Quality is the key to a bright patent future

Ask anyone in the world of patents to name their top three issues and you can be sure that the importance of quality will be mentioned. A panel of leading IP professionals discuss the importance of first-rate patents

By **Sara-Jayne Adams**

Patent quality is an elusive term that seems to mean different things to different people depending on their relationship to the patent system. There is no denying, however, that it is an issue that affects patent holders worldwide and for which there is no one objective measurement.

In order to see whether there is any kind of agreement, *IAM* approached a number of stakeholders in the patent community to hear what they had to say. And while they each have their own take on what patent quality means and how best to measure it, they all agree that it is vital to innovation and economic growth.

Jonathan Barney, Managing Director of Ocean Tomo and Chief Executive of Ocean Tomo PatentRatings, LLC, USA

Like beauty, patent quality can often be measured only in the eye of the beholder.

While a certain degree of precision may never be attained in objectively measuring patent quality, there are certainly ways to probe the issue, or at least to draw statistically informative conclusions using objective criteria. For example, we believe significant insights can be drawn from analysing past renewal decisions of patent owners.

The natural attrition effect of the maintenance fee system discourages the renewal of less valuable, poorer-quality patents by placing substantial recurring costs on all patents. For example, of the patents issued in the US in 1986, only 42.5% were maintained beyond 12 years: over half were allowed to expire. A rational decision maker would renew a patent only if the expected future economic benefits from the patent exceeded the cost of maintaining it. Thus, patents that have been renewed (and especially those carried to full term) arguably hold greater value than those which have been allowed to lapse. By examining the characteristics of patents that were renewed relative to those that were abandoned, we can begin to make certain predictive assessments about the quality and likely value of other patents that share statistically similar attributes.

Unfortunately, in the US, the issue of patent quality has been adopted as a politically convenient poster-child to support more broadly aimed legislative reforms. Much of the patent reform debate currently raging is squarely framed within the context of perceived patent quality problems, but the debate is really a political one concerning fundamental issues of public patent policy.

Despite the perceived patent quality problems at the USPTO, statistically examining several objective factors going back five years, it seems like they are currently doing a good job and that patent quality is as high, if not higher, now than it was five years ago. Maintaining high patent quality is very important to ensure that applicable public patent policies are being faithfully carried out, that patents are validly granted and that the public is able reasonably to rely on the work of the patent office.

Duncan Bucknell, IP Strategist, Lawyer and Patent Attorney, Melbourne, Australia

Patent quality is an important issue, but it

doesn't have to be. The level of importance, the quality of granted patents and the way that this is achieved are really the result of a bargain between the general community and the government. In essence, the community allows the government to spend public money on a patent office in return for the government providing an effective service. Effectiveness will vary from one situation to another. The key things that the community wants to see are: (i) an acceptable standard of thoroughness in the review undertaken (which gives at least some comfort about validity); and (ii) consistency in applying that standard. It costs a lot of money to run a patent office and so, in my view, the community cannot reasonably expect an exhaustive validity review. However, it is reasonable to expect the review to be of high quality (for the price paid) and consistent.

There are many ways to achieve this. For example, it is possible for a community to prefer a 'user pays' system, where the minimum is spent on checking patents and responsibility for unearthing invalid patents sits with those individuals that wish to litigate. Therefore, patent quality really must be judged on the agreement that the patent office has with the community in each instance.

But what is patent quality? To my mind, it is the consistent examination of patents to a high standard as allowed by the revenue that the community agrees to spend on the process. In essence, it refers to a minimum level of assurance about the validity of granted patents.

Alison Brimelow

President of the European Patent Office, Munich, Germany

Simply put, patent quality is the degree of compliance with legislation and, in particular, when this is achieved in a timely manner. When achieved, the legitimate expectation for certainty of patentees is met, and companies and the public are not subjected to unwarranted costs. Trying to measure patent quality, however, even if possible, is expensive due to the costs of redoing search and examination work. Better investments are made in process improvements combined with regular checks on quality aspects.

