



Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

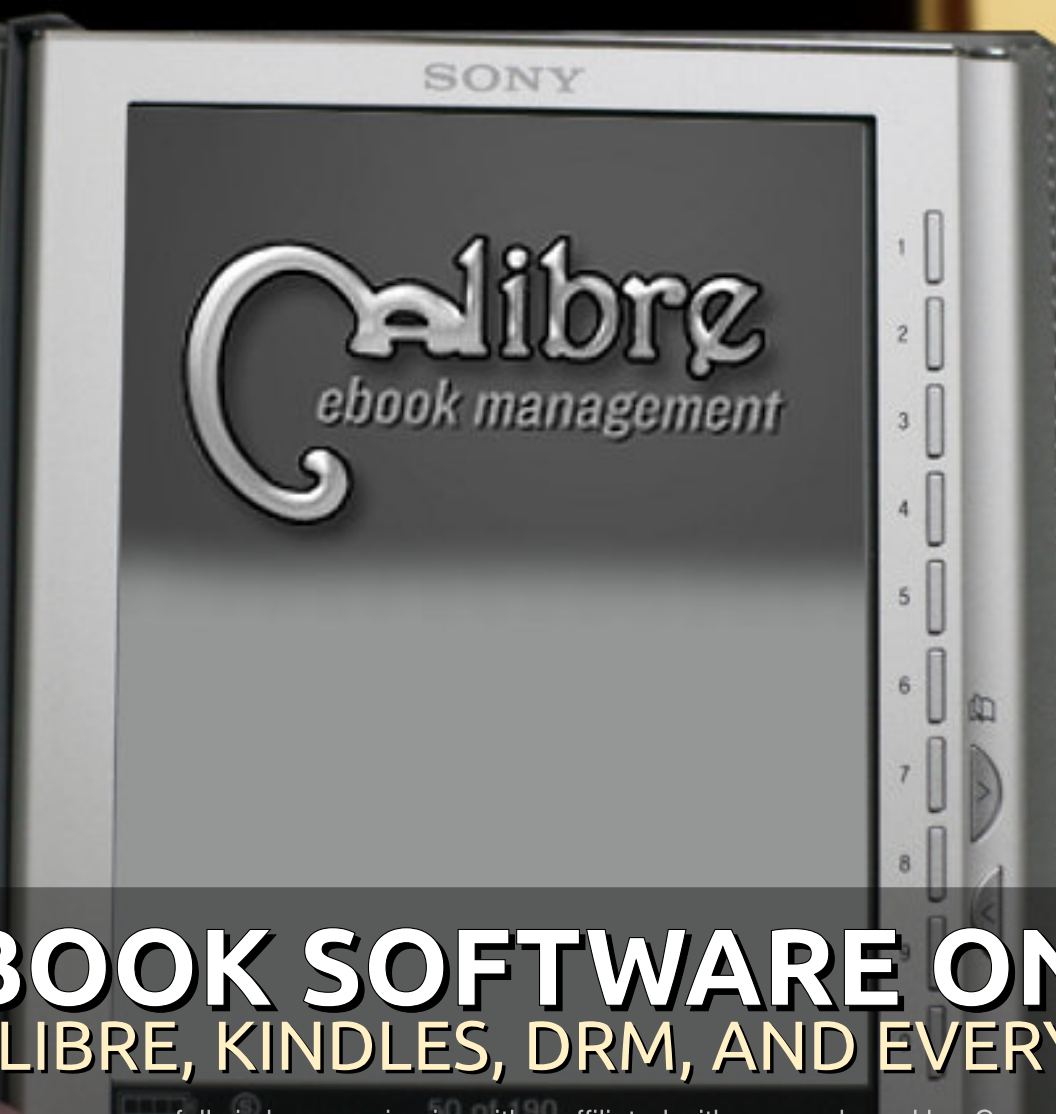
ISSUE #47 - March 2011



LINUX LABS
FILE SYSTEMS - PT2



Books photo: Shutterstock (Flickr.com)
Sony Reader photo: Kayakleader (Flickr.com)



EBOOK SOFTWARE ON LINUX **PART 1 : CALIBRE, KINDLES, DRM, AND EVERYTHING IN BETWEEN**

full circle magazine is neither affiliated with, nor endorsed by, Canonical Ltd.

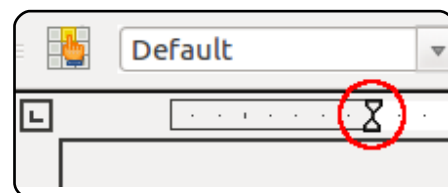


Linux News

p.04

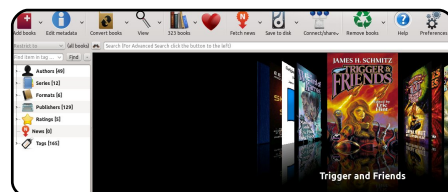


Program In Python Pt21 p.09



LibreOffice Pt2

p.14



Ebook Software in Linux p.16



Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY



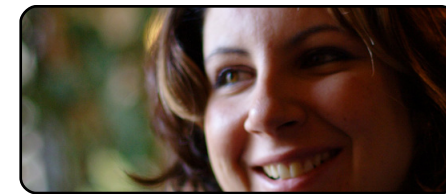
Write For Full Circle p.19

Guidelines for submitting an article to Full Circle. We rely on reader submissions so please write!



Linux Lab p.20

What's a file system, and what's an EXT3? Sit down and let your Uncle Robin explain...



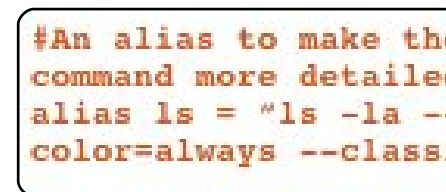
Ubuntu Women

p.30

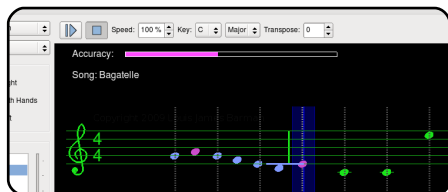


Ubuntu Games

p.32



Command & Conquer p.05



Review - Piano Booster p.26



Letters p.28



Top 5 p.39



The articles contained in this magazine are released under the Creative Commons Attribution-Share Alike 3.0 Unported license. This means you can adapt, copy, distribute and transmit the articles but only under the following conditions: You must attribute the work to the original author in some way (at least a name, email or URL) and to this magazine by name ('full circle magazine') and the URL www.fullcirclemagazine.org (but not attribute the article(s) in any way that suggests that they endorse you or your use of the work). If you alter, transform, or build upon this work, you must distribute the resulting work under the same, similar or a compatible license.

Full Circle magazine is entirely independent of Canonical, the sponsor of the Ubuntu projects, and the views and opinions in the magazine should in no way be assumed to have Canonical endorsement.



Welcome to another issue of Full Circle!

This month, you won't notice many visual changes, but there are plenty of changes in the background of FCM#47. Ubuntu 11.04 is just around the corner with many changes that I can't say I really want. So, I've migrated to Kubuntu (10.10 at this point) which uses Ubuntu as a foundation but uses the KDE desktop.

The main thing I'm not too keen on, in Ubuntu 11.04, is Unity. The new netbook-looking interface just doesn't seem right to me, and that's my main reason for switching to Kubuntu. Another reason is the addition of social networking, and several other things added/removed by default which I think are unnecessary. Thankfully, KDE 4 is now very usable and is my new home-from-home.

Anyway, enough about me. Elmer continues his LibreOffice series, the Python series is now up to part 21(!) and we start Kevin O'Brien's two part series on e-book software. Next month, Kevin will look at how to (legally!) obtain ebooks.

For all you fans of the Python series, just the other week we released the first of several Python Special Editions. The first one reprints parts 01 to 08 in one handy dandy issue. Look out for the next Special Edition soon!

Keep your letters coming in. This month, I received enough to restore the Letters page to its former two-page glory! Remember, without your input the magazine shrinks.

All the best, and keep in touch.

Ronnie

ronnie@fullcirclemagazine.org

This magazine was created using :



Full Circle Podcast

Released every two weeks, 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:

Robin Catling
Ed Hewitt
Dave Wilkins

<http://fullcirclemagazine.org>



AUDIO MP3



AUDIO OGG



Next after Natty?

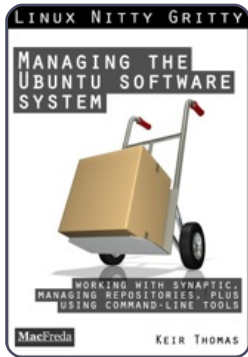
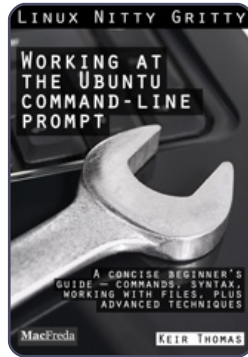


What we want is something imaginative, something dreamy. Something sleek and neat, too. Something that has all the precision of T S Eliot's poetry, matched with the "effable ineffability" of our shared values, friendship and expertise. Something that captures both the competence of ubuntu-devel with the imagination of ayatana.

Which leads us neatly to the Oneiric Ocelot.

Oneiric means "dreamy", and the combination with Ocelot reminds me of the way innovation happens: part daydream, part discipline.

Source: markshuttleworth.com



\$0.99 Ubuntu Books For Kindle

Keir Thomas is the author of *Ubuntu Pocket Guide*, the hugely popular free Ubuntu book that's been read by over 1,000,000 people.

He has recently started authoring Kindle books about Ubuntu costing just \$0.99 each. More details can be found here:

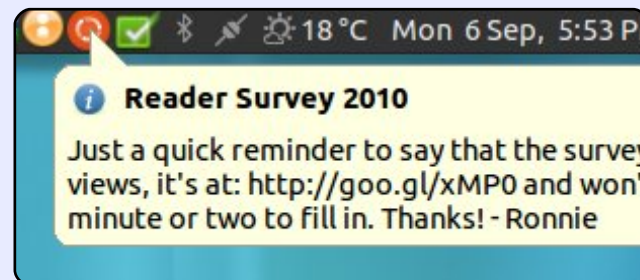
<http://keirthomas.com/kindle.html>

The books are on sale at the US and UK Amazon stores. One of them is the current best-selling Linux book at Amazon.

Full Circle Notifier - Beta Release!

Our very own **Full Circle Notifier** is now at 1.0.2. FCN is a small application that sits in your system tray and will not only announce issue/podcast releases, and can be set to automatically download them for you too! Several people have created packages of FCN and translations are starting.

For more info, see the FCN Google Group:
<http://goo.gl/4Ob4>



Firefox 4 doubles IE9's 24-hour download tally



Firefox may be under fire from Microsoft's newly competitive browser, but with more than twice the downloads in its first day, Firefox 4 today soared over its rival by one measurement.

Microsoft, not without reason, boasted that IE9 was downloaded 2.35 million times in the first 24 hours after its release last week. And that is indeed a big number, especially for a browser that tech enthusiasts had scoffed at for years.

But less than 24 hours after its own launch, Firefox 4 cleared 4.7 million, according to the Mozilla Glow site that logs downloads.

Source: <http://news.cnet.com>



I realize that last month I said I was going to do an article on Zenity within a script.

However, I couldn't think of a script that would benefit from Zenity - without getting extremely complicated. Instead, I decided I would go further into Conky, specifically the ability to use lua scripts to draw graphical items to the desktop (in this case, rings, but I'm sure other objects are possible). Before we get started, I'd like to make the disclaimer that I am in no way a lua coder, and there is a good chance that there are easier ways to make the changes I've made, but it's what I came up with.

For those of you who aren't sure what I'm talking about, this screenshot on my DeviantArt profile is an example of what is possible with Conky:
<http://lswest.deviantart.com/#/d3ay5fb>

First and foremost, make sure you have installed Conky (1.7.2 is in the repositories as of version 9.10 Karmic Koala). I will assume

that everyone is using version 9.10 or higher. If you're using an older version, launchpad will probably have a PPA for you.

As for the widgets we'll be creating, I'm going for a simple MPD music widget, and a clock (the same widgets visible in the above screenshot). Also, since I felt no need to re-create the wheel (or, in this case, the ring), I will be using the following script as a basis for what we are doing now: <http://londonali1010.deviantart.com/art/quot-Rings-quot-Meters-for-Conky-141961783>. For those of you who would like the complete scripts (for reference/correction), see the Scripts section at the end of this article.

Pre-coding

Before we get started on the actual script, I ask you to decide if you want it in two separate Conky instances (my choice) or within a single instance. The reason why I use two is quite simply because I have two other Conky instances on my desktop, and merging the

Clock

Configuring the clock.

For each ring you want, you will need to configure an entry in the settings table which will look like this:

```
{  
    name='time',  
    arg='%I',  
    max=12,  
    bg_colour=0xffffffff,  
    bg_alpha=0.1,  
    fg_colour=0xffffffff,  
    fg_alpha=0.4,  
    x=165, y=170,  
    radius=89,  
    thickness=7,  
    start_angle=0,  
    end_angle=360  
},
```

widgets into one would have resulted in overlaps between Conky instances. If you wish to use only one, you will need to increase the minimum size, and adjust the x and y values for each widget to place them within the Conky window. The x and y relate to the relative position of Conky. For example, if Conky starts at (400,200) ((x,y)) then a widget with placement (100,85) will actually be at (500,285) on your monitor. Keep this in mind.

Also, to use the lua scripts, you must add in the following to your .conkyrc:

```
lua_load  
/home/lswest/conky_testing/rings-v1.2.lua
```

```
lua_draw_hook_pre ring_stats
```

...where the top line is, of course, the actual absolute path to the lua script, and the name below is the name of your main function (if you write conky_ring_stats, or

ring_stats, it will find the function regardless of which variation you use within the actual script).

The script has comments to clarify the entries, but I'll quickly explain each as well. The name is actually the name of the Conky variable (i.e. `${time}`), the args are the arguments (i.e. `${time %l}`), and it is parsed by the script in lines 121-131 (on pastebin), within the local function `setup_ring`. It basically sends the command (after formatting it into `${name args}`) to Conky, gets the result, and parses it. Then it's casted into a number, and the deviations (entered into the `max` variable) of the ring are calculated (so, if you say 360 divisions, then each division is exactly 1° of the ring, or if you have 12, then it's $2\pi/\text{max}$ (in radians)). It's not important if you don't understand this, just keep in mind that to have 12 hours within the ring, you must make 12 divisions. The 4 following variables are simply background and foreground colors, and their alpha (transparency) levels. The `x` and `y` variables make up your position vector, radius is the width of the ring, thickness is the size of the line, `start_angle` is where the circle starts (0°), and `end_angle` is where

it stops (360°), so that we get a complete circle.

For those of you who know the formatting for the date command, you'll know that `%l` is the format for the hours with leading 0s (so 01...12). The format for a 12-hour clock, without leading 0s, is `%l`, but it doesn't matter for this clock - I also had it working fine with `%H` (0...23). The next two rings I made smaller and made the seconds ring 2 pixels thinner. In the end, you should have something along the lines (after the hours ring) of the code shown right.

As you can see, it's fairly straightforward. If you're fine with the seconds ring counting off the seconds, and without the date in the center, you're finished. If you, like me, want the seconds to fill the innermost circle, then you'll need to add the following line before `"cairo_arc(cr, xc, yc, ring_r, t_arc-arc_w, t_arc+arc_w)"`:

```
if pt['arg'] == '%S' then
  cairo_arc(cr, xc, yc,
    ring_r, angle_0,
    t_arc+arc_w) end
```

What this does is simply start at the `angle_0` (12 o'clock on the

ring), and extends the line. My first reaction is to put the original line into an else statement, but, it works without it, and it's a little less typing, so we'll forgo good formatting in this case. If you want to place the date within the center of the ring, it's a bit of guess-work for the positioning, but here is what you need to add to your `.conkyrc`:

```
${goto 115}${voffset
150}${time %A}
```

```
${goto 115}${time %b %d %Y}
```

The `goto` line shifts it over to the right (you can also use `${offset <pixels>}`), and `voffset` is the vertical offset (i.e. pixels moved down from the top of the conky window). What I did was display the day on the top line (`${time %A}`), and the date on the line below it. If you want to change the way it's displayed, checking the manpage of date will give you the formatting options you need.

MPD Widget

Now before we start this, the widget I describe here works only for MPD (Music Player Daemon), since Conky lacks variables for

```
{
  name='time',
  arg='%M',
  max=60,
  bg_colour=0xffffffff,
  bg_alpha=0.1,
  fg_colour=0xffffffff,
  fg_alpha=0.4,
  x=165, y=170,
  radius=79,
  thickness=7,
  start_angle=0,
  end_angle=360
},
{
  name='time',
  arg='%S',
  max=60,
  bg_colour=0xffffffff,
  bg_alpha=0.1,
  fg_colour=0xffffffff,
  fg_alpha=0.4,
  x=165, y=170,
  radius=70,
  thickness=5,
  start_angle=0,
  end_angle=360
},
```

other music players. I'm sure you could get it working the same with some tricky coding, but I don't think it's worth it as most other music players have a "now-playing" widget of sorts.

The `settings_table` entry for this one looks like the code shown on the next page, top left.

```
{
    name='mpd_percent',
    arg='',
    max=100,
    bg_colour=0xffffffff,
    bg_alpha=0.1,
    fg_colour=0xffffffff,
    fg_alpha=0.4,
    x=70, y=170,
    radius=60,
    thickness=7,
    start_angle=0,
    end_angle=360
},
```

As you can see, we're working with 100 divisions (since it's a percent, it will be a value between 0 and 100). Also, the arg variable is empty, which is important, since leaving it out entirely makes it incompatible with the functions we use later (missing argument). Once you've done this, I also altered the script so that the widget disappears when the music is paused. To do this, you need to make the following changes to the script:

Add this function to the beginning or end of the file:

```
function
conky_my_flag(my_arg)
    flag = my_arg
    return ""
end
```

Then, place the following text from the original script:

```
local
updates=conky_parse('${update
s}')
    update_num=tonumber(updat
es)

    if update_num>5 then
        for i in
pairs(settings_table) do
            setup_rings(cr,se
ttings_table[i])
        end
    end
```

inside of the following if statement:

```
if tonumber(flag) == 1 then
<text from above>
end
cairo_destroy(cr)
```

So that the last 11 or so lines of the file read as shown above right.

What the above changes do is simply to destroy the widget if MPD isn't running, and otherwise to run as normal. The function we created is so we can assign a value to the global variable flag that we use within the if-statement. Now, before this script works, you'll need to add in `${lua my_flag 0}` and `${lua my_flag 1}` into your .conkyrc so that the function is called and

```
if tonumber(flag) == 1 then
    local updates=conky_parse('${updates}')
    update_num=tonumber(updates)

    if update_num>5 then
        for i in pairs(settings_table) do
            setup_rings(cr,settings_table[i])
        end
    end
end
cairo_destroy(cr)
end
```

```
${lua my_flag 0}
${if_mpd_playing}
${lua my_flag 1}
${execi 2 python /usr/bin/mpd-cover}
${image /tmp/cover -p 40,138 -s 60x60 -u 15}
${if_match "${mpd_status}" == "Paused"}
${offset 137}${voffset 40}${font
DejaVuSans:bold:size=10}Paused
$endif
${if_match "${mpd_status}" == "Playing"}
${offset 137}${voffset 20}${font
DejaVuSans:bold:size=10}${mpd_artist}
${offset 137}${font DejaVuSans:size=9}${scroll 38
${mpd_title}}$font
$endif
$endif
```

the flag variable is set to 0 or 1, depending on if MPD is stopped (0), or not (1). The TEXT section of my .conkyrc looks like the code shown above.

What this does is set the flag variable to 0 when if_mpd_playing is false. Otherwise it gets set to 1.

The rest of the settings display and position the album art, display "Paused" if MPD is paused, or the Artist and Song Title on two lines to the right of the ring if MPD is playing. The `${scroll 38 ${mpd_title}}` section causes the title to scroll (so the text moves from right to left) if it's longer

COMMAND & CONQUER

than 38 pixels. You can leave this out, but I put it in there to prevent the text from being longer than my Conky is wide. In order to display the image, you'll need to add the following two settings above the TEXT marker somewhere:

```
imlib_cache_size 0
```

Also, the mpd-cover script is below, in the Scripts section. The mpd-cover script is written for python 2.X, but you can always use the 2to3 program to re-write it for python 3. If you have issues, let me know. Be aware that some symbols can cause problems with the script. I have done very little editing (if any) to it, and it was originally from here:

<https://bbs.archlinux.org/viewtopic.php?id=112708>

Hopefully the majority of you have found this interesting, and, as always, I'm open to requests, suggestions, general feedback, and questions. You can reach me at lswest34@gmail.com, and remember to put C&C or FCM into the subject line, so I don't overlook it. Also, English or German are my preferred languages, because otherwise I

will have to rely on Google Translate. If anyone improves the scripts I have listed/used here, feel free to send a copy to me with an explanation of additions/changes, and I will note it at the beginning of the next article for anyone who is interested.

Scripts:

<http://pastebin.com/SpC6bcn7>
Lua clock ring
<http://pastebin.com/iZFdZAeq>
Conky mpd
<http://pastebin.com/zkVVHkYk>
.conkyl_mpd
<http://pastebin.com/BDa5MHuR>
conkyrc for clock
<http://pastebin.com/ZX4pLbta>
mpd-cover script



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.

u³UCubed
<http://ucubed.info>

A free event taking place in Manchester on the 2nd April 2011 that brings together the Debian and Ubuntu communities

Visit our website <http://ucubed.info> for tickets and for more information

Do you want to tell people about your new project? Do you want to work with others to develop your ideas?
Do you want to learn more about Linux and Free Software?
Do you want to contribute to free software?

Fun
Ubuntu Debian Crunchbang
Network Participate
You Learn
Friends Documentation
Community Development
Contribute Artwork
Co-working Share

Debian <http://ucubed.info> ubuntu <http://ucubed.info> #!



HOW-TO

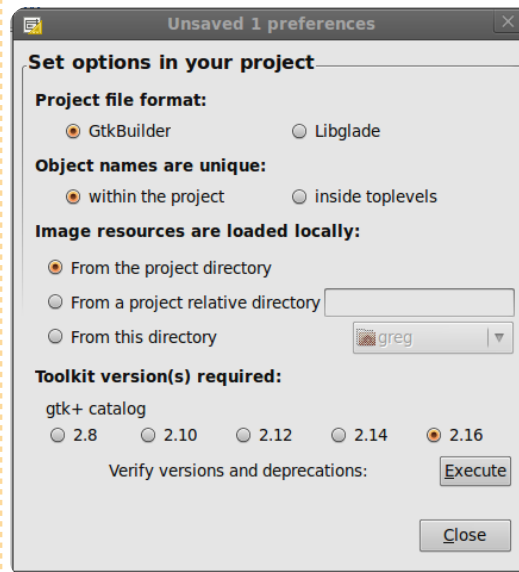
Written by Greg Walters

Program In Python - Part 21

If you've been with me for a long while, you might remember back to parts 5 and 6. We talked about using Boa Constructor to design our GUI application. Well, this time, we are going to deal with Glade Designer. Different, but similar. You can install it from the Ubuntu Software Center: search for glade, and install GTK+ 2 User Interface Builder.

Just to let you know, this will be an application that we'll need multiple parts of these tutorials to cover. The ultimate goal is to build a playlist maker for our MP3, and other media files. This portion of the tutorial will be focusing on the design portion. Next time, we'll deal with the code that glues all the parts of the GUI together.

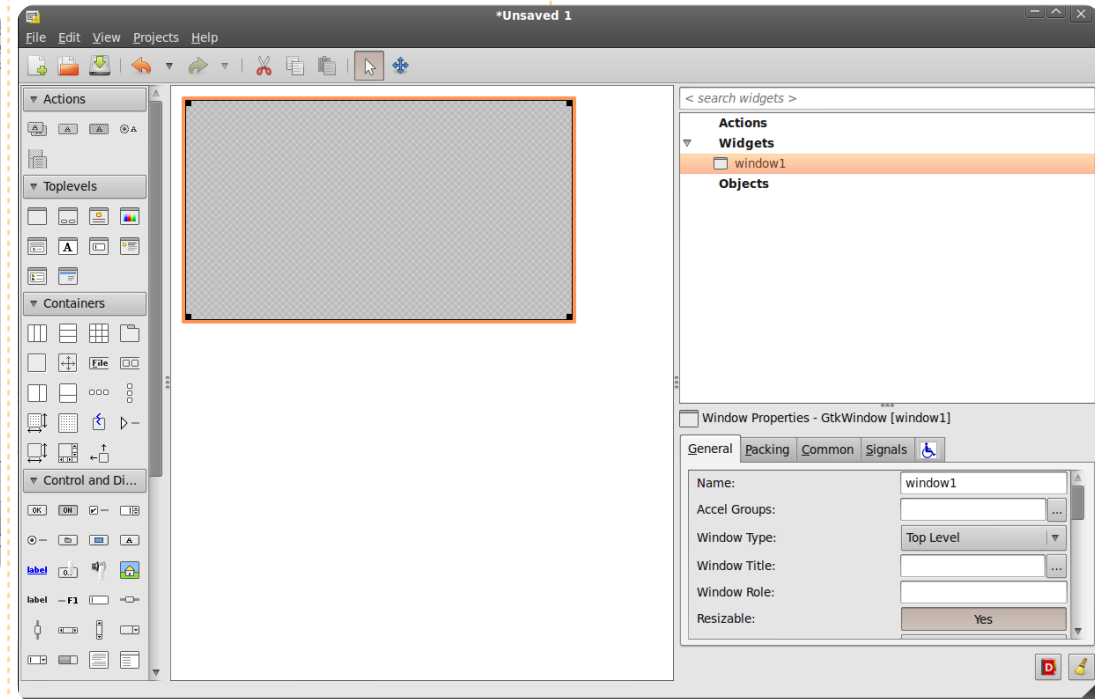
Now to start designing our application. When you first start the Glade designer, you will have a preferences window open (above). Select Libglade, and "inside toplevels", then click close. This will give us our designer main window.



Let's take a look at the main window (right). On the left is our toolkit, in the middle is the designer area, and on the right is our attribute and hierarchy areas.

In the toolkit area, find the group marked "Toplevels", and click on the first tool there (if you hover over it, it should show "Window"). This will give us our blank window "canvas" that we will be working with.

Notice that, in the hierarchy area, you see window1 under the



Widgets section. Now move down to the attributes section, change the name from window1 to MainWindow, and set the Window Title to "Playlist Maker v1.0". Save what you have as "PlaylistMaker.glade". Before we can move on, in the attributes section of the General tab, find the Window Position pulldown and set it to Center. Click the check box for Default Width, and set this to 650. Do the same for Default Height, but set it to 350. Next, click on the

Common tab, and scroll down to the entry marked "Visible". BE SURE TO SET THIS TO "YES" - otherwise your window won't show. Finally, select the Signals tab, scroll down to the GObject section, and click the arrow pointing to the right. Under destroy, click the pulldown in the Handler column, and select "on_MainWindow_destroy" setting. This gives us an event that gets raised when the user closes our window by clicking on the "X"

in the titlebar. One word of warning... After setting the destroy event, click somewhere above or below to make the change take. This seems to be a bug in Glade Designer. Again, save your project.

Just as before when we were doing GUI design, we need to put our widgets in vboxs and hboxes. This is the hardest thing to remember when doing GUI programming. We will be adding a vertical box to hold our widgets in the window, so, on the toolbox under Containers, select Vertical Box (second icon from the left on the top row), and click in our blank window in the designer section. You will be presented with a pop up window that asks how many slots or items you want. The default is three, but we need five. The layout, from top to bottom, will be a toolbar, an area for a treelist control, two horizontal areas for labels, buttons and text entry boxes, and a status bar.

Now we can start adding our widgets. First, add a toolbar from the toolbox. It's the (in my setup) fourth icon on the second line under containers. Click in the topmost slot of the vbox. That slot

will shrink and almost disappear. Don't worry, we'll get it back in a few minutes.

Next, we need to add a Scrolled Window to the next slot down to hold our treelist. This will allow us to scroll within the treelist. So, find the Scrolled Window icon under the Containers section of the toolbox (second icon from the left on the fifth row on my setup), and click that into the second slot of the vbox. Next, we will add two Horizontal boxes, one to each of the next slots. Each needs three slots. Finally, add a Status Bar to the bottom slot. This is under the

Control and Display section of the toolbox near the bottom. Now your designer should look something like the image below.

Last, but not least, add a Tree View widget from the Control and Display section of the toolbox into the scrolled window widget. You'll get a pop-up asking which TreeView model you wish to use. Just click the "OK" button for now. We'll set that up later.

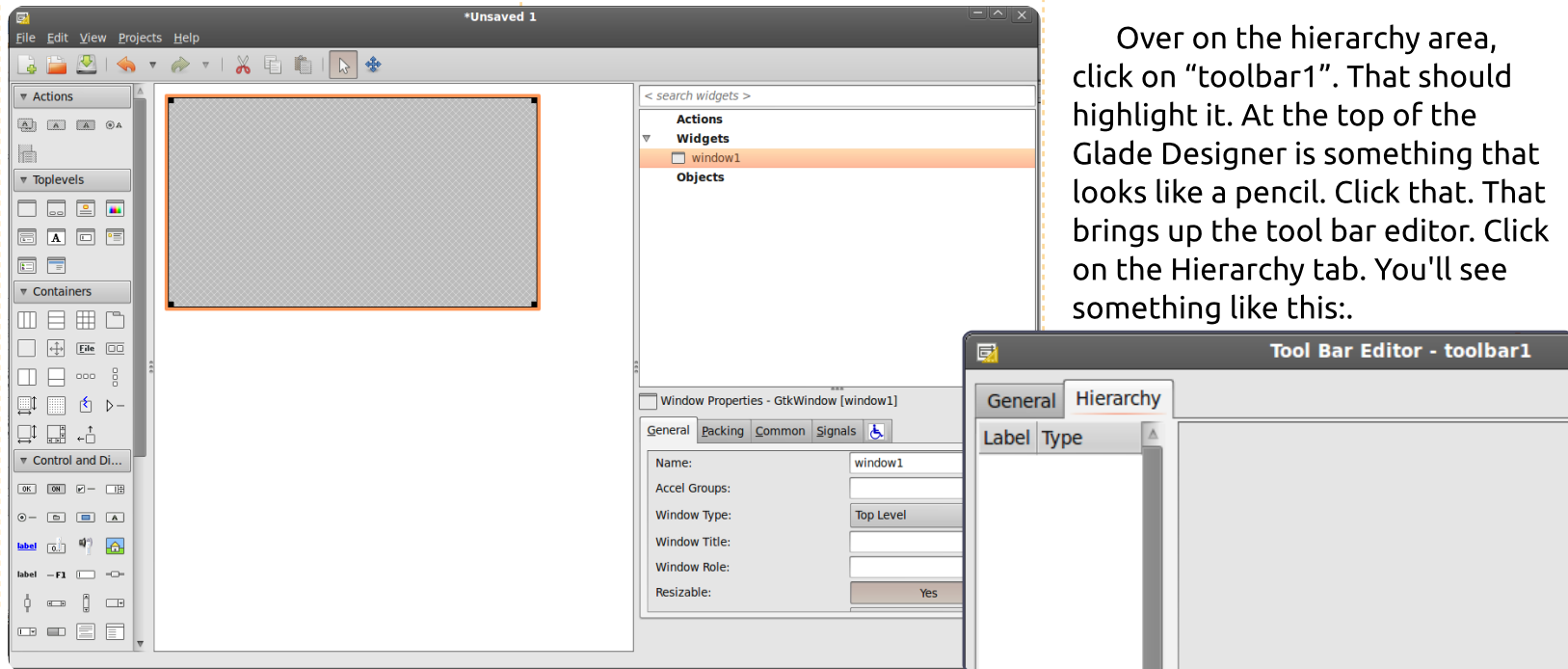
Now we need to concentrate on the Scroll Window for a second. Click on it in the hierarchy area. Scroll down in the General tab to

the entry marked "Horizontal Scrollbar Policy". Change that to 'Always', and then do the same for the Vertical Scrollbar Policy. Save again.

