

The patent monetisation hurdle race

It has never been harder to monetise patent assets. Governments and regulatory authorities must step up to make the current hurdle race to success much less taxing

By Roberto Dini and Alessandra Mosca

In recent years, we have witnessed a global erosion of patent rights which is starting to affect innovation. Rights holders around the world are suffering as a result of low or non-existent royalty rates for use of their patented technologies, while the process of obtaining protection for ideas has become increasingly time consuming and costly. Patent monetisation has become a hurdle race in which fewer than ever can complete.

Governments and institutions urgently need to restore confidence in the patent system by acting decisively to remove these barriers and encouraging innovators to innovate.

First hurdle: prevent inventors from pre-publishing

Inventors often get extremely excited when they develop a new idea and rightly so. However, such exuberance needs to be controlled – at least until the invention is properly protected by a patent, if eligible, or some other form of IP protection.

Unfortunately, inventors are often under a great deal of pressure to early-disclose (ie, to divulge before they can file for patent protection) their inventions. The following three factors are particularly dangerous:

- the absence of strong IP structures in research centres and universities due to a lack of awareness of the benefits of protecting intellectual property;
- peer pressure to early-disclose from other researchers or academics; and
- the need to disclose information to potential investors.

While open access to R&D is a fundamental cornerstone of our society and many academic institutions champion and nourish a collaborative, accessible, open environment for innovation, in recent years there has been a drift towards free access to research. The patent system was designed to encourage open innovation (which should not be confused with free innovation), since it protects and discloses at the same time. However, disclosing your invention through early publication without patent protection favours free innovation. According to the European IP Rights Helpdesk, IP assets within the open innovation scenario should be considered “an advantage and no longer a barrier, an opportunity and no longer a cost, and an option for the second intellectual property market”.

Academics are often evaluated based on the publication of scientific works in reputable journals or presentations

at international conferences. While this is an excellent framework for evaluating the impact of research, it should not be the only metric. Researchers should also be encouraged to seek real-world applications for their ideas. Patents, among other forms of IP protection, are one tool available to allow inventors to translate their research into products or services (through either commercialisation or licensing), and to gain a strategic advantage over other researchers working in the same field.

Innovators are often faced with a dilemma when it comes to raising capital to spin off an idea or scale-up development: shall I invest resources and (often limited) cash for patent protection or shall I disclose my innovation early in the hope of luring investors into a venture? Any disclosure carried out before patent (or other IP) protection is in place should be provided under a non-disclosure agreement (NDA) only. Unfortunately, sophisticated investors often resist the use of NDAs – negotiating them takes time and resources, and they can be hard to scale when faced with the prospect of dozens (or even hundreds) of potential deals per year.

Publishing and disseminating one’s own ideas does not necessarily conflict with patent protection – in fact, it should be highly encouraged after protection is sought. The goal should always be for wide market acceptance and the best way to obtain this is to let the world know about your ideas.

Individual inventors, academics, researchers and anyone with a creative mind should be educated and reminded of the importance of IP protection. Hence, strong IP practices should be encouraged among companies, universities and research centres to increase the possibilities of monetising inventions. At the same time, the right incentives and the appropriate guidelines should be available to ensure that inventors are not forced to disclose before they have the correct protection in place.

Second hurdle: patent attorneys

Assuming that you have decided to file for a patent application and have not disclosed your idea early, a second serious decision is: who do I talk to now?

Intellectual property lies at the intersection of law and technology; IP professionals thus need to have both wide expertise and a multidisciplinary approach. Finding the right patent attorney is not like finding a plumber. Even the best patent attorney in the world may not have the right skills to understand your idea or may lack sufficient time to dedicate to your case and ensure a quality result;

or he or she may simply be unaffordable.

The first issue – having the right skills – is crucial: a badly written patent application is a waste of money. It is crucial to pick a patent attorney who has successfully prosecuted similar technologies in the past and who fully understands the subject matter and its potential applications.

The second issue – sufficient time – is also a delicate one and must be carefully addressed by the applicant and honestly approached by the attorney.