Low patent quality can lead to prohibitively expensive litigation that can have a devastating impact on business models, especially of small and medium-sized companies. As valuations of companies are increasingly based on intangible assets, poor-quality intellectual property rights have negative impacts on free market economies rather than providing incentives to innovation, which is ultimately their purpose.

In spite of anecdotal evidence to the contrary, there is no hard empirical evidence that patent quality has substantially deteriorated in the last five or 10 years. Frequently cited indicators such as opposition or revocation rates have to be treated with great caution as they do not provide statistically sound data. With regard to the timeliness characteristic of quality, which is not covered by legislation, there has been deterioration.

Patent offices face tremendous challenges due, among other things, to the backlogs that have built up and the increase in foreign-language – particularly Asian – prior art. Patent offices are addressing these issues, implementing quality management systems and ensuring continuous improvement of processes as never before. If the challenges mentioned can be dealt with, and if real and effective mutual exploitation of search and examination work can be achieved, I believe that quality of granted patents will improve. Quality management will, however, need to be taken seriously and investments made.

Jonathan Barney
Managing Director of Ocean Tomo and Chief Executive of Ocean Tomo PatentRatings, LLC

Alison Brimelow
President of the European Patent Office

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Jon Dudas
Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, Washington, DC, USA

The most fundamental measure of patent quality is validity. At the US Patent and Trademark Office (USPTO), we assess whether a patent should be granted by determining whether the claimed invention is "new, useful, and non-obvious".

Issuing quality patents is vital, because they are key to economic growth. Every nation focusing on innovation recognises that patents are the best way to protect and promote innovation.

In the United States, our intellectual property is worth US$5.5 trillion, and we recognise that this value begins with a high-quality patent examination process. The standards of this process determine the level of trust on the part of the markets. If the markets have faith in the quality of patents being granted, many of the issues and problems that could exist down the line are resolved.

At the USPTO, our objective measurements tell us that patents today are of a higher quality than they were 10 or even five years ago. In 2006 and 2007, the USPTO had its lowest examination error rates in the last quarter-century – which is mainly due to adding significant new quality measures in recent years. By every objective measurement – including end-of-process and in-process reviews, certification and recertification of examiners and percentage of affirmances at the Board of Patent Appeals and Interferences – we've determined the quality of patents granted has been improving, and we expect this to continue because of current and future quality initiatives.

A major concern we have at the USPTO – and it is a concern I have heard from many IP offices around the world – is the room for improvement in applications coming through our door. There has been a dramatic decrease in the allowance rate, or the percentage of patent applications that ultimately get approved. Our allowance rate has dropped from 72% in 2000 to 44% in the first quarter this year. This is due partly to our quality initiatives, but much is due to the lack of quality in many applications we receive.

The US Congress is considering changes to patent law that will have a significant impact on our patent system. In response to concerns about application quality, a provision under consideration is one known as applicant quality submissions (AQS), which requires applicants to provide high-quality, relevant information at the beginning of the review process. AQS represents the most promising way to improve both patent quality and the efficiency of the examination process.

Douglas Clark
Managing Partner, Lovells

Jon Dudas
Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office

I believe that this can be objectively measured. On a population basis, we can retrospectively compare patent offices based on the number of patents that are commercialised and look at the percentage that are subsequently found to be invalid. Then we'd need to consider what the grounds for invalidity were and judge whether it was reasonable for the patent office to grant the patent in that form. So, for example, a patent office which has a lot of patents subsequently invalidated due to lack of enablement should really be doing a better job. However, those offices that have patents mostly invalidated by obscure prior art are probably already doing a pretty good job. On an individual patent basis, however, we never know the quality until it is tested – by looking into its validity, and ultimately having a court of law test it.

Overall, I think we've seen an increase in patent quality over time. The major patent offices are doing a good job of keeping up with the sheer number of patents that are filed and must be examined: a much larger number than 10 or even five years ago. Of course, this doesn't mean that fewer patents are being invalidated now than in the past, but you need to look at the number of invalidations as a proportion of all patents granted.

