

The battle for your box

Linux vs Vista and Windows is not a fair fight. Richard Hillesley dissects the propaganda that Microsoft is using in its battle to retain its dominance.

For obvious reasons, the concept of Free Software does not sit comfortably with Microsoft's view of the world.

As far back as 3 February 1976, Bill Gates bemoaned that he was engaged in a "break-even operation" and declared: "As the majority of hobbyists must be aware, most of you steal your software. Hardware must be paid for, but software is something to share. Who cares if the people who worked on it get paid?"

"Who can afford to do professional work for nothing?" he asked.

In the years that followed

Microsoft grew from being the mere "break-even operation" that Gates claimed it to be to become the richest corporation in the world. Free and open source software didn't become a threat to Microsoft's dominance of the computing market until the late 90s, when the dotcom bubble burst and Linux and Apache began displaced both Unix and Windows NT as the

default configuration for successful web companies, including Amazon, Yahoo and Google. By 1998, a year or two before Linux began the breakthrough into the enterprise, Microsoft had commissioned an assessment of Free Software from one of its own engineers, Vinod Valloppillil, who praised "the ability of the [Free Software] process to collect and harness the collective

IQ of thousands of individuals across the internet," and concluded that the resulting software was of such a high quality as to constitute a "direct, short-term revenue and platform threat to Microsoft."

To counter the success of open source software, MS has developed three strategies, which we're going to examine here: to choke developer communities by adopting and extending open source languages; to divide the Linux community by striking partnership deals with selected Linux vendors; and to create scares around the ownership of intellectual property in IT.

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Tactic #1: Embrace and extend

Valloppillil's report surfaced in 1998, when it was published as part of the 'Halloween Documents (which comprised a number of Microsoft memoranda that had somehow been leaked, along with responses written by Free Software advocate Eric S Raymond). The report also looked at some of the remedies that Microsoft might consider in order to counter the threat that Linux posed. "OSS [open source software] projects have been able to gain a foothold in many server applications because of the wide utility of highly commoditised, simple protocols," Valloppillil wrote. "By extending these protocols and developing new protocols, we [Microsoft] can deny OSS projects entry into the market."

Open standards are the meat and drink of networked computing, and are essential to interoperability. Decommoditising protocols and data formats is an effective way to create barriers to entry, to inhibit competition and sustain vendor lock-in, but it hasn't always been successful. IBM and Digital Equipment Corporation (DEC) both stuck with their own proprietary protocols long after open replacements had made them redundant elsewhere, which, for DEC, arguably hampered its once-popular VAX/VMS operating system, which eventually lost out to Unix.

The domino effect

Microsoft's grip on the office market grew out of its monopoly of the PC operating system market, and its monopoly of the browser market grew out of its dominance of the home computing market. The company has a long history of using its dominance in one market as a springboard into another, and its grip on the protocols has been an asset in preserving its position, as Jeremy Allison, a lead developer on the *Samba* team, noted in **LXF99**.

"In the days when Novell NetWare dominated the file serving world Microsoft was a great supporter of standards. They published the specifications of their own protocols (then called

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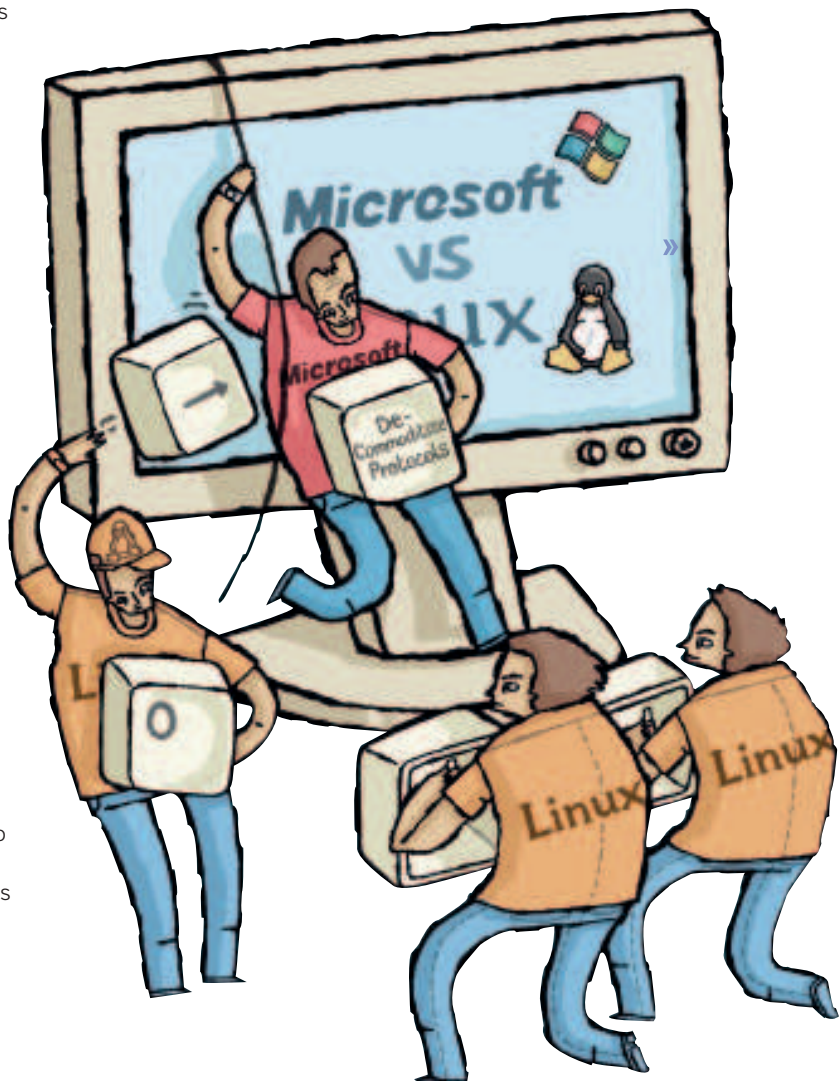
Server Message Block, or SMB) and supported implementations on other platforms than Windows." But once NetWare was defeated by Windows NT, Allison says: "their attitudes changed, and the flow of information stopped. Proprietary modifications to core protocols like the Kerberos authentication protocol followed, and these changes were treated as trade secrets, patented if possible, and only released under restrictive non-disclosure agreements, if released at all."

Microsoft's record with standards is ambivalent, but this may be due as much to its domination of the office space as any other motive. Microsoft has defined the *de facto* standards for its software, embracing and extending the published protocols for convenience and obfuscation, and competitors have had to follow where they can. Monopoly does not encourage innovation or interoperability. Protocols and data formats have been extended, sometimes as a deliberate ploy, sometimes just to satisfy an immediate requirement without reference to the competition. A more worrying tendency, not limited to Microsoft, is the encumbrance of protocols and data formats with software- and business-method patents that have been all too readily distributed by the US Patent Office. In 2003, the European Commission determined that Microsoft had deliberately obstructed access to APIs and protocols with the objective of

maintaining its monopoly. Microsoft argued that the protocols constituted "trade secrets". Fortunately, the European Commission recognised that interoperability – or the simple notion that computer systems should produce outputs in common formats that enable one computer to talk to another – has been a staple of computing since the beginning of the electronic era. Standards give us the means to talk to one another in a heterogeneous environment, whatever applications, operating systems or computer language we use. Within the EU, Microsoft will have to play ball with the competition, at least with its groupware.

