Full Circle

All Applications
Accessories
Graphics
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Office
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System Tools
Places

Desktop Sharing
Dropbox
FileZilla
Firefox Web Browser
Pidgin Internet Messenger
Skype
Sun Java 6 Web Start
Thunderbird Mail
Transmission
XChat IRC

LINUX MINT 12
FULL REVIEW
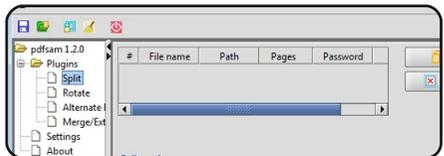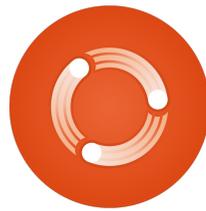
Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

EDITORIAL

Welcome to another issue of Full Circle!

The shock of the month for me was a headline that read: '**Canonical pulls the plug on Kubuntu**'. I almost had a heart attack and passed out! But, thankfully, it's not as bad as it sounds. Canonical has withdrawn its funding for Kubuntu (if you haven't heard about it, have a look at the news page), which just means that Canonical is not paying anyone to work on Kubuntu, leaving it on the same level as the other family members (Xubuntu, Lubuntu, etc). No big deal.

Programmers around the world can rejoice with the return of the Python series. Greg explains at the end of his article why he had to miss a couple of issues. Send all supportive messages to Greg and his wife at: greg.gregwa@gmail.com. The LibreOffice and Backup series continue, and, with them, we have one How-To on screencasting, and one on having a paperless office.

As well as working on the Closing Windows series (with my co-authors), I'm drawing up plans for an astronomy article for FCM. I recently bought a telescope (a Heritage 130P if you must know), and I'm going to write about Linux astronomy software. Yes, I'll even include a couple of Windows ones that run in Wine. If you've any suggestions (just not *Stellarium* or *Celestia*, I know about them), please email them to me. Image stacking, motorized telescope control, all that fun stuff. Don't worry - FCM won't become Full Celestial Magazine.

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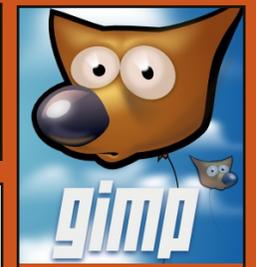
Full Circle Podcast

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

Hosts:
Robin Catling
Ed Hewitt
Dave Wilkins

http://fullcirclemagazine.org

AUDIO MP3   AUDIO OGG
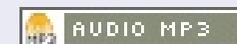
Canonical Stops Funding Kubuntu
by Ronnie Tucker

Jonathan Riddell, the only paid developer for Kubuntu, wrote:

Today I bring the disappointing news that Canonical will no longer be funding my work on Kubuntu after 12.04. Canonical wants to treat Kubuntu in the same way as the other community flavors such as Edubuntu, Lubuntu, and Xubuntu, and support the projects with infrastructure. This is a big challenge to Kubuntu of course and KDE as well.

It should be noted that Kubuntu will still survive, but in the same (non-funded) way as Lubuntu and Xubuntu are currently.

Source:
http://lwn.net/Articles/479710/

Mint 12 KDE Released

Linux Mint 12 KDE has finally been released!

New features at a glance:
KDE 4.7.4
Hybrid ISO images
Search engines
Upstream components

Release notes:
Moonlight
Upstream issues

System requirements:
x86 processor (Linux Mint 64-bit requires a 64-bit processor. Linux Mint 32-bit works on both 32-bit and 64-bit processors).
512 MB RAM (1GB recommended for a comfortable usage).
5 GB of disk space.
Graphics card capable of 800×600 resolution.
DVD-ROM drive or USB port.

Source:
blog.linuxmint.com/?p=1927

Ubuntu for Android
by Robin Catling

Mark Shuttleworth is bringing Ubuntu to a device near you. Yes, if you are designing and manufacturing dual-core smart-phones, Canonical wants it running a full-featured Ubuntu desktop.

Canonical has announced the availability of Ubuntu for Android as a working prototype. Under the snappy tag-lines "...in every dual-core phone there's a PC trying to get out" and "Ubuntu is the killer app for multi-core phones in 2012," Canonical makes the case for the docked corporate smart-phone to become the next desktop PC.

When you connect the phone to an external monitor with keyboard and mouse, Ubuntu boots and runs concurrently with Android. Looking at the images and the technical specification, the 2GB disk image for Ubuntu looks like 12.04 with Unity, sitting atop a hardware compatibility layer on ARM processors.

EPUB

Finally, we have mobile editions of *Full Circle* on the downloads page. At the moment there are only a couple of issues online, but we're hoping to have back issues online shortly. If you've any problems with the epub file/formatting, you can drop an email to Jens at:
mobile@fullcirclemagazine.org

Big thanks to Jens, Oppih and the beta testers for making them a reality.

FC Notifier Update

The **Full Circle Notifier** is still at 1.0.2, but the PPA has been updated for Oneiric. FCN is a small application that sits in your system tray and will announce issue/podcast releases, and can be set to download them too! **For more info, see the FCN Google Group:** http://goo.gl/4Ob4

I realize that many of our readers are students (as am I). Depending on the country, a new semester has just started, is about to start, or, in the case of Germany, is nearly over. It's often a good idea to keep a listing (alone or in collaboration with your colleagues) of questions, and their answers, pertaining to the courses you're taking.

If you are in the habit of doing so (or are resolved to start this habit), then the following script will help make your revisions much easier. This script was written by a university professor (and FCM reader) who likes to be called "Magic Banana". You can find it on his website: http://dcc.ufmg.br/~lcerf/en/utilities.html#trivialibre

It aims to ask the questions, organized in categories, in a random order, and lets you set a fixed delay to answer each of those questions. It is named "Trivialibre" - because it was initially written to ask the questions of an eponymous game (see: http://trivialibre.humanoidz.org), which is a variation of the famous "Trivial Pursuit" for free software enthusiasts. The script is interesting in its various uses of the Shell tests, Zenity, the rather new 'shuf' command, and of 'sed'.

I'll briefly discuss the functionality of the script, and then explain what each command is used for (including an explanation of the uses within the script).

What does it do?

This shell script takes the questions from the files within the categories folder, and poses them (at random) in a zenity-formed GUI window. It displays the question, waits, and then displays the correct answer (much like flashcards work).

How does it work?

It uses shuf to take the files from the categories folder, shuffle the contents, and then save it in the $XDG_DATA_HOME/trivialibre folder (so that the pending questions can be recorded somewhere without losing any).

Once this is taken care of, a Zenity window will then ask the user to choose a category (you can choose a specific one, or have the script choose a random one).

A zenity window asks the next pending question in the chosen category. This windows contains a progress bar that reaches 100% after a delay chosen by the player (the only argument of the script), or 20secs by default. Once a category has been exhausted, it is then shuffled again and moved back into the $XDG_DATA_HOME/trivialibre folder.

Conditionals:

Throughout the script, conditionals are used in order to navigate the varying branches of the file. They are used in if-statements, while-statements, and for-statements.

```
16. if [ -n "$1" ]
```

This if-statement checks whether the argument $1 is NOT empty (-n stands for "not zero length"), so that the delay for the progress bar can be set to something other than the default 20secs.

```
23. if [ -z "$XDG_DATA_HOME" ]
```

This is the exact opposite of line 16, where you check if $XDG_DATA_HOME is empty (-z stands for "zero length"). In this case, you then set the variable to "$HOME/.local/share" (which is the value it should be).

```
28. if [ ! -d $XDG_DATA_HOME/trivialibre ]
```

This comparison checks to see if the directory doesn't exist, and then creates the folder (and all the category files it will need).

```
39. while [ -n "$categoryName" ]
```

Here, we use the conditional we used in line 16, but in a while-

statement. This means the loop will keep running until the variable is empty (which happens when the player clicks the "cancel" button). Once the variable is empty, the program effectively quits.

```
42. if [ "$categoryName" =
'Random!' ]
```

This is a simple String comparison, where we check if the user has selected Random! (as a category) or not.

```
48. if [ ! -s "$questionList"
]
```

Usually -s is used to check if a file exists and is not empty. Since we're negating it (the "!"), we are actually checking to see if the file is empty, i.e. if the questions within the category are exhausted. If it is, then the next step is to re-populate the file.

Shuf:

Shuf is a program included in the coreutils package, and creates permutations (variations) of the lines within a file. It's used in the following ways in the script (the numbers before the commands are the line numbers):

```
33. shuf -o
"$XDG_DATA_HOME/trivialibre/$
category" "$category"
```

In this instance, shuf takes the contents of the file (whose name is saved in variable "category"), creates a permutation, and then saves it in $XDG_DATA_HOME/trivialibre under the same name. This permutation is then the one used in the script.

```
44. `shuf -n 1 -e *`
```

In this case, shuf displays only the first line of the permutation ("-n 1"), and accepts the arguments as the contents of the file ("-e"). This means it takes the list of categories, creates a permutation, and selects the top one. This is the function used when "Random" is chosen as a category.

```
50. shuf -o
"$XDG_DATA_HOME/trivialibre/$
categoryName" "$categoryName"
```

This is the same as in line 33, as it is simply replenishing the exhausted category.

Zenity:

"zenity is a program that will display GTK+ dialogs, and return (either in the return code, or on standard output) the user's input. This allows you to present information, and ask for information from the user, from all manner of shell scripts." (taken from the zenity manpage).

```
11. zenity --list --radiolist
--window-icon=../token.png --
height=247 --
title='Trivialibre' --
text='Choose a category in
the list below or cancel to
quit\n(the same questions
will not be asked again next
time).' --hide-header --
column='' --column=''
```

This creates a GTK window with a radio list, using the token.png file as the window icon. It also includes the window title, the text (outside of the radio button), and offers some configuration (such as geometry). The radio buttons are populated by piping the output of ls -1 through sed and then zenity. Sed is used to format the ls output so that Zenity can use it. It should be noted that Zenity expects each string to be preceded by a TRUE or FALSE, where it denotes which string is the default choice (the line marked TRUE).
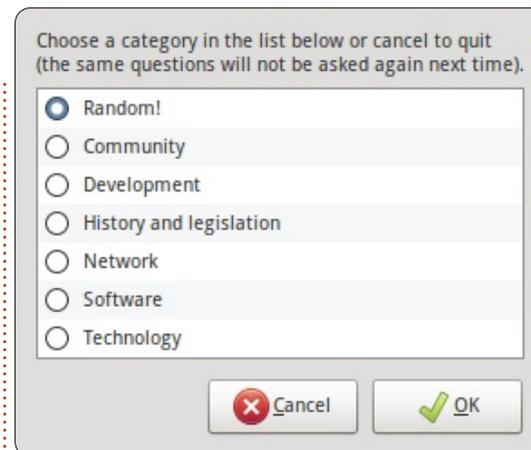

```
51, zenity --info --window-
icon=../token.png --
title="Exhaustion of the
questions \"$categoryName\""
--text="All questions in the
category \"$categoryName\"
having been asked, they are
reused (in a different
order)."
```

This is the window that notifies the user when a category has been completed.

```
60. zenity --progress --
window-icon=../token.png --
title="In the category
\"$categoryName\"" --
text="Question of
$author:\n\n$question"
```

In this example, zenity creates a progress bar (using a for loop to run through a percentage for the time between the question and the answer, defined earlier in the script). The percentage for the

progress bar is read in through the standard input, which is adjusted every second in this script.

```
64. zenity --info --window-
icon=../token.png --
title='Answer' --text="The
answer is:\n\n$answer"
```

Once the progress bar has reached 100% and the user has clicked on the OK button, this command is then called, providing the answer to the question. It will also be displayed if the user clicks the "cancel" button, interrupting the progress bar and displaying the answer.

For a better introduction to Zenity, you can check out my article in **FCM#46**.

Sed:

Sed is a command that allows you to use regular expressions in order to modify text that you can input. I will be writing an article on both sed and awk in the near future.

```
11. sed iFALSE
```

This is used after the "ls -1" command, and inserts (hence the
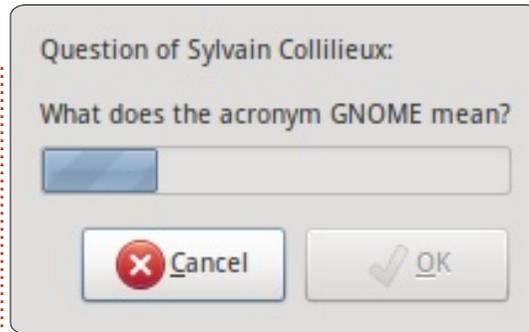
"i") the word "FALSE" before every line, so that Zenity can correctly format the data into the radio list.

```
62. sed -i 1d "$questionList"
```

Here, sed edits the list of questions in-place ("-i") and simply removes the first line of the file, thereby effectively removing the question that was just asked.

How do I add categories?

You can add categories using LibreOffice Calc (or any other program which can create CSV (comma separated values) files). Instead of commas, a tab should be used as the separator, and nothing to separate text. Be sure to give the file the name of the category you want it to represent.

I hope you've found this article

interesting (and the script useful). I would like to once again thank Magic Banana for supplying the script and being extremely helpful when organizing this article. If anyone has any questions, suggestions, or requests, feel free to email me at lswest34@gmail.com. Be sure to include "C&C" or "FCM" in the title, so that I don't overlook it.

Further Reading:

• "Linux Shell Scripting with Bash" - Ken O. Burtch (Developer's Library)

• Corresponding manpages

• FCM#46 of FCM (for Zenity)

• info coreutils 'test invocation'

• info coreutils 'shuf'

• info sed

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.

This month, we'll explore yet another GUI designer, this time for Tkinter. Many people have an issue with Tkinter because it doesn't offer a built-in designer. While I've shown you how to easily design your applications without a designer, we will examine one now. It's called Page. Basically it's a version of Visual TCL with Python support on top. The current version is 3.2 and can be found at http://sourceforge.net/projects/page/files/latest/download.

Prerequisites

You need TCK/TK 8.5.4 or later, Python 2.6 or later, and pyttk - which you can get (if you don't already have it) from http://pypi.python.org/pypi/pyttk. You probably have all of these with the possible exception of pyttk.

Installation

You can't really ask for an easier installation routine. Simply unpack the distribution file into a folder of your choice. Run the script called "configure" from the folder where you just unpacked everything. This will create your launch script called "page" which you use to get everything going. That's it.

Learning Page

When you start Page, you'll get three windows (forms). One is a "launch pad", one is a toolbox, and one shows the Attribute Editor.

To start a new project, click on the Toplevel button in the toolbox.
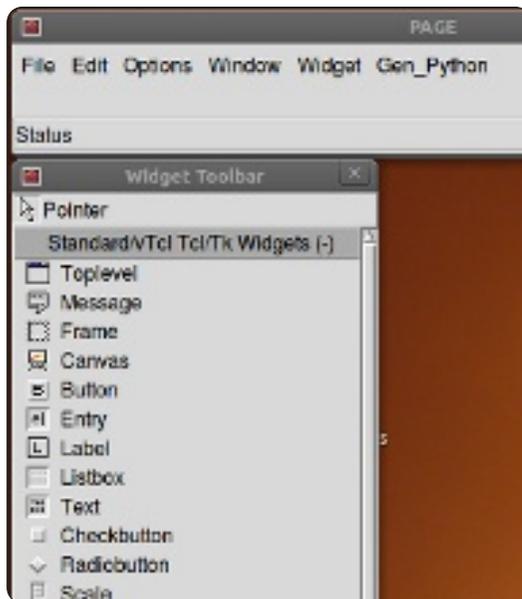
This creates your main form. You can move it wherever you wish on your screen. Next, and from now on, click on a widget in the tool box and then click where you want it on the main form.
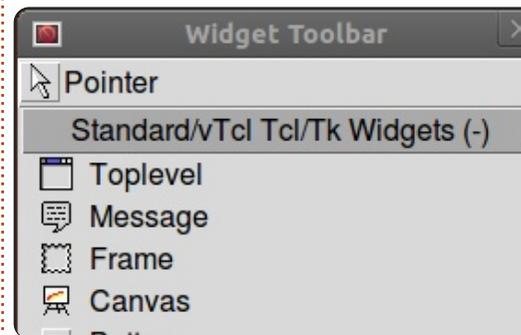
For now, let's do a button. Click on the Button button on the toolbox, and then click somewhere on the main form.
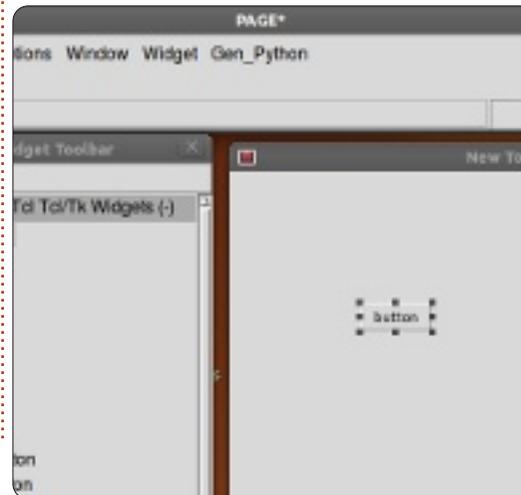
Next, in the launch pad form, click on Window and select Attribute Editor (if it's not already showing). Your single button should be highlighted already, so move it around the form and when you release the mouse button you should see the position change in the attribute editor form under 'x position' and 'y position'.

