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## Technology: Mired in a legal morass

By Richard Waters

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Escalating courtroom battles over intellectual property are placing a mounting burden on the sector

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**J**udith Masthoff, a Dutch researcher in artificial intelligence, was a doctoral student in the mid-1990s when she came up with her first invention.

The outline of the idea – a way of “enabling a user to fetch a specific information item from a set of information items” – hardly hinted at the starring role her brainwave would play in the legal battles sweeping through the technology industry.

Ms Masthoff still remembers the excitement she felt

writing her patent application, one of the first in the software field for Philips, the Dutch electronics company to which she assigned the work. Providing a form of personalisation, it was an early attempt to help users make sense of the flood of online information, a critical issue for many websites. But she lost track of it as her career moved on, and only recently discovered that her application had eventually been approved in 2001.

The idea – now known as US patent number 6,216,133 – has been on a long journey since then. It was sold to the subsidiary of an American company that deals in intellectual property before finding its way, late last year, to its current owner: Facebook.

It is now playing a prominent role in the social network's first big legal fight. It is the oldest of 10 patents the company used last month to mount a legal action against Yahoo – a counterstroke against a patent infringement suit brought by the internet search and media company this year.

“I wouldn't be so happy if they had used it offensively,” Ms Masthoff says of Facebook's use of her idea to protect itself ahead of next week's initial public offering. But the provocation, she adds, deserved retaliation: for Yahoo to mount its legal attack “just before Facebook floats its shares could be regarded as blackmail”.

Depending on your point of view, Facebook's ability to co-opt old ideas such as this to defend itself against an assault on the legal foundations of its business could be a sign that, in an economy increasingly based on ideas, an efficient market in intellectual property is at work. Alternatively, it indicates that the system is running amok, threatening to suffocate the innovation that makes breakthrough ideas such as Facebook's social network possible in the first place.

With suits flying among some of the best-known tech names, companies such as Facebook, Apple, Google and Microsoft have been forced to spend heavily in the past year or so to arm themselves legally, in turn pushing up prices for patents such as Ms Masthoff's as they change hands. In the smartphone business alone – centre of much of the action – \$15bn-\$20bn has been spent buying patents, with legal bills reaching \$500m on a “conservative estimate”, says Professor Mark Lemley of Stanford Law School.

It is hard to find anyone in the industry or in legal circles prepared to argue this is anything other than a colossal waste of money. “It's highly inefficient and antithetical

to what patents are meant to achieve,” says David Martin, chairman of M-Cam, a US patent analysis company. Lawsuits such as those brought by Yahoo are “a de facto utility charge on someone else’s business success”, he adds.

Worse, the rising costs faced by companies arming themselves against legal attack could hamper innovation. Those that cannot pay this new “tax” risk being in effect barred from competing in the most promising new areas, such as smartphones.

Patent battles in tech – and the costs of building a strong intellectual property position – are not new. In recent years, executives have complained about the emergence of “trolls”, companies set up specifically to buy patents and mount opportunistic lawsuits against successful groups.

But proof of dramatic new forces at work came nearly a year ago, when patents owned by Nortel Networks, a bankrupt Canadian telecoms equipment maker, were auctioned for \$4.5bn. The price, five times higher than initial estimates, showed Nortel was worth more dead than alive.

Having lost out in this case – and been left in a weak patent position compared to Apple and Microsoft, which were among the auction’s winners – Google agreed six weeks later to pay \$12.5bn for Motorola Mobility, mainly to get its hands on the telecoms group’s intellectual property.

Behind these deals lay a rash of suits over smartphones, as Apple, Samsung, Microsoft and others angled for advantage in the sector’s biggest new market since the advent of the personal computer. Along with a spate of other transactions leading to Microsoft’s \$1.1bn purchase of patents from AOL last month, they reflect “a perfect storm” in tech patent circles, says Ron Laurie of Inflexion Point, which advises on patent sales.

On one side are cash-rich companies, including Apple, Google and Microsoft, with the wherewithal and incentive to pay large amounts for legal protection. On the other is a group of former stars forced to turn prized intangible assets into cash. They include bankrupt companies such as Nortel and Eastman Kodak, whose digital imaging patents are expected to end up being among its most valuable holdings, as well as struggling concerns such as Motorola and AOL, both of which came under pressure from activist shareholders to jump on the patent-sale bandwagon.

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Smartphones: Authorities weigh in on a legal food-fight

Companies in decline could yet shed their reluctance to take legal action against those once considered potential

Patents are, by definition, legal monopolies: they grant an exclusive right to exploit an idea. That largely takes them beyond the reach of regulators and lets companies protect their operations – or hamper competitors – as they see fit.

Yet authorities on both sides of the Atlantic have been showing a growing interest in at least one aspect of the legal food-fight that has broken out in the mobile phone world.

At issue are patents that lie at the heart of technology standards – things such as the H. 264 video compression technology – that all manufacturers have to comply with so that their products will work together. Companies that own these rights are required by standard-setting organisations to license them to all-comers on “fair, reasonable and non-discriminatory” terms. Defining what that means, though, leads to a legal minefield.