OK, now let's concentrate on our toolbar. This area will be at the top of our application right under the title bar. It will hold various buttons for us that will do the majority of the work. We will use eleven buttons in the toolbar, and, from left to right, they are...

Add, Delete, Clear List, a Separator, Move To Top, Move Up, Move Down, Move to bottom, another Separator, About, and Exit.

Over on the hierarchy area, click on "toolbar1". That should highlight it. At the top of the Glade Designer is something that looks like a pencil. Click that. That brings up the tool bar editor. Click on the Hierarchy tab. You'll see something like this:



We will be adding all of our toolbar buttons from here. The steps will be:

- Click the Add Button.
- Change the name of the button.
- Modify the label of the button.
- Select the image.

This will be repeated for all eleven of our widgets. So, Click Add, then in the name box, type "tbtnAdd". Scroll down to the Edit Label portion and type "Add" in the Label box, then a little further down under Edit Image, in the text box for Stock ID, use the pulldown to select "Add". That takes care of our Add button. We named it "tbtnAdd" so we can reference it in our code later. The "tbtn" is shorthand for 'Toolbar Button'. This way, in our code, it's easy to find and is fairly self documenting.

Now, we need to add the rest of the widgets to our tool bar. Add another button for Delete. This one will be named (as you might guess) "tbtnDelete". Again, set the label and the icon. Next, add another button naming it "tbtnClearAll" and use the Clear icon. Now we want a Separator. So, click Add, under name type "Sep1" and in the pulldown for type,

select Separator.

Add the rest of the widgets naming them "tbtnMoveToTop", "tbtnMoveUp", "tbtnMoveDown", "tbtnMoveToBottom", "Sep2", "tbtnAbout" and "tbtnQuit". I'm sure you can find the correct icons. Once you are finished, you can quit the hierarchy window and save your work. You should have something that looks like the image below.

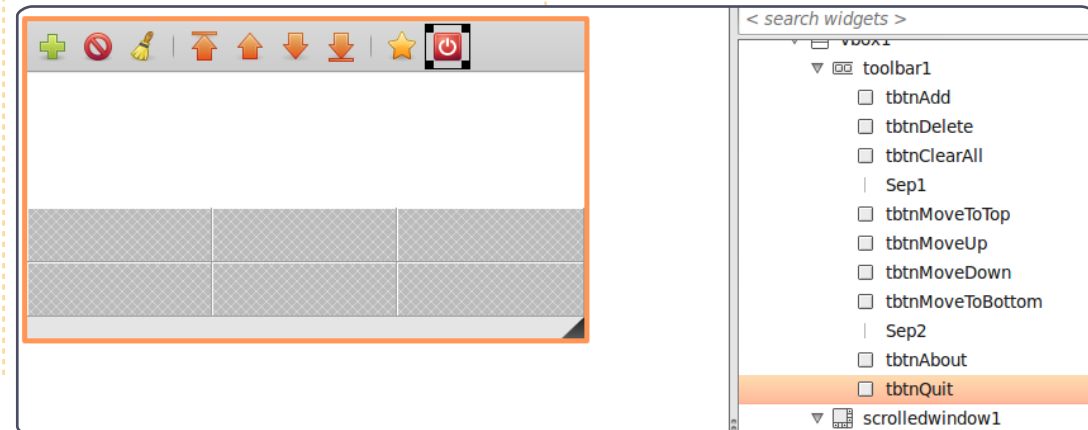
Now, we need to set the event handlers for all the buttons we created. In the hierarchy area, select the tbtnAdd widget. This should highlight both the entry in the hierarchy and the button itself. Go back to the attributes section, select the Signals tab, and expand the GtkToolButton to reveal the clicked event. Under handler in the clicked event, as before, select "on_tbtnAdd_clicked", then click above or below to force the change. Do this for all the other buttons we created - selecting the "on_tbtnDelete_clicked" event and so on. Remember to click off of it to force the change, and save your project. Our separators don't need events, so just pass over them.

Next, we need to fill in our hboxes. The top hbox will contain (from left to right) a label, a text widget, and a button. In the toolbox, select the label widget (not the blue one), and put it in the left slot. Now put a Text Entry widget in the center slot and a button in the right slot. Do the same for the second hbox.

It's now time to set our attributes for the widgets we just added. In the hierarchy area, select label1 under hbox1. In the attributes section, select the General tab, scroll down to "Edit label appearance" area, and set the label to read "Path to save file:". Next, go to the Packing tab and set Expand to "No". You might remember the discussion on packing from last month. Set the padding to 4, which gives a little bit of room on the left and right

side of our label. Now select button1 and set the Expand under the Packing tab to "No" also. Go back to the General tab and set the name of our button to "btnGetFolder". Notice that since this isn't a toolbar button, we didn't preface it with a 't'. Scroll down to the Label entry and enter "Folder...". Then click on the Signals tab and set the button event of GtkButton/clicked to "on_btnGetFolder_clicked". Before we set the attributes of the next set of widgets in the next hbox, we need to do one more thing. Select the hbox1 in the hierarchy area and under the Packing tab, set expand to "No". This makes the hbox take up less space. Finally, set the name of the Text Entry widget to "txtPath".

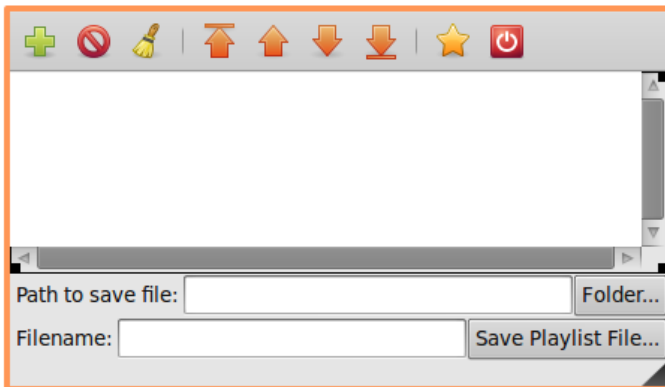
Now, do the same thing for hbox2, setting its Expand to "No",



then set the label text to "Filename:", expand to "No", padding to 4. Set the name of the button to "btnSavePlaylist", its text to "Save Playlist File...", its Expand attribute to "No", set up its clicked event, and set the name of the Text Entry widget here to "txtFilename". Once again, save everything.

So now our window should look something like the image below left.

All that is wonderful, but what did we really do? We can't run this as a program, since we don't have any code. What we have done is create an XML file called "playlistmaker.glade". Don't let the extension fool you. It's really an XML file. If you are very careful, you can open it with your favorite editor (gedit in my case) and look



```
<widget class="GtkWindow" id="MainWindow">
  <property name="visible">True</property>
  <property name="title" translatable="yes">Playlist Maker v1.0</property>
  <property name="window_position">center</property>
  <property name="default_width">650</property>
  <property name="default_height">350</property>
  <signal name="destroy" handler="on_MainWindow_destroy" />
</widget>
```

at it.

You'll see plain text describing our window and each widget with their attributes. For example, let's look at the code (above) for the main widget, the actual window itself.

You can see that the name of the widget is "MainWindow", its title is "Playlist Maker v1.0", the event handler, and so on.

Let's take a look the code (shown below) for one of our toolbar buttons.

Hopefully this is starting to make sense to you. Now, we need to write some code to allow us to see our hard work actually do something. Bring up your code editor and start with this...

So, we have created our imports pretty much like we did last month. Notice we are importing "sys" and "MP3" from mutagen.mp3. We installed mutagen back in article number 9, so if you don't have that on your system, refer back to that one.

We'll need the mutagen import for next time, and the sys import is set so the system can exit properly on the last exception.

Next, we need to create our class that will define our window. This is shown above right.

Pretty much the same kind of thing we've done before. Notice the last two lines here. We are defining the glade file (self.gladfile) to be the name of the file we created in the Glade

```
<child>
  <widget class="GtkToolButton" id="tbtnAdd">
    <property name="visible">True</property>
    <property name="label" translatable="yes">Add</property>
    <property name="use_underline">True</property>
    <property name="stock_id">gtk-add</property>
    <signal name="clicked" handler="on_tbtnAdd_clicked" />
  </widget>
  <packing>
    <property name="expand">False</property>
    <property name="homogeneous">True</property>
  </packing>
</child>
```

designer. Notice also that we didn't include a path, just a file name. If your glade file is going to reside somewhere away from your actual code, you must put a path as well. However, it's always smart

```
#!/usr/bin/env python
import sys
from mutagen.mp3 import MP3
try:
    import pygtk
    pygtk.require("2.0")
except:
    pass
try:
    import gtk
    import gtk.glade
except:
    sys.exit(1)
```

to keep them together. Next, we define our window as self.wTree. We'll be referring to that every time we need to refer to the window. We are also saying that the file is an XML file, and the window we will be using is the one named "MainWindow". You can have multiple windows defined in a single glade file. More on that another time.

Now we need to deal with our events. Last month we used button.connect or window.connect calls to refer to our event handler routines. This time we are going to do something a bit differently. We will use a dictionary. A dictionary is like an array, except rather than being referenced by its index, it's referenced by a key and then has a data element. Key and Data. Here's the code that will probably make it easier to understand. I'm only going to give you two events for now (shown below)...

So we have two events: "on_MainWindow_destroy" and "on_tbtnQuit_clicked" are the keys in our dictionary. The data for our dictionary is "gtk.main_quit" for both entries. Whenever an event is triggered by our GUI, the system uses the event to find the key of our dictionary, then knows what routine to call - from the data segment. Next we need to connect the dictionary to the signal handler of our window. We do it

```
=====
#
# Create Event Handlers
#
=====
dict = {"on_MainWindow_destroy": gtk.main_quit,
        "on_tbtnQuit_clicked": gtk.main_quit}
```

```
class PlaylistMaker:
    def __init__(self):
        =====
        #
        # Window Creation
        #
        =====
        self.glade = "playlistmaker.glade"
        self.wTree =
        gtk.glade.XML(self.glade, "MainWindow")
```

with the following line of code.

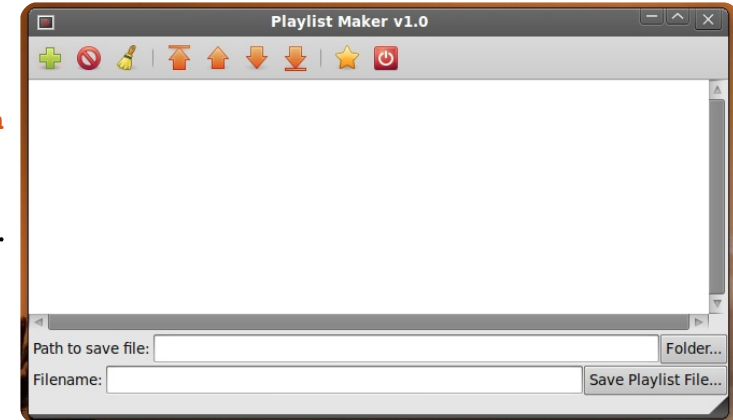
```
self.wTree.signal_a
utoconnect(dict)
```

We're almost ready. We still need our main routine code:

```
if __name__ ==
    "__main__":
    plm = PlaylistMaker()
    gtk.main()
```

Save this file as "playlistmaker.py". Now you can run it (shown above right).

It doesn't do much right now, other than open and close properly. The rest is for next time. Just to whet your appetite, we'll be discussing the use of the TreeView, Dialog boxes, and adding a bunch more code. So tune in next time.



Glade file:

<http://fullcirclemagazine.pastebin.com/YM6U0Ee3>

Python source:

<http://fullcirclemagazine.pastebin.com/wbfDmmBh>



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



HOW-TO

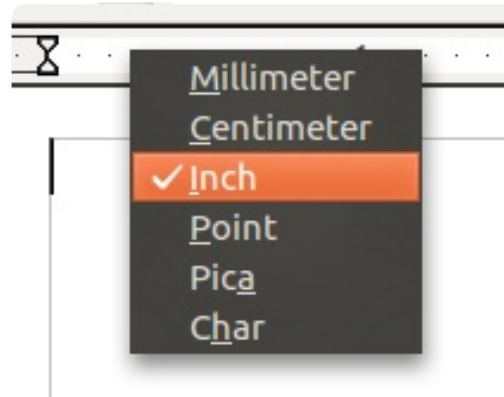
Written by Elmer Perry

Libre Office - Part 2

In my last article, I introduced you to the different modules of the LibreOffice program. Today, I want to show you the basic setup and manual formatting methods for the Writer module. The Writer module allows you to create formatted text-based documents. You can use Writer (below) for something as simple as a letter or journal, or something as complex as a manuscript or thesis paper.

First, we will look at the Writer window. Starting from the top, you have the menu bar. The menu bar gives you access to all the different tools and actions you can perform on a document. Below the menu bar sits the standard toolbar. This gives you quick access to common commands such as open,

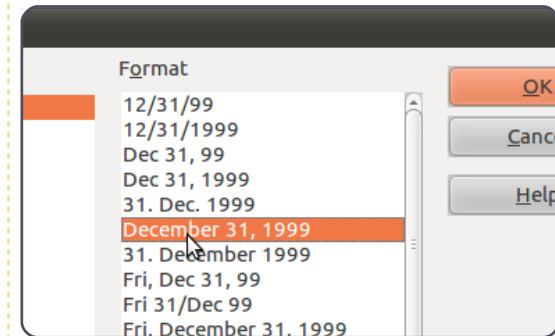
save, and print. Beside the standard toolbar sits the search toolbar. Below the standard toolbar, you find the formatting toolbar - it displays icons for often-used formatting tools. The toolbar is context-sensitive, and will change when you are working with elements like drawing objects. If you have tips turned on, hovering the mouse pointer over the icons in the toolbars will show a pop-up description of what the icon does.



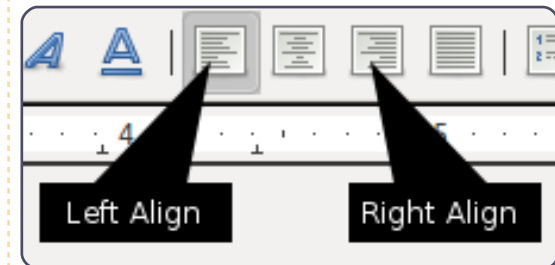
Below the formatting toolbar, and to the left, you have the horizontal and vertical rulers. The rulers are guides to help you when laying out a document. By default for the English language, the rulers display in inches. There are two ways to change the measurement units of the rulers. Right-click anywhere on the rulers (shown left), and Writer displays a pop-up menu of the different measurement units. This method works best when you need the change just for the current document. However, if you need a different measurement unit as the default, you need to change it in the Options. Go to Tools > Options > LibreOffice Writer > View. Here you can set the defaults for the vertical and horizontal rulers, or chose to work without rulers.

Now, we will create a simple letter, and I will show you how to manually format the different paragraphs of the letter. Open LibreOffice and start a new Writer document. We will place the current date at the top of the document, and align it to the right.

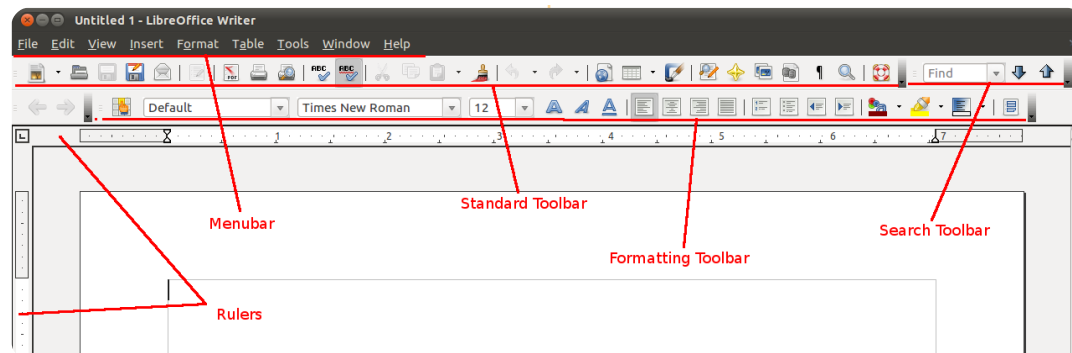
Go to Insert > Field > Date. This will give you the date in the default date format (MM/DD/YY). You will notice the date highlighted in gray. This lets you know it is a field you have inserted into the document.

