

# EXPLORING THE INCREASING ROLE OF PATENTS FOR AUSTRALIAN BUSINESS

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*“Microsoft, IBM and others are applying for patents in quantity. Those who don’t understand the situation, are not. Many are happy to have software patents attacked. Why let your competitor, in on a good thing?”<sup>1</sup>*

The writer will examine the evidence of an increasing role for patents for Australian business. The paper will continue by exploring the reasons behind the increase in patent registration and the increased significance of patents for technology companies over the last decade. This paper will then examine the nature of a patent and the types of inventions which are patentable subject matter, and will conclude with some observations about future directions and strategies for the use of patents.

## 1. THE EVIDENCE OF AN INCREASING ROLE FOR PATENTS

This section of the paper examines the statistical evidence of an

increasing level of patent acquisition globally. The practical ramifications of the increase are examined in the balance of the paper.

Table 1 below<sup>2</sup> shows a significant growth rate in Patent Cooperation Treaty<sup>3</sup> (“PCT”) applications filed on a global basis since the inception of PCT applications in 1978. The number of filings increased during the 1990’s by an annual average of 17%. There has been a slowing of growth since 2001.

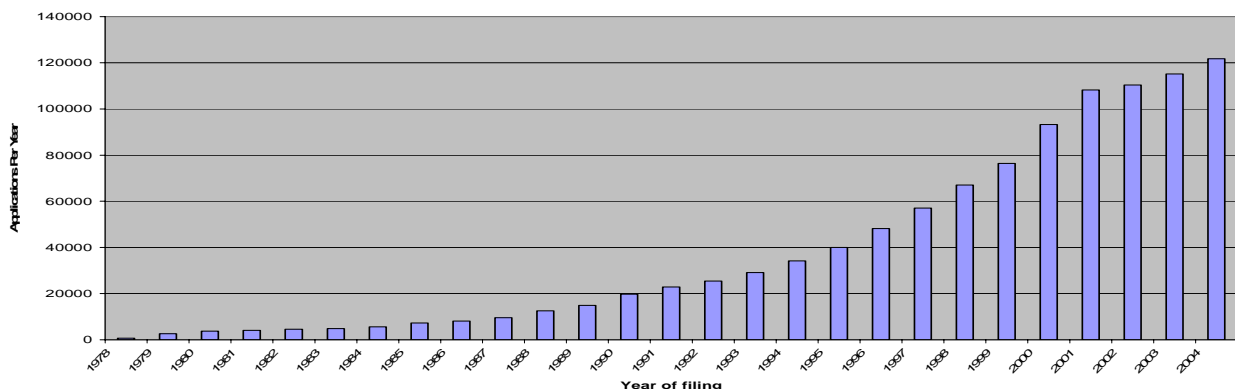
Of the national origins of patent applications in Table 1 the European Patent Convention nations rank 1<sup>st</sup> with the USA a close second. Japan and Germany rank 3<sup>rd</sup> and 4<sup>th</sup>, with Australia 13<sup>th</sup> just behind Canada and ahead of China<sup>4</sup>. In 2004, 1,705 applications originated from China which had only 3 applications from 1990 to 1993. In 2005 Chinese applications had risen to 2,501. This shows the increased interest in IP in China and rapid growth in patent filing since the

early 1990’s at up to 120% per annum.<sup>5</sup> Rankings to 2006 show that Australia has dropped to 14<sup>th</sup> with China rising to 11<sup>th</sup> overall. China has maintained a growth rate in filings from 2002 to 2006 of 43%. The USA remains the dominant single country filing PCT applications with 45,586 applications originating from the USA in 2005. Not surprisingly the USA is a strong supporter of the established international system for IP registration and enforcement.