Vote with your wallet

But standards move on shifting sands, and the controversy has moved to the International Organisation for Standardisation and the political process surrounding the acceptance of OOXML as a counter standard to the previously recognised ODF office data format. These developments continue to echo the advice of Valloppillil that "by extending these protocols and developing new protocols, we can deny OSS projects entry into the market." However, such tactics work against the interests of the people with the real power – the customers. The success of Linux is due in part to the fact that it provides a welcome escape from vendor lock-in. As the actions of the EU have illustrated, subversion of the standards process may prove to be counter productive. »



Tactic #2: Divide and rule

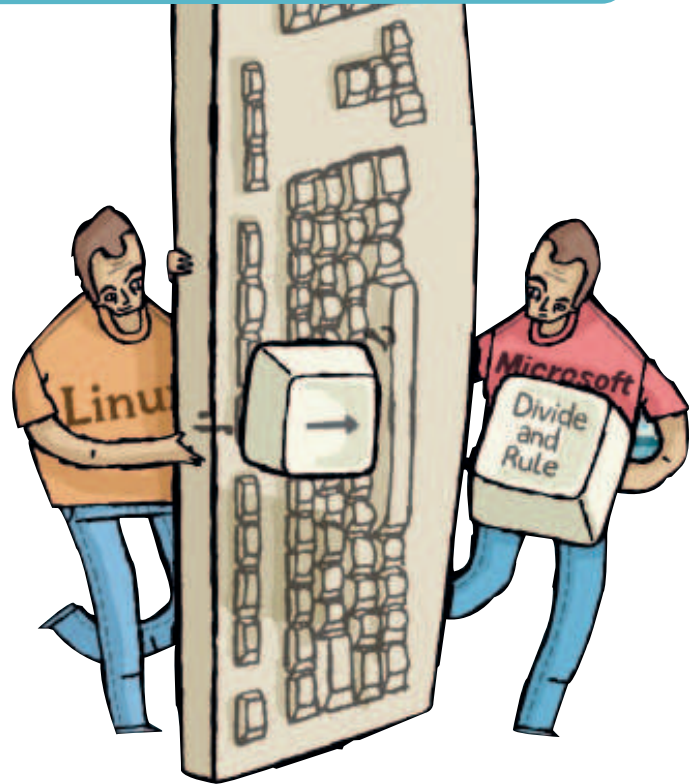
One side effect of Microsoft's adoption (and eventual decommoditising) of open source languages and protocols is that it has accentuated the faultline between the 'open source' and 'Free Software' wings of the Linux user and developer communities, represented respectively by the Open Source Initiative (OSI), and the Free Software Foundation (FSF).

The OSI was created in 1998 to encourage a more liberal licensing regime and the use of the term 'open source' rather than 'Free Software'. The main public role of the OSI, which is now led by Michael Tiemann of Red Hat, is to arbitrate on the validity of open source licences. Unfortunately this has led to a proliferation of licences, many of which conflict with one another, are incompatible and serve little purpose other than satisfying the doubts of the participating companies. There has also been a proliferation of companies that describe themselves as open source, some of which are a long way from fulfilling the objectives of either the FSF or the OSI.

“Microsoft is now an OSI approved producer of ‘open source’ software.”

By 2001 Microsoft understood that not only Linux, but also the wider principle of open source software development was here to stay. The response to this threat to the company's dominance has varied. As Steve Ballmer, Microsoft's CEO, has identified, there is no single company called Linux. In traditional terms this makes Linux difficult to compete with. But there are splits within the Linux world that drives different organisations to create different distributions, and there are even fissures within the various development teams. At the same time nobody owns Linux, and there is mileage in creating a scare around the ownership of ideas. When SCO first made its claims to owning the Linux code, Microsoft was quick to buy a 'Unix licence', which gave succour, credibility and financial assistance to SCO's claims to the ownership of Linux. Who knows how much effect the SCO debacle has had on the uptake of Linux?

Each of the 'shared source' technologies that Microsoft has sponsored is locked into its proprietary version of userland. This



inevitably limits its appeal to open source developers. Nevertheless, it is taking an adventurous approach towards the newer programming languages and is being pragmatic in its approach to developer communities, in the hope that by undertaking such exercises as drawing up its own open source licences, and submitting them for approval by the Open Source Initiative, it will gain an aura of respectability among a larger community of developers, who will take their expertise on to .NET and Windows in the workplace.