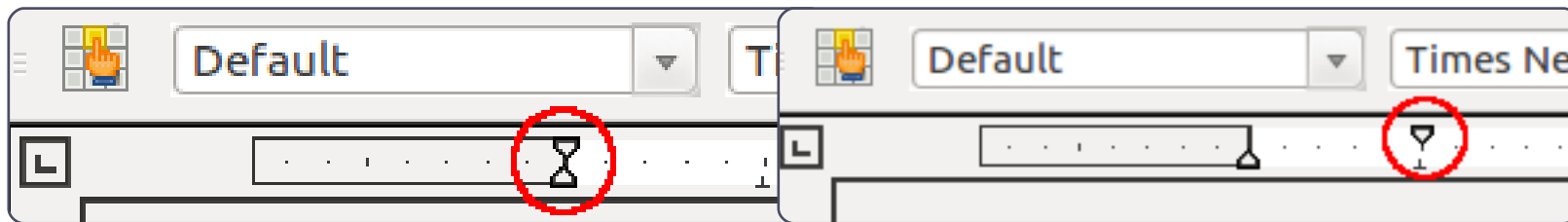


Let's change the formatting of our date. Double-click the date, and a dialog window (above) will display showing the different options for displaying the date. Select the one you want and click OK.



We need to right-align our date, so, find the alignment icons on the



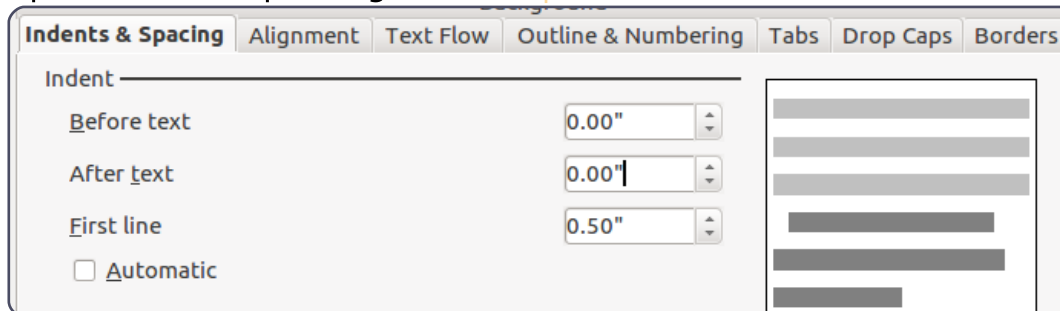


formatting toolbar, and click on the right-align icon. Our date will move to the right margin. Use the End key on your keyboard to move to the end of the current line, and press Enter. We don't want to stay right-aligned for a new paragraph, so click the left-align icon to move the start of the paragraph back to the left. Type in your salutation and press Enter.

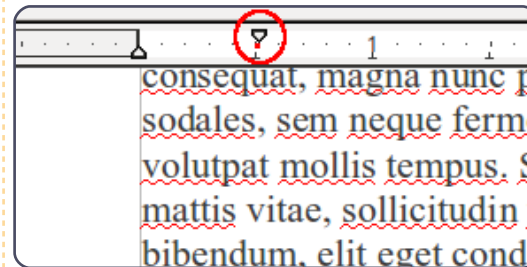
For the body paragraphs of our letter, we want to indent the first line of each paragraph. When you are not concerned with accuracy, you can apply the indentation using the horizontal ruler. On the horizontal ruler, you will notice two triangles on the left margin (above left and right), one pointing up and the other pointing down.

The bottom triangle - the one pointing up - manually adjusts the left indent for the entire paragraph. You will note there is one just like it on the right, which is used to adjust the right indent for the paragraph. The top triangle on the left - the one pointing down - adjusts the paragraph's first-line indent. Click on the top triangle and drag it to about 0.5" (1.27 cm).

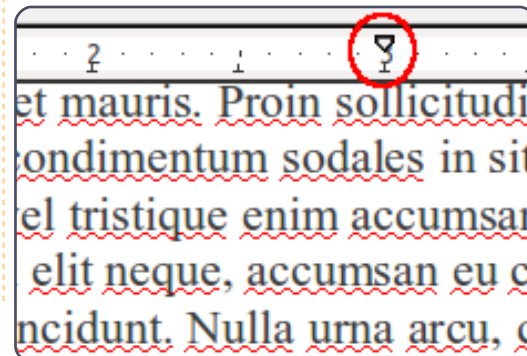
If you need more accurate indents, you can access the paragraph style dialog (below left) by double-clicking on the gray part of the horizontal ruler. You can also access the paragraph style dialog by going to Format > Paragraph. Here you have many options for formatting your paragraph. Today, we are



concerned with only the first line indent, so change First line to 0.5" (1.27 cm). Click OK. You will notice the top triangle (first-line indent, shown below) has changed to the position you gave it in the dialog.



Now, we can type our paragraph. Type in your first paragraph, and press Enter. Notice that the next paragraph is indented just like the previous one. Writer will use this paragraph style until we tell it to do differently.



Once we have typed the body of our letter, we need to add a signature block, but we don't want our signature block the same as the rest of the body paragraphs. Using either the drag method or the paragraph style dialog, change the indent to 3" (7.62 cm). Now, type in your closing and press Enter. Rather than typing in your name, let's use the name field to insert your name. This will work only if you filled out the User data in the options: Insert > Fields > Author. Your letter is now done, and you can print and send it.

While manual formatting is okay on small documents, larger documents need more control. If you decide to change the formatting of paragraphs on a larger document, going through each paragraph and changing the style is tedious. In a larger document, we will need a way to change all like paragraphs at once. Next time, we will talk about using styles to accomplish this.



HOW-TO

Written by Kevin O'Brien

Ebook Software In Linux

I have become quite a fan of E-books. They have a number of great advantages: they are generally cheaper (in some cases free), they don't take up space, and are highly portable. Right now I am carrying a couple of dozen books around with me at all times. You can't do that with dead trees!

You might have thought that you would need expensive equipment and software to enjoy E-books, but that is not the case. With readily-available software, you can manage and enjoy E-books on your Ubuntu computer, and add them to portable devices such as an Android phone. I am going to show you how I do it in the U.S.

Calibre: The Desktop Solution

The first piece of software you should have in your arsenal is Calibre (<http://calibre-ebook.com/>). This is billed as "the one-stop solution to all your E-book needs," and it is pretty close

to being that. It is cross-platform, being available for Linux, Windows, and OS X. You can download from the site, or install from the Ubuntu repositories. But note that this program is under active development, and the version in the repositories is not maintained, so it is likely to be behind the most current version. As I write this, for instance, the repository version is 0.7.18, while the latest version on the Calibre Web site is 0.7.42. As a regular user of this program, I can say that I almost never open it without getting a notification that a new

version is available. So I would advise downloading it from the Web site. It is written in Python, so you will have a dependency, but most people will already have the required packages on their system. (It needs python >= 2.6).

What do you get when you install Calibre? You get a collection manager, a format converter, the ability to download and add metadata, syncing to e-book reader devices, and a reader capable of handling just about every format out there that is not DRM-restricted. It can also act as a

Web server - letting you access your collection from any Web browser over the internet. This is a great deal, since it is free and open source, but, if you like it, there is a "Donate" button on the Web page, and I clicked it to donate \$10 and I would encourage anyone using the software to support the development of this software.

Create your library

When you run Calibre for the first time, the "Welcome Wizard" will give you an initial setup, with a library in your /home directory.



HOWTO - EBOOK SOFTWARE IN LINUX

You can add books by copying the file into that directory and then clicking the “Add books” button. Calibre will take each book and copy it into a directory and create a database entry for it. You can add books to the library in a wide variety of formats: CBZ, CBR, CBC, CHM, EPUB, FB2, HTML, LIT, LRF, MOBI, ODT, PDF, PRC, PDB, PML, RB, RTF, SNB, TCR, TXT. And you can convert these files from any of these formats to a somewhat reduced list of output formats: EPUB, FB2, OEB, LIT, LRF, MOBI, PDB, PML, RB, PDF, SNB, TCR, TXT. This can matter when you get to syncing or transferring your e-books to a reader device. Also note that the conversion process will result in two files, since the original is also kept.

Once you have added the books, you may want to add metadata. A lot of the free e-books available are simple text files - without covers or added information. You can right-click on any book in your library, select “Edit Metadata”, and get going. I usually do this for each book individually for greater control, but you can edit them in bulk for books in a series, and then add individual data later. When you

edit the metadata you get this screen:

You can type in information for the fields on the right side of the screen, but often that information is already available online. If you click the button on the bottom, “Fetch metadata from server”, it will find any data available from Google books, and, in addition, you can get a free account at isbndb.com to give you even more information. For recently published books, you can get the precise edition info from the ISBN, or, for older public-domain works, you can choose from a variety of editions to get your metadata and covers.

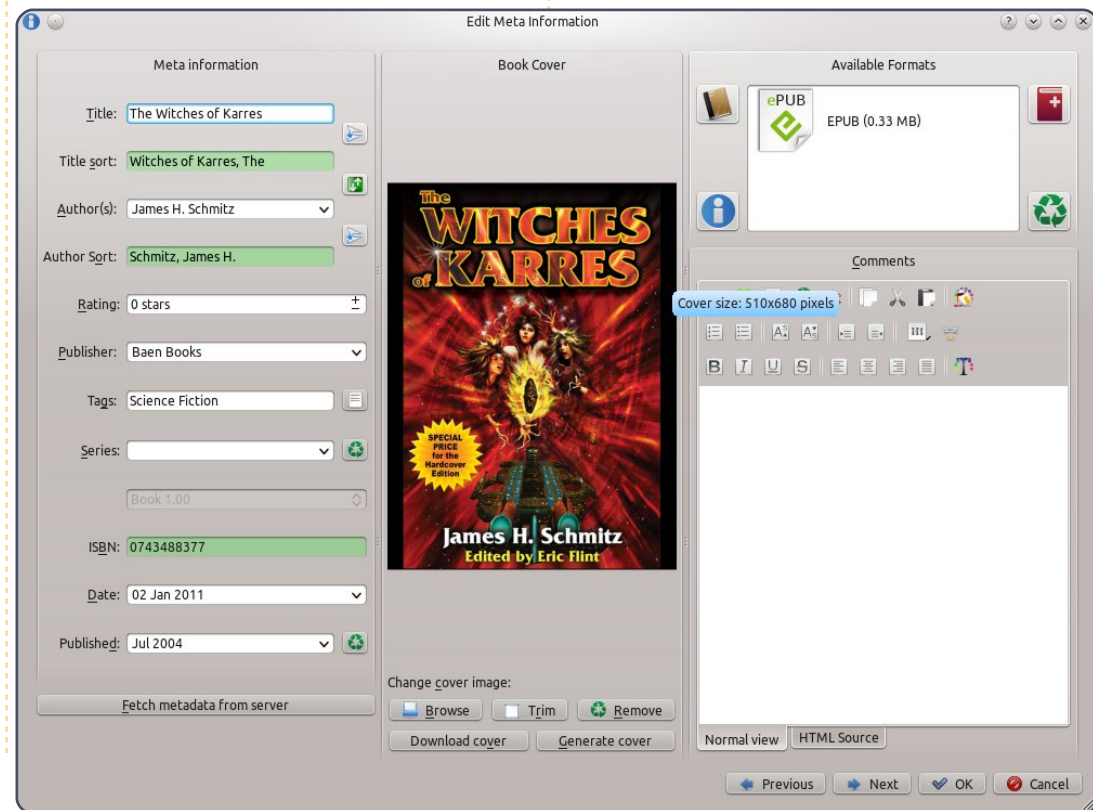
E-readers

You may have heard the saying: “Q. What is the best digital camera? A. The one you have with you.” I think the same thing can be said for E-readers. Calibre is great for building and managing your library, but I don't really read anything with Calibre because I have to be at a computer to use it. I suppose that would work if you have a laptop you take with you everywhere, but I prefer

something lighter and more portable. There are dedicated E-reader devices like Amazon's Kindle and Barnes and Noble's Nook, and, if you want to go that route, you need to be aware of a couple of things: they are proprietary and they are restricted by DRM. Any e-book you buy from Amazon will work only on a Kindle or on Amazon's Kindle software. The same is true of Barnes and Noble. And their readers and software handle different formats. Amazon's Kindle does not read

EPUB, which is one of the most common formats. But Nook favors EPUB. It is things like this which make Calibre's ability to convert between formats so valuable.

While these readers are valuable, I have found it most convenient to do my reading on my Android phone, because it is always with me. Aldiko is available in the Android store in 2 versions, free and paid. The developers (<http://www.aldiko.com>) say that the free version is ad supported.



Since the paid version was only \$2.99, and I like to support developers, I bought it once I knew I would keep using the software. However, I know that the ability to purchase apps from the Android store varies in different countries. Aldiko is available for any Android phone running Android 2.1 or greater, and is quite intuitive.

To begin, you need to transfer books to your Android phone. Connect your phone with a USB cable, mount your SD card as a USB device, and copy the books you want to read to the ebooks/import/ directory. You can then import the books from within Aldiko using the Menu button from the main screen. Aldiko can read books in the EPUB or PDF formats as long as they are not DRM-restricted. But the latest version (2.0) does add support for Adobe DRM if you have files with that restriction. Once imported, the books appear in your Library, and you can begin reading. Tap the home button on the upper left of the screen, select "List view", or you can use the drop-down on the upper right to select "Books by Title". Find the book you want, and start reading. You can move from page to page with a sidewise

swipe. If you close the application and come back later, you can open that book at the exact spot you were in when you closed it.

Once you have Aldiko on your phone, you will find it is very convenient. Any time you are stuck in a queue or in a waiting room, you can just pull out your phone and get a little reading done. I would not sit down to a long winter's evening by the fire and read on my phone, but I find I knock off a book a week on my phone just by using those otherwise wasted moments.

NEXT MONTH:

How to obtain ebooks legitimately for your ebook reader.

EXTRA! EXTRA! READ ALL ABOUT IT!



THE PERFECT SERVER SPECIAL EDITION

This is a special edition of Full Circle that is a direct reprint of the Perfect Server articles that were first published in FCM#31-#34.

<http://fullcirclemagazine.org/special-edition-1-the-perfect-server/>

Full Circle Special Editions Released On Unsuspecting World*



PYTHON SPECIAL EDITION #01

This is a reprint of Beginning Python Parts 01 – 08 by Greg Walters.

<http://fullcirclemagazine.org/python-special-edition-1/>

* Neither Full Circle magazine, nor its makers, apologize for any hysteria caused in the release of its publications.



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).

Write your article in whichever software you choose. I would recommend OpenOffice, but **PLEASE SPELL AND GRAMMAR CHECK IT!**

Writing

In your article, please indicate where you would like a particular image to be placed. Please do not embed images into your Open Office document.

Images

Images should be JPG with low compression.

Regarding image sizes: if in doubt, send a full size screengrab and we will crop the image.

If you are writing a review, please follow the guidelines shown here.

For a more detailed list of the style rules and common pitfalls please refer to: <https://wiki.ubuntu.com/UbuntuMagazine/Style> - in short: US spelling, no l33t speak and no smilies.

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

If you can't write articles, but hang out in Ubuntu Forums, send us interesting forum threads that we could print.

Non-English Writers

If your native language is not English, don't worry. Write your article, and one of the proofreaders will read it for you and correct any grammatical or spelling errors. Not only are you helping the magazine and the community, but we'll help you with your English!