Turning to statistics on the filing of patents in Australia, IP Australia’s published data shows a steady increase in the number of patents entering examination phase in Australia each year. Of the patents filed in 2003/2004 only 11% were filed by Australian applicants and 43% by US applicants.<sup>6</sup>

Table 2 below shows the total number of standard applications entering examination phase in Australia from 1994 to 2005:

Table 1  
PCT International Applications Filed on a global basis



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**Table 2**

**Standard Applications Entering Examination Phase in Australia<sup>7</sup>**

1994-95	13,613
1995-96	14,369
1996-97	15,541
1997-98	17,762
1998-99	18,906
1999-00	21,194
2000-01	22,551
2001-02	22,530
2002-03	22,002
2003-04	21,983
2004-05	23,493

## 2. ANALYSING THE REASONS BEHIND THE INCREASE IN PATENT REGISTRATION

One of the reasons why patents have become increasingly important as a global business tool is the expanding subject matter for patents. Software related and business method patents have been recognised in Australia since the early and late 1990s respectively. Much like the shift in mindset which justified the licensing of mere software (being fundamentally a series 0's and 1's) as distinct from software embedded in hardware (the initial dilemma facing the sale of software), the concept of licensing IP in the form of patent rights has become better understood. Corporations are now attempting to identify patentable software and "business method" aspects of their businesses in a competitive global environment.

Since the late 1990's the prominent anti trust cases involving Microsoft's commercial strategies (and in particular the

bundling of its web browser and media player with its Windows operating system) in the USA, Europe and elsewhere and a global focus on breaking down anti competitive conduct and misuse of monopolies has led to Microsoft and other leading technology companies having to focus on more legally secure methods for preserving their position in the marketplace. Antitrust actions in the USA against Microsoft, both private and US Government initiated have reportedly resulted in Microsoft paying settlements totalling US\$3.8 billion. Settlements so far have involved IBM, Novell, America Online, Gateway and Sun Microsystems.<sup>8</sup>

Differentiation and preservation of market share in today's marketplace may be achieved by use of registered trade marks and protection for "get up" for some companies and their products, but in many cases there is little to distinguish products other than an ability to innovate and remain at the leading edge of development in a given area of technology. Patents offer a way to preserve differences between the products and services of different companies.

Copyright is not effective to protect the functionality or "look and feel" of software products. A wall of patents surrounding a particular area of innovation can effectively limit other companies' ability to duplicate a product. A company may pick an area of innovation and file 10, 20 or even 100 relevant patents. When competitors enter upon this area, the technology they use is subject to detailed scrutiny by the patent holder and its advisors. A letter of demand could follow and either the competitor must fight for its space in the marketplace, or be removed from the area of technology in question.

In part the increased role for patents is brought about by the adoption of aggressive patent registration and enforcement

strategies by competitors. If a major competitor has a significant patent portfolio the chances are that they can hurt you in the marketplace through patent infringement actions against you and your customers. An effective answer to a patent infringement suit is a counterclaim asserting infringement of your own "book" of patents. Competitors to be more evenly matched in a modern marketplace will each have books of patents. Patents are used defensively as well as offensively. Patent monopolies can result in pooling between major players in an industry or preserving of difference. New players find it very difficult to deploy their own products without the shield of a number of patents themselves. Indeed for optimum commercial exploitation all innovative technology should now be supported by a portfolio of patents covering the jurisdictions of most importance to that technology.

The high profile patent infringement actions of the last decade, particularly in the USA have also brought about an increasing awareness of the role of patents in modern technology businesses. This brings with it a growth in interest in patents. The high profile examples of Amazon.com stopping Barnes and Noble selling their products online over the Christmas of 1999 gathered a lot of press. Amazon's "1-click" patent had a fairly easy "work around" and that was 2 clicks to secure a purchase instead of one, something consumers would not care much about. This work around was not available in time to resist the injunction stopping Christmas trade.<sup>9</sup> It was the combination of recognised business method patents and high profile proceedings which brought patents to the fore through this case.

Other significant patent infringement matters have included the Priceline.com "reverse-auction" patent, the Yahoo "universal shopping cart",

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the Microsoft “double click” patent and the BT “hyperlink” patent.<sup>10</sup> In April 2006 Microsoft and Autodesk lost a patent infringement claim to Z4 Technologies which successfully claimed infringement of two patents designed to stop software piracy. Damages were set at US\$133 million.<sup>11</sup> There are many more examples of high profile patent cases with large damages awards.

A recent and highly publicised US patent infringement case is the action by NTP a patent holding company which enforced patents against the supplier of the Blackberry technology to 3 million users in the North American market, a Canadian based company called Research In Motion (“RIM”). