
ILLUSTRATION ADRIAN JOHNSON

# Patently absurd

If you are a programmer or create ecommerce websites you could unwittingly be infringing someone's patent. Guy Matthews looks at the winners and losers in the murky world of patenting laws.

**On the face** of it, the ability to patent an invention, so that you can charge a small commission for its subsequent commercial use by others, is perfectly fair. If you put in the hard work, why should another party freely be able to copy your innovation? In the high-tech world at least, this simple principle has become considerably muddied, thanks to a combination of sinister and self-interested motives and muddle-headed bureaucracy. And if writing software code of any kind is your business, then you could easily suffer dire consequences.

The principle of patenting an invention is surprisingly old, dating back to 1790. The basic right to patent your invention is enshrined in the US Constitution, the idea being to give a little guy with a big idea a chance of exploiting the fruits of his labour. The principle's usage blossomed in the increasingly industrialised US of the late nineteenth and early twentieth centuries, the era of the Wild West and the American Dream.

In the hundred-odd intervening years, these worthy original ideals have been turned on their head and, effectively, perverted. In the digital age, the owner and

enforcer of a patent is more likely to be a big-time software corporation coming down hard on a small-time programmer who happens, probably inadvertently, to have strayed onto their patch, sometimes with financially lethal consequences. The world of patenting, particularly the patenting of software code, has become a badly-policed jungle where might is right and lawmakers are out of their depth. Not unlike the Wild West of patenting's first heyday.

At the heart of the problem is the spiralling number of patents being filed with the Patent and Trademark Office (PTO), the US Government body that grants patents. Until a few years ago, most developers of software, corporate or otherwise, were generally content to allow the far less rigorous law of copyright to protect their intellectual property. For years, it was widely thought that software, as an 'idea' rather than a physical object, was unpatentable anyway.

Now, thanks to new thinking on software's definition and status, everybody wants to patent it. In 1992, there were a manageable 1,600 or so software patents issued by the PTO. By 1997 this had grown to over 13,000, and the figure for last year is estimated at around 22,500. The PTO, operating on the same resources today as a decade ago, is scarcely able to cope. Patents are being approved, it is alleged by the body's critics, that had no business being filed in the first place.

This approval, say critics, is being granted by poorly paid and poorly trained civil servants who have little idea of what software innovation really is, and no time or inclination to learn. In a climate where high-paying, high-flying software companies are short of the bodies they need for the work they're doing, what chance does a dusty governmental outpost like the PTO have of competing for talent to better itself?

So who does this problem affect? The majority of the above mentioned flood of patents are sought by powerful technology manufacturers and software developers – IBM, Sun, AT&T to name three prime examples. What they're seeking to do, say critics, is to use patenting laws not to protect their property from rogues, but to crush others attempting to establish any sort of foothold in their markets. This means you could be a start-up developer, or even a small-time enthusiast, and blamelessly stray onto turf that has already been claimed. Unlike in the world of copyright, your lack of awareness of infringement is absolutely no defence.

## See you in court

What happens next is sometimes salutary stuff. Gregory Aharonian is a US patent lawyer who has made a name for himself as a prominent critic of current software patent policy. He said that there are two principal types of attack made by the owners of patents: 'If you are a successful

## The crazy world of patenting

**1** Software company Geoworks has a patent that covers 'flexible user interface technology' used on 'all devices, including mobile phones, which are based on the WAP specification'. This translates as just about any wireless device connected to the Internet. Phone.com, which produces software for WAP phones, has filed a suit in the US District Court to challenge the validity of Geoworks' patent claims. Others such as Toshiba have stumped up for the licence fee.

**2** Although we can now look back on the Y2K threat and see it as a storm in a teacup, the threat seemed serious enough in December of last year. A long-running dispute about the validity of Dickens2000, a bug fix, went right to the wire. As late as 23 December the PTO was still dithering about whether inventor Bruce Dickens has the right to collect fees and royalties from thousands of firms which had used the fix or something similar.

**3** Knowing that it has one arm tied behind its back by its open-source status, Microsoft is trying to use patent law in a devious attempt to throttle Linux. As applications based on Linux proliferate, unprotected by patents, as is the wish of the Linux community, so Microsoft is looking hard for patents that Linux apps appear to stray onto. Another Bill Gates dirty trick, say outraged open-source fans.

