



Submission to Review of the Innovation Patent System

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1. Introduction

The intention of the patent system is to provide statutory and enforceable exclusive control over novel inventions, thereby granting an incentive for investment and subsequent monetisation of that investment¹.

Theoretically, this works to society's benefit: the public cede their right to make commercial use of the new invention by way of granting the privilege of monopoly of use or license to an inventor in return for the inventor revealing and placing their invention in the public domain. This process hypothetically works to nurture innovation, and spreads ideas and information. However, in practice, the system has become restrictive and in many instances actually stifles innovation.

2. How patents are now

Patents are granted under the *Patents Act 1990* (Cth) after application to the Patent Office. The Patent Office provides the exclusive right to exploit an invention for a limited period, in return for which the patentee must publish details of the invention².

In order to be patentable, an invention must be a 'manner of new manufacture'³. It must be novel in the sense that its creation has not been anticipated by others, and it must be inventive⁴. This sets out that a patent should not merely be an obvious advance in light of existing knowledge.

A standard patent subsists for 20 years and may restrict the use of the inventions for the whole period⁵. A lesser innovation patent lasts for a period of eight years. Despite a growing pool of investors, most products never find their way on to the market, and the patents end up lapsing before they're due, or worse, they're kept in force, restricting the possibilities of further development in that sector.

In the European Union, the European Commission commissioned a study on the practise of strategic patenting in a number of industries and found that patenting behaviour in specific industries (namely industries with complex products, such as end-consumer electronics or telecommunications services) appears to favour the mere holding of many patents, as opposed to holding the technology or invention of which the patents are, optimally, a result. "Portfolio maximization" does not safe-guard the quality of patents, nor does not it ensure that the patent system is used the way it is meant to be. The subsequent patent

¹ Stewart, Griffith and Bannister, *Intellectual Property in Australia*, 3.

² *ibid.*, 9.

³ *Patents Act 1990*, Commonwealth of Australia.

⁴ Stewart, Griffith and Bannister, *Intellectual Property in Australia*, 9.

⁵ *ibid.*, 9.

inflation may indeed cause harm to competition and innovation on the markets exposed to this abuse.

Patents can be acquired cheaply, but have the potential to inflict a lot of significant damage. Some companies employ aggressive or opportunistic tactics with no intention to manufacture the patented invention, a troubling precedent commonly referred to as "patent trolling".

These "patent trolls" amass portfolios of patents in order to profit by legally enforcing the patents they own rather than developing products themselves. In these instances, all profits are derived from enforcing jurisdiction over ideas, to the detriment of society⁶. "These companies have no interest in using the patents but instead hope to reap large sums of money from the lawsuits themselves."⁷ It is common for a patent to remain unused for the full length of the patent period, and for subsidiary components of the patent to be protected by further individual patents (often referred to as "evergreening").

3. How patents can be improved

The previous sections provide an overview of the flaws of the current patent system, emphasising the system's restrictive and stifling nature. Below is an outline of what we argue are appropriate reforms in regard to the patent system.

Currently there is no way for the public to oppose the grant of a standard patent under s59 of the *Patents Act 1990* (Cth). The Minister alone has the power to reject patents only on the following basis:

- that the nominated person is not entitled to a grant of a patent for the invention
- that the invention is not a patentable invention; and
- that the application is incomplete under s40(2) or (3)⁸.

3a) No software patents

Software is one of the few areas protected by both copyright and patents, the latter of which is excessive. The majority of commercial End User License Agreements (EULAs) already prohibit the reverse engineering of software, even for non-commercial use. This is the equivalent of purchasing a car and not being able to change the type of tyre to suit your needs. We do not need such prohibitive licenses in the first place, and software patents are a further step towards prohibition, not co-operation.

A primary issue with software patents is that software algorithms are mathematics, (see Lambda Calculus in relation to the history of computing), and according to Intellectual

⁶ Bessen, "The Private and Social Costs of Patent Trolls," 1.

⁷ Eric Von Hippel, 2010, quoted in Nick Bilton, "An Explosion of Mobile Patent Lawsuits."

⁸ *Patents Act 1990*, Commonwealth of Australia.

Property Australia "you cannot patent...mathematical models, plans, schemes or other purely mental processes."⁹ Under such regulations, software cannot logically be patented.

