote, click the applications button (the six tiny boxes) in the top right corner of the screen. To drag an application or a widget, click and hold on the widget. Hold for a second and the virtual desktops will appear. Drop the icon anywhere you want on the desktop. Dropping applications on top of one another stacks them in a folder. Folders are symbolized by a black circle in the background and stacking of icons. To remove an application, hold the OK button down while hovering over the application, and drag it to the Remove section that appears at the top. To remove an application from a folder, or access it within the folder, simply click once on the folder; the folder opens and you can click on any of the applications within the folder.

Additional applications can be added to the XIOS DS either locally off a disk from an apk, Android Package, or via the included Google Play Store. If you installed the Ice Cream Sandwich extra applications apk, then you'll also have the Amazon store to install applications from. The choice of applications is actually pretty good, there are a number of great applications and games in the Android store. From the free part of the Play Store, I downloaded Angry Birds (which proved to be great fun for some clients who came over), Google Currents (for reading Full Circle Magazine), a Terminal Emulator, and SSH Server. Some familiar apps like Frozen Bubble are also in the Google Play Store.

One application which surprisingly isn't present is XBMC, XBMC Media Centre. There is good and bad news around running XBMC on the Pivos XIOS DS. The good news is there is both XBMC for Android and a custom Linux-based firmware for the box. The first bit of good news means that you don't have to give up your other Android applications to run XBMC on the XIOS DS. XBMC runs a bit more sluggish under Android
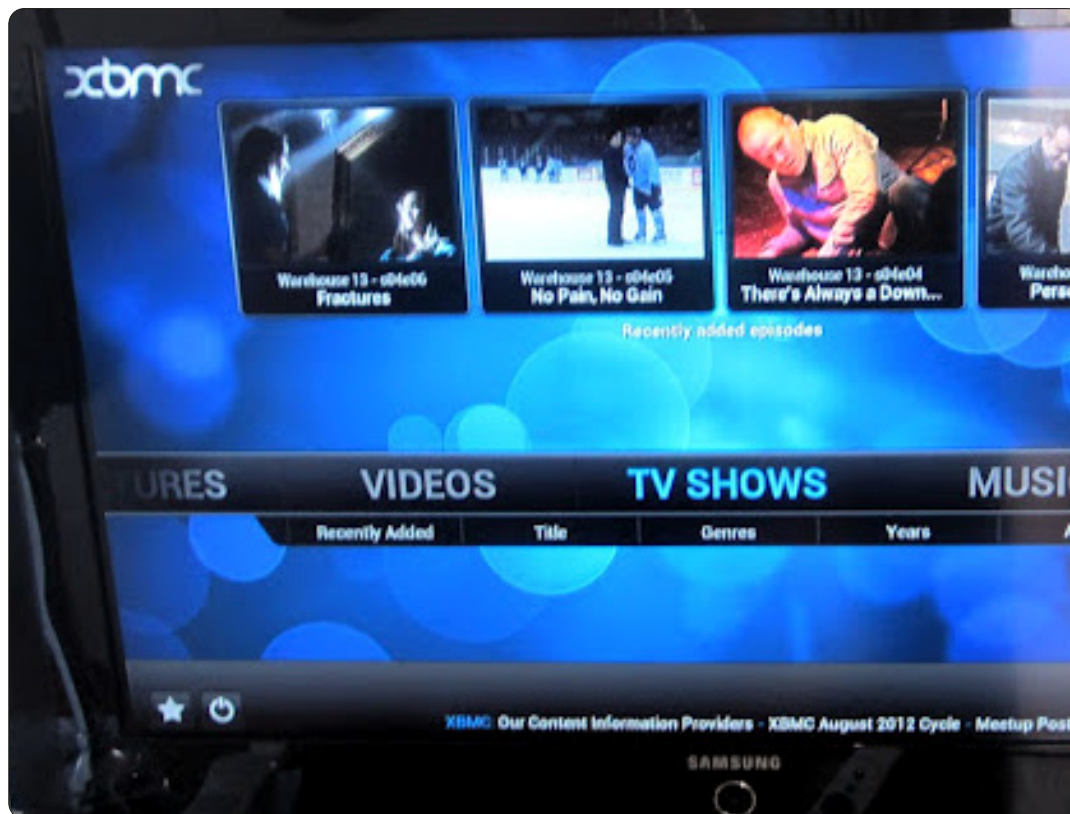
than it does on the custom Linux firmware, but you don't lose any applications. The custom-Linux XBMC firmware loads fast, taking only about 15 seconds to load, compared to about a minute and a half for Android 4.0 Ice Cream Sandwich.

Playback of video under both is smooth, though the scrolling between videos is much smoother with the custom Linux kernel. The great thing is you can try the

custom XBMC Linux kernel and if you want Android back, you can just reflash the device using the upgrade hole on the bottom of the device and the Ice Cream Sandwich firmware on a microSD card. XBMC in either state is considered beta, the main reason why it wasn't put up on the Google Play Store. As with a lot of Linux beta software, it works quite well. It isn't quite as nice an XBMC solution as the custom Linux-based solution I wrote about in Full Circle

Magazine, Issue #56, but it has to be one of the smallest XBMC-capable devices I've ever seen. As an entertainment system, it's well worth the money. Yes, you could buy a Raspberry Pi, but then you'd have to hack together a case, get XBMC working on it, buy a remote control (or make one), but with the XIOS DS Media Play you can get all these things plus the entire Google and Amazon markets. Ultimately, it's a good little box for the money. It takes some getting used to, but once you've customized the XIOS DS the way you want, it's a fun little box.

Charles is a step-father, husband, and Linux fan, who hosts a not-for-profit computer refurbishing project. When not breaking hardware/servers, he maintains a blog at:
http://www.charlesmccolm.com/
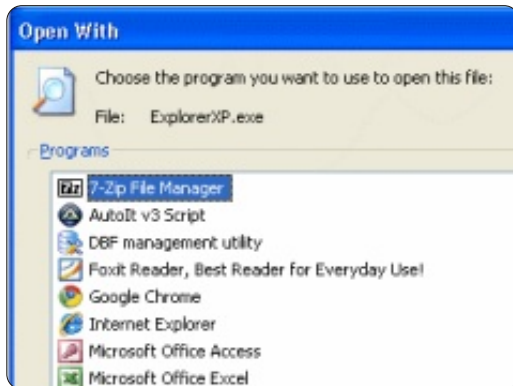
Written by:
Ronnie Tucker (KDE)
Jan Mussche (Gnome)
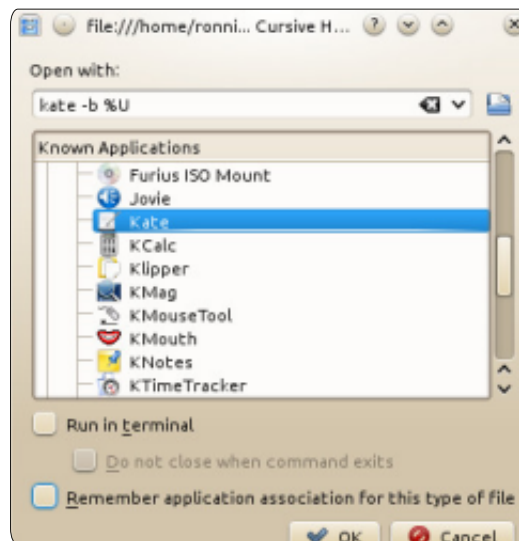**Elizabeth Krumbach (XFCE)**
Mark Boyajian (LXDE)

D ouble clicking a file will, usually, open it in the appropriate application. So, double clicking a Word document will load up the Word application which will, in turn, open the chosen Word document. This is called 'file association'. If a file does not have an application associated with it, then you will be asked which application should be associated with this file type and if it should

be made permanent. Alternatively, you can right-click a file and choose which application it should open in. This is especially true if one file can be opened in a variety of applications. For example, an MP3 file. You may want to open it, this time, in an audio editing application instead of playing it like you normally would.

Kubuntu

As with Windows, when you double click a file, and Kubuntu has no idea what type of file it is, you'll be presented with a window asking you which application you want to try and load the file with.

You can also right click a file and choose 'Open With...' from the menu. Often an application will install and associate itself with a file type. This will show when you right-click a file and choose 'Open With' and you see several options.

Sometimes human error occurs and you associate a file type with the wrong application. This can be corrected in System Settings > File Associations. Here you can

manually add/edit file types.

These settings are also helpful in that you can have an order of preference. So, for example in the screen shown, I have the file type 'jpeg' set to open in Gwenview first. Should that fail, Kubuntu will try and load it in GIMP and so on down the list. This is the list of options that I mentioned previously.
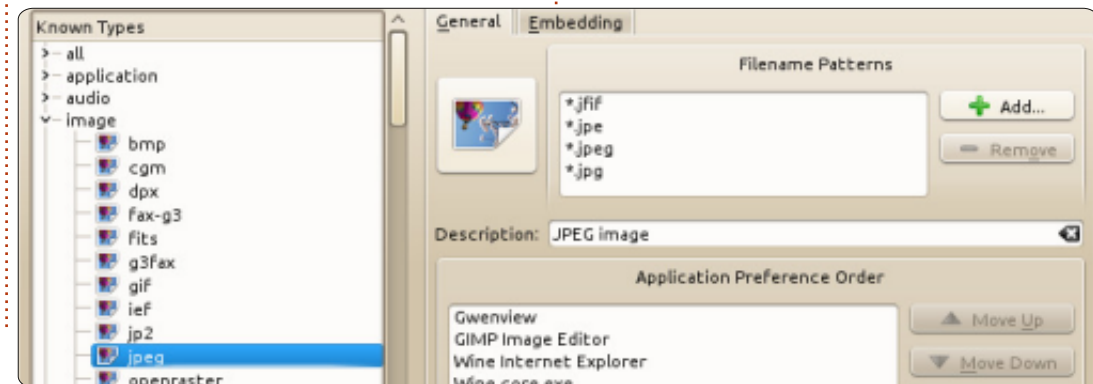
Gnome Shell

In Gnome Shell a few applications are mentioned as default for some operations, like web-browsing, e-mail, etc. These programs can be selected in Activities > Applications > System Settings > Details > Default Applications.

Other files, like a simple text file, can be attached to a default program by means of right-clicking the file in the file-manager. A menu appears showing the possible options.

The default setting for this type of file is gedit, so, when you double-click the file, gedit will run and it will open the text file.
Should you want to open the file with a program other than gedit, choose the second option: Open With Other Application.

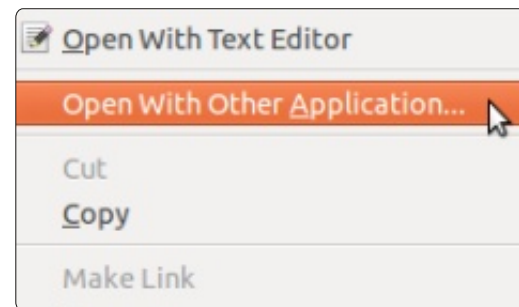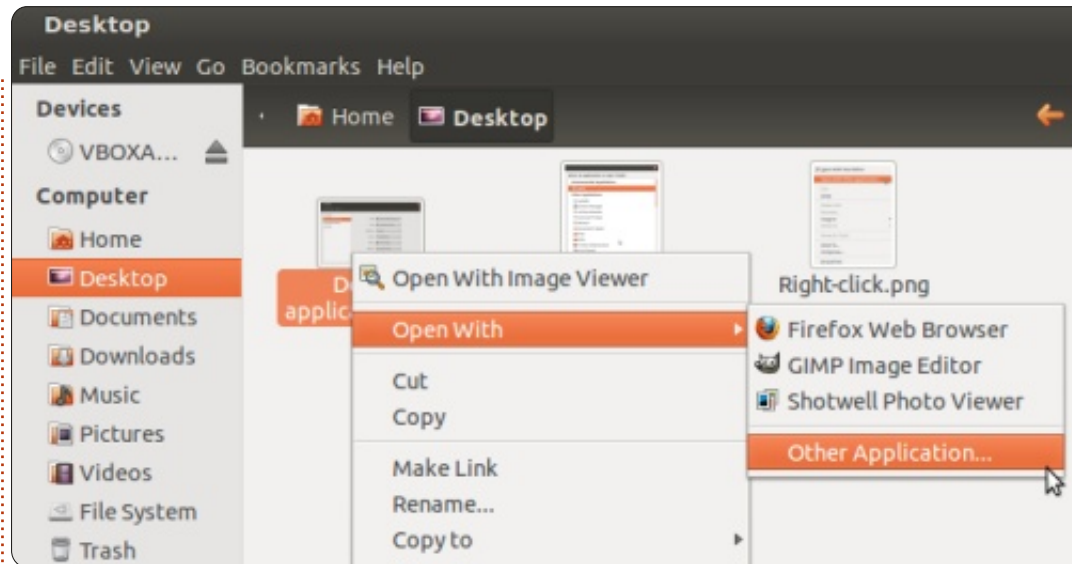Depending on the file-type you will see some programs listed. Should you still not find the program you want to use here, chose Other Application. A new window is opened with the list of programs. When even this list is not enough to choose from, select the button Show other applications at the bottom of the window. Now all installed programs are listed. Should your desired program not be in this list, then I suggest to install it first.