Finally, the issue of cost is always a constraint. Even the largest corporations do not have unlimited time and resources to dedicate to intellectual property and need to compromise on the number of filings, geographical coverage, divisional applications and continuations. Rather than focusing on quantity, inventors should strive for quality.

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Third hurdle: convince examiners

Once a patent application has been filed and prosecution is ongoing, the inventor and the patent attorney face an uphill battle. Patent examiners around the world have a limited amount of time to dedicate to each application, which can result in a conservative approach: applications are generally assumed not to be patent eligible unless proven otherwise. The inventor thus bears the burden of convincing the examiner that the subject matter is inventive, non-obvious and novel, and hence patentable.

With regard to patent attorneys, examiners are not omniscient. Even if the subject matter generally falls within their area of expertise, they may not have the right skills or experience to fully understand the nuances of the application at hand. Further, the ever-growing

number of applications filed every year and the constant budget cuts faced by many patent offices around the world mean that the workload of examiners is increasing significantly year on year (and, as a consequence, shrinking the amount of time that examiners can devote to each application).

Fortunately, some patent offices are taking the right approach to ensure that the quality of granted patents remain high (or even increases), and that examiners’ workload is kept under control. The European Patent Office (EPO), for example, has taken the following measures to increase patent quality and broaden examiners’ subject-matter expertise:

- attracting and retaining highly qualified examiners;
- focusing on intensive, regular training for examiners;
- implementing quality management and quality audit procedures;
- ensuring that every application is seen by three examiners;
- making directors accountable for prosecution quality;
- investing in patent search tools;
- overseeing industry outreach, coordination and events;
- obtaining ISO 9001 certification; and
- coordinating with other patent offices.

Thanks to this proactive approach, the EPO was rated top among the world’s five largest patent offices for patent quality and service, according to a recent *LAM* survey.

Fourth hurdle: work towards swift grants

Limited investment and budget cuts at patent offices around the globe are affecting the quality of examinations, with applicants often having to go through a lengthy series of rejections and oral proceedings. This fact – coupled with the large number of applications being handled by each examiner – can cause significant delays.

R&D cycles, especially in information and communication technology and electronics, are getting shorter and shorter, with technologies quickly becoming obsolete. Unfortunately, patent offices run the risk of becoming bottlenecks due to delays in obtaining protection.

Such delays could result in the wider use of trade secrets and proprietary, closed solutions – to the detriment of innovation.

Fifth hurdle: oppositions, *inter partes* reviews and appeals

Once a patent has finally been granted, the inventor should be able to reap the benefits of his or her own work. However, the opposite appears to be the case, as there are several additional obstacles before the granted patent can be monetised or enforced. Several patent offices around the world have established procedures whereby anyone can challenge the validity of a granted patent.

While the EPO allows parties to challenge patents for a limited timeframe after grant, other patent offices (most notably the US Patent and Trademark Office (USPTO)) set no such limits and allow challenges to be requested any time during the life of a granted patent.

As a result, many applicants will see their granted patents challenged in several jurisdictions, especially if those patents are needed by a third party to manufacture a product or provide a service. In some cases, such oppositions are requested and established by unrelated third parties – so-called ‘straw men’ – or even companies

FIGURE 1. How to protect ideas and recoup R&D investments

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- Prevent the inventor from pre-publishing the invention
 - Find the right patent attorney and carefully protect the invention
 - Convince examiners around the world
 - Convince patent offices to grant the patent before the invention becomes obsolete
 - Navigate through oppositions, *inter partes* reviews and appeals
 - Negotiate with unwilling licensees
 - Establishing fair compensation for inventors with an adequate royalty level

whose business it is to challenge the validity of patents being used by their members (eg, Unified Patents in the United States).

Defending an opposition or an *inter partes* review is expensive, time consuming and often frustrating, as many of the challenges overcome during prosecution must be addressed again. The risk of invalidation is high, as no patent office can be considered technically reliable when it comes to reviewing applications. In any normal service industry, if you fail to get what you paid for, you can usually obtain a refund. However, if a patent office fails to do a good job in reviewing your patent and it is granted only to be invalidated later on, no refund is available.