REVIEWS

Games/Applications

When reviewing games/applications please state clearly:

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

Hardware

When reviewing hardware please state clearly:

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

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



There's more to file systems than the descendants of our Unix ancestors. A plethora doesn't even begin to describe it. Why do we care? Sadly, we don't live in a Linux bubble - unenlightened colleagues, family, and friends insist on using other non-native file systems with which we often need to interact. The biggest? Microsoft blessed us with FAT and NTFS, while Apple gave us HFS through the Macintosh.

Chewing the FAT

We mentioned MS-DOS last time, but not the actual file system underpinning it: the most limited, but most ubiquitous file system, FAT. So named after the File Allocation Table, which provided the file index, it is more accurately the translation table that maps file contents to storage locations on disk.

Neither FAT16 nor FAT32 (having sixteen- and thirty-two-bit address spaces) are journaled, neither have access controls, but,

thanks to their use by Microsoft, VFAT and FAT32 rode the Windows 95 and 98 desktops to world domination. They became the default file systems for flash RAM devices - digital cameras, USB memory sticks, and the like. Small and highly portable, they work adequately on those devices and in embedded applications, which is why we need FAT-support in Linux, if we want to plug in standard cameras, music players, and other portable storage devices.

FAT16's simplicity (or lack of features) is its strength, and weakness. This gave us the legacy of eight-character filenames, with three-character suffixes denoting the file type. You think Twitter is a challenge, you have to be very clever to get a meaningful file name in 8 characters, and be very organized with your folders - named in eleven characters or less. Imagine how overjoyed we all were when we got long filenames - up to 255 characters - and large-disk support in VFAT (Virtual FAT) and FAT32. Large partitions mostly worked fine once created.

However, some software wouldn't allow creation of FAT32 partitions larger than 32GB, including, notoriously, the Windows XP installation program.

You really don't want to use either for your desktop file system any more. Even with a redundant backup copy of the FAT itself available to provide some kind of data security, FAT file systems are far too fragile and liable to corruption. They need regular health checks and defragmentation in order to maintain any kind of performance.

NTFS arrived with Windows NT (standing for New Technology, which it wasn't). NTFS remains the current Windows file system, widely used for work groups, and shared file serving over local networks. This one is journaled, has solid access controls, and is based on Novell Netware. It gives you a lot of networking file-sharing operations, large volume support, and decent performance, but it's still unique to Microsoft. More importantly, there is open-

source NTFS support in Linux. It enables you to access your Windows disks and create new NTFS partitions when you need to administer Windows disks or create compatible shared folders. The Samba suite of file-sharing tools in Linux provides most of the infrastructure you need to run Windows shares day-to-day without needing a Doctorate in file systems. I hardly ever manage to break NTFS. Hardly.

I doubt you'll do much technical support for family and friends (and as their tame 'computer enthusiast,' you will do technical support for family and friends) without contact with NTFS.

Apples is Apples

Apple's own HFS, Hierarchical File-system, also called Mac OS Standard, used on Macintosh computers (or other systems running Mac OS), has now evolved into HFS Plus, or HFS+, or Mac OS Extended (but not, apparently, "HFS Extended," which is wrong). If only they would make their mind

up. HFS Plus is also one of the formats used by the iPod digital music player.

As another descendant of Unix file systems, HFS Plus has all the smart features of journaling, access controls, meta-data, aliases, and symbolic links. But being Apple, they do things just a bit differently from everyone else. Parts of the original HFS used to break easily and frequently, thanks to the lack of journaling. HFS Plus is a bit more elegant.

If you have, or need simply to talk to, a Mac, the Linux kernel supports basic reading of HFS and HFS Plus. However, journaling support, which is needed for writing to HFS, is nearly non-existent (too many licensing and patent issues). By default, most modern Macs using HFS Plus have journaling enabled, and you really don't want to disable journaled writes from Linux on an HFS Plus partition.

Mac OS also supports Universal File System (UFS), which is based on the Fast File System (FFS) of BSD 4.4, so it's a serious industrial strength journaling file system, but with less meta-data. I'm

thinking life is too short to breakdown another flavor, and it's getting close to my bed-time.

Dead End Canyon

As a side-note, IBM tried to compete with Windows when it launched OS/2, using HPFS or High Performance File-System. It was a high performer for its day, but nobody used it.

Shiny, shiny

I'm almost embarrassed to include those shiny round things – optical media.

ISO9660 is a CD-ROM file system type conforming to the ISO 9660 standard. Support for CD-ROMs and ISO images is, thankfully, well supported in Linux. You can copy and mount ISO images from almost anything using the command-line or point-and-click GUI-utilities. It's the surest way of moving data from one machine to another - or at least it was, until optical drives went out of fashion.

UDF is the Universal Disk Format, which it isn't. UDF almost

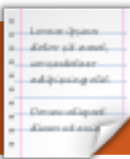
took off as a standard. You could use it to burn re-writable optical media with a 'normal' file system that you didn't have to finalize (close) or create multiple sessions. In theory, UDF disks could be used like high-capacity floppy disks. In reality, the differences in optical re-writer drive hardware and Windows support across the versions meant you could easily trash the equivalent of the file allocation table, particularly when you deleted files. Many CD-ROM drives had trouble reading them, open or closed. Linux doesn't have nearly the same problems. It's just

that using optical disks this way is painfully slow.

Conclusion

This rounds off the long, long list of file systems you may see or touch in the course of Linux computing. The sharp-eyed will be asking about the one I've missed: NFS. I haven't missed it. The Network File System isn't really a file system, it's a protocol for file-sharing, like (but not actually like) Samba. Maybe there's a how-to article in that one.





MY STORY

Written by C. F. Howlett

I stumbled onto Ubuntu at around release 7.04. I wasn't looking to broaden my horizons, but I happened to be rebuilding a Dell desktop with Windows XP following a catastrophic hardware failure. My initial exposure to Ubuntu was this:
<http://blog.seattlepi.com/microsoft/archives/114866.asp>. I did some research and requested a shipit CD.

Installation proved quite interesting. I don't recall that I ever got the modem to work, so I missed the on-line Ubuntu experience. As a new dual-booter, I caused myself no end of grief. Eventually, I had learned a bit and continued to be interested, but I decided that Ubuntu wasn't for me. At least I could keep the Windows box working – for the most part.

A year later, I purchased my first laptop computer. I ordered another shipit CD, and, with a little effort, got Wifi working. What a refreshing change from Windows! I

particularly enjoyed the IRC channels and found answers to some of my most vexing configuration problems. I even configured a dual-boot via wubi. I was quite happy to learn that Ubuntu had improved dramatically since I had last looked at it. Sadly, my laptop died prematurely.

For a year, I relied upon my dual-booting desktop. I purchased a new laptop in October 2009, and installed Ubuntu 9.10 next to Windows 7 via wubi. Unfortunately, the infamous grub/grub2/wubi bug bit me – hard. Try as I might, I could not get Ubuntu to boot, and I was scared to upgrade to a non-wubi dual boot. I spent the next few months quite discouraged with Ubuntu, and impatiently awaited a Canonical solution. During that time, I came across articles describing methods to install OSX via Linux tools. (Mea Culpa. Forgive me, I don't mean to offend. I'm neither a Linux zealot nor heretic – I'm an OS agnostic.) I learned that some people were TRIPLE booting. Color me impressed.

Suffice to say, I couldn't resist the challenge. It took a few months to work it all out, but I learned more about Linux than ever before. As of 02/10, I have had a fully functional Dell 1545 laptop which offers my choice of Ubuntu Studio 10.04, Windows 7, or OSX as boot options. Even with such choices, I use Ubuntu 90% of the time.

My next challenge was to recover much needed HDD space by shrinking my Ubuntu system partition from 60 gigabytes to 10 . Upon completion, the system wouldn't boot, but a quick reboot from the CD allowed me to update Grub. All was right with the world again.

I recently got serious about pod-casting. I've been in deep study of Audacity and the other multimedia tools in Ubuntu Studio. Last week, I suffered an OHE (Operator Headspace Error) and removed something critical that impaired my audio rendering capability. Both command-line and

Software Center re-installation efforts failed due to broken packages. Under time pressure, I decided to reinstall Ubuntu.

Following ample instructions from FCM and on-line, I re-jiggered my existing partitions and accounts without data or configuration loss. Upon booting my refreshed system, I found that my files were read-only. I guess I read about that scenario somewhere because the solution soon came to me. I selected the /user folders and changed the permissions to read/write. Problem solved! Ubuntu has given me the confidence to resolve such previously insurmountable challenges with peace of mind. Ubuntu's evolution has enhanced my computer understanding, use, and enjoyment, immeasurably. I look forward to booting the next LTS release, Buff Buffalo (hint!), in 2012.



Internet piracy and copyright infringement on-line is rife, even though the glamor of reporting it has diminished sufficiently for it to have almost dropped away into obscurity (except for the odd tale of someone else being sued by this or that group). The old way of doing business in the music industry sees the industry trying to keep control over who owns what, and who is allowed to do anything with something they thought they owned. It is not working. A clear message over the past few years has been: "Something has to change."

When faced with rules, conventions, "laws", there are two main ways of circumventing them. The first, and the most common, method is to break them (which tends to come with adverse consequences). The second, mostly used by visionaries and great leaders, is to change them.

The story of FOSS (Free and Open Source Software) is a shining example of how people have

brought about change by changing the rules of the game, rather than breaking them. For anyone unfamiliar with the old way of doing things, and the changes that occurred, there is a great book called *The Cathedral and the Bazaar* by Eric Raymond (<http://www.catb.org/~esr/writings/cathedral-bazaar/>)

Here now is a new story about change in the making, inspired by the FOSS philosophy, about a group of people "hell bent on changing the music industry"... a band named **Severed Fifth** (<http://www.severedfifth.com>).

Now, typically in an article of this nature - in a magazine like this - you would expect a lot of technical detail about the plethora of FOSS software being used by the band instead of the more mainstream proprietary software, but alas, these tasty topics will have to be the focus of other articles; here we will look at the philosophy the band is advocating.

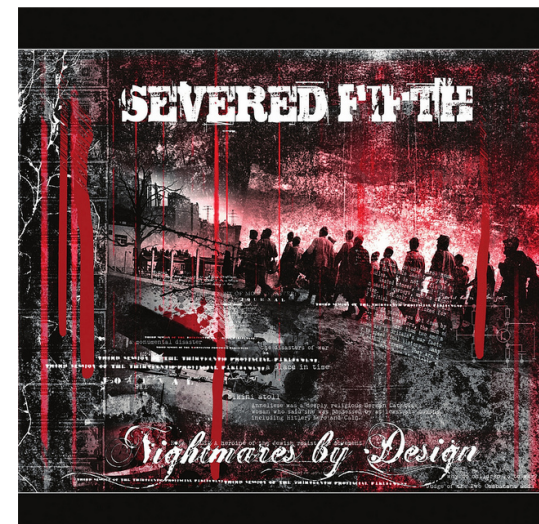


From the website:

"Founded by Jono Bacon in 2008, Severed Fifth blends together Bay Area thrash with British metal, all the while infusing their wide range of influences, and delivering a tight, competent, rhythmic attack that has a constant heavy undertone. If you like metal, you are going to like Severed Fifth."

"Severed Fifth is not just another metal band though, for they are changing how the music industry works. Led by the philosophy of its founder Jono Bacon, Severed Fifth makes all its music freely available under a permissive license, helping to bring their fans closer to the band, and encouraging fans to use Severed Fifth content in their own creative work. Severed Fifth's vision is of a music industry that is fairer for bands and fans".

Now for those unfamiliar with Jono Bacon, he is the Ubuntu Community Manager, and also the author of such works as *The Art of Community* (<http://www.artofcommunityonline.org/>) - a guru of community if there ever was one. Together with Jim Adams, Ron Crockett, and Ben Gibbs, he formed Severed Fifth, which needs us to help bring change to the music industry.



Just like GNU/Linux has grown from strength to strength - with support from communities the world over - Severed Fifth is slowly growing a community of fans world-wide, connected by a shared enjoyment of the music the band makes, and being united under a common philosophy of change.

In Jono's own words:

"The main goal I have with Severed Fifth is to begin a groundswell of interest in the music world by creating a successful example of a Free Culture band that is successful using:

- *Freedom of access to the content (this enables fans to share the music, and helps get more people interested in the band)*
- *Growing community (our community is at the heart of everything we do - and we are growing the global Severed Fifth Street Team and the Regional Street Teams to help with this) - our community contributes in so many ways, and*
- *Encouraging people to remix and use the content in their own projects - we have seen examples of this in YouTube Videos, in video games, and more."*

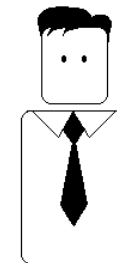
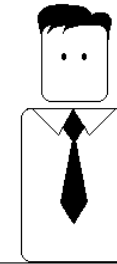


Examples of fans using Severed Fifth songs, and samples of their songs, have already surfaced - from ring-tones to songs featuring in a video game. The universal appeal of community can be seen in Street Teams springing up across America, in the UK, Germany, even in places like the United Arab Emirates.

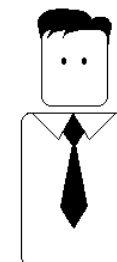
Jono continues to sum up Severed Fifth as follows: *"The plan is fairly simple - make Severed Fifth a successful example of a Free Culture artist - so that other artists can point to Severed Fifth and say 'if those guys can do it, so can we!'"*

The FOSS movement has not completely changed the way the software landscape looks, but it has definitely changed the rules enough to make it look a lot different, and with bands like Severed Fifth, and a host of other like-minded individuals marching forth in unison, who knows how different the music industry will look in a couple of years. And in both these cases, be it FOSS or a band like Severed Fifth, there is something that each and every one of us can do: join the community, share in it, and help shape the future.

9 out of 10 experts recommend that you download IE9.



So that you can really appreciate Firefox 4.



MORE UBUNTU!

Can't get enough Ubuntu?
We've got a whole lot more!
DON'T MISS ANOTHER ISSUE!

Ubuntu 10.04
Kubuntu 10.04
on a double-sided DVD

ubuntu 10.04 Lucid Lynx

UBUNTU
user
EXPLORING THE WORLD OF UBUNTU

TOTALLY LUCID

THE LYNX LEAPS
What's new in Ubuntu 10.04?

HUGE SAVINGS OFF THE NEWSSTAND PRICE!
SUBSCRIBE NOW!

TUNEUP FOR STARTUP
Find out why Lucid boots faster

Getting around in Launchpad
New ink: Exploring OpenOffice 3.2
Create your own e-books

DISCOVERY GUIDE



WWW.UBUNTU-USER.COM/SUBSCRIBE-NOW



REVIEW

Written by Robert Szabo

Piano Booster

Piano Booster (<http://pianobooster.sourceforge.net/>) is a great, open-source, piano-teacher program.

You can load any MIDI file. PB will play it, and wait for you to push the right keys on your MIDI keyboard.

It has a brand-new, Light-Key or Guide-Lamp feature supported since January, which is extremely useful and fun to play and learn.

Background

This lighting keyboard feature was of interest when I started to search for a MIDI keyboard teacher program. I found two alternatives, synthesia and karakeyoke. Both of them support Light Keys, but are shareware, and not Linux although, to be honest, you can run them both with Wine without any special configuration.

Finally, I found Piano Booster, created and managed by Louis Barman, UK. His intention was originally to teach sheet music, by showing scrolling musical notes on screen and waiting for you to play those exact notes on your MIDI

device. It has many help features, for example to slow down music, repeat, transpose, and so on. I found it the best program to start with, but (at that time) there was no light keyboard yet.