Microsoft knows all about how costly patent infringement can be. It ended up paying out £75m in compensatory damages when it was found guilty of violating STAC Electronics' patent on data compression in February 1994.

**4** Linux isn't the only victim of openness on record. When Compuserve released the Graphical Interchange Format (GIF) as an open specification in 1987, it didn't realise that it contained compression technology owned by Unisys. Unisys didn't get around to acting on the matter until 1994, but, no matter that the patent had gone undefended for so long, developers in their thousands were forced to fork out a royalty to Unisys for use of the by then hugely popular image format.

**5** The newer the technology, the more apparently prone it is to patent problems. Small-time MP3 programmer Tord Jansson has been forced, temporarily at least, to shut up shop while large companies threaten to take him to court.

and established software company, then you are bound to get lots of people after you with patent claims on your technology. Most of these are invalid and nothing to worry about, and companies will often see it as a badge of honour to be sued in this way. It means they've arrived.'

It's a different matter if it's a small start-up that gets hit, said Aharonian. 'If you are a small company, and you get a letter in the mail that begins "Dear Sir, We hold a patent..." you are in immediate trouble. The first thing you need is a validity opinion from your lawyer, which could cost you between £12,500 and £25,000. You can't really do without this, just in case it is a valid claim. If you get two or three of these a year, will it kill you? Maybe not, but it certainly uses up slim resources.' Few cases, he said, end up in court, but the expense of settling behind the scenes can be horrifying.

It's rare, but not unknown, said Aharonian, for independent or even amateur programmers to get hit. 'Patent holders are usually after people they think have money,' he advised. But in essence, any shareware programmer, any ecommerce entrepreneur, any small software operation could potentially be caught out by a minefield that's growing more dense year by year.

This wouldn't matter too much if so many of the patents being granted weren't so dubious. If the only patents being permitted were rock solid, and based on proper research, both on the part of the applicant and the examiner, then there would be far fewer to contend with. But it's widely acknowledged that most software patents aren't worth the paper they're printed on. Most are taken out as an intimidatory device by corporations that can well afford the small fortune it costs to establish the patent. The currency of the patent has been devalued by applications, made by these companies, that are backed by inadequate research into prior art (see glossary). The law that guards them, however, remains the same.

So, who's doing something about this mess? The PTO, and other patenting bodies around the world, aren't oblivious to the growing problem. The PTO, in particular, has announced new patenting laws to better define how software patents differ from hardware patents. It also plans to implement a secondary examination procedure for software, and has put out new guidelines for computer patents, including a promise that examiners will pay more attention to prior art.

So much puff, say critics. Aharonian said: 'I'm cynical about government promises. The quality of patents has not improved for 15 years, and it has become an assembly line process. The Government says it is on the case, but when did you ever know a government, British or American, that told the truth? And unlike in business, civil servants don't get fired for doing nothing.' There's also the whiff of suspicion, said Aharonian, that various governments are glad of the extra revenue that the growing patenting industry brings them.

## Glossary of patent terms and bodies

**European Patent Office (EPO)**
The continental equivalent of the PTO (see below), with similar powers but working to subtly differing laws.

**Obvious/non-obvious**
The degree to which a patent claims ownership to something that is novel, or alternatively commonly used and in the public domain.

**Patent and Trademark Office (PTO)**
The US Government body responsible for granting patents.

**Processes and ideas**
An idea or a process may not be patented, only a usable invention that accomplishes a task. But software is no longer regarded as an idea, thanks to important legal test cases.

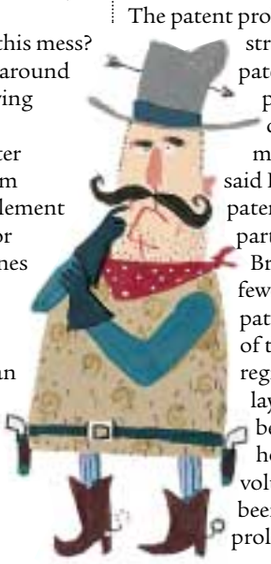
**Prior art**
Examples of similar existing innovations, potentially evidence that an 'invention' has been thought of before. Non-patent prior art is previous inventions that, because unpatented, do not stand in the way of an application.

