



Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

ISSUE #53 - September 2011



REVIEW:
LINUX MINT 11



BACKUP STRATEGY - PART 1

ARE YOUR BACKUPS SAFE, SECURE AND RELIABLE?

NEW
SERIES!

HowTo



Program In Python Pt27 p.07

	A	B
1	Income this Period	
2	Sources	Amount
3	Work	\$1,079.00

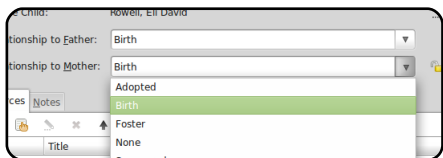
LibreOffice Pt8 p.14



Backup Strategy Pt1 p.17



Business & Edu. Pt2 p.19



GRAMPS Pt.2 p.25

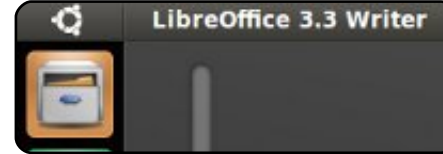


Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY



Linux News p.04



My Desktop p.49

Columns

```
#An alias to make the
command more detailed
alias ls = "ls -la --
color=always --classi
```

Command & Conquer p.05



Ubuntu Games p.45

Id	Name	Monitor	Cause	Time(^)	Duration	Frame
127	Event-127	Monitor-2	Motion	07/24 15:34:19	3.84	104

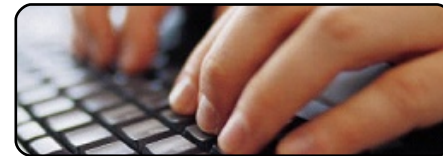
Linux Labs p.30



Q&A p.47

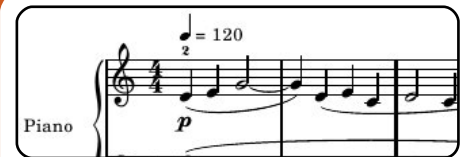


Ubuntu Women p.43



Write For Full Circle p.29

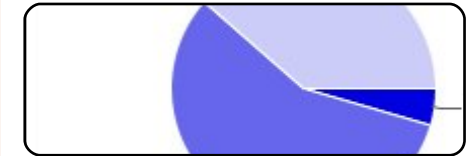
Opinions



My Story p.32



My Story p.34



I Think... p.36



Review p.39



Letters p.41



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!

Another new How-To series for you this month, Backup Strategy. In this, the first of several parts, Allan discusses where you should keep your physical backup. In future issues he'll be discussing backup applications (such as Deja-Dup which will come as standard with Ubuntu 11.10), and, of course, storing your backup in 'the cloud'.

I want to take a few moments to send a special message of congratulations to the entire Italian translation team. They've been bashing out back issues in Italian now at quite a pace, and are the first (and, so far, only) translation team to translate every single issue of FCM!

I also want to thank you, the readers, for stepping up and bombarding me with emails about my latest FCM idea. If you're not on the mailing list (head over to fullcirclemagazine.org and sign up to get first knowledge of new issues and exclusive emails) let me fill you in: my idea is to start a new feature in FCM where I take a Windows feature and show the *buntu equivalent. I say *buntu as I want to show how things are done in Gnome, KDE, LXDE and XFCE. I was sent many good ideas, so that new feature will start in FCM#54. And I want to thank each and every one of you who emailed me wanting to help with this idea. I wish I could have picked you all, but I only needed a couple of people whom I have now contacted. If you weren't successful in helping with this new feature: **don't get sad, get writing!** Write about whatever it is you do with your *buntu as it will help someone out there. The more quirky the better. If you use it for science, or medicine then let us know what software you're using, and how it helps you.

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.

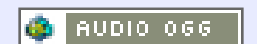
Hosts:

Robin Catling

Ed Hewitt

Dave Wilkins

<http://fullcirclemagazine.org>





Ubuntu Store Open To App Devs

Canonical has launched its app developer web site in a bid to persuade developers to port applications over to its Ubuntu Linux distribution. Ubuntu's Software Centre is Canonical's app store for its popular Ubuntu Linux distribution, offering both free and paid applications. Hardened Linux users will look upon it as a graphical front end to Dselect, but Canonical has put a lot of work into its Software Centre to not only generate cash but also make Ubuntu easier to use.

Steve George, VP of business development at Canonical said,

“The Ubuntu developer site aims to help put Ubuntu on the app development map. We want to provide a platform that makes it easier for developers to create applications and distribute them to millions of Ubuntu users.”

Source: theinquirer.net

Ubuntu One Windows Client

If you look at the marketplace for cloud based storage at the moment, some of the most successful services have one thing in common: they work everywhere. Look at Dropbox, for example, which has clients on all the major desktop operating systems as well as apps for iOS and Android.

Canonical wants, and needs, the same multi-platform service if Ubuntu One is going to survive and flourish, and admits its users are a diverse bunch who don't just use Ubuntu. With that in mind, they have launched a fully-featured Windows client for the service.

Source: geek.com

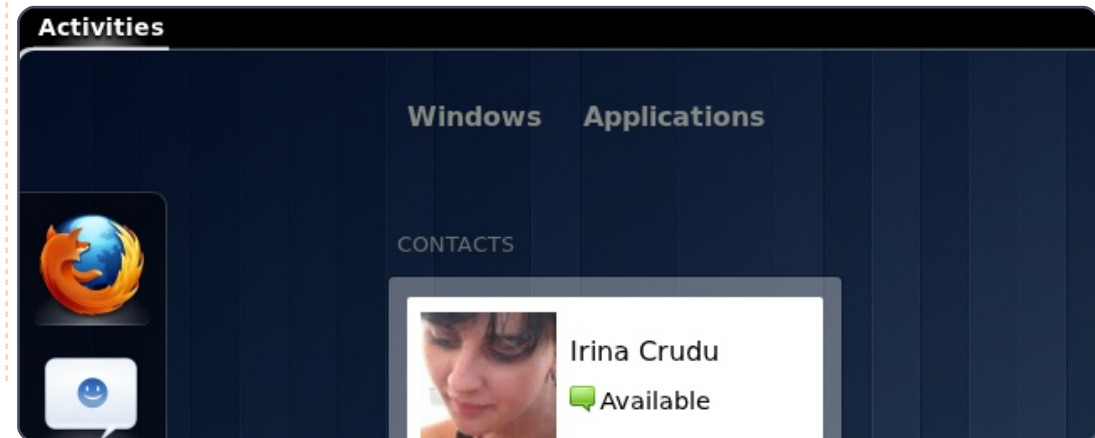
GNOME 3.2 Released

GNOME 3.2 final has just been released, "since the last version, 3.0, approximately 1270 people made about 38500 changes to GNOME".

What is new in GNOME 3.2?

- Support to preview your files in Nautilus in a fancy polished way
- Online Accounts can be used automatically by Documents, Contacts, Empathy, Evolution, etc
- Web Application (the ability to "Save as Web Application" a web-page in Epiphany and used it as a separate window)
- Contacts acts like a centralized place to store online contacts or within Evolution and Empathy
- Documents helps you find, organize and view documents
- Color Management allows you to calibrate devices to ensure the shown colors are representative
- New login screen in GNOME-Shell
- Redesigned font chooser and much, much more

Source: iloveubuntu.net





Regarding FCM#52: Gord Campbell was kind enough to point out to me that, while Chinese can be written vertically, it seems that it's not as common as I had assumed it to be.

If you, the readers of Command & Conquer, are anything like me, you will have probably enticed one or two people you know into trying Linux. My first and foremost aim is always to make the operating system run as stable as possible, so that the user will have less to fight with (in order to fend off complaints about how Windows had fewer problems). Once I have that taken care of, I give the user a short run through some things they need to be aware of – what this list consists of is generally dependent on the distribution I installed. However, most recently I installed ArchLinux on a netbook (after we decided Chakra didn't quite fit the bill). Shortly thereafter, the KDM wasn't starting properly on run level 5, dropping the user into a tty screen. This is generally one of

those moments where the user will feel lost as to how to proceed, which brings me to the purpose of today's article, the Message of the Day (motd). The Message of the Day is a file on the system that is printed upon login, located at `/etc/motd` and `/etc/motd.tail`. There is also a package called `update-motd` for Ubuntu, which seeks to offer more options. Usually used by server administrators to list the terms of use, or list help information (rooms, phone numbers, emails, etc.). Since it's a text file, absolutely anything can go in there. I felt it might be useful to cover a list of things you can put in your Message of the Day, so that if your user needs to log in on a tty shell, he (or she) will not be completely lost.

About the files

For Ubuntu Server (and probably the Desktop version), you need to edit `/etc/motd.tail` and `/etc/motd`, so that the `.tail` file doesn't overwrite the `/etc/motd` file after a reboot. For the newer

versions of Ubuntu, the files may be located in `/etc/update-motd.d/`. This seems to be a result of the `update-motd` package, but the files are clearly named and should be easy enough to edit.

Useful commands

The first thing I did was add a list of commands for getting around in the shell (`cd`, `cat`, `vim/nano`, `pwd`, etc.) and a brief explanation of each command. After that, you may want to supply some system-specific commands (i.e. if you have a command-line email client configured, how to access that); however, it is completely system-dependent.

Important locations

You could also include a list of important files/directories, where the user can either access help pages/tutorials, or else a file with more commands, or a file containing contact information (if it's not included in the MotD already).



The Message of the Day is a file on the system that is printed upon login

Troubleshooting

I would also list one or two of the most common fixes (such as restarting the Xserver or login manager) in order to get the User out of the tty shell. If you feel that the user would be comfortable with it, you can also explain how to capture debugging information, or log files, that they should then send to you.

Mounting external devices

If the user needs to send you log files, or needs to back up a file (or restore a backup), it would be extremely helpful for them to connect an external drive of some sort to the computer. Since `hal` or

maybe a website where they can contact you.

That essentially covers all the items I would usually include in a Message of the Day, but it's by no means extensive. If anyone has an interesting or unique use for their Message of the Day, feel free to share it with me at

lswest34@gmail.com. If I find it interesting as well, I may compile a list of them for next month's article. As always, suggestions and questions are also very welcome. Any emails sent to me should include "C&C" or "FCM" in the subject line, so that they get sorted properly.

If anyone has an interesting or unique use for their Message of the Day, feel free to share it with me.

udev generally handle that, it may still work in the tty shell, although I find it rather unlikely. Therefore, I would list a few commands (label them something useful, like "USB" (generally FAT32), "external hard drive" (usually ntfs or ext3/ext4), or even specific devices if you know the hardware). I wouldn't advise adding all this extra information in unless it's extremely important, or if the user lives in a location where you, or someone who is comfortable with Linux, cannot easily intervene and help, be it in person or via SSH.

Contact information

If you're employing this as a system administrator for a company, or for someone you don't know well, I would include a phone number, email address, and



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.



Server Circle is a new question and answer site run by techies.

Users with any level of experience can ask technical questions for free about anything server related, and receive answers from trusted experts, who are rated by the community.

With time you can earn reputation points, and even financial rewards, by contributing your answers to questions from other people.

<http://www.servercircle.com>



Recent	Popular	Unanswered	Rewards	
Which packages can I safely uninstall on Ubuntu Server ?				17 views 0 replies
answer now				
by Squeeze (445 points) in Ubuntu Linux - 0 votes				
How to access a Intel Express 535T Switch Hub				34 views 4 replies
answer now				
by GoldAlchemist (50 points) in Networking - 1 votes				
How to use wired desktop for server to wireless notebook				38 views 2 replies
answer now				
by t0x1nman (50 points) in Linux Servers - 1 votes				
Help with mod_security in Apache please				

NOTE: Server Circle is not affiliated with, nor endorsed by, Full Circle magazine.



If you've ever waited in line to buy a movie ticket, you've been in a queue. If you've ever had to wait in traffic at rush hour, you've been in a queue. If you've ever waited in a government office with one of those little tickets that says you're number 98, and the sign says "Now serving number 42," you've been in a queue.

In the world of computers, queues are common. As a user, most times, you don't have to think about them. They are invisible to the user. But if you ever have to deal with realtime events, you will eventually have to deal with them. It's just data of one type or another, waiting in line for its turn to be processed. Once it's in the queue, it's there until it gets accessed, and then it's gone. You can't get the value of the next data item unless you pull it out of the queue. You can't, for example, get the value of the 15th item in the queue. You have to access the other 14 items first. Once it's accessed, it's out of the queue. It's gone, and unless you save it to a

long-term variable, there's no way to get the data back.

There are multiple types of queues. The most common ones are FIFO (First In, First Out), LIFO (Last In, First Out), Priority, and Ring. We'll talk about ring queues another time.

FIFO queues are what we see in everyday life. All of the examples I listed above are FIFO queues. The first person in the line gets handled first, moves on, then everyone moves up one spot in the line. In a FIFO buffer, there is (within reason) no limit to the number of items it can hold. They just stack up in order. As an item is handled, it is pulled out (or dequeued) of the queue, and everything moves closer to the front of the queue by one position.

LIFO Queues are less common in life, but there are still real-world examples. The one that comes to mind most quickly is a stack of dishes in your kitchen cabinet. When the dishes are washed and dried, they get stacked in the

cabinet. The last one in on the stack is the first one that comes out to be used. All the rest have to wait, maybe for days, to be used. It's a good thing that the movie ticket queue is FIFO, isn't it? Like the FIFO queue, within reason, there is no limit to the size of a LIFO queue. The first item in the queue has to wait as newer items are pulled out of the buffer (plates pulled off the stack) until it's the only one left.

Priority queues are a bit harder for many people to imagine right off the bat. Think of a company that has one printer. Everyone uses that one printer. The print jobs are handled by department priority. Payroll has a higher priority (and thankfully so) than say, you, a programmer. You have a higher priority (and thankfully so) than the receptionist. So in short, the data that has a higher priority gets handled, and gets out of the queue, before data that has a lower priority.

FIFO

There are multiple types of queues. The most common ones are FIFO (First In, First Out), LIFO (Last In, First Out), Priority, and Ring.

FIFO queues are easy to visualize in terms of data. A python list is an easy mental representation. Consider this list...

```
[1,2,3,4,5,6,7,8,9,10]
```

There are 10 items in the list. As a list, you access them by index. However, in a queue, you can't access the items by index. You have to deal with the next one in the line and the list isn't static. It's VERY dynamic. As we request the next item in the queue, it gets removed. So using the example above, you request one item from the queue. It returns the first item (1) and the queue then looks like this.

```
[2,3,4,5,6,7,8,9,10]
```

```
import Queue
fifo = Queue.Queue()
for i in range(5):
    fifo.put(i)

while not fifo.empty():
    print fifo.get()
```

Request two more and you get 2, then 3, returned, and then the queue looks like this.

```
[4,5,6,7,8,9,10]
```

I'm sure you get the idea. Python provides a simple library, surprisingly enough, called Queue, that works well for small-to-medium sized queues, up to about 500 items. Above is a simple example to show it.

In this example, we initialize the queue (`fifo = Queue.Queue()`) then put the numbers 0 through 4 into our queue (`fifo.put(i)`). We then use the internal method `.get()` to pull items off the queue until the queue is empty, `.empty()`. What is returned is 0,1,2,3,4. You can also set the maximum number of items that the queue can handle by initializing it with the size of the queue like this.

```
import Queue

fifo = Queue.Queue(12)
for i in range(13):
    if not fifo.full():
        fifo.put(i)

while not fifo.empty():
    print fifo.get()
```

```
fifo = Queue.Queue(300)
```

Once the maximum number of items have been loaded, the Queue blocks any additional entries going into the queue. This has a side effect of making the program look like it's "locked" up, though. The easiest way to get around this is to use the `Queue.full()` check (above right).

In this case, the queue is set for a maximum of 12 items. As we put items into the queue, we start with '0' and get up to '11'. When we hit number 12, though, the buffer is already full. Since we check to see if the buffer is full before we try to put the item in, the last item is simply discarded.

There are other options, but they can cause other side-effects, and we will address this in a future article. So, for the majority of the time, the bottom line is either use

a queue with no limit or make sure you have more space in your queue than you will need.

LIFO

The Queue library also supports LIFO queues. We'll use the above list as a visual example. Setting up our queue, it looks like this:

```
[1,2,3,4,5,6,7,8,9,10]
```

```
import Queue
lifo = Queue.LifoQueue()
for i in range(5):
    lifo.put(i)
while not lifo.empty():
    print lifo.get()
```

Pulling three items from the queue, it then looks like this:

```
[1,2,3,4,5,6,7]
```

Remember that in a LIFO queue, items are removed in a LAST-in FIRST-out order. Here's the simple example modified for a LIFO queue:

When we run it, we get "4,3,2,1,0".

As with the FIFO queue, you have the ability to set the size of

the queue, and you can use the `.full()` check.

```
pq = Queue.PriorityQueue()
pq.put((3, 'Medium 1'))
pq.put((4, 'Medium 2'))
pq.put((10, 'Low'))
pq.put((1, 'high'))
```

```
while not pq.empty():
    nex = pq.get()
    print nex
    print nex[1]
```

PRIORITY

While it's not often used, a Priority queue can sometimes be helpful. It's pretty much the same as the other queue structures, but we need to pass a tuple that holds both the priority and the data. Here's an example using the Queue library:

```
(1, 'high')
high
(3, 'Medium')
Medium
(4, 'Medium')
Medium
(10, 'Low')
Low
```


HOWTO - PROGRAM IN PYTHON - PART 27

First, we initialize the queue. Then we put four items into the queue. Notice we use the format (priority, data) to put our data. The library sorts our data in an ascending order based on the priority value. When we pull the data, it comes back as a tuple, just like we put it in. You can address by index the data. What we get back is...

In our first two examples, we simply printed the data that comes out of our queue. That's fine for these examples, but in real-world programming, you probably need to do something with that information as soon as it comes out of the queue, otherwise it's lost. When we use the 'print fifo.get', we send the data to the terminal and then it's destroyed. Just something to keep in mind.

Now let's use some of what we've already learned about tkinter to create a queue demo program. This demo will have two frames. The first will contain (to the user) three buttons. One for a FIFO queue, one for a LIFO queue, and one for a PRIORITY queue. The second frame will contain an entry widget, two buttons, one for

```
import sys
from Tkinter import *
import ttk
import tkMessageBox
import Queue

class QueueTest:
    def __init__(self, master = None):
        self.DefineVars()
        f = self.BuildWidgets(master)
        self.PlaceWidgets(f)
        self.ShowStatus()
```

adding to the queue, and one for pulling from the queue, and three labels, one showing when the queue is empty, one showing when the queue is full, and one to display what has been pulled from the queue. We'll also be writing some code to automatically center the window within the screen. Above left is the beginning of the code.