Douglas Clark, Managing Partner, Lovells, Shanghai, China

Ensuring patent quality at the examination stage of the patent process requires that an examiner is not allowing claims of a patent that are obviously invalid – due to lack of inventiveness, obviousness or insufficiency – to be granted. For the majority of patents, it is possible for those skilled in the field to look at the drafting, disclosure and claims, and objectively say whether the patent is of a sufficiently high quality.

A good-quality patent tells others clearly the scope of the patentee's monopoly and allows others to design products that do not infringe it or, if necessary, to seek a licence. It also enables the patentee to work, enforce or license its patent, with the comfort that it is valid.

In China, examination of pharmaceutical patents has tightened, resulting in the standard of patents improving over the last decade. However, utility models are still not examined here and the majority are clearly junk. Unfortunately, I don't hold out much hope for the quality of patents improving in the coming five or even 10 years, as most

Carl Horton

Chief IP Counsel, General Electric Co, USA

For GE, patent quality obviously starts with making sure we meet the technical requirements specified by the patent offices around the world. However, for the most part, I see real patent quality as more a question of substance than an analysis of the form of a patent. Thus, the more important items on which GE focuses in defining and managing the substantive quality include the following:

- Ensuring we are identifying and patenting the right innovation.
- Deciding on the right type of IP (patent, trade secret, publication, etc) to protect the best innovation.
- Identifying the IP with the highest potential to contribute significantly to GE's growth so that we can tailor the level of quality processes to which we will subject an asset according to its potential (eg, the highest-quality processes for the best innovation and less strenuous processes for lower-potential innovation).
- Defining upfront the specific intended purpose of the IP so that we know exactly how to measure the quality for that particular asset.

With that done we turn our attention to addressing the specific content of the patent to ensure it will survive substantive and procedural attack and still:

- Prevent free riding on our R&D investment.
- Open GE's access to new markets.
- Help GE manage our suppliers.
- Influence our customers' buying behaviour.
- Guarantee choice of partners when going to market jointly with another company.
- Be licensed or enforced for cash/share.

A solely objective analysis of patent quality (as we define it above) will be, at most, directionally correct. If you wish to assess the quality of a patent in terms of its ultimate effectiveness rather than simply its ability to survive an attack of form, you must not understand only its intended purpose, but also the landscape in which the IP is situated and the scope and content of the claims, not to mention the activity of the competitors or other third parties that are impacted by your IP.

I would say that the quality of patents in Japan and Europe has been relatively constant, or slightly improved, over the past decade. This is due to higher patentability standards and greater time being spent on each case relative to five or 10 years ago, as well as greater access to digital tools to facilitate basic processes such as prior art searching. The US was headed in the other direction over the past five or more years due to relaxed application of the standards of patentability. However, thanks to the *KSR* decision, we expect a rather sharp correction/improvement of patent quality in the US.

The big developing markets, such as China and India, should also see the quality of patents increase in the coming decade as they increase staff levels and their experience continues to grow. In jurisdictions with developed patent offices, however, I would expect there to be significant pressure on quality as they face productivity issues and significant backlogs. Ideally, if the major offices were able to work more collaboratively, they could potentially overcome their productivity issues. If not, I expect the developed offices to shift more responsibility onto applicants to help address the potential erosion of patent quality.

At the macro/political level, patent quality is an important issue because it is being viewed as the lynchpin balancing the two sides of the *quid pro quo* underlying the whole patent system. As such, making sure the patent systems are turning out quality IP and that the public is appreciating the quality of those assets plays into the integrity and long-term stability of the whole IP system.

At the operating level inside our company, we believe quality is important because when you measure quality from the back end of the process (the overall effectiveness of your portfolio) rather than the front end (how clean the portfolio is), then quality is arguably *all* we care about.

