

Quality counts

New review procedures introduced by the America Invents Act, recent USPTO initiatives and key rulings from the US Supreme Court have increased the focus on patent quality. This marks a significant change for companies and lawyers filing patents

By **Richard Lloyd**

It is a popularly accepted truth of the IP market that in recent years the US patent system has become burdened by a proliferation of poor-quality patents. Those pushing hardest for patent reform claim that many frivolous infringement suits are founded on vague, overly broad filings, more often than not concerning new advances in software. As a result, the calls to improve patent quality have started to gain real traction.

In February 2015 the US Patent and Trademark Office (USPTO) launched its Enhanced Patent Quality Initiative, aimed at strengthening the quality of the patents that it issues, enhancing the measurement of patent quality and improving customer service. In announcing the initiative, the USPTO declared: “High quality patents permit certainty and clarity of rights, which in turn fuels innovation and reduces needless litigation.” Prior to the launch, the USPTO also revealed that it had appointed its first deputy commissioner for patent quality.

But it is not only at the USPTO that patent quality has moved centre stage. The US Supreme Court has also zeroed in on the issue, hearing several key cases in its 2013/2014 term – including *Alice Corporation v CLS Bank International*

and *Nautilus Inc v Biosig Instruments* – which have been seized on by parties in infringement suits as a way of invalidating patents that were once deemed permissible.

Alice – involving a computer-implemented business method used to resolve complex financial trades, which was found not to be patentable – is arguably the highest-profile patent case that the Supreme Court has heard in recent years. Although the court did not find all software patents invalid, as some more extreme predictions had suggested, it has caused more and more patents to be scotched on the grounds of ineligibility. For companies and lawyers looking to file patents in the IT sector, ‘*Alice*-proofing’ applications by ensuring that they are drafted as clearly and definitively as possible is now vital.

As patent lawyers digest the latest Supreme Court decisions, they also need to factor in the new review processes introduced by the America Invents Act, which came into effect in 2012. The popularity of new post-issuance proceedings – particularly *inter partes* reviews at the Patent Trial and Appeal Board (PTAB) – has further intensified the spotlight on patent quality. In many infringement suits defendants have used *inter partes* reviews to knock out claims in patents being asserted against them in court. A victory at the PTAB severely hamstring the patent in question and more often than not undermines parallel litigation.

In the current climate, the definition of what constitutes a high-quality patent is continually shifting. But there are some constants that in-house patent counsel insist should withstand any changes in case law or review procedures. “We ask, ‘Is a patent based on a genuine technological

innovation? Is there something here that's clearly contributing to what has gone before?" suggests Tim Porter, legal director, patents at Google. "A high-quality patent does that and doesn't just need current judicial interpretation."

It is against this changing landscape that IAM has once again teamed up with Ocean Tomo to reveal the leading US law firms in terms of the quality of the patents that they procure. Using the Ocean Tomo Rating (OTR), a metric which gives a quality score to each US patent granted over the last three years, the analysis covers patents issued in the industrials, consumer electronics, healthcare (including pharmaceuticals and biotechnology) and IT sectors.

The OTR is akin to an IQ score used to measure intelligence: a score of 100 corresponds to a median quality patent, while a score above 100 indicates a patent of above-average quality. As with last year's analysis, large, specialist IP practices dominate most sectors, with a few full-service firms such as Baker Botts and K&L Gates rounding out the rankings.

Ocean Tomo's research provides an apposite opportunity to analyse what patent quality means in today's patent market. Given the uncertainty that now surrounds so many aspects of the US patent system, ensuring that the applications which you file are of the highest possible quality has never been so important.

Under review

Perhaps more than any other feature of the America Invents Act, the re-engineering of PTAB review procedures has had the greatest impact on the US patent system. The new procedures – including post-grant review, *inter partes* review and covered business method review – were designed as faster, cheaper and more efficient alternatives for challenging the validity of patent claims than traditional litigation.

As an example, an *inter partes* review can cost around \$500,000 and takes up to 18 months to resolve once it has been instituted. District court litigation, by contrast, typically costs several million dollars and takes several years to conclude. A post-issuance review may pose a new threat to patent owners; but if a patent survives the PTAB, it emerges with an unmistakable stamp of quality.