A small variation to this all makes it possible to change the default program to open a certain file-type. Right-click the file, choose Properties, select the tab

Open with, choose the right program, select the button Set as default. From now on, when you double-click the file, the newly chosen program will open it.
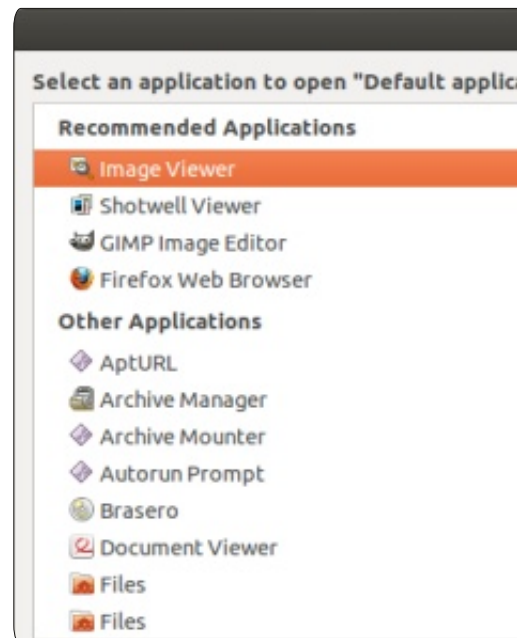
Xubuntu

Just like many other Desktop Environments, in Xfce and Xubuntu you have a selector accessible within the file manager that allows you select an application per file type.

First, open the file manager by going to the mouse menu at the top left > Accessories > File Manager, and then go to a directory that has files you wish to open.

Double-clicking on a file will open it in the default application associated with it. A single right-click will bring you to a menu that allows you to open with the default application associated with it, or with other applications which may be associated with that file type.

You also have the option of "Open With Another Application..." which will bring up an "Open With" window that allows you to select any application for association, or a custom command, and also gives you a checkbox for "Use as default for this kind of file" – so it remembers it as your default
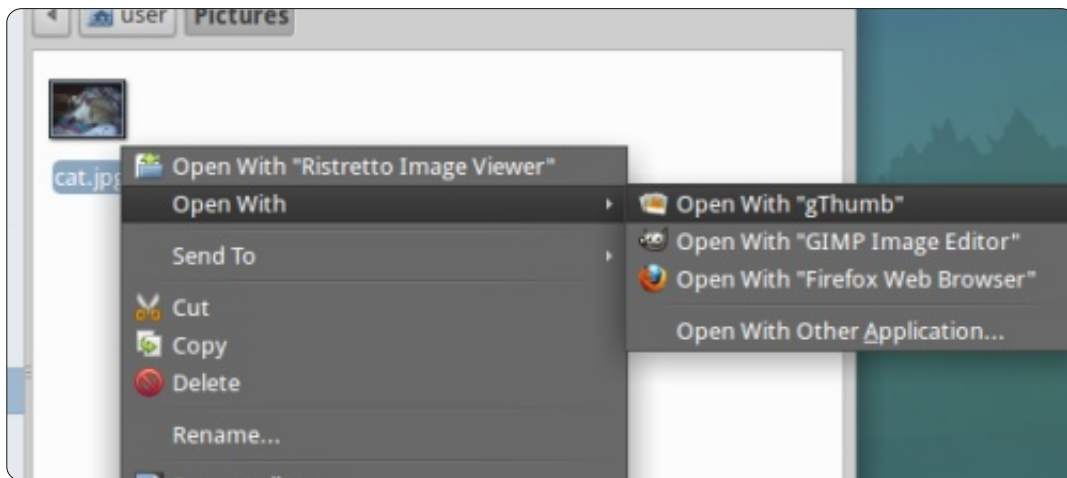
preference. Just like with Gnome Shell, you can also set the application you wish to open the file with by opening the "Properties" dialog for the file and changing the "Open With" setting, which will change the default application for that and other files of the same type.

Finally, there are limited default application associations under the mouse menu > Settings > Settings Manager > Preferred Applications. This settings menu will allow you to select the default Web Browser, Mail Reader, Terminal Emulator, and File Manager.
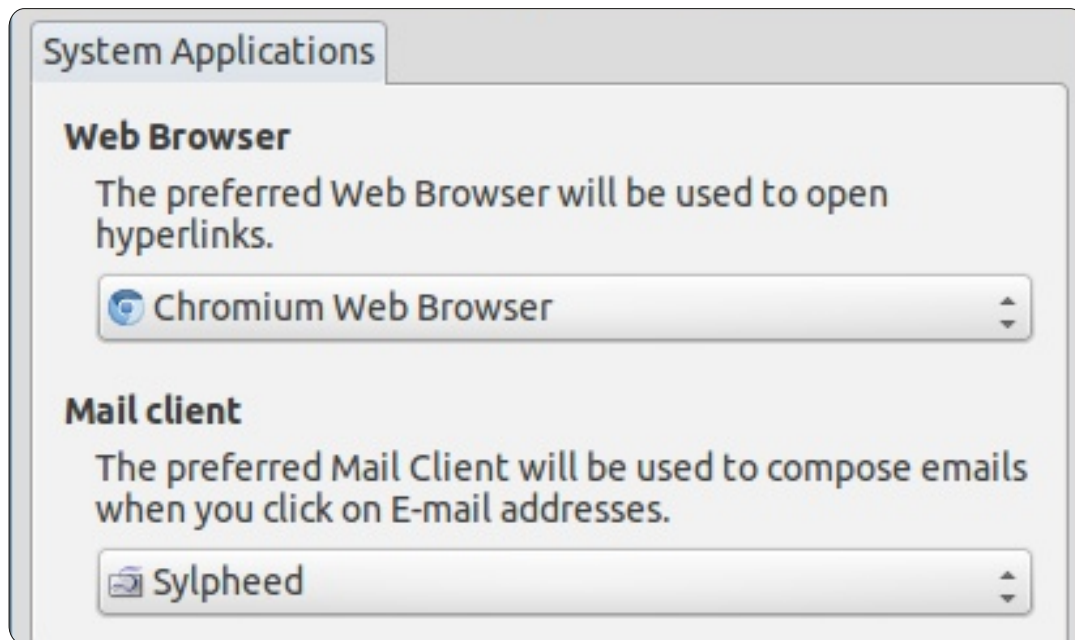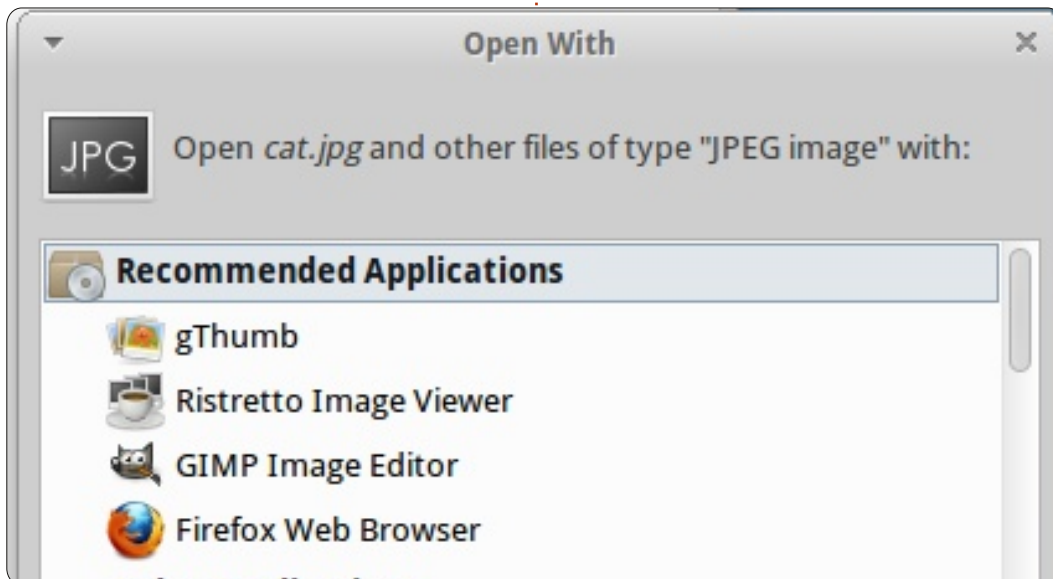
Lubuntu

Even in the minimalist LXDE environment, there are options to control file associations, and the process is very similar to those already described above. Let's start with the "Preferred Applications" window: from the main menu, select Preferences > Preferred Applications.

This window allows you to set system applications, but only two options are presented: Web Browser and Mail Client. (NOTE: I am using Lubuntu version 11.04; your mileage may vary.) The

defaults are Chromium and Sylpheed, respectively; however, if you have other applications installed, then you can select them from the provided dropdown lists.

As with the other window managers described above, double-clicking a file in LXDE will open that file in the default preferred application. If, however, you would like to open that file with a different application, you can right-click the file and the pop-up menu will list any other applications with which that file type is compatible.

Select (i.e. left-click) the desired

contents ^

CLOSING WINDOWS
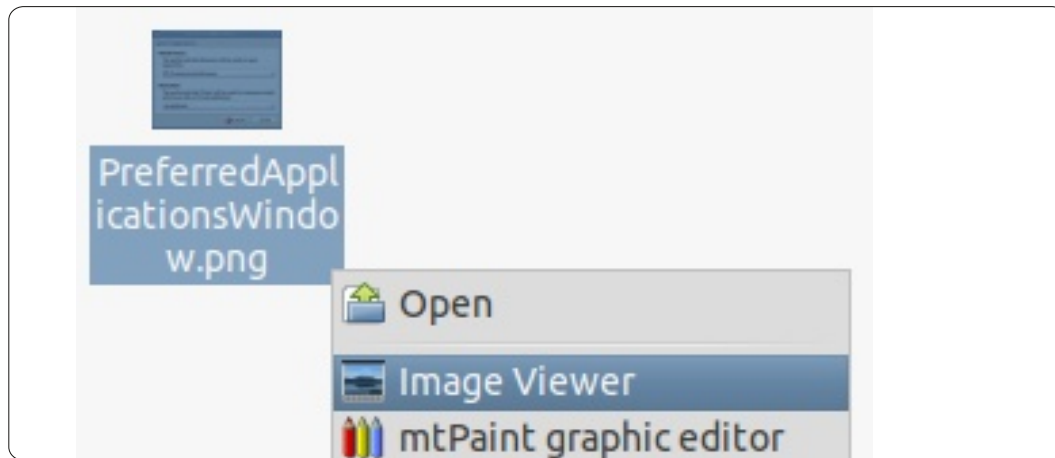
application from the pop-up menu, and the file will open in that application.

If the application with which you want to open the file is not listed in the pop-up menu, then you can select "Open With…" from the menu to select any application you have installed on your system from the Choose an Application window.

From the Choose an Application window, you are, by default, placed on the "Installed Application" tab; from here, you can can expand each category to browse for the application you want. There is also a "Custom Command Line" tab which allows you to create a custom command to launch the application of your choice using the power of command line

options to control it. In both cases, you can choose to make your selection the default application/action for this type of file by putting a "check" in the check-box at the bottom of the window. If you do, your choice will be saved and it will become the default action every time you open a file of this type; otherwise, your choice will be valid for only this one selection, and all future attempts to open a file of this type will revert to the saved default.