Rather than incentivising inventors to file for patent protection, patent challenge procedures act as an additional hurdle to applicants and favour free riders that simply want to use the patented technology without paying for a licence. A possible remedy against frivolous or unsubstantiated invalidation requests could be to introduce provisions compelling the opposing party to reimburse the costs borne by the patent owner if it loses the case.

Sixth hurdle: negotiate with unwilling licensees

If an industry player uses and infringes a granted patent, the likelihood of it then actively initiating licensing discussions with the patent owner is extremely low. Instead, the patent owner must usually bear the burden of contacting potential licensees, demonstrating infringement and proposing a licensing deal. For example, in the United States, damages do not even begin to apply to an infringement until the rights holder puts the infringer on notice; even then, notice requirements are extremely technical and thus often improperly given.

In today's environment, the willingness of potential licensees to enter into licensing discussions is generally low. Several companies follow the so-called 'efficient infringement' method: they use the technologies and simply refuse to take a licence. If the patent owner sues them, they generally challenge the patent through an opposition, an *inter partes* review or some other post-grant invalidation mechanism.

If the patent at stake is necessarily infringed by practising an international standard (a standard-essential patent (SEP)), the patent owner is often

required to declare it to the appropriate standard-setting organisation and to commit to licensing under fair, reasonable and non-discriminatory (FRAND) terms. The FRAND licensing framework has been designed to encourage early declarations and allow standard-setting organisations to continue development with increased transparency. By postponing commercial discussions until after the standard has been finalised and adopted, FRAND incentivises broad participation by all stakeholders to the standardisation process.

Unfortunately, courts are increasingly suspicious of licensing offers made under FRAND terms, often challenging the royalty rate or refusing to grant injunctions. Owners of SEPs often come under scrutiny from antitrust authorities, sometimes claiming an abuse of dominant position. While the European Court of Justice has provided some clarity on FRAND, even calling the commitment a "two-way street" where both implementers and patent owners commit to FRAND, additional hurdles remain for patent owners when it comes to enforcing their rights in the presence of a FRAND commitment.

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Seventh hurdle: fair compensation and adequate royalties

Much confusion, if not bad faith, surrounds the determination of fair royalty rates for FRAND-encumbered patent portfolios, with never-ending discussions as to the level of those royalty rates now the norm. Moreover, some courts and, in particular, government agencies are not helping the discussion by getting involved in what should be the outcome of a commercial discussion between patent owners (technology providers) and licensees (implementers).

FIGURE 2. Contribution of IP rights intensive industries

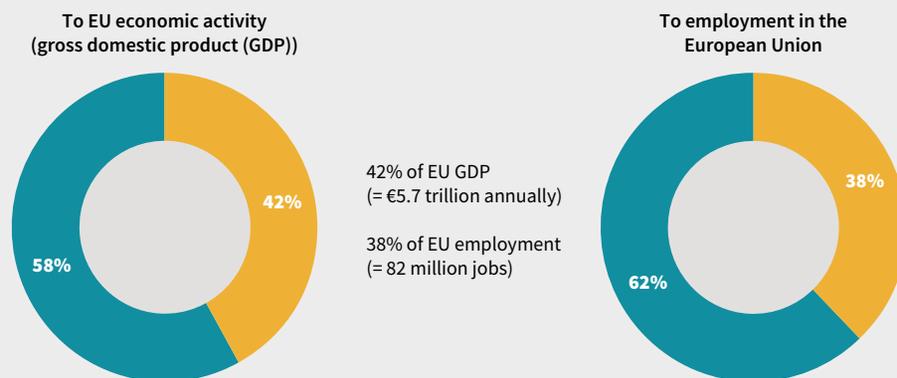


TABLE 1. R&D expenditure (% of gross domestic product), 2014

South Korea	4.29%
Israel	4.1%
Japan	3.58%
Germany	2.86%
United States*	2.72%
France	2.25%
China	2.04%
European Union	2.03%
United Kingdom	1.7%
Canada	1.61%