**Software Patent Institute**
Maintains a database of US and non-US software patents.

**UK Patent Office**
Thanks to EU harmonisation, the UK Patent Office is increasingly in line with the EPO, and can virtually be regarded as a division thereof.

## Global concern

The patent problem might look like a strictly US affair, and with most patents only enforceable on products made or sold in their country of origin, you could be mistaken for thinking so. Not so, said Bruce Dearling, a European patent lawyer with UK-based partnership Hepworth Lawrence Bryer & Bizley. Dearling said that fewer patents are issued by European patenting bodies, partly a function of the longer period it takes to register one and the additional layers of examination that need to be gone through. This may, however, be about to change. 'The volume of patents in the US has been largely brought about by the proliferation of Internet and



# Closing the doors to competition

The huge potential of Internet-based patents to rake in massive amounts of money in licensing deals is proving too much for many web companies that are falling over themselves to register patents – many of them ideas in widespread use outside the web.

The two most famous offenders are ecommerce software supplier Open Market, which is encouraging anything but open competition with its raft of ecommerce patent applications, and online retailer Amazon which has registered a number of patents for shopping online.

Open Market has been granted a number of obvious patents including one on the concept of an online shopping basket. It is currently causing breath to be held all over the global Internet community as it bids to patent card payment technology which is already in widespread use.

However, Amazon has stirred up the most antagonism among net users over the leveraging of its patents against competitors.

The company came very close to shooting itself in the foot when activists called for a boycott of its site. Leading the protests was Tim O'Reilly, the founder of technical books publisher O'Reilly & Associates. O'Reilly wrote a strongly worded open letter to Amazon's chief executive Jeff Bezos and organised a 10,000-signature petition.

The controversy was over Amazon's patented one-click system that allows repeat online customers to place orders without having to re-enter their credit card and address information. The patent also covers how Amazon stores the billing and shipping information.

Amazon then went on to get a preliminary injunction against competitor Barnesandnoble.com that prevented the company from using the one-click system.

However, although still defending both Amazon's right to the patent and the company's lawsuit against Barnesandnoble.com, Bezos did state in an open letter posted on Amazon's website: 'I now believe it's possible that the current rules governing business method and software patents could end up harming all of us — including Amazon.com and its many shareholders, the folks to whom I have a strong responsibility, not only ethical, but legal and fiduciary as well.'

*Amazon.com was threatened with a boycott over its one-click*

Bezos also said he was prepared to lobby the US Congress to try to have the patent rules modified and that he had agreed to help fund a prior art database.

Priceline.com is another company that is causing controversy over dubious patents. The web retailer has patented an Internet version of a reverse auction where a customer can propose a price for a product or service and then sellers can decide whether they want to accept that price. The company is suing Microsoft and its Expedia travel services site for infringing its patent because Expedia allows customers to propose their own prices for flights and hotel rooms.

Perhaps Tim Berners-Lee, inventor of HTML, best summed up the problems with online patents at the Eighth International World Wide Web Conference in Toronto last year: 'You are able to take an existing social practice and write software to do it and get a patent.'

ecommerce technologies. The jury is out, but there are those who believe there will be a corresponding increase in Internet-related patents in the UK and Europe,' said Dearing

He also points to a rise in multi-jurisdictional patents, and to the increase in European patents being sought by US corporations. He added: 'With the borderless nature of the Internet, it is getting harder to pinpoint where a patent infringement has taken place. There hasn't been a test case yet, but there might well be soon enough. Thanks to the Internet, the globalisation of intellectual property rights might be around the corner.'

There are good reasons that the software patenting problem has got so serious with so little being done about it. It is not the sort of issue that provokes public uproar. No government would countenance such equivocation and muddle if it applied to an issue such as public health. Consequently, drug patent applications are sifted with a fine tooth comb, and granted only after lengthy deliberation.

But as the Internet and ecommerce bring high tech out of the laboratory and processing centre and into the home, this prevailing attitude is clearly nearing its sell-by date. It's really all a question of who gets hurt in the meantime. Until laws and procedures change, the life of the programmer will continue to be a tightrope.