The Story

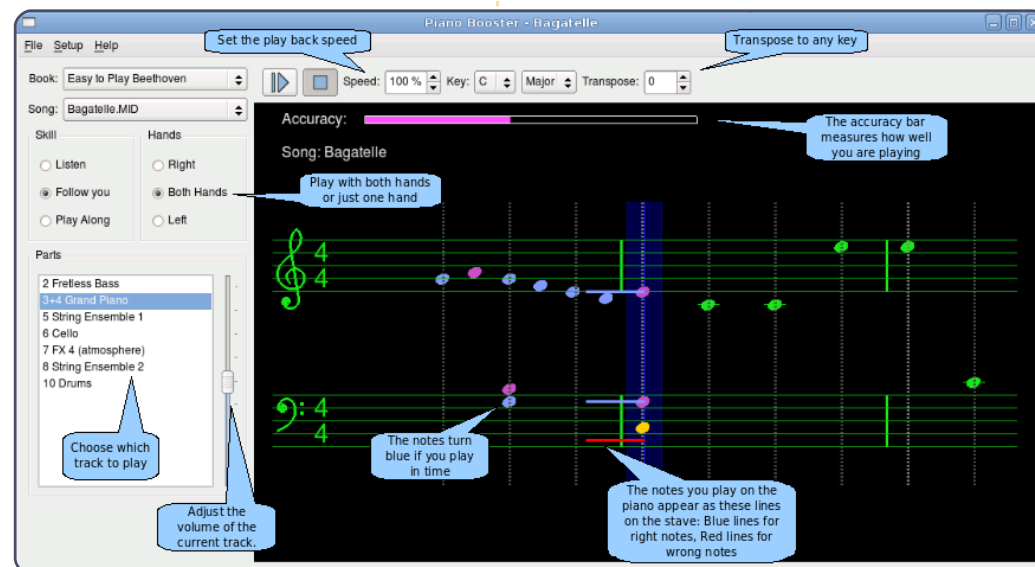
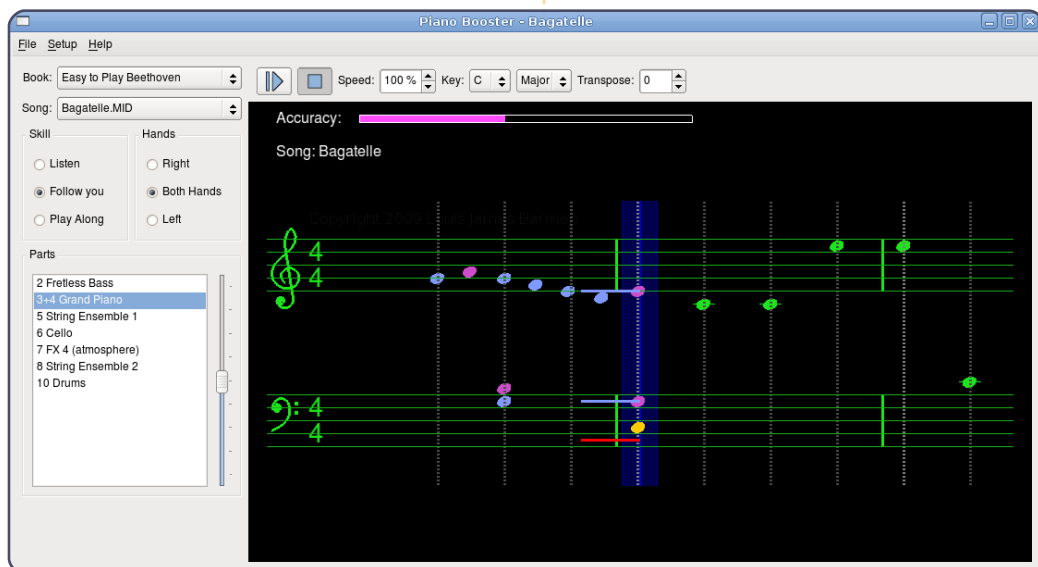
People wrote requests on the forum to ask Louis for this feature, but he was unwilling to add it. Eventually he changed his mind and started to support the Light-Key / Guide-Lamp function. Within a few days he made full-working Light-Key support for Piano

Booster!

Piano Booster is great, incredibly small, and compiled on Linux as native. OSX and Windows are also supported.

MIDI Keyboards, cables, etc.

If you're in the middle of the selection phase, I recommend synthesizers that have LED lamps below the keyboard. Some of them are under 200 USD. Some examples: Yamaha EZ-200, Casio LK 220, LK-300 TV, and LK-43.



REVIEW: PIANO BOOSTER

Now I run Piano Booster on my 12 year old Fujitsu Stylistic C500 tablet, and connect to my MIDI keyboard with a cheap USB to MIDI converter cable

(<http://www.dealextreme.com/p/usb-to-midi-cable-with-16-midi-input-output-channels-1-8-meter-11277>).

My tablet PC and Yamaha EZ200 have built in batteries, so no further power supply is needed and therefore it is absolutely portable.

On the tablet PC, I use the Ubuntu Lucid-based Puppy Linux, which is much more suitable for a weak old machine like mine than the Ubuntu desktop version which

uses more resources.

9/10

Good:

- Free
- Easy to use
- Low resources required

Bad:

- Some small bugs
- Sometimes slow forum response.





You Missed One!

I find it strange you picked 3 apps that are based on Lilypond, yet didn't mention Frescobaldi. Even stranger that you ignored Musescore.

Ludo

Happy Anniversary!

I'm surprised to find that it will be seven years, this March, since I began using Ubuntu.

I started using it because I was fed up with Windows, and the upcoming launch of Vista which made it even more restrictive than XP.

So, I decided to take a close look at Linux. At the time I wasn't sure which distro to get, but a chance viewing of the now defunct TV show "The Screensavers" did a segment on different modern distros of Linux, and they talked about, and displayed, Ubuntu.

The things that grabbed my attention were:

- 1) Free shipping via Shipt
- 2) It came with a Live CD to try before installing, and:
- 3) It only required one CD to install (minus the Live CD which was separate in those days)

I immediately ordered the free CD via Shipt and within a few weeks it arrived, and I've not looked back since. Yes, over the years there have been a few problems, such as those early years of having X crash and having to battle/learn the command line, and configuring x.conf in Vi was scary at first. Not to mention codec installations, also, pulse audio, flash plugins etc., but the community was there to help with articles, and Ubuntu has itself improved over the years. Since 6.10 I haven't had X die on me.

All that's missing from desktop Linux I believe is gaming. Yes we have loads of free and indie payware games but we need to get the big names to come to

Linux and if they follow then the other commercial apps will.

Dougn Redhammer

Ebook Genetics

Thank you so much for giving us such a great magazine to read. I really wait for new ones to come out. Although I am just a noob, I thoroughly enjoy your Magazine, especially the parts which are not about programming. I am a researcher in the fields of Genetics. Maybe you include something for me sometime?

One more thing. I have an Amazon Kindle. And like me eReaders are getting more and more popular. I would love to read the Full Circle magazine on my Kindle some day but that would only be possible if it comes out in an eBook friendly format like ePub or mobi, etc. Will that ever be possible?

Saurabh

Join us on:



Ronnie replies: *Unfortunately I'm not sure which F/OSS software is used in genetics, and since I'm not qualified in genetics I'm probably not the best person to review scientific software. So, the call goes out to all you scientists out there, genetics or otherwise, if you use a piece of free or open source software in your research please write in with a review of your favourite application. Better still, send in an article on how your project uses F/OSS software. Regarding ebook format, unfortunately I don't have enough free time to create several editions of FCM, so I can only recommend a piece of software such as Calibre (<http://calibre-ebook.com/>) which can convert between most ebook formats. If anyone creates ebook formats each month, email them over and we'll put them on the site.*

HEEEEEEEELP!

Full Circle magazine is great! I really like all the changes you've made, the special series and the broad spectrum of information it contains. I am getting more and more interested in contributing - not sure where you need the most help though. Thanks for all you do with it!

Joel Kilthau

Ronnie replies: *We're always looking for new articles, single articles or entire series. I always recommend writing articles on whatever application you feel most comfortable using. You never know, your one-off article may end up being a series, or turn people to an application they never knew existed.*

No Copy & No Paste

I've been wondering why you can't cut and paste from the FCM PDF's. I can't do it even with other PDF viewers. Not on Unix, not in Arch, not at work, not at home, even other Ubuntu

enthusiasts can't.

But, in the Python special you can select, and cut and paste everything. Within FCM#46 you can't cut and paste e.g. the email address from page 37.

Cornelis

Ronnie replies: *I've no idea why you're having problems using copy and paste with the FCM PDF's. I've just tried to copy and paste from FCM#46 (using KDE) and it worked fine, no problem at all. The special edition PDF's are different since they are cobbled together from several other issues using some sort of black magic courtesy of Robin Catling. If anyone else has problems using copy and paste please let me know.*

RadioTray

I'm currently dual booting Ubuntu 10.10 and Windows 7 on a Dell Inspiron 1750, but I've dabbled with Linux since RedHat introduced a GUI installer back in the 1990's.

One of my must-haves in every

Windows installation that I use has been Screamer Radio. This little program plays Internet radio and nothing else. For years I've used various Linux apps that either had Internet radio as an after thought, or bug-laden apps that did not work at all.

All that has changed, since I found RadioTray

(<http://radiotray.sourceforge.net/>). It does everything I want in a streaming radio app, and I look forward to its continued development.

The only thing keeping the Windows 7 installation on my computer is Netflix.

Craig Anderson

History revealed: February 17th, 1011 - The world's most used password makes its debut...



Modern Times



UBUNTU WOMEN

Written by Elizabeth Krumbach



Elizabeth Krumbach: Please tell us a little about yourself.

Flavia Weisghizzi: I'm Flavia Weisghizzi, I'm a 34 years old, and I live in that wonderful melting pot called Roma, Italy, where I was born, and from where, maybe, I'll fly away someday. I'm a writer, I write poems and critical essays about literature. I also work as a freelance journalist and radio speaker. Recently, thanks to Ubuntu, I have become a conference speaker too.

That said, you can argue that the story of my involvement with Ubuntu and FLOSS is really original. Everything began in 2001, the first time I wrote for an online magazine. They asked me to write something for IT News about an alternate office suite called StarOffice (yes, it was pre OpenOffice.org age). Here I learned about the FLOSS philosophy, and I was definitively attracted by its sense of freedom.

EK: What inspired you to get involved in the Ubuntu community?

FW: On my first attempt I tried to approach the Linux OS as software to use, but it was really hard for a girl who had studied Italian literature as her main field to install it without help. But I continued reading about open source and Linux. The year 2007 marked a turning point in my life: my Windows XP decided it was its "time to die"... taking a full month of my work with it! My boyfriend brought me a Live CD of Ubuntu 7.04, and so a Feisty Fawn slowly started to run on my PC, allowing

me access to all my work and documents!

It has been love at the very first glance!

After the installation of Ubuntu, it seemed obvious to me to look at the Italian community, and to take my first steps in the IRC channels. I felt at home. Some weeks later, I thought it would be nice to give a helping hand to the community, so I asked to join the translation team. That time saw the release of the first issue of Full Circle Magazine. I also joined its translation team. Coming from publishing, I could share my skills and my working experience.

I initially supposed that simply having communication skills would be useless in a software-oriented community, but I was wrong.

During the release of Ubuntu 8.04, I became the Media Relations Coordinator for the Italian LoCo Team, and I coordinated the Media Relations project, which aims to spread the spirit of Ubuntu

beyond trade magazines in Italy.

It was a success for us. In fact, our community has been hosted many times by national broadcasts. Telling my story is important, because I believe too many people are shy, and underestimate the contributions they can give to the Ubuntu community.

EK: What are your roles within the Ubuntu community?

FW: At the moment, I'm a member of Italian LoCo Team Community Council. Of course, I still take care of Media relations, and recently I started to promote, together with Silvia Bindelli, an Italian branch of the Ubuntu Women project.

When I landed in Ubuntu (yes, landed), I had heard about this project, but there wasn't a local branch. At that time, there were two main ways to get help with my OS-related issues: connect to the the IRC or the forum, and chose between asking in the Italian LoCo team support channel in my own language, but in a male-dominated

environment, or asking in a women-related channel, but in an "alien" language (not simply English, but English applied to computer science). Here in Italy, we have some problems about how women are received in many work environments, and, unfortunately, this pertains also to open source. There are too many prejudices against woman, not only from men, but also from many women. With this in mind, I hope to be able to enhance the status of women in the field of open-source software.

I'm able to write, and I'm comfortable with public speaking. I've published (with Luca Ferretti, a member of the GNOME Release Team) a couple of books about Ubuntu, and I'm often asked to speak in conferences or round tables about Ubuntu and FLOSS.

EK: Is there anything you haven't done yet, but would like to get involved with in the Ubuntu community?

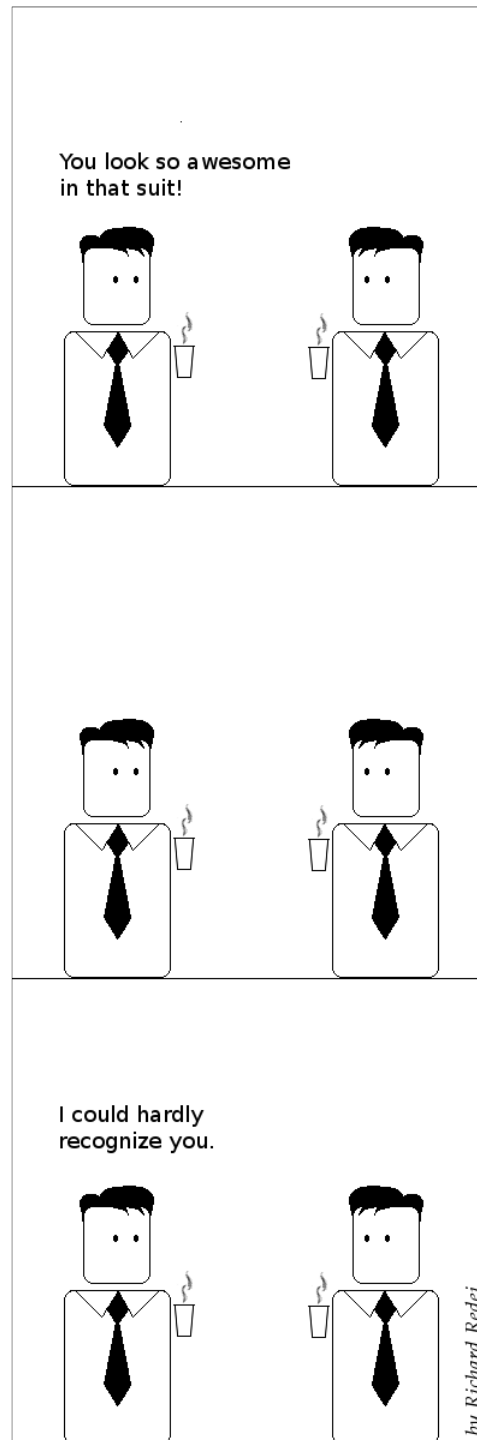
FW: Oh many, many things! But, first of all, I'd like to participate in an UDS! I'd like to be face-to-face with the people who build Ubuntu and whom I may know by their names or nicknames.

As a Media Relations Coordinator, I think it would be much more useful to spread out a single press-release announcement, one shared between all local groups and Canonical. This would give more effectiveness to the news.

Finally... I want to make a package! Only one, just to say I've done the dirty work!

EK: What other things are you interested in outside of open source and Ubuntu?

FW: I'm interested in poetry. I teach creative writing, and I love reading and writing poems. I'm a curious woman, enchanted by everything strange and new. I like to observe the small things in the world, because I believe from the small things could come great changes. I like the theater. Recently, I've been studying Yoga Philosophy. You can find more about my ideas and my poems in Italian on my long-time running blog at <http://weisghizzi.ilcannocchiale.it> or in English at newborn Code Is Poetry at <http://deindre.wordpress.com/>



Full Circle
Podcast

Full Circle Podcast

In episode #17:

- * **Review:** FCM#46.
- * **News:** U-Cubed, Ubuntu 11.10, and more!
- * **Gaming:** Vendetta Online, and Assault Cube.

File Sizes:

OGG 41.3Mb

mp3 32.9Mb

Runtime: 1 hr 17min 26seconds

<http://fullcirclemagazine.org/>

Full Circle Podcast is a proud member of the Tech Podcasts Network.