Here we have our imports and the beginning of our class. As before, we create the `__init__` routine with the `DefineVars`, `BuildWidgets`, and `PlaceWidgets` routines. We also have a routine called `ShowStatus` (above right) which will... well, show the status of our queue.

We now create our `DefineVars` routine. We have four `StringVar()` objects, an empty variable called

```
def DefineVars(self):
    self.QueueType = ''
    self.FullStatus = StringVar()
    self.EmptyStatus = StringVar()
    self.Item = StringVar()
    self.Output = StringVar()
    # Define the queues
    self.fifo = Queue.Queue(10)
    self.lifo = Queue.LifoQueue(10)
    self.pq = Queue.PriorityQueue(10)
    self.obj = self.fifo
```

```
def BuildWidgets(self, master):
    # Define our widgets
    frame = Frame(master)
    self.fl = Frame(frame,
        relief = SUNKEN,
        borderwidth=2,
        width = 300,
        padx = 3,
        pady = 3
    )
    self.btnFifo = Button(self.fl,
        text = "FIFO"
    )
    self.btnFifo.bind('<ButtonRelease-1>',
        lambda e: self.btnMain(1)
    )
    self.btnLifo = Button(self.fl,
        text = "LIFO"
    )
    self.btnLifo.bind('<ButtonRelease-1>',
        lambda e: self.btnMain(2)
    )
    self.btnPriority = Button(self.fl,
        text = "PRIORITY"
    )
    self.btnPriority.bind('<ButtonRelease-1>',
        lambda e: self.btnMain(3)
    )
```

HOWTO - PROGRAM IN PYTHON - PART 27

QueueType, and three queue objects - one for each of the types of queues that we are going to play with. We have set the maximum size of the queues at 10 for the purposes of the demo. We also have created an object called obj, and assigned it to the FIFO queue. When we select a queue type from the buttons, we will set this object to the queue that we want. This way, the queue is maintained when we switch to another queue type (code is on previous page, bottom right).

Here we start the widget definitions. We create our first frame, the three buttons, and their bindings. Notice we are using the same routine to handle the binding callback. Each button sends a value to the callback routine to denote which button was clicked. We could just as easily have created a dedicated routine for each button. However, since all three buttons are dealing with a common task, I thought it would be good to work them as a group (code shown right).

Next (below right), we set up the second frame, the entry widget, and the two buttons. The

only thing here that is out of the ordinary is the binding for the entry widget. Here we bind the self.AddToQueue routine to the <Return> key. This way, the user doesn't have to use the mouse to add the data. They can just enter the data into the entry widget, and press <Return> if they want to.

Here (next page, bottom) is the last three widget definitions. All three are labels. We set the textvariable attribute to the variables we defined earlier. If you remember, when that variable changes, so does the text in the label. We also do something a bit different on the lblData label. We will use a different font to make it stand out when we display the data pulled from the queue. Remember that we have to return the frame object so it can be used in the PlaceWidget routine.

This (next page, middle) is the beginning of the PlaceWidgets routine. Notice here that we put five empty labels at the very top of the root window. I'm doing this to set spacing. This is an easy way to "cheat" and make your window placement much easier. We then set the first frame, then another

```
self.f2 = Frame(frame,
    relief = SUNKEN,
    borderwidth=2,
    width = 300,
    padx = 3,
    pady = 3
)
self.txtAdd = Entry(self.f2,
    width=5,
    textvar=self.Item
)
self.txtAdd.bind('<Return>',self.AddToQueue)
self.btnAdd = Button(self.f2,
    text='Add to Queue',
    padx = 3,
    pady = 3
)
self.btnAdd.bind('<ButtonRelease-1>',self.AddToQueue)
self.btnGet = Button(self.f2,
    text='Get Next Item',
    padx = 3,
    pady = 3
)
self.btnGet.bind('<ButtonRelease-1>',self.GetFromQueue)
```

```
self.lblEmpty = Label(self.f2,
    textvariable=self.EmptyStatus,
    relief=FLAT
)
self.lblFull = Label(self.f2,
    textvariable=self.FullStatus,
    relief=FLAT
)
self.lblData = Label(self.f2,
    textvariable=self.Output,
    relief = FLAT,
    font=("Helvetica", 16),
    padx = 5
)

return frame
```

HOWTO - PROGRAM IN PYTHON - PART 27

“cheater” label, then the three buttons.

Here we place the second frame, another “cheater” label, and the rest of our widgets.

```
def Quit(self):  
    sys.exit()
```

Next we have our “standard” quit routine which simply calls `sys.exit()` (above right).

Now our main button callback routine, `btnMain`. Remember we are sending in (through the `p1` parameter) which button was clicked. We use the `self.QueueType` variable as a reference to which queue type we are dealing with, then we assign `self.obj` to the proper queue, and

finally change the title of our root window to display the queue type we are using. After that, we print the queue type to the terminal window (you don't really have to do that), and call the `ShowStatus` routine. Next (following page, top right) we'll make the `ShowStatus` routine.

As you can see, it's pretty simple. We set the label variables to their proper state so they

```
def btnMain(self,p1):  
    if p1 == 1:  
        self.QueueType = 'FIFO'  
        self.obj = self.fifo  
        root.title('Queue Tests - FIFO')  
    elif p1 == 2:  
        self.QueueType = 'LIFO'  
        self.obj = self.lifo  
        root.title('Queue Tests - LIFO')  
    elif p1 == 3:  
        self.QueueType = 'PRIORITY'  
        self.obj = self.pq  
        root.title('Queue Tests - Priority')  
  
    print self.QueueType  
    self.ShowStatus()
```

```
self.f2.grid(column = 0,row = 2,sticky='nsew',columnspan=5,padx = 5, pady = 5)  
l = Label(self.f2,text='',width = 15,anchor = 'e').grid(column = 0, row = 0)  
self.txtAdd.grid(column=1,row=0)  
self.btnAdd.grid(column=2,row=0)  
self.btnGet.grid(column=3,row=0)  
self.lblEmpty.grid(column=2,row=1)  
self.lblFull.grid(column=3,row = 1)  
self.lblData.grid(column = 4,row = 0)
```

```
def PlaceWidgets(self, master):  
    frame = master  
    # Place the widgets  
    frame.grid(column = 0, row = 0)  
    l = Label(frame,text='',relief=FLAT,width = 15, anchor = 'e').grid(column = 0, row = 0)  
    l = Label(frame,text='',relief=FLAT,width = 15, anchor = 'e').grid(column = 1, row = 0)  
    l = Label(frame,text='',relief=FLAT,width = 15, anchor = 'e').grid(column = 2, row = 0)  
    l = Label(frame,text='',relief=FLAT,width = 15, anchor = 'e').grid(column = 3, row = 0)  
    l = Label(frame,text='',relief=FLAT,width = 15, anchor = 'e').grid(column = 4, row = 0)  
  
    self.f1.grid(column = 0,row = 1,sticky='nsew',columnspan=5,padx = 5,pady = 5)  
    l = Label(self.f1,text='',width = 25,anchor = 'e').grid(column = 0, row = 0)  
    self.btnFifo.grid(column = 1,row = 0,padx = 4)  
    self.btnLifo.grid(column = 2,row = 0,padx = 4)  
    self.btnPriority.grid(column = 3, row = 0, padx = 4)
```

display if the queue we are using is either full, empty, or somewhere in between.

The AddToQueue routine (next page, bottom right) is also fairly straight-forward. We get the data from the entry box using the .get() function. We then check to see if the current queue type is a priority queue. If so, we need to make sure it's in the correct format. We do that by checking for the presence of a comma. If it isn't, we complain to the user via an error message box. If everything seems correct, we then check to see if the queue that we are currently using is full. Remember, if the queue is full, the put routine is blocked and the program will hang. If everything is fine, we add the item to the queue and update the status.

The GetFromQueue routine (middle right) is even easier. We check to see if the queue is empty so as not to run into a blocking issue, and, if not, we pull the data from the queue, show the data, and update the status.

```
if name == '__main__':
    def Center(window):
        # Get the width and height of the screen
        sw = window.winfo_screenwidth()
        sh = window.winfo_screenheight()
        # Get the width and height of the window
        rw = window.winfo_reqwidth()
        rh = window.winfo_reqheight()
        xc = (sw-rw)/2
        yc = (sh-rh)/2
        window.geometry("%dx%d+%d+%d"%(rw,rh,xc,yc))
        window.deiconify()
```

We are getting to the end of our application. Here is the center window routine (above left). We first get the screen width and screen height of the screen we are on. We then get the width and height of the root window by using the winfo_reqwidth() and winfo_reqheight() routines built into tkinter. These routines, when called at the right time, will return the width and height of the root window based on the widget placement. If you call it too early, you'll get data, but it won't be what you really need. We then subtract the required window

```
def ShowStatus(self):
    # Check for Empty
    if self.obj.empty() == True:
        self.EmptyStatus.set('Empty')
    else:
        self.EmptyStatus.set('')
    # Check for Full
    if self.obj.full() == True:
        self.FullStatus.set('FULL')
    else:
        self.FullStatus.set('')
```

```
def GetFromQueue(self,p1):
    self.Output.set('')
    if not self.obj.empty():
        temp = self.obj.get()
        self.Output.set("Pulled
{0}".format(temp))
    self.ShowStatus()
```

```
def AddToQueue(self,p1):
    temp = self.Item.get()
    if self.QueueType == 'PRIORITY':
        commapos = temp.find(',')
        if commapos == -1:
            print "ERROR"
            tkMessageBox.showerror('Queue Demo',
                'Priority entry must be in format\r(priority,data)')
        else:
            self.obj.put(self.Item.get())
    elif not self.obj.full():
        self.obj.put(self.Item.get())
    self.Item.set('')
    self.ShowStatus()
```

width from the screen width, and divide it by two, and do the same thing for the height information. We then use that information to set the geometry call. In MOST instances, this works wonderfully. However, there might be times that you need to set the required width and height by hand.

Finally, we instantiate the root window, set the base title, instantiate the QueueTest class. We then call root.after, which waits x number of milliseconds (in this case 3) after the root window is instantiated, and then calls the Center routine. This way, the root window has been completely set up and is ready to go, so we can get the root window width and height. You might have to tweak the delay time a bit. Some machines are much faster than others. 3 works fine on my machine, your mileage may vary. Last but not least, we call the root window mainloop to get the application to run.

As you play with the queues, notice that if you put some data in one queue (let's say the FIFO queue) then switch to another

```
root = Tk()
root.title('Queue Tests - FIFO')
demo = QueueTest(root)
root.after(3,Center,root)
root.mainloop()
```

queue (let's say the LIFO queue), the data that was put into the FIFO queue is still there and waiting for you. You can completely or partially fill all three queues, then start playing with them.

Well, that's it for this time. Have fun with your queues. The QueueTest code can be found at <http://pastebin.com/5BBUiDce>.



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

Below Zero

Zero Downtime



Below Zero is a Co-located Server Hosting specialist in the UK.

Uniquely we only provide rack space and bandwidth. This makes our service more reliable, more flexible, more focused and more competitively priced. We concentrate solely on the hosting of Co-located Servers and their associated systems, within Scotland's Data Centres.



At the heart of our networking infrastructure is state-of-the-art BGP4 routing that offers optimal data delivery and automatic multihomed failover between our outstanding providers. Customers may rest assured that we only use the highest quality of bandwidth; our policy is to pay more for the best of breed providers and because we buy in bulk this doesn't impact our extremely competitive pricing.



At Below Zero we help you to achieve Zero Downtime.

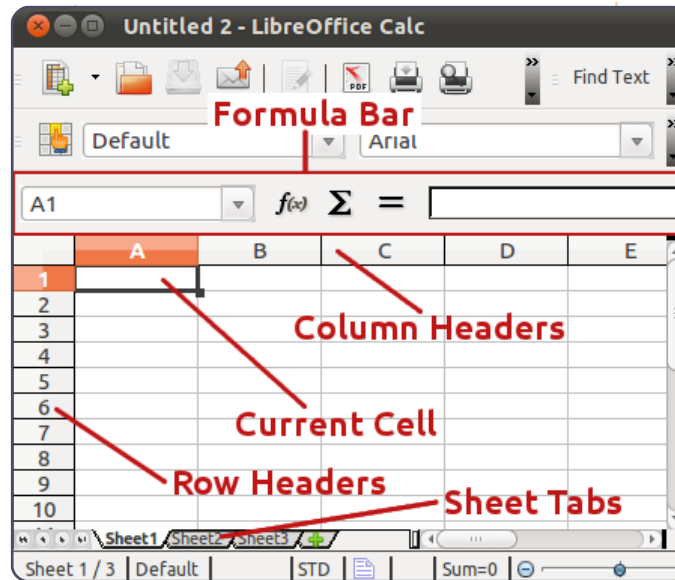
www.zerodowntime.co.uk



Calc is the spreadsheet module of LibreOffice, which is compatible with Microsoft's Excel. We already saw one use for Calc when we created our poor man's database in my last article, but Calc is capable of more than just data collection. As the name implies, Calc can do calculations using a rich number of functions built into the program. This means we don't have to manually calculate the total of some column; we can insert a formula to add it up for us. Calc also allows you to do a "what if.." scenario to play with the numbers in your spreadsheet.

Before we get into building our budget spreadsheet, you need to know a few things about how a file, sometimes referred to as a workbook in Calc, works. Each file can contain several different spreadsheets. In a new workbook, you get three spreadsheets by default named sheet1, sheet2, and sheet3. They are listed on tabs at

the bottom of the window. Each spreadsheet consists of individual cells. You identify the cells by their column letter and row number. For example, the first cell in the upper left hand corner is A1, the first column, first row. Each spreadsheet is capable of having 1,024 columns and 1,048,576 rows.



The layout of the Calc window is a little different than the Writer window. You still have a menu bar and formatting bar, but below the formatting bar, you have the formula bar. The formula bar is your friend when you work in Calc.

The leftmost box is the current cell name box. It tells you the currently selected cell or range of cells. The three buttons are the function wizard, the sum button, and function button. The text box is the input line. Use it to edit the contents of a cell.

At the top of your spreadsheet, you have the column headers (A, B, C...), and along the left hand side, you have the row headers (1, 2, 3...). The columns and rows are marked on the sheet by light gray lines. You will find this grid handy when you are laying out your spreadsheet.

You have several choices in the way you enter data into the cells. You can click on the cell and just start typing. When you have finished, press enter and you will move to the cell below. You can also click on a cell and enter your data in the input line of the formula bar. This method has a drawback, which I will explain in a minute, but sometimes, it is the

best method for editing the content of a cell. You can edit directly in the cell by double-clicking the cell. This puts you in cell edit mode. This mode is similar to editing in the formula bar.

To navigate within your spreadsheet, you can always grab the mouse and click on the cell you want. However, since often your hands are already at the keyboard, keyboard shortcuts work better. Tab moves you one cell to the right. Shift-Tab moves you one cell to the left. Enter moves you one cell down, and Shift-Enter moves you one cell up. While not in edit mode or not using the input line, the arrow keys move you in the direction of the arrow. The arrow keys are disabled for navigation while in the input line and in edit mode to allow you to move within your content.

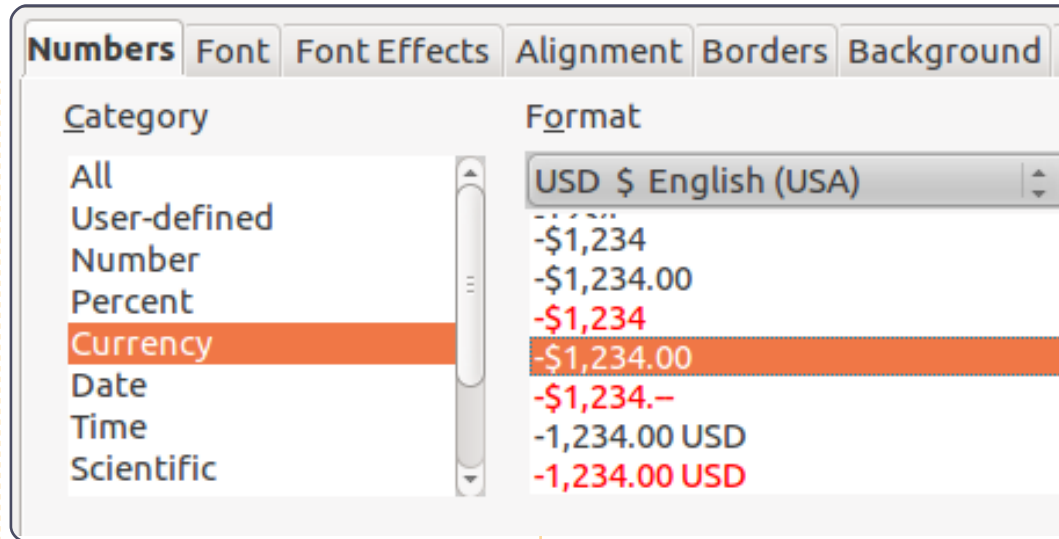
Now, with these tools on your belt, let's build the first section of our budget spreadsheet. Open a new Calc file. Click on the blank gray spot to the left of the column header and above the first row

header. This will select the entire sheet. In the formatting bar, set the font to a nice sans-serif font like Arial, and set the font size to 12pt. By doing this, we have set the default font and size for our entire sheet.

In cell A1, enter the text "Income for This Period," and press Enter. For now, don't worry if the text overruns the cell. We will fix that in a minute. On the second row of column A, type in "Sources". Down column A starting with row 3, type in the different types of income you have, e.g. Work, Freelancing, Bonus. I usually add a "Misc" for those things that don't fit into other categories, like winning the lottery and quitting your day job.