Selecting the "File Properties" for a file provides you with an "Open with…" option that is identical in function to the "Open with…" option from the file's pop-up menu, as described above.
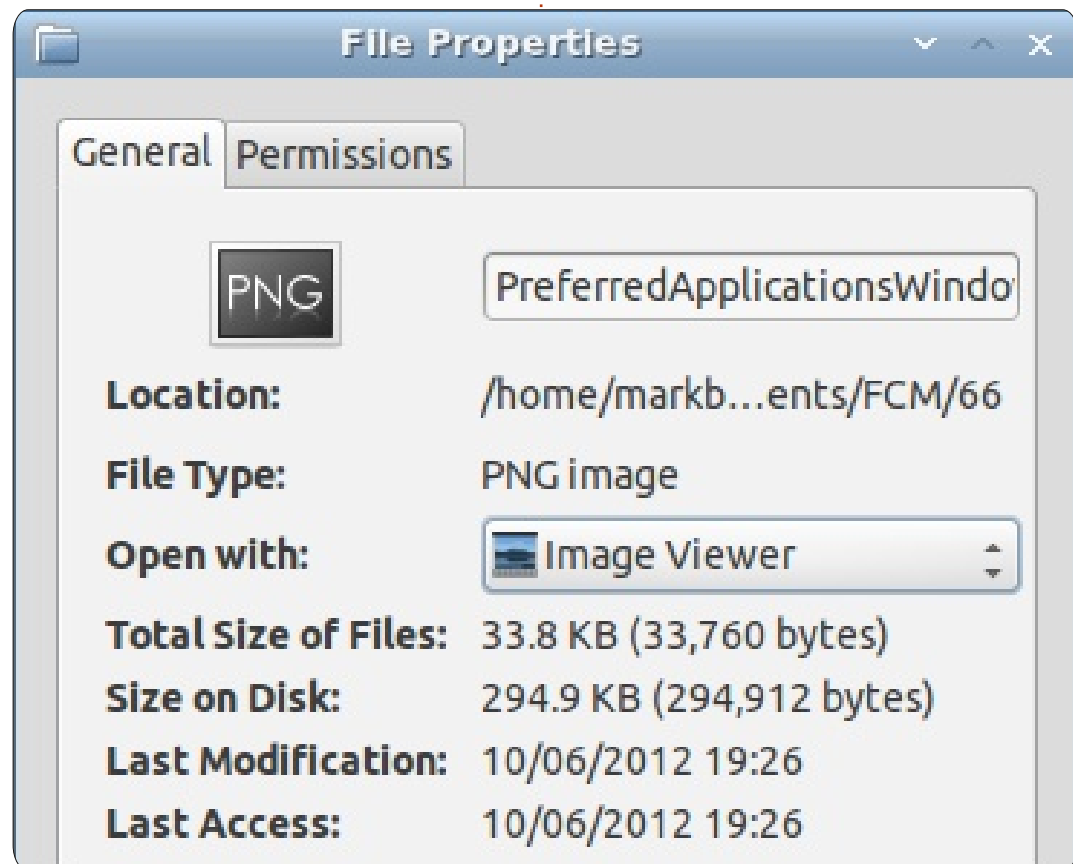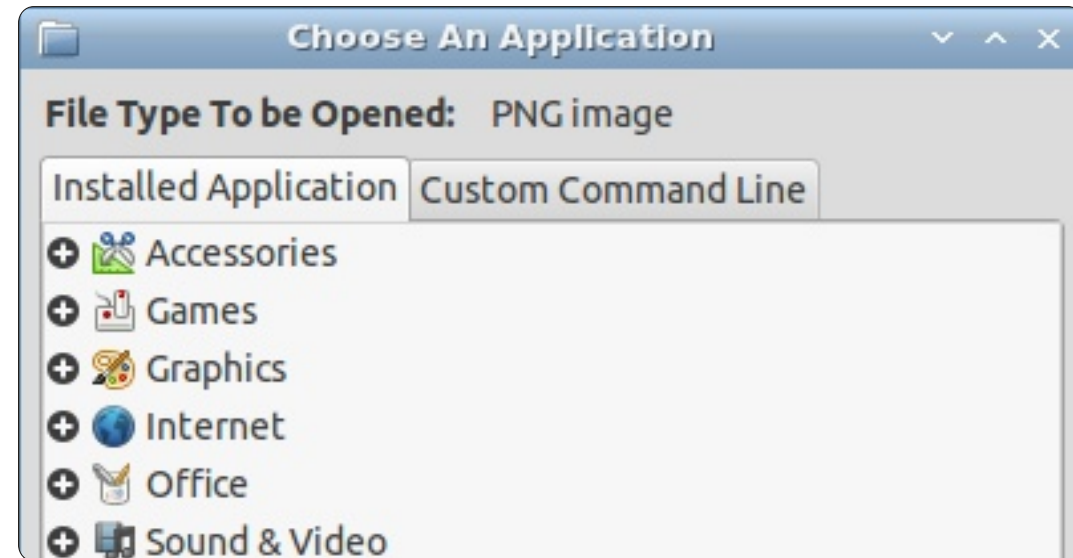
'm a not so young computer fan from Italy. I started using them in 1983, when my father gave me my first one: a Sinclair ZX Spectrum 16KB. Since then, I've always loved playing and/or working with some kind of machine (Amiga 500, and then PC).

I discovered the world of open source when I still did not know anything about free OS, such as *buntu and stuff like that. Still working with Windows (XP), I first started using open source software; then, speaking with IT colleagues at work, they told me about Ubuntu and Open Suse and, after trying both of them, in 2007 I made my first partition on my home PC, choosing Ubuntu...

Meanwhile, I discovered your beautiful and useful magazine (even for people who aren't so able to manage a terminal, or a programming language, as I am).

Since then, I have tried some different flavours of the same tree: Linux Mint, Lubuntu, MoonOS and others. I am always trying to

"close Windows," even if for some little things I still need to have Windows on my home PC, for my phone, for some applications, or for Photography. I am even trying GIMP with some satisfaction, and, last month, I saw an issue of a new free PDF magazine about this powerful software.

In 2012, I started collaborating with the FCM-IT Team (they rock so much and you know: I read your article about them, and I can confirm that they are beautiful,

committed people. I have rarely met the same professional concern in a work environment), and the story goes on... waiting for 12.10.

Luca Masini

- -

Everything started in the mid 90s with Linux. I was struggling with the earlier versions of Linux, where the Command Line was standard. Although there were graphical

interfaces, they were not as advanced as Ubuntu is today, almost 20 years later. This gave me a chance to become used to the command line interface (CLI). When I found Ubuntu, it quickly became my distro of choice, because it supported most of my hardware. In late 2006, it was time to get a new computer, and I decided to buy a laptop for the first time (I was always using desktop computers). Back then, I was still unsure of the hardware supported by Linux, especially for the wireless. So I decided to face the problem right in the store, and I brought with me the live CD of Ubuntu 6.06. Some store workers were not ready to let me try it on their machines. Others told me "Sure, go ahead", and others were ignorant of Linux. My main criteria to buy a machine was that the sound, the wireless, and the display had to work off a live boot. I found one, and I was very happy with it. The first thing I did with it was boot from the Ubuntu CD and reformat the hard disk.

Fast forward to 2012, almost six

years later. This laptop is still running, with Ubuntu 12.04 now. I upgraded the RAM to 4GB, and the hard disk from 120GB to 500GB. I bought a faster computer that is now my workstation. It runs Ubuntu in different flavors, and I have one partition with the latest alpha/beta/testing version out there. The laptop is now a file server, and an SSH server that I use remotely. Linux has been running my laptop for almost 6 years now, and I can foresee another 5 years of good use of this computer.

What made me choose Ubuntu was the large range of applications and systems that are available. I am also happy to see that new applications, programs and utilities now come first with Ubuntu-based scripts and repository files, so, under Ubuntu, we can always be the first to try them. I still use (and need) the CLI, as this is what I grew up with. But the evolution of the Ubuntu graphical environment has made it one of the best systems I see today.

Linux provides us with the possibility to choose our office suite, our graphical environment, and our type of operating system. Although a lot of users would
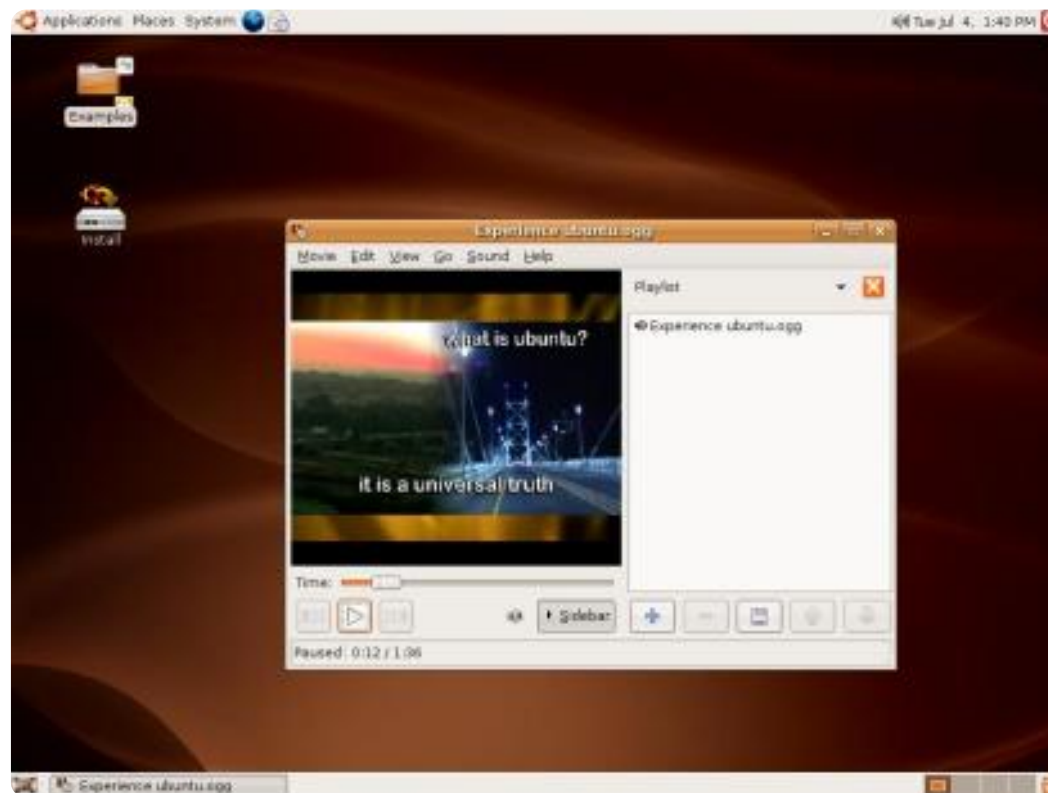
prefer to let others make these choices, I like the freedom to decide how I use my computer and my hardware. I prefer to spend a bit more time on my system and have something that is tailored for me, rather than something that I have to adapt to. The computer should adapt to the user, not the other way around. Ubuntu gives me this freedom.

Jean-Francois Messier

IT HAS RETURNED!

The Full Circle Podcast Returns!

It may be a new team of podcasters, but the format will be the same.

We'll be talking about Full Circle Magazine, news, reviews and interviews.

Your new team is:
• Les Pounder
• Tony Hughes
• Jon Chamberlain
• Oliver Clark

All are members of the Blackpool (UK) LUG
http://blackpool.lug.org.uk

Debut episode is available from the FCM homepage.

Download

UEFI

Written by Ronnie Tucker

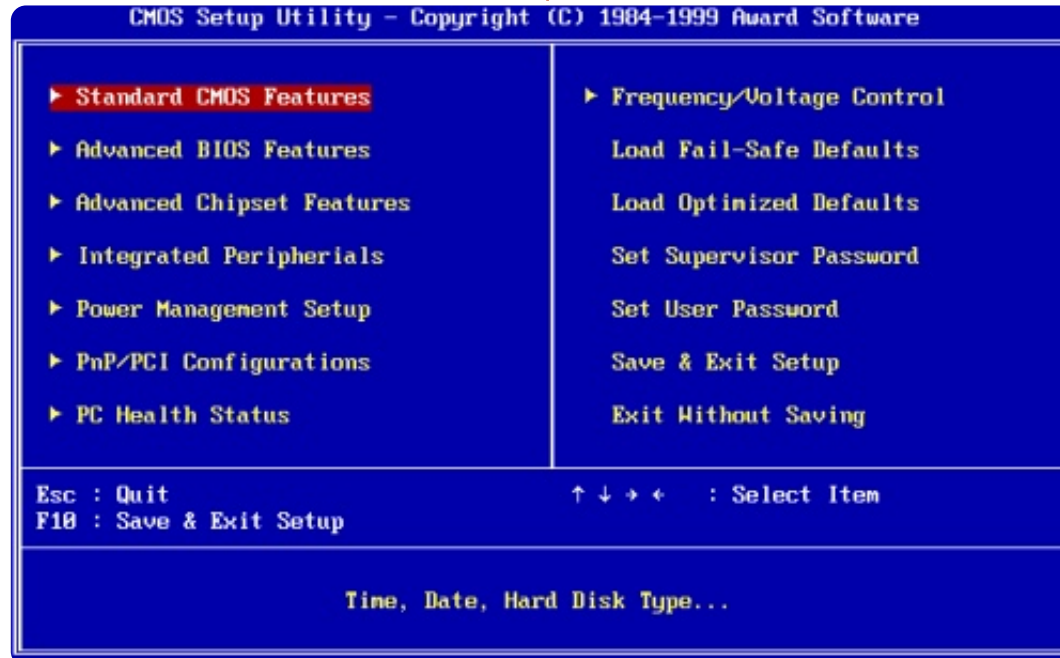I hope this is the first of a new column. I'd like to use this space to show articles that take a single subject and explain (briefly, and simply) the history, some behind-the-scenes information, and how the software we use interacts with the chosen subject. Send your articles to
articles@fullcirclemagazine.org

Here are some ideas to help get you creative: *newsgroups, IRC, BitTorrent, email, the web, video codecs, PGP encryption, the kernel, graphics tablets...*

Before we delve into what UEFI (Unified Extensible Firmware Interface) is, let's take a step back and review what we have at the moment.