Despite considerable objections from the Linux community, Microsoft's 'shared source' licences were accepted as part of the OSI canon, now consisting of 68 different licences, and Microsoft is now an OSI-approved producer of 'open source' software. It remains to be seen where this leads, but it is unlikely to lead to a transformation in Microsoft's business model any time soon.

Say what?

For a company that spends hundreds of millions of dollars on marketing, Microsoft is pretty good at making itself sound daft. In 1999, Ed Muth, a Microsoft group marketing manager, suggested that free software developers were Robin Hoods, and declared that: **“Complex future projects to add such functions as automatic translation of email require big teams and big capital. These are things that Robin Hood and his merry band in Sherwood Forest aren't well attuned to do.”**



A year later the tune was beginning to change, and a note of fear and menace (at least for an American audience) was introduced. That year Steve Ballmer chipped in with this gem: **“There's no company called Linux, there's barely a Linux road map. Yet Linux sort of springs organically from the earth. And it had, you know, the characteristics of communism that people love so very, very much about it. That is, it's free.”**

By 2001 it had become obvious that free software developers were well suited to the creation of large projects, and had found working business models to distribute the software. During this time Microsoft was on the attack, worried in particular by the impact that free software was having on government computing projects, with their emphasis on cost and accountability. Within a matter of months Microsoft executives Steve Ballmer, Bill Gates, Craig Mundie and Jim Allchin all made statements about the dangers of free software. In July that year Ballmer declared that: **“Linux is a cancer**



that attaches itself, in an intellectual property sense, to everything it touches.”

Later the same month, Bill Gates compared the GPL with *Pac-Man*: **“If you say to people, ‘Do you understand the GPL?’”, he said. “They're pretty stunned when the Pacman-like nature of it is described to them.”** Genius, no?

Tactic #3: Intellectual property scares

More enduring have been the attacks on Linux that serve to question the originality, authenticity, authorship, identity and parentage of the software, by SCO, the Alexis de Toqueville Institution, Microsoft and others. During the last two or three years, Steve Ballmer has made a number of claims that Linux uses Microsoft's intellectual property and infringes on any number of patents owned by Microsoft.

Historically, MS did not have much truck with patents. Back in 1991, Bill Gates wrote in an internal memo that: "If people had understood how patents would be granted when most of today's ideas were invented and had taken out patents, the industry would be at a complete standstill today." In the same leaked 'Challenges and Strategy' document, Gates outlined a solution to the problem: "Patenting as much as we can. A future start-up with no patents of its own will be forced to pay whatever price the giants choose to impose. That price might be high: established companies have an interest in excluding future competitors." By 2004 Microsoft was accumulating patents at a rate of 3,000 a year.

In February 2007, Microsoft lost a \$1.52 billion judgement for infringing a patent taken out by Bell Laboratories and held by Alcatel-Lucent on MP3 audio compression technologies. MP3 was acknowledged as a standard by the ISO in 1993, but contains a number of patented technologies owned by a variety of corporate entities, several of which are staking claims on the relative success of the format.

Patents scares are a double-edged sword. Microsoft's patent claims against Linux are often unsubstantiated and highly