Tom Ewing
IP Value Added Consultant

Horacio Gutierrez
Vice President & Deputy General Counsel, Intellectual Property & Licensing Group, Microsoft Corporation

Carl Horton
Chief IP Counsel, General Electric Co

countries are not investing sufficient resources in recruiting qualified examiners and providing adequate training.

Tom Ewing, IP Value Added Consultant, Gothenburg, Sweden

Most issues related to patent quality will resolve themselves once a discussion on patent valuation has been completed. Current valuation metrics are not well calibrated from one patent to the next (assuming one can even find comparable data), and patent valuation is not well calibrated with other product cost drivers. Studies show that nearly 80% of the value of the S&P 500 lies in intangibles, and for many technology companies their IPRs represent the lion's share of their intangibles. So there are strong incentives to sort out the valuation question.

Patent quality is a key component of patent valuation. The two components of patent valuation are: the commercial value of the underlying invention; and the quality of the legal document and the related prosecution procedure that defines the patented invention. Patent quality speaks to the latter, but has no impact on the inherent commercial value of the invention itself. An invention of minor commercial significance is patentable and probably should be, so long as it satisfies the legal tests for patentability.

You need only look to Charles Dickens' *A Poor Man's Tale of a Patent* to see that the Patent Office has always been an unappreciated and unloved government department. There is a range of complaints:

- Legal practitioners and inventors have long complained that the Patent Office takes too long to review applications and rejects claims that should be allowed.
- Economists generally disdain any economic power that arises from a legal right.
- The open source movement probably cannot achieve its original goals so long as patents exist.

- Multinational incumbents have lately adopted a "Goldilocks" approach in which they would like to see a "just right" number of patents, which would still allow them to retain significant IP assets while not having to worry much about IP threats from smaller competitors.

In short, much, but not all, of the complaints about patent quality are really part of a larger argument about patent valuation. And many of the loudest voices in the discussion primarily advance arguments to support a particular agenda rather than reporting the results of a dispassionate study on the topic. The rate of patent invalidity in litigation as a fraction of the number of patents granted is likely lower now than it was 20 to 30 years ago.

Horacio Gutierrez, Vice President & Deputy General Counsel, Intellectual Property & Licensing Group, Microsoft Corporation, Redmond, WA, USA

From our perspective, patent quality starts with patenting inventions that are aligned with our business strategies, goals and priorities. In general, the proof in the quality of a patent can be measured by how often patents are cited as prior art in other patents and applications. Furthermore, the amount of prior art cited in a patent is a good indication of its quality. Microsoft is regularly cited by other patentees in the industry, and we cite more prior art in our patents – particularly more scientific and research papers – than most other patent holders. Those two factors are key contributors to why Microsoft has achieved the top rankings in the two leading patent portfolio quality indexes.

The IEEE (Institute of Electrical and Electronics Engineers) and the Patent Board objectively assess patent portfolio quality by, among other metrics, looking at the degree to which a company's patents are cited as prior art by subsequent patent applications, as well as the number of scientific publications referenced in a company's own patent applications. The number of times a patent is cited in other patents is considered a good indication of how innovative and influential it is. Microsoft's patent portfolio is now ranked #1 by both the Patent Board IT Industry Scorecard and the IEEE Patent Power rankings (both overall and for the Computer Systems & Software Industry).

For Microsoft, and the IT industry as a whole, IP is the currency of innovation, so maintaining the quality of that currency is critical. We are one of the biggest investors in R&D in the world, spending US$7.1 billion last year. Our patent filings maximise the value of that R&D by capturing the innovation it represents and the intellectual property it produces – particularly innovations that are aligned with our business strategies. We have entered into over 475 IP licensing agreements since 2003 with like-minded companies who believe the sharing of quality IP fosters innovation throughout the IT ecosystem and ultimately benefits consumers.

There is no doubt that IT and other industries have placed a growing demand on the world's patent offices because of the accelerated pace of innovation we have all fostered. That is why we are working collaboratively with other like-minded industry participants, patent offices and universities around the globe to help facilitate technological solutions to some of the challenges patenting bodies face, to ensure the quality of patents being granted does not suffer.

Masanobu Katoh
Corporate Vice President and President, Law & Intellectual Property Unit, Fujitsu Ltd

Masanobu Katoh, Corporate Vice President and President, Law & Intellectual Property Unit, Fujitsu Ltd, Japan

In general, I think that the quality of a patent depends on its incontestability. A high

standard of examination, with detailed guidelines and well-trained examiners producing consistent examination results, is vital to ensuring this quality.

Quality, however, means different things to different people. Our company looks at the issue of quality from two perspectives – that of the patent owner, but also through the eyes of society in general. For the patentee, a quality patent provides broad coverage that enables them to enforce their rights against third parties where necessary. Society benefits from a thorough disclosure of an invention providing information on its technical use.

The most important factor in the objective measurement of the quality of a patent is its market impact. We, as a rights holder, evaluate inventions using multiple indexes including the possibility of use in the market and the scope of such use. Some would argue that the quality of inventions should be evaluated based on the level of useful contribution to the economy and industry.

Patent enforcement cases have increased extensively in Japan over the last decade – most probably, due to the improvement of the quality of patents granted. However, while we have seen improvements, we are not totally satisfied with the current status of patent quality. There are many inconsistencies in the rules of different countries and, even within one country, the practices of examiners are not necessarily consistent.

However, I predict that we will see significant improvement in the quality of patents granted in the coming years. Thanks to initiatives such the trilateral PTO talks, significant steps towards harmonisation are being taken. There are moves not only to harmonise laws and rules in different countries, but also to create more consistent and compatible examination practices.

As a technology company, Fujitsu recognises that intellectual property is one of our most important assets. Improving the IP system will inevitably increase the value of our technology. Since companies today have international corporate strategies and initiatives, it only makes sense that intellectual property systems must improve globally as well.

Lars Kellberg, Corporate Vice President and Head of Corporate Patents, Novo Nordisk, AS, Denmark and **Reza Green**, Chief Patent Counsel, Novo Nordisk, Inc, USA

Patent quality is an important issue because of the business expectation and reliance associated with the property right that a patent represents: you do not buy a house with the expectation that it will collapse around you the week after you move in. It becomes difficult to justify a major effort to acquire patent rights if those rights turn out to be 'weak' (ie, invalid and/or unenforceable) and thus not useful for the chess game that is licensing and litigation.

Patent quality is extremely contextual and validity is a moving target. It is difficult to evaluate patent quality without considering business value and validity/enforceability. In general, a quality patent is one that has claims of broad enough scope to provide a useful swath of exclusivity to the patent holder, while at the same time being valid and enforceable at face value.

With respect to Europe, patent quality has continuously been improving since the establishment of the EPO. Whereas, leaving aside software and business method patents, we believe that the overall quality of US patents being awarded today is approximately the same as it was five or 10 years ago.

The quality of patents is directly linked to the functionality of the USPTO which, unfortunately, is not moving in the right direction. Having said that, it is important to remember that patent quality is fundamentally under the control of patent applicants; it is a direct reflection of the quality and scope of innovation that leads to

Sherry Knowles
Senior Vice President Corporate Intellectual Property, GlaxoSmithKline

Pauline Newman
Judge of the United States Court of Appeals for the Federal Circuit, USA

The question of patent quality requires a threshold focus on the standard by which quality is measured, which in turn is determined by the purpose of a system of patents.

The purpose of a system of patents is to serve the public interest in advances in science and technology, as manifested in the products of technology-based industry. Patent quality is measured by the effectiveness of the patent in contributing to the economic incentive to develop and commercialise advances in science or technology, with the resultant public benefit of new products, new industry and new opportunities, all tending to national economic growth. A patent that is vulnerable because of legal or technical flaws, or a patent that can readily be circumvented, is of diminished quality, no matter how elegant its technical content. And a patent system that is uncertain, or a patent law that is unpredictable, places a burden on innovation for which there is no balancing benefit. In turn, clear and objective standards for the grant and enforcement of patents are essential.