Here we can set other attributes such as the text on the button (or most any other widget), the alias for the widget (the name we will refer to in our code), color, the name we will call it and more. Near the bottom of the attribute editor is the text field. This is the text that appears to the user for, in this case, the button widget. Let's change this from "button" to "Exit". Notice that now the button says "Exit". Now resize the form to just show the button and recenter the button in the form.

Next click in the main form someplace where the button isn't. The attribute editor form now shows the attributes for the main form. Find the "title" field and

change this from "New Toplevel 1" to "Test Form".
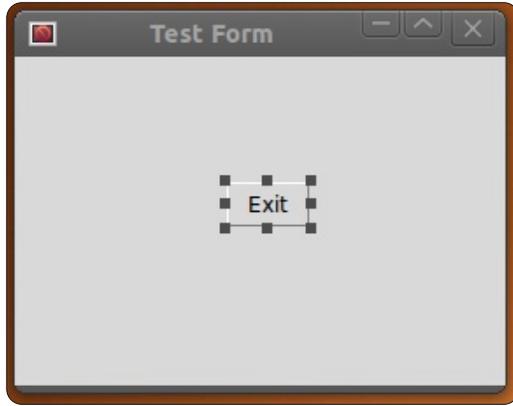
Now, before we save our project, we need to create a folder to hold our project files. Create a folder somewhere on your drive called "PageProjects". Now, in the launch pad window, select File then Save As. Navigate to your PageProjects folder, and, in the dialog box, type TestForm.tcl and click the Save button. Notice this is saved as a TCL file, not a Python file. We'll create the python file next.

In the launch pad, find the Gen_Python menu item and click it. Select Generate Python and a new form appears.

Page has generated (as the name suggests) our python code for us and placed it in a window for

us to view. At the bottom of this form, are three buttons...Save, Run, and Close.

Click Save. If, at this point, you were to look in your PageProjects folder, you will see the python file (TestForm.py). Now click on the Run button. In a few seconds, you'll see the project start up. The button is not connected to anything yet, so it won't do anything if you click on it. Simply close the form with the "X" in the corner of the window. Now close the Python Console window with the close button at the bottom right.

Back at our main form, highlight

the Exit button and right click on it. Select "Bindings...". Under the menu is a set of buttons.
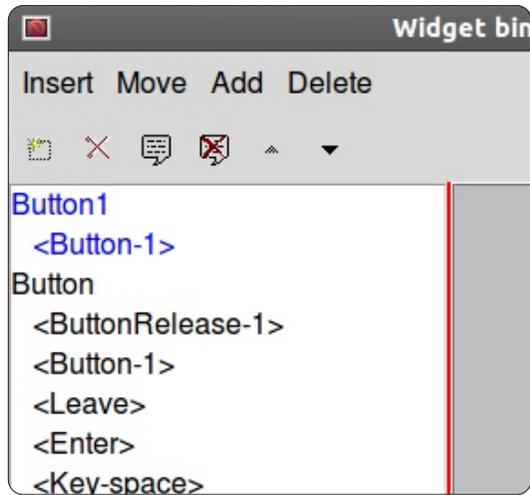
The first on the left allows you to create a new binding. Click on "Button-1". This allows us to enter the binding for the left mouse button. In the window on the right, type "Button1Click".
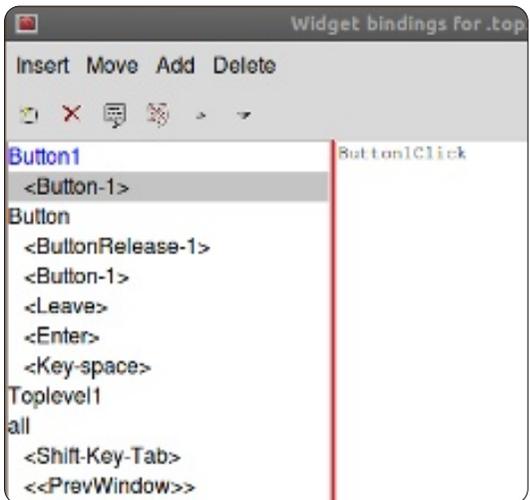
Save and generate the python code again. Scroll down in the Python Console to the bottom of the file. Above the "class Test_Form" code is the function we just asked to be created. Notice that at this point, it simply is passed. Look further down and you'll see the code that creates and controls our button. Everything is done for us already. However, we still have to tell the button what to do. Close the Python Console and we'll continue.

On the launch pad, click Window then select Function List. Here we will write our method to close the window.
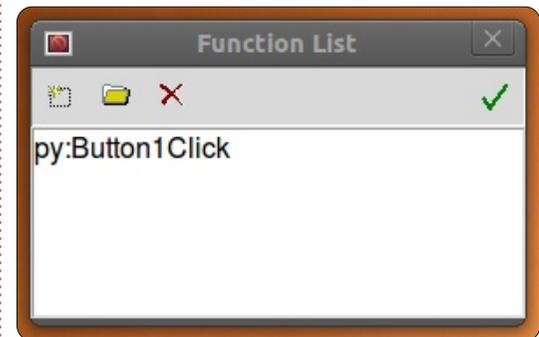
The first button on the left is the Add button. Click it. In the Function box, type "py:Button1Click" and, in the Arguments box, type "p1", and

change the text in the lower box to...

```
def Button1Click(p1):
       sys.exit()
```
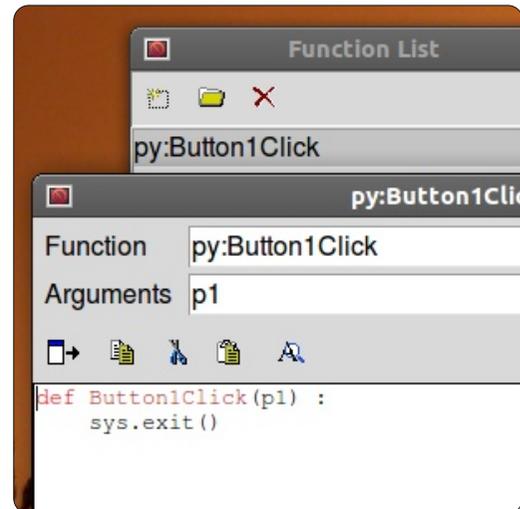

Click on the checkmark and we are done with this.

Next we have to bind this routine to the button. Select the button in the form, right click it, and select "Bindings...". As before, click on the far left button on the toolbar and select Button-1. This is the event for the left mouse button click. In the right text box, enter "Button1Click". Make sure you use the same case that you did for the Function we just created. Click the checkmark on the right side.

Now save and generate your python code.

You should see the following code near the bottom, but OUTSIDE of the Test_Form class...

```
def Button1Click(p1) :

sys.exit()
```

And the last line of the class should be...

```
self.Button1.bind('<Button-
1>',Button1Click)
```

Now, if you run your code and click on the Exit button, the form should close properly.

Moving Forward

Now let's do something more complicated. We'll create a demo showing some of the widgets that are available. First close Page and restart it. Next, create a new Toplevel form. Add two frames, one above the other and expand them to pretty much take up the entire width of the form. In the top frame, place a label, and, using the attributes editor, change the text to "Buttons:". Next, add two buttons along the horizontal plane. Change the text of the left one to

"Normal", and the right one to "Sunken". While the sunken button is selected, change the relief to "sunken" and name it btnSunken. Name the "Normal" button "btnNormal". Save this project as "Demos.tcl".

Next, place in the lower frame a label saying "Radio Buttons" and four radio buttons like in the image below. Finally, place an Exit button below the bottom frame.
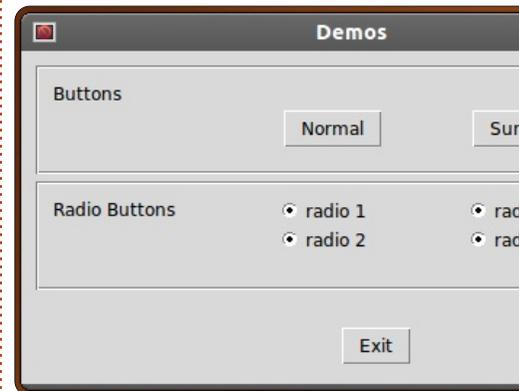
Before we work on the bindings, let's create our click functions. Open the Function List and create two functions. The first should be called btnNormalClicked and the other btnSunkenClicked. Make sure you set the arguments box to include p1. Here's the code you should have for them...

```
def btnNormalClicked(p1):
```

```
print "Normal Button Clicked"

def btnSunkenClicked(p1) :

print "Sunken Button Clicked"
```

Let's add our button bindings. For each button, right click it, select "Bindings...", and add, as before, a binding to the functions we created. For the normal button, it would be "btnNormalClicked", and for the sunken button it would be btnSunkenClicked. Save and generate your code. Now, if you were to test the program under the "Run" option of the Python Console, and click any of the buttons, you won't see anything happen. However, when you close the application, you should see the print responses. This is normal for Page and if you simply run it from the command line as you normally do, things should work as expected.

Now for our radio buttons. We have grouped them in two "clusters". The first two (Radio 1 and Radio 2) will be cluster 1 and the other two will be cluster 2. Click on Radio1 and in the Attribute Editor, set the value to 0 and the variable to "rbc1". Set the variable for Radio 2 to "rbc1" and the value to 1. Do the same thing

for Radio 3 and Radio 4 but for both of these set the variable to "rbc2". If you want, you can deal with the click of the radiobuttons and print something to the terminal, but for now, the important thing is that the clusters work. Clicking Radio1 will deselect Radio2 and not influence Radio3 or Radio4, and the same for Radio2 and so on.

Finally, you should create a function for the Exit button, and bind it to the button like we did in the first example.

If you've been following along as we have done our other Tkinter applications, you should be able to understand the code shown above right. If not, please go back a few issues for a full discussion of this code.

You can see that using Page makes the basic design process much easier than doing it yourself. We've only scratched the surface of what Page can do, and we'll start doing something much more realistic next time.

The python code can be found on pastebin at
http://pastebin.com/qq0YVqTb.

```
def set_Tk_var():
# These are Tk variables passed to Tkinter and must
# be defined before the widgets using them are created.
global rbc1
rbc1 = StringVar()
global rbc2
rbc2 = StringVar()
def btnExitClicked(p1) :
sys.exit()
def btnNormalClicked(p1) :
print "Normal Button Clicked"
def btnSunkenClicked(p1) :
print "Sunken Button Clicked"
```

One note before we go for this month. You might have noticed that I've missed a couple of issues. This is due to my wife being diagnosed with cancer last year. As hard as I have tried to keep things from falling through the cracks, a number of things have. One of these things is my old domain/web site at ~~www.thedesignatedgeek.com~~. I blew it and missed the renewal. Due to this, the domain was sold out from under me. I have set up www.thedesignatedgeek**.net** with all the old stuff. I will be working hard the next month to bring it all up to date.

See you next time.

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.thedesignatedgeek.net.

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

In my last article, I discussed setting up styles in LibreOffice Calc. This month, I will show you how to prepare, examine, and print your spreadsheet. We will add headers and footers to our sheet, use the Page Preview to examine how our sheet will look when we print it, and review the print dialog and how it affects the final printed pages.

Renaming Sheets

When you first create a new spreadsheet file, the default workbook starts with three sheets named Sheet1, Sheet2, and Sheet3. You can use these names in other places in your sheet, and we will use them when we create the header and footer for our budget spreadsheet. However, the default names are not very informative, so we will rename them. The names are located on tabs at the bottom program window. To rename a sheet, right-click on the tab and select Rename Sheet from the pop-up menu. The Rename Sheet dialog will display. Type in a meaningful name for the sheet, i.e. "February 24, 2012" and click OK.

Headers and Footers

Headers and footers allow us to create consistency between pages. Doing this on the sheet would mean shuffling cells as the sheet changes and grows. Using the page settings, we can create the same look for multiple pages.
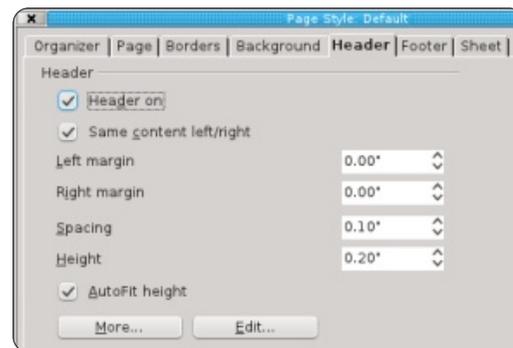
Open the page settings dialog, Format > Page. Click on the Header tab. Here you can adjust the margins, width, and height of the header area. I would recommend checking the Autofit Height checkbox, otherwise your header may get cut off. Click on the Edit button to bring up the header area format dialog. You will notice the header is divided into three areas,
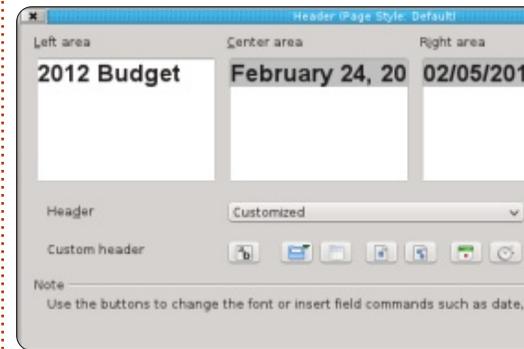
left, center, and right. Along the bottom, you will notice a toolbar. The toolbar lets you insert placeholders into the header and format the text. For our budget spreadsheet, we will place something in each of the areas. In the left area type "2012 Budget". For the center area, we will place our sheet name. To get the sheet name, click in the center area and delete any content that already exists, then click on the third button on the toolbar. This inserts the name you gave the sheet. For the right area, we will insert the current date. Click in the right area and delete any content that already exists. The next-to-last button on the toolbar inserts the current date. To change the font, size, color, etc, of the text, highlight the text in any of the

areas and click on the first button on the toolbar. This brings up a font dialog, where you can change the attributes of the text. Click the OK button when you are finished editing your header.

We also might want to separate our header from the rest of the sheet with a border or background color. We can do this by clicking on the More button on the Header tab in the Page dialog. For mine, I just put a 0.50pt line at the bottom.

The Footer tab is the same as the Header tab, but let's put some different information in the three areas. On the Footer tab, click the Edit button. In the left area, place the sheet name using the third button on the toolbar like we did with the header's center area. In the center area, delete the content that is already there and type the word Page and a space. Click on the fourth button in the toolbar. This creates a placeholder for the page number. This placeholder will increment for each page of the sheet. In the right area, click on the last button on the toolbar to insert

a current time placeholder. This will print the time when you print the sheet. Having the current date and time on the sheet can come in handy when you have to do revisions and need to know which one is the most current. As with the header, we can edit the attributes of the text by highlighting the text we want to change and clicking on the first button in the toolbar. Click OK when you are done editing.

To separate the footer from the rest of the document, we can use the More button to create a border or background color. I used a 0.50pt border on the top.

In our setup, we used all the buttons in the header/footer edit dialog except for two. The second button inserts the filename of the workbook, and the fifth inserts the total number of pages.

We are finished editing the page setup. Click OK to close the page-setup dialog.

Page Preview

The page preview allows us to make final adjustments to our

sheet before printing. With the preview, we can make sure everything fits on the page the way we want it, and the data shows as we intended.

To open the page preview, go to File > Page Preview. The current window is replaced by the page preview window. You can make several adjustments while in page preview mode.

The slider in the toolbar is the scaling factor. This allows you to make the cells bigger or smaller so they fit on the page the way you want. You can increase the size by clicking on the plus (+) or reduce it by clicking on the minus (-). You can also click and drag the adjustment handle.