That the new reviews have achieved their aim is beyond dispute. Since they came into effect in September 2012, they have proved more popular than anyone predicted: by early March 2015 a total of

Table 1. Industrials

Change from 2014	Rank	Firm	Average OTR score
↑	1	Schwegman Lundberg & Woessner	129.0
↑	2	Slater & Matsil	125.0
↑	3	Knobbe Martens Olson & Bear	124.5
↑	4	Fish & Richardson	122.7
↓	5	Perkins Coie	122.7
↑	6	Haynes and Boone	121.1
↑	7	Nixon Peabody	120.6
↑	8	Blakely Sokoloff Taylor & Zafman	119.0
↑	9	Sterne Kessler Goldstein & Fox	118.7
↑	10	Baker Botts	116.5
		Min	116.5
		Max	129.0
		Median	121.9

Table 2. Consumer electronics/discretionary

Change from 2014	Rank	Firm	Average OTR score
↑	1	Schwegman Lundberg & Woessner	131.0
↓	2	Knobbe Martens Olson & Bear	128.9
↓	3	Lee Hong Degerman Kang & Waimey	124.9
↑	4	Perkins Coie	123.6
↓	5	Fish & Richardson	123.4
↑	6	Nixon Peabody	122.8
↑	7	Haynes and Boone	121.6
↑	8	Blakely Sokoloff Taylor & Zafman	121.2
↑	9	Sterne Kessler Goldstein & Fox	120.3
↑	10	Baker Botts	119.9
		Min	119.9
		Max	131.0
		Median	123.1

2,907 reviews had been filed at the PTAB, of which the overwhelming majority (2,582) were *inter partes* reviews.

Inter partes reviews allow interested parties to challenge the validity of claims by only using prior art for any patent which is older than nine months on grounds of novelty and obviousness. Although they have been available for several years, their increasing popularity perhaps represents the biggest change in the market since IAM's 2014 quality analysis. As Steve Slater of Slater & Matsil points out: "Filing an *inter partes* review has become part of the playbook of responding to a patent litigation case."

Table 3. Healthcare (pharma/bio)

Change from 2014	Rank	Firm	Average OTR score
↑	1	Schwegman Lundberg & Woessner	132.6
↑	2	Knobbe Martens Olson & Bear	131.8
↑	3	Vista IP Law Group	129.3
↓	4	Shumaker & Sieffert	129.3
↑	5	Nixon Peabody	126.7
↑	6	Fenwick & West	125.8
↑	7	Fish & Richardson	124.8
↑	8	Perkins Coie	124.4
↑	9	Baker Botts	121.9
↑	10	Haynes and Boone	121.7
		Min	121.7
		Max	132.6
		Median	126.3



Reza Green, vice president of IP, Novo Nordisk
 “I used to think that having different rules for different sectors was a bad road to go down, but I’m not sure I see that anymore”

Table 4. Information technology

Change from 2014	Rank	Firm	Average OTR score
↑	1	Nixon Peabody	128.8
↓	2	Schwegman Lundberg & Woessner	128.8
↑	3	Slater & Matsil	127.3
-	4	Perkins Coie	125.2
-	5	Fish & Richardson	125.0
↑	6	Fenwick & West	124.8
↓	7	Knobbe Martens Olson & Bear	124.7
↓	8	Sterne Kessler Goldstein & Fox	122.3
↑	9	Haynes and Boone	121.4
↑	10	Baker Botts	121.4
		Min	121.4
		Max	128.8
		Median	124.9

The new procedures have really taken off in the IT sector in particular – as of early March, 64.3% of all review petitions filed in the 2015 fiscal year (the US government’s fiscal year runs from October 1) originated in the electrical/computer sector. By contrast, just 7.5% of those reviews involved biotech and pharma patents.

Unsurprisingly, the most common filers of *inter partes* reviews therefore include major tech titans such as Apple, Microsoft and Google. “A process like *inter partes* review is a good way of giving companies and members of the public the ability to

test the realms of a patent without having to get sued to do it,” enthuses Porter.

The greater threat of a review after a patent has been granted has fundamentally changed how claims are drafted. “Clients now want patents that will survive post-grant review,” comments Mike Messinger, a partner at Sterne Kessler Goldstein & Fox. “You need to focus on not just getting a patent by an examiner, but also ensuring it can withstand scrutiny by a panel of three judges if it is later subjected to a review.”

Sterne Kessler has emerged as one of the leading firms advising clients on PTAB reviews, a credential which enables it to file some of the highest-quality patents in the United States: review-proofing clients’ filings is easier when you know that process inside out. In Ocean Tomo’s rankings, the Washington DC-based firm features in the top 10 for patents filed in the industrials, consumer electronics and IT sectors, and places eighth in the overall ranking.

Different sectors

The relatively low rate of reviews involving biotech and pharma patents reflects the fact that filings in these sectors are typically of very high quality. A pharmaceutical company’s fortunes often rest on the prospects of a handful of patents; it is thus imperative to ensure that these can stand up to closer scrutiny.

It may also be some time before a pharma patent is actually used commercially when a new drug is brought to market. “You may not be using a patent until five, 10 or 15 years after it is issued,”

Table 5. Overall, all industries

Change from 2014	Rank	Firm	Average OTR score
-	1	Schwegman Lundberg & Woessner	128.8
↑	2	Slater & Matsil	125.0
↓	3	Knobbe Martens Olson & Bear	123.2
↓	4	Perkins Coie	122.7
-	5	Fish & Richardson	122.6
↑	6	Haynes and Boone	121.2
↓	7	Nixon Peabody	120.1
↓	8	Sterne Kessler Goldstein & Fox	119.4
↓	9	Blakely Sokoloff Taylor & Zafman	119.0
↑	10	Baker Botts	116.6
↑	11	McKenna Long & Aldridge	114.6
↑	12	Brundidge & Stanger	112.3
↑	13	Morrison & Foerster	112.3
-	14	Kilpatrick Townsend & Stockton	112.2
↓	15	Patterson & Sheridan	111.4
↑	16	K&L Gates	109.9
↑	17	Merchant & Gould	108.5
↑	18	Alston & Bird	107.4
↓	19	Wolf Greenfield & Sacks	107.3
-	20	Pillsbury Winthrop Shaw Pittman	106.1
		Min	106.1
		Max	128.8
		Median	115.6

points out Reza Green, vice president of IP at pharmaceutical giant Novo Nordisk. “That’s one of the key differences from the tech sector, where the business models are different and the lifecycle of a patent tends to be much shorter.”

One of the most notable features in Ocean Tomo’s rankings this year is the decline in the median quality of patents in the healthcare sector. In 2013 the median ranking in this sector was 138.3, but last year it dropped to 126.3. This was still the highest score of the four sectors covered in the rankings, but the gap with IT in second – which had a median score of 124.9 – narrowed considerably.

Whether these figures point to a sustained drop in the quality of healthcare patents or just a temporary blip will probably become clear only over the next couple of years, as more data is gathered. However, they suggest that as many blockbuster drugs reach the end of their patent lifecycles, the pharma sector may be struggling to replace them.

The healthcare sector has also found itself the target of a threat from hedge fund investor Kyle Bass and IPNav founder Erich Spangenberg, who joined forces at the start of the year to file an *inter partes* review concerning a patent related to a multiple sclerosis drug owned by Acorda Therapeutics. The speculation is that the two profited by short-selling the company's stock as news of the *inter partes* review broke.

Although so far this is an isolated incident, it has undoubtedly heightened the focus on patent quality in the pharma sector. If more reviews are filed against drug-related patents, there will be significant ramifications for the industry as a whole. While the new review procedures are finding favour with tech companies and speculative investors, the fact remains that to have the greatest impact on patent quality, you need to turn to the source.

As Michael Locascio, director of global IP strategy for BASF Catalysts, observes: "An *inter partes* review should be relatively uncommon. If the original examination (of a patent application) were more rigorous, then *inter partes* reviews would be used less."

The heart of the matter

Getting to grips with patent quality at the source is, of course, the responsibility of the USPTO. The idea that the agency responsible for issuing patents should be laser focused on the quality of filings is nothing new; but most would date the recent surge in interest to David Kappos's directorship between 2009 and 2013.