At this point, some of your income sources may overflow their

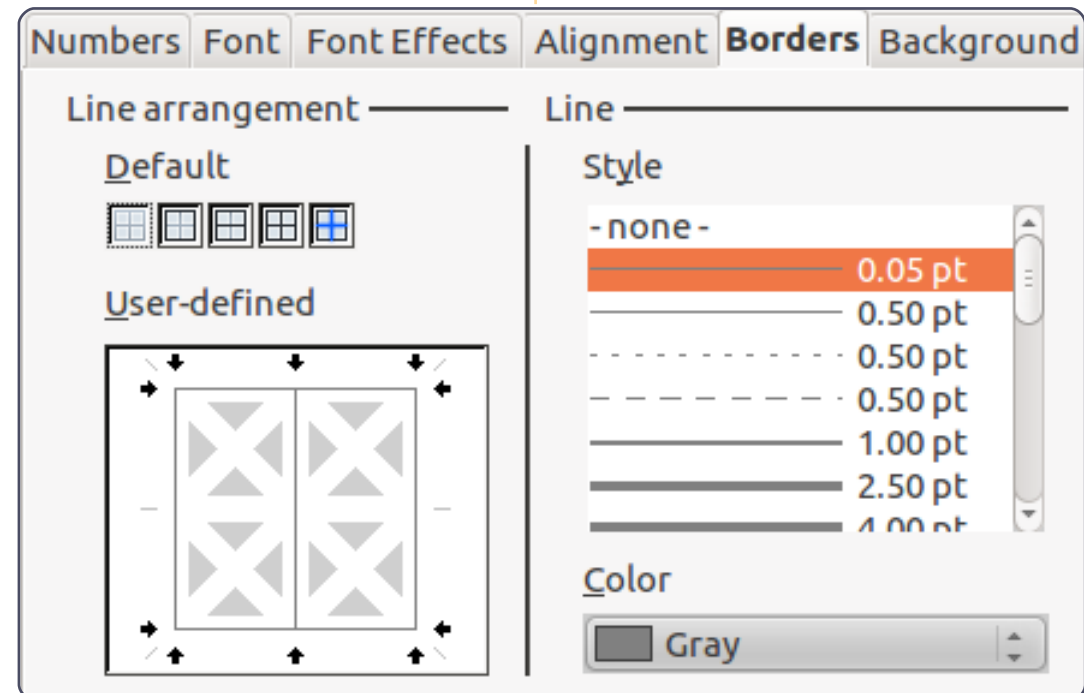
A7	A	B
1	Income this Period	
2	Sources	
3	Work	
4	Freelancing	
5	Bonus	



cells. We can adjust the width of the column by clicking between the cell headers for A and B and dragging. We are still not concerned with the cell A1. At this point, A1's overflow is okay, just make sure all your income sources fit in the column.

Move to cell B2. Type in "Amount". Press Enter. Down column B, enter an amount for each of the income sources. You will notice the default for numbers is just some unformatted numbers. Let's make them look like currency amounts. We will change them all at once. You can select all the numbered cells by click with the left mouse button and dragging until you have all the numbers highlighted. You can also click on

the first cell, hold down the Shift key, and click on the last one. With the keyboard, use Shift in combination with the arrow keys.



Format > Cells > Numbers. Select the Currency category. Above the format box, select the correct currency type for your country. Select a currency format from the format box. This is entirely up to you. Since you should never have a negative figure in your income cells, you don't need to worry too much about formats that deal with negative numbers.

Now, we will take care of A1 overflowing into B1. Since this text is a heading for the section, we want it to span across the width of the section. Cell Merge is the answer. Highlight cells A1 and B1,

and Format > Merge Cells > Merge and Center Cells. We will use merge cells a lot, and it should become one of your favorite formatting features.

Unfortunately, there is no keyboard shortcut. You can create one in Tools > Customize > Keyboard, but take care that you don't assign the keyboard shortcut to a common or predefined functionality.

Now, let's make it look like a header. Let's make the font bold, Format > Cells > Font tab. Select bold under Typeface. Let's put a border around it to make it stand out just a little more. Click on the Borders tab. Under Default, click the second box, Set All Four Borders. Leave the style at the default, but change the color to gray. Click OK.

With our Source and Amount headings, we want them to stand out as well, but they need to look a little different to distinguish them from the section header. Select the two cells with Source and Amount in them. Format > Cells > Font tab. Select bold again. Click on the Borders tab. This time we just want a border between the two cells. Click in the User-defined

box between the two gray boxes with a white X in them. You will see a line between the two. Change the color to gray. On the Alignment tab, change the alignment for horizontal to center and vertical to middle. On the Background tab, select a light blue (Blue 8) for the background color. Click OK.

For our income items, we could put a border around them, but that can be hard to read sometimes. Instead, let's highlight the even numbered rows. Start with the second item, highlight both the name and its amount. Format > Cells > Background tab. Select a light gray for the background. I used Gray 10%. Click OK. Repeat for all the even rows.

It would be nice to have a divider between the name and the amount and a border around the whole list. Click on the first name, hold the Shift key, and click on the last amount. This should highlight all the items and their amounts. Format > Cells > Border tab. Under Default select the second box, Set Outer Border Only. You will notice the User-defined box is different this time. There are four gray boxes with white X's in them. Click

between the top two boxes. This will give you a vertical line between the cells. If you click in the middle, it will create a vertical and horizontal line, which is not what we want. Change the color to gray and click OK.

	A	B	
1	Income this Period		
2	Sources	Amount	
3	Work	\$1,079.00	
4	Freelancing	\$200.00	
5	Bonus	\$50.00	
6	Misc	\$5,000.00	
7			

This completes the Income section of our spreadsheet. In the next article, we will continue with our budget spreadsheet by adding the Assets section. And we will begin looking at making our spreadsheet do some math for us using the Sum function.



Elmer Perry is a children's minister in Asheville, North Carolina whose hobbies include web design, programming, and writing. His website is eeperry.wordpress.com.



There's nothing worse than the thought of data loss to an habitual geek, particularly if that geek happens to be a hoarder of bits going back a couple of decades. We're all inexorably going digital; music, photo albums, correspondence; all so convenient, all so ephemeral.

It's not good for one's state of mind to know that hard disks fail; gravity, electric surge, malware, and human stupidity all take their toll. What's needed is a safety net; a backup strategy. Oh, look, I just happen to have one...

What to Backup

Don't panic over software. Program loss is merely an inconvenience, since programs can be replaced easily, particularly Open Source programs; much easier than grubbing around for License/Activation Keys for proprietary software.

Data loss, however, is the real

tragedy. Data can be priceless and literally irreplaceable.

What data files to backup, then?

Photos, documents, spreadsheets, calendars, email (mailboxes or individual messages). Music, too, if, like me, you have an old library ripped from quarter-inch tape.

Critically, you need to know where everything is stored. Key to this is a detailed inventory, starting with a system-wide search based on the file types (extensions). Don't assume you or your dearest save things to the folders that you should use. Run that search, note where everything is. Do the housekeeping, and tidy up. Rationalise. De-duplicate. Know what's vital and current. Empty the trash. Include memory sticks and external hard drives in that inventory.

You won't want system cache or

temporary files, swap files, or page files, as you can rarely extract anything useful from them, and they fill up with junk anyway. If there is anything you need to keep from your cache, copy it out to a more secure location.

You will need to know the types of files (usually described by the file extension, such as .odt, .pdf, .mpeg, .mp3, .mp4) in order to better specify your inclusions and exclusions when you backup.

Any databases (.dbf, .db) may have additional backup conditions to cope with locked or open files, records and indexes. Think of your vital club membership, mailing list, video index; all the backups can be rendered useless if you backup while they're in a locked (edited) state. Best close them and the applications that use the data while you backup.

Where Are the Files/Data for Backup?

The local (internal) hard disk is

the number one stop, followed by external drives, network (server) drives, NAS, SAN, and peer-to-peer connected machines. USB 'flash' memory sticks are excellent for holding the latest 'sneaker-net' copies of documents, closely followed by external USB or Firewire hard drives. I have 'temporary' and intermediate copies of data duplicated across several devices already. Mobile phones and PDA's; iPhone, iPad, or synced files from Blackberry? Make a list of all the different types of data and devices you need to backup.

Version Control

How volatile is your data? High priority or critical information can change regularly. Are you going to want to backup each version? There may be a need for generations of backups, for audit trails and inspections, company or government data retention policies, or plain old work-in-progress, so you can back out a generation of changes should things go wrong. You should plan

your generations of data to best use the storage available, so decide what's the best frequency to take copies, and how long to retain them. There's a whole discipline in IT administration built around backup, versioning and retention. You can go read.

Backup Destination

The safest data storage plan goes something like this:

- local machine disk (original or master copy)
- network storage disk (common or shared copy).

Note that in these days of network computing, this may actually be your master. While you may have RAID (Redundant Array of Inexpensive Disk) which is more robust, don't rely on it. It's still electrons stored as bits on mechanically spun magnetic platters.

- offline storage. This was commonly tape, but could be anything loaded on request - tape, disk caddy, mini-disc, optical re-writeable disk, or logical volume mount.
- off-site storage. This could be physical media - say a set of imaged disks which are caddied,

your digital tapes or data-DVD's.

- Remote cloud storage, or on-line backup.

For maximum peace of mind, you should be looking to hold at least three copies of data on a selection of different media types: local, off-site, and cloud.

Local backup does not include the working copy on your PC. Get an external drive for convenience. Keep it somewhere safe, out of site, away from the PC. Use it as a deliberate and planned local backup.

On-premises backups would ideally go into a fire-proof safe.

Off-site means not at your home or office where the PC normally lives. If nothing else, swap between two external hard drives, and always keep one at your mother's house. Maybe have a reciprocal arrangement with your best mate. I know of professional people who use a safety deposit box at the bank.

This provides physical persistence of data, but consider privacy and whether you need encryption for data security. If

your off-site backup gets burgled, will that harm you if the data gets into the wrong hands? Family photos? No. My lawyer friend's legal briefs? Yes. That's why he encrypts his backups. This is another whole topic.

Embed Backing-up into your life

This means a program with a scheduler, or a script triggering the backup application to copy your data onto something other than the device where the master copy lives.

Move External Backups Off-site

The value of your backup holds for as long as it stays intact and proof against fire, flood, theft, earthquake, subsidence, and so on. Once you make a backup, remember to move it off-site to your alternate location. Don't leave it on the bookcase, on top of the fridge or under the desk. That's not a useful backup. This is why online or cloud storage is so attractive.

Online backup and storage is now a practical reality for most computer users and there are lots of providers in the industry of cloud storage. Disk space is cheap, bandwidth is available and it automatically migrates off your premises. The best cloud storage services have encryption built in.

Testing

Finally: test your backup with a partial restore from ALL sources. Just because a backup exists, doesn't mean it is usable. Tapes and DVD's decay, disks fail, software doesn't always write with integrity. Test them before you need them in an emergency.

Restoration is always a challenge owing to the volume of data and the length of time it takes. It has to be done to verify the integrity of your backup. If you never rehearse a full restoration, you need to establish what a colleague calls a 'degree of confidence.' The partial restore gives you that confidence that it will work in extremis. Otherwise you're just guessing. How confident are you in your guesses in other areas of life? Exactly.



Last issue, I started talking about the needs of a home office or small business that runs on Ubuntu. To have a reference starting point, I described a fictional environmental company of five people, and a mixture of desktops and laptops, and some hardware requirements. Now that we have our hardware set up, we move to the software necessary for our needs. The business will run Ubuntu 10.04 because the long-term release provides a known long-time support for the OS.

To determine the needs of the company, let's start by evaluating the workflow. This is a big word that means "the steps taken to achieve a goal". Look at the second page of this magazine. You will see logos for LibreOffice, GIMP, Scribus, and Creative Commons. LibreOffice is used to manage the text that will be in the articles. GIMP is used to resize and retouch the pictures, while Scribus gets the text, images, flow, and pdf creation managed. Creative Commons provides the license of

the resulting work.

The workflow can be defined very broadly or narrowly. We will broadly define our workflow as follows:

- 1, Market the company to potential clients.
2. Client calls, gives the details of a project, and asks for a proposal (cost estimate).
3. The proposal is researched, prepared, and sent by email.
4. Client accepts the proposal. Initial paperwork is completed.
5. Field work is performed. Samples and pictures are taken, and field notes and drawings are written. Samples are delivered to a lab.
6. The lab report and fields notes are evaluated, the pictures resized, and the report written and sent to the Client.
7. Invoice and payments are processed (from Client and subcontractors).
8. Records are archived.

From this workflow, we see that we need the following types of software:

- Desktop and web-based publishing (workflow 1)
- Office productivity (workflow 3, 6)
- Email and contact management (workflow 1, 2, 3, 4, 6, 7)
- Accounting (workflow 4, 5, 7)
- Image manipulation, CAD, GIS, Scanning (workflow 1, 5, 6, 7, 8)
- Records management (workflow 3, 4, 6, 7, 8)

Now that the software needed is known, the first area to check is the Ubuntu repository and then the web. The software can be open-source, and it could have no cost or it could be commercial. Remember that a free (all the meanings you want) alternative is not always available. If it is not in the repositories, it should be packaged as a deb and should need as few external dependencies as possible. You can also check the Ubuntu list of certified software at <http://webapps.ubuntu.com/partners/certified-software/> for software that will work. These guidelines will help to minimize problems encountered.

Desktop and web-based publishing

Flyers, business cards, brochures and web pages fall in this category. When you meet someone, business cards are exchanged. If you are at an industry show or at a potential client meeting, you bring brochures and flyers with you. All of these have contact information, email and web address.

If you have used MS Publisher, Adobe Frame Maker or Quark Express before, you know that the precise placement of elements in a page is a must for printed publications. On Ubuntu, you will use Scribus (<http://www.scribus.net>). Scribus is desktop publishing software (DPS). Its precise placement and color management make it one of the best free and open DPS tools around. Scribus, and DPS tools in general, are not word processors. Take your time to learn Scribus. Check the first eight issues of FullCircle for a tutorial on it. Once you have the hang of it, your paper

publications will come out as the best you have seen.

Scribus will also be useful in creating forms to collect data on the field. It can create exports directly to pdf if you want to take it to a professional print shop. One thing about the pdf is that if you try to extract text from it, it may not come out really nice. Extracted text may have spaces within words, and every line is a new line. Use Writer to export a page with a couple of paragraphs to pdf and do the same with Scribus. You will see what I mean. Scribus is also an excellent tool to create pdf forms. Its main drawback is that multi-line boxes have too much space between lines making it look awkward. Also, there is no option to let the user save a filled pdf. Scribus can also use vector (Inkscape, <http://inkscape.org>) and raster (GIMP, <http://www.gimp.org>) images. You can use Inkscape to create the logo of your company and various clip arts. The upside of creating your logo as a vector image, is that you can scale it without losing resolution.

Web-based publishing is another thing. MS Publisher can

create a web page of your document. It may do the work, but the code is horrible and tailored to use IE hacks. The repositories have Bluefish (<http://bluefish.openoffice.nl/index.html>) and Kompozer (<http://www.kompozer.net>). Both are web-page creation tools, but Bluefish is only for hand coders. With both, you can create html, PHP, javascript, or any combination of them. Bluefish development is active while Kompozer is more slow. If you plan to go this way, ensure that you use a strict DTD (document type definition), and forget about table layouts. Strict DTD html and CSS layouts will give you the least headaches because you will be following a strict recipe - the presentation is handled by CSS, and the information is handled by the html markup. When you tire of the way your website looks, you just change the CSS. When you need to update the information, you go to the html source. Your web page may not look exactly the same across browsers but even if you use hacks you are not assured that it will. Also, if you later hire someone to manage your website, a strict DTD is easier to maintain and read by a different person.

Also remember that there are many people accessing the web through smartphones, and others who print your info. It's a good idea to offer a screen, print and mobile css rule for each. Remember that each medium is unique, and that you do not need to make all of them look the same. Open up Firefox Preferences, and look at the Content tab. The Advanced option of the Font & Colors section will show the font size and font used for web pages that do not offer any special rule for font display. If you have not changed it, the font will say serif, and the font size says 16 pt. If you open up the same page in print preview, the font may be too large. A CSS rule may leave the screen font at 1 em, but set the print size to 12 pt. A mobile rule may leave the same font size, but hide all images by default, or use alternate, smaller images. That way, your web page will automatically serve different users without you doing any special java or ajax magic.

Another tool you can use is Drupal (<http://www.drupal.org>). Drupal provides several templates,

and handles all the coding for you. There are hosting companies that offer a Drupal setup to their clients. You will just have to add your text to the Drupal-ready templates. Check out <http://drupal.org/hosting> to find the host that is suitable for you.

Office productivity

This is the software group that most people will be familiar with. Ubuntu supplies OpenOffice as the default office productivity suite. OpenOffice is similar to MSOffice, enough so that most people will need only little training on it. The benefits of using OpenOffice come from being able to open MSOffice files, and having a full featured office productivity application. Not only do have you a word processor, spreadsheet, and presentation software, but you also get flowchart and diagramming via Draw, and database applications via Base (which is not in the default installation in Ubuntu). To get the full suite, open the Software Center and download OpenOffice.org Office Suite, or just install OpenOffice.org Base to get the database. The full

installation will give you some legacy and mobile device filters.

OpenOffice is able to match MSOffice, so you should not have any reservations about it. One thing to remember is that OpenOffice is a tool to create Open Document Format (odf) files just like the latest iterations of MSOffice are tools to create Office OpenXML files. Although each suite is capable of opening "the other" file format, they are best suited to handle the one they were created for. In short, use ODF as your default file format.

Getting a free suite means that you do not get some things like templates, clip art, and grammar checker, but they are available for download. The trickier one is the grammar tool. You will have to go to the Lingucomponent webpage (<http://lingucomponent.openoffice.org/grammar.html>) to check the available tools. After the deadline (<http://afterthedeadline.com>) has been the best of the offered tools with the drawback that you will need to install it on your server and have at least 4GB of RAM and several cores in it. It pays to do it.

OpenOffice provides user

guides at http://wiki.services.openoffice.org/wiki/Documentation/OOo3_User_Guides. Download them and have them available for your employees. Many of their first time use and migration pains are explained there. On Writer, go over the concepts of sections and page formats as those were some of the ones that gave me a lot of trouble. Learn to use paragraph, character, and page styles as these are very powerful. As children, we were taught that there are times that we need to emphasize text but word processors got us in the bad habit of using bold or italics. Same thing happens when separating paragraphs, an empty paragraph is added instead of using a paragraph style like Text body.

Calc provides a spreadsheet with mathematical formulas and chart functions. The conditional formatting works great when you have a table with values to compare against a standard. Once you set it up, the data that fulfills your instructions get automatically formatted. I use it to bold, underline, italicize, or any combination of them, values that are above reference standards.

These values are then charted to evaluate, for example, their trend over time or over an area. Calc formulas also provide ample coverage for statistical, logical, arithmetic, and financial needs.

Many users of Impress will complain of the lack of templates. That said, move on. Impress does its job well enough. Transitions are good, and one thing that I have found that works better than Powerpoint is the embedded media player. Impress will automatically play the video, I wasn't able to do that with Powerpoint.