The Format Page button displays the Page Style dialog. Here you can change your overall page

margins and background color, and make corrections and adjustments to your header and footer. Two things we haven't mentioned yet are the table alignment and the print order. Table alignment is found on the Page tab. It allows you to center the table horizontally, vertically, or both. On the Sheet tab, the page order controls how the cells are printed on the page. This allows you to make your data layout in the order and way you intended. If you have more columns than can fit on a page, you can change it from the default to left-to-right, then down. You can also set the beginning page number should you need something other than 1. You can also specify what prints and what does not. Finally, you can manually adjust the scaling here as well.

The page preview gives you buttons to page forward and

backward, and jump to the first page or the last page. There are also zoom in/out buttons for closer examination of the page.
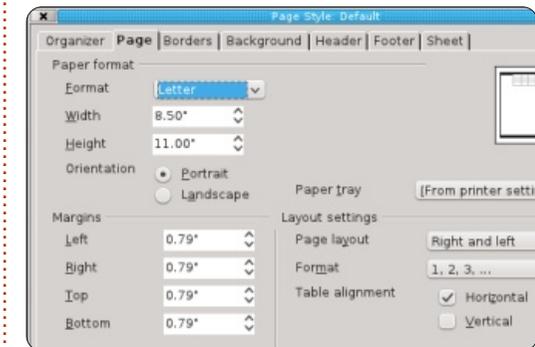
The Margins button gives you the ability to adjust the page, header, footer, and column margins. Click the Margins button to activate margins mode. The dotted lines let you manually adjust the page, header, and footer margins. The black markers at the top allow you to adjust the widths of the columns. Click the Margins button again to exit margins mode.

Close Preview exits the preview mode.

Printing

Finally, we have completed all our preparation and it is time to print our sheet. File > Print brings up the print dialog. On the General

tab, you can select your printer. Click on the Properties button for settings specific to your printer. You can choose to print just the selected sheets, all sheets, or just selected cells. You can also specify whether to print all the pages or just selected pages. If you don't feel like ordering your pages after you print, you can also choose to print them in reverse order. You have an option to print multiple copies, and whether or not to collate them.
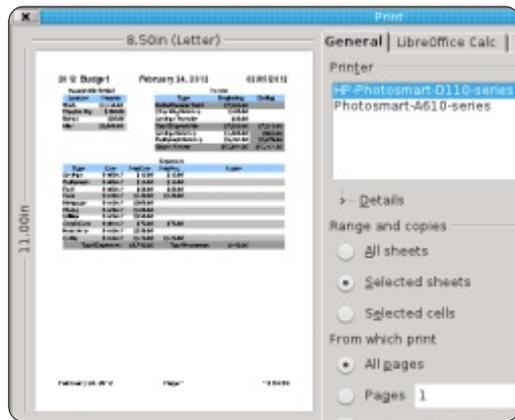
On the LibreOffice Calc tab, you can choose to print or not print blank pages. The Page Layout tab gives you options for printing more than one page on a sheet of paper, what order to print them, and whether to put a border around the page. On the Options tab, you can choose to print to a postscript file, and, if you are printing

multiple copies, whether to do it as one print job or multiple.

Once you have everything set, click Print.

This may seem overkill for a single document, but you need to always consider how often you will use and change the document. If you use the sheet often, as in a budget, once the header and footer is set, you will never have to change them again. By considering the reusability, you decrease the setup time the next time you use it.

Next month, we will look at some quick tips and tricks for working with spreadsheets in Calc.

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

Quick Opinion
Tune out, Drop Out, Get things Done
by Allan J Smithie

I turned off the Internet today. I don't mean the whole thing. I mean my access to it. I unplugged the router from the wall.

I also killed my music player and left the mobile phone in another room.

Something mystical then happened. *Concentration*.

I love the Internet. I'm probably addicted. It's a huge resource for information and an unparalleled research, educational and entertainment resource, but every so often I have to shut it all out just to Get Things Done.

Turn off the TV, radio, iPod, Xbox, PSP and Wii. Close the browsers (both of them), kill the chatroom, the IRC, AIM, Facepunch, Twiddle and anything else that's running. The fact checking can wait. Contrary to contemporary systems of belief, your status doesn't have to be updated in real time. It will all still be there. After you get something **DONE**.

Not quite the 'elephant in the room' - there is one obvious service that we've avoided in this series thus far: Ubuntu One.

Ubuntu One is Canonical's real-time cloud storage and syncing service, promoted to Ubuntu users right there during the installer slide-show, integrated and available out-of-the-box. Moreover, it's freely available to anyone and this makes it an important product for Canonical.

Early adopters grumbled about the speed and reliability of the service in its initial release, but we're glad to say that Canonical has continued to make progress with the service, to the extent that there's no discernible difference in performance versus the other top names such as DropBox or SpiderOak. It is now so well integrated in Ubuntu that I've challenged it by spending most of the effort for this article using Ubuntu One on Windows 8!

I know at this point I'm going off-script by declaring that Canonical has done a really smart thing with its cross-platform strategy. Making Ubuntu One available on Windows, Android, and iOS, is certainly a major step for diversifying the Ubuntu One user market. Last year, the service passed the milestone one million user mark, but how many of those lie outside the Ubuntu faithful is unknown. You can download the free Files app for your Android and iOS devices from Ubuntu or from the Apple App Store or the Android Market.

Usage

When the Ubuntu One application is launched, you have the choice to either login with an existing Ubuntu One account or to create a new one. A new account can be created directly from the Ubuntu One client as well as from the website, which is the most straightforward of all the cloud storage services to my mind.

Account creation is quite standard; provide a name and a valid email address, verify using the confirmation link that is emailed you, and you get your 5GB of free storage.

The Ubuntu One client has a simple, clean user interface on all the platforms. Above the four tabs, the Get More Storage button sits prominently next to the connect/disconnect button. You can start uploading items by placing them in the default Ubuntu One folder (just like DropBox). For the Windows client, Ubuntu One also suggests My Documents, My Pictures and My Music folders, and provides a storage estimate for each folder. You have the option of selecting additional folders to synchronize. The files added to this directory syncs with your on-line account and become available in all computers and connected devices (Android or iPhone) where Ubuntu One is installed. You can either add files or folders directly into this folder, or use the 'Add a folder from this computer' option from the Ubuntu One interface.

The Settings tab has options to place a bandwidth limitation for the content being synchronized with the Ubuntu One service (download and upload speed). You can enable options to initiate Ubuntu One synchronization as soon as you login to Windows, device notifications and sync all shared files instantly as they become available. Interestingly, most of the management functions

contents ^

– public and private sharing, devices - are carried out through the Ubuntu One website, not in the client.

Since so many features depend on the web interface, any mobile device with a decent sized screen should be able to access any of the web interface's features. For smaller phones, for example, the Android and iOS clients will be more useful.

Like DropBox, if you click on Publish file, Ubuntu creates a unique URL that you can share with anyone via email or on your social networks. Syncing Notes and Contacts isn't supported in the Windows version; the Ubuntu One site has tutorials for Notes and Contacts only for various versions of Ubuntu Linux distributions.

Currently, the File Sync in Progress doesn't show the percentage completion. One of the FAQ's on Ubuntu's site indicates that a real-time progress indicator is on the feature list for the future.

Security

As an on-line storage product, the lack of file encryption on Ubuntu's servers will be a deal-breaker for many. Whilst Ubuntu uses SSL for syncing data, Public sharing links are HTTP links, not secure HTTPS links and this is where Ubuntu One is at a disadvantage against DropBox and others.

Pricing

Competitively, the Ubuntu One free service is in the same 5GB free band as SugarSync, compared to the DropBox 2GB free account; however, SugarSync and DropBox also offer bonus storage upgrades for trying out features and referring new customers. Additional paid storage is in 20GB blocks at $2.99 per month or $29.99 per year. Up at the 100GB mark, you can clearly see that UbuntuOne and SugarSync match prices at $149 plus change and DropBox is more expensive at $199 a year.

Music

This is where Ubuntu One becomes a more distinctive product, because of its music store for purchase and streaming. Ubuntu One will host your music online, just like the Amazon Cloud Player. This is an additional paid service, but, if you're an Ubuntu user, then the music you buy from the Ubuntu Music Store is stored on your personal cloud and ready for streaming on any registered device or smart phone, and, as it is synced, you can also listen off-line. There's currently a special offer on 20GB of storage for all your data $3.99/month or $39.99/year - with two months free on music streaming and storage when you sign up for 12 months. The issue with Ubuntu One music store remains the range of titles and the base price per track - when compared with Amazon and iTunes.

Verdict

We're still looking for the perfect Cloud storage and backup solution. Ubuntu One is a real-time syncing service to compete with DropBox and SugarSync, not a Backup tool like Deja Dup or SpiderOak; there's no scheduling or versioning, either in version number or intervals of days. Ubuntu One supports Private Sharing, but not Share Groups. There's no Search of your Ubuntu One cloud as it relies on you searching the synced copy of data local to your device. As a storage solution, it is hard to fault Ubuntu One - it mostly makes sense, and Canonical has made reasonable compromises in splitting the controls and management between the various clients and the web interface. Security concerns are all that's stopping me going over to it full time.

Allan J. Smithie is a journalist and commentator based in Dubai. His blog, 'No Expert,' is at: http://allanjsmithie.wordpress.com

What is screencast? It is actually the digital recording of the computer screen, often with an associated audio. Why would we like to do this? Sounds like a good question. Well, often we need to record the screen to make a tutorial, or record a problem that we are having. There are many programs that can be used for this purpose such as gtk-recordmydesktop, recorditnow, xvidcap, etc. But, out of all the above, my personal favorite is gtk-recordmydesktop. In this article I will explain how to use it to do a screencast. I would also like to point out that I currently use Ubuntu 10.04 on a 64-bit machine.

Installing the Software

Recordmydesktop can be downloaded from the Ubuntu software center.

Knowhow of the Software

Recordmydesktop can be found in Applications>Accessories>Sound & Video. The layout of the software is quite plain. On the left-hand side, there is a screen which shows the current area which will be recorded. On the right-hand side, we have options to control the video and sound quality. The recording will take up more space if we use higher sound and video quality. On the bottom left-hand corner, we have two options which are 'Select window' and 'Record'. With the first, we can select the area on the screen which we want to record, while the second option will start the recording. On the bottom right-hand side, we have two options, namely 'SaveAs' and 'Quit' - to save our recording, and exit the software.

Now, let us explore the 'Advanced' features of this software by clicking on that tab. There are four tabs, and we will cover each one of them one by one:

Files
Under this tab, the first option controls the overwriting of existing files. By default, if we try to save a file by a name that already exists, then the new file will be renamed. If we checkmark this box, then this functionality will be disabled. Assume we don't want that, and hence we won't check the box. The next option specifies where the working directory is, ie, where the recordings will be saved. We can easily change this option if we want.

Performance
In this tab, the first option 'Frames per second' is self explanatory. The second option lets you encode the video simultaneously while recording, but this will also require a lot more processing power. The third option is checkmarked by default - which means that no compression is done to our recording. The fourth option, if enabled, will reduce the processing power required but may make the recording a bit blurry. The last option should be enabled only while recording 3D windows.

Sound
In this tab, the first option lets

us specify the number of audio channels. The second option sets the sound frequency. The third is set to 'default', which means that the device is discovered by the software automatically. I would not recommend tampering much with settings in this tab.

Misc

I would recommend once again not to change the default options in this tab. But you may change the type of mouse cursor. If the Follow Mouse option is enabled, then the recording area will follow the mouse.

Using the software

Run the software. Then click on the 'Select Window', select the appropriate recording area, and then start the recording. On the Ubuntu top panel (one where the time is displayed), you will see a circular red object - which you can click to end the recording, or right-click it to pause the recording. Once you stop the recording, you will see a window which is doing encoding as shown in figure-3; don't close it. Then you will be asked where you want to save the video. Hurray! Now go and enjoy

your first video recording or screencast!

Jayneil is pursuing his major in Electrical Engineering from Nirma University in India. His areas of interest include OpenCV, Python, Android, Linux, Arduino and other open source hardware platforms.

I am a dedicated and proud user of linux, predominately Ubuntu, and, for a long time I've wanted to rid myself of the last remaining occurrence of Windows in my home. Only PaperPort was preventing me from achieving my goal.

I have searched the internet for a few years, but have been unable to find a substitute for this, until now.

I am a dedicated user of the paperless office.

So what is this all about, I hear you ask?

Well, the title is somewhat self-explanatory. It's an office (home or small business) without paper. (Well, almost.)

Let me explain. Whether you are a home user or a small business user, this is applicable to you.

Almost every day the letter box, and consequently the home or business, is littered with letters or bills or statements. What do you do with them? I suppose most home users dump them in the bin; business users will need to store most of them in increasing numbers of filing cabinets I guess.

This is where the paperless office comes into its own.

There is a windows application called PaperPort; this has changed ownership in recent years, but the application still remains the "Rolls Royce" of the paperless office. The whole package has many, many features, more than I can recall, but I tend to use only a couple of these. The cost of this s/w is reasonable (for a Windows setup), but not an option (at the current time) for Linux users.

In simplistic terms, the application contains a built-in file manager and scanner application.

On running PaperPort, you use the file manager application to select the folder where you want all your "scans" saved (the office of no paper). It is simple to create new folders and move things around. Just remember to file everything in sensibly-named folders and filenames.

Each time you scan in a document, it will be saved in the "selected" folder as a compressed pdf file type. If a document is multi-page, it will be saved as a compressed multi-page pdf.

Once the documents have been scanned (and backed up to another HDD), they can be "binned", although I would recommend that they are shredded with a cross-cut shredder. Everything that is paper-based can be treated in the same way. All bills, bank statements, receipts, etc., are stored in an appropriate folder, thus allowing it to be found easily in the future. Should a hard copy be required, a document can be dropped onto the printer icon and it will be printed. Fantastic! Think of the space you can save!

I have recently found PaperPort's Linux equivalent. It's not something that has just been created, it's been there quite a while, but doesn't seem to have been documented or even considered for this purpose.

I will now try my best to explain the workings of this Windows replacement. BTW, I am now ecstatic, as I can now make my last Windows PC redundant.

Installation

There are two applications that you will need to install to replace the functionality of PaperPort: *gscan2pdf* and *pdfsam*.

Both are available in most repositories. Now, let me make it quite clear that I am no expert in either of these applications, and I am still learning the finer points of both of them, but I will try to explain the elements that I know work, and which provide me with the end result I need: "The paperless office".

It matters not whether your scanner is a stand-alone or all-in-one; gscan2pdf should be able to detect it. I accept that there will be

some issues here, especially the the newest printers/scanners, but I will state that I purchased an Epson PX810 over 12 months ago, when it was quite new to the market, and Ubuntu detected it straight away, even though I use it over my local network with Wi-Fi. I also have a HP OfficeJet 4500, connected with USB, and have no issues with that either.

Now, let's get down to action.

Scan and save

Let me now summarise the use of each of the applications mentioned above.

gscan2pdf provides the functionality needed to scan your documents and save them to disk.

Pdfsam (pdf split and merge) provides the functionality to merge multiple single pdf scans into a single 'stacked' pdf document, and, if required, it can unstack them back to single pdf's.

Ensure that your scanner is connected to the Laptop or PC or to your Network, and switched on at the mains. Select and run the

application gscan2pdf, and, once it opens, click the "scan" icon; the application will now search for any connected scanners and place them in a selection list. The next window that opens allows you to select the appropriate scanner if you have more than one connected.

There are 4 tabs:
Page Options: here you can select to scan single pages or multiple pages. Obviously, multiple pages can be handled only with an ADF (Automatic Document Feeder). I have found that "Clean up images" and "OCR scanned pages" are best left un-ticked for the purposes of this tutorial.
Scan Mode: here you can choose between 'colour', 'line art', and 'grey'. The scan resolution can also be changed here. I find that for normal "paperless office" uses, 150 is a good choice.
Advanced: here you can alter the 'compression', 'factor', and

'scan source'. I tend to set Compression at JPEG, factor at 10, and Scan Source at either 'Flatbed' or 'ADF' - as appropriate. I use ADF mostly, as you can scan many pages with ease. NOTE: ADF will be an option only if the scanner supports this.
Geometry: I leave measurement as default, and paper size as A4 (I am in the UK).

Now, assuming you have placed the docs to scan in either the flatbed or the ADF, click 'Scan'.

The scanned pages will now appear as thumbnails in the 'main' gscan2pdf window.