If anything, Michelle Lee – who was initially appointed as acting director before being confirmed as Kappos's replacement in March – has increased this focus on quality. In public appearances she makes frequent

references to the need to raise the standard of granted patents and the USPTO's various initiatives for doing so.

In January the USPTO announced the appointment of Valencia Martin-Wallace as the first deputy commissioner for patent quality, responsible for leading its various quality projects. These include the Enhanced Patent Quality Initiative, centred on the three key areas or 'pillars' of excellence in work product, excellence in measuring patent quality and excellence in customer service.

According to in-house patent counsel and members of the patent bar, the USPTO's efforts have not gone unnoticed. "I am encouraged (by the USPTO's initiatives); half of the issues with 'patent trolls' go away if patents are good quality," comments Locascio.

Sterne Kessler's Messenger highlights the willingness of the USPTO to engage the public in its quality initiatives, adding: "They've been very creative in the way they look at things like workflow." He points to the agency's track one prioritised examination programme, introduced in 2012 to give filers the opportunity to speed up the application process for a higher fee, as an example of its responsiveness.

With the debate on patent reform in Washington DC centring attention on frivolous litigation, poor-quality patents have been thrust further into the spotlight. While some outside observers may perceive the USPTO as little more than a rubber-stamping agency, Steve Lundberg of Schwegman Lundberg & Woessner insists that the reality is very different. "Attorneys have a very different experience from the wider public, who tend to focus on one or two bad patents," he says. "We have to fight hard to get claims through



Mike Messinger, director, Sterne Kessler Goldstein & Fox

"Clients now want patents that will survive post-grant review"

Methodology

The rankings in this article were generated using the Ocean Tomo Ratings™ system, which uses a regression model to calculate a raw probability score for a patent. Raw scores represent the simple probability that a patent will be maintained for the full statutory term. For convenience, these raw scores are mathematically adjusted to provide a normalised mean or nominal expected score of 100. The adjusted score, dubbed OTR™ score, is akin to an intelligence quotient or IQ used to score human intelligence. Thus, a score of 100 on the OTR™ scale generally corresponds

to an expected normal or median quality (average expected maintenance rate). An OTR™ score higher than 100 indicates above-average quality (higher expected maintenance rate), while an OTR™ score lower than 100 indicates below average quality (lower expected maintenance rate).

Of course, as with IQ, the OTR™ score provides only part of the equation for determining patent quality/value. Thus, a high OTR™ score does not guarantee high quality/value and vice versa. It only establishes a statistical correlation based on the body of available data. To create

the rankings, Ocean Tomo first selected the top 50 law firms according to the number of US utility patents issued over the trailing three years within each chosen sector and selected the top 100 law firms overall. To segment the law firms by the four representative industry groups and overall, Ocean Tomo used patents that have both a prosecuting attorney on the issued patent and an assignee. Patents that have no assignee on the record were excluded. The resulting sets were then sorted based on the average OTR™ score of those patents, top down.



Tim Porter, legal director, patents, Google
“A process like *inter partes* review is a good way of giving companies and members of the public the ability to test the realms of a patent without having to get sued to do it”

that we think are quite patentable given the prior art.”

“David Kappos introduced more comprehensive metrics to measure patent quality, which was a great start,” notes Porter; but he admits that quality can at times be hard to determine and on some occasions cannot be measured until the patent has gone through an *inter partes* review or a lawsuit.

Under the microscope

While some patents may stand out as high quality whatever the context, there are others whose quality shifts with changes in case law and the overall patent environment. As new legislation is debated in DC and the Supreme Court hears more patent cases than ever before, companies have never been under such pressure to assess the true quality of their portfolios.

When those portfolios stretch into the tens of thousands, a claim that every invention that a company owns is of the highest quality might appear somewhat

outlandish. Take Google as an example: the tech giant went from owning a handful of patents at the time it went public to more than 30,000 today. Having developed a large batch in-house and acquired a huge portfolio from Motorola Mobility in 2011 (it subsequently sold the business to Lenovo, but retained the vast majority of the patents), it has transformed its standing on the patent market. As a keen exponent of big data analysis, it has a better idea than many of what is in its portfolio; but that doesn't mean that all of its IP assets are first rate.

