# Thinking Outside the Cage

## An introduction to Free/Open Source Philosophy

**"Microsoft Windows is what makes your computer work". People who learn to use computers at school or in the workplace may believe that most computers require Microsoft's *Windows* system to work, but this is not true. *Windows*, and it's latest incarnation *Vista*, might be what the mainstream computer media talk about but there are other options – *and best of all, some of these options are completely free!***

### The home computer – *reliant on piracy*

It's something that the computer industry, and the "intellectual property" lobby in general, don't like to talk about, but the fact is that the growth in popularity of computers in general (and especially the home computer) has been directly linked with the abuse of the law on copyright. From the piracy of the early commercial programs[1] developed for the first "homebrew" computers in the 1970s, to the growth of home computers of the 1980s and 1990s on the back of the interest in computer games, copying programs was an implicit part of the growth of computing.

Without software piracy many people could not have afforded the costs of doing what they wished on their home computers. In developing countries, and Eastern Europe especially, computer piracy was even more prevalent because the people there could not possibly afford to use computers if they had to pay the full price of the software. In this sense not only was software piracy an active force in growing the demand for computers, but it has been an essential element in the growth of the public's use of computer systems.

During the 1990s the pressure to stamp out software piracy grew. This was the result of two trends: Firstly, computers were becoming a major global industry – even if you were to stamp out just a few extra percent of piracy that represented a *huge* amount of extra money for the industry; Secondly, computers began to use software (programs) and hardware (the electronics) that made piracy more difficult – so piracy just became harder to do. Another related trend has been the rise of the games console, which removed a lot of computer-based software piracy as the programs on consoles are better protected against copying.

As a result of the pressure to reduce piracy, from the late 80s onwards copyright laws were tightened and technical barriers increased in order to stop the "theft" of computer software. For example, the Federation Against Software Theft[2] (FAST) was established in 1984 by the British Computing Society's Copyright Committee to lobby for changes to the law (it was, it claims, the first software copyright organisation in the world).

### Everything's becoming digital

Now we come to the present day; the mainstream computer industry has change immensely because of a new technological trend – *convergence*[3]. No longer is a computer a large plastic box with a glass-fronted screen on top of it. Computers are everywhere, and increasingly they're talking to each other. What this means is that the hardware – *the electronics* – is becoming transparent to the information that we push through it. For the individual, it means that computer software is becoming more critical to the way we live our lives because of the influence these machines have over it – *something has to control all the computers around us, and those who decide how they work ultimately have a powerful means of control over computer users!*

For example, there are estimated to be about 1 billion[4] personal computers (PCs) in the world, but there are 2 billion[5] mobile phones now in use which contain computers almost as powerful as PCs. We can add to this figure all those games consoles, digital TVs, set-top boxes and radios which are all computer-based, and which can execute instructions according the data received in the transmission. Taken together, you can see the scope computer software has to influence how we live, and to what extent those who develop these systems can determine our use of them.

As noted earlier, the growth of the computer market meant that there was a lot of money to be made by stamping down on piracy. Today, with the tightening of intellectual property rights[6] on everything, from music to magazines, the "intellectual property industry" stands to make large sums of money by locking up our use of information. With the old-fashioned analogue systems (like cassette recorders, LPs, etc.) that was very difficult, but with digital technologies, and the software that controls them, the inclusion of extra information in the file or transmission (something called *metadata*[7]) allows

the software to stop you doing certain things that are deemed to be "bad". The problem is that, despite the fact we still have something called "fair dealing rights"[8] that allow certain uses of the information legally, the technology is beginning to clamp down on activities which are permitted by the law.