Source: Analysis on World Bank Data
*2013

FRAND is a dual commitment by technology providers, which commit to offering a licence on FRAND terms, and implementers, which commit on entering good-faith negotiations to take those licences. FRAND is an incomplete contract which balances the need for standard-setting organisations to include the best technologies in a standard and the requirement by technology providers to earn a return on the investment they have made in developing those technologies. Hence, FRAND defers all commercial discussions until the patented technologies are implemented in the market. Much confusion has thus been generated by trying to calculate *a priori* the royalty amount which needs to be paid to the patent owner for use of a certain patent or portfolio.

Further confusion, if not bad faith, arises when potential licensees or courts suggest or attempt to calculate a fair royalty level for a complex device by starting at a percentage of the cost of the component itself, rather than the price of the device as a whole. In the mobile phone business, this is referred to as the “smallest saleable unit theory”. Crucially, it completely fails to recognise the value added to the consumer of the patented technology and focuses on cost rather than value to the end user.

For example, the value added by including a WiFi module into an appliance goes well beyond the cost of such a module, as it allows users and the manufacturer alike to access several functionalities which would not have otherwise even been thinkable (eg, remote monitoring and provisioning, software updates, smart usage and in-home interconnectivity). As stated by Judge Davis in *CSIRO v Cisco*: “Basing a royalty solely on chip price is like valuing a copyrighted book based only on the costs of the binding, paper, and ink needed to actually produce the physical product. While such a calculation captures the cost of the physical product, it provides no indication of its actual value.”

Ultimately, the licence cost should be included in the final price to the consumer and the discussion should move away from licensee affordability towards what the market can bear. To put it another way, what is a consumer willing to pay for the end product, royalties included? The level of royalties would then be market driven and the price of a product, including royalties, would determine the volume (eg, of mobile phones) sold.

TABLE 2. US median costs of patent litigation

Less than \$1 million at risk	End of discovery	\$400,000
	Inclusive, all costs	\$600,000
	Mediation	\$100,000
\$1-\$10 million at risk	End of discovery	\$950,000
	Inclusive, all costs	\$2 million
	Mediation	\$200,000
\$10-\$25 million at risk	End of discovery	\$1.9 million
	Inclusive, all costs	\$3.1 million
	Mediation	\$250,000
More than \$25 million at risk	End of discovery	\$3 million
	Inclusive, all costs	\$5 million
	Mediation	\$300,000

Source: AIPLA Report of the Economic Survey 2015

If demand volume falls drastically as a result of the royalty and licensors earn less than they would have done with a lower royalty rate, they then have a market-based rationale for lowering the royalty rate. Price elasticity of demand (which measures the relationship between a change in the quantity demanded of a particular good and a change in its price) should apply equally to patent licensing. However, if the playing field is distorted by large quantities of products which include no royalty payments, the industry will face a real challenge. The system of enforcement, therefore, must be fair, fast and efficient to support the efforts of licensors to work on a level playing field. Educated buyers of products must understand that if royalties are not paid (ie, if they buy unlicensed products), R&D funds will dry up and the level of innovation being brought to the market will inevitably suffer.

Herculean task

IP rights protect many of a firm’s intangible assets, allowing enterprises to profit from their creative and broadly innovative activities. Intangible assets account for more than half the value of companies and their importance is growing. In a world where companies compete more on innovation, creativity and quality than on price, intellectual property is a powerful tool for enterprises to become more competitive.

Nevertheless, as we have demonstrated here, monetising patents is becoming a Herculean task. Applicants spend years protecting their ideas, only to see these copied and their patents infringed on a regular basis. Recouping investments in R&D is increasingly difficult and licensing revenues have dried up (resulting in fewer resources to reinvest in further innovation).

Governments, institutions, universities, corporations and stakeholders around the world need to recognise the importance of a strong and efficient patent system and put in place the right incentives to encourage innovators to innovate. Without these, only a few companies with sophisticated patent departments and deep pockets will make it to the finish line. **iam**

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