When your computer is powered up, your BIOS (Basic Input Output System) kicks in and does a quick check of your hardware to ensure everything that is required

```
CMOS Setup Utility - Copyright (C) 1984-1999 Award Software

▶ Standard CMOS Features          ▶ Frequency/Voltage Control
▶ Advanced BIOS Features             Load Fail-Safe Defaults
▶ Advanced Chipset Features          Load Optimized Defaults
▶ Integrated Peripherials            Set Supervisor Password
▶ Power Management Setup             Set User Password
▶ PnP/PCI Configurations             Save & Exit Setup
▶ PC Health Status                   Exit Without Saving

Esc : Quit                        ↑ ↓ → ←   : Select Item
F10 : Save & Exit Setup

              Time, Date, Hard Disk Type...
```

is plugged and in good working order. Should anything be out of place, you will hear beeps from the computer's built-in speaker. These beeps, similar to morse code, tell you what is wrong. The BIOS does have a user interface to allow configuration. This is usually seen by pressing Del, F1, or something similar.

Once your BIOS is happy that the system is OK, it will begin loading the operating system.

Since the BIOS system has been around (in one form or another) since the mid-70s, it's definitely time for it to be replaced. UEFI will be that replacement. Well, sort of.

UEFI

Many tout UEFI as a replacement, but really it works with the BIOS in booting the computer. The idea behind it is that UEFI is a mini-OS which will be mouse driven (with a GUI), and even have its own command-line prompt. Being a mini-OS in storage somewhere means that this new look BIOS will be multi-language, and potentially remove the need for the old morse code beeps. It all sounds great so far, so why the outrage?

Secure Boot

UEFI has a feature called 'secure boot' that will disable hardware, drivers and other loaders that do not have a digital signature. Think of a digital signature as being a certificate from the manufacturer to say that this is genuine hardware/software. Booting is a bit complicated, but simply put: when secure boot is enabled, it requires that hardware/software show some form of ID, and if the ID matches known legitimate ID's in a database, then everything moves along swiftly. But this is where the potential arguments arise.

Finger Pointing

Before blaming Microsoft,

which everyone seems to do, remember that secure boot is part of UEFI, it just happens that Windows 8 will use it. The problem is that Microsoft has demanded that all hardware marked as being for Windows 8 should have secure boot enabled by default. This means that Linux would not be able to boot, or dual-boot, since it doesn't have a valid form of ID. Hardware vendors who aren't aligned with Microsoft will have the ability to tweak UEFI and secure boot as they see fit, but, as I'm sure you can imagine, they'll be few and far between.

Microsoft has specified that on X86 (Intel or AMD) machines with the Windows 8 logo, you will be able to disable secure boot (i.e.: enter custom mode) which will allow Linux to boot. The problem is that most users really won't want to make their shiny new Windows 8 machine potentially vulnerable. And for good reason.

Credentials

So wait, what if Linux was to get a valid ID. Well, that might conflict with the GPL (GNU Public License) that Linux conforms to.

Left Vulnerable

As I write this (late September 2012), Italian security consultants ITSEC have discovered a way to defeat the Windows 8 Kernel Patch Protection and Driver Signature Enforcement policy by overwriting the Windows 8 bootloader. They maintain that UEFI is just as vulnerable to attack as the old BIOS system.

The valid ID would need to be kept a closely guarded secret which would cause problems when releasing source code, as doing so would reveal that distro's unique digital signature. Initially the same was thought of GRUB 2 (the Ubuntu boot loader), but this has now been resolved and Ubuntu 12.10+ will continue using GRUB 2.

Another way is: if you can't beat them, join them. Fedora has forged an alliance with Microsoft and paid the $99 (€77) to obtain a secure boot key.

Summation

In summing up:
• UEFI is not Microsoft
• Windows 8 logo machines must have secure boot enabled
• Users can, if they wish, disable secure boot

• Disabling secure boot leaves Windows 8 vulnerable
• Secure boot keys must be kept secure
• UEFI does not replace the BIOS, but works with it

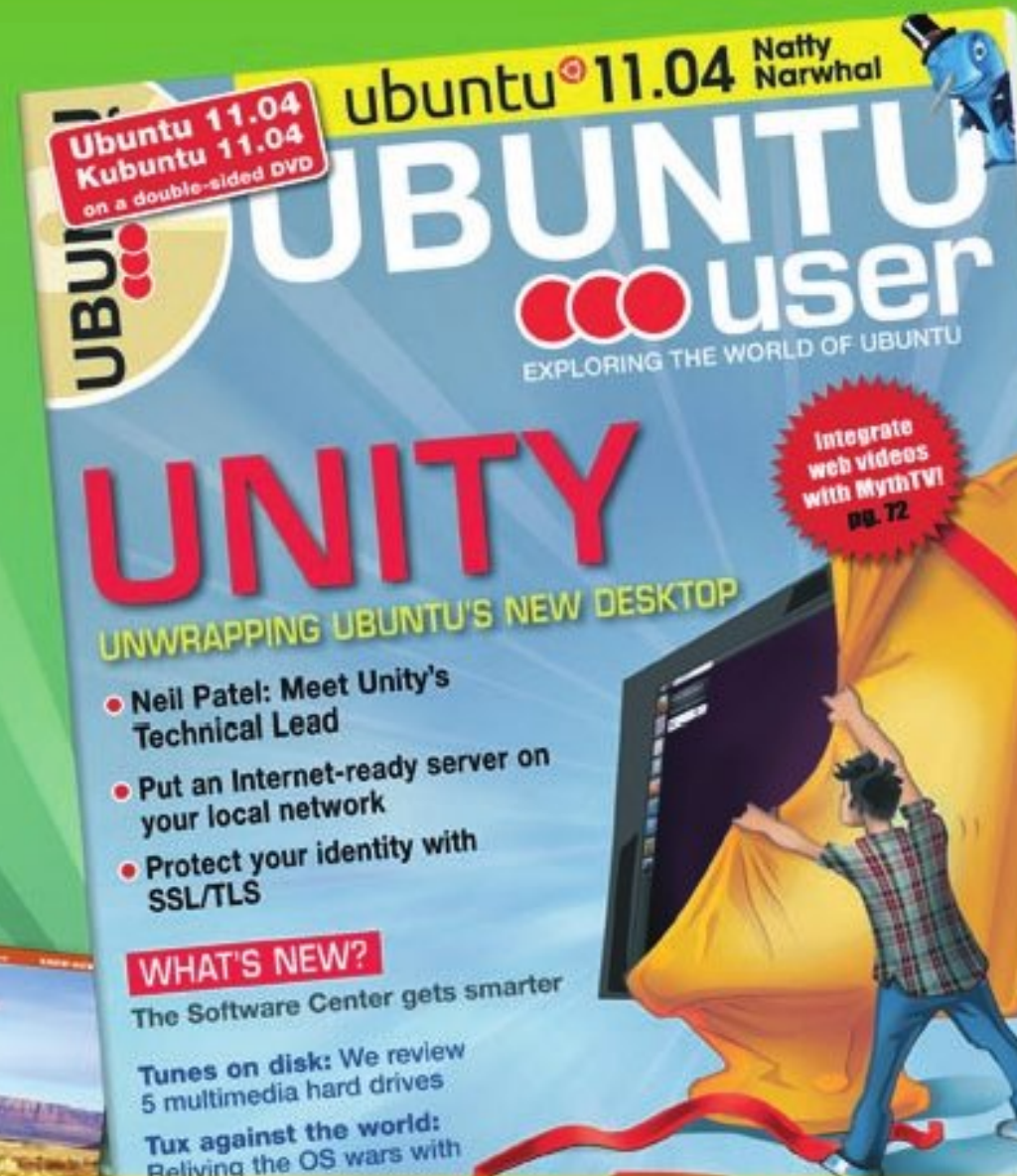Oh, and I should mention that there is one other company enforcing secure boot on machines pre-loaded with their OS. Canonical. Oh, the irony...

After one long journey too many on public transport, I decided that I needed some sort of pocket-sized entertainment. Yes, I could listen to an audio device while staring blankly out of the window. Yes, I could check my email every five minutes on my mobile phone. Yes, in theory, I could read books on my mobile phone, but, with a 4" screen, it's not the most pleasant of tasks.

I needed a tablet. A pocket-sized tablet.

Initially, I looked at a Kindle. Black and white screen, does only text, and must buy from Amazon. There is that Kindle Fire thing. Ditto.

There must be something better.

Enter the Nexus 7. Made by ASUS and using Google's Android 4.1 (Jelly Bean), it has a seven inch (full color) touch screen, 8 or 16 GB of storage, and comes with (in most cases) £15 of Google Play credit.

Surely it must have a down side? Well, there is one minor niggle: it uses only wifi, there's no 3G option to give you data everywhere and anywhere. Living where I am in the UK means that I am usually without 3G and wifi, and survive reasonably well. Come the inevitable zombie apocalypse, I reckon I'll be one of the OK ones. But, should you have an Android mobile phone, then, in most cases (not all!), you should be able to make your phone a wifi hotspot. Tethering it's called. I've done this a few times with my Nexus 7 and it works great.

Free Stuff!

After logging into the Nexus, 7 you'll receive an email from Google telling you that your Play account has £15 of credit. The way this works is that you go through the usual process of buying an app (quite simple and painless), and, when you're on the last step, you'll see a menu letting you choose between your registered credit card or your Play credit.

The Google Play shop is where you get all your installables from. The first screen will present you with some suggestions but also three options: 'Apps', 'Movies', and 'Books'. Chose one of those and you'll be given some featured suggestions. Swiping left will give you a list of categories to browse through. Swiping right will go through a lists of 'Top Paid', 'Top Free', 'Top Grossing', 'Top New Paid', 'Top New Free', and 'Trending'. Any item you choose will also suggest other apps based on this choice, and list more apps (if any) by the creator. You can, of course, search titles. Pressing the down arrow beside the search box will list all currently installed apps.
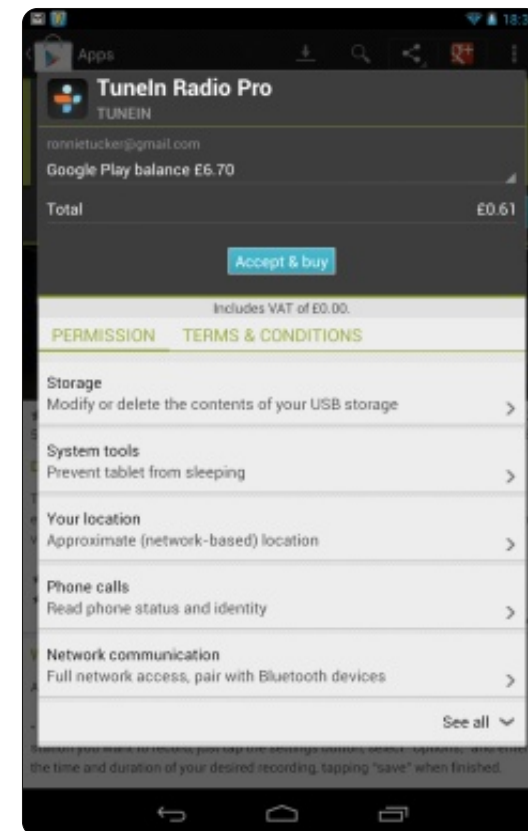
Choosing one will give you its normal description, and with the option to uninstall it. This is also where app updates are listed.

All in all, the Play shop is very well designed and very easy to use, so there should be no real problems installing/removing apps.