## The alternative – *FOSS*

*By limiting people's ability to manipulate the information they transact in their everyday lives you limit not just their ability to manipulate, but to create our cultural inheritance.*



From the time that our ape-ancestors started playing with sticks and stones to make primitive tools, humans have copied one another, so transmitting our culture and technological knowledge over the generations, slowly modifying and improving it in the process. Looking back over the last two or three million years of human history intellectual property rights (IPRs) are just a blip; they have arisen over the last three hundred years in parallel with the Industrial Revolution, and most of the restrictions that we see today have arisen in the last fifty years. In political terms, we can see the rise in intellectual property rights taking place as part of the development of people's level of cultural education. From this point of view, intellectual property rights are simply an extension, specifically designed to influence our cultural heritage, of the economic domination of the population that arose out of the Industrial Revolution.

What's really strange is that many progressively-minded people still place their lives in the hands of those who promote ever-tighter intellectual property restrictions. Even those who campaign against the



practices of large multinational corporations still hand over control of their computers to monopoly corporations (primarily, *Microsoft*) and pay large sums of money for the privilege of using insecure and unethical software!

There is a curious contradiction at the heart of the use of information and communications technology (ICT) by activists, especially many of the larger campaign groups. They seek to remove or reform the adverse impacts of corporate globalisation, but at the same time most of them use the tools of this system to work and communicate. In particular, activists rail against the excesses of aggressive corporations but then use Microsoft software on their computers. *Why?*

As noted earlier, traditionally home users of Microsoft and other computer programs relied heavily on piracy in order to do what they wanted. The convergence of digital technologies, and the tightening of legal controls on intellectual property, mean that this is becoming more difficult. But there is an alternative! What's even better, not only is this

alternative much cheaper than conventional computer systems, but it's also legal to copy and share the software that makes it work.

*Free and Open Source Systems* – FOSS (usually called *free and open source software*, but we take a broader view) – still rely on intellectual property rights, but they use those rights to protect the information from inclosure[9] by private interests. Arising at the same time as the lobbying for stronger intellectual property rights by the computer industry, the free software[10] movement sought to escape the control of the proprietary software[11] industry by developing their own, freely available alternatives. Hence the phrase "free as in freedom, not in beer"[12] – although you might pay a nominal fee to obtain it (hence, not like "free beer"), once you do it is yours to customise and copy as you will (hence "freedom").

Free and open source (*open source[13]* means that the designs/programs are available for use and modification, but they may not be completely "free" to redistribute as you wish) systems began with computer software in the 1980s, but in the 1990s we saw the development of other forms of free/open licensing for music



and other creative works (e.g., *The Creative Commons[14]* license). Recently we've seen the beginning of the open hardware[15] movement – people designing electronics or engineering hardware with 'open' rights over the designs.

The rise of FOSS mirrors a wider counter-cultural movement against the norms of the modern economic system. This takes many forms[16], and has many names, but is best summed-up in the phrase "the gift economy"[17]. People seek to openly share what they have in order that all might benefit as, even where there is scarcity amongst those who take part in this process, sharing makes very little go a long way. For this reason the gift economy is seen as a more ecological alternative to mainstream economics and intellectual property rights, and far more reminiscent of the way human societies have worked over our history than the present "property by right" economy that has developed in the last few centuries.



When we look at the FOSS options for our home computers the main alternative to Microsoft is the Gnu/Linux operating system. There are many variants or "distributions"[18] of Gnu/Linux, but as each is compatible with the others the choice of which you use is entirely up to your needs and personal preferences. How far you decide to go in your struggle to move outside the confines of "closed" intellectual property rights, in part, or completely abandoning Windows and other forms of proprietary software, is entirely up to you.

Many people who have undertaken this process of transition[19] have found that, as their knowledge

and confidence increase, they steadily find free and open alternatives for most of their computing needs. This approach need not be specifically anti-Microsoft's software products, but the fact that Microsoft have so closely associated themselves with strong intellectual property rights, and resisting[20] the development of free and open source software, the very act of questioning the "locked up" view of computers is clearly in opposition to Microsoft's whole model[21] of business. But, as is often said in the free software community (with clear reference to Microsoft's iconic leader), "In a world without fences, who needs Gates?"