If you have scanned multiple documents, you have the option to select one or more in the left pane. You can now click the 'save' icon (looks like an HDD with green arrow). The save window will now appear. You have the following options:
Page Range, select either All or

Selected as appropriate.
Image Type, for normal Paperless Office uses, select PDF.
Date, click this and choose the appropriate date. If you are scanning, say, bank statements, select the date of the statement as this will be used for the filename. Other data can be added as required.

For Compression, I normally select Automatic. Click Save.

You will now be offered a file manager window to select the target destination.

Browse to where you wish to save the scan.

To make the next "save" somewhat easier, you can choose to click the + sign (to save as a shortcut for next time), before you click the Save button.

That's it, your scans will have been saved to your HDD.
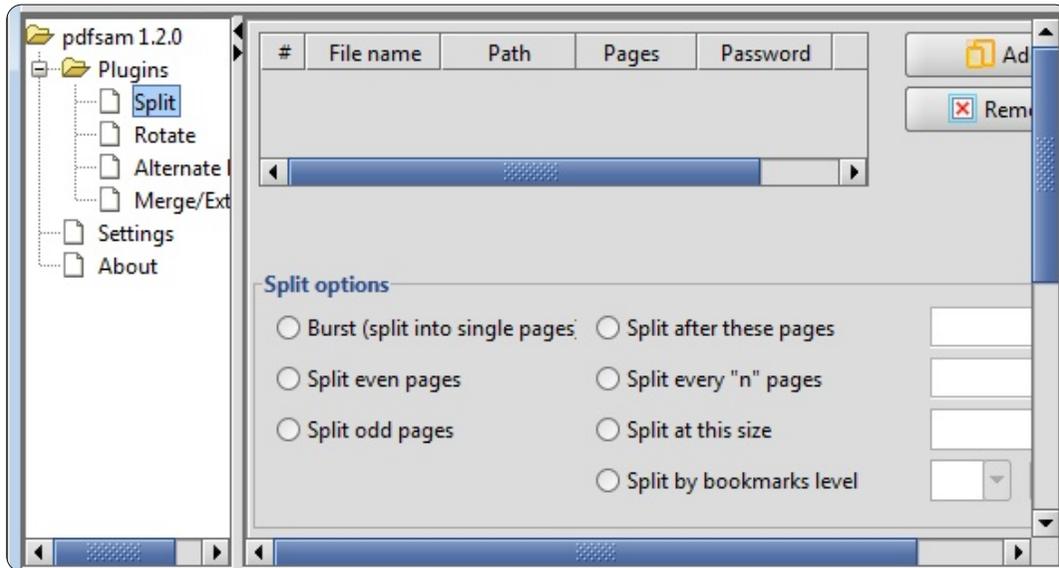
Merge and/or Split

If you subsequently need to merge (stack) multiple single scans together, or extract (split) a page from a merged set, then you need to open pdfsam.

This is quite simple to use: select the Merge/Extract option in the left-hand window, then click the ADD button, and select the PDFs you want to merge into one. In the selection window that returns listing all the PDFs that you previously selected, you get the option of re-ordering them, then you can choose the target location and filename, and then click RUN.

Conversely, if you wish to split a page from a merged/stacked set, select the split option in the left window, then click the ADD button, and select the PDF you want to extract from. The normal split option would be Burst; then you can choose the target location and filename, and then click RUN.

I hope you have found this useful, because I now use this at weekly intervals, to reduce the "paper" collecting in my office.

Many thanks to the author(s) of both the applications described above.

A PLEA ON BEHALF OF THE PODCAST PARTY

As you often hear in 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

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 LibreOffice, but **PLEASE SPELL AND GRAMMAR CHECK IT!**

Writing

There is no word limit for articles, but be advised that long articles may be split across several issues. In your article, please place where you would like a particular image to be. Please do <u>not</u> use any formatting in your document.

Images

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

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.

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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 proof-readers 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:

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- what category would you put this hardware into?
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- easy to get the hardware working in Linux?
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You <u>don't</u> need to be an expert to write an article - write about the games, applications and hardware that you use every day.

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Whether you need to figure out if your system supports a certain mode, or just want to get to know more about a system, Ubuntu has a good number of useful tools. Most of the tools described here can be run from a standard Live CD, so, if you are looking for the system specifications for dozens of different systems, these can be handy tools.

As with a lot of Linux software, there are both graphical and non-graphical tools. The first couple of tools (hardinfo and lshw-gtk), are not a part of the standard installation or Live CD, but they are in the Ubuntu universe repositores. As long as you have the Ubuntu universe repositories enabled, then installing them is a simple matter:

```
sudo apt-get install hardinfo
lshw-gtk
```

While most of the system information tools can run as a standard user, they will not necessarily detect as much as when run as the root user. It's best to run each tool using gksudo in the case of graphical tools, or sudo for command line tools.

hardinfo
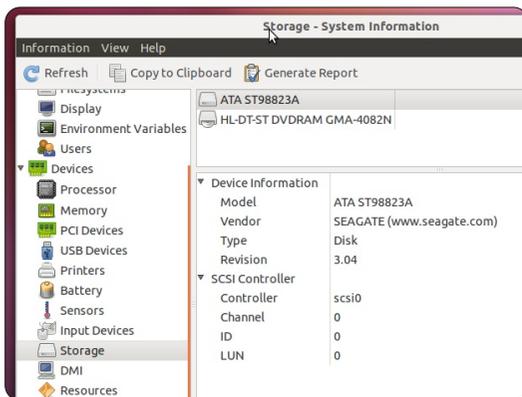
Of all the tools, this is perhaps the most visual, and it has a couple of benchmarking features that are not in lshw-gtk. Run hardinfo by either pressing Alt+F2 and typing:

```
gksudo hardinfo
```

or typing the same command into a terminal window.

Hardinfo has a nice graphical representation of each system component. Clicking on a component reveals its attributes.

For example, clicking on the Summary icon gives a quick overview of processor, memory, operating system, and some information about the sound and video devices. What differentiates hardinfo from lshw-gtk is that it shows some operating system information, such as which kernel modules are in use (which can be handy if you are trying to problem-solve why a particular device is not working), environment variables, and even boot times. Hardinfo can also do a number of benchmarks: CPU Blowfish, CPU CryptoHash, CPU Fibonacci, CPU-N-Queens, FPU FFT, and FPU Raytracing. By themselves, the benchmarks are not much to look at, but if you are building a variety of different systems, or slightly different systems, these benchmarks are an interesting way to see the difference between equipment.

Perhaps the best feature of hardinfo is the fact that it can generate reports about any or all of the system information or benchmarks. Those reports are stored as a html file, and can be opened by the browser of your choice.

The downside to hardinfo is that some of the information is rather sparse. For example, it shows the model of the hard drive in my notebook, but not the actual size. If you're trying to spec a bunch of machines, this is one more detail you would have to look up.

If you do a little more searching for information about hardinfo, it is worth noting that while the home page for hardinfo suggests the last active version was created in 2009, the bug tracker shows recent active bug squashing and enhancements.

lshw-gtk

LINUX LAB - INVESTIGATIVE TOOLS
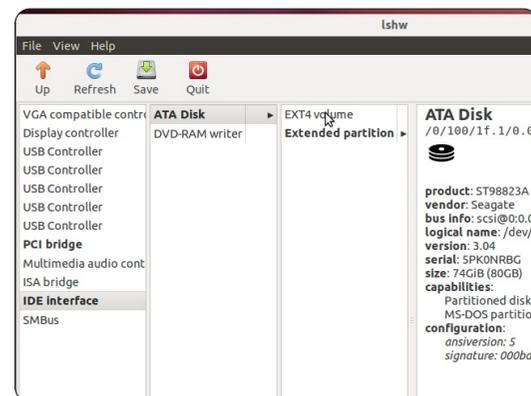
This product can fill in many of the details hardinfo leaves out. lshw-gtk is a graphical front end to the command line tool lshw. As you will see, a number of these tools are related, so do not be surprised to see how similar some of the tools appear. Like hardinfo, lshw-gtk is not installed in the default installation of Ubuntu (the command line version, lshw, is). Run lshw-gtk the same manner you would hardinfo:

```
gksudo lshw-gtk
```

lshw-gtk normally shows a few top-level items that can be expanded for more information. Where most of the other tools show reams and reams of information, lshw-gtk streamlines the information into somewhat digestible separate windows. lshw-gtk is a bit less friendly than hardinfo. In order to get to some of the results (hard drive size, for example), you have to "drill down" into sub-menus. For example, in order to determine the hard drive size, you have to click Motherboard, host bridge, IDE interface, then ATA disk, not exactly intuitive if you're not hardware savvy.

The amount of information lshw-gtk shows is very useful, and it's a bit more friendly than its command line brother lshw. It can save system information just like hardinfo, but saves information in an XML format (better for processing, but not pretty when loaded in Firefox). The main advantage of lshw-gtk over hardinfo is that lshw-gtk displays some information (hard drive size) which hardinfo currently doesn't show.

lshw
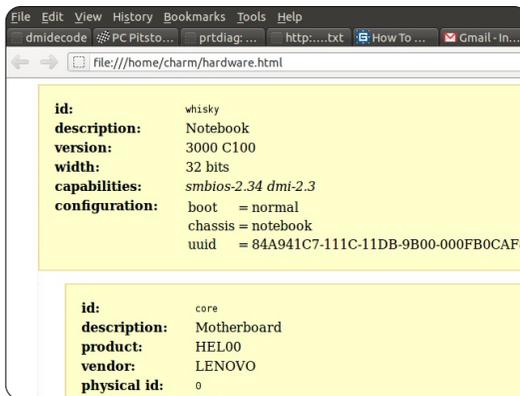
This is the command line brother to lshw-gtk. Being a command line tool, lshw has all the typical advantages of many command line tools: it's part of the default Ubuntu install, it can be piped to a text file and processed using other tools, and it has switches that allow for some very specific information. For example:

```
sudo lshw -class disk -class
storage -short | grep sda
```

Displays the following result on my notebook:
```
/0/100/1f.2/0.0.0
/dev/sda          disk
80GB HDS728080PLA380
```

Run without any switches, lshw displays literally pages of information. lshw-gtk saves information only in XML format, but the command line lshw can save information in XML, HTML, or json (Javascript object notation) format.

```
sudo lshw -html >
hardware.html
```

After running lshw with the -html switch, just open the file (hardware.html in this case), with a web browser.

While lshw can display system information in html format, we found it didn't work so well combined with other switches - the information was there but the formatting was completely lost. The information is so extensive

that it can be a bit overwhelming. The -class and -short switches come in handy parsing down the information to something more manageable. The classes available are: system, bus, memory, processor, bridge, display, network, multimedia, disk, storage, volume, and power. For example:

```
sudo lshw -class memory
-short
```

lspci
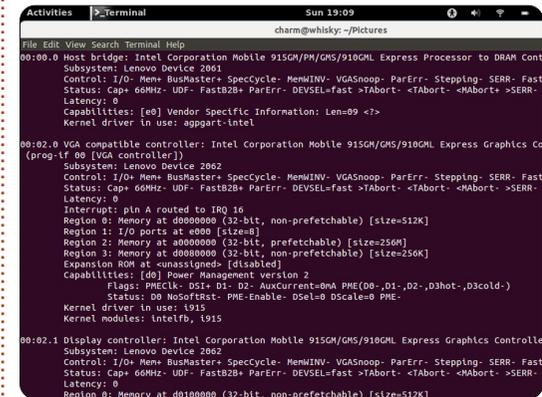
lspci lists PCI devices in a system. Like lshw, lspci can display a lot of information about a system. Run on its own without switches, lspci displays a fair amount of information about PCI devices within a system, but you can add more verbosity by adding up to 3 v switches:

```
sudo lspci -vvv
```

One practical use of lspci is to figure out which wireless chipset a system has in order to install the correct wireless driver. Like hardinfo, lspci can display kernel module information about pci devices (using the -k switch).

dmidecode
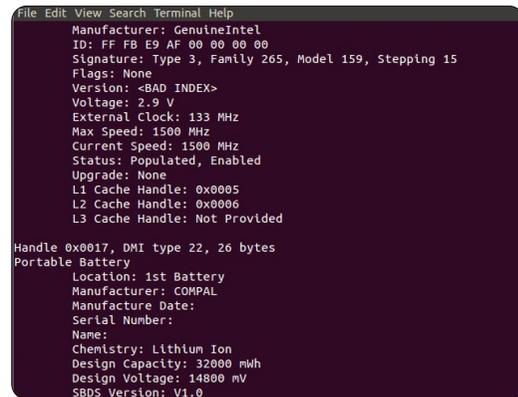
This reads a system's DMI table for information. One of the great things about dmidecode is that it can display information about the maximum supported configuration of the system. For example: dmidecode displays both the current amount and maximum amount of RAM a system can handle. It is also possible to limit the information dmidecode displays using the -t switch to limit the type of information displayed (such as processor, memory, or

cache). Additional information can be displayed with a comma between information types. For example:

```
sudo dmidecode –t 4,22
```

The first type 4 is the processor, and the second type 22 is the battery. Of course not all the types will necessarily display for all systems. Battery information, for example, is primarily for notebooks. Note: be sure not to include a space after the comma or dmidecode will not interpret the second type.

cat /proc

The sixth tool is not really a specific tool for querying hardware, but the combination of cat and the /proc (process) information in the Linux file system. The two processes I query most on systems are /proc/cpuinfo and /proc/meminfo. I typically use grep to limit information (though with cpu information it can be handy to see other information such as cpu family to help sort between different processors):

```
cat /proc/cpuinfo | grep
'model name'
```

On my notebook displays:

```
model name    : Intel(R)
Celeron(R) M processor
1.50GHz
```

Checking meminfo using cat shows a lot more detail about active memory including both main memory free and swap memory free. Unlike other tools, sudo isn't required to query the proc filesystem.

df

This one is specific to displaying disk information. As with cat, you do not need to execute df with root permission, you just run df from a command prompt. Running df by itself displays disk information in 1K-blocks, not very human-readable. Use the -hH switches to make the df output human-readable, and using powers of 1000 (which is closer to what hard drives are marketed as). I also like to limit information to the drive I'm working with, again using grep:

```
df –hH | grep 'sda'
```

On my notebook results in:

```
df: /dev/sda1
77G   5.6G        68G   8% /

`/root/.gvfs': Permission
denied
```

The second line ending in Permission denied can be eliminated by running df with sudo.

Baobab / Disk Usage Analyzer
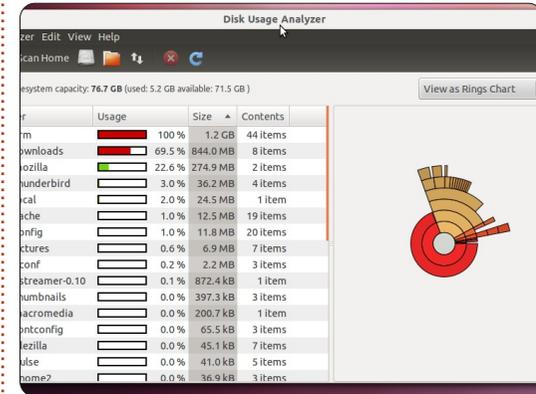
The last investigative product is also a disk usage tool. You can find Disk Usage Analyzer under the Accessories menu. Disk Usage Analyzer (like the du command line tool which I do not cover here) is really handy for tracking down which files and directories are taking up the most space on your file system. Disk Usage Analyzer is really easy to use. Click the Scan Home button to get an overview of

LINUX LAB - INVESTIGATIVE TOOLS

disk usage in your home directory.

The Analyzer menu allows you to scan your home directory, entire file system, or a remote file system through SSH, FTP (with login), Public FTP, SAMBA share, WebDAV and Secure WebDAV, or Custom URI.

Disk Usage Analyzer can also be run from the command line using the baobab command, but it's still a graphical tool. The advantage of running baobab from the command line is that you can specify a particular directory without the need of drilling down to that directory from the home or root filesystem.

We've looked at 8 useful system investigation tools. Linux has many more tools, a number of which are referenced by the manual (man) pages of the tools we've looked at here. Whether you're a system builder or just supporting Linux, these are all useful tools.

Helpful Links:

Hardinfo homepage:
http://hardinfo.berlios.de/HomePage

Lshw wiki:
http://ezix.org/project/wiki/HardwareLiSter

Nognu dmidecode page:
http://www.nongnu.org/dmidecode/

Charles is a step-father, husband, and Linux fan who runs a not-for-profit computer refurbishing project. When not breaking hardware/servers he maintains a blog at http://www.charlesmccolm.com/.

