

Big Tech vs Big Pharma: the battle over US patent protection

Critics fear Silicon Valley lobbying has weakened the defence of intellectual property and sapped innovation

YESTERDAY by Rana Foroohar in New York

Sherry Knowles has a very personal interest in defending intellectual property — she believes it saved her life. Ms Knowles, herself a patent lawyer, fears that the treatment that helped her combat breast cancer, a medicine known as Adriamycin, would not have been produced if the [tighter patent regulations](#) introduced over the past decade had been in place when she fell ill.

As a former chief patent counsel at [GlaxoSmithKline](#), Ms Knowles, who runs her own life sciences legal consulting firm, has a vested interest in defending IP laws. She knows that major pharmaceutical groups like GSK can only monetise new drugs based on their ability to patent innovations.

But pointing to Supreme Court rulings that have made innovations in drugs difficult to patent, and to changes in the patent adjudication system, she says it has become tougher for some groups to protect their interests.

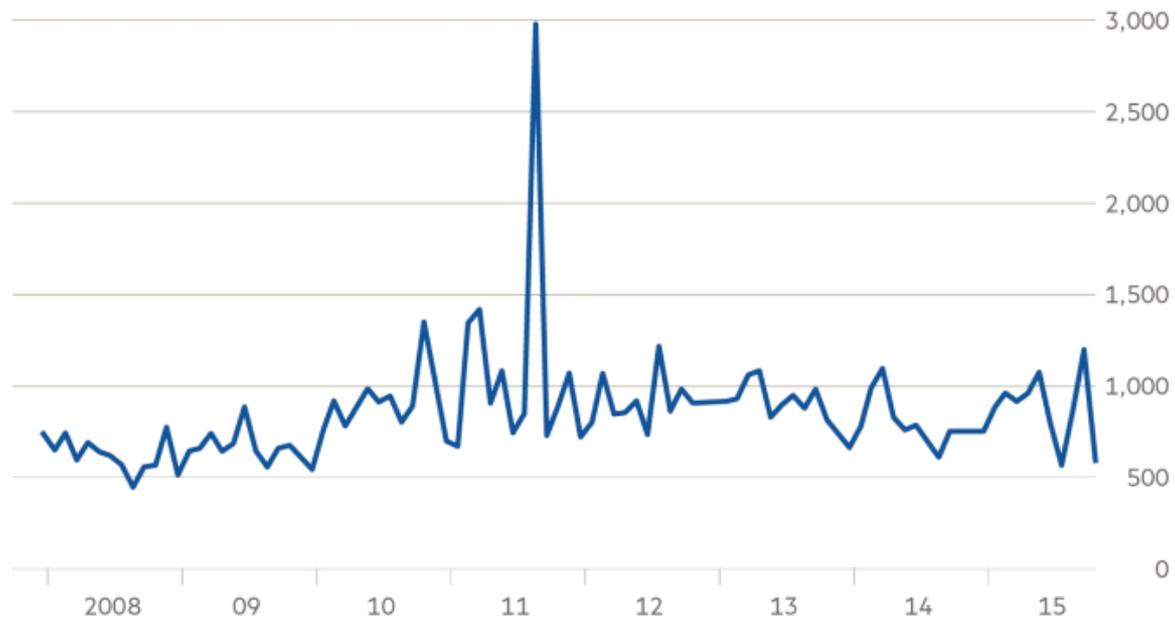
“If companies can’t defend their intellectual property, they won’t invest,” says Ms Knowles. “It’s that simple.”

Few will have too much sympathy for Big Pharma. The industry has long been in the line of fire [over drug pricing](#) and its [monopolistic power](#). But the large drug companies are only one voice among many that have begun to complain about how shifts in the US patent system over the past decade have weakened the ability of companies to protect their innovations.

Start-up biotech firms are complaining, as are a number of semiconductor and electronics firms, clean-tech companies, data analysis groups, universities and innovators working on the [“internet of things”](#) — not to mention the venture capitalists that invest in them.

The litigation myth

US patent litigation cases as measured by defendants



Source: LexMachina
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Indeed, the only ones that seem not to be complaining about the current system are a handful of the biggest Silicon Valley companies — including Google, Apple, Intel and Cisco. While they all have their own patents to protect, their business models, which involve products that include hundreds or even thousands of bits of IP, tend to do better when there are fewer patents to deal with.

But small and mid-sized software and hardware suppliers as well as life sciences companies have very different business models — ones that live or die on the ability to protect a handful of patents, and thus monetise their years of investment.

For many of these companies, the shifts in the system that began a decade ago have gone too far.

Thanks to a series of court rulings since the mid-2000s, such as eBay v MercExchange in 2007, Mayo Collaborative Services v Prometheus Laboratories in 2012 and Alice Corp v CLS Bank in 2014, and the subsequent passing of the American Invents Act under President Barack Obama in 2011, patents in the US have become harder to secure — and harder to defend.

There are numerous metrics that reflect this, but one simple measure is that the US has moved from first to 10th place globally in terms of patent protection, according to [a yearly study](#) by the US Chamber of Commerce, based on research by the Israeli data analysis group Pugatch Consilium. While the study shows the US is still strong on other aspects of IP creation, the patent system itself is now tied with Hungary in terms of the strength of patent rights.

53%

Increase in probability of securing venture capital if a start-up can hold and defend its patent, according to an NBER report

Perhaps as a result, many companies complain of “efficient infringement” on the part of larger rivals, which simply copy or take the IP they want, then settle with aggrieved parties out of court for less than the full value of the IP.

Few companies except those who have been in open litigation will go on the record with their travails, for fear of being blackballed within the tech community. Among those that do, there are numerous stories of patent fights that border on the absurd: consider Zond, a Massachusetts-based manufacturer of plasma generators whose IP has been challenged nearly 400 times, unsuccessfully, by companies including Intel, Gillette, AMD and Fujitsu.

Why did the US patent system, which was written into the constitution as a key right and had successfully fostered American IP development since its last tweak in 1952, undergo such a radical shift? In a word: trolls — which is the industry nickname for companies that issue a flurry of spurious patent filings. Or perhaps more accurately, the patent troll narrative.

When the dotcom bubble burst in the early 2000s, many companies were left with nothing of value except their patents, which were then bought up by financial companies or larger tech entities that tried to milk some cash from them.

At the same time, the software suppliers that served the burgeoning commercial internet and smartphone markets began to broaden. The majority of those companies had legitimate technologies and ideas to protect. But some “patent trolls” were playing a game of legal arbitrage, filing as many patents as possible to get larger companies to settle with them for the use of their technology.

US innovation has always been dogged by patent trolls. But by the time that Mr Obama took office in 2009, the patent troll narrative had reached a new fever pitch. It was a storyline supported by many Big Tech companies which individually and via lobbying bodies pushed for the American Invents Act.

The law established a non-court adjudication body, the Patent Trial and Appeal Board. The idea was to save time and money with the non-court “inter-parties” process, and indeed, patent claims went from taking three years and an average cost of \$2m to settle, to being done with \$200,000 in 18 months.



David Kappos, former head of the US patent office, says the argument about patent trolls 'increasingly rang false' © Bloomberg

Yet the largest tech groups, particularly Google (which declined to comment for this story) lobbied hard for even more anti-patent legislation in 2013. Companies which supported additional legislation say it would have cut out legal distortions around issues like the venue in which patent cases are heard, thereby cutting litigation costs.

“It was shocking to see calls from some in the tech industry for a second round of drastic patent legislation immediately after all we did in the AIA, and before the AIA had even gone into effect,” says David Kappos, former head of the US Patent and Trademark Office, now with lawyers Cravath, Swaine & Moore, who says the argument about patent trolls “increasingly rang false”.

Mr Kappos represents Qualcomm, one of the critics of the current system, but both he and the legal firm also represent clients on the other side of the argument.

“Ultimately, the real agenda sunk in,” he says. “This second round of drastic cutbacks to the patent system was a commercial ploy designed not to stop abuse but to cut supply chain costs by devaluing others’ innovation.”

The push for new legislation was ultimately held up in Congress. Meanwhile, Michelle Lee, Google’s former head of IP, replaced Mr Kappos as head of the USPTO. In 2013, the White House put out an alarming report on the prevalence of patent trolls and their destructive effects, blaming them for two-thirds of patent suits.

20%

Proportion of suits bought by ‘patent trolls’, according to non-partisan Governmental Accounting Office. The Obama administration had put the number at two-thirds

Yet subsequent research done by the non-partisan Governmental Accounting Office put that number at one-fifth, and other data showed that the number of patent defendants had been roughly flat before and after the AIA. (Ms Lee, who resigned from the patent office in June, could not be reached for comment.)

“The historical trend in litigation rates relative to patents granted clearly does not support claims that litigation in the past decades has ‘exploded’ above the long-term norm,” wrote Bowdoin College professor Zorina Khan, in a 2013 paper “Trolls and Other Patent Inventions”.

What’s more, she argued, a number of legislative changes seemed to address “the ephemeral demands of the most strident interest groups at a single point in time” and are “inconsistent with the fundamentals of the US intellectual property system”.

Indeed, some would argue that the system of adjudication for patents introduced under the Obama administration has become a “powerful shield” for those accused of patent infringement. Most of the verdicts go against the patent holder, leading former chief judge Randall Rader, who led the court in charge of patent appeals, to label it the “[death squad](#)” for IP.