## Spurning the "acronym mafia"

The globalisation of trade requires that the whole world has the same intellectual property rules in operation so that goods can be designed in one country, manufactured in a second and sold in a third. As a result the number of organisations lobbying and enforcing intellectual property rights, most of which have catchy acronyms used to identify them, has blossomed into what could best be called the "acronym mafia" (their names are usually reduced to acronyms in the media!). In the name of protecting private interests these groups threaten legal action – which in many cases might not be successful if taken to court – in order to extort money from people and organisations for the use of their clients' "property".

Whilst, through the protests seen in the media, we might be more aware of the World Bank or the World Trade Organisation, one of the lesser known enforcers of global trade is the World Intellectual Property Organisation (WIPO[22]). WIPO was established by the *WIPO Convention* in 1967. Most of its members in the first few years were almost entirely made up of the world's developed states, but as world trade has developed so the developing nations have had to join WIPO as a condition of the trade deals[23] between the rich and poor states (e.g., Afghanistan was one of the last states to join in 2005).

In Britain, from the government's IPO (*Intellectual Property Office*[24]) and their *IP Portal*[25], to AAIPT (*Alliance Against IP Theft*[26]), FACT (*Federation Against Copyright Theft* [27]), FAST (*Federation Against Software Theft*[28]), ACID (*Anti-Copying in Design*[29]), DACS (*Design and Artists Copyright Society*[30]) and ITMA (*Institute of Trade Mark Attorneys*[31]), the UK's "acronym mafia" has grown, and because of the money to be made by the tighter enforcement of intellectual property rights (IPRs) this lobby has become well funded too. Through lobbying in the UK Parliament, and with similar groups working at the European and International level, the IPR lobby have, over the last fifty years, reduced our "fair dealing" rights whilst at the same time lengthening the period that creative works are legally protected for (the most recent example being the rights of the early rock-and-pop-era artists to receive performance royalties for seventy rather than fifty years).

## It's all about creativity

The structure of the law, both in Britain and internationally, means that it's not possible to fight the intellectual property establishment on its own terms... *you'll lose!* Instead we have to take their own rule book and, within its own terms, subvert its principles to meet our own needs. In this way they cannot seek to attack our use of these principles without attacking their own rules. This is precisely what the use of open licenses does; it works within the legal confines of intellectual property law in order to ensure that once released, a creation cannot be chained in property rights by others.

> *So, rather than fighting against intellectual property rights, all we need do is creatively work around the problem – we redesign the framework of the existing system in a form that works for us!*

More than anything this represents the "do it yourself" approach of the gift economy; in order to manage without the need to earn money through "mainstream" employment we learn new creative skills with the tools that we have to hand. This allows us to meet our needs without obtaining more "stuff". This also reflects the approach the Community-Linux Training Centre Project/the Free Range Network in general; developing the tools to undertake the tasks we need to do simply and efficiently with the least amount of money and resources.

Information and communications technology (ICT) is a tool that extends the ability of the individual to develop and share their creative work. It doesn't matter if you're a permaculture designer finding new ways to grow fruit, or a high-tech. engineer developing new uses for redundant electronics, FOSS is a means for you to share your ideas and work with others.

Implicit in the design and use of free and open source systems is the idea that, collaboratively with others, you learn to improve your knowledge and skills in order to become better and more proficient than you currently are. You need to learn more to use these programs; in that sense it's the opposite approach to proprietary software, which tries to make you buy help or new programs in order to "extract value" from your need to use computers.

This is the reason that this sheet is called "thinking outside the cage". With FOSS you are allowed to work to any level of creativity that you can conceive of – even if that means modifying or rebuilding the tools that you are using. You are not limited

to what the developer of that system wishes you to do with their tool or information. In this sense FOSS is a revolutionary force as it allows people to get on and find their own solutions outside the mainstream of culture, economics and politics.