CODEWORD

Every number in the codewords grid is 'code' for a letter of the alphabet. At the end you should have a different letter in each numbered box, and a word in English in each of the horizontal and vertical runs on the codeword grid.

Solutions are on the second last page.
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Written by:
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Elizabeth Krumbach (XFCE)
Mark Boyajian (LXDE)
David Tigue (Unity)
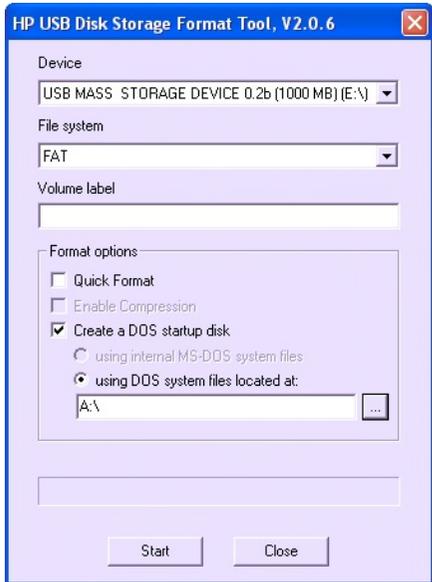
Formatting (or erasing) a storage device in Windows is relatively easy. You right click the drive you wish to format, and you'll be presented with a window which details the steps to take in erasing all information from your device.

Linux is slightly different in this regard as it's almost impossible to format a device without seeing a mention of partitions. And that always bothers people. Think of partitions as being drives within a drive. If you want to only format a USB/SD storage device, then you'll more than likely not bother with partitions.

WARNING: Be <u>very</u> careful with formatting storage devices. If you choose the wrong device, and click OK, you could be in big trouble. Make 200% sure you've got the right device before clicking that final OK button!

Kubuntu:

Kubuntu comes with an application in K > Appllications > System called KDE Partition Manager.

On first loading the application, you'll see a list of your storage devices at the top left, and a diagram of your devices space at the top. The middle section lists
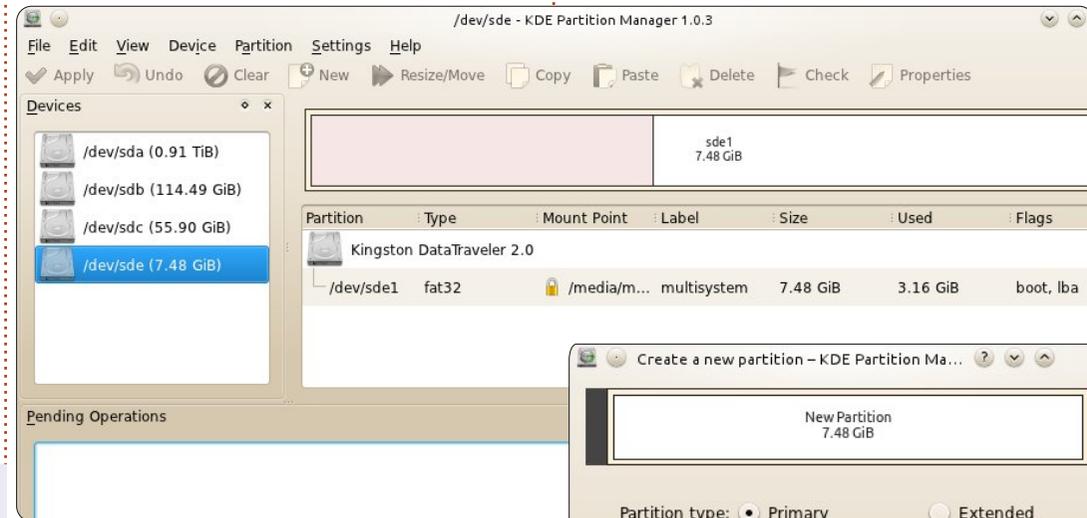
partitions, types, labels, and so on. While the bottom panel shows operations pending. Sometimes, it can be difficult to tell which device is which. In the list above, one of them is a USB device, but which one? Well, I can narrow it down by knowing that the others are too large to be my USB device. Clicking the name /dev/sde tells me (middle panel) that it's a Kingston DataTraveler and is 8GB - which confirms what is physically written on my device.

Right clicking on the top or middle panels will get me almost no options other than 'Unmount', so do that first. Now we have
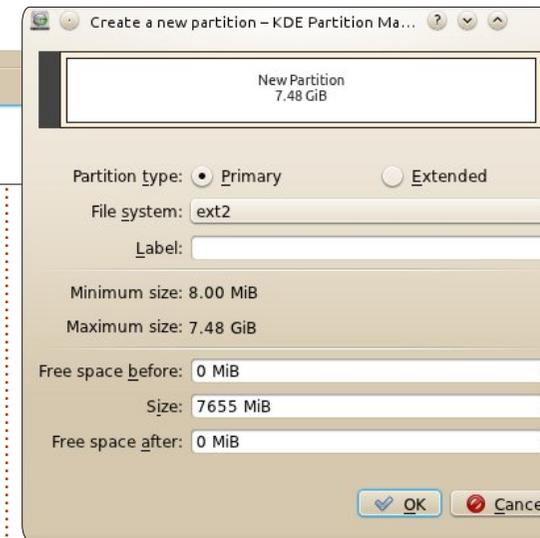
access (via right clicking, or the buttons at the top of the window) to more options, and the main one (for now) is 'Delete'. This will remove the current partitions before letting us choose 'New'.

This window will let you assign a file system, a label (if applicable), and how big to make this new

partition. I'll call it 'My USB', use the ext4 file system, and use the full capacity of the USB.

After clicking OK, the last thing to do is to click 'Apply'. It's absolutely critical that you double check you've got the right device before clicking apply - as you'll get only one more sanity check!

Once KDE Partition Manager tells you it's done, your USB device is shiny and new! To begin using it, you need to remove the device (it's safe as it's still unmounted) and plug it back in again.

Lubuntu:

By default, Lubuntu comes with a program called Disk Utility that easily handles all standard disk management tasks. The program can be opened from the main menu by selecting System Tools > Disk Utility.

Disk Utility is simple but powerful. As mentioned earlier in this article: you need to exercise caution before committing an action or you could find yourself reformatting the wrong drive! As you can see (below), Disk Utility
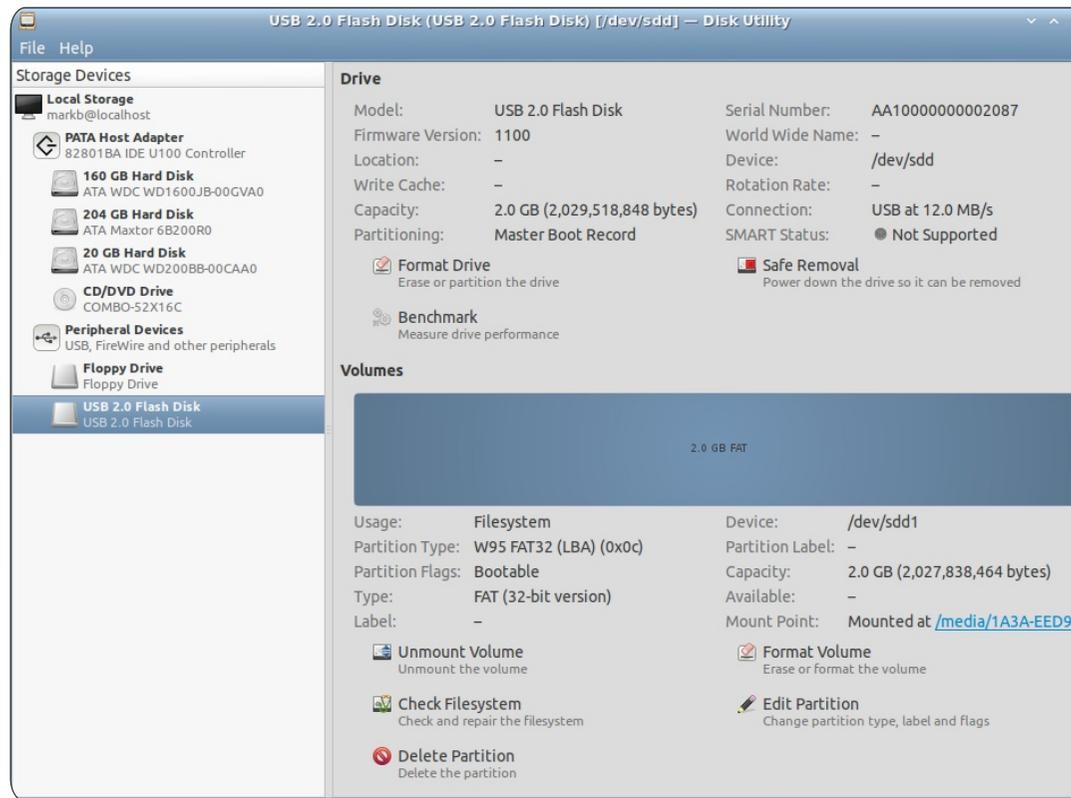
"sees" all the drives attached to your system, which it displays in the "left pane" under the title Storage Devices; I have selected the USB drive. Disk Utility provides a lot of information about the selected drive, and segregates the results into two categories: Disk and Volumes. The former provides disk-level information and functionality. In this example, there are three functions you can perform at the disk level: Format Drive, Benchmark, and Safe

Removal. To invoke a function, hover your mouse over the function until it becomes highlighted, then click it. (Note: Depending on the type of drive selected in the left pane, the available functions will change.)

The Volumes section (lower half of right pane) analyzes and displays attributes and functions related to the volumes (partitions) on the drive. In this example, there is only one partition and it is represented

graphically by the blue rectangle. If we wanted to reformat this partition, you would simply click on Format Volume. A simple pop-up menu will prompt you for the type of file system you want, and a name for the volume - then you would click the Format button. (Note: doing this will destroy any data you have stored on this partition; however, if you had more than one partition on the selected drive, the other partitions would remain unaffected.) In this example, to delete the entire partition and leave the disk unallocated, you would click Delete Partition. Once the partition is deleted, you can create a new partition(s) - specifying the type, size, and volume name.

From the Drive section (upper half of right pane) of Disk Utility, you can select Format Drive to delete all the partitions on a drive with a single action. Disk Utility is very easy to use, but it assumes you understand the consequences of your actions. At most, Disk Utility will warn you once before you execute a destructive action (e.g. delete a partition, format a drive, etc.); however, it is simple to operate and easy to learn.

CLOSING WINDOWS

Gnome-Shell:

In this version of Ubuntu, you can find the program Disk Utility (System > Administration > Disk Utility). Once started, you will see an overview of all disks connected, or built into your computer.

Since it is the same program as has been described above in the Lubuntu section, I will explain only some of the features of this program that have not been described already.

Top right, you see the section Drive. Here you see a lot of information about the drive. Just have a look at some drives in your computer, see if you can recognize them. In this Drive section, you see 3 buttons: Format drive, SMART Data, and Benchmark. Clicking SMART Data, you will see this screen which tells you about the condition of your drive.

The Benchmark button tells you about what the drive can do regarding read and write speed.

Unity:

In Unity, the default application is 'Disk Utilty'. Click on the Dash icon, start typing 'Disk Utility', and then click the icon when it appears. The usage for this tool has already been mentioned before, so I won't go into details here. I would just like to emphasise that you unmount the volume before formatting, and also make sure you are 100% certain this is what you want to do before you click the final button. This will cause you to lose all data on the drive, so make sure that formatting the drive is what you want to do. Good luck.

Xubuntu:

Xubuntu 11.10 does not ship with a default graphical application for formatting a storage device. If you don't want to install software,

you have the option of using the command line tool "parted" which does ship with Xubuntu - you can find documentation for this tool on the parted website:
http://www.gnu.org/software/parted/

However, it is instead recommended that you use the same tool already recommended for Lubuntu and Gnome, "Disk Utility" - which you can install from

the Ubuntu Software Center by simply searching for "Disk Utility" and clicking Install. Once installed, you can access it via Xubuntu mouse menu > Settings > Disk Utility.

Usage has already been covered, so I will quickly mention that, in Xubuntu, USB Flash Drives are automatically mounted when inserted - so they will show up when you load up the the Disk Utility application. You can go to Xubuntu mouse menu > Settings > Settings Manager, and select "Removable Drives and Media" to make modifications to this behavior.

Next month, we'll be looking into *buntu equivalents to the Windows Task Manager.

MY STORY

Written by Chandra

In 2008, I was still using a 20-year-old DOS computer (!!) when it became obvious I couldn't go on without connecting to the web. I bought one of the very first netbooks because it was funny and cheap. Linux was one of the reasons for the low price, and I knew nothing about this strange thing. But I discovered that it was possible to buy a computer without paying what I call the "Microsoft tax", so to speak. I added an external CD/DVD writer.

The original distro was Xandros, not a very good one in fact. The possibilities were very limited, and I rapidly looked for something else. The problem was to find a distro working out-of-the box on an EeePC, and it was not easy in those days. I started with ubuntu-eee (an Ubuntu 8.04 fork which became easypeasy). The main problem was the kernel: ubuntu-eee was using a specific kernel, and it was not possible to easily upgrade it when a new ubuntu version was available. I tried live sessions of eeedora, eeedebian and Linux Mint, and I finally switched to Ubuntu 8.10 on my netbook and on my new desktop computer too (I bought a "naked" Nyos 50 to avoid paying the "tax").

In the meantime, I was gradually discovering Linux, thanks to forums, magazines, and online documentation. Everything was not yet working out-of-the box: e.g. the wifi LED or the volume control on the netbook - but I succeeded in fixing those little problems. Within a year and a half, I definitely dropped out everything that was coming from Microsoft, and my configuration was OK regarding what I wanted to do with it.

Then, Unity arrived! I'll just say two things about that. To me, Unity is a real nightmare. It is also a solution for which there was no problem. So, I switched to Xubuntu. It is very simple, very intuitive, faster, and very easy to configure. Since it uses gtk libraries, gnome applications are welcome. Xubuntu is now the only distro I use.

Oh, by the way, what do I use?

Very simple but powerful things: Firefox and Thunderbird, Abiword, and Gnumeric. On a second level, eog as an image-viewer, epdf as a pdf-viewer, Xsane for scanning, GIMP, MPlayer, devede, brasero (if you want to know more about these packages, please refer to the ubuntu online documentation). I also use things as gparted, baobab, mousepad, gnome-disk-utility, hardinfo, ntp, wipe, clonezilla...

And now, what is important to me? First of all, I do not have to adapt myself to the distro. The distro must be able to adapt itself to me. I must be able to control precisely what I need, and to remove all that is not necessary to me. That is why I don't use Ubuntu Software Center - which is just a pleasant catalogue to look at. It's not precise enough. It does not allow me to completely remove unused packages, that is to say to also remove configuration files. I added deborphan in synaptic, which allows the removal of orphan packages. I also removed about forty or fifty useless things. For example, dummy packages or things like splx - since my printer is not a Samsung printer. This is important because my netbook has only a 4 GB SSD.

I must be able to completely personalise the desktop so that everything is located where it has to be and behaves the way I want. Fortunately, Linux allows any user to modify little things in configuration files. For example, I changed the 3600 seconds random sleep time to 10 seconds in /etc/cron.daily/apt. Otherwise, when I start my computer, it may take more than half an hour before I am told about available updates.

Upgrading to new versions is a real problem which bothers me.

- First, upgrading should be as simple as updating. And it's not. During the very long upgrading process, I am generally asked to choose either the new version of an unknown configuration file or to keep the old one. I don't know everything about ubuntu, so I know nothing about the consequences of the choice, and I don't know what

MY STORY

to do. I generally choose at random. After the process, I discover applications have been added. For example, I chose mousepad and eog. Why install leafpad, pidgin (which I don't use), and ristretto that I had previously removed ?

- Second, all that was working before should work after. And all my personal choices in the different preferences and configuration files should stay unchanged. After upgrading, things have disappeared such as certain icons. Other things simply don't work anymore. For example ADSL connection (from Jaunty to Karmic). I had to add sun-java-plugin after upgrading to Lucid because icedtea-plugin was no longer able to display websites which it did before.