Best Of Both Worlds

Speaking of apps, not only can I read books from Google Play on this, but I can also install the Amazon Kindle app and read Kindle books on there too. Best of both worlds! Within both the Kindle app and Google Play you can download the books to the device, so you can read your books offline. Google have helpfully included a widget (a little 'app' you can drag onto the desktop which can be thought of as being a shortcut) which can display your Play books right on your desktop! A widget can be downloaded from the Play store which will display links to your Kindle books on the desktop too. Here's my current desktop with 'MY BOOKS' (Google Play) and a link to the Kindle edition of 'The Complete Sherlock

Holmes':

Installing Adobe Reader from Google Play will allow you to read and annotate PDF files. Text can vary between PDFs though. Some use large margins and small text, but most PDF books should be easily readable without zooming and scrolling, which is something I hate.

If RSS is more your thing, then you can use Google Currents (which comes pre-installed). Handy for reading FCM on the move.

Battery life on the Nexus 7 is excellent. With some light reading, and no wifi, I went three days without a charge. Obviously turning on wifi and/or doing more intensive tasks will drain the battery much faster.

Audio/Video

If you've got wifi access, and you're in need of some entertainment, you could install one of the many radio apps, or even Netflix. Movies in HD played flawlessly on the Nexus, even with my pretty slow Internet connection. Google Music is included (but called Google Play – which is a bit confusing), and works great showing your album covers as nice big icons.

Android no longer uses the old 'USB Storage' method for sending/receiving files which has been a problem for Linux in the past. Thankfully, this seems to be improving, but what I've been doing is either using an app like 'WiFi File Explorer' (WFE), 'ES File Explorer' (ESFE), or 'AirDroid' to move files back and forth. With WFE, you can wirelessly connect your PC and Nexus using your browser as a controller. You start the WFE app and it will connect to your wifi network and it will give you an address such as http://192.168.0.23:8000. For more on AirDroid, see this month's Command and Conquer column.

Type that into your browser and you'll be able to access your Nexus to send/receive files.
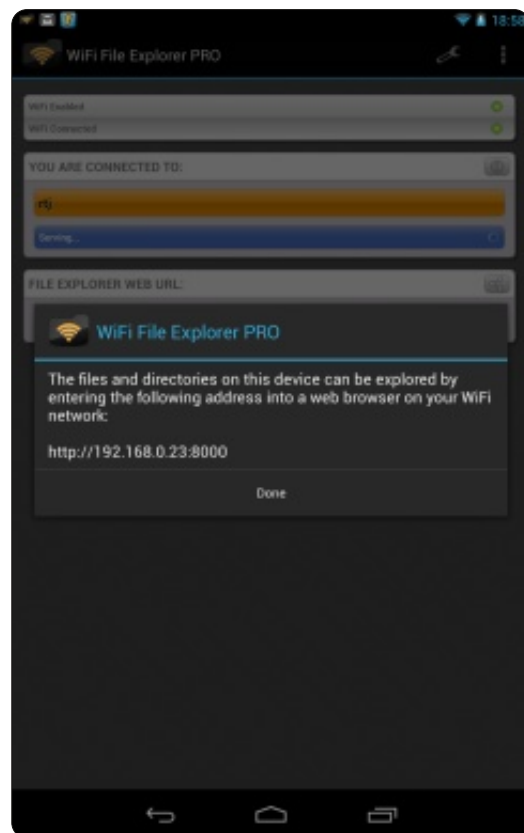
ESFE is a similar idea, but you connect directly to the PC to send/receive files from shared directories. It all sounds complicated just to shuffle files back and forth, but it's a lot quicker than plugging in the cable and such like.
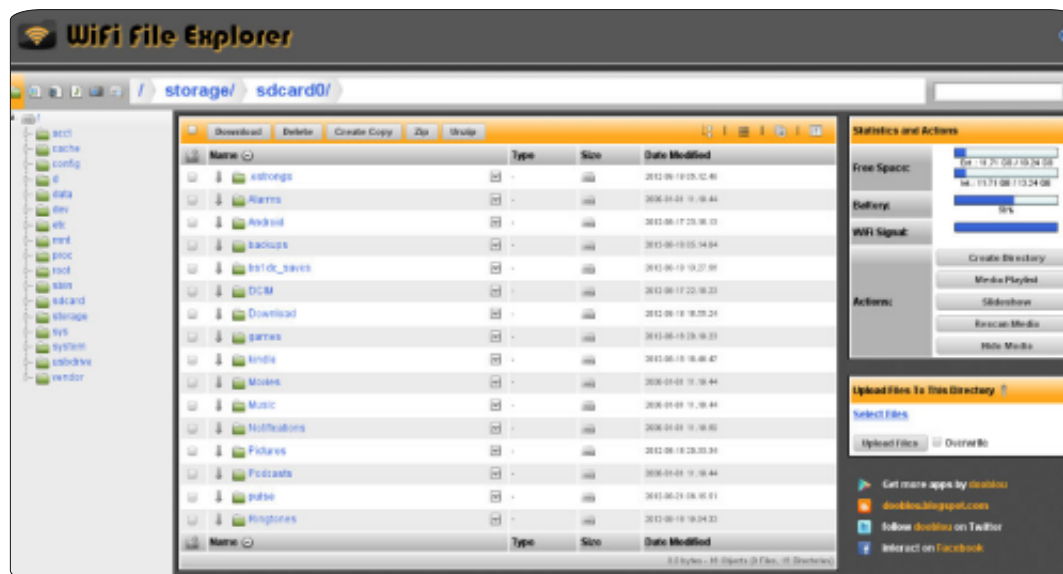
Head In The Clouds

Ubuntu One works dandy with the Nexus 7. I simply installed ubuntuone-control-panel-qt (I use KDE) which gave me a folder in /home called 'Ubuntu One', and anything I dropped in there would show in the cloud on the Ubuntu One website and in the Ubuntu One Android app. Adding a file from the Nexus 7 was as simple as pressing the '+' button in the top right of the screen, selecting the type of file to send, then selecting the file itself. After a few seconds, the file was in the cloud. DropBox works flawlessly, and in the same way as Ubuntu One. DropBox came in handy with this review. I took my screenshots of the Nexus screen (hold the power and volume down keys), and sent them to my DropBox account. When writing this review in Google Docs, I simply added the images from my DropBox folder. Cable free!

Say Cheese!

For a camera – the Nexus 7 has a front facing camera which is quite low resolution, but it's more than adequate for the facial recognition in Android 4.1 (a cool unlocking feature) and for use in Google+ hangouts.

I haven't tried many games on the Nexus, but Minecraft ran smooth as silk as did Broken Sword (Android remake of the old PC classic), and Pinball HD looked mighty impressive, and, again, smooth as silk. No glitches or slowing down at all.

One new addition to the Android box of tricks is Google Now. With this app you can use text/voice searches, and, based on those searches, it will, over time, build up a series of 'cards' that it will display. These cards will give you everything from traffic advice, weather, even public transport timetables. Google is pretty much trying to predict your searches before you even do them!

At £199 ($199) the Nexus 7 is an absolute bargain. It's fast, has a really nice responsive screen, and Android 4.1 is indeed buttery smooth (as Google has been saying). It fits nicely into the palm of the hand, it's not too heavy, and, more importantly, fits in my jacket pocket!

Peppermint Three (the number is always spelled out) has been out for roughly 6 months – One and Two have been in use for nearly a year before that – and has managed to remain in the Distrowatch top 50, so I decided to give the 64-bit version a try.

At just over 550MB (a 32-bit version is just slightly lighter), this is an OS that still manages to fit on a CD or small flash drive – which is somewhat unusual given that its parent OS, Lubuntu, is nearly 150MB larger. Base and recommended specs include 192MB RAM (512MB recommended), Intel x86 processor (user forums indicate AMD chipsets are no problem but the website makes specific mention of Intel), and 2GB HDD space (4GB recommended). Many included programs require active Internet capability, so keep this in mind.

Although based upon Lubuntu 12.04, Peppermint is really a hodgepodge of parts from the
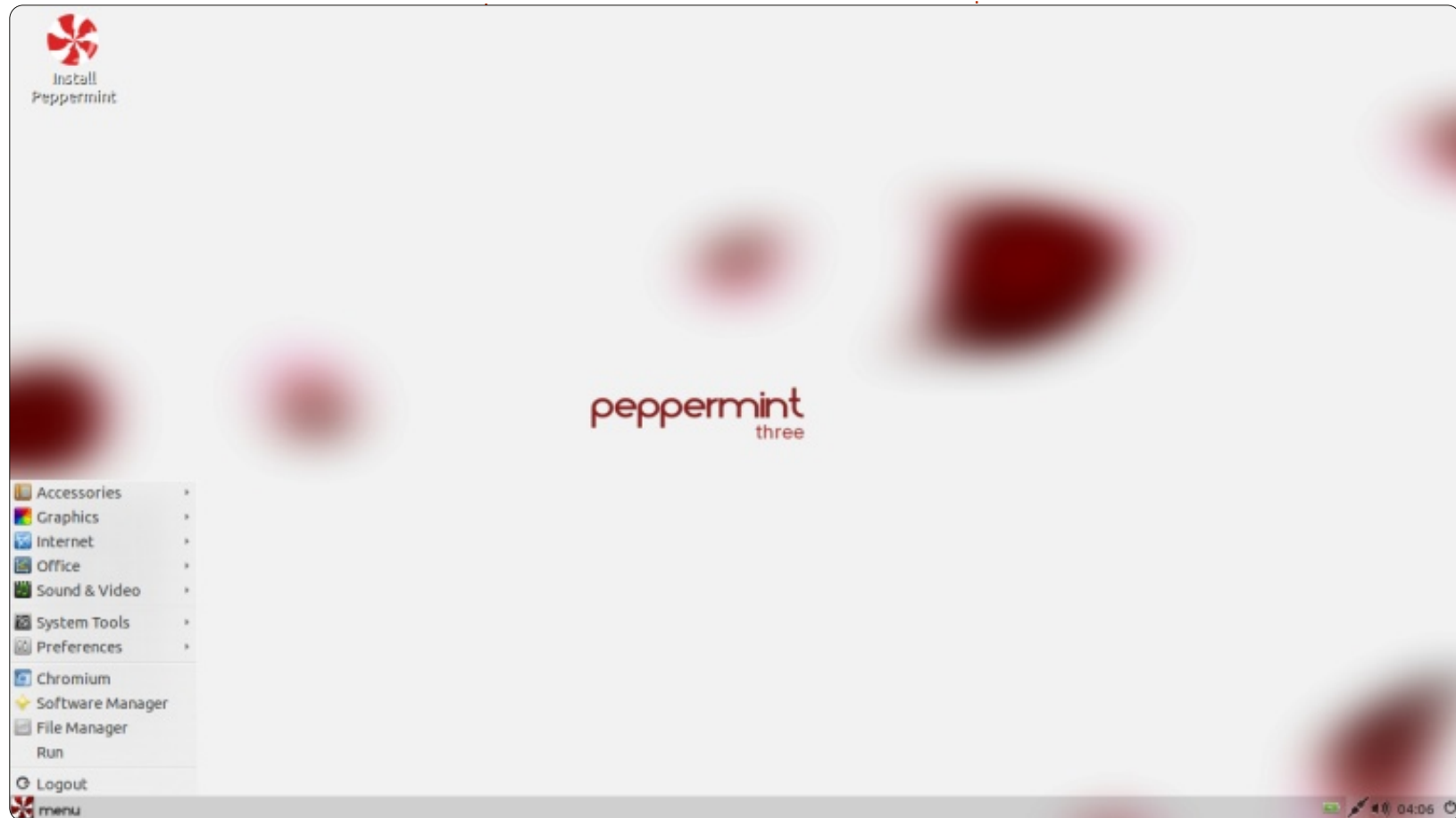
Linux bin. It does have the Lubuntu LXDE desktop, menu structure and Software Center but it borrows Mint's Update Manager, some bits of underlying code from Debian Wheezy and Sid, and, finally, pieces from the Chromebook engineering perspective.

Chromebook? Yes, Google's answer to tablet users desiring a laptop instead. Utilizing the limited Chrome OS, that design has Google's Chrome browser doing double duty as the desktop, too. All the programs are Cloud based, so, without an Internet or cellular connection, you've got a $300 to $500 paperweight.

Being light has advantages, and Peppermint has a brisk installation time of just under 15 minutes. And my version had updates of just over 60MB (as opposed to my

previous review of openArtist in which the updates were nearly 10 times larger than Peppermint's).

Another advantage is that boot times, including BIOS, POST, and the obligatory password, averaged less than 30 seconds.

Some of this speed is attributable to the LXDE underpinnings, but another part of the equation involves what this OS doesn't have. Seekers of glitz and glamor best look elsewhere as you get just a simple panel at the bottom with the usual indicators and a desktop of peppermint white and red.