Semantic objections aside, software patents are routinely abused, with companies taking out patents which are obvious and fundamental to participation on the Internet. A prominent example is the patenting of "1-click" by Amazon, which is a staple of the Internet marketplace. Another is the delivery of electronic mail to wireless devices – a process fundamental to mobile computing and communication. In 2010, NTP filed suit against Apple, Google, HTC, LG, Microsoft and Motorola for patent infringement regarding this basic mode of delivery, yet was not actually developing or publicly offering a license for the technology¹⁰.

Companies abuse software patents primarily for two purposes: first as a means of extortion whereby companies whose sole asset is an intellectual property portfolio sue successful companies for violating a poorly defined patent (described above as "patent trolling"); and secondly as a means of building a patent portfolio to be used in the inevitable negotiations that occur between major technology companies due to mutual patent violations¹¹. The end result of this abuse is that innovation from startup companies and other small business entities is made more difficult due to the cost involved in diligence and in defending against frivolous law suits. In turn, this leads to a brain drain, where entrepreneurs look elsewhere to base their business and avoid the frustration and legal minefield of software patents.

Abolishment of software patents in Australia will not only encourage local innovation, it would also attract foreign investment as inventors and businesses seek a safe haven from the patent storm that frequently ravages the IT sector (see for example *SCO vs Novell* and *SCO vs IBM*, where SCO wanted to recoup license fees from all business Linux users).

The rapid developments in the information technology field do not lend themselves well to patenting. Rather than inspire further innovation, long-term patents mean that one can build a fence around an idea and leave it stagnant for the current term of at least eight years. This effectively takes it out of the pool of resources from which the community can draw building blocks for development. Ideas are of no value unless they are utilised; software patents put good ideas out of the reach of intelligent people.

Information technology changes faster than any other industry. It is an industry dependent on increasing efficiency, speed and simplicity. It is also one of the few industries where combinations of different ideas are necessary for development. Often, an innovator will be reliant upon previous existing software as a platform on which to improve. Open-source software is a clear example of this: by allowing usage of the source code by developers, we have seen an overwhelming number of modified Linux distributions that are tailored for

⁹ What can be patented.

¹⁰ Rao, "NTP Sues Apple, Google, Microsoft And Others Over Wireless Email Patents".

¹¹ Harhoff, et al., "The strategic use of patents".

specific purposes. Software patents mean a developer is forced to spend additional time and resources developing a less effective method of achieving the same ends.

3b) No gene patents

Gene patents have led to Monsanto's virtual monopolisation of the seed industry. They have "filed 145 suits against growers for alleged patent infringement, involving nearly 400 farmers [and] have patented approximately 90 percent of all [genetically engineered] seeds."¹² Pollination is not a process that farmers can effectively control: it is primarily a natural process. Cross-pollination of crops is a common occurrence required for continued growth and a farmer should not be held responsible for determining the origin of the genetic make up of their harvest. In the case of *Monsanto Canada Inc. v. Schmeiser* (Canada, 2001), it became apparent that although Percy Schmeiser had no reason to question the genetic constitution of his canola crops, he was still guilty of patent infringement¹³.

Gene patents would threaten the livelihood of Australian farmers, and so it is imperative that the patenting of genetic material be disallowed. It is unreasonable for Australian farmers to be expected to verify the origin of their crops, as the process for plant reproduction on large agricultural scales cannot ever be within the absolute command of the grower. The effective increase in the costs of such verification would minimise the incentive for primary producers to persist in the agricultural industry, considering the threats of drought and pest already posed by nature, and in turn increase the cost to the consumer.

It is not in the interests of Monsanto or other such patent holders to prevent the natural spread of their gene patents as they can take legal action against infringers. This places the burden of responsibility on the farmer and does nothing except ensure the monopolisation of the agricultural industry, which forces farmers to buy licenses, destroys any competition that exists and allows dominance of Australian agriculture by foreign patent holders.