## The "cage" is shrinking...

The convergence of the new digital media, around mobile phones, wired or wirelessly networked computers and other gadgets allows proprietary software producers and the media corporations who buy their products to develop new ways to "lock up" their information content. This will restrict the ability of computer users to undertake activities that they may have once commonly carried out. And of course this is not a political issue; quite apart from the fact that the IP industry has a lot of financial clout, when was the last time that you heard a politician talking about the importance of the intellectual property framework to the rights of the individual at election time?

**DRM IS KILLING MUSIC**



**AND IT'S A RIP OFF!**

As noted earlier, non-corporate users of Microsoft software and other proprietary computer programs, and those in developing countries, have relied heavily on piracy. It didn't matter that extortionate demands were made for software because it could be installed, unlicensed or using the code key from someone else's licensed copy; *but no longer*. We are now moving into the age of "digital rights management"[32] – total control over the installation and use of computer software, and the information that the programs utilise, by requiring that computers all register with a central database and have their functions monitored internally to prevent the "abuse" of intellectual property rights.

What Microsoft and others[33] are developing is the "trusted computing platform"[34] (TCP). For example, both Microsoft's Windows XP and Vista operating systems must be 'activated' via the Internet. Activation allows the tracking of users, and prevents multiple installation using the same license. But TCP goes further. It actively monitors all running programs on the computer and ensures that they are properly licensed by their users. If you run a non-TCP compliant program, all the other TCP-compliant programs will shut down. Getting TCP compliance costs thousands of pounds, restricting the role of individuals and minor/independent software developers in producing new programs. TCP also monitors the files that your system uses, and prevents editing or copying if you do not have the 'rights' to do so.

The most recent onslaught in the struggle for free computing is the development of *software patents*[35].



These give exclusive rights to the producers of computer programs as if they were 'hard' technology – like a car or a pen. What this means is that it is illegal to write a program that can read or utilise information that is generated by or uses patented software. Even if you were to write a program just for yourself, the very act of trying to write a program to read something produced or processed by a patented program is unlawful.

This might seem all quite abstract except for one important process – *the digital switch-over*[36]. We're currently junking all our old TVs, video recorders and radios in favour of new digital technologies. However, not only are these technologies patented, but so too is much of the software involved in decoding the digital transmissions. For this reason your options to read the digital transmissions are limited to what the patent owners choose.



At this point you should be aware about something called the *broadcast flag*[37]. This is information embedded in the transmission that tells your receiving equipment whether or not it is allowed to record or relay the information. The station/service provider can arbitrarily set the broadcasting flag[38] when they want to stop you recording transmissions even though this might interfere with your legal fair dealing rights[39] for "private study and criticism and review and news reporting" (sections 28-31 of the *Copyright, Designs and Patents Act 1988*). In addition to preventing recording, the technology can also date-stamp recordings to prevent them playing-back after the one-month time period that you're permitted to play-back the recordings.

## Don't sit on the fence – *get rid of the fences!*

Today, in the name of protecting intellectual property rights, the intellectual property lobby is locking up knowledge using technological and legal devices to prevent not only illegitimate access, but also access which would normally be permitted under the law. Intellectual property rights represent the last, modern-day land grab of the "commons"[40], and we will all be culturally impoverished as a result of it. As Pierre-Joseph Proudhon[41] once said, "property is theft"[42] – extending this principle to the modern day can't we fairly say that "intellectual property is stealing our creativity" since we must not think or dream of using anyone else's ideas in case it offends their right to exclusively think it and charge others for the privilege of doing so.