- Third, depending on how I do it, I don't exactly get the same thing. I use a single ext4 partition, and no swap, and I have tried four different ways to switch to a new version:
• I use the very long upgrading process. It generally takes at least four hours to upgrade, fix what doesn't work any more, and remove the useless things which

have been added. There is also another problem in this process. Some new features are not available. For example, I had to manually switch from grub-legacy to grub-pc in karmic.
• I make a fresh install, which is the best way to get the real new version. But I have to re-personalise everything, and it takes a very, very long time.
• I make a fresh install WITHOUT formatting the old ext4 partition, which keeps my /home directory. But the result is not exactly the same as the one I get with the previous option. Pieces of the old version are not completely removed.
• I use two partitions: / and a separate /home partition, and I then make a complete fresh install which keeps my home directory. But I still have to remove what is not useful to me. That's what I'll do with Xubuntu 12.04 LTS.

So, the ideal upgrading process doesn't exist. Anyway, the good new is that facing problems is an opportunity to learn something and to grow up. And of course, I go on with Xubuntu -- the best distro for me.

16x16 SUDOKU

Numbers 1 to 9 and letters A to F are to be filled into the 16x16 grid so that every row, every column, and every 4x4 box contains 1 to 9 and A - F.

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

Solutions are on the second last page.

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MY OPINION

Written by John Kerr

It has been over ten years now since I installed and used Linux for the first time. I wanted to tinker with computers, but, at the same time, I did not want to spend money on software, and I did not want to break any EULA. And I also wanted to make use of discarded hardware. It was Red Hat 5 that gave me the ability to do this, and I have been hooked ever since.

I have tried many distros over the years - from Red Hat, Fedora, Puppy, SCO (yes, even them), Mandriva, but at one point I decided that I should quit distro hopping and stick with one, for better or worse. I chose Fedora. That went well - except for one thing - to me, Fedora was very unstable from one release to the other, and, often, things that I spent time fixing got broken again six to twelve months later. I came very close to going back to the dark side - yes, that meant Windows.

Then, I heard about Ubuntu Warty Warthog, and I decided to give Linux one last try. Ubuntu did solve one more problem - as I was also tired of downloading 4 CD's for each install. The one-CD download was a godsend.

By this time I had become quite the software freedom evangelist; I was just disappointed that the software "free as in freedom" movement was too connected to the technocrat elite, and not really connected to everyday end users.

So, I tried Ubuntu, and I could see that Ubuntu was trying to do what the other distros have not done, and that is be easy to install for people who were far and away less computer geeky than I. Needless to say, I have been won over by Ubuntu.

However, as a person who believes in software freedom on religious, political, economic, and environmental grounds, I am disappointed on one front. I am not alone in my efforts to promote software freedom; many Linux users do the same. But, over the years, I would have liked to see some support from the likes of IBM and Red Hat. Don't get me wrong, I know that they have put money and resources back into Linux for which I am thankful. What I would like to see is Linux advocacy in some kind of major advertising budget. We need a "desktop" advertisement with "punch" in it.

It would be great if all of the corporations that benefit from Linux contributed to an advertising fund. I would love to see Linux decals on Formula 1 cars of the teams using Linux. I know that a Formula 1 car is probably the most expensive piece of advertising real-estate on the planet, but all we want is a few square inches that nobody else wants.

What I am saying is this: any large corporation that gets benefits from free software should be helping out in the promotion of Linux.

This brings me to Mark Shuttleworth. I believe that Mr. Shuttleworth has been a major contributor in the effort to promote the use of Linux by the everyday user. I do not believe there is anyone in the past, present, or near future with his kind of commitment or resources.

When I first tried Unity, I had some misgivings about it. However, for me it was not rocket science to see what Unity wanted to achieve and why. A single user interface for desktops, phones, and everything in-between. For people who run less than ten applications, Unity is all they need, and the good news is that Unity is going to get better.

Unity is what the software freedom movement needs to take free software to the next level. It is time to quit all of the "year of the Linux desktop" navel gazing, and get behind something that has some real potential to yield some good results.

So, lets stop nitpicking, and support Mark Shuttleworth and Canonical. Because, for all that he and his company has done for us, it is the least we can do.

I THINK...

If you have a mobile/cell phone, which OS does it use?
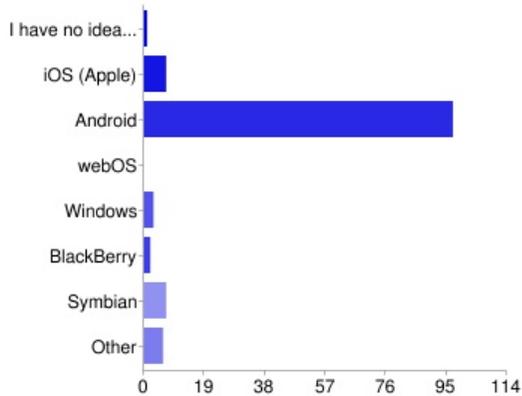
I have no idea.	1	1%
iOS (Apple)	7	6%
Android	97	79%
webOS	0	0%
Windows	3	2%
BlackBerry	2	2%
Symbian	7	6%
Other	6	5%

Comments:

Android:

Apple didn't make it; works well with linux computers.

Flexibilty, geek factor. Previous phone was Symbian, but that's dying now. Android was the best option.

I prefer not to be closed in.

Android can be rooted. Linux in my pocket.

Open source - I use Cyanogenmod

Initially a friend's recommendation (and some research). Nokia had lost its way, and I refuse to pay Apple prices or be told what I can or cannot do with my device (iTunes, no Flash, etc). Now on my second Android smartphone.

I love integration of Google mail, calendar, nice free Google navigation, free handy apps, etc.

iOS (Apple):

It's the most "polished" mobile OS.

GPS & topo maps apps.

Symbian:

Reliable, and I won't pay the Microsoft tax to buy an Android phone.

Windows:

low price + large display + fast hardware.

This month I'd like to pose the question:

What turns you away from a distro, and what turns you to a distro?

To give your tuppence worth go to: http://goo.gl/gXDZP

Closing date for this question is **Sunday 11th March 2012.**
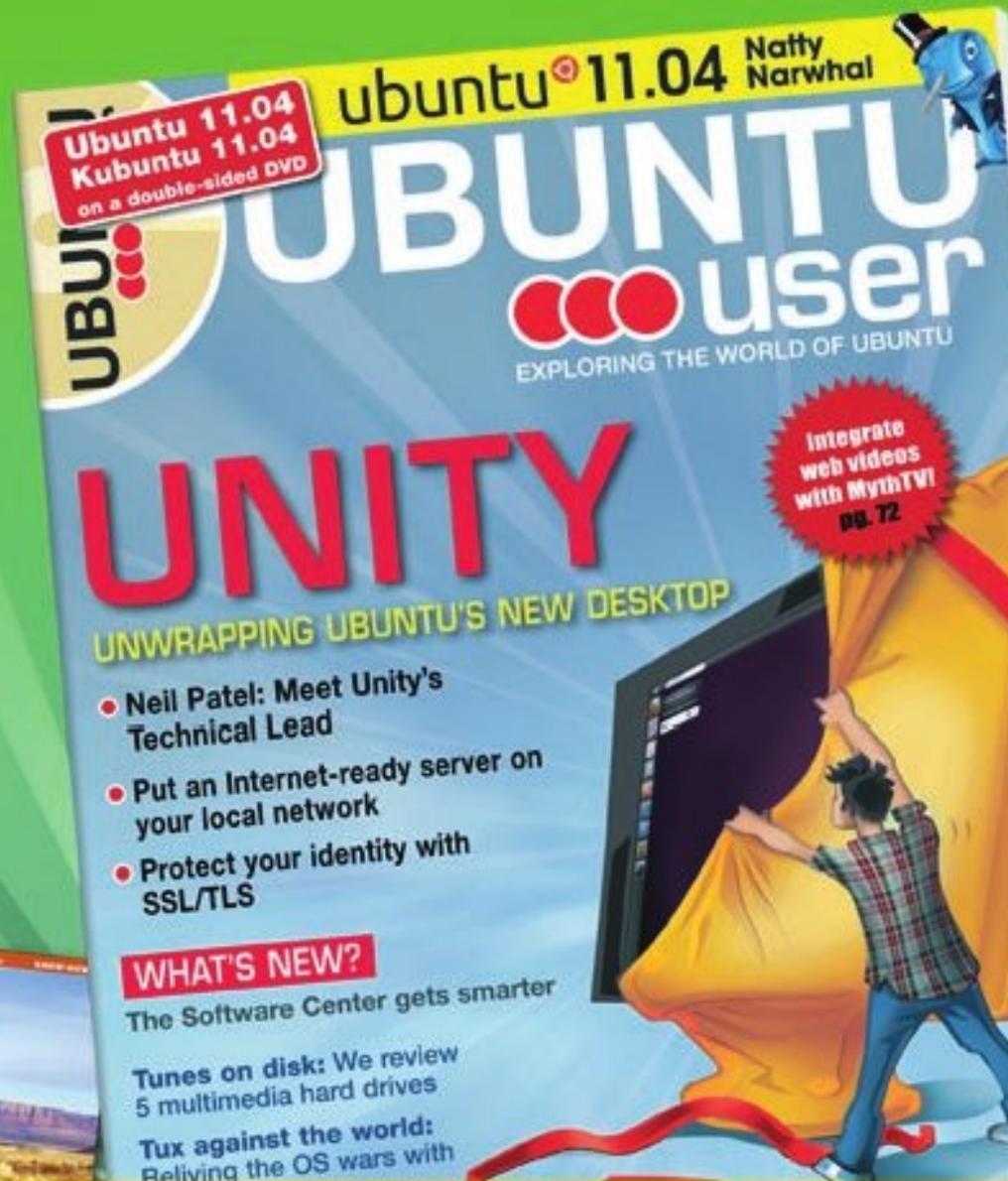
It's that time already, as Clem and the team gear up to push the next version of Linux Mint through the gate, the rest of us wonder if Mint can maintain its momentum in gaining a larger share of the Linux user base. Mint has built a reputation as the alternative to Ubuntu, variously catching the defectors from Ubuntu Unity and at times even overtaking Ubuntu in the distro download charts. Given the fact that Mint is dependent on the upstream efforts of Debian, Gnome and Ubuntu, this release is going to be far from plain sailing.

Linux Mint 12 is based on Gnome 3.0 atop the Ubuntu 11.10 base. More on that shortly. As usual, I've got Mint in two configurations; in a virtual machine on VirtualBox, and on physical hardware in the shape of the old Celeron test box with 1GB memory and GeForce 440MX graphics card.

The graphical installer is the current standard for Debian/Ubuntu 11.10, and, in normal operation, hides everything that's going on. Not that peering under the covers helped when the thing crashed on me three times on the Celeron. I think it has trouble with the collection of USB adapters, cards, ports, and two elderly wireless adapters - one of which is PCI and the other a USB dongle, both based on RaLink chip-sets... yes, I know, glutton for punishment.

Gnome 3.0 ups the specification for graphics adapters. Neither the VirtualBox Guest Additions adapter nor the old GeForce AGP card can deliver 3D. Gnome 3.0 with the Mint extensions just hangs part way into populating the desktop.

If you can get 3D running, Mint relies on MSG or GCSE's or some such; at least it's not Gnome Shell or Unity. Actually, "MGSE" (Mint Gnome Shell Extensions) is a desktop layer on top of Gnome 3.0 that makes it possible for you to use Gnome 3.0 in a traditional way. You can disable all components within MGSE to get a pure Gnome 3.0 experience, or you can enable all of them to get a Gnome 3.0 desktop that is similar to what you've been using under 2.x. In the default configuration, you get Mint Menu but with a Gnome Shell/Unity style sidebar launcher panel within it. You can also access the Activities button to get the Gnome Shell panel launcher. That's three ways to launch programs, two of which don't work for me on two different set-ups. This Gnome 3.0 with MGSE is already taking flak elsewhere as a 'Frankenstein' creation and 'as big a piece of *rap as Unity.' Harsh, chaps, truly harsh.

If you get the DVD edition or upgrade via the mint-meta-mate package (all 105MB of it), you can get the MATE version of the faithful Mint Menu; it's a fork of Gnome 2 which preserves compatibility with Gnome 3. To quote the Mint team, "MATE is brand new, it's not completely stable yet, and it's missing a few parts... Eventually, MATE will be in every way identical to Gnome 2 and represent the future of traditional desktops within Linux." So far, I've had it working once in six installs, and, even then, MATE stopped working after a reboot, never to be seen again.

So MATE doesn't work on either of my test boxes. Instead of the Mint Menu with sidebar, all I get is a conventional Windows-style start menu. All the fonts render
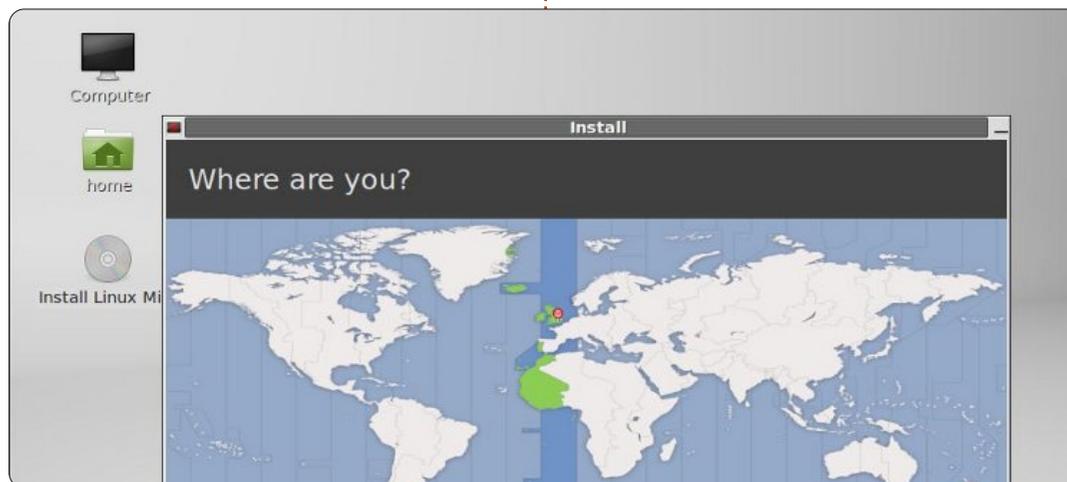
abysmally. Go into the Appearance controls, under themes, and almost everything declares "this theme will not look as intended because the required GKT+ theme engine [name] is not installed." Even though all the referenced GTK+ theme engines ARE installed. It's a mess.

The fall-back 'Gnome Classic' option provides a top panel with the application menu and notifiers with visible system tray icons, a bottom panel containing the window list and workspace switcher, and retains the idea of a task-centric desktop, wherein you switch between windows, not applications. It's all locked-down, non-configurable à là Gnome Shell/Unity, with no way to add items or customise the panels.

For the current menu set-up, which is fairly sparse and not always logical, Mint dumps most of the control-type programs (everything not in System Settings) into the 'Other' category. When I say sparse, there are many things missing, presumably because they've not been engineered for Gnome 3.0 yet, or left off the CD release to make space for all the Gnome 3.0 tat; for example, there is a User account tool, but no

facility to maintain group permissions - you have to drop into a terminal session. That'll go down well with the Mint user base.

Artistically, Linux Mint 12 uses a new theme called Mint-Z which is based on Mint-X and Zukitwo, the default background is the 3D Mint logo updated to version 12. The window controls and borders feature a frankly ugly look called Adwaito, which I can't wait to get rid of. Depending on whether I run Gnome, Gnome Classic 2D, or MATE, the desktop rendering of fonts is as ugly as sin, which is a big step backward given that Mint always looked stunning.

Interestingly, for a distro in search of a business model, the

default search engine is DuckDuckGo. Ethically, I like the look of this; it doesn't show different results depending on who's running the search, it doesn't track or record user information, and it's built on, and contributes to, Open Source software. It's one of a small number of search engines which will share revenue generated by Linux Mint users with the Mint team to provide funding. Although you can easily switch search engines in Linux Mint 12, thanks to the clear instructions, you might want to stick with those that fund the distro.

For now, web browsers browse, media plays, documents can be written, and even the USB wireless connection on the Celeron works

fine after a couple of hiccups; I'm running it in preference to the PCI wireless card because the aerial on that one is a piece of junk that can't pick up the attenuated signal in my building. I'm probably being unfair as even the thumping great Hawking antenna on my router barely penetrates the steel in my building.

And that, dear friends, is as far as we go with Mint 12 'Lisa'. The stack of new and forked software isn't working properly, so while I could upgrade to the DVD version to pull in the full release, I'm not sure it's worth the bandwidth. This is a disruptive release, the whole thing a transitional step from Mint 11, in need of a lot of damage limitation. I hope they can get it fixed soon, I really do.

The Gnome Classic 2D desktop of Linux Mint 12 is stable and quicker than expected, but it can't compensate for the fact that the overall release is drowning in all that desktop re-engineering.