It is the current practice of the Patent Office to deny patents that are claims for agricultural or horticultural processes¹⁴. In *National Research Development Corp v. Commissioner of Patents* ("NRDC case") the Deputy Commissioner of Patents directed that the claims be rejected on the grounds that they did not disclose an 'invention' but instead only described an action of the substance developed by NRDC in eradicating weeds growing amongst broad-leaf crops¹⁵. In this case, the High Court discussed the special danger of confusion between an invention and 'mere discovery' of the laws of nature. A 'mere discovery' of the laws of nature are not currently patentable. The NRDC case also reveals a reluctance to allow monopolies in areas concerned with human or animal foodstuffs.¹⁶ These overlapping

¹² McGann, "Columnist: Monsanto monopolizes meal".

¹³ *Monsanto Canada Inc. and Monsanto Company v. Percy Schmeiser and Schmeiser Enterprises Ltd.* (2001) FCT 256 [Canada].

¹⁴ *National Research Development Corp v. Commissioner of Patents* (1959) 102 CLR 252.

¹⁵ *ibid.*

¹⁶ *ibid.*

concerns resulted in the established principle that agricultural or horticultural processes could not be a manner of new manufacture,¹⁷ a method of new manufacture being a prerequisite to being granted a patent. The High Court has also excluded from patentability cases where the contemplated result was not the result of the process but was 'the inevitable result of that which is inherent in the plant (or animal)'¹⁸.

Under the TRIPS Agreement Article 27(3), a member of the WTO is allowed to exclude the granting of patents for plants per se, but also states: "Members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof." Generally, Article 27 requires that microbiological processes must be patentable.

Plant varieties are now protected by the *Plant Breeder's Rights Act 1994* (Cth) (PBRA) enacted under s51(xviii) of the Constitution 1900. The system allows registration of new 'plant varieties' that have the registrable characteristics as set out in s43 of the PBRA.¹⁹ These characteristics are:

- a. that the variety has a breeder; and
- b. the variety is distinct; and
- c. the variety is uniform; and
- d. the variety is stable; and
- e. the variety has not been exploited or has only recently been exploited.

If successful the breeder is given the exclusive right to produce or reproduce the material, to condition it for propagation, to sell, import or export it, or to stock it for any purpose as well as license it to others to do any of the aforementioned things²⁰. The rights are for a minimum period of 25 years from the date of grant²¹. An important exception to the registered plant breeder's exclusive right to the material is in 17 of the PBRA. This section sets out that where a person engaged in farming activities legitimately obtains propagating material (any part or product from which another plant with the same essential characteristics can be produced) of a plant variety covered by the PBRA, they do not infringe the breeders rights under the act²². "Propagating material" meaning any part or product from which another plant with the same essential characteristics can be produced.

This means that Australia's legislation is distinguishable from that in the US due to its exceptions to the plant breeder's rights. Should a farmer happen to produce a plant with the same essential characteristics, a breeder may not be able to bring an action against that farmer under this act.

¹⁷ *ibid.*

¹⁸ *ibid.*

¹⁹ *Plant Breeder's Rights Act 1994*, Commonwealth of Australia.

²⁰ *ibid.*

²¹ *ibid.*

²² *ibid.*

3c) Pharmaceutical patent reform^{23 24}

Millions of people too poor to receive the drugs they need suffer and die because they don't have access to them. Even though the drugs they need to save their lives exist, and could be easily available, strict enforcement of the monopolistic control of the supply of medicines necessary for their health and safety means they will not see them.

By using the monopoly power the patent provides, pharmaceutical companies place the value of their already excessive profits above those of human life. Pharmaceutical patents have led to a moral corruption that sees the pricing of retrovirals and other medicines out of the grasp of the people that desperately need them, whilst doing all within their power to maintain draconian control over measures that would see lowered costs, and greater access.

Abuse of pharmaceutical patents is widespread and we have seen anti-trust action in the EU, taken against the pharmaceutical industry as they try to evergreen their patents and block generic competition, preventing the return of research and knowledge to the public domain. Many pharmaceutical companies use "process patents" to effectively block the generic manufacture of a drug, by requiring that a certain patented process to produce a drug that is delivered in a certain way within the body. By establishing newer processes, the drug effectively stays patented for much more than the intended 20 years. This also contributes to the ever-increasing cost of the Pharmaceutical Benefits Scheme, (PBS) and similar schemes the world over, because we simply have no way to control spiralling costs that pharmaceutical companies are imposing on us.

Despite these concerns, there are people who continue to argue for the maintenance of pharmaceutical patents in their current form – the research and development cycle for pharmaceuticals is long, complex and involved and thus expensive, so it must be funded adequately.