The bundled office suite provides for your needs. However, there is LibreOffice. LibreOffice now ships inside the current Ubuntu, and it looks like it will ship in the next LTS edition (12.04). Everything I said holds for LibreOffice. There are some features that LibreOffice has that have not made it to OpenOffice - yet. If you find that you want it, follow the instructions at <https://wiki.ubuntu.com/LibreOffice>. You will have to uninstall OpenOffice as the two cannot coexist.

Lyx (<http://www.lyx.org>) is an alternative document processor that you can try. Being a front end to Latex, Lyx emphasis is in writing; Latex rules are used to style the document. The basic textclasses are good, but people used to managing every single space may find them frustrating. Lyx takes some of Latex's complexity away and those who know Latex can create new textclasses to suit their needs. Lyx can output to pdf, html, DVI, and others.

Email and contact management

Evolution. Learn it, love it. It is no different (in terms of basic usage) from MS Outlook or IBM Lotus Notes. It manages your email, contacts, and calendar. Base connects to your address book so you can do mail-merge easily.

Accounting

This is a category with challenges - because not many free accounting packages exist for Linux small businesses. Luckily, the software repository has a

Canonical Partner source that has a link to such software. Openbravo ERP is a web based application that lets you manage projects and create invoices, and access business intelligence tools, for a price. The certified software web page also points to Accountz (<http://www.accountz.com>) and Muli (<http://www.muli.com.au>). I have not had any experience with any of these packages but Ubuntu says they will work. Whether these do what you want is another thing.

Image manipulation, CAD, GIS, Scanning

The pictures taken during field word, the hand-made drawings, geolocating the samples, and digitally preserving all these, require the use of special software. Let's start by looking at the image manipulation software. If you are new to Ubuntu, you may not know GIMP because it is no longer a default application. Go ahead and download it from the Software Center. GIMP is often compared to PhotoShop because it is just as powerful. If you care to learn it, there is a lot that you can do with your images. It will be part of your workflow of desktop and

web publishing apps. In this instance, we will use it mostly for picture resizing because it gives us the option of using physical units (mm or in). When pictures are printed as part of a report, they will only take a set space, let's say a 4×6 in. With most cameras these days, if you take pictures at full resolution, you end up with a picture of several MB and in the 30-inch size range. If you create a document, think Draw, with several of these images, the resulting file will be bloated, unwieldy and slow to print. Use GIMP to open the picture and go to the Image menu. From there, select Scale. In the dialog box, go to resolution, make sure that the chain link between x and y is not broken, and if it is anything different from 300, change it. Look at how the size changes. Now move to the unit selection box and select inches. Pictures are usually taken landscape - meaning that the width is the largest dimension. Change the dimension to 4 inches. The height will change automatically. Save this picture - with a different name - and compare its file size to the original one. Using these resized pictures will give you an excellent printed document and the file size will also

be manageable.

Ubuntu's default scanning application is Simple Scan, and simple it is. You will scan documents that you receive from third parties, and Simple Scan has settings for A4, A5, A6, letter, legal and 4×6 sizes. The resolution is limited to several choices, and saving options are limited to pdf, jpg, and png. I believe that these settings are enough, but Simple Scan always scanned the largest size and I had to crop every single image. When using the document feeder, Simple Scan was able to detect the last page and stop scanning. Double-sided scanning using a document feeder with automated collating of the pages is not possible. Simple Scan is also missing an optical character recognition (OCR) option because that is not the goal of the application.

For OCR, and some more advanced features, look at gscan2pdf (<http://gscan2pdf.sourceforge.net>). Gscan2pdf is a collection of different tools that makes scanning more convenient by far. One of the things that it does is page cleaning and deskewing via

unpaper (<http://unpaper.berlios.de>). By using scanadf (<http://www.martoneconsulting.com/sane-scanadf.html>), gscan2pdf should detect when the ADF is out of pages. Unfortunately, for me that feature does not work. I use an HP Photosmart Premium and every time I use the ADF I have to enter the number of pages in it. To use OCR you have to install an OCR engine. Of those that I have used, I obtained the best results with Tesseract (<http://code.google.com/p/tesseract-ocr>). Install it and any language you need before you install gscan2pdf. None of the tools that I have used in Ubuntu work like the ones that come for Windows. The multifunction printer I have comes bundled with software that scans to pdf and inserts the OCR'd text in such a way that you just select the line to copy the text. When saving to pdf, gscan2pdf places the OCR'd text in a note which some people will find odd. I will call this a limitation to the current state of the software. Another limitation is complex layout analysis. Ocropus (<http://code.google.com/p/ocropus>) and Cuneiform (<http://launchpad.net/cuneiform->

[linux](#)) are alternative OCR and layout analysis engines that you can use with gscan2pdf. Your results will vary depending on the layout of the documents, and both tools are command-line only.

Once you have scanned your field drawings, you will have to use a CAD application to digitize them. For those who know only AutoCAD, you will be surprised by the options in Ubuntu. AutoCAD is not available, and the best option in the repositories is QCAD. There is a free edition and a paid one (www.qcad.org). The commercial edition is only \$36.00 USD - and well worth it. My reason to get the commercial edition was to get pdf export. There are some new features and bug fixes as well. I use QCAD to do layout of the facilities, and mark utilities and sample locations. It has a model space and no paper space. The missing paper space is the major drawback for me, but I have learned to work around it. The default file type it uses is dxf, and it can not export to AutoCAD dwg. That is no problem to me, but, if you want dwg support, look to Bricsys (<http://www.bricsys.com>) to obtain Bricscad. It works great in Ubuntu (an Ubuntu software

partner), it is much more sophisticated than QCAD, and has a reasonable price at \$400 USD. Another free option is DraftSight (<http://www.3ds.com/products/draftsight/free-cad-software/>). It appears promising enough - offering capabilities similar to Bricsys. When I installed it in Ubuntu, I was barely able to run it. I met the hardware specs, but scrolling, moving the mouse, and adding elements, was painfully slow. It reminded me of the time I was playing a game and my graphic card did not meet the minimum requirements. A couple of days ago, a new version came out - so things might have changed. I have stayed with QCAD because it provides for my needs.

Geographical Information Software is part of the toolbox used in the environmental sciences and many other places. It lets us evaluate the geographical relationship between many diverse aspects. If you have an Android phone, go to Latitude or Maps. If you get your location you can see what is around you. Do you want to know if the presence of a university has an impact in scholarization around it? You can go the US Census web page

(<http://www.census.gov/geo/www/tiger>) and download their data. Then get the location of several universities, and use GIS tools to see if there is a change with distance. That is geographical information at work. GIS is even used in crime fighting (<http://gislounge.com/crime-mapping-gis-goes-mainstream/>). For my GIS needs, I use QGIS (<http://www.qgis.org>) which is not in the repositories. You will need to follow their instructions (<http://www.qgis.org/wiki/Download#Ubuntu>) to add their repositories. When installing it, also include the GRASS plugin. Those who have used ArcGIS will find QGIS somewhat familiar. The main problem that I have found is with the Coordinate Reference System (a type of information that gives a placeholder of locations). Read the manual on these because it works a little different from ArcGIS.

QGIS will also help in creating contours, whether they are of elevation or contaminant concentration. Follow these tutorials from Scratching Surfaces to do them. <http://www.surfaces.co.il/?p=595> and

<http://www.surfaces.co.il/?p=578>.

Records management

Sometimes people forget that the information collected and created needs to be managed for several years. The Occupational Health and Safety Agency (OSHA) requires that employers keep certain records related to health monitoring for 30 years after a person leaves the company (29 CFR 1910.1020(d)(1)(i)). The US Environmental Protection Agency (EPA) has a record schedule (<http://www.epa.gov/records/policy/schedule/>) that governs the maintenance of their records. Records - paper, electronic or in any other media - consume space, money, and time. This is records management (http://en.wikipedia.org/wiki/Records_management). If we go back to our workflow, records are generated at almost every step: when a proposal is sent, when the proposal is accepted, the documents generated as part of the field work, invoices, payments, documents received from third parties, and so on. When you print those records, and start filling file cabinets, you will get to the point

in which you will have to add to the file cabinets. The electronic records start filling your hard drives - requiring that you add more hard drives. I know people who have not erased any business email in over ten years. Holding on to records forever does not make good business sense. You have to get rid of some. The National Archive and Records Agency (NARA) has a framework, geared to federal agencies, for developing records management guidance (<http://www.archives.gov/records-mgmt/policy/rm-framework.html>). There is even guidance for using sustainable formats (<http://www.archives.gov/records-mgmt/initiatives/sustainable-faq.html>) and pdf (<http://www.archives.gov/records-mgmt/initiatives/pdf-records.html>). The International Organization for Standardization (ISO) has for sale a two-part standard for electronics record management (http://www.iso.org/iso/catalogue/catalogue_tc/catalogue_detail.htm?csnumber=31908). This Australian webpage (<http://www.records-management.com.au/information.shtml?standards->) has a comprehensive list of records-

related standards and guidance from around the world.

Now that I have convinced you to throw away those unneeded records, I can tell you about record management software (RMS). RMS works like a gateway of documents. You use the RMS to save a document within the vaults of the repository and to request documents within it. The RMS keeps track of changes to the documents and who has the document out for editing. It also takes care of archiving. The Canonical Partners repository has one such option by a company called Nuxeo. Nuxeo goes a bit over record management, and it also offers content management. Think of "Terms and Conditions" that are added to contracts. There is a free option for you to evaluate.

Another RMS that you can check, and that is DoD 5015.02 certified, is Alfresco (<http://www.alfresco.com>). There is a free community edition. We are looking for a RMS where I am working now, and Alfresco is one of the contenders. The main reason to evaluate it is because it can connect to Documentum (a monster of enterprise content

management software). I have not tried it yet, and, if you want to do it, the Linux Community Edition is 64bit only.

As you can see, Ubuntu offers all the tools needed by a small environmental company. The main cost for the company will be in acquiring the hardware, and setting the network and software. Most of the software that I mentioned above is free, and in the repositories, removing some of the headaches associated with hunting down software. Have no fear in taking the plunge to open shop with such a great free environment.



Jesse is an industrial microbiologist from the environmental field who now works for the government. Along the way loving FOSS and ways to help people with it.



HOW-TO

Written by David O. Rowell

GRAMPS - Part 2

I need to begin by correcting some bad advice in the previous article. The Marriage event is properly entered for the family - not for the individual. It is, after all, a family event, and not just that of any person, although it will show in the individual screen as a shared event.

Before you get too far along in recording your family history, here are some hints gained from many researchers' experience and mistakes:

- DO NOT start by trying to find family data on the Internet. Always work from the known to the unknown – gives your feet a firm place to stand.
- Don't blindly assume those family legends to be the complete truth. They usually have some root in reality, but you may not recognize it right off.
- Don't expect "Who Do You Think You Are?" results without years of hard work!

• Begin by recording what you know about yourself – your birth date and place. How did you know that? Gather copies of your birth record if you don't have it already. In the US, a birth certificate will generally include only a minimum of extracted data. Try to get a copy of the actual courthouse journal entries.

• Dates are usually entered in day-month-year (08 Jun 2011) format to avoid confusion. Enter as much

of the date as you know. Some useful common abbreviations are – cal, Calculated; bef, Before; aft, After; ca, Circa; abt, About; est, Estimated; bet, Between.

As we saw in the last article, Gramps facilitates this by having a date selection screen where you can choose how best to enter the dates as you know them. Just click the little box to the right. You can even choose the calendar you're using – not a problem for most of

us! Making a choice from the 'Quality' dropdown says something about how certain you are about the date. Making a choice from 'Type' takes care of choices mentioned above. Entering one or two dates into the date fields completes the entry. The 'Text Comment' box will show you how your choices will appear. You'll use 'Calculated' for those birth dates extrapolated from Census data or calculated from an age and death date. Be aware of accuracy problems found in many date calculators. Many don't take into account everything they should!

Be aware that there was a calendar change from Julian to Gregorian method of calculation that may well impact your work. While the change should have taken place in the 1500's each country decided when to adopt it. Britain and the British colonies seem to have adopted the new calendar in 1752. Suffice it to say that, if you're dealing with dates around the changeover you have to be very careful. You may also run into double dates that stem

HOWTO - GRAMPS - PART 2

from the definition of what date the year started. Then there was the French Republican calendar, but we won't go there! My advice is to record the date as you found it and make use of 'Notes' to record your evaluation of the situation.

- As you gather family data, you're bound to find that you have entered children out of birth date order. To fix this click the edit box to the right of 'Family'. On this screen (only) you can drag and drop to establish the right order, or you can use the 'up' and 'down' arrows.

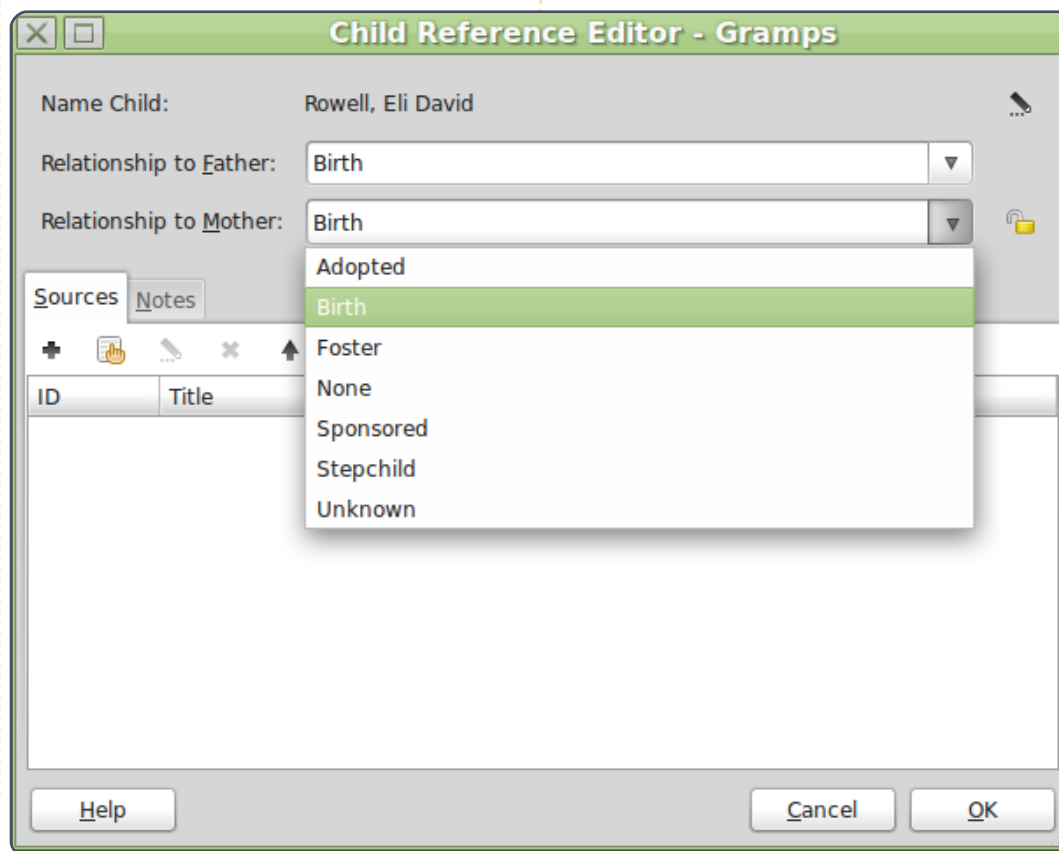
- Placenames are entered in small to large order - parish, township or city, county, state, country; e.g. Lysander Township, Onondaga County, New York, US of A. This level of detail is needed to make a positive location. It is important that places be entered as they existed when the event took place. Knowing that will help in locating primary records. For example the present Oswego County, NY, was formed from Oneida and Onondaga Counties in 1816. Hinmansville and its records would have been in Onondaga County in 1810 - even though it is in Oswego

County now. Nor will you find an 1810 census for Oswego County. You can search for this sort of information on the 'Learn" tab at FamilySearch.org.

- I will guarantee that you will want to revisit your source data at some time in the future. If you record enough information to uniquely identify both the specific source and where you found it, I feel that's enough. Others would insist on a more formal citation.

Data on the Internet had to come from somewhere else. Cite the source of your source. In that manner, you have some assurance of finding the data even if the site changes. It may seem a tedious waste of effort to find and record the source information for your data, but it's not. Just do it!

- If you're married, record your spouse's and children's data in the same way. The complete family information is usually recorded on



a 'family group sheet'. Gramps will generate a 'Family Group Report,' simply choose Reports->Text Reports->Family Group Report. Select your family and options, then press OK. I find PDF output to be the most convenient, but Open Document format is handy if you need to edit the report. I'd avoid plain text, it's formatted for fixed-width printing, and RTF, because every WP processes it differently!

- Be sure to select the child's relationship to the parents when recording family data. Gramps includes what appears to be all the usual parent relationships in the dropdown box. Please don't ask how to handle the complex situations that might develop from a surrogate mother situation or sperm or egg donation. I'm sure those have been discussed on the Gramps forums – look there.

- Now it's time to record yourself as a member of your parents' family. Record your siblings too. Again, secure copies of documents that verify the data.

- Working backward in time, record your parents as members of your grandparents' families. You may

begin to find that documentation is getting hard to find. Record what you know and make a to-do list for the unknowns. Try to find pictures and get your grandparents to talk about the people and places in them.

- If you don't know parts of a person's name, DO NOT enter unk or unknown – that will bite you, guaranteed! I type [–?–], there's no question that is a symbol, not a name. I took that away from months' long discussion on one of the Genealogy newsgroups years ago.

- Contact your cousins, aunts, and uncles. Find out about your family history from “the horse's mouth” so to speak. One day my cousin and I looked at each other and realized that we were 'the older generation'! Too late then. Genealogy isn't just dates and numbers. Try to flesh out your knowledge with pictures, recordings, letters, medical information, precious objects, and interviews. Talk to your parents about events that have special meaning to them. Have them identify people and places in pictures.

- Start some sort of filing system to keep track of the documents you're gathering. Some file by person, some by family. Some use notebooks, some use folders in a file. Your choice, but do something, or you'll find yourself staring at a pile of half remembered papers! Develop a system to preserve the names and places you've identified in those old pictures. Reading through http://genealogy.about.com/cs/organization/a/filing_systems.htm will give you some ideas.