“I would like to think that our portfolio is as good as anyone's, but it would be naïve to think you could look at a portfolio the size of ours and not find something that doesn't raise questions,” admits Porter, who leads Google's internal patenting efforts. He adds that if this means that a number of patents may ultimately be invalid, the company can live with that.

The question of patentability – and, by extension, patent quality – has become

even more pressing for tech companies since the decision in *Alice*. Although some feared that the nine justices of the country's highest court would take the opportunity to rule all software patents invalid, the final opinion made no mention of software. In reality, the patents in question related to a business method, implemented on a computer, to resolve complex deals between financial institutions at the end of a trading day.

That the patents were ruled invalid under Section 101 of the US patent statute (the provision which describes the starting point for determining whether something is patent eligible) surprised no one. It was rather the Supreme Court's guidance on the eligibility of abstract subject matter that attracted the most attention.

Many felt frustrated by what they regarded as the court's failure to provide a test for 101 eligibility. However, some tech companies which recognise that the patents in question in *Alice* were of questionable merit believe that the case could have a knock-on effect on quality overall. Infosys associate vice president Anindya Sircar, for instance, told the *IAM* blog that the Indian IT giant generally welcomed the decision, adding: "We feel (*Alice*) should help in enabling high-quality software patents, thereby allowing more innovation in the ecosystem." Sircar did admit that in the wake of the decision, his company is considering a shift to using open source more extensively.

At Microsoft, where software innovation is engrained in the company's DNA, the decision coincides with a shift in the way the company drafts claims that has been ongoing for several years. "We're capturing the same innovations as before, but now we're making sure that we're describing things not in abstract, but in concrete ways," explains Micky Minhas, head of the tech giant's patent strategy group. That change was a response to the company filing more patents outside the United States and therefore needing to draft claims that work across multiple jurisdictions.

Both Minhas and Google's Porter acknowledge that the full impact of *Alice* is hard to quantify and may not become apparent until after the USPTO's guidelines on patent eligibility have had time to take effect and more case law has developed.

Split market

Meanwhile, lawyers who specialise in prosecuting patents are increasingly faced with a delicate balancing act of staking out

a patent's claims as broadly as possible (as most have been trained to do) and giving a filing sufficient specificity to withstand a challenge on *Alice*-related grounds or a review at the PTAB.

According to Sterne Kessler's Messenger, the evolving case law on issues such as patent-eligible subject matter means that lawyers need to emphasise how the patents they are filing move technology forward. They also need to clearly elaborate on the problems that these patents are attempting to solve. "You have to be much more focused now on the scope of a patent's claims," he stresses. This focus is new to the tech sector, he admits, but has been prevalent in biotech and pharma for some time.

In moving away from vague, overly broad patents, high-tech may be said to be following the lead of those sectors. But for some, the debate over patent reform – which, depending on who you listen to, would either reduce frivolous infringement litigation or weaken patent rights – points to a fundamental split between the two disciplines.

"I used to think that having different rules for different sectors was a bad road to go down, but I'm not sure I see that anymore; maybe one size doesn't fit all," muses Green. At a time of increasing convergence between different sectors, different regimes for specific industries may prove too challenging to introduce. But to avoid a split system, the pressure is now well and truly on ensuring that the quality of those patents being filed is as high as possible.

This is especially true for those patents that are being asserted. "In general, it should follow that inventions which are commercialised have higher-quality patents supporting them," insists John Squires, a partner with Perkins Coie. As Messenger points out: "It is an extraordinary legal right that an inventor is seeking (in filing a patent)." Ensuring that right stands up to closer inspection at the USPTO, at the PTAB and in the courts is now, more than ever, the name of the game. *iam*



Micky Minhas, head of patent strategy group, Microsoft

"We're capturing the same innovations as before, but now we're making sure that we're describing things not in abstract, but in concrete ways"

Action plan



- The premium now is on drafting patent claims with greater specificity and a tighter focus.
- With the rise in popularity of the new review procedures, review-proofing your patent filings has never been more important.
- As the case law develops, most in-house counsel and private practice attorneys hope that guidelines on issues such as patent-eligible subject matter will become clearer.

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