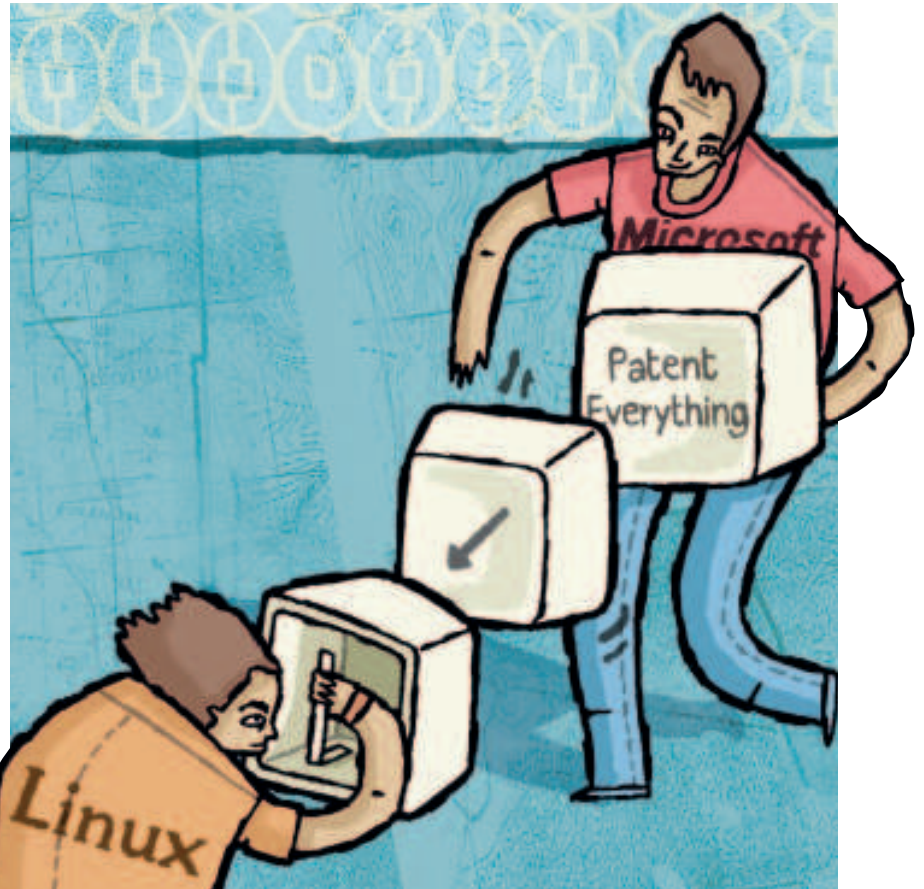
"MS can't sue its own customers for using Linux – that would be suicide."

contentious, but when said often enough pass into common currency. In the unlikely event that Microsoft does have usable patents that are infringed by Linux and is confident that its software doesn't infringe the operating system patents of HP, IBM, Sun Microsystems and SGI, there are three ways that it could use patent infringement claims to interrupt the progress of open source software: it could sue the customers, sue the developers, or sue the distributors. In each case the potential problems would be massive.

Patently obvious

Microsoft is not going to sue its own customers for using Linux – that would be commercial suicide. Sueing individual developers would incur the wrath of computer programmers worldwide, and suing the distributors would be the opening round in an unstoppable war with the rest of the computing industry, which could result in any number of unseen complications and consequences for Microsoft. It isn't always necessary to take such threats at face value, but scaring the customers with the idea that Linux isn't quite bona fide may just work – although that argument is going to be undermined by the Linux suppliers, who include IBM, HP and others.

More worrying is the notion that a patent troll, an entity that exists purely to exploit patents and has nothing to lose by counter-suits, may cause trouble by purchasing and exploiting a relevant patent. To guard against this threat, software and business-method patents should be opposed at every opportunity, although Linus Torvalds took a notably different tack on the Linux kernel



mailing list back in 2002: "I do not look up any patents on principle," he wrote, "because (a) it's a horrible waste of time and (b) I don't want to know.

The fact is, technical people are better off not looking at patents. If you don't know what they cover and where they are, you won't be knowingly infringing them. If somebody sues you, you change the algorithm."

The trouble is that Microsoft has too much to lose. Unlike IBM or Sun Microsystems, Microsoft's primary business is software in a box.

The company is built on a model that is directly threatened by the emergence of Linux and free software, and it has nowhere else to go. Microsoft's monopoly of the home and office software markets is still in place, but faces inevitable decline over the coming years, and the rapid emergence of alternative technologies entails some serious challenges for the medium- and long-term future.

Steve Ballmer recently came up with his own explanation of the difference in approach between Microsoft and a company like Red Hat by saying: "If we open source Windows... we wouldn't have enough profit to pay people, let alone invite in people from the community. I'm not saying open source is a bad thing, but it doesn't pay the bills in this company, so we can't embrace that way of doing things. We give out free soda pop to everybody who works here. We make our stuff free, people gotta give back the soda pop – it's just inconsistent with what we do around here." **LXF**