That's it folks; no desktop icons and just a few alternate wallpapers you can access by right-clicking the desktop; however, as bare as this may seem, it's no worse than base Lubuntu, and actually looks crisper and better designed. Keep in mind that LXDE was designed to work quickly in lower powered computers, and it doesn't fail here.

Clicking on the main menu button (a circular red and white peppermint) will bring forth a rather eclectic mix of programs, but it's the substitutes that may
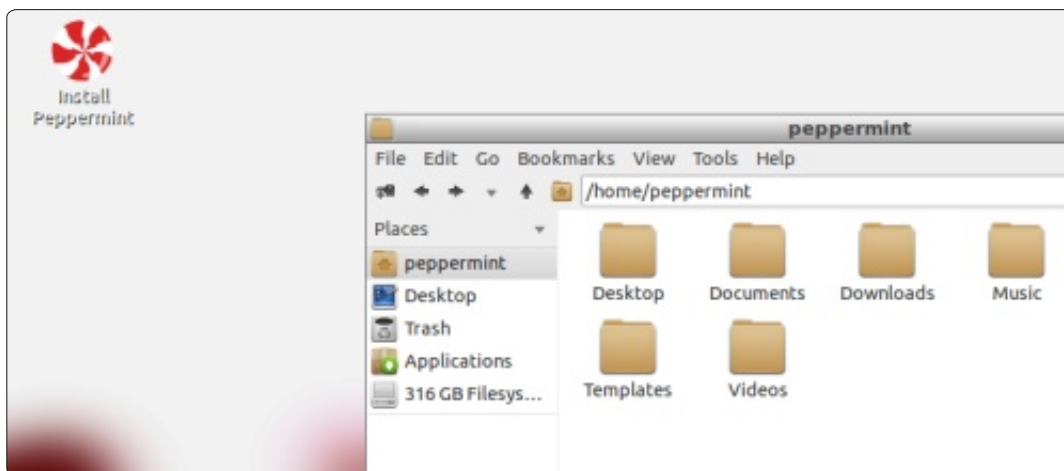
flummox some. LibreOffice or Abiword are nowhere to be seen; instead they're replaced by Google Web Office, aka GWoffice. Firefox is a no-show for Google Chromium, Gmail assumes email duties, Guayadeque substitutes for the usual music players, and Gnome-MPlayer is there to play other media that Guayadeque won't or can't. Games are non-existent, as is Wine.

Other programs include Dropbox (nice addition), Ice (a custom browser I'll delve into later), Transmission, Google Reader, and Google Calendar. Those desiring to add additional programs will find Software Center and Synaptic Package Manager.

Photo and image techies are in

for a treat. There are three custom designed web applications tailored for the manipulators in us all – Editor by Pixlr, Express by Pixlr, and pixlr-o-matic. Without getting overly elaborate, let's say you should have enough with these to keep your image hacking satisfied. Although it's tough to describe them in great detail here, I'll just say they are all well designed and rival just about anything the software managers offer.

At this point it should be evident that some of these programs are definitely Cloud oriented, especially the office and image suites. As stated before, Peppermint took a cue from the Chromebook, but didn't go quite as far as that design. The Chrome OS used for those laptops is almost

exclusively Cloud based, and no Internet or cellular connection means you've got a serious problem; however, Peppermint developers opted for a hybrid design – some of the programs are Cloud based, but users can add all the standard HDD based programs they desire.

However, Chrome OS and Peppermint differ greatly in their approach. The Chrome OS utilizes (obviously) the Google Chrome browser. It acts as a gateway for the included programs (such as Google Docs), and also acts as the desktop. If, for some reason, you cripple Chrome, then you've also crippled the computer.

What makes Peppermint unique is Ice, their SSB (site specific browser) that acts as a middle-man or conduit for certain programs. Without being too geeky about it, Ice works by piggybacking the Chromium browser. For example, opening GWoffice (Google Docs by any other name) opens Ice in a separate window. You're online at Google Docs but what you see is in a window separate from Chromium. If you check your program manager, you'll notice no entry for Ice but you will see

multiple Chromium entries, if you already had Chromium open.

And what if you close Chromium while Ice is working? Nothing will happen and Ice will keep on working since it can still go through Chromium even if it is closed. In theory, even if Chromium crashes or freezes, it shouldn't adversely impact Ice (I never got to test that since Chromium wouldn't cooperate by crashing for me).

But here is where it does get geeky. Although Ice may work independently of Chromium, it still relies on it and, therefore, you can't uninstall Chromium. Go ahead and install Firefox, Midori, Konqueror, or any other browser you like, but Chromium must stay or your online programs may not work.

Although it may sound a little buggy, it really isn't, and the whole affair works surprisingly well as long as you have a strong Internet connection.

This became readily apparent when I tested live mode at my local library, a place notorious for its mediocre wireless signal that slows to a crawl if more than 20

computer users show up. Already crippled by running Peppermint off my optical drive, the weak wireless signal eventually made most of the Cloud programs unstable and useless.

This is exactly what happened with a Chromebook I tested for an acquaintance a few months ago. That person was piggybacking off a weak wireless signal and couldn't figure out why it wouldn't work.

Fortunately, Peppermint has an out. Whereas Chromebooks often come with puny flash drives and an OS that makes adding programs a chore, Peppermint can be installed on nearly every computer, and has the capability of adding any program currently found in Software Center or Synaptic Package Manager.

As one might expect, Peppermint shines on the performance front. RAM (with 4GB) generally idled around 10% and rarely ventured above 15%, while my dual-core CPU usage hovered below 10%. Overstressed this isn't. Sluggish opening programs like Gimp and LibreOffice snap to attention quickly, and web-based offerings

are just as quick (provided your connection is good). This is the main selling point of LXDE and Lubuntu.

The real (and shocking) difference was in battery life. With Ubuntu 12.04 Unity, I averaged 2.5 to 3 hours on my laptop, but Peppermint's average was nearly 4 hours. That is a substantial improvement and not one easily brushed off.

There was one failure, though. Guayadeque (the music player) just refused to cooperate and kept telling me my system lacked the proper mp3 drivers. However, Gnome-MPlayer and other music players I tried had no such problem. No matter what I added or tweaked, it wouldn't work, and I eventually had to uninstall it. Weird thing is, this program is one of the highest rated in Software Center for the audio category so it could just be a quirk.

Peppermint was very stable in general operation with just one system freeze – which I'll blame on Mint's Update Manager since it was in the middle of operations when it gave up the ghost and locked me out (but recovered on reboot). I've

had this happen in Mint and other Ubuntu variants that used the Update Manager, so I won't blame it on Peppermint's developers.

Overall, I'd rate Peppermint as a good beginner's introduction to Ubuntu based variants, especially users defecting from limited tablets or previous Cloud experiences that didn't pan out. However, more experienced users may find it a little light (although starting from scratch and adding what you want isn't always bad – Ubuntu has made a living off of that).

As a final grade, I'd give Peppermint Three 3½ out of 5.

As an installed system, it's great, but, in live mode or areas where Internet connectivity is an issue, the Cloud based programs can be a bear to live with.

LETTERS

Zorin OS

I'm a long time Linux user; in fact, my first Linux distribution was Yggdrasil. Then came Redhat.

Sadly enough, I can't use Linux at work as the applications I work with (Pro/E, Creo) are available on the Windows platform only. I've used Ubuntu at home, but got dissatisfied with it when they introduced Unity.

So I started searching for alternatives. A very interesting one that is perhaps eligible for an article in your magazine is Zorin OS: http://zorin-os.com/

John Bijnens

Some People...

I feel so sad. The day before yesterday, I removed the preloaded Ubuntu from a friend's Dell laptop and installed Windows 7 Ultimate on it. A few months back, when I bought my Dell laptop, much to my surprise it also came with preloaded Ubuntu 10.04 on it. But there were no official Ubuntu logo. When I saw my friend's laptop with the Ubuntu logo alongside Intel's, I was overwhelmed. But the sad thing is that I could not persuade that friend of mine to use Ubuntu. He just won't give it a try.

Uttam

Office Base

This is a last ditch attempt to get something done about LibreOffice Base before I completely wipe Ubuntu from my dual-boot machine.

For years, I had been using a famous financial package on my Windows machine without any problems. It also gave me all the financial reports I needed.

Then I loaded Ubuntu on the same machine using the dual-boot method (after listening to all the much-vaunted hype about Ubuntu). I then switched to Gnucash, saving the data to a mysql database from where I used LibreOffice Base to produce the desired reports. Everything worked fine until 12.04 came. All of a sudden one can not produce any report in Base at all. Please have a look at https://bugs.launchpad.net/ubuntu/+source/libreoffice/+bug/992232, which might give you a better picture of the problem. One of the last comments on this post is surely very valid: "What good is a database that can't produce reports?"

My question: what can I do? Ideally in kicking somebody's backside as apparently nobody is doing anything to solve the problem. Other advice will also be appreciated.

Surely this is no advert for LibreOffice or Ubuntu.

Jose

Gord notes: *a fix was posted to that bug report in June, but I don't know if it will solve Jose's specific problem.*

More Bugs

The rant concerning bug reporting (for Evolution in his case) is pretty close to bang on for bug reporting in general. I guess that just because a program uses Bugzilla it doesn't mean that Bugzilla is a generic term—it's unique to a given program. Even more deceptive is the more or less automatic bug reporting that pops-up now and then.

I guess that developers really do want feedback, but the tools they offer are "less than intuitive"! Indeed they seem designed for the developers – not the users.

A generic article on how to report a bug would be a winner—wish I was smart enough to write it!

Dave Rowell

Ronnie says: *Any developers, or smart cookies, out there want to teach us users how to use bug reporting sites/tools such as Bugzilla?*

Viruses

Regarding the security issues of attacks from Viruses, Mal-ware and Spy-ware are "unheard" of. However, as I still access Windows' machines with a USB memory stick, I installed Clam Av to my Linux machines as a precaution.

I run Clam Av on a regular basis and recently got a warning of a virus on scanning my machine, not a USB memory stick. So Linux is susceptible to attacks. The contamination came from another source.

Can you give us readers of FCM some more information as to this security issue?

Allan Hambidge

I just read FCM issue 64, and I'm worried! The news item on the Linux trojan caught my eye, and the question uppermost in my mind is: how do I check if my computer has been infected and how to I get rid of it? In the Windows world (last used 6 years ago) I had an antivirus, but I never felt that I needed it on Linux. Has that just changed? What are the best anti-virus programmes for Ubuntu? An article on this might be useful.

Chris Burmajster

Ronnie says: *Any antivirus gurus out there who'd like to give us a quick run through on how to protect our machines from native viruses, but also in keeping a dual-boot safe?*

Gord adds: *See the Q&A in FCM#64. I showed how to scan a Windows partition, but a tiny simplification of the procedure would scan your Ubuntu system.*

Kdenlive Help

I'm an intermittent reader of FCM who enjoyed your piece in issue 65 about editing clips in Kdenlive. I use Kdenlive at home and at work.

The manual nature of repositioning clips has always bothered me. Let's say that I put together a 3 minute video with 7 to 10 clips and audio, then decide that one of the clips in the middle must be trimmed. Trimming the clip using the scissors is no sweat. However, I now have an open space in my presentation and all the other clips must be moved manually to close that opening.

Closing that space is fairly straightforward on a single track video but can be a royal pain in the butt if one is using multiple video and audio tracks. Removing a photo from the middle of photo slideshow movie, where each photo lasts 3-4 seconds, is arduous in the extreme.

Is there a utility that I might be unaware of that could make this process simpler? Would others have the same issue?

Jeff Boulden

Ronnie says: *That's a good question. I don't think there is a way to automatically rearrange clips after a trim, but I'm no expert. Any Kdenlive experts out there got a solution for this one?*

Tuxidermy

WHEN VISITORS FROM PLANET *MELVIN* CAME TO *EARTH*, WHAT THEY FOUND WAS A DEAD PLANET.

THEY LOCATED INTELLIGENT LIFE, BUT THE DOLPHINS WEREN'T IN THE MOOD TO EXPLAIN WHAT HAPPENED TO HUMANITY.

WRECKED CITIES INDICATED WAR, AND RECORDS REVEALED THAT MOST MEN DIED SCREAMING "I'LL SUE YOUR @SS", WHATEVER IT MEANT.

THE CORPSES OF WHAT ONCE WAS CIVILIZATION SAT IN FRONT OF OLD COMPUTING DEVICES, ALL BROKEN BY RAGE AND FRUSTRATION.