- It is helpful to keep a record of places (books, web sites ...) you've researched, what you searched for, and what you found. “Nothing” is a perfectly valid and useful fact! This practice will help prevent searching again and again for the same item in the same place. Of course this isn't strictly true in the case of searching on the Internet, since URLs and content vary with time.

- Consider this about the Census – the census taker only recorded what he thought he heard, generally without checking spelling. In many cases someone else may have provided the information to the census taker,

perhaps the family was away for the day? Get used to inferred birth years changing over time. Accept the fact that names and name spelling just weren't that important in the old days. I've found a certain “liquidity” in reported ages. Perhaps being older or younger than your spouse had a certain stigma?

- At some point, hopefully after you've recorded some data for your grandparents, or even great grandparents, you will want to seek further information on the Internet. Learn to develop a skeptical attitude toward what you find – some “researchers” aren't at all careful about what they record. There are even known cases of fraud. There's a lot of garbage and copies of garbage out there. You want to get back to hard evidence – original records if they exist.

- As a newcomer to genealogy, I'd suggest that you visit https://www.familysearch.org/learn/getting_started, and work through some of the guides provided. The Family Search site is provided by The Church of Jesus Christ of Latter-day Saints, the Mormons. I understand that family history is very important in their

religion. LDS has undertaken some very large international projects to digitize original records – much of this work is available for your research on the Family Search website at no cost. They also have a worldwide network of FamilySearch Centers. At these Centers, you can view microfilm of these original records and use some for-fee sites at no cost on their computers. Microfilm not found at a Center can be rented very reasonably from their main library in Salt Lake City. On-site staff will be helpful but may not know much about genealogy. No, I'm not evangelizing here - it's just that LDS has generously provided these services for your use at no cost and with no strings attached.

- At some time you will need to visit <http://www.rootsweb.ancestry.com/> to consult and register for some of their lists. You'll find a wealth of background information on RootsWeb. RootsWeb is hosted by Ancestry, but has remained free and independent of commercial influence.

- Other resources include www.worldgenweb.org which will link to www.usgenweb.org

HOWTO - GRAMPS - PART 2

www.canadagenweb.org and other national sites. The information you'll find here is organized geographically, and may contain information you need.

- You may well find that your local library has a genealogy and local history department. Most provide user access to online databases such as Heritage Quest or

Ancestry. Some systems even allow remote login. Ask at the Reference desk.

- If you can afford it, www.ancestry.com has, probably, the most complete online digital content. Remember the "Who do You Think You Are?" TV series? You can search for events, names, or places, find and view original and

secondary sources, and participate in online training. Considering Ancestry's vast content, the price is reasonable.

- Google is your friend even for genealogy! Surprisingly, Wikipedia will also prove useful.

This brief note should get you well started on the path to building a good sound family history database. Don't forget those sources!





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:

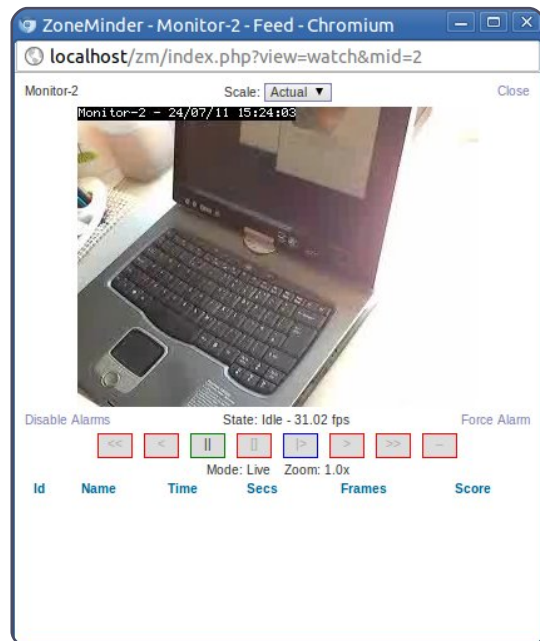
- make and model of the hardware
- what category would you put this hardware into?
- any glitches that you may have had while using the hardware?
- easy to get the hardware working in Linux?
- did you have to use Windows drivers?
- marks out of five
- a summary with positive and negative points

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



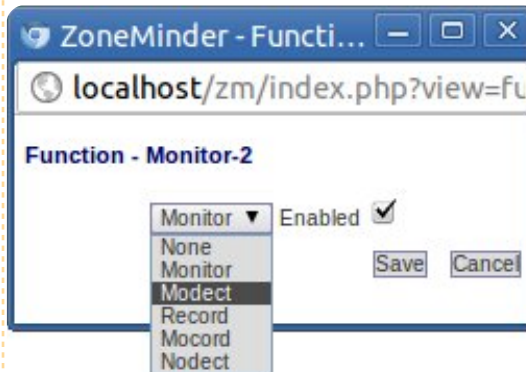
Last month we got our CCTV system up and running. The only downside was that it was view only. It wouldn't record. We'll rectify that this month.

Here's the scenario: I have my laptop on my desk, and I want to know if someone has touched, moved, or taken my laptop. The easiest way to do this is to have our ZoneMinder CCTV pointing at it:



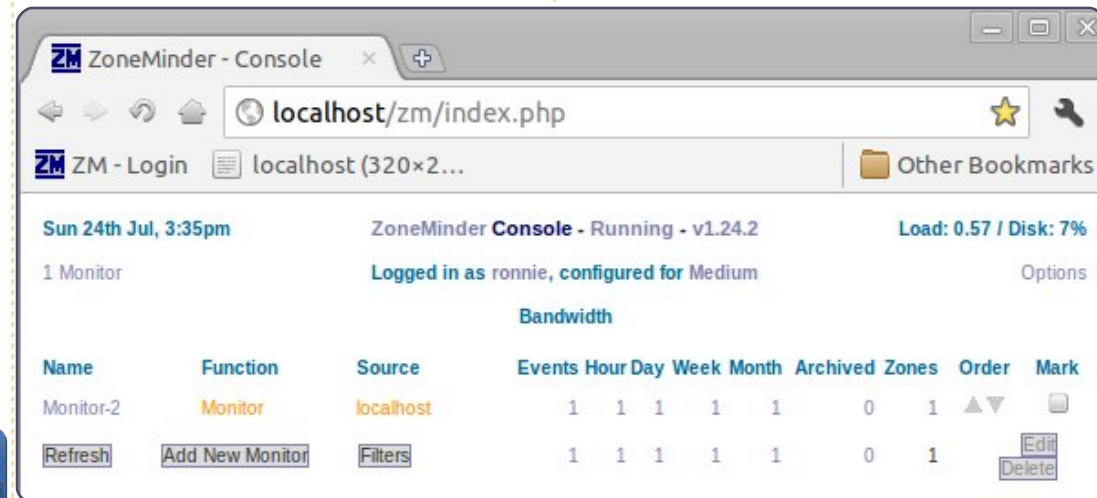
then, in the ZoneMinder admin

screen, click the link which says 'monitor'. You'll get a pop-up window with some options. These options are what ZoneMinder is doing. Monitor is what we were doing, just monitoring, or watching, the situation. Here, we want to choose 'Modect' which is short for 'motion detect' and click 'Save'.



Now ZoneMinder is sitting watching (monitoring) for motion detection. That is, it is waiting for something to move. When something does move, you'll notice some numbers appearing on your admin screen (above right).

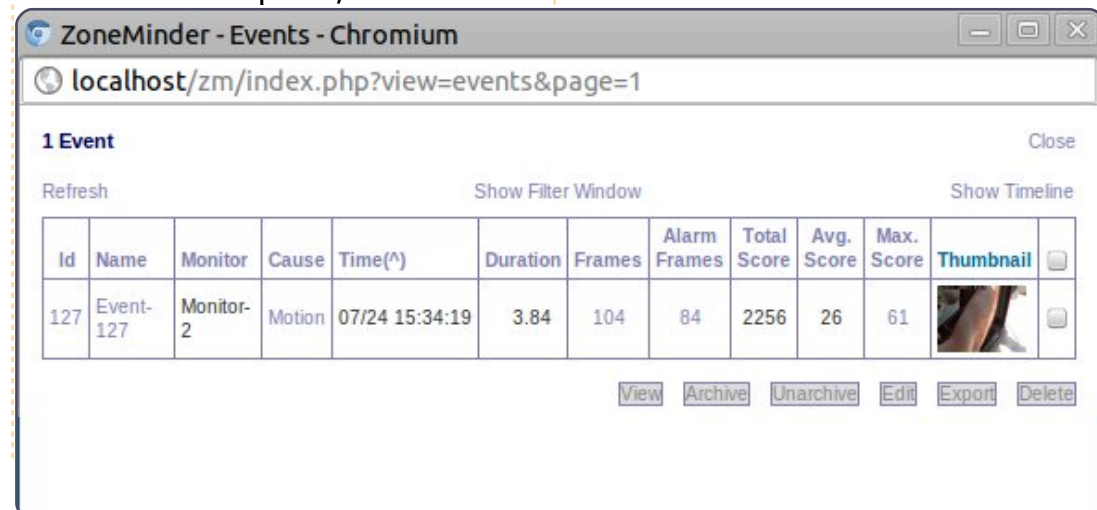
The number one (in my case) means one event has happened. Clicking the number one in the



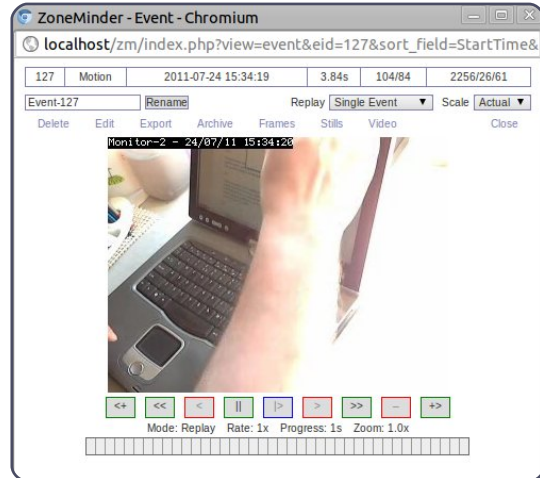
events column will take you to your list of events:

You'll see information for your event(s). In this case the 'Cause' is 'Motion' (a movement). The time the event took place, duration of

the event (or movement) and various other pieces of data. If you've enabled it in the settings you'll see a thumbnail of the event too.

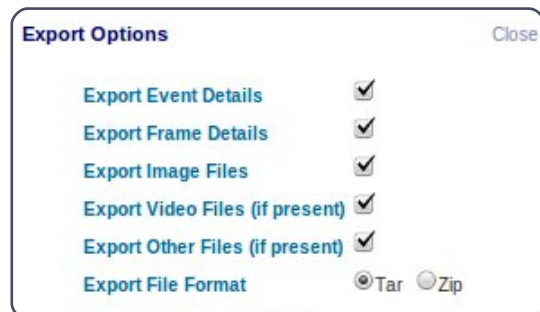


Clicking the name/id will play the event:



Don't panic, it's only me closing the lid on my laptop, but it could also have been someone stealing my laptop. You'll also notice that the playback has the date and time stamped on it.

Just above where it has my time stamp, you'll see a link to 'Export' the scene as a video. If you're lucky, you'll get a window which asks you which things you'd like to export:

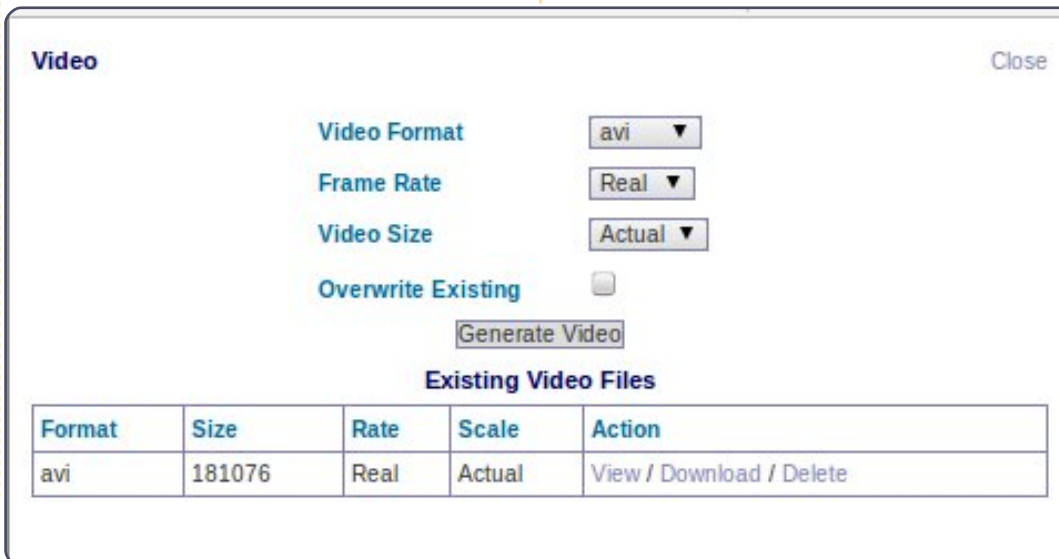


Me? I got nothing. It turned out to be another ZoneMinder/Ubuntu clash which I could only resolve by using a static URL to gain access to the export screen. So, if you don't get the export pop-up, try using this URL:

<http://localhost/zm/index.php?view=video&eid=127>

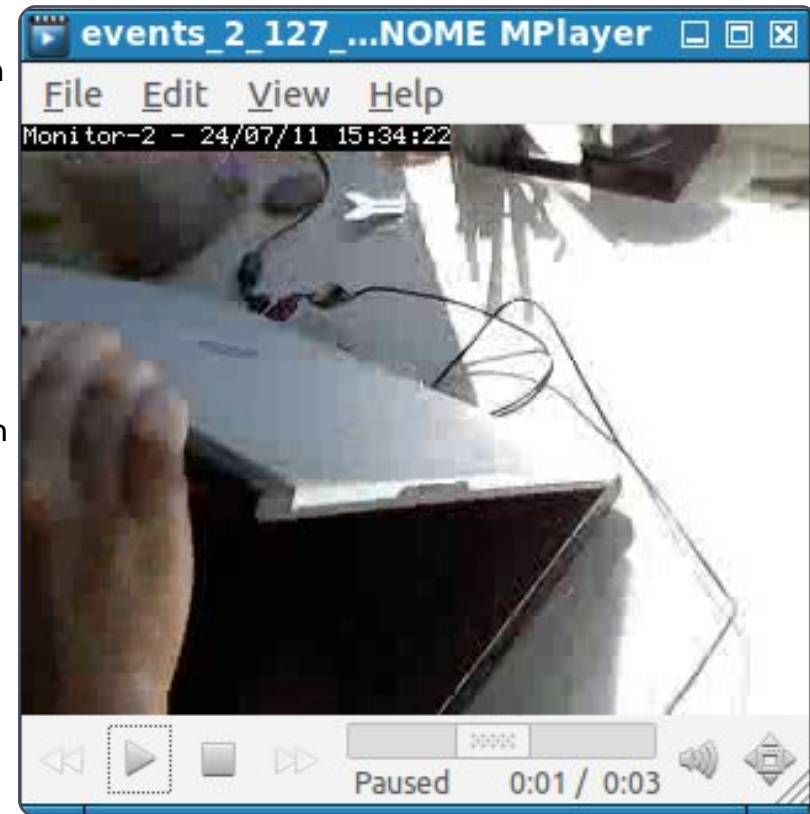
NOTE: the '127' at the end of the URL is the event ID which can be found either in the event list window, or in the video playback window. Make sure you change the 127 in the above URL before you export your video.

Which should take you to:



where you can choose the video format, frame rate, and video size, and get access to the 'Generate Video' button. Once you've clicked generate, you can then view, download, or delete the generated video.

And, here's the generated video of me not stealing my own laptop.



Next month, we'll discuss more motion detection. What if you're wanting to watch your car, but you don't want to have the CCTV getting false positives from wind-blown trees or innocent passers by?



I teach various music classes at Florida Keys Community College in Key West, Florida, and am proud to use Ubuntu - along with open source or public domain materials in as many areas of my job as possible.

I have a history of being interested in being involved in the open source community, having created a piano primer licensed under the GFDL titled "Learning the Code," which is available for download in several places, including Scribd and the Internet Archive. It was only natural that I would take my opportunity to teach in the classroom to see what materials could be successfully used in music appreciation.

First, I have a simple Acer Aspire One 255E netbook. This is the modest machine that I use to get results in the classroom. I use the Ubuntu distro, having switched to it after Ubuntu switched to Unity. I really like Ubuntu and see it as the eventual successor to Xubuntu.

For classroom lectures and presentations, I use LibreOffice Impress 3.3. I embed music and video clips liberally in my presentations, as they seem to keep students' attention. I looked at other open-source presentation software, but, of all solutions available on Ubuntu, LibreOffice serves my needs best. As LibreOffice improves, I will continue to improve my presentations.

I ask my students to do their presentation projects in Google Docs, when practical, for portability purposes: I feel Google Docs is superior to LibreOffice or MS Office in this regard. No matter what computer displays the presentation, it will look the same. This allows students to view the presentations outside of class on their computer without formatting issues.

I am also using OpenShot and Audacity to create podcast-style video mini-lectures that will eventually be a part of the online curriculum at the school.

I regularly use materials from the Internet Archive and MusOpen. Both of these are great sources for public domain and copyleft music performances. The International Sheet Music Library Project is a great source for first editions and manuscript copies of music, which I use in some of my presentations.

I regularly listen to all the files in each format to determine which one sounds the best. This means that I have several different file formats on my data DVD: mp3, mp4, ogg, ogv, oga, mov, flac and wav. I provide an installer for VLC for my students on the data DVD so they can listen to all the files without problems.

When I would attempt to make mp3s from ogg files, the resulting recompression sometimes made a

result that sounded worse than the .ogg file, so I stopped trying to convert everything to mp3 format. If I use Audacity on any of the files to remove surface noise or record pops and clicks, then I save the file in .flac format to avoid any additional degradation from lossy compression.

I use Scribus to typeset, using open source fonts. The fonts I find most useful are the Fontin family (regular, sans, smallcaps), the Nimbus Sans family (especially the



condensed variety), Delicious, and Miso. All of my printed material is rendered in .pdf format.

When I am composing (I have written an Alma Mater and a Fight Song for the school), I use MuseScore and Lilypond together. MuseScore allows me to place the notes easily using a GUI, and then I use Lilypond to polish the final score. I really believe Lilypond creates some of the best looking sheet music out there. I used Finale from version 3.1 through 2005, switching to Lilypond in

2006. For my legacy Finale compositions, Finale 2005 runs acceptably well through Wine. Until I started using MuseScore as a GUI aid for inputting notes for Lilypond to typeset, I used jEdit for its wonderful LilypondTool plugin.