In implementation, quality starts with the first step: the examination in the Patent and Trademark Office. This is the strongest reason for a system of public participation such as opposition and re-examination, to catch errors and oversights in the examination process, to provide an inexpensive way of eliminating or adjusting the patent grant. Today much is heard about problems of patent examination, enlarged backlogs, appeals and judicial review, as well as concern for finding the optimum balance between the innovator and improver. As we face these difficult and complex questions, let us not lose sight of the overarching purpose of patents, to support the creation and dissemination of products of new technology.

These questions are of ever-increasing importance, for today science and technology are the foundation not only of the industrial economy, but also of vast societal changes. Familiar legal principles are being tested in new arenas, as scientific advances are brought to public benefit. Patents provide the broadest, most equable and most available incentive for technological creativity and industrial commitment. The quality of a patent is measured by how effectively it fulfils that purpose.

a patent application. Therefore, the question of future patent quality is linked to the level of true innovation.

Sherry M Knowles, Senior Vice President Corporate Intellectual Property, GlaxoSmithKline, USA

In order to have a first-tier economy, a country must provide:

- Commercial laws that protect and incentivise innovation.
- A strong, intelligent and impartial court system to resolve business disputes.
- A strong patent system to provide an adequate return on investment and encourage innovation.

When any of these three factors are missing, the economy and the country suffers.

From this strong patent system must come quality patents. I would define a quality patent as one which adequately teaches someone of ordinary skill in the art how to make and use an invention. It must effectively demonstrate that the applicant was in possession of the invention at the time of filing. It must furthermore include claims that are clear and adequately define

Chris Mercer
President of the EPI

Pauline Newman
Judge of the United States Court of Appeals for the Federal Circuit

the metes and bounds of the invention over prior art.

It seems to me that the quality of patents awarded today is mixed. The standard of those issued for established art units, where the search and examination requirements are well worked out, is fairly high. Newer areas of technology – such as software and business method patents, in which the requirements for patentability and the ability to conduct a thorough search are difficult – yield more variable results. A lack of adequate examination time is another reason for variable patent quality. In the United States, patent examiners are urged to give only one non-final office action before providing their final decision. This often does not allow for a meaningful dialogue between patent office and patentee. Sometimes this is not enough time to understand the invention or the relationship of the prior art to the claims, resulting in mistakes.

To increase the quality of patents granted, patent offices need to reduce examiner turnover, give examiners more time (and more office actions) to reach well-considered decisions and increase examiner pay. Economic disincentives may be considered to motivate patent applicants to consider carefully the number of applications and claims filed, and to account for increased work burden – something that is currently used by the EPO.

Chris Mercer, President of the EPI, UK

The only way in which you can define patent quality without inventing other criteria which then cannot be effected is by judging a quality patent as one that meets all the requirements of the relevant law. Thus, an EPO patent is of good quality if it meets the criteria of the EPC. It seems to me that there are those that say that the quality of patents is too low without saying why.

The quality of patents at the EPO seems to have remained much the same, if not improved, over the last decade. And while

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the quality of patents issued by the USPTO has declined, it has not done so dramatically. The main problem that dissenting voices raise is that there are too many patents and that, therefore, the standards must have fallen. However, there is no inevitable connection between numbers and quality. The number of granted patents reflects the number of applications as well as the quality of the granting procedure.

Over the coming five years, we will hopefully see the quality of examination at the EPO become more consistent and there will be fewer exceptions to the usual high standard. I feel that it will be more difficult, however, for the USPTO to raise its standards as the main problem there seems to be that they cannot retain examiners, and while this remains the case, the quality of examinations will not improve.