★★★★☆

LETTERS

Sims 2 Crisis

I'm a long-time geek from back in the '70s. I loved Unix back then; however I made the bad choice of switching to the newest and greatest thing (DOS). Then mistake two: trying windows. And I kept making that mistake through to Windows XP. Then a friend pointed me to Ubuntu. Heaven! Well, almost. I have a dual-boot system that spends 85% of its time in Ubuntu. Unfortunately, this house is addicted to TheSims2. I've studied up on Wine and playonlinux. I've begged and re-begged for help. I know it's possible, but, so far, no one has shared how to run Sim2 in Ubuntu. Please post a how-to on importing games from Windows.

Rodney J Miller PCA

Head In The Clouds

I discovered your magazine over the Christmas vacation while setting up a dual-boot Windows/Mint machine. I have spent many mornings over the last couple of weeks happily rifling through back issues, and coming up to speed on where the Ubuntu Linux community is at after a long break.

Reading your article on SpiderOak in FCM#56 prodded my conscience about backups. We have a blended family (Mint 11 / OS X Lion / Windows 7, Vista, XP), so any cloud solution needed to support a mixed home environment.

Setting up the SpiderOak client on Mint and OS X was straight-foward. Having the ability to access the backup from anywhere is a huge bonus.

Sean Hodges

William and Kate

New to Ubuntu Linux about a year ago, I cannot understand the fuss about desktops, GUI nuances, and distribution content choices. Why should anyone object to Unity, since the user can so easily replace it? Why should I care which music player or contact manager comes standard in the distribution, or whether the distribution includes them at all, since I have the Software Center and Synaptic at my finger tips?

My befuddlement is not confined to FCM. Distro dyspepsia and GUI griping dominate reviews of Ubuntu releases from any number of sources.

How about some meaningful discussion for a change, such as citing kernel improvements for stability, or better employment of multi-core processors? What's new amongst the underlying libraries, and what difference does that make? What effect might the latest release have upon the browser war and HTML5? Who is providing superior documentation and support for all of this toothsome FLOSS? Are Prince William and Kate settled in and truly happy together, or are they miserable and merely posing before Britain's expectations?

No wait, scratch that last bit. That's what happens when I listen to the FCM Podcast from here on the left side of the pond. Perhaps Ubuntu banality is good. Perhaps it reflects maturity and utility. Beats broken or missing device drivers, for sure.

Halfnium (in America)

LETTERS

WiFi USB Adapter

I recently added a USB wifi adapter to an old desktop PC that has been running Ubuntu since I first scrapped its native WIndows 2000 system when I took ownership of it, used, 5 years ago. It's not a state-of-the-art system, but has been a dependable device for basics, and, until now, was attached to the web via ethernet cable. I decided to try to run it wireless and realized that although there are lots of wonderful machines with wifi or wifi cards installed, that the leap from ethernet to wifi is a challenge, depending on the vintage of the hardware, software, and so forth. I purchased a C. Crane Versa II Wifi USB adapter as it was priced competitively with various USP wifi adapters from many mainstream retail outlets and online vendors whose products are not Linux-friendly. To my surprise, I didn't need to use Wine and the Windows/Mac installation instructions and installation disc included with the adapter. I was able to go wifi after a few false starts (mainly to Ubuntu apps), and eliminating confusion in the configuration files. Apart from the slightly constrained speed of its CPU, this old desktop now works as flawlessly as a three-year old laptop I had screaming along with native wifi and Ubuntu Linux until its motherboard died a few months back.

Long live Linux. Long live Ubuntu. I'm neither a programmer nor a code-monkey/geek. Ubuntu connects yesterday's hardware with today's software in ways that you can only dream of - if that would be useful to you and if you are more savvy than myself in the appropriate areas of hardware/software/code/network, etc, then the sky's the limit.

modyl

More KDE Love

Surely Canonical knows by now that not all users have stuck to Gnome as their Desktop of choice, and in fact hadn't done so long before Unity came along. So isn't it about time that they put a bit into helping with the development of the alternatives?

Kubuntu, which I currently use as my own desktop, is still a bit docile, and could do with a bit of a jiggle to get things moving. It is a relatively stable desktop these days, and full credit to the maintainers of it as otherwise where would we be? The unfortunate thing I find with Kubuntu is that it tends to be a bit sluggish in comparison to some of the other KDE distributions.

Unity is too much like Windows, or, for that matter, Apple, in that it is basically "You will do things the Canonical way!" I can see where there will be people who think it is wonderful and mimics their smartphones, whereas everyday PC users don't all want to fit the spec of Smartphone operators.

KDE is one of the alternative options, and the reason I use Kubuntu is that it offers the features of KDE plus it also offers the advantages of a huge Ubuntu base to work with. That is Ubuntu's strength - its huge base of users and software in its repositories. KDE is an excellent desktop, and tends to be overlooked by many new users because of the concerted push for Unity/Gnome.

I am surprised that there hasn't been a concerted push by Enlightment users to design a good Ubuntu-based desktop - just as they have Lubuntu and Xubuntu. Enlightenment is a nice desktop, with a smart modern appearance, but without the quite cumbersome overheads of KDE. I have tried a few different Enlightenment desktops, but the thing that they lack is the Ubuntu repositories and the Ubuntu Forums and the like. It is the forums and repositories that make Ubuntu what it is today.

I have noted that a lot of the previous Ubuntu Gnome users have deserted to Linux Mint - as they like the classical Gnome 2 look and feel. It is the users like myself, who like to be able to tinker just that little bit more, who feel left out.

So how about it, Canonical - how about actively encouraging development of KDE, E17, LDE, in fact, any of the other desktops?

Phil

The 3 x 3 grid below must contain the numbers from 1 - 9 exactly once. There are symbols between the numbers... they are: + for addition, - for subtraction, x for multiplication and the / sign for divide.

Please note that the sums run from left to right or top to bottom,

	/		/		**2**
X	■	-	■	X	
	+		X		**26**
+	■	+	■	-	
	+		-		**2**
34		**2**		**-7**	

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

ALGEBRA
ANGLE
AXIS
CIRCLE
CONSTANT
COSINE
DIGIT
DODECAHEDRON
FIGURE
HEIGHT
HYPOTENUSE
IRRATIONAL
LEMMA
PARABOLA
REFLECTION
ROTATION
SQUARE
TANGENT
TRAPEZIUM
WIDTH

The solutions to all the puzzles are on the second last page of this issue. **No peeking!**

Q&A

Compiled by Gord Campbell

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

Q I recently installed an Asus EN210 Silent video card in my Home Theatre PC (HTPC). Sometimes when I run VLC Media Player, the system becomes unstable and shuts down, perhaps due to overheating.

A (Thanks to *inobe* in the Ubuntu Forums) Install mplayer2 and smplayer. In smplayer, go into options> preferences> video> output driver, select vdpau. It should reduce the CPU usage dramatically.

Q I have Ubuntu 11.10 on an Asus k53e. When I try to suspend or hibernate the laptop, I get a black screen until I turn off the computer manually.

A This web page has a couple of possible fixes. Despite the name, it is current:

http://thecodecentral.com/2011/01/18/fix-ubuntu-10-10-suspendhibernate-not-working-bug

Q I'd like to configure my PC to run two monitors. I have an ATI RV370 video adaptor.

A (Thanks to *tomski* in the Ubuntu Forums) Many ATI cards which use this core (ATI RV370) have 2 sockets, 1 DVI and 1 VGA. If you want to use two VGA monitors, I would recommend an 'adaptor cable,' essentially it is an adaptor and cable combined into one. This should ensure that the card recognizes the monitor, which is often an issue when you use a DVI to VGA adaptor.

Q I`ve been trying to get used to Unity, but I want the icon sidebar gone, and top and bottom panels back, as in Gnome 2. I can't seem to get the desktop cube in compiz fusion to work well with Unity either, this is a necessity for me.

A Sorry, the underpinnings of Gnome 2 were ultimately limited, so it's gone and it's not coming back.

You could try Kubuntu, although that also has significant changes from what you are used to. Another option would be Linux Mint, which uses Gnome 3, but looks more familiar than Unity. I've never understood the attraction of the desktop cube, so I have no advice on that front.

Q I want to change the order of the icons in the Unity launcher.

A You can "grab" an icon with the mouse and move it up or down.

Q I have noted that the new Firefox (v9.0.x) is available for Linux. If I choose to download and install the upgraded package, will it affect how the package manager operates?

A I ran an update today on Ubuntu 11.10, and Firefox 9 arrived. My primary system runs Ubuntu 10.10, with Firefox 3.6.24 up until recently. I have not noticed a difference between the two versions; Mozilla has been changing the major version number for minor updates.

If you download and install a program, you will not get automatic updates. In my experience, you're just asking for pain if you do it.

Q My laptop has an ATI 9100 video adapter. I am using Ubuntu 10.10. How can I install the right video driver?

Q & A

A (Thanks to **Mark Phelps** in the Ubuntu Forums.) ATI dropped Linux driver support for this card, which was introduced in mid 2003, years ago. The only working drivers are already installed by default, otherwise, you would not be seeing a desktop.

Q I would like to stop the launcher from appearing when I move my mouse to the left.

A (Thanks to **grahammechanical** in the Ubuntu Forums.) You can use the Ubuntu Software Centre to install CompizConfig Settings Manager. You will then find it in the Dash by typing Compiz. Look under the Desktop heading for Ubuntu Unity Plugin. Make sure there is a tick mark against it to enable it, and then click on the name.

You will see an option under the Behaviour tab to Hide Launcher. You have four options 1) Never - the Launcher will always be visible.

2) Autohide - the standard setting. 3) Dodge windows - the launcher moves out of the way as a window comes near. 4) Dodge active window. My preference is number 3.

Q I just installed Ubuntu 11.10 a day ago. I used to have access to a Sun Microsystems workstation with gnu gcc installed and I have some C/C++ programs that I want to recompile and run in Ubuntu. What do I need to do?

A Open Software Centre and install build-essential.

Q I want to protect my Ubuntu server against attacks. It has SSH, PhpMyAdmin, and Drupal installed.

A (Thanks to **Lars Nooden**, **e79** and others in the Ubuntu Forums.) Use only key-based authentication for SSH. Remove PhpMyAdmin and use the shell. If you must keep PhpMyAdmin, change the default URL. There are also hardware authentication tokens and intrusion detection software.

Q I just installed Eboard Chess, and I can't figure out how to make the pieces stay on the square I move them to.

A It's a GUI, not a chess game. Gnuchess is one of the actual games. After installing Gnuchess, run Eboard, click on "peer," select "play against," choose gnuchess, and make a move by grabbing a piece with your mouse.

- - - - - - - - - - - - - - - - - -

Tips and Techniques
Get Rid of Duplicate Files

I have a lot of duplicate files on my computer. Part of the problem is that I usually save a copy of an entire web site before I begin a major update, part of it is that I do the same thing with video editing projects, and part of it is a result of other "save a copy to a different place" habits.

A recent post in the Ubuntu Forums reminded me that I really should do something about it. The message thread began in 2007, and pointed out a couple of helpful programs you can install from the Ubuntu repositories.

If you have hundreds of duplicate files, there's a GUI-based program called fslint which works very nicely. By default, it will look at all the user files on your system. I found it most useful to remove that option, then "Add" a smaller portion of my files, such as everything under "Music". Son of a gun, it found 150 files, totalling a gigabyte! Turns out that I tried to get my Karaoke files organized a few years ago, and gave it up before finishing. The best part was, it found duplicates with different names, so I won't be puzzled by clicking on "Don't be Cruel," only to find that it plays, "American Trilogy."

Using Fslint is a little slow. You highlight a file, then click on

"Delete." Or you can Ctrl-click to highlight multiple files, then delete them. With 150 duplicates, you might spend a dozen minutes to clear things up, assuming you don't have to think very much about which location to delete.

There's a command-line program which speeds things up. To try it, install "fdupes" from the repositories. I have found two useful options. To use the first, enter this command:

```
fdupes -r -d Music
```

This will go through everything in your Music folder and sub-folders, and prompt you about which version to keep when it finds duplicates. You could use the same approach with Documents, Videos, etc.

Before running the next option, I suggest you clear the cache of any Internet Browsers you use. In Firefox 3, it's Edit/Preferences/Advanced and click on the Network tab, then "Clear Now." In Chrome, begin with Tools, Clear Browsing Data. All you want to do is clear the cache. Then run this command:

```
fdupes -r ~ > dupes.txt
```

I have one file of 44 GB on my system, and when Fdupes calculates a checksum for this file, it appears to stall. However, it only take a few minutes to go through 55,000 files, totalling 300 GB on my system.

If you double-click on dupes.txt, it will open in your text editor. You can browse through the file, and try to find whole folders which are duplicates of other folders. Otherwise, you need to run the file manager, and go to the folders where duplicate files reside. It's not a quick process, but it's complete.

Fdupes will also find duplicate files with the same content but different names.

Is all this worthwhile? Only you can be the judge. Hard drives are cheap these days, so it might not be worth your time to click on a file to free up 100 KB of space. I think it makes it easier to find what you have if you remove the duplicates, but you might not agree.

There's one special case which might apply. The floods in Thailand
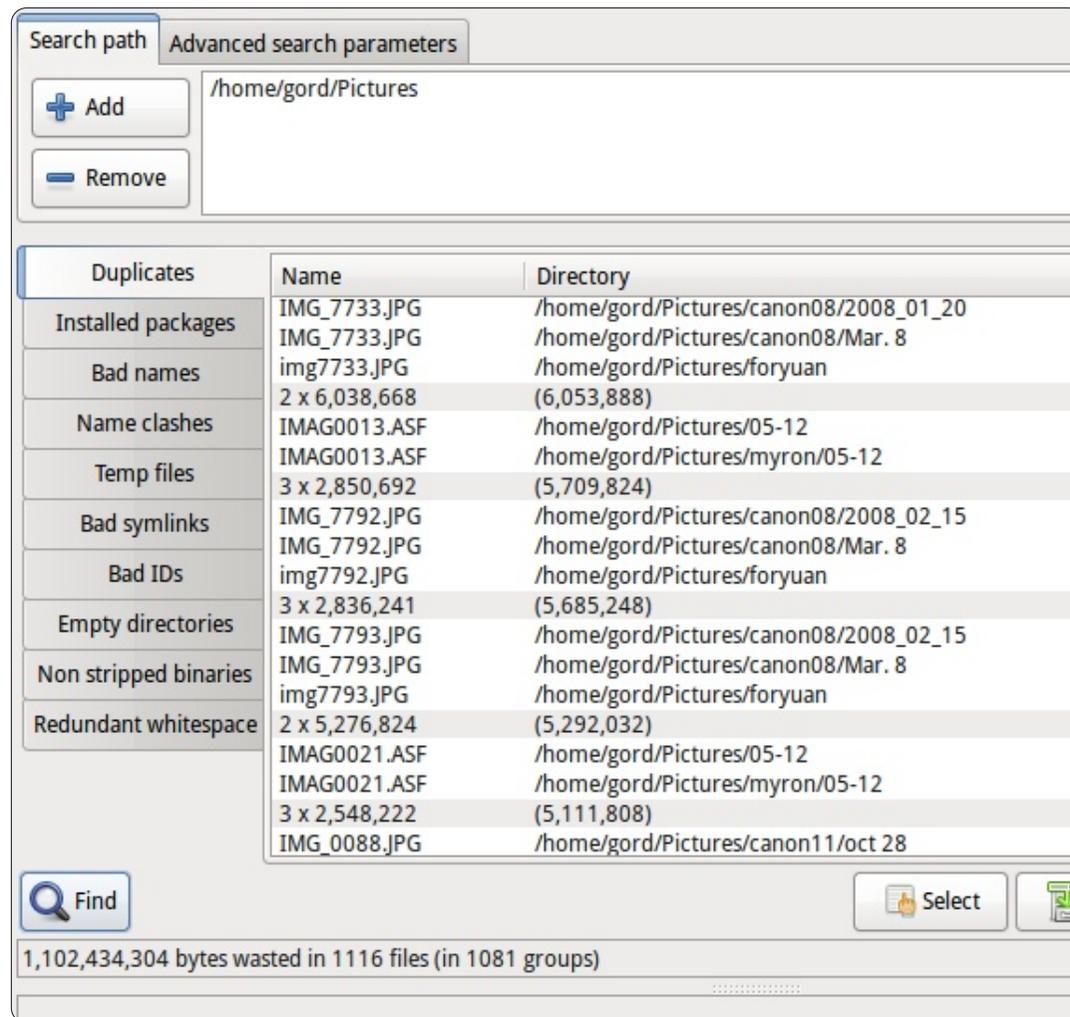
tripled the price of hard drives, so if you are thinking of adding a drive now, and deleting the duplicates lets you defer that decision until prices have returned to normal, the effort might be especially worthwhile.