For recording, I use Rosegarden or Audacity. My multitrack recording needs are not as extensive as others.

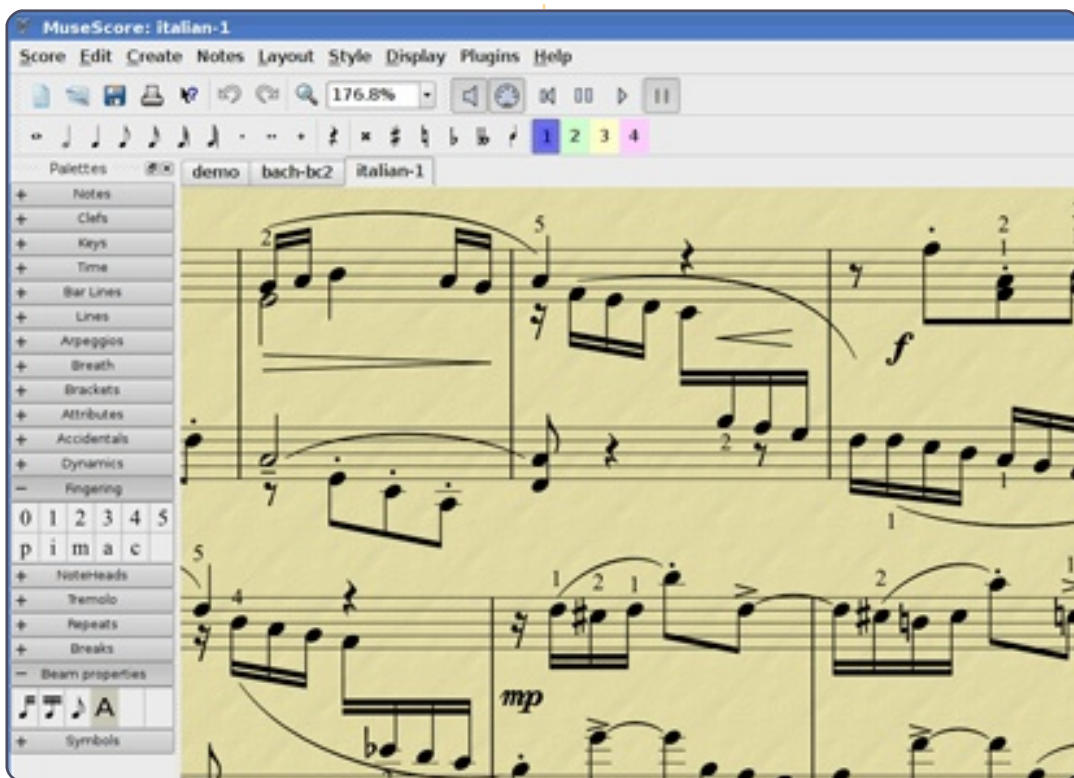
LibreOffice allows me to open up all MS-Office-created documents that the administration

asks me to fill out and return, and I have never once been told that the files I saved in MS Office format (using LibreOffice) were corrupted or unusable.

I use public transportation to get back and forth from home to school so I can remain productive while traveling. I use my iPhone on the road, tethered to my netbook for internet access so I can work on files, respond to student emails, and do continued research for the music textbook I am creating (which will be open-

sourced when finished).

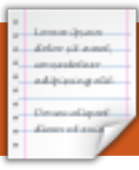
I see myself as a willing and enthusiastic volunteer to experiment with using open-source materials in an environment that is not always open-source-friendly. I always look at what the software can do and what it's capable of doing, and work within those parameters. If I always looked at what any software (proprietary or open-source) couldn't do, I'd never get anything done with the negativity.



under the quarter moon
a nocturne for solo piano

James L. King III (b. 1968)

A musical score for "under the quarter moon" by James L. King III. The score is for solo piano and is in 4/4 time. It begins with a tempo marking of quarter note = 120. The score is divided into three systems. The first system (measures 1-8) starts with a piano (*p*) dynamic. The second system (measures 9-16) includes a mezzo-forte (*mf*) dynamic, a ritardando (*rit.*) marking, and a piano (*p*) dynamic. The third system (measures 17-24) includes a mezzo-forte (*mf*) dynamic and a ritardando (*rit.*) marking. The score features a variety of musical notations, including eighth and sixteenth notes, rests, and dynamic markings.



MY STORY

Written by Matt Anthony

I love Windows. Some of you are probably laughing right now, thinking to yourself “what a funny typo to slip past the editors, he put 'Windows' instead of 'Ubuntu'.”

I'm serious, I love Windows. It has kept me gainfully employed since the mid-80's. I've watched iteration after iteration come and go, from Windows 1.0 to Windows 7, and have helped many, many, many users throughout the years negotiate their various troubles with the operating system.

Windows does what it does, which is making the use of a computer relatively simple for a vast majority of users. Is it flawed? Absolutely. Will it ever be a 'perfect' operating system? For some users it already is, for others it will never work 'right'. For all of its faults, flaws, and glaring weaknesses, it is highly unlikely that Linux, Mac, or any other OS will ever knock it from its perch as the world's most widely used operating system. As long as that remains fact, I will remain gainfully

employed.

Now with all that being said, I adore Ubuntu for entirely different reasons. My first introduction to Ubuntu came in 2006, at a FOSE show here in Washington, DC. Among all the vendor booths and companies competing for attention was a tiny table manned by three people, handing out copies of Ubuntu 5.10 Breezy Badger. There was no high pressure/high energy sales pitch from these guys, only a simple request: “Just try it”.

Into my bag of swag went the Ubuntu packet (Live CD and Install Disk), forgotten for a month or two until I moved offices. When I found the disks again, I remembered the request made when I first got them, “Just try it”. Like a lot of the other “My Story” writers, I happened to have a recently deceased computer, a Gateway Solo 5300 laptop. I popped in the Live CD, and, less than a minute later, I have a desktop. Graphics card, sound card, wireless NIC - everything

recognized and functioned right off the bat. I didn't have to swap out disks, load additional drivers, download anything from the Internet - everything just worked.

Color me impressed.

I played around for a few days, trying out everything I could from the Live CD. Occasionally, I would forget the laptop I was using was actually broken, but would be reminded each time I rebooted and saw the “Windows did not start correctly” screen. That eventually settled the matter, “Just try it” soon became “Just do it,” and I wiped the drive and fully installed Ubuntu. I gave the CDs to a colleague when I finished the install. When he asked “what's this?” my answer was, of course, “Just try it”.

Over the next year, I was happily learning all I could about Ubuntu; the forums were (and still are) an amazing wealth of knowledge and support. Tux magazine (now defunct) was also a useful resource. My colleague

installed Ubuntu within a few days of using the Live CD, both of us forgoing the “dual boot” and diving head first into the OS. There were some headaches ('stupid iTunes doesn't work in this OS' being the primary one) but overall the experience was fantastic.

Eventually though, my old Gateway laptop really did die of massive hardware failure. I bought a new system, a Lenovo Ideapad S10 netbook, which came preinstalled with Windows XP. I left the laptop as it came (minus all the bloatware) and ran happily for a while, Ubuntu all but forgotten. I didn't have a CD player so I couldn't run a Live CD. Besides, iTunes worked fine so all seemed right with the world.

A few months ago, I began to notice my little netbook really struggling to get through simple tasks, such as booting. I decided to time how long it took to boot the system and open my homepage. Five minutes and eight seconds later as I stared at my homepage - which finally opened - and I

remembered how quick Ubuntu was on my old laptop. Maybe I needed to “Just try it”, again.

A quick search of the Internet led me to PendriveLinux.com, where I easily created a bootable USB drive featuring Maverick Meerkat. A reboot, BIOS adjustment, and thirty eight seconds was all it took to rekindle the feelings I had for this operating system. Okay, so iTunes still doesn't work in it (I know I can run a VM, or Wine) but, for the relatively few songs I have in their m4p format, I can burn them to a CD and rip them back on another system.

Banshee works great (couldn't get Amarok to work properly) and keeps my devices synced perfectly, Calibre is amazing for keeping my ebooks and Sony Pocket reader organized, setting up my email through Evolution couldn't have been simpler. I've even used OpenOffice (and now LibreOffice) to help a customer recover some PowerPoint slideshows that Windows thought were corrupted and unreadable.

That pretty much brings me to the end of my story. I, on occasion,

have the opportunity to pass Ubuntu on to someone new. I show them my netbook, how quickly it operates, all the free software, all the same functionality they currently enjoy using Windows. Most of them smile politely, reminding me that I enjoy Linux because I'm a “geek”. A couple seem genuinely interested, and to those I hand a Live CD with the same three words that got me started; “Just try it”.

My System:

I run a Lenovo Ideapad S10 netbook with a full version of Ubuntu 11.04 installed. I removed the Unity interface as I much prefer the “classic” desktop. Because it's a netbook, the system specs are not very impressive: Intel Atom 1.60GHz processor, 1.5GB RAM, and an 80GB hard drive. I added a Bluetooth controller to the system to run my mouse (there are only two USB slots in this thing, so I didn't want to waste one on a mouse). Ubuntu worked with everything straight “out of the box”. Even my

HP Photosmart C6280 printer was found on the first try, and, with the HP plug in, I can easily scan, print and copy wirelessly.

My desktop is pretty plain, which is just how I like it. I'm running three Screenlets, which are the standard Clock, Weather, and Calendar. On occasion, I switch to an AWN Dock, but usually switch back to the standard bottom panel after a few days. Guess I just haven't found the right configuration for the AWN Dock that will make me keep it. That's another reason I like Ubuntu so much; it's so customizable and so easy to switch around.

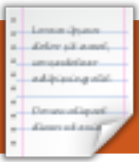


The Ubuntu Podcast covers all the latest news and issues facing Ubuntu Linux users and Free Software fans in general. The show appeals to the newest user and the oldest coder. Our discussions cover the development of Ubuntu but aren't overly technical. We are lucky enough to have some great guests on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

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

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

podcast.ubuntu-uk.org

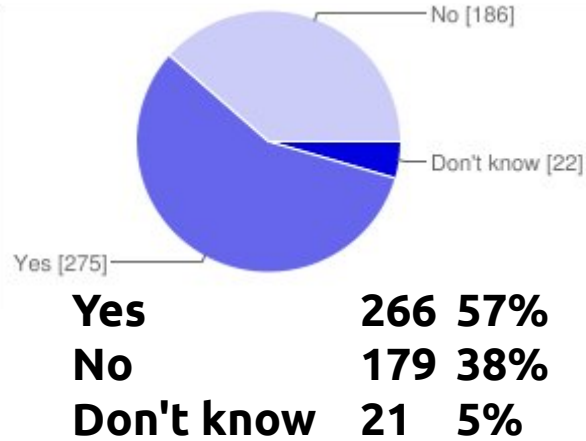


I THINK...

Last month's question was:

With the rise of web-based email, do we really need an email client installed by default?

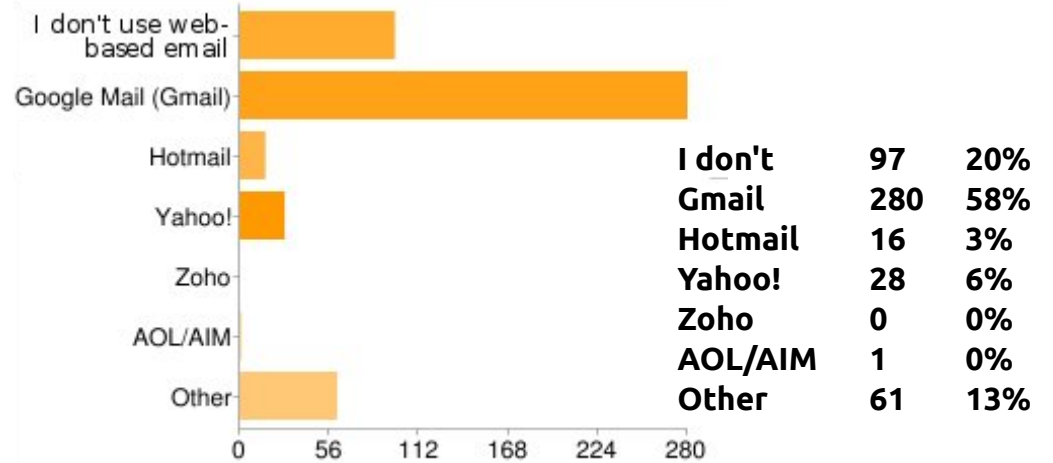
With the rise of web-based email, do we really need an email client installed by default?



- Why keep emails on a computer when there is the cloud? GMail lets me import my mail from other servers, why should I not use it? Moreover, I can access the same email on my laptop, on my mom`s pc, on my phone or tablet.
- I use both web based and computer based email clients. I see the need for both.
- I don't want my business email to be hostage to web-based storage. I want to keep my

- own records.
- In my personal experience, since I'm using GMail, I have never run Evolution again on my Ubuntu System.
- Web-based email is slow and not comfortable.
- People aren't ready for it not to be included -- yet.
- Yes we need to download and store emails for offline use.

Do you use web-based email? If so, which one.



- I have not used an email client for over 5 years. Web-based works just fine.
- I use Hotmail, and have my Gmail accounts downloaded into Thunderbird. I prefer the client, so I can tailor how I view the emails.
- Since I have various e-mail addresses, Evolution is important.
- Not being able to remove Evolution has bugged me for

- ages.
- Only used to use email client to notify me of mail, but now use Google Mail Checker in Opera, so no need for client now.
- Mixed opinion. Essential - No. But if it is necessary to have full integration, then yes. I find that I am more and more impressed with Thunderbird every day. Still, it is not essential for default installation.
- An email client is useful to access these emails in case of

unavailability of Internet connection.



I do use Gmail, but through Thunderbird... So yes, I am using an e-mail client, but personally, I don't really need it by default, as I can easily install it myself. I would just like to have better integration with Thunderbird once I install it.

I want MY data (including emails) on MY computer. Do not want to hear about this "cloud" thing.

Webmail = low security, to me.

With the rise of web-based email, we need an email client which merges each email

account into a single piece of software.

I sometimes use Thunderbird but would like all that Evolution stuff to go away

The question I'd like to pose for FCM#54 is:

What age do you think the average Linux user is?

To give your answer, go to: <http://goo.gl/AB1nX>

Quick How-To : Broadcom Wireless

by Eric Skala

When you install, or upgrade to, Ubuntu 11.04 you may notice that you can not use your Broadcom Wireless adapter. Many people have left Ubuntu and/or Linux for this reason. Yes, you can look online for a way to install the driver, but I'm going to show you how to quickly install the driver. The way I'm going to show you works in all Ubuntu derivatives.

First, open a Terminal, and enter:

```
sudo apt-get firmware-b43-installer
```

It will ask you for your password which you should enter. When the program has been successfully installed go back to your terminal and type in:

```
sudo apt-get install b43-fwcutter
```

Again, typing in your password.

If you don't want to use the terminal you can open your package manager and search for *bcm*. Make sure you uninstall the *bcmwl-kernal-source* package. Search for *firmware-b43-installer* and install it, then search for *b43-fwcutter* and install that. Your wireless should now work. I used the steps above to also get the wireless on my Dell Inspiron 1200 laptop to work. Remember, **you need to have a wired network connection to do the steps above!**

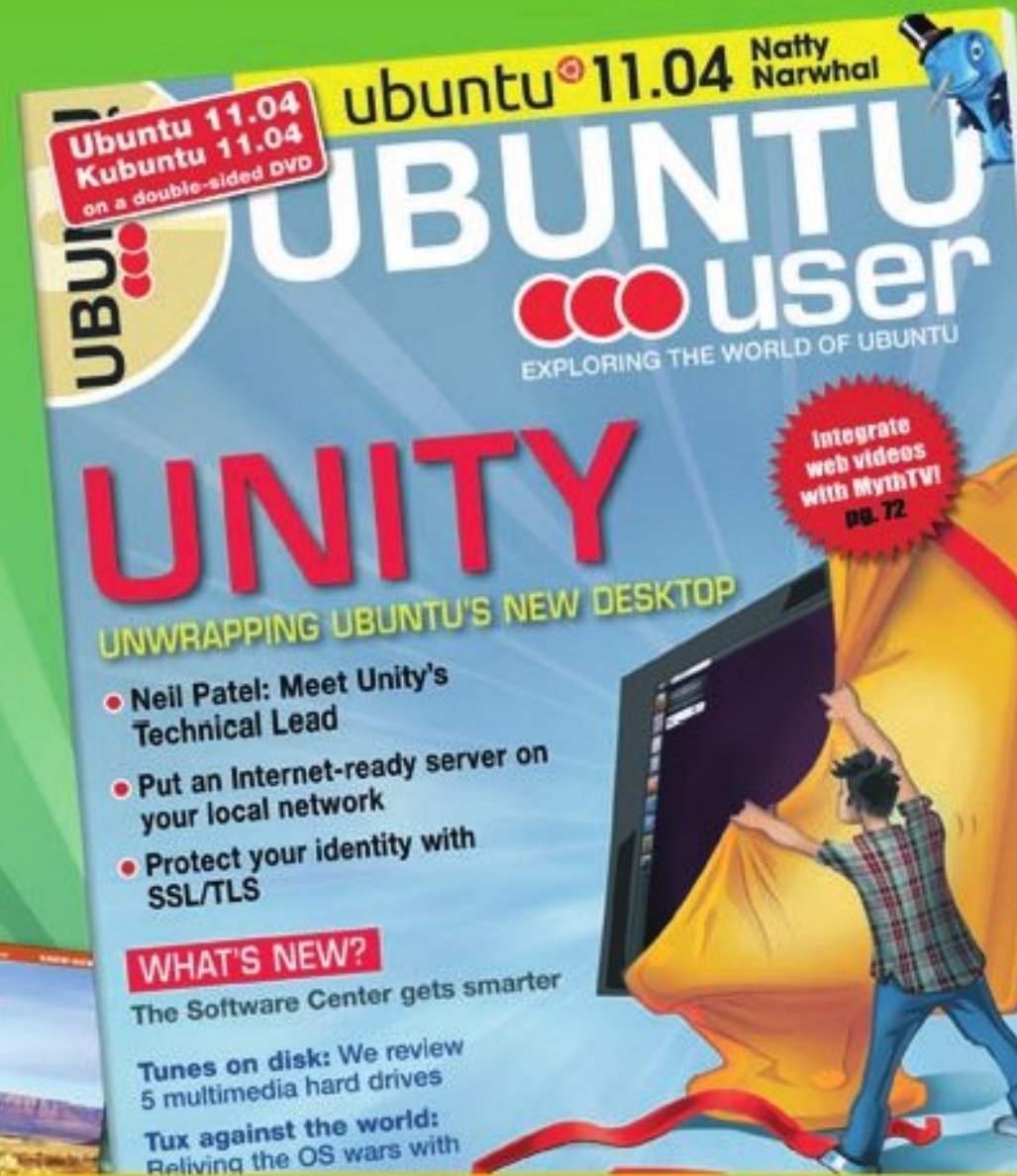


MORE UBUNTU!

