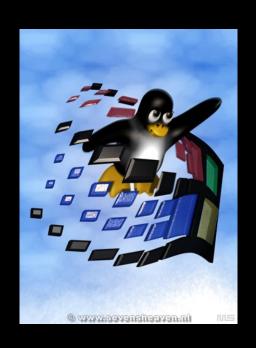# *Linux and Open Source*

A Real alternative to Windows ?

Or, why settle for Windows when you can have the whole house for free ?

What am I going to cover ?

- Why consider change & what are the options?
- What is Linux & how does one try it out?
- Installing Linux alongside Windows
- Linux distributions, what do you get in Ubuntu?
- How has it all worked out for me ?
- What are the downsides?
- Preparing for change.
- Where does one get more information

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Why consider Change ?

- Security

- Reliability

- To avoid the need for continual upgrading of hardware and software

- To regain control of your hardware and data flows

- To save costs on software and data

Options for Change

- Apple Mac
- Linux
- Windows/Linux Dual Boot System
- Maximise use of Open Source Software
- Select Compatible Software and Hardware for future transition.

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But what does Open Source Mean in simplified terms?

- Open Source Software is free and has all the source code accessible

- Anyone can use, change, and improve the software, and redistribute it in unmodified or modified form *provided* it is made available on the same basis.

- It is free as in Free Speech not free beer.

- There must be no discrimination.

- The best of Open Source Software is often developed in a public, collaborative manner with support from volunteers and enthusiasts.

- There is also commercial *support* for firms which employ it.

- Recently many firms have made Open Source versions of their software available – this increases use and capitalises on development, extension, testing and support from a wide community of users.

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A brief History of Linux

- Linux is an Open Source operating system derived from Unix (1960s) by Linus Torvalds in 1991.

- Linux is used for most of the web servers on the Internet and many supercomputers.

- It was designed from the start to be robust, reliable and secure.

- It does not suffer from Viruses and other Malware to any great degree.

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A brief History of Linux 2

- Over the last 3-4 years Linux distributions have emerged which have the hardware and software support to enable 'normal' home computer users to use it.

- Linux distributions have much of the standard software included and installed

- There is support for an increasing amount of hardware 'out of the box'

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First Steps in Trying Linux
A LiveCD

- Most Linux Distributions have the option of a LiveCD trial

- A LiveCD enables you to check compatibility of your hardware and try out the software without any changes to your hard drive by 'booting' straight to a CD

- PC may need to be reconfigured slightly to allow 'booting' to a CD.

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First Steps in Trying Linux
A LiveCD 2

- Running from a LiveCD will be much slower than from hard drive

- But you will be able to make sure your video and audio work. (very likely)

- And you will be able to check your Wifi works (quite likely)

- You should be able to get an Internet connection and even install a printer.

First Steps in Trying Linux A LiveCD 3

- You will be able to see that you can read your Windows files on your hard drive as OpenOffice reads and writes Microsoft Office compatible files.

- You will be able to try out the other main Software included in the distribution and its compatibility with your most complex files.

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First Steps in Trying Linux
A LiveCD 4

- You can also use a LiveCD to rescue a lot from a damaged Windows system or one infected by viruses and malware.

- But running from a LiveCD is transient – none of your configuration remains when you turn the machine off.

- Ubuntu Linux is usually installed from the LiveCD

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Installing an Ubuntu Linux Distribution

- We are going to use Ubuntu Linux as an example mainly because has long term support. (3 years)

- The normal first installation for most people will be a 'dual boot' configuration.

- When you turn on the machine you can chose whether to use Windows or Ubuntu Linux

- You need empty space on your hard drive (4-8 Gbytes is enough)

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WUBI (Windows based UBuntu Installer)

- Ubuntu can also be installed under Windows for extended testing.

- It is best not regarded as a long term solution but for a one or two month trial.

- It again needs at least 4 Gbytes free disk space and preferably 8 Gbytes

- It is possible to move to a full installed system (but I have not done it)

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Advantages of a Dual Boot (or WUBI) System

- I use only Ubuntu Linux on the internet for browsing and email whilst away from home for security.

- I boot into Windows for some purposes such as video editing where I have bought expensive software whilst at home and where hardware is currently dependent on Windows (a fancy scanner).

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Why are some peripherals not supported by Linux

- Some peripherals save cost by making use of the computers central processor to do the hard work.

- This includes some Wifi cards, modems, printers and scanners.

- The driver software is often proprietary and dependent on the operating system.

- Many peripheral manufacturers only support Windows and sometimes Apples although this is changing.

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Configuring a Dual Boot system

- I always set up a shared Partition (Drive) which can be accessed from Windows and Ubuntu for all my data files.

- It is also possible to set up Thunderbird, Sunbird and Firefox to share their data areas (called profiles) on the common partition so emails, calendar items, tasks, favourites and history can be shared.

- But some virus checkers may prevent this.

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Peripherals - the current state of play

- The situation is improving all the time and most Printers, Wifi cards and 'soft' modems are now supported but sometimes by running chunks of Windows code under Linux.

- The purists do not like this and there may be license issues – you may have to confirm you are happy to use proprietary drivers if Open Source drivers are not available.

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Open Source and Cross Platform Software

- Open Office provides a ***complete*** Office Suite compatible with Microsoft Office with Word Processing, Spreadsheets, Database and Presentation software.

- The Firefox Browser runs under Windows, Mac and Linux and is better and more secure than Internet Explorer.

- Thunderbird runs under Windows, Mac and Linux and is better than Outlook Express

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Open Source and Cross Platform Software 2

- Sunbird provides Calendars and Tasks and can be integrated into Thunderbird as the Lightening extension giving facilities similar to Microsoft Outlook

- Skype runs on Ubuntu Linux

- Google Earth runs on Ubuntu Linux

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Open Source and Cross Platform Software 3

- Picasa is an excellent photo management package from Google

- There are packages for CD/DVD creation, playing and 'ripping' but there are some issues for purists concerning licenses and proprietary codecs

- Gimp is a powerful cross platform and open source graphics package

- Progress is being made towards synchronisation with Personal Data Assistants (PDAs)

Ubuntu in practice

- I first installed Ubuntu, the long term support version (6.04 'Dapper Drake'), two years ago on a desktop and shortly after on this laptop - both Dual Boot

- After the first week I rarely used Windows

- I have installed it on two more 'legacy' machines of my own and a number of other machines with no major issues.

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Ubuntu in Practice 2

- I have done distribution upgrades to the latest Long Term Support version 8.04, 'Hardy Heron', over the Internet on three machines.

- The distribution upgrade was slow but successful and almost all my hardware is now supported and automatically installed.

- They now all work over a wireless network 'out of the box' and share printers etc.

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Running Windows Programs Under Linux - WINE

- WINE (WINE Is Not an Emulator) allows one to install and run some Windows programs under Linux including many games.

- I use it for graphics programs such as Paintshop Pro and IrfanVu.

- Dreamweaver MX 2004 now runs under WINE

- WINE is supported by Google who use it for Picasa and Google Earth

- A commercial version called Crossover Office allows one to even run versions of Microsoft Office and Adobe Photoshop.

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The way forwards – Drivers for immediate change

- When your machine slows to crawl with upgrades and security software remember that you may still have many years life under Linux.

- Think before upgrading to a new Windows machine, many recent 'soft' peripherals do not and may never work under Microsoft Vista. That includes printers and scanners.

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Downsides of Linux

- You will not find many neighbours who will be able to help you – but it won't go wrong so often.

- Few support desks for hardware or ISP/broadband services will know how to help you so it may be back to Windows while they fix or replace it.

- A Dual Boot system keeps your options open

Preparing for progressive change

First and most important, reduce your dependence and use of Microsoft Software and switch to Open Source equivalents which are available for multiple operating systems:

- Firefox is better and more secure than Internet Explorer

- Thunderbird is better and more secure than Outlook Express and with Lightning comes close to Outlook 2003

- Open Office is equivalent to a Microsoft Office Suite and uses compatible file formats:

- Kompozer is an adequate WSYWYG HTML Editor

- TrueCrypt is an excellent Encryption package which can be used under Linux

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Preparing for progressive change 2

- Avoid buying hardware which is Windows dependent such as soft-modems which include most internal landline, USB landline and ADSL modems. Wifi connections are also going the same way.

- If you have or find an old fashioned serial external V90 or V92 modem buy or keep it even if you need a USB to Serial converter.

- Keep any PCMCIA modems such as those from Xircom

Preparing for progressive change 3

- Replace the USB ADSL Modem which you got free from your Broadband provider with an ADSL Modem/Firewall/Router/Wifi box - many are under £50 and often have a free Wifi card with them. I use ones from 3Com. A combined interface will give valuable protection to you under Windows and be easy to use with Linux. In contrast USB modems are soft-modems and will not work easily with Linux.

Preparing for progressive change 4

- When you buy the next Laptop or Wifi card/dongle check which chip is used. My Toshiba with an Atheros chip was auto detected and set up from the Live CD whilst some chips such as those from Broadcom used in some Dells are less well supported.

- Think ahead and check hardware you buy. I deliberately got a USB to serial adapter which I knew was supported under Linux, others are not.

- Likewise check printer support.

Where do I get more information

- I have a comprehensive web site covering everything discussed here in much more detail www.pcurtis.com/ubuntu.htm

- The Ubuntu home page www.ubuntu.com

- Community support - there is lots of help available in the Ubuntu Forums where you can post your problems for others to assist www.ubuntuforums.org (there are over half a million replies to questions and rising!)

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