Costly re-examination of a patent is the only objective way of judging its quality. The problem, however, lies in determining the presence of inventive step, which is really a matter of judgement. At present, the final arbiters of validity of any patent are the supreme courts in the relevant countries. However, as these see only a very small selection of patents, this does not give any real idea as to whether all patents that are granted are in fact obvious. The Appeal Board at the EPO sees more granted patents than any other body and, therefore, an analysis of decisions of the Boards of Appeal might give some idea as to whether patents have been correctly granted. However, that will also depend on whether new prior art has been cited. Thus, it may be possible to review quality by reviewing BoA decisions. However, probably the best way to measure quality is for an independent body to review whether a representative selection of patents meets the requirements of the legislation. The main problem with this is that it will be expensive and no one seems to be prepared to pay.

The real problem comes if there are a large number of patents in existence that should not have been granted. These present unfair obstacles to companies who may wish to enter a particular market and, thus, will inhibit economic development. It is costly to prove that a patent is not valid and so companies will rather not bother than invest the money to clear the way to enable them to enter the market.

Stephen Potter, a director and immediate past chair of the R&D Society (UK), based in Glion, Switzerland

The term "quality" covers a multitude of sins. To me, a quality patent should cover an invention that is meaningful; creates commercial advantage; has well-written claims, maximising the coverage; and has been filed and prosecuted correctly. It's worth asking the following questions:

- Has a large area of subsequently interesting activities been protected by the patent?
- Does the patent protect an invention that is shown to be important over a period of time?
- Has the patentee been able to generate value that wouldn't have existed without the patent?
- Would the patent stand up in front of the highest possible court in which it could be litigated?

The quality of patents today is higher now than it was five or 10 years ago, and there are several indicators that we should see further improvement over the coming 10 years. Patents are being attacked by a wide variety of disparate interests and I believe that this competition will drive inventors to do a better job of protecting them.

Patents are becoming increasingly liquid assets and their value – helped by the public auction process – is increasingly transparent. In these circumstances it is becoming clear that most patents are not worth the paper they are written on, and that some are worth a hell of a lot. This will drive inventors and lawyers to question and focus their patenting.

Patent quality – as given by the different parameters I've mentioned – creates and drives value. I agree that, for many of the parameters, it is a quality judged by hindsight and is extraordinarily difficult to foresee. It is also highly dynamic: the patent laws may change, and technologies and markets are growing and dying ever more rapidly – just look at how drastically the invention and commercial quality of the "Vioxx" patent changed between 2000 and 2008.

I am extremely suspicious of attempts to create an "ISO" type of evaluation for patent quality and value, leading to statements that "the average value of a European patent is Euros 300,000". I'm worried that this will be a waste of time and effort whose results, if any, will be highly misleading, and lead to poor economic and business decisions.

Intangibles are now the most valuable assets that organisations have and, sooner or later, CEOs will have to realise that all the

Stephen Potter
A director and immediate past chair of the R&D Society (UK)

legal ways of protecting them, including patents, must be a key strategic and tactical board subject and be treated accordingly.

Manny W Schecter, Associate General Counsel Intellectual Property Law, IBM Corporation, USA and **Marian Underweiser**, Intellectual Property Law Counsel IP Law Strategy & Policy, IBM Corporation, USA

Strong intellectual property systems encourage innovation. Today, a major threat to innovation – and the business and societal benefits it generates – is the issue of patent quality.

Patent quality refers to how well a patent meets the legal criteria for patentability. This includes both differentiation over the prior art and appropriate clarity, so that the public can delineate the scope of patent coverage. Quality is to be distinguished from value, which reflects characteristics such as the market for the invention.

IBM believes that patent quality has suffered in recent years, as patent offices have been overwhelmed with an expanded scope of patentable subject matter and an increasing volume of ambiguously worded applications. Overly broad patents for ideas without merit lead to speculation and litigation that divert resources from research and development, stifle real innovation and increase prices.

IBM also feels that patent applicants, and even the public, can help improve patent quality, and that applicants have a responsibility to do so. We therefore initiated several patent quality initiatives in cooperation with other companies and academia to enhance patent examination and measure patent quality.