Can't get enough Ubuntu?
We've got a whole lot more!

Ubuntu User is your roadmap to the Ubuntu community. In the pages of **Ubuntu User**, you'll learn about the latest tools, best tricks, and newest developments in the Ubuntu story.

DON'T MISS ANOTHER ISSUE!



UBUNTU-USER.COM/SUBSCRIBE-NOW

FOLLOW US ON

TWITTER: UBUNTUSER

FACEBOOK: UBUNTUSERMAG



Linux Mint comes in two flavors (I know, I know, cliché alert...), the rolling Debian release, and the more established, Ubuntu-derived, periodic release. Mint 11, codenamed 'Katya,' is the newest based on Ubuntu 11.04, re-spun with the Mint team's distinctive applications and software choices.

If you are expecting revolutionary or cutting edge: don't. Mint 11 uses Ubuntu as its base, but with classic Gnome 2.32 as the default desktop environment. It remains, in our view, the premier Linux for new users and migrants from the Redmond way of life. Call it conventional if you like, but it has polish and it's tried and tested. Linux Mint 11 comes with updated software, refinements, and new features to make a comfortable desktop in use.

Some people attribute Mint's dramatic rise in popularity to defecting Ubuntu users who are unhappy with Ubuntu Unity; I think there's more to it than that.

Mint Installer

I still think this one has the edge over the Ubuntu installer; coherent Mint branding starts here, as the installation steps through, quickly and solidly bringing you to a clean, attractive desktop.

Mint has long been distinctive with its Mint Menu and Welcome screen. Mint 11 includes some artwork changes, an apt download command, and some changes in the packaged software. For a major numbered release, the main change is the adoption of the Ubuntu 11.04 code base.

Mint is available either as a full liveDVD or a lighter, smaller, liveCD (minus codecs and extra applications) available for those without a DVD burner, or for distributors in the USA and Japan.

Software Manager

I still regard Software Manager

as one of Mint's major selling points. Ever more polished, a splash screen appears when you launch it, and the main window has bigger category icons, with new categories for templates and fonts.

It now shows even more icons and preview screen-shots. Previews of application icons are now gathered from the mintinstall-icons package and also from your current theme icons. Searches now take in package summary descriptions as well as titles; this may take longer but gives more accurate search results.

Further layout changes in Software Manager take it further on from the equivalent Ubuntu Software Center. Select a package to install, and the Mint Software Manager runs a diagnostic to tell you precisely which packages it will add to or remove from your system alongside the total download size. This may be just an impression, but Mint's ratings and reviews seem more complete to me.

Expanding Mint

The LiveCD edition is much reduced in the scope of applications installed, and comes with limited multimedia support from first boot. Both these are overcome with desktop short-cuts and Mint Menu entries for Upgrade to the DVD Edition and Install Multimedia Codecs. These provide additional browser plug-ins and codecs for full multimedia support of MP3 and video, the VLC player, Gimp, Giver, Tomboy, LibreOffice-Base, and additional fonts; Java, Samba file sharing, more backgrounds, themes and icons.

Shifting Mint

The Mint team has actually used the feedback in the reviews and scores provided by the user community in the Software Manager, changing the default application software:

- Gwibber is dropped, just before Ubuntu does the same

- gThumb replaces F-Spot as the default photo manager
- Banshee replaces Rhythmbox as the default music player, the same as Ubuntu
- A stack of Pulse Audio utilities are no longer installed by default
- LibreOffice replaces OpenOffice.org.

Mint Update

Mint Update was always a strong selling point, categorizing updates according to criticality. It's now faster as change-logs are downloaded asynchronously in the background. The whole thing now has a more attractive graphical interface; for example, all Update dialogs are now modal, so you can't lose windows in a stack like you can in Ubuntu (which drives me crazy). After a successful update, the Update Manager hides itself, without parking a confirmation dialog on the screen. Warnings and information tabs now only appear for updates that need them.

The update rules including the safety level for each package are embedded and refreshed with each Mint 11 Update Manager

version, so the majority are no longer downloaded in real time; Update Manager checks only for new versions of itself, which it updates as a priority, then for package updates for everything else.

Similar to Software manager, Mint Update runs a diagnostic to determine package and library dependencies, which is output in a separate dialog, so that, for each update, you get a better picture of what it entails.

The Good, the Bad, the Indifferent

- **Themes and artwork:** Mint has always featured good backgrounds and themes. Mint 11 leaves behind water droplets and goes 3-D,
- **Desktop Settings** also provides the control framework for any desktop in any desktop version; Gnome, KDE, LXDE, XFce,
- **Fortune Quotes:** Mint has a sense of humor, which is why the terminal window features an ASCII-art cow telling bad jokes. You can turn these off, too,
- **Mint menu's** application categorization has its critics, mainly those who find them

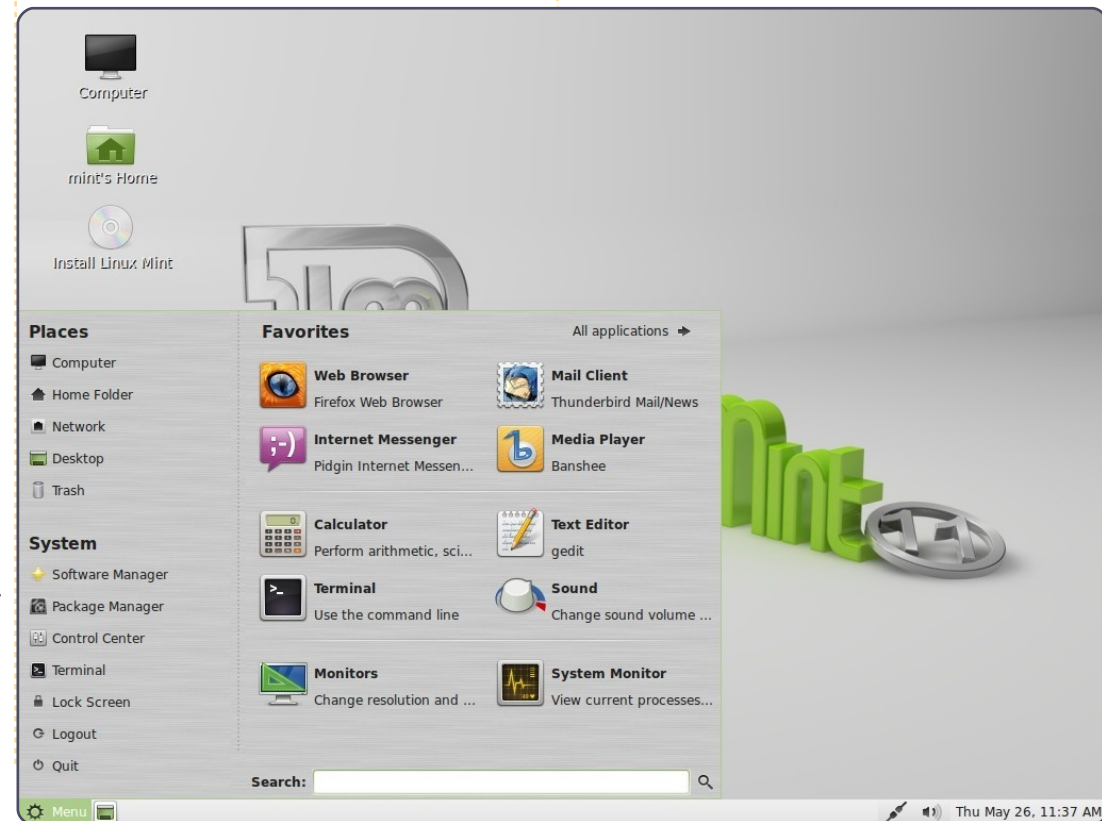
inconsistent. It may be true, but the Mint Menu remains one of the more familiar features for those looking for a 'Start' menu,

- **Overlay scrollbars:** Linux Mint 11 inherits the overlay scrollbars from Ubuntu upstream, and enables them by default. I hate them, but I can turn them off using the Desktop Settings tool ,
- **The boot process** is a mixed bag of changes; the Plymouth boot screen kicks in late in a fast boot process, which is mostly 'quiet', that is to say - black. Very

professional, but not so helpful when it fails to boot into higher resolutions, which it sometimes does.

Verdict

This is one of those times when conservative with a small 'c' is a complement. Full marks to Clement Lefebvre and the team for delivering an incremental update with stability and continuity in mind.





Pagemaker

Many thanks for the article in My Opinion in Issue 52: How to install Microsoft Office in Ubuntu. While I did not want to install this software, the Wine set up in the article allowed me to install an old copy of Page Maker. I still use this program and was stuck with a Windows computer previous to this article.

Allan Hambidge

Telephone Bill Desktop

I got my telephone bill today; on the page where they list the calls over a particular amount there was not enough room for them all so they appened a little note "a bit more to go...". What is wrong with "continued overleaf"? This really got me annoyed.

I tell you this to explain why I do not like the way desktop appearance seems to be heading. I do not want pretty pictures, icons

or similar displays, I want a well structured menu with the ability to access frequently used items by hot key combinations. I currently have this in my Kubuntu desktop and near enough with my Ubuntu desktop on my laptop. I could, of course, do it all from the command line but typing in a hurry leads to mistakes which are easier to avoid with a clean graphical user interface. Am I out of touch with the modern world? Or is it that there are now two sorts of computers - one in the world of work and one in the world of play?

Even considering the world of work computer for the majority of users, it seems they only use a dedicated program with restricted icon-guided interface and very restricted rights. The world of play, where so much is dictated by Apple design style, menus and textual interface seem so out of place. I guess I will continue to be a misfit in my belief that it is possible to have far greater richness in an interface that is menu driven and I hope that Kubuntu and Ubuntu designers

will always provide that facility to configure the interface the way the user likes it, not what current style dictates.

Roy Read

GRAMPS Update

While I appreciate that your series (GRAMPS Pt.1, FCM#52) has so far only scratched the surface of the possibilities of GRAMPS, and I note with pleasure that you do tend to push forward the use of Sources and Notes there is one possible error.

While the person edit form does allow you to add Marriage as an event this is not the preferred method to add Marriages. A Marriage is a family event and should be added as an event under the family edit form, the one marriage event will then correctly be associated with both people and the database structure will correctly link families. I made the mistake of adding marriage events

Join us on:

-  facebook.com/fullcirclemagazine
-  twitter.com/#!/fullcirclemag
-  linkedin.com/company/full-circle-magazine
-  [ubuntuforums.org/forumdisplay.php?f=270](https://ubuntuforums.org/forum/display.php?f=270)

to people when I first started with Gramps and had all sorts of problems finding relationships and seeing people married twice to the same person and lots of database instability. I ended up manually re-entering details for 800+ people.

R. Geleick.

David O. Rowell says: *The reader is, of course, right. I never fell into that particular trap - thank goodness! The ability to do decidedly unclever things like that is one of the features that leave me a bit uneasy using GRAMPS.*

Upgrading From 11.04

A number of friends I convinced to install Ubuntu Linux instead of Windows XP, as well as myself, who have found Ubuntu 11.04 too bug laden, would like to downgrade to 10.10 or perhaps 10.04 LTS in order to get some work done while looking into which Linux distribution, if any, might provide for our needs going forward. It would be nice to see an article on how to return to a previous version, safely, as most all have no means to back up their /home partitions.

While Unity is the primary cause of dissatisfaction, many other problems too numerous to list have created an unbearable situation rendering our computers barely usable. None, including myself again, expect 11.10 to be an improvement, so Ubuntu 10.xx will likely be the last upgrade, unless Canonical gets its act together.

Joe

Dell Go-Go

Dell may no longer sell pre-installed Ubuntu, but on higher cost machines it will sell it to you OS free at a reduced cost to offset the Windows/3rd party licenses. So, call a salesman and negotiate!

Of course, there will be no support except for hardware failure, but that's why we have Ubuntu Forums.

Matt

KDE Konvert

I have not even been able to get Gnome 3 to work on any of my computers, and I think that Ubuntu has totally lost the plot with trying to look like Apple.

Hence, I am returning to KDE. I have found the new KDE 4 very different to the beautiful KDE 3.5, and had written it off in the past. But, with what has happened to Gnome, I think that KDE is the only way to keep Linux.

I do think that KDE is the way to go.

I moved to Mint Linux as soon as Ubuntu put the window buttons on the wrong side. I know you can change them, but it shows their attitude to the people who made them what they are, more than anything. But even Mint won't be able to keep Gnome 2 alive. Very sad because Gnome 2 was the perfect desktop for getting the job done, and efficiently.

Ray

More Toys

I have a similar set up to David O. Rowell's (FCM52) and I am working through a consolidation and simplification to reduce the complexity and confusion of having different files on different machines. My approach to simplify things is to add something else.

I have just added a 4 yr old Dell Precision 390. Adding a server negates the need for the separate USB drive and my old NAS box. It makes it possible to move, synchronise or backup all home

directories files to one central location (i.e. available then to all other PCs on the home network or if required, from anywhere on the internet). Not sure yet how the Apple will interact (it may need to have its own directory shares).

It connects to the router via Devolo Powerline Ethernet, is headless (ie no screen or keyboard needed once it is configured and can be shutdown, halted, or started up remotely using 'wakeonlan' so it doesn't need to be left switched on) and uses NFS to provide access to the Linux OS PCs. It also uses Samba to provide access to the Windows PCs, and Netatalk to provide access to my Apple.

Adding the server has cost me just €150, and that was for the two 2TB disks.

All of the above and lots more is possible - Its not bleeding edge speed and its not bleeding edge technology but it is working, it is cheap and it is do-able with a little time and research.

Peter Errity



This summer, the Ubuntu Women team held the annual election for project leaders. Among them are newcomers Cheri Francis and Jessica Ledbetter, and leadership incumbent Elizabeth Krumbach. We asked these leaders about their work so far, and their goals for the Ubuntu Women project.

Cheri Francis

Ubuntu-Women was one of the first Ubuntu related IRC rooms that I braved as a new user. From that moment on, the people there have been an amazing support, and just good people. I have been trying to find ways to “give back” to the project, and I really hope that, as one of the leaders, I can do so. I have been working in my LoCo to encourage participation, and making the group welcoming to new users and contributors. I fully believe in the community aspect of Ubuntu, and have seen that manifested in many ways since I’ve been a part of it.

Cheri’s Goals for Ubuntu Women:

Career Days project: have a “day in the life” series of sessions, talking about various IT jobs and what some of our members do in “real life”.

Publicity: raising visibility of the project, helping people on other projects realize that small adjustments can make things more welcoming to everyone (including women).

LoCo Outreach: expand on our “best practices” list, and be a resource for LoCos that are interested in welcoming everyone and helping them feel comfortable.

Elizabeth Krumbach:

I have been an active member of the Ubuntu Women project since 2006 - working on all portions of the project including: Holding foundership of IRC channel, and maintaining the access list, launchpad admin, website admin, wiki admin,



heading up monthly team reporting. I have been involved with organizing our Full Circle Magazine Ubuntu Women series and interviews series, the mentoring program, conference resource development, courses, and collaboration with Ubuntu Classroom, and have had the opportunity for in-person presence at Ubuntu Developers Summits (Lucid, Maverick, Oneiric) regarding the project, and will be attending the next UDS for the LTS release next year.

Elizabeth’s Goals for Ubuntu Women:

Our website is the first resource people see for the team, and the theme is very out-dated.

We’ll be continuing to work toward getting the new theme in place so we can get it published before the end of the year.

The mentoring program we have now is very casual - with people joining the team and members of the team connecting them with people and resources within the Ubuntu project. I’d love to see us making more progress on a formalization of the process so we can get more feedback and learn how we can improve our program.

Jessica Ledbetter:

Currently, I’m a web developer and designer who creates applications in Java, Python, and Ruby. In addition to full-time

UBUNTU WOMEN

development for a company, I am also a developer on Peer 2 Peer University (<http://p2pu.org/>). I've been using Linux for years, and Ubuntu for more than a few cycles.

The Ubuntu Women Project was one of the first IRC channels on freenode that I joined. It was a great environment to learn more about the Ubuntu project as a whole, and to find ways to get involved. Everyone was very welcoming and helpful back then, and continue to be that way today. Through the UW members, I've seen people encouraged to contribute to leading classroom sessions, contributing to coding

projects, speaking at conferences, building one's own business, and more. It's a very supportive place for everyone.

Jessica's Goals for Ubuntu Women:

Publicity: Getting the word out about the team and team members' accomplishments, and collaborating/helping other groups to be more welcoming.

Mentoring: Help find ways to increase the team and team members' accomplishments by improving the mentorship program.



A PLEA ON BEHALF OF THE PODCAST PARTY

As you heard in episode #15 of the podcast, we're calling for opinion topics for that section of the show.

Instead of us having a rant about whatever strikes us, why not prompt us with a topic and watch for the mushroom clouds over the horizon! It's highly unlikely that the three of us will agree.

Or, an even more radical thought, send us an opinion by way of a contribution!

You can post comments and opinions on the podcast page at fullcirclemagazine.org, in our Ubuntu Forums section, or email podcast@fullcirclemagazine.org. You can also send us a comment by recording an audio clip of no more than 30 seconds and sending it to the same address. **Comments and audio may be edited for length. Please remember this is a family-friendly show.**

It would be great to have contributors come on the show and express an opinion in person.

Robin





It's that time of year again! - the release of the third Humble Indie Bundle, giving us 5 indie games which run on Linux, and we can pay what we want for them. Four of the games in the bundle will be reviewed over the next few issues ('And Yet it Moves' was reviewed in Issue 43). This month, I am reviewing this very retro platformer.