< SMELLS LIKE *ROTTEN FRUITS* >*

THEN THEY DISCOVERED, IN A NATIVE WALL, THAT AT SOME POINT A *BLACK MONOLITH* APPEARED AMONG MEN AND AN *UNKNOWN LIGHT* HAD GUIDED THEM TO EVOLUTION. THE MELVINS WERE RELIEVED.

< MY GOD! IT'S FULL OF PENGUINS! >

SAVED

TAKEN

* TRANSLATED FROM MELVISH

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 close the laptop lid and it suspends. If I leave it for a long while, when I open the lid, it comes out of suspend okay, but I can only just see the desktop enough to get to the LogOut button, log out and log back in, then all is good again. Xubuntu 12.04, Radeon graphics.

A (Thanks to **brainwash** in the Ubuntu Forums) Navigate to Settings Manager > Screensaver > Advanced > Fading and Colormaps, and untick Fade to Black when Blanking, or similar wording in Xubuntu.

Q How can I stop my screen from going dark after it is inactive for a few minutes?

A Run System Settings, Brightness and Lock. Set "Turn off screen" to never.

Q After I log out, the system gets to a full screen terminal and stays that way. Only way to escape it is power button to shut down.

A You might try one of these commands:

```
sudo poweroff

sudo shutdown now
```

Q I installed Ubuntu as the only OS on my computer, taking up the entire hard drive. Now I discover that I must run a Windows program, and it doesn't work with WINE. I have a Windows DVD. What's my easiest option?

A Assuming you have a fairly modern, reasonably powerful computer, the easiest thing is to install VirtualBox, then install Windows inside VirtualBox. See issue 49 of Full Circle

Magazine. Google also finds several tutorials, including this one:
http://www.wikihow.com/Install-Windows-XP-on-Ubuntu-with-VirtualBox

Q I tried to start the new Sigil from the terminal and got "illegal instruction error". My computer is based on an AMD Duron CPU.

A The Duron is a 32-bit processor, with support for MMX, 3DNow and SSE. (Each of those is a set of instructions which the CPU can run, in addition to what a standard Intel 486 can run.) It sounds like Sigil requires some additional instructions which were not implemented in older CPUs. The only way to fix this would be to get the source code and compile it with the options appropriate to your CPU.

Q I'm trying to open 2 gvims at the same time, but 12.04 does not do it. When I click on the quick-launch icon the second time, it just brings in front the first window opened before.

A (Thanks to **David D**. in the Ubuntu Forums) Hold down the shift key while clicking on the icon.

Q In Ubuntu 10.04, I used the utility under the Places menu to connect via SSH to my shell account on a remote server. That allowed me to simply transfer files from one computer to the other, the tool automatically doing the SFTP stuff etc. Is there an equivalent in 12.04?

A (Thanks to **cryptotheslow** in the Ubuntu Forums.) On 12.04, Nautilus (the default file manager) has a "Connect to Server..." entry in its

Q & A

File menu that gives the option to use SSH to connect to a remote server.

Q **I'm a new user in Ubuntu and I want to install NS2.33 (Network Simulator) in my Ubuntu 10.04.**

A Switch to Ubuntu 12.04 or one of its variants, and NS2.35 is available from the Software Center. Ubuntu 10.04 will expire in less than a year, so it's not a great way to begin using Ubuntu.

Tips and Techniques
Can't boot from USB?

Y es you can! With the news that future releases of Ubuntu will not fit on a CD, some people will be worried about older computers with only a CD drive, which won't boot from USB — even though they have USB ports.

The solution is the Plop boot manager:

http://www.plop.at /en/bootmanagers. html
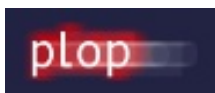
Download the .zip file, then extract it to a known location such as Downloads. One of the files in the plop folder, which might be called plpbt-5.0.14, is a little tiny ISO, less than a megabyte. Insert a blank disc into your CD burner, and press Cancel when Ubuntu asks what you want to do. Run Brasero or K3b, or whatever program you use to burn CDRs. Select "Burn Image". Navigate to the ISO and select it. Now you can "Burn". The burn will take just a moment, but "finalizing" the disc will take longer.

Set your computer to boot from CD and test that Plop comes up when you restart. (I leave my computers permanently set to boot from CD [and USB], and if I happen to restart with a bootable CD – but that's not what I want – I just eject it and restart.)

Now you need a flash drive with a Linux distro on it. Ubuntu 12.10 and the rest of the family have recently been released. Go ahead and download Lubuntu 12.10 or Xubuntu 12.10. (I'm assuming that

the older computer will be happier with one of the lightweight versions of Ubuntu.) If you don't have Unetbootin installed, install it. See FCM#44 for instructions about how to use Unetbootin. You will need a flash drive of at least 1 GB. Where I live, you can buy a 4 GB flash drive for under $5.

Now, insert the CD with Plop installed, and the flash drive containing someUbuntu, version 12.10. Restart the computer. I found that I needed to select HDA from the Plop menu, not USB. When I did, the computer booted from the flash drive, and I could Try

it or Install it, just what I wanted.

Thanks to **Roy** in the Yahoo Ubuntu Linux Forum for the pointer to Plop. Don't forget to make two good backups before you install anything!

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

UBUNTU WOMEN

Written by Elizabeth Krumbach

n the summer of 2012, the Ubuntu Women project grew from a leadership trio to a leadership quartet with the election of Silvia Bindelli and Flavia Weisghizzi to the team.

We took some time to talk with Silvia and Flavia about their experience in Ubuntu and Ubuntu Women, and to learn some of their goals for the Ubuntu Women project moving forward.

Silvia Bindelli

I joined the Ubuntu Women project in 2007, but, for several months, I was mainly a passive member. My activity started to be more concrete in 2010, when I joined the Italian LoCo team and, at the same time, Flavia and I created a local section of Ubuntu Women. Since then I've met wonderful people, both in the Italian LoCo team and in the international community, all willing to help, to share, and completely enthusiastic about Ubuntu and their contributions. This is why I always try to get myself a bit more involved in the community, and to contribute sharing my enthusiasm and helping others as much as I can.

Silvia's Goals:

Publicity: Try to enhance further the visibility of the project on the web, and try to promote a good and welcoming image for it. For instance, we could give more vitality to the website via a news section and increasing the number of pages linking to it.

Loco Activity: Encourage initiatives like the Italian Ubuntu Women group: having more or less explicit groups in the LoCo team who take care of involving more women in the Ubuntu community. One activity that proved to be much appreciated is holding sessions on IRC showing briefly each specific activity of the LoCo team: this kind of tutoring, done in the mother language of the audience, encourages even those

who are a bit more shy to start contributing actively. For example, we could also do sessions on IRC sharing our experience in UbuntuWomen-it.

Flavia Weisghizzi

The first post I wrote on Ubuntu-it forum, away back in 2007, was, more or less: "Hi, I'm Flavia, I'm a 30 years old journalist." The reply was "Wow, an alien has landed in this forum!"

I felt very different from the geek-addicted teenagers who were used to hanging out at that forum. So I asked what could I do for the Ubuntu-it community and where could I meet some other women involved in it. Anyway, as time went by, I participated in our

community, serving with my communication skills and in translation and marketing.

At the same time, I was taking a look at different female experiences, like Linux Chix, and, finally, I was introduced to the inspiring Ubuntu Women list and Silvia, and together we gave life to a branch dedicated to Italian-speaking women.

My work gave me the opportunity to become an Ubuntu member and to be elected as former member of the Italian LoCo team, but I know there's much more I can do.

Flavia's Goals:

Publicity. As a journalist, I well know the importance of taking trace and release activities and initiatives. So I'd like to strengthen the UW communication tools, toward inner and outer community targets.

Mentoring: I'd like to offer my experience as a speaker to help people in developing a better communication strategy for talks and conferences.

QUICK YOUTUBE TIP
by Sayan Chattopadhyay

A small BASH script for downloading entire Youtube playlists/single videos and automatically converting them to MP3.

```
youtube-dl -o '%(stitle)s.%(ext)s' "$1"
for file in *.flv; do `ffmpeg -i $file -acodec
libmp3lame -ac 2 -ab 128k -vn -y $file.mp3`;done
for file in *.mp4; do `ffmpeg -i $file -acodec
libmp3lame -ac 2 -ab 128k -vn -y $file.mp3`;done
rm *.flv
rm *.mp4
```

or, download from: http://dl.dropbox.com/u/5299195/yt2mp3.sh

Usage :
In terminal:

```
sudo install yt2mp3.sh /usr/local/bin
```
(for first time installation)

To use, enter:

```
yt2mp3.sh "playlist_url/video_url"
```

Points to be noted:
• Please install *youtube-dl, ffmpeg* and *livavcodec-extra*.
• Execute the script from a new directory meant for the MP3's of that playlist/video.

Hope it's useful!

Tested for Linux Mint, but should work with all Linux systems.

The game developer studio, **Obsidian Entertainment**, has launched a kickstarter page for the next project simply called "Project Eternity". Obsidian is responsible for such games as Star Wars Knights of the Old Republic 2, and, more recently, Fallout New Vegas, and is also helping develop the Kickstarter funded game Wasteland that will have a Linux version. Obsidian is asking for 1.1 million dollars which they have already surpassed; if they are able to reach 2.2 million in the next 28 days, they will have a Linux version of the game. Personally, I am surprised it's going to require more money for the Linux version of the game than for the MAC – the MAC requires only 1.6 million in funding. Perhaps

Obsidian has nobody on staff familiar with developing games for Linux.

Find out more at the kickstarter page and newly minted site, www.kickstarter.com/projects/obsidian/project-eternity and http://eternity.obsidian.net/

Next up... as we all know, **Valve** is coming to Linux. They have announced the ten games that will be released – which include Heroes and Generals, Dream, McPixel, Kenshi, Routine, Towns, The Black Mesa Project, Cry of Fear and Project Zomboid. This is just the beginning. Most of these games also come from Steam's newly launched Greenlight project. You can also vote for games that have Linux versions to appear on Steam via Greenlight.

Runic Games' single player action RPG, Torchlight, is a Diablo-like hack and slash that brings back feelings of nostalgia and warm fuzzies for fans of the genre. It was initially released for PC in 2009, and later for the Xbox 360 in 2011, and, thanks to Humble Indie Bundle 6, Torchlight has made its Linux debut.

Story

In the world of Torchlight, you must venture down the dungeons in the small town to uncover the strange events in the mines below. Beneath the town is a magical ore called Ember that has some pretty strange effects on the citizens who come in contact with it.

When you arrive in Torchlight, you meet Syl, who asks you to help find her mentor, Master Alric, who has recently disappeared. Along the way, you meet people affected by the ember, and find the items that it infuses its powers into. As you go through the story, you discover the secrets behind the Ember, its powers, and what it really does.

The story is clever and interesting, but the pacing is a bit slow as the plot is uncovered in chunks as you progress. The plot is solid enough to give you a reason to play, but it's easy to get lost in the gameplay without feeling engaged in the story.

Gameplay

There are three character classes to choose from: Destroyer, Alchemist, and Vanquisher. The Destroyer is essentially a warrior, capable of great destruction with melee weapons. The Alchemist has a variety of spells in his arsenal and has the ability to summon minions. The Vanquisher is akin to a ranger and uses long range weapons to defeat foes.

The characters are pretty customizable, and, in the end, each one ends up being on par with the others. For instance, the Destroyer can eventually gain the same summon spells as the Alchemist. They are naturally best at their given class, but you have the opportunity to make a well-rounded character who is capable of handling himself in any situation. On the flip side, it can feel a little pointless since they end up with essentially the same spells and abilities towards the end of the game.

One fun feature of Torchlight is the ability to have a pet from the start of the game. They're surprisingly effective and helpful - and they won't interfere while you're trying to finish off an enemy. They even have their own pack with a variety of armor and spells to choose from. And the best part of having a furry companion? They don't really "die" permanently, and will rejoin you when their health is recovered.

Aesthetics

UBUNTU GAMES

Unlike most hack and slash dungeon crawlers, Torchlight has an unique stylized comic book appearance. The art style was intended to be less dark and more light fantasy, and, although I prefer a little grit with my dungeon crawlers, the visuals are still stunning. The soundtrack is nice, but there really isn't much variation between the tracks, so long sessions can be kind of dull.

Final Thoughts

Torchlight is definitely a polished game that is tons of fun to play. It's a classic hack and slash to the core, which could bore some casual gamers, but, if you're a long time fan of the genre, you'll have no problem with grinding your way through the beautiful world of Torchlight.

Although Humble Indie Bundle 6 is over, you can still get the full game from the Ubuntu Software Center for $14.99.