To enhance examination, IBM established the Open Source as Prior Art (OSAPA) and Peer to Patent (P2P) projects. The OSAPA project attempts to capitalise on the inherent transparency of open source software to make it more available as prior art. The P2P project is a pilot with the USPTO that allows the public to collaborate and identify prior art relevant to pending published patent applications. More than 36,000 registered users from around the world are participating and have provided nearly 150 prior art citations on a few dozen test applications.

To measure patent quality, IBM established the Patent Quality Index (PQI) project. The PQI will compare measurable characteristics of patents that have been found valid by the Court of Appeals for the Federal Circuit with those of patents that have been found invalid. The characteristics which correlate to patent validity will be weighted and aggregated into an index that will be useful in monitoring trends in patent quality over time and between industries, and should encourage better applicant and examiner behaviour.

Patent quality is important because patents convey powerful rights to inventors which impact on their competitors and, more

Manny Schecter
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importantly, the public. Patents themselves will become more important as our global economies continue to shift to become knowledge-based economies. It is imperative, therefore, that we address patent quality issues today, to ensure that our patent systems can promote innovation in the 21st century.

Peter Spours, Director, IP Transactions & Strategy, TomTom, The Netherlands

Patents are business tools often considered as 'transaction currency'. The right to stop infringers is usually converted to the extraction of a financial remedy, this being one measure of a patent's worth. But what is quality? Many would say that it is the same as worth. It is easy to say that a patent that has achieved a high financial return is a high-quality patent, but this is a judgement that can only be made after the event. How can we make a judgement before pursuing an adversary or setting up a licensing programme? Here follow some pointers:

- Is this an early patent in its field? A good test is to look at citations. If the patent cites few other patents as prior art, but lots of later inventors refer to it, that's a great start.
- Are the claims short and in plain language? Business people need to 'see' infringement.
- Would a jury understand the invention? Companies take licences only if they believe the licensor would litigate and they could face an injunction. If the invention is too esoteric, it will be lost in the courtroom and the prospect of a successful outcome far less certain.
- Is the patent key to a valuable area of commerce? There is little point in licensing a patent if the royalty return is small.
- Are there standards involved? Is there a history of licensing in this field? Is there a real need for the technology underlying the patent? Can these patent claims be avoided?

All these issues either add to or destroy value in a patent, but it would be a brave executive who tried to evaluate each element objectively. Rather, these issues point to a judgement that those skilled are able to make and act upon. But are they measures of quality? I think so, because a patent is worth having only if it has transaction currency potential or acts as a successful deterrent to others to stay away from the patent owner's business interests.

Margareta Ydreskog, Group Patent Manager, Corporate Strategy and Business Development, Saab AB, Sweden

Patent quality has very little to do with the invention itself, but everything to do with how the invention is defined in the patent. The description should be a complete and clear description of the inventor's contribution to the state of the art, including a set of claims that covers the invention – and only the invention.

In order that patents granted are of a high quality, efficient search and examination proceedings are required, and a final decision on the application should be formed without undue delay. It is also essential that there is a possibility for third-party contribution in the administrative process.

I strongly believe in the patent system as a motor for innovation and a tool for technology transfer. In order to serve as such, patents should be granted only for inventions that clearly provide a contribution to the state of the art. Improved patent quality would enhance trust and confidence for the patent system – something I believe would open the system up to new users. SMEs, in particular, need a patent system that awards true inventions and discourages patent applications for ordinary innovation.

The requirement for accreditations, such as the EQE (European Qualifying Examination), has led to greater consistency in the work of patent attorneys, which is of course beneficial to patent quality. However, there is a worrying trend of applicants attempting to cover much more than the invention in their patent application. I would prefer to see specifications that are more to the point, and of course examiners that react and object to vague language.

Furthermore, it appears to me that requirements for inventive step have been lowered. An application put in the right language and the right format may proceed to grant without the invention having made sufficient contribution to the state of the art to merit the grant of the patent.
A combination of low inventive step, unclear description and vague claim definition provides for low patent quality, at the cost of all involved. ■

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