However, if the purpose of patents is for the mutual benefit of us all - that is, to encourage disclosure and to help developers of knowledge, balanced with the inherent right of the public to use and benefit from that technical knowledge - there are serious questions about whether this is happening through pharmaceutical patents and whether they do bring about the promotion of innovation in the current monopolisation of knowledge. Furthermore we must ask if they are adequate or appropriate as a mechanism for funding research and development in the pharmaceutical industry.

Pharmaceutical industry profits far exceed those of other industries, and far exceed the average budget set aside for research and development. Industry-stated costs for the research and development of new medicines are of themselves something that requires investigation.

²³ *An alternative to pharmaceutical patents.*

²⁴ *Pharmaceutical patents.*

Instead of innovation, pharmaceutical companies are re-prioritising marketing over research and development, with the priorities of those research resources being distorted and skewed.

We already pay substantially for research through grants, tax exemptions and credits, and through inflated prices in the PBS. So the public sector, directly and indirectly already pays for the majority of research and development. Most of the truly innovative advances come from public sector research.

As increasing problems manifest in the pharmaceutical patent system (such as ever increasing prices and the restriction of access) the focus has been primarily on the stricter enforcement of patents as a means of funding pharmaceutical research and development, and an increasing push for the removal or weakening of government consumer protections for pharmaceuticals.

Patents are too indirect a measure for something as important as medical research, and we can see that the pharmaceutical industry cannot be shown to adequately respect the social responsibility of the monopoly they have been granted, except where they have made token gestures.

3d) Require patents to be used

Patent holders are not obligated to license, prototype or market their patents. This creates the following inadequacies and unintended drawbacks of the patent system:

- The patent system is intended to inspire innovations that benefit society. An unused patent does not achieve this goal.
- Patents may be collected in portfolios and legal action be taken against infringers, thus shifting the revenue stream from the product to litigation.
- A party may obtain patents with the express purpose of not developing them, in order to subvert potential competition from alternative products by patenting more effective inventions than their current product, thus thwarting the threat of obsolesce.
- Patents of great benefit to society may therefore be held in the hands of a monopoly, stifling further development of ideas by third parties.

Due to the above points, we suggest a mechanism be introduced to encourage development of patents by requiring them to be:

- prototyped within two years of approved application, and
- marketed within six years of approved application.

After this period expires, a patent must be licensed to another party for development. Extensions may be granted in cases where patent development is delayed (for health reasons, lack of funding, legislative requirements or necessary additional research, for example). The above reforms mean that the majority of physical patents will be put into

production within six years of patenting, thereby achieving the aim of the patent system and being of benefit to a rapidly developing and expanding community.

3e) Lower length of patent time & cap renewals/extensions

The current patent lengths of eight and twenty years are in theory suitable, however, they allow an inventor to effectively lock up designs, exercising their privileges to:

1. Not use or continue to develop a patent,
2. Refuse to license a patent,
3. Take legal action against unauthorised use of a patent.

This is contrary to the initial purpose of the patent system: to encourage development. A development is, as stated above, of no value unless utilised. The withholding of ideas for such lengthy periods of time is detrimental to Australia's ability to be seen as a major originator.

Furthermore, the practice of "evergreening" to extend patent time should be curbed. The following we feel appropriate:

- As shown by the examples from anti-competitive behaviour in software and pharmaceutical industries, it is imperative there is a functioning competition correction mechanism which, through swift actions, can remedy abuses of market position by a dominant actor. With the different needs of different industries in mind, competition law should, apart from the strong, general provisions currently therein, be amended with customised, industry-specific legislation that protects and stimulates innovation and participation.
- The installation of an exception similar to that introduced in the Indian Patent Act Section 3(d) should be considered²⁵.
- Protection against evergreening could be introduced into the Competition and Consumer Act 2010 (Cth) (formerly the Trade Practices Act 1974 [Cth]) as the practice prevents, restricts and distorts competition beyond what is considered reasonable.

4. Conclusion

This submission highlights the negative aspects of patents, but also provides ideas for reforms that would improve the patent system, returning it to its original purpose of stimulating inventiveness, innovation and development of novel products and methods for the benefit of society.

²⁵ Daureeawo, "The Controversy of Section 3(D) of The Indian Patent Act".

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