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

The year is 2018. Two alien spaceships, mistaken for meteors, collide with Earth - hitting Baghdad and Tokyo, causing massive casualties and creating powerful, almost impenetrable, energy fields around these cities. The armed forces, namely "Platoon 14", are commissioned to take action against the invaders.

So begins Anomaly: Warzone Earth by 11 Bit Studios. You are a squad leader, guiding a convoy of armored vehicles through ruined, war-torn streets while battling visitors from outer space. We're talking about a "tower defence in reverse" game, primarily targeted for mobile gamers on the Android platform. This aside, the most compelling feature is the natural balance between strategic planning and ruthless fighting, compounded by the possibility of avoiding meaningless fights altogether. There is no obligation to follow a given route as a means to an end, since you create your own instead.

Gameplay & Features

Acting as something like a co-ordinator, you can distract the enemy with smoke, divert their firing using dummy targets, and heal your units. You don't directly fire at enemy turrets: members of your convoy (APCs, missile launchers, force-field generators and so on) can take care of them. Once you have enough resources, these war machines can be upgraded, multiple times if necessary, to increase their firepower and durability.

Convoy units must be taken care of, and the same weight should be given to route planning. Some turrets, such as "Behemoths", can be difficult to beat if you confront them head-on, but present only a minor threat if you attack them from the side. Some distractions work better than others against certain types of turrets: you just

have to try them to figure it out! There is also the order of your vehicles, which greatly determines how swiftly you can inflict critical damage. The downside for putting all firepower up front is that these vehicles don't hold very good defensive capabilities, and are possibly wiped out in a matter of seconds.

I'm a big fan of computer usability and especially keyboarding. I was intrigued when I discovered that Anomaly is fully playable using only simple controls on the keyboard. In addition, the game requires no training to get started. This is something the majority of today's games don't have; here it is well thought out.

How to get it

Anomaly: Warzone Earth was originally released in February 2011, and re-released as a part of the Humble Bundle for Android on February 1st, 2012. As usual, the bundle included Linux, Mac, and Windows ports, as well as three other games. As of February 2nd, the list price in the Android market (for the Android version only) is 3 euros. The game is also available on Steam for Mac and Windows for 10 euros, but, unfortunately, I saw no mention of Linux there.

I tested Anomaly on Ubuntu 11.10 (32-bit; 2.7 GHz core i7, 8GB DDR 3, Radeon 6470 1 GB, 128 GB SSD). With medium specs and the highest resolution, there were no problems at all. Installation was trivial with the Debian dpkg command:

    sudo dpkg -i package_name.deb

Conclusions

Anomaly is one of the best out there in its genre. Graphics are very good, gameplay is solid, and the music fits the theme. However, there could be more enemy types, and perhaps scenarios with a little more freedom than just simple routes. I know this is a lot to ask, especially because the price was a bargain when put in comparison with the quality.

★★★★☆

Riku Järvinen (rierjarv) is a CS major student from Finland who delves into the Linux and Open Source gaming world once in a while.
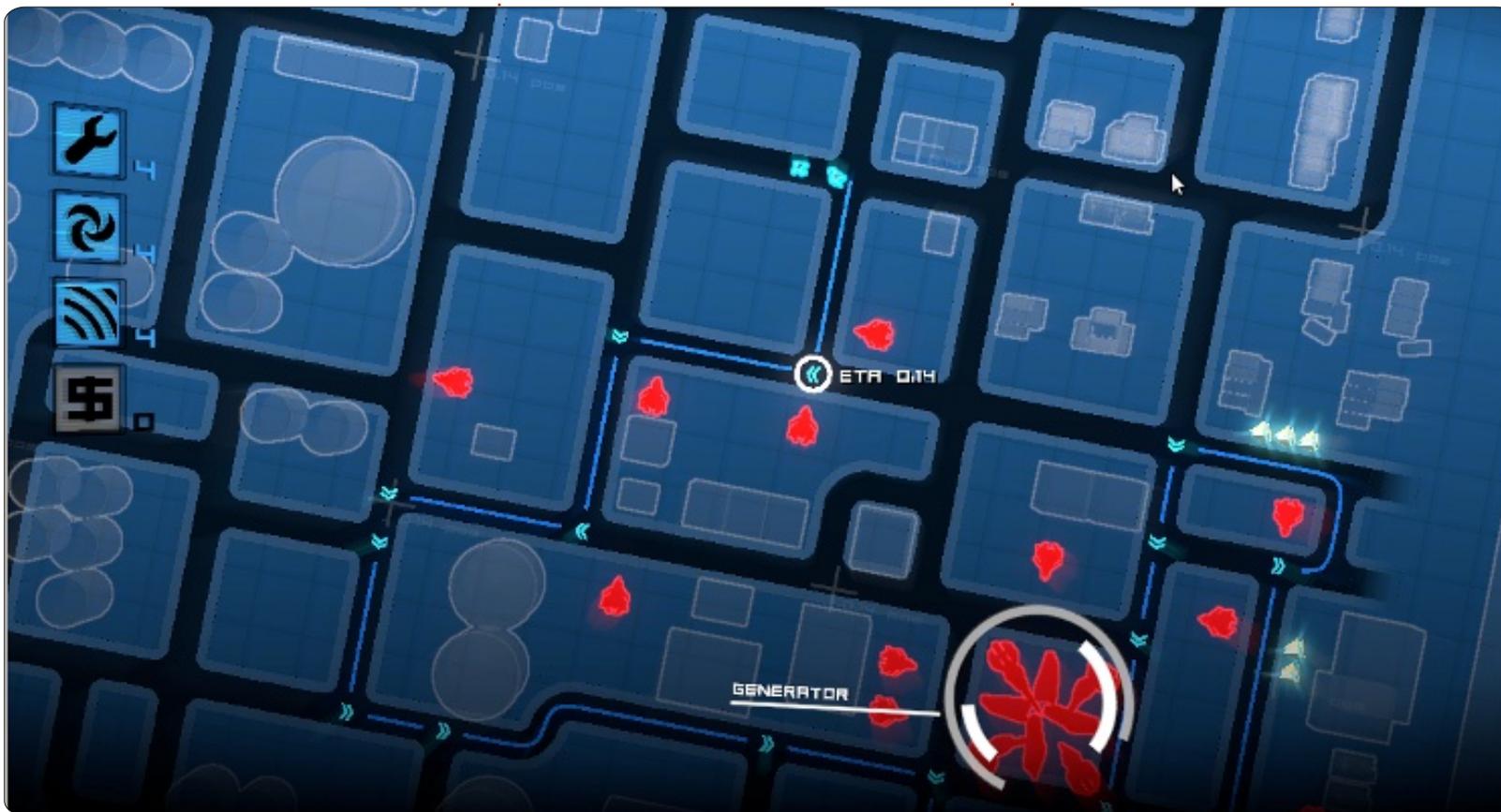
Dead Cyborg (deadcyborg.com) is a 3-episode game, in which its main goal involves exploration and solving puzzles. If you like the first-person shooter's exploration experience - without the violence - this is the game for you. The game itself is free, but the developer suggests that, if you like it, you donate.

The game is currently available for Linux and Windows users. The game is very well rendered, the work done by Endre Barath (a one-man project if you can believe it), on both the characters and the scenery, is incredible.

The controls are very basic; W,A,S,D (A,Z,E,R,T,Y) keys to move, and the mouse to point. There is a certain grittiness felt through the game, similar to many top ranking games available. The story itself is also great because it is set after an apocalyptic catastrophe. Oh, and if

Collapse it did.
Your inventory is empty.
You've picked up an acid spray.

Welcome to Dead Cyborg! Level 1: Cryotanks. Press H for help.

you get stuck (and you will), you can visit the official page (http://deadcyborg.com/walkthrough.html) to check out the walkthrough.

Good:
• Great detail on both the characters and backgrounds,
• Grittiness will give you chills alongside the awesome music,
• Controls are easy.

Bad:
• Puzzles are sometimes ridiculously difficult if you are not watchful,
• It will run slowly on older hardware,
• No voice actors/voices in game, just text.

★★★★☆

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.

Hi everyone. This is my laptop desktop.

I use Ubuntu 11.04 and love trying different distros. Who knows, perhaps I will turn to another one tomorrow. My wallpaper is the Predator, which I love very much, and also docky, which is productive, and so valuable to me that no money can buy. it There's Unetbootin, Brasero, Shutter, and LibreOffice on the dock.

The system works well on my Atom d510 1.66 GHz CPU, 160GB HDD with 2GB of RAM. I hope you enjoy your Ubuntu. Thank you!

kazak_boy
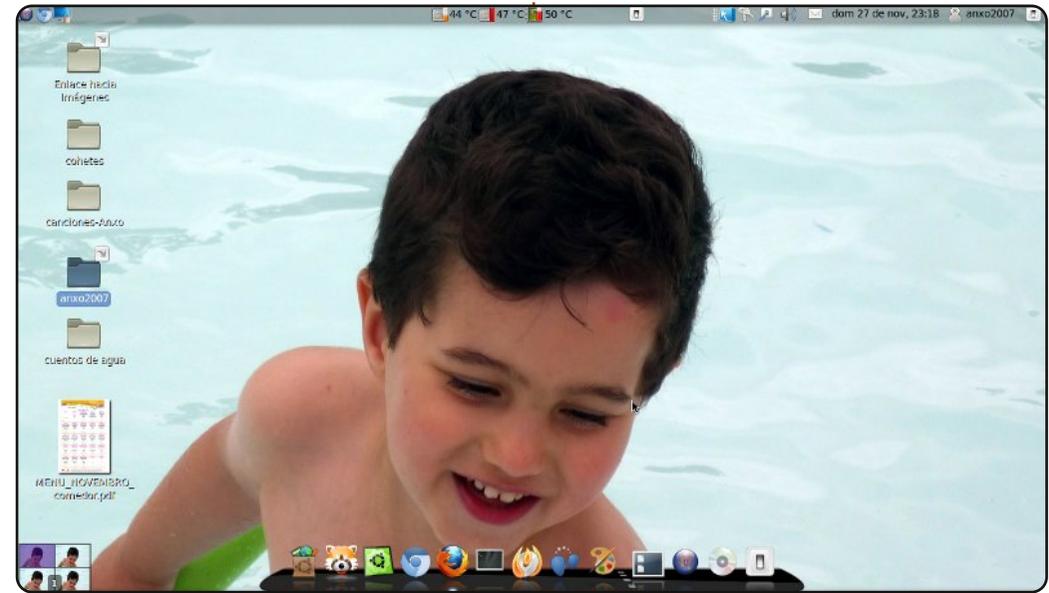
This is my desktop::

theme :clearlooks
Dock: Cairo-dock
wallpaper: a picture of my son
System: AMD ATHLON II X2 250
RAM :2 GB
GRAPHICS: NVIDA G-FORCE 8400GS
OS: COMFUSION 3 (BASED ON UBUNTU 10.04 LTS)

Vicente Mera
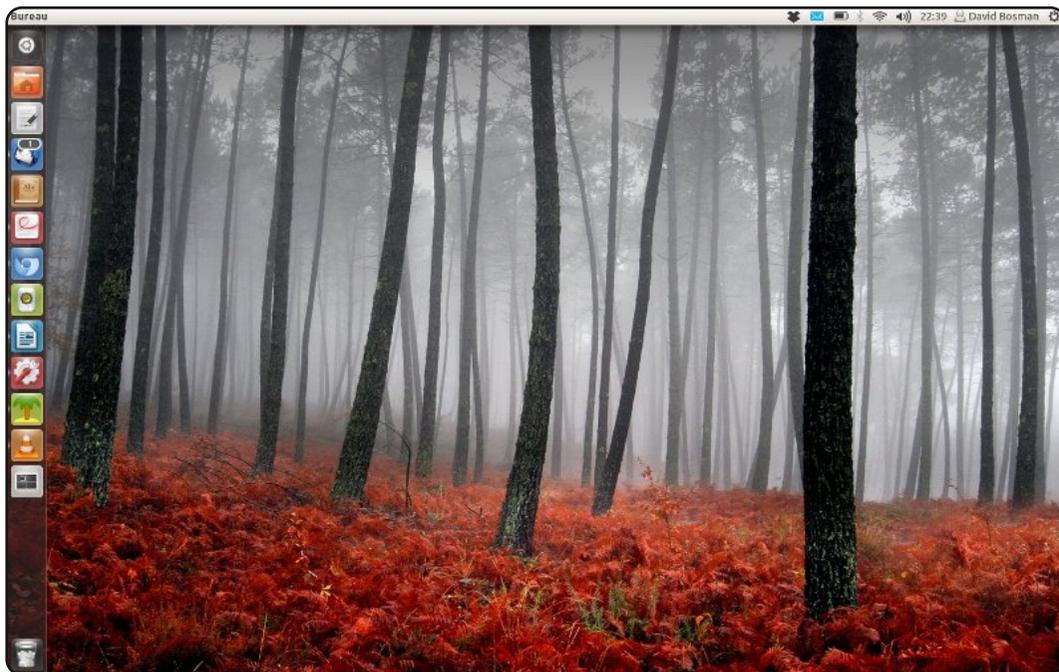
MY DESKTOP

I run Ubuntu 11.10 on a Lenovo/ThinkPad X200s (1.86 GHz C2D 4 G RAM, 1440x900 12", 256 GB SSD). Nothing fancy on my desktop, I am afraid. If it wasn't for the screenshot, even the Launcher would be hidden. The theme is Radiance, icons are Faenza's (they're so nice).

Besides browsing the web, emails, RSS and Twitter, I write, read a lot, listen to music & podcasts, and watch movies. I've been using GNU/Linux distro since 2000, and almost every version of Ubuntu since 2005. I love GNU/Linux's openness, and the idea that users have the right to build it and share it and change it. I also like the fact that Ubuntu just works: one doesn't have to tweak it to make it run. And I absolutely love Unity, even with its current lack of options: let's give it a chance to grow.

David Bosman

Hi, I am an Ubuntu user from Indonesia. This is my latest desktop, I'm using Ubuntu 11.10 with Gnome Shell as a Desktop Environment. And I'm very comfortable with it.

Wallpaper and shell theme are default. Using AwOken icons. Added some shell extensions and some custom conky. The top conky displays "dmesg" output, the right conky for monitoring disk space, network, and processes. The down-left corner is Metro Clock Conky, and some reminder/greeting message below it.

System Specs:
Ubuntu 11.10 @ Acer Aspire 4736
32-bit Intel® Core™2 Duo CPU T6500 @ 2.10GHz × 2
1GB RAM, 320GB Disk
Conky Metro by satya164.deviantart.com
Awoken icon by alecive.deviantart.com

Ghozy Arif Fajri

16X16 SUDUKO

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

WORD SEARCH

```
- - - - - - - - - - - - - - - -
- - - - - - - F - - - - - - - -
- - - - - - J I G S A W - - - -
W - E - - - - E - H - - - - - -
- O C I G O L N M T - - - C - -
- - R R J - F D - A - - - I - - T
- - Y D O N - I - M S - - T - - L
- - P - W S A S L - - T - P - - U
- - T - - H S H - L - N E Y - - C
- - O - - - E W C - O U L R - - I
- - G - - - E O R - M B C M - - F
- - R - - K H - L R A B I - - I - F
- - A - - - A U - - D E S N - - N I
- - M - - - R K - - A R S - O - - D
- - - - - - D O U S - S O D - - -
- - - - - - - D Y R - - P - R - - -
- - - - - - - - U - - O - M - - o -
- - - - - - R E S A E T N I A R B W -
```

CODE WORD

1	2	3	4	5	6	7	8	9	10	11	12	13
P	M	J	O	L	S	B	E	N	Z	A	I	R

14	15	16	17	18	19	20	21	22	23	24	25	26
Q	V	U	W	T	H	K	Y	D	X	F	G	C

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

Crossword solution (filled letters by row):

SPITTING ■ MURK
TRIPOS AIRIER
FIZZ SLICES
IGNORE SOLDER
BESTOW BATH
QUILLS SINFUL
VERY EARLOBES

6	/	3	/	1	**2**
X	■	−	■	X	
5	+	8	X	2	**26**
+	■	+	■	−	
4	+	7	−	9	**2**
34		**2**		**-7**	

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