There are not many native MMOs available for Linux. It's definitely an area where developers could expand into. There is a dire need for online RPGs and RPGs in general to become available on Linux, so, when one comes along, it's a breath of fresh air. Vendetta Online is a first-person action Sci-Fi MMORPG, which allows players to interact as the pilots of spaceships in a large universe. VO is a cross platform game - available on Windows, Mac and Linux.

VO is set in the future where there is an ongoing war between two factions to control the universe. There are three factions in total; players must decide which faction to join. The Itani Nation and Serco Dominion are in an ongoing war, while the Union of Independent Territories are a neutral faction. There is no real in-depth lore or story line to follow; it's just a massive war between the factions of the universe.

The factions in VO are heavily integrated into the missions and PvP parts of the game. As soon as you start VO, you're thrown into a decent tutorial showing you how to play VO, and introducing you to the three main skills in VO: combat, mining, and trade. There are missions for all three skills, and are all-important to your character progression. Combat plays a huge role for all the PvP content available, which mainly centres around faction battles. There are organised weekly large scale battles known as Nation Wars - where the players on Itani Nation

and Serco Dominion factions fight. In the mix of this war between the factions, there is a gray space which is an unclaimed part of the Universe that happens to be overrun by the Hive, an ever-expanding race of NPC Robots vying for control of areas of space containing asteroids rich in valuable minerals. By banding together with other players, they may take down powerful enemies such as the Hive Queen or Leviathan. However, VO has a rather small community so these battles are designed to be large scale, but sadly that does not happen.

Mining is a simple way to earn money quickly; by heading asteroid fields, rocks can be mined for minerals and traded at stations. Trading and Delivering allows players to buy a resource from one station and sell it for profit at another station. Finally, racing is where players have to obtain the quickest time around a race track, and they are competing against other player's times.

VO has a decent missions system. Missions are just like quests in other MMOs. Go to a station and look for the missions list to find one you want to complete. There are plenty of different missions - from combat missions involving attacking enemy pilots from a different faction, assassinations, and fighting against the hive. There are mining missions, escort missions, and delivery missions.

Each of these skill types require certain ships to fully utilise each skill, and VO has plenty of ships for this: a mixture of fighters for combat and large ships designed to hold large amounts of cargo for mining and transfers. All ships are fully customisable with different colours to paint your ships, and equipment which can be added to the ship for functionality, such as weapons, mining equipment, and energy batteries. It's best to level up quickly so you can access the better ships and equipment for PvP.

The general gameplay is

excellent, ships are enjoyable to fly, simple to learn, but difficult to master. Controls are mapped to the mouse and keyboard, the keyboard is used to manage the ships speed, while the mouse is used to fly the ship. Joysticks can be used. Traditionally in MMOs, the more you level the stronger you become; however, VO is slightly different, since when you level you do become stronger because you have access to better ships and equipment, but a large majority of your success comes down to your skill at flying a ship. VO is much like an online FPS: everyone can play it, but if you're not good at it, the game will not be enjoyable. You are flying through the vast universe of VO, and the players around you. When you tie the ship's controls with the combat, it all comes together so well. You will often find that you die very easily, since you can repair your ship in battle, and will end up spawning back at base to buy a new ship. Luckily, you gain plenty of money quickly from missions, and ships are relatively cheap.

The game is very impressive to look at, due to the sheer scale of the environment. Planets, asteroids, ships, and space look

stunning. The effects from the weapons and the blast from ships look great. Vendetta is very scalable; it ran silky smooth on my netbook, and looked great on my 20 inch desktop. The game sounds great: the blast from the weapons and engines from the ships fit the space-age game well. The musical score is lacking though. An epic soundtrack would help.

Vendetta Online community is like no other MMO community I have ever come across. Usually, even though the whole point of a MMO is human and social interactions, that never happens. Players don't talk to each other, and, when they do, no one is very helpful, and the word 'noob' is passed around a lot. The Vendetta Online community is the total opposite. For starters, there is one global channel which anyone can chat in, and can be used anywhere in the world. Chat does work like IRC, because there are many different channels you can join, but most of the community will be found in channel 100. Secondly, everyone is willing to chat with you and be incredibly helpful to new players. It's just generally a nice community to be a part of. You will probably find yourself just



logging in, and sitting in one of the stations chatting with the community. As mentioned before, the only issue with the community is the size: there are not many players. However, you could take the view that it's a close community, where you quickly know the regular players in Vendetta.

Like many MMOs, a subscription is required to play. The monthly fee is \$10, which, compared to many other MMOs, is on the low end, since their competitors, such as Eve Online and World of Warcraft, charge \$15 per month.

Vendetta Online is definitely worth checking out. It's an excellent MMO experience. There is plenty to do, an excellent combat experience, and the best community I have found in any MMO. Sadly, PvP is a bit underwhelming due to a lack of players, and it can be very easy to die. Missions can be repetitive as well. An 8-hour free trial can be

found at vendetta-online.com. You can download the game from either the official website (<http://www.vendetta-online.com/>) or the Ubuntu Software Centre.

Score: 7/10

Good:

- * Excellent Community
- * Ease to pickup gameplay
- * Varied PvP options

Bad:

- * You Die far too often
- * Player base is small



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 need a program to read documents aloud; is there one in Ubuntu?

A Searching Synaptic Package Manager for "text to speech" showed several, including espeak, festival, epos, jovie (for KDE), and mbrola. The first two seem to be the most supported.

Q I bought a Canon Lide 110 Scanner, but I can't scan with it.

A To get your Lide 210/110 scanner working under Ubuntu 10.10, you need to run Accessories/Terminal:

```
sudo add-apt-repository  
ppa:plaxx/random-fixes
```

```
sudo apt-get update
```

```
sudo apt-get install libsane  
sane-utils
```

Q The red triangle with the exclamation mark, which indicates that the system is unable to figure out if there are updates, never goes away.

A If you run Accessories/Terminal, and enter this command:

```
sudo apt-get update
```

an error will appear. Open Administration/Software Sources, and un-click the repository which caused the error. In some cases, you can get rid of the error by getting a missing "key," such as:

```
sudo apt-key adv --keyserver  
keyserver.ubuntu.com --recv-  
keys 16126D3A3E5C1192
```

Q I just did a fresh install of Mythbuntu 10.10 on a box that was previously running 9.10. My homebrew IR blaster isn't working; it's the standard diode-

resistor-led serial transmitter from the lirc website, and it worked flawlessly for over a year.

A Installing the version tagged "lirc-0_8_7pre1" from the lirc git repo worked.

Q I am an Ubuntu newbie. So far, my two partitions (Ubuntu and WinXP) worked fine, I always had a boot option at startup. Then my Windows boot option simply disappeared.

A Open Accessories/Terminal and paste in this command:

```
sudo update-grub
```

It will ask for your password, and it won't display it as you type. The next time you boot, you should have the proper options.

Q I have a Dell Latitude E5500 laptop, and I was trying to set up the fan control daemon to sort out my noise and thermal issues using i8kfan.

A (Thanks to **Wipster** in the Ubuntuforums) You need to get into a hidden BIOS screen. This can even be done when you are running programs, not just at boot time. Hold Fn+Shift and type 15324, the numlock capslock lights should flash (they did for me), then you can press Fn+r, and you are presented with the thermal control overrides, CPU throttling, and Fan control. I learned about this in the Dell Community Support forums.

Q My netbook only has 4GB storage space, so I'm wondering if it's possible to install programs to other devices such as an SDHC card?

A Go to <http://portablelinuxapps.org/> to find several dozen applications which can be placed on any storage device. Download, make executable, and run!

Q I was messing around a little with the panel at the top of the screen when I removed something I really didn't want to remove. How can I restore the main menubar thing to have all of the original buttons and the like - without having to reinstall and start over?

A Open Accessories/Terminal and paste in this command:

```
gconftool --recursive-unset /apps/panel && killall gnome-panel
```

Q In the Ubuntu repositories, there are files listed by the Synaptic Package Manager as "place holders", and some called "transitional dummy

packages". What are these files, and how are they used?

A You can think of those files as pointers, pointing to the real packages, which probably have more complicated names. So, for example, if you install "apache2," you get all the components you need in order to run the current version of Apache2.

Tips and Techniques

Installing on an External Drive

If you want to do serious testing of some version of Ubuntu, without changing your current computer setup, an external hard drive can take you a lot further than a flash drive or a Live CD. However, I have seen that a lot of people are confused about how to install Ubuntu on an external hard disk. It isn't terribly difficult, you just need to be careful.

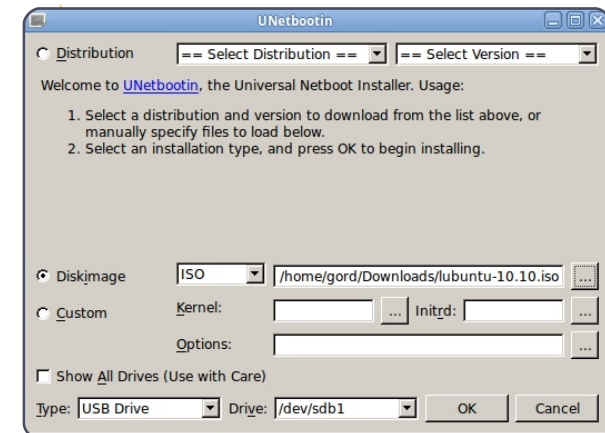
In what follows, I actually installed Ubuntu 10.10 to my external hard drive, but the same steps apply for any version.

Before you spend a lot of time downloading, I suggest you go into your computer's BIOS settings, and tell it to boot from a USB hard drive if it's present, from a flash drive if it's present, or from a CD if it's present, and only boot from the internal hard drive as a last resort. To change your BIOS settings, you need to press a key just after you turn on the power, and the key varies from computer to computer. Most often it's "Del", but it might be ESC, or a function key. Some (mostly older) computers do not have these settings, other than boot from CD, so that's the end of your attempt to install to an external drive! Some computer manuals will tell you how to do it, but many manufacturers withhold the information. If you can't figure it out for your computer, turn to Google: "bios settings" computer-brand computer-model.

Any time you are changing BIOS settings, you need to be very careful; it's not a good time to have the cat jump onto your keyboard. Unless you installed Ubuntu using WUBI,

you probably figured out how to get your computer to boot from CD, so you're half way there.

Now that you know the computer can do what it needs to do, go ahead and download the ISO, in my case, `lubuntu-10.10.iso`. I installed unetbootin using Synaptic Package Manager, and it appeared under "System Tools." Plug in a flash drive, run unetbootin, tell it you're using a Diskimage, and click on the three dots to tell it where to find the ISO. When you click "OK," it will take a few minutes to create a bootable flash drive. It might appear that it has stalled, because one file takes several minutes to process; don't cancel it prematurely. (You could make a Live CD instead, but I prefer a flash drive that I can re-use.)



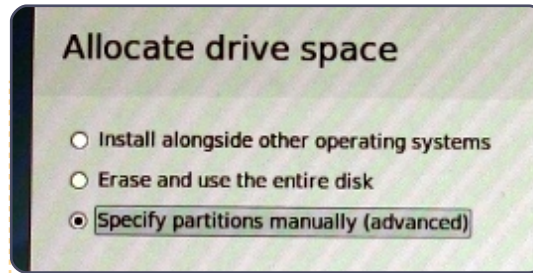
Re-boot the computer from the flash drive, and select "try Ubuntu without installing," or whatever similar option appears. Once the new OS is running, connect your external hard drive and turn it on. It should appear on the desktop. Open Accessories/Terminal, make it full-screen, and enter the command:

```
sudo fdisk -l
```

It will show you the partitions on the computer's internal hard drive(s), the flash drive, and the external hard drive. In my case, the flash drive is sdb and the external hard drive is sdc. Write that down! You can probably identify the drives based on their capacity, unless you have, for example, a 500 GB internal drive, and a 500 GB external.

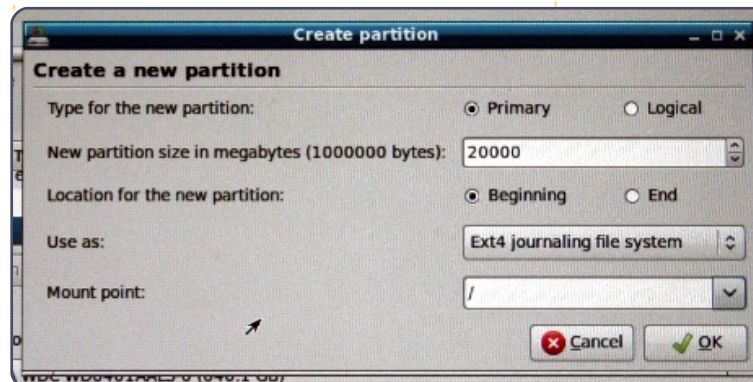
Now you are ready to install the new OS. There's probably an icon on the desktop to do it.

Go ahead and answer the standard questions. You might be prompted: "do you want to unmount sdc." Say yes! The most important moment is when you select: "specify partitions manually," or "advanced."

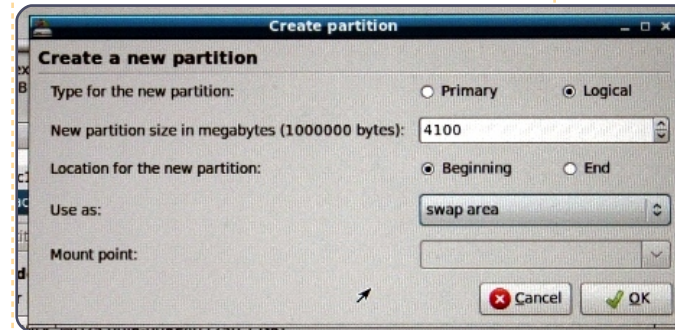


You will be taken into the partitioning program. Select sdc (or whatever it is on your system,) and click "New partition table," then "Continue." Scroll the window down, highlight the "free space," and click on "add".

What follows is a little more complicated than it needs to be, but it's a good method, because it will let you install a different version of Linux later, without disturbing your data. Specify that you want to add a partition of 20 GB (less if the external drive is small), "use as" ext4, with a "mount point" of "/" (also known as "root"). Click OK.



Next, highlight "free space", and click on "add." Specify a partition that is just a bit larger than your RAM, with a minimum of 512 MB. Specify "use as" "swap area." Click OK.



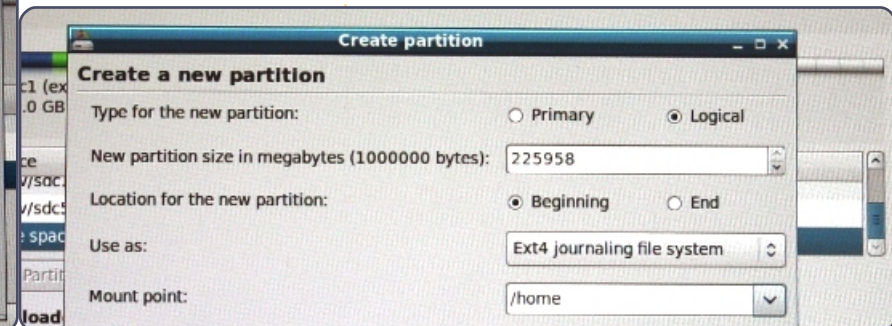
Again, highlight "free space" and click on "add." Accept the suggestion of all the remaining space on the drive, ext4 format, with a mount point of "/home."

Finally, select installing the Boot Loader on sdc, and "install now," and the tough stuff is done. There are more

questions: pick simple, lower-case user- and computer-names. After a few minutes, the installation will be complete, and you can reboot - removing the "installation media" (flash drive) when prompted.

I have found that booting from an external drive is much slower than booting from an internal drive, but most programs run reasonably quickly. At least you can try installing your favorite programs to see how well they work in an alternative environment.

There are numerous minor variations on the above procedure. For example, if you use Microsoft Windows, and someone gives you an Ubuntu CD, and you have a spare external drive, then you just have to do the BIOS settings, boot from the CD, and take it from "Re-boot," above.