At first glance, **VVVVVV** will remind many of you about the good-old-days playing games on your Commodore 64. I have been told the good old classic games are brilliant, and so is **VVVVVV**. The story around **VVVVVV** is about Captain Viridian, who must try to evacuate her spaceship after it was affected by a dimensional interference. Over the lengthy single player campaign, you must try to find your crewmates across the dimensions of **VVVVVV**. The storyline, while fairly basic, is interesting, and is told through cut scenes and text. Sadly, no voice acting here.

The gameplay is typical of a 2D

platformer: enjoyable, while being simple and easy to pick up and play. However, **VVVVVV** does deploy some interesting gameplay mechanics. You cannot jump, even though there are plenty of platforms to jump across to and traps to avoid. **VVVVVV** solves this problem with the ability to switch how gravity works, you can be moving on the floor - and then switch to moving on the ceiling. It is a very clever ability, which makes the game very enjoyable, and different from your standard 'Mario-Style' platformer. **VVVVVV** can be a tricky game at times. It can be annoying falling off a ledge for the tenth time, but, luckily, **VVVVVV** has plenty of checkpoints to save your progress.

Sadly, **VVVVVV** is not as feature packed as many games are today. No extra modes, achievements, level editor, or multiplayer. Just a straight single player campaign, which in all fairness is decent in length, just not that replay-able.

As mentioned before, there is nothing to brag about with the

graphics. It is the most retro new game you will play, taken straight out of the 8-bit era. You old gamers will love reliving this era, while some of our new gamers may find it slightly off-putting, but I don't think the graphics should put you off playing this excellent platformer. Remember, looks are

not everything! The sound is solid throughout, suiting the look of the game, sounds of the 8-bit era.

VVVVVV is a fantastic indie title. They have been very brave to design a game with retro graphics and sounds. But, it seems to work well for a 2D platformer. The level



UBUNTU GAMES

design is excellent, gameplay mechanics are new and interesting, plenty of checkpoints is a huge bonus while still making a challenging game. Sadly, there are no extra modes, and the single player campaign you will probably only want to play through once; VVVVVV does not have a lot of legs. Out of all the games in the Humble Bundle 3, I think VVVVVV is my favourite game, even though the title is a pain to type!

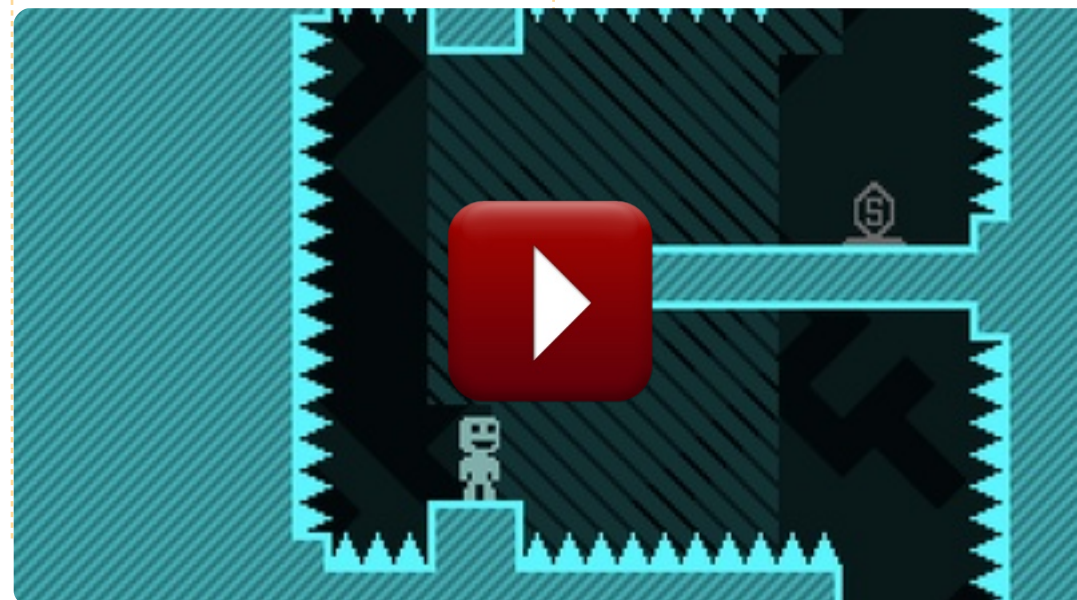
Score: 7/10

Good:

Retro Graphics & Sounds
Great new mechanics
Plenty of Checkpoint

Bad:

No extra modes
Can be very difficult at times



Ed Hewitt, aka *chewit* (when playing games), is a keen PC gamer and sometimes enjoys console gaming. He is also co-host of the Full Circle Podcast!



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 have installed Ubuntu 11.04 on my Dell Mini 1010, and I'm having troubles playing video files such as .avi and .mkv. They load up, but the sound is jumpy and the video skips/jumps, so it's unviewable.

A Install CompizConfig Settings Manager, then open it from Dash and go to the "OpenGL" plugin and uncheck the "Sync to VBlank" option.

Q I've got an ext4 formatted Truecrypt container which has a size of 400 GB. After I deleted all the files in it, Nautilus tells me that I now have only about 100 GB free space, but I can't see any files in the container anymore.

A It has its own Trash bin, which you can see if you Edit/Preferences in Nautilus, and tell it to display hidden files. You have to empty the trash to free up space.

Q Where can I find information about using a 3G modem?

A <http://www.pcurtis.com/ubuntu-mobile.htm> contains information ranging from dial-up on land lines to mobile broadband USB sticks.

Q I have Sound Recorder installed in Ubuntu 10.04, but when I click on it to do some voice recording to dub over a video I'm building, I get this notice: *"Could not create the GStreamer GConf audio recording element. Please install the 'gconfelements' plug-in from the 'gst-plugins-good' module..."*

In checking the Software Center, *gststreamer*, etc, they all show as installed.

I'm using a USB connect headset/mic for clean voice recording.

A After a full clean install of 11.04, it seems to be working well.

Q I was fooling around with Mysql, but then I forgot my password. When I uninstall it and then install it again, it does not ask me for a new password.

A Use Synaptic Package Manager, and "mark for complete removal." That should get rid of the hidden folders in Home, where the old password is stored.

Q I need to install Blender 2.5, which is not in the repositories.

A Open Accessories > Terminal and enter these three lines:

```
sudo add-apt-repository
ppa:cheleb/blender-svn

sudo apt-get update

sudo apt-get install blender
```

Q How do I share my CD/DVD drive for general usage, so that whatever a CD/DVD is inserted into the drive, it will be accessible on the remote machine?

A Edit your `/etc/samba/smb.conf` with:

```
gksudo gedit
/etc/samba/smb.conf)
```

Instructions to enable a shared CD drive are in the file.

Q My KDE sessions freeze randomly, and I can only do a hard reset.

A (From the original poster) I found that one of my RAM modules was faulty. MemTest was a real life-saver in finding this.

Q I get connected OK, but my WEP key isn't being stored; I have to enter it every time!

A (Thanks to Barry in the UbuntuLinux Yahoo Group) Try manually creating the connection using 'Edit Connections' and make sure that the 'Apply to all users' box is ticked.

Q I am trying to use winff to convert an FLV file to AVI, but I get this error message "Unknown encoder 'libmp3lame.'"

A Enable the Medibuntu repository, and enter this command:

```
sudo apt-get install ffmpeg  
libavcodec-extra-52
```

Q How can I compile C++ programs and other basic languages?

A <https://help.ubuntu.com/community/CompilingEasyHowTo>

Q Running Ubuntu Server 10.04, this error appears for a few seconds before it boots:

"error: no argument specified.
Press a key to continue..."

A Browse this: <https://help.ubuntu.com/community/Grub2>, go to section 12.1.5.

Because you are running Server, you just need to run steps 8, 9 and 10.

Tips and Techniques Help Wanted: Community Docs

One of the great strengths of Ubuntu is the Community Docs, a Wiki of how to do this, that and

the other thing in Ubuntu.

However, the articles do not include a date-written. There's a date last-updated at the bottom of the article, but the update might have been to fix a spelling mistake.

The authors' guidelines suggest you must include what version of Ubuntu a new article applies to. However, lots of authors have ignored this. As well, many authors have made no attempt to keep their articles up to date. So you get an article which says it applies to Dapper, and it turns out that it was valid all the way to Jaunty, but after that it became obsolete. It still shows up on Google.

A "how-to" written in 2007, when I began using Ubuntu, is more likely to mislead people in 2011, than to help them. The solution? If you look at an article and find that it's obviously obsolete, take a bit of time to fix it.

It takes a few steps to be authorized to update the community docs. First, go to the WikiGuide article. You should have a look at each section, even if you're not going to remember it all.

Then follow the "/Registration" link. From there, follow the link to the Launchpad Help Site. More links, to the account sign-up page, then "Create a new account." Fill in your information, and try to get the annoying captcha right. You'll get an email with a "confirmation code" you can copy and paste into the next screen.

Now, when you are reading a community doc, you can click on "log in to Edit," and when you do, "Edit" will appear at the bottom of the screen.

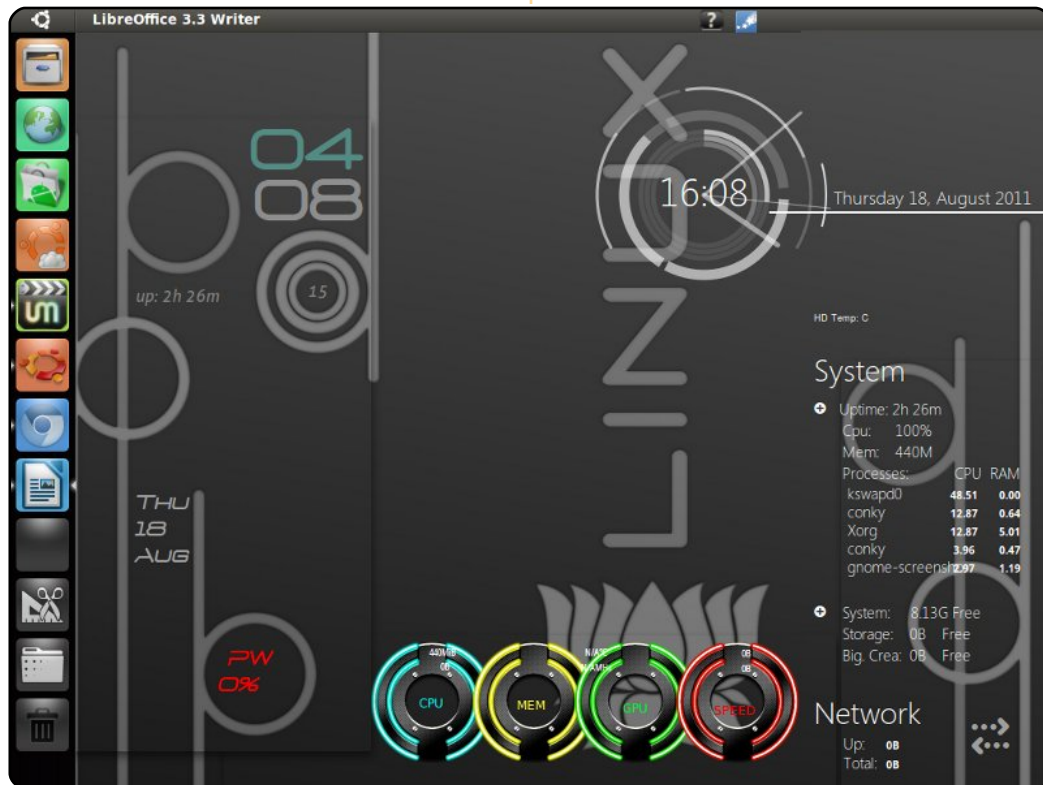
The rigamarole to sign up on Launchpad might seem like a nuisance, but there needs to be some procedure to block random people from vandalizing the community docs, and that's the chosen process. Really, it takes only a few minutes, and you will probably spend longer than that just staring at the first doc you decide to improve.





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.



I'm from Indonesia, and this is my first participation in FCM.

I run Ubuntu 10.10 on an old low-end PC, P4 1.6 GHz, 512 SDRAM, 40 GB HDD, Nvidia Geforce2 TI, 15" CRT monitor.

All runs great here. I use Unity 2d with mac4lin theme and genoid icons. Compiz works in minimal settings since there's a warning on compizchecker. I put together 3 rcs into 1 conky.

Ubuntu rocks.

Hendraone

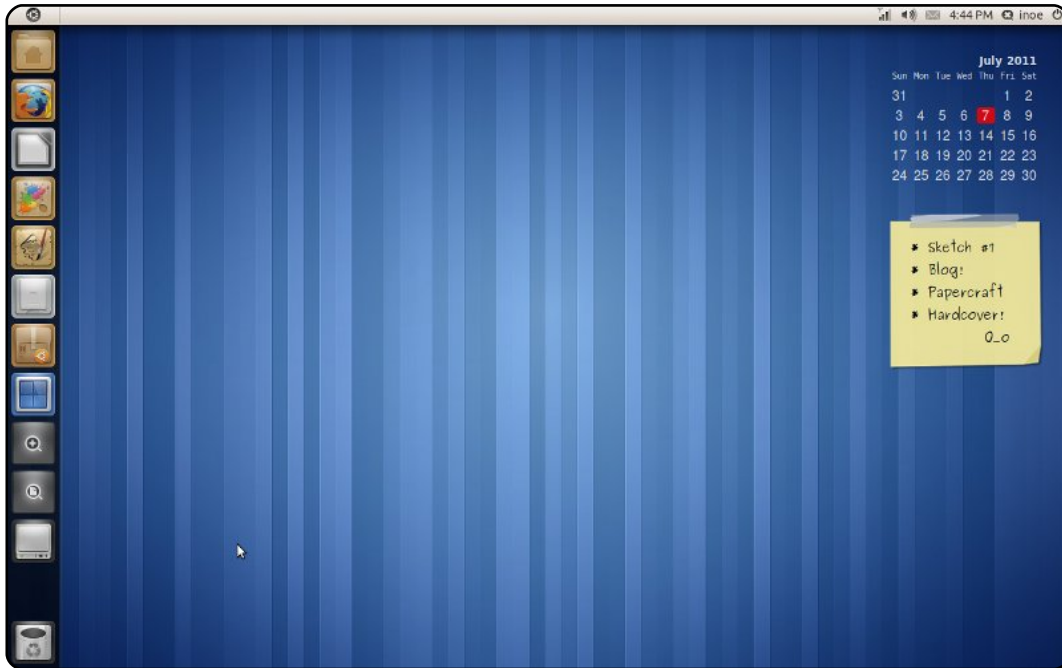


I took this screenshot some time ago, when I used Ubuntu 10.10. Now I'm using 11.04. In fact I like using Unity because it's simple, and satisfies what I need.

I like my desktop simple, and with no icons, so I removed the top panel and used the bottom panel with the dockbarx applet and gnomenu instead of the default one. I got the wallpaper from deviantart.

My computer specs: Toshiba Satellite A135-s2276, Intel Pentium Dual-Core 1.6 GHz, RAM 3GB, ATI Radeon 128MB (Shared) and a 320GB HDD.

Alvin Sie

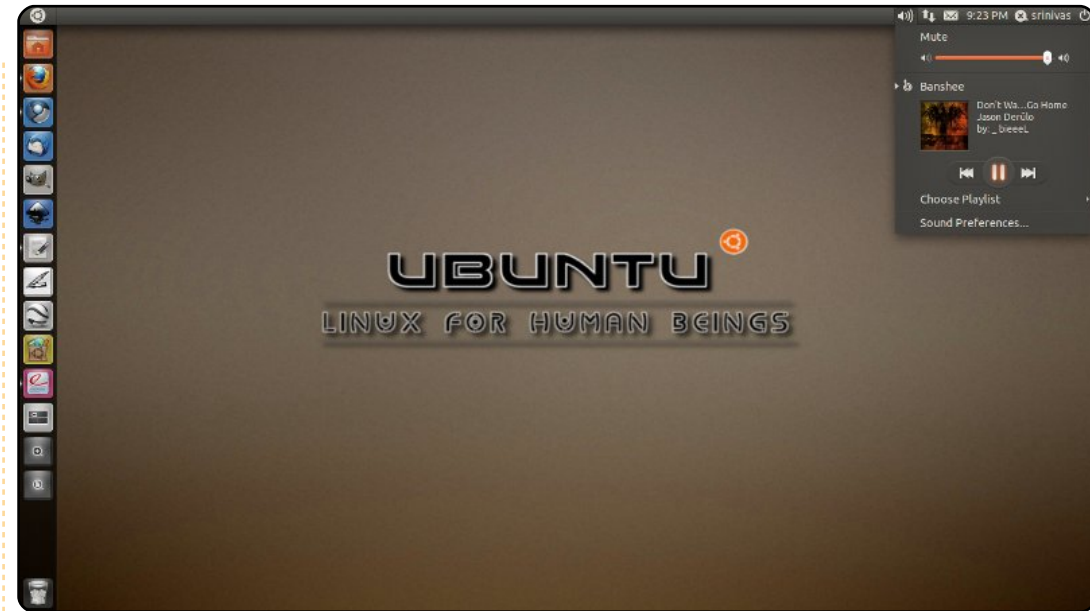


This is Ubuntu 11.04 Natty Narwhal, running on my 14" laptop, with Intel Celeron CPU 550 @ 2.00GHz and 1GB of RAM.

I disabled Nautilus showing mounted volumes on the desktop to provide a cleaner desktop.

The wallpaper is Stripes, the default wallpaper of GNOME 3 (Hey, it looks good with Unity :D). I use the Radiance theme, retouched with Faenza Icon Set. There are two Screenlets, ClearCalendar with Noback theme, and Lipik with a theme I made myself, Tempel, which can be found at <http://i-n-o-e.deviantart.com/art/Screenlets-Lipik-tempel-1-0-208444137>

Asmoro Budi Nugroho



This is my idea of a perfect desktop, something that's neat, simple, and minimalistic. Not too many short-cuts on the unity launcher bar, but with a little coding of Unity Quicklist scripts, navigation becomes just as good as any other bulky Unity launcher bar. I like this style because it's suitable for serious work and looks good too.

Wallpaper downloaded from: <http://solancer.com.deviantart.com/gallery/#/d3jrhu0>

Unity Quicklist scripts:

<http://solancer.blogspot.com/2011/05/ubuntu-1104-quicklist-for-unity.html>

System specs: AMD Dual-core 2.5 GHz, Gigabyte S-series mother-board, 4GB RAM and a Seagate 500 GB hard disk

Srinivas Gowda



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

Lucas Westermann

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 #54:
Sunday 09th Oct. 2011.

Release date for issue #54:
Friday 28th Oct. 2011.