Central to the issue have been demands from Motorola Mobility for royalties that many in the industry claim are excessive. Undeterred, Motorola has been pressing its claims in courts in Europe and the US. This week, a court in Germany ruled in its favour against Microsoft in a case involving video compression technology, potentially blocking sales and shipments of Xbox games consoles and all Windows-based machines in that country.

Microsoft said Motorola’s initial royalty demand would have

partners. Yahoo went as far as preparing a lawsuit against Google in 2006 over its core search technology, according to someone familiar with the initiative, but called it off after senior managers shrank from the business risks. Now, as Yahoo’s position in the search market falls further, a new management group with little to lose has landed a blow against Facebook in the Masthoff case.

According to this view, the more active market for patents is bringing much-needed liquidity to intellectual property, helping it find its way to those best able to extract value. When Microsoft immediately resold part of its new AOL patent holding to Facebook last month for \$550m, recycling dotcom-era ideas into the hands of the latest internet company to transfix Wall Street, it seemed a fitting confirmation of how industry leadership has been transferred.

Supporters of this view argue that aggressive legal actions and high prices are often symptoms of a market – albeit an imperfect one – at work.

A wave of start-ups has been launched on the idea that the “ideas economy” needs a stronger infrastructure and new approaches to make the market work better. It includes Intellectual Ventures, which aims to foster invention by separating the creation and patenting of ideas from their commercialisation; and RPX, which buys patents for defensive purposes on behalf of its customers. Critics, however, claim such businesses lubricate a system that encourages litigation and forces companies to buy protection against opportunistic lawsuits.

A second view holds that the outbreak of legal hostilities simply reflects the inevitable upheaval from the emergence of big new markets. The smartphone patent wars have become the clearest example of this, pitting companies from the computing and mobile communications worlds against each other for the first

amounted to a tax on the technology industry of \$4bn a year – though Motorola characterised the discussions as part of a negotiation. The enforcement of the German ruling is dependent on the outcome of a separate case under way in Seattle.

Patents that are used in industry standards such as this carry “undue leverage” since they allow “the ability to disrupt other people’s businesses”, says Doug Lichtman of the University of California.

That has attracted the attention of regulators. With new technology markets, from “smart” TVs to social networking, only just starting to open up, consumer-minded regulators have every reason to get involved, says Ron Laurie of Inflexion Point, a patent advisory. “Everyone’s focused on Washington.”

The European Commission this year announced an investigation of how so-called “standards-essential” patents are being applied. The issue has also come up in Washington, with the Department of Justice expressing misgivings about Google’s refusal to limit how it will enforce the patents it will assume with the acquisition of Motorola. Apple and Microsoft, by contrast, have already bowed to the DoJ’s request.

time. More than 250,000 patents, often overlapping, are potentially brought into play by smartphones drawing on technologies from several parts of the industry, according to RPX.

Such legal battles were seen with the emergence of the telegraph and the radio – and even mechanical farm equipment – as companies stake claims to the new markets. Eventually a stalemate is reached, and rivals conclude there is more to be gained from cross-licensing their ideas.

Whether that pattern will hold in smartphones – or in areas such as social networking and online advertising – has yet to be seen. “Maybe this time it isn’t a usual cycle,” says Prof Doug Lichtman of University of California, Los Angeles. “Patents are much more front and centre: people realise they can be sold and traded, they are much more visible.” The higher incidence of lawsuits – and rising patent values – could continue for much longer, he suggests.

Another sign that a deeper change is occurring has been the rise in patent litigation in industries far removed from the latest hot tech markets, says Prof Meurer. Even relatively stable businesses such as food, cars and mining seem to be facing a secular increase in lawsuits, he adds.

That leads to a third explanation for the change in the patent world: that a systemic shift has taken place. The sheer number of lawsuits being filed, and the large amounts of money being thrown around to buy protection, suggest “there is something fundamentally broken here”, says Prof Lemley.

According to this view, long-running weaknesses in the approval process – making it too easy to obtain recognition for marginal or unoriginal ideas – lie at the heart of the problem, along with court decisions that have handed the advantage to plaintiffs. If so, it could take years to fix: the US’s first legislation in this

area in more than half a century, enacted last year, was widely seen as having brought only marginal improvement. It brought US filing procedures more into line with international practice, but limited the ability to bring nuisance lawsuits only modestly.

The cycle of lawsuits, meanwhile, is unlikely to abate: rather, it shows every sign of being about to spill from the smartphone industry into the broader online world.

If Yahoo succeeds in extracting patent royalties from Facebook, for instance, it would almost certainly make similar claims against other internet companies, particularly newcomers such as Twitter that lack significant patent holdings, according to one experienced litigator.

Others warn Facebook could soon face bigger legal challenges of its own. Amazon's ownership of a seminal social networking patent predating Facebook's own intellectual property in the area could leave the social network facing a lawsuit over its core business, says Mr Martin. Amazon itself has risked a legal morass by branching beyond ereaders into mobile devices, such as the Kindle Fire, with a broader range of uses, another legal expert says. Lawyers will be rubbing their hands at the prospect.

For the inventors whose ideas set the whole system in motion, meanwhile, all of this conjures up a certain air of unreality.

"I'm interested in people using my ideas," says Ms Masthoff, echoing the age-old cry of inventors everywhere – before adding, with resignation: "But then, of course, companies also have to protect their businesses."

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