MY DESKTOP

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



This is my Ubuntu 10.10 Maverick Meerkat desktop-edition desktop. It looks pretty simple, and yet appealing. I got the panel above as I am using AWM. I removed the native Ubuntu panel to free up desktop space. The sidebar on the right is a "Screenlets" application that can be downloaded directly from the Ubuntu Software Center. I got this amazing looking wallpaper from <http://abstract.desktopnexus.com/>.

My computer specs are:

- Lenovo 3000 N100 Laptop
- 1.5 GB RAM
- 120 GB HD
- Intel Dual Core @1.73GHz

BHAVEEK DESAI



This is Lucid Lynx running on my BenQ Joybook R56. It became my primary OS a few months ago. It works great. I use it extensively for multimedia work (audio/video), church presentations, office work (Wine also works for MS Office 2007, but is rarely used), and for gaming (Warzone, and Nexuiz, among others). I chose Ubuntu because it's the most popular distro. I chose free software because I can't afford proprietary products, and to protect me from sin (the Torah says that stealing is a sin). I do have a license for WinXP, but I rarely use XP, except for copying VCDs when CLI annoys me. Ubuntu, please add this feature on Nautilus. Hardware: Core 2 Duo T5550 (1.8GHz), 2GB DDR2, nVidia 8400M G (driver 260, better than standard 195 in repos), 120GB HDD.

Danang Dwi Kristiyanto



I've been using Ubuntu Linux for about three months, and I love it. I'm running 10.10 on a Dell Inspiron 1520. Here is a screenshot of my desktop. I live in Sweden but am from the US, so my Conky is set to give me the weather in Fahrenheit, the time locally and around the world where I have family, and the current exchange rate between the dollar and Swedish krona. I also have my system setup to switch between English, Japanese, and Swedish.

John Niendorf



Hi, this is my Ubuntu 10.04 desktop. I bought my laptop in 2009, and then tried to install Linux. But most people in China know only Windows, so it was hard for me to learn how to use Linux. Fortunately, with the help of the Internet and Forums, I learned lots of new things, and now with Ubuntu have a really useful, wonderful, and fantastic OS.

- Wallpaper: The Study of Information
- Icons: Faenza
- Dock: AWN
- Emerald Theme: GAIA Sprout
- Screenlets: ClockRing, eventCal (3 circles on the top right), Terminal

yafc18

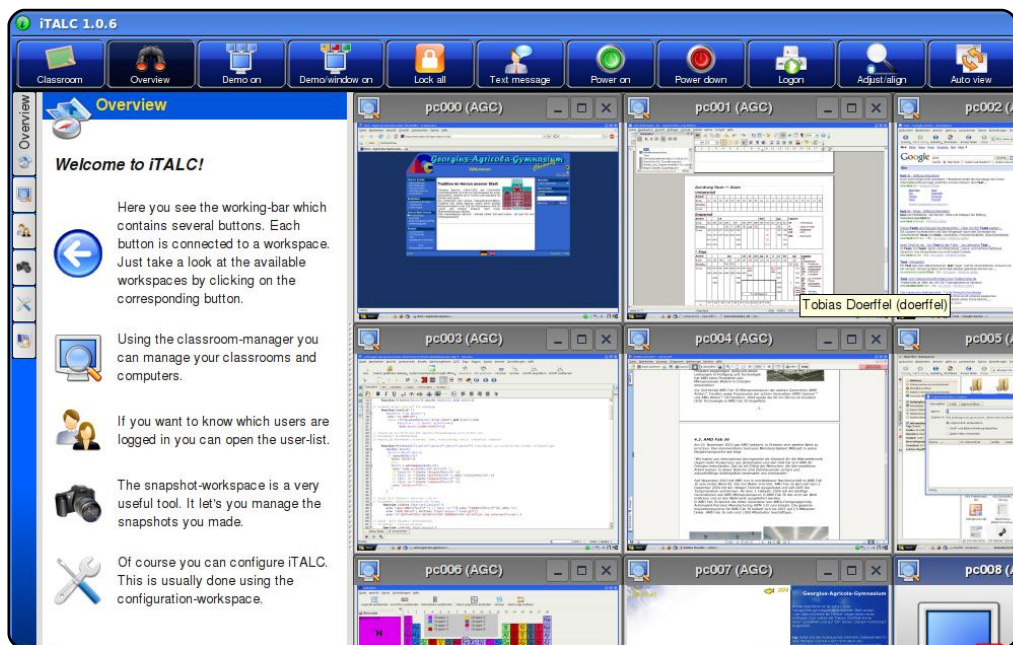


iITALC

Homepage: <http://italc.sourceforge.net/>

Technology is one of the most integral parts of the classroom. And iTALC (Intelligent Teaching And Learning with Computer) is one of the best ways to harness it. It's sort of like a remote desktop designed for teachers: the teacher can view all the screens at the same time, while the student can view the teacher's screen in real-time. The teacher can also control the student's screen if the student needs individual support. Since it works over VPN, iTALC also bills itself as a perfect tool for online classes, especially for homeschoolers.

The teacher needs to install the **italc-master** package in the universe repository.

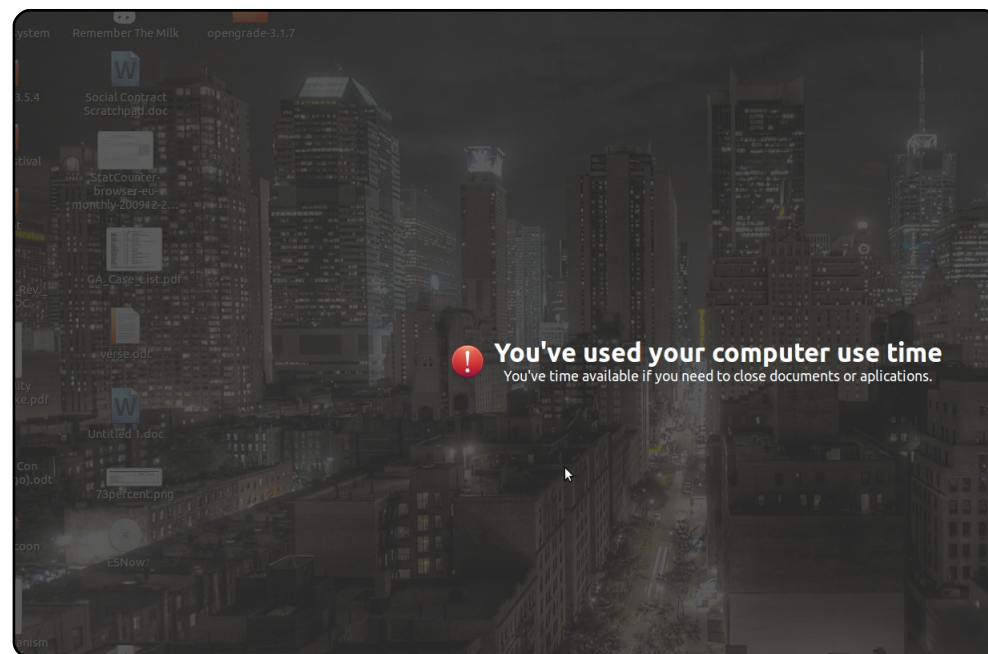


Nanny

Homepage: <http://projects.gnome.org/nanny/>

A school, obviously, doesn't want its students on undesirable websites. In fact, in some cases, it might be best for the school to limit its browsers to certain websites. The best way to do this is to use Nanny. This Gnome project limits the times available to use various applications (email, chat, browser) and, more importantly, the sites that each user can access. That way, you can make sure no one's online during school hours, that thepiratebay.org will never be accessed, and, of course, that administrators have access whenever they need through their own account.

To install Nanny, use the **nanny** package in the universe repository.

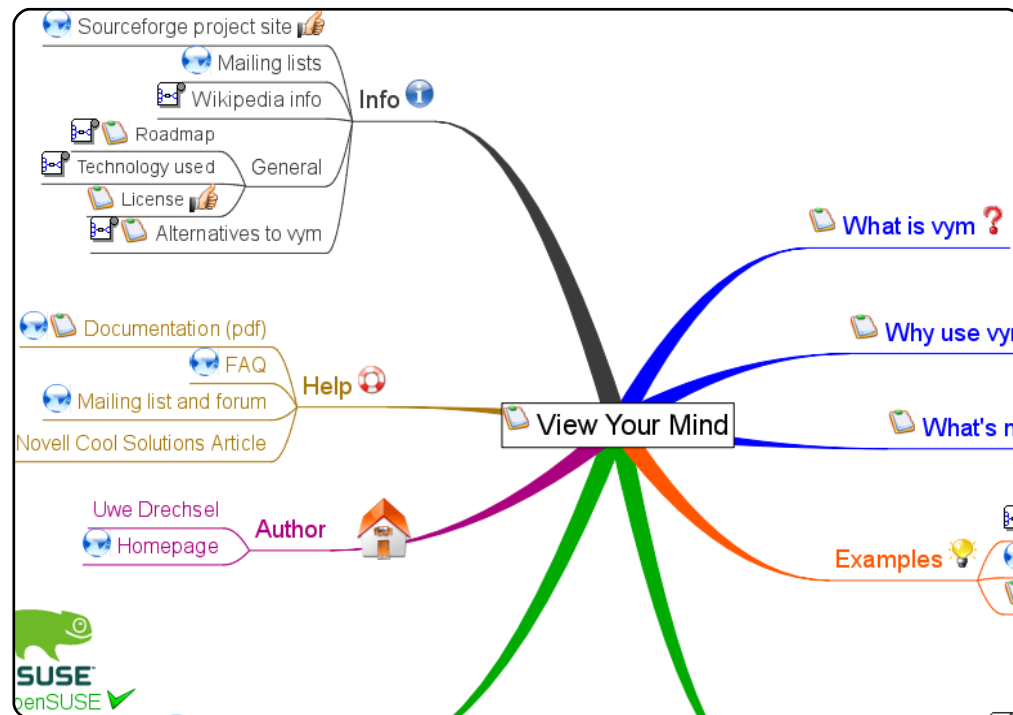


Vym

Homepage: <http://www.insilmaril.de/vym/>

One of the best ways to study is to use a mindmapping tool. It basically allows you to visualize your thoughts more clearly, and works great both for outlining and notetaking. It also helps your brain with associating certain keywords with each other (and with parent keywords). And one of the best mindmapping programs around is Vym (View Your Mind). You can color code the branches, change their look, and add icons. You can also sort or scroll various branches. Finally, you can export your masterpiece to a document, spreadsheet, or webpage.

To install Vym, use the **vym** package in the universe repository.



GCompris

Homepage: <http://gcompris.net/>

They say that all work and no play makes Jack a dull boy. But why does learning and fun have to be mutually exclusive? The creators of GCompris believe that the answer is that they don't. GCompris is a game suite geared towards education. It includes a wide variety of applications, including multiplication memory games, an arithmetic dartboard, a Space Invaders-like falling words game, and, my personal favorite, the Pacman-like "Prime Number Muncher". All in a friendly world of cartoon characters and familiar open-source mascots.

To install GCompris, use the **gcompris** package in the universe repository.

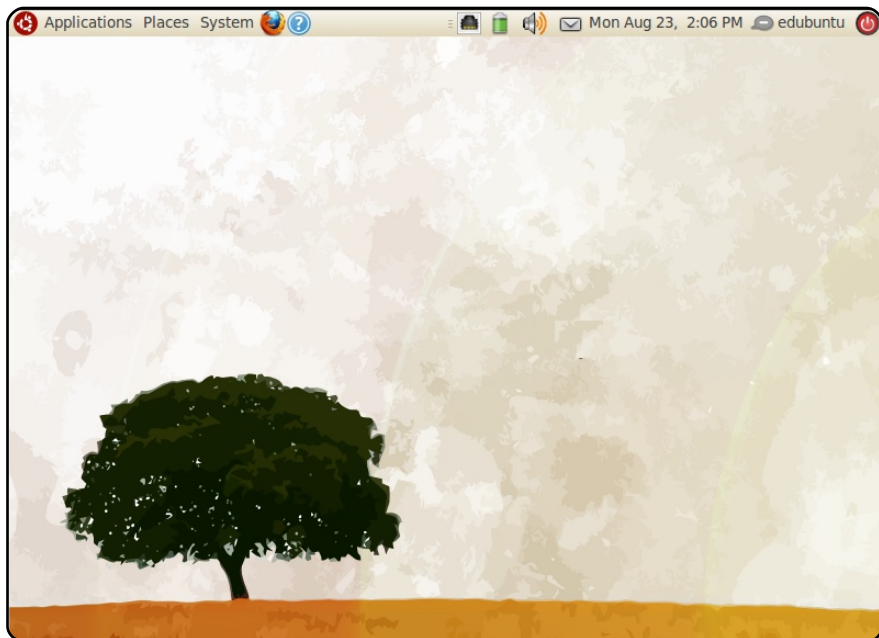
Multiples of 2					
5		10	10	12	
4	10	12	2	5	6
4	11	1	3	2	2
11	11	6	7	11	5
6	3	8	12	6	10
10	5	10	10	1	7

Edubuntu

Homepage: <http://edubuntu.org/>

If you want to go the distance and get a full-blown education operating system, Edubuntu may be right for you. This officially supported Ubuntu derivative supports all of the above, and much more. It also supports a built-in LTSP thin client, which is useful for a school setting. And, best of all, it's built for the end-user. Rather than an endlessly configurable distribution bursting at the seams, Edubuntu aims for ease of use. Of course, apt-get is always there if you need more packages. Many groups are adopting Edubuntu for use in schools; most notably, Macedonia deployed 180,000 machines running Edubuntu to their schools.

To install Edubuntu in an existing Ubuntu installation, use the **edubuntu** package in the universe repository. You can also download a full DVD installation disk from the Edubuntu homepage.



The Ubuntu UK podcast is presented by members of the United Kingdom's Ubuntu Linux community.

We aim is to provide current, topical information about, and for, Ubuntu Linux users the world over. We cover all aspects of Ubuntu Linux and Free Software, and appeal to everyone from the newest user to the oldest coder, from the command line to the latest GUI.

Because the show is produced by the Ubuntu UK community, the podcast is covered by the Ubuntu Code of Conduct and is therefore suitable for all ages.

<http://podcast.ubuntu-uk.org/>



ubuntu uk podcast

Download

Available in MP3/OGG format in Miro or iTunes, or listen to it directly on the site.



HOW TO CONTRIBUTE

We are always looking for new articles to include in Full Circle. For article guidelines, ideas, and for issue translation, please see our wiki:

<http://wiki.ubuntu.com/UbuntuMagazine>

Please email your articles to: articles@fullcirclemagazine.org

If you would like to submit **news**, email it to: news@fullcirclemagazine.org

Send your **comments** or Linux experiences to: letters@fullcirclemagazine.org

Hardware/software **reviews** should be sent to: reviews@fullcirclemagazine.org

Questions for Q&A should go to: questions@fullcirclemagazine.org

Desktop screens should be emailed to: misc@fullcirclemagazine.org

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

FULL CIRCLE NEEDS YOU!

A magazine isn't a magazine without articles and Full Circle is no exception. We need your Opinions, Desktops and Stories. We also need Reviews (games, apps & hardware), How-To articles (on any K/X/Ubuntu subject) and any questions, or suggestions, you may have.

Send them to: articles@fullcirclemagazine.org

Full Circle Team



Editor - Ronnie Tucker

ronnie@fullcirclemagazine.org

Webmaster - Rob Kerfia

admin@fullcirclemagazine.org

Comms Mgr - Robert Clipsham

mrmonday@fullcirclemagazine.org

Podcast - Robin Catling

podcast@fullcirclemagazine.org

Editing & Proofreading

Mike Kennedy

David Haas

Gord Campbell

Robert Orsino

Our thanks go out to Canonical, the many translation teams around the world and to **Thorsten Wilms** for the current Full Circle logo.

Deadline for Issue #48:

Sunday 10th April 2011.

Release date for issue #48:

Friday 29th April 2011.