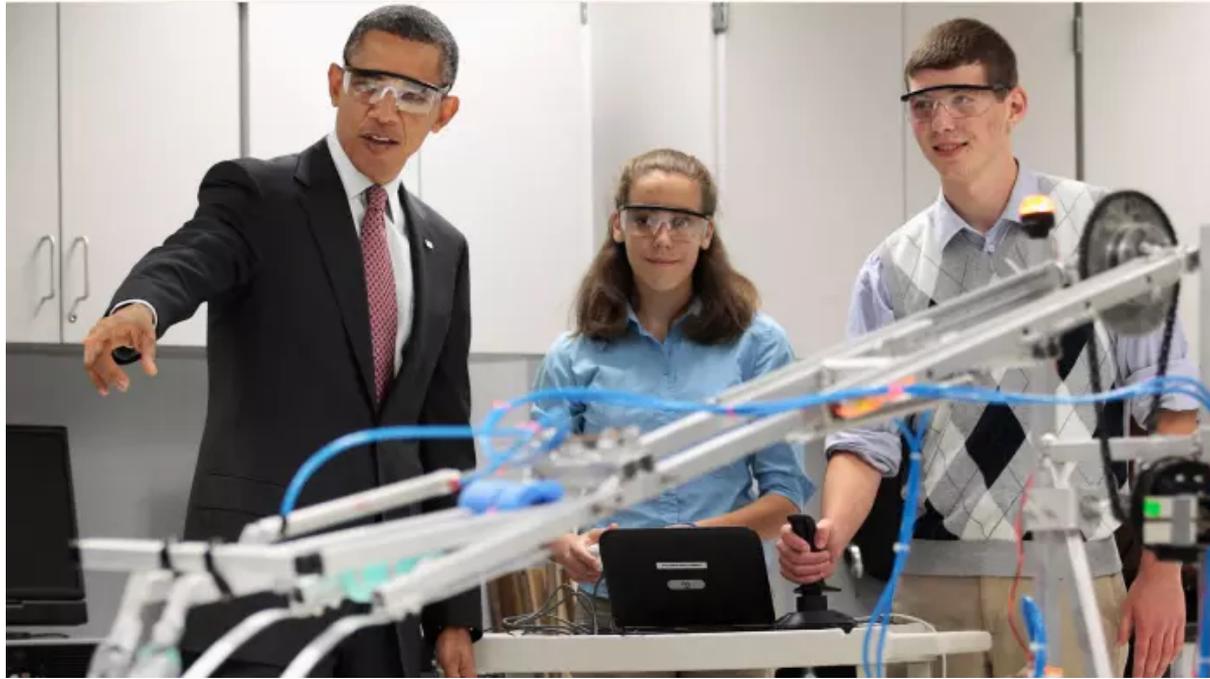
Another retired federal district court judge, Paul Michel, has become a vocal opponent of the system, arguing that excessive invalidations and the way in which the adjudication board has pre-empted court rulings are sapping both the strength of the patent system, and American innovation itself.

“The cumulative [anti-patent] effect of the Supreme Court rulings and the AIA was, together, stronger than it should have been,” he says, in part because of what he and others say was lobbying on the part of large tech firms. “Patent values are plummeting, and licensing and capital investments in many technologies are sinking. The AIA has done more harm than good.”

There are those who say there’s not much to fix in the system. Mark Chandler, the general counsel of Cisco, recently had two patents overturned in the PTAB system, but still believes it is the best way to determine patent worthiness.

“The patent right is designed to promote progress through the reward of a legal monopoly. The system is effective as long as patents represent a true, implementable technology, and patents which never should have been granted can be efficiently eliminated from the system. If the system cannot achieve this, it puts a deadweight burden on the economy by blocking innovation by others and unnecessarily driving up prices to consumers.” Companies such as Intel would say much the same thing.

The key is deciding which patents should be granted — and opinions between Big Tech and many other innovators differ wildly.



President Barack Obama visits a school robotics lab as part of a day of events marking the signature of the America Invents Act in 2011 © Getty

“You need a patent system that induces the right behaviour, which means one in which incumbents have to pay for innovations, not copy or steal them,” says venture capitalist Gary Lauder, a Silicon Valley-based investor who has poured more than half a billion dollars in funding into nearly 100 companies and 60 venture capital funds in the past 28 years, and has become an advocate for a stronger patent system.

“We need to protect the larger start-up ecosystem, which is where the majority of jobs are created,” he says. “It’s an issue that’s really crucial for our economy. Today the incumbents are copying the innovators. Next both will be copied and displaced by cheap foreign knock-offs.”

There is little doubt that strong IP protection is linked to stronger economic growth. A [recent paper](#) from the National Bureau of Economic Research found that holding a patent (and being able to defend it) increases the probability of securing venture capital funding by 53 per cent, start-up job growth by 36 per cent and start-up sales by 51 per cent. Another paper, “Patents and the Wealth of Nations” by Stanford academic Stephen Haber, found that countries that protect patents enjoy stronger economic growth. His [research also shows](#) that the patent troll narrative, and the idea that litigious patent holders can “hold up” innovation for bigger groups, is inconsistent with the data.