Pros: fun choice for fans of classic hack and slash, tons of gameplay
**Cons**: slow story progression, still small bugs on some systems
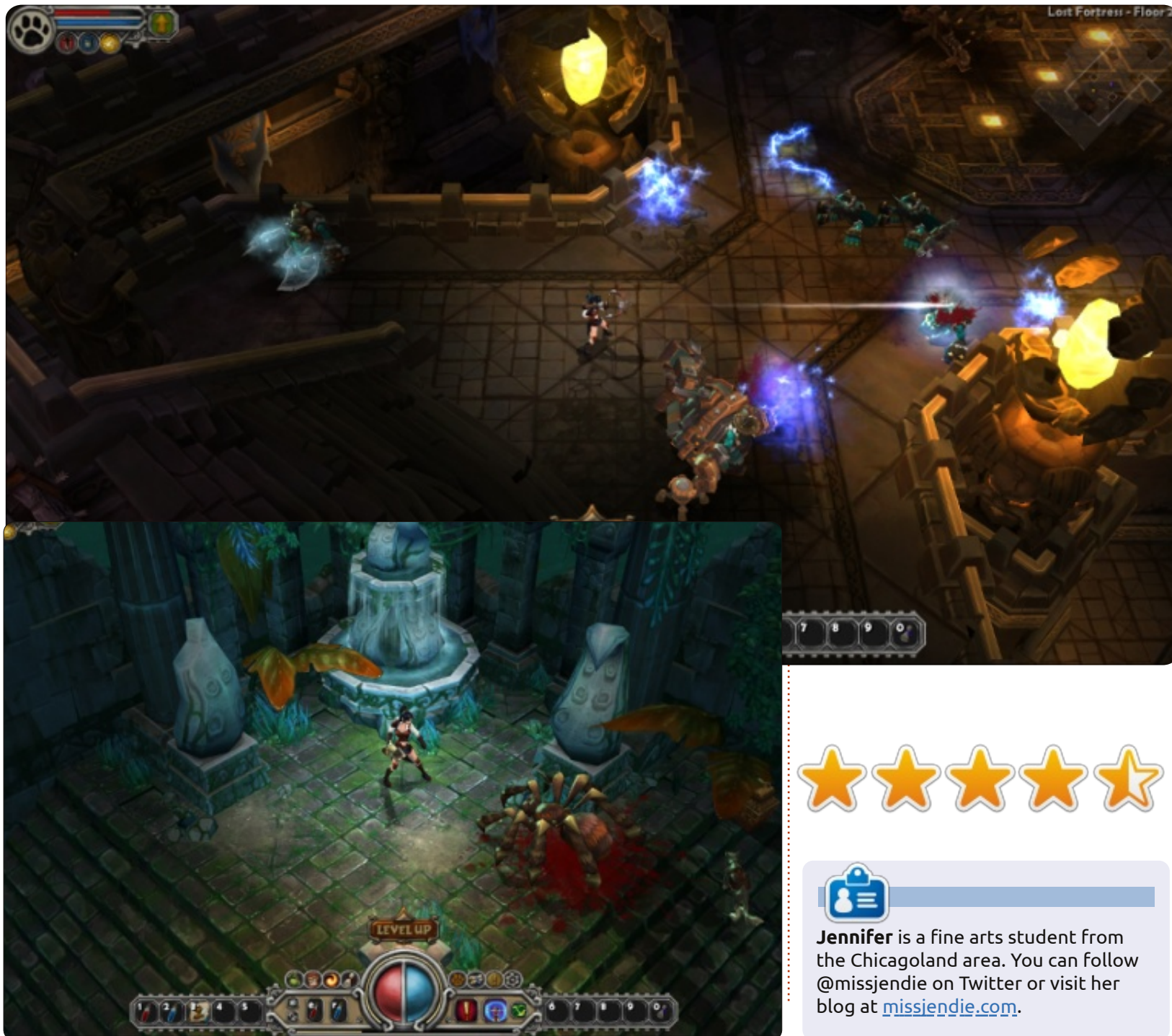
Jennifer is a fine arts student from the Chicagoland area. You can follow @missjendie on Twitter or visit her blog at missjendie.com.

MY DESKTOP

Your chance to show the world your desktop or PC. Email your screenshots and photos to: misc@fullcirclemagazine.org and include a brief paragraph about your desktop, your PC's specs and any other interesting tidbits about your
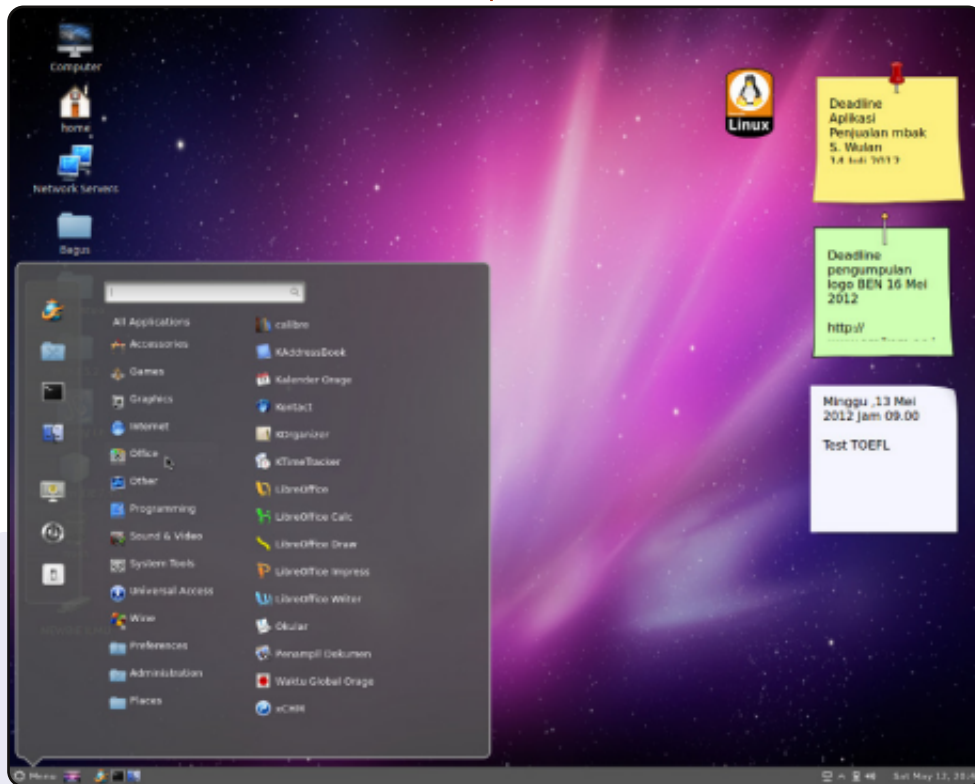
Hi! I'm from Indonesia, and this is my desktop. I am using Ubuntu 12.04 LTS with the desktop environment Cinnamon. On the right side I put linux stickers and sticky notes.
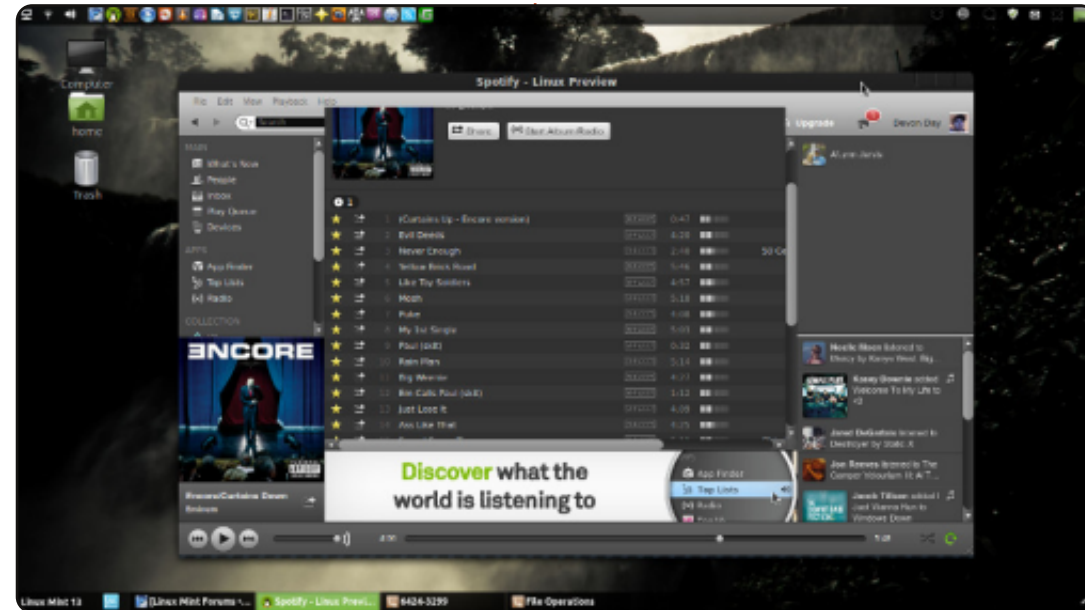
Specs:
Processor: Intel ®Core i5-2500 CPU @ 3.30GHz x 4
Memory : 1.9 GiB
Graphics: Intel® Sandybridge Desktop x86/MMX/SSE2
32-bit OS

Anugrah Bagus Susilo

Linux Mint 13 Cinnamon Edition 64bit
Cinnamon Theme: Minty
GTK Theme: OMG-Dark

I really just got tired of the default look and feel of my desktop, so I decided that I'd customize it in a way that I could enjoy, and have my OS feel more like my own. This is one of the reasons why I love using Linux Mint. It is easy for me to use, yet it gives me the flexibility and the power I need to completely change it into something that I can say is my own.

Devon Day

MY DESKTOP

I'm an Ubuntu user from Hungary. This is my desktop. You can see a conky in the right side, and an AWN dock in the left side. I found this background on the Internet. The system theme is default but I use compiz, and the window decorator is emerald. I like this layout and have used it a long time.

System:
Ubuntu 10.10 (Maverick Meerkat)
Intel Pentium 2.8 GHz
1.5 GB ram, 250 GB hard disk
ATI Radeon HD 4600 video card

Conky: http://ubuntu.hu/node/8082?page=1

Nagykéri Ákos

I am running Ubuntu 12.04 LTS 32-bit, but I use KDE 4.8.4, and I've customized it to get the best possible use that I can from it.

The top center consists of a panel, the left top has the Lancelot Launcher Widget along with the Running Application Widget. In the top right is the Hard Disk temperature widget. Center left is the Hard Disk Size Status, with the Instant Messaging Widget. In the center right is Bubblemon Widget for CPU clock frequency, and behind it is an analog clock. There is also a Luna Widget with Notification Widget. In the bottom left is the Device notification Widget, and opposite to it is the Battery Notification Widget along with Show Widget Desktop Widget. At the bottom is my favorite dock Docky...

These all work pretty well on my Lenovo G550 with Pentium(R) Dual-Core CPU T4300 @ 2.10GHz- 2GB RAM, 250GB HDD, no graphics card.

Priyesh Vishwakarma

PUZZLE SOLUTIONS

SUDOKU

D	8	2	B	6	A	E	3	7	F	C	5	9	0	4	1
0	3	4	C	D	B	7	8	A	E	1	9	2	F	5	6
F	E	6	5	0	C	1	9	D	8	2	4	B	3	7	A
A	9	7	1	2	4	F	5	6	0	B	3	D	8	E	C
5	D	B	4	7	6	C	E	3	A	0	8	1	9	2	F
1	C	9	3	A	D	2	F	4	7	E	B	0	5	6	8
2	0	F	E	4	3	8	1	C	5	9	6	7	B	A	D
7	A	8	6	9	5	0	B	2	D	F	1	4	E	C	3
9	2	0	D	3	1	A	C	B	4	7	E	8	6	F	5
3	7	1	8	5	9	4	D	0	6	A	F	C	2	B	E
B	5	E	A	F	0	6	2	9	C	8	D	3	7	1	4
4	6	C	F	E	8	B	7	5	1	3	2	A	D	9	0
E	F	5	0	1	7	9	A	8	2	D	C	6	4	3	B
8	B	A	9	C	E	D	6	F	3	4	7	5	1	0	2
C	1	3	7	8	2	5	4	E	B	6	0	F	A	D	9
6	4	D	2	B	F	3	0	1	9	5	A	E	C	8	7

CODE WORD

1	2	3	4	5	6	7	8	9	10	11	12	13
X	H	O	T	D	C	L	B	M	A	Q	S	E

14	15	16	17	18	19	20	21	22	23	24	25	26
K	P	U	N	V	W	R	I	J	F	Z	Y	G

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

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