**In the modern world, or, as politicians call it, the Information Economy[43], proprietary software is bad news for everyone. It's not in our interest to support or use proprietary software, and we should not do so where alternatives exist.... *this is the issue that the Community-Linux Training Centre Project seeks to convey; the alternatives DO exist!***

## The alternatives

Of course, in the best of all possible worlds, you'd immediately switch-over to using a wholly free or open source system[44] – such as Gnu/Linux (we'd recommend *Fedora*[45] or *Ubuntu*[46] in particular). For many that will be difficult because of the compatibility problems some people will experience, especially those who must use documents generated by Microsoft's Vista system. In general most of the things you do on a Windows system are do-able, although sometimes you need to load extra programs (that can be an issue for those not used to playing around with their computer).

In the short term you can begin by looking at just a few simple steps – and as the first three points below will also run on Windows systems, the transition is less problematic (for more details see the Free Software Foundation's *Software Directory*[47] site):

### Web Browsers.

There are various free web browsers but the most popular is *Firefox*[48] – this has an easily downloadable Windows version. As well as getting a good browser, Firefox can be radically customised by loading a large variety of plug-ins that can perform different functions within the browser, some of which are made to work with specific web sites to make accessing data easier. If you like Firefox you can also get involved in promoting it through the *Spread Firefox*[49] initiative.

### Office Suites/
### Word Processing. Again

there are various office suites – word processors, spreadsheets, etc. – available for free software systems, but on Windows systems the simplest option is *OpenOffice*[50]. This is fully compatible with most of the files generated by Windows systems, and provides the same functions and usability for most users. Also, unlike many Windows-related sources of help, there are a growing number of free, on-line sources of help, information and tutorials to get you started using OpenOffice.
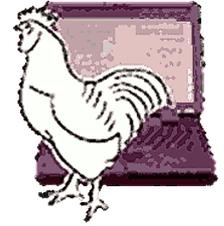
### Email/Messaging. What email programme are you using? Again, there are many different options for free software users, but for Windows users the simplest option is *Thunderbird*[51]. The email counterpart to Firefox, Thunderbird offers much of the same functions as Outlook and it runs a whole lot better. Again, like Firefox, if you like Thunderbird you can get involved in spreading the message about free software through the *Spread Thunderbird*[52] initiative.

## And finally, of course, *ditch Windows*!

Your long-term goal should be to make the transition to a wholly open operating system. There are many examples of this happening and the benefits it can bring. For example, the recent transition of the entire French Gendarmerie Nationale[53] to Ubuntu Linux; the police force is to switch 70,000 desktops over to Linux, two years after switching its browsers to Firefox, and three years after dumping Microsoft Office for OpenOffice (this is projected to save €7 million per year!). The Free Range *Community-Linux Training Centre Project*[54] will be producing new resources to help people install and use free software operating systems over the Summer and Autumn of 2009.

*Also, don't forget that this is "free software" that we're talking about – you can quite legally copy the CD or DVD that you receive your software on, give copies to your friends as presents, and then encourage them to make the transition too!*

## Perseverance!

Changing your lifestyle over to FOSS will of course take a little time and effort, but the benefits in the longer-term (both practical and financial) will pay-off quite quickly. The difficulty of changing away from proprietary systems to FOSS (or even between proprietary systems) is of course *the whole point about proprietary approach*:

- by locking users into the restrictions of specific programs or systems,
- by preventing them easily configuring their system without buying more programs or expertise to do what they want to, and
- by removing any expectation that we should be able to change how the computer works,

the proprietary model of computing de-skills the computer user and thus creates a situation where alternative options are practically impossible for the average computer user to consider.

Looking at this relationship in its simplest terms, proprietary software is a form of exploitation – it demands that the user part with their money if they wish to continue using a program/their computer, either to get support or more/new software, rather than finding ways to solve the problem themselves or with the help of friends and associates.

*A different kind of world is possible if we can create the vision in our minds; but if we can't transfer those ideas into real life because the tools are secured with financial, technical and legal restrictions then change will not happen. FOSS is more than just cheap computers for geeks – it's a philosophy of how we work and relate to one another as creative beings. Ultimately, it's about the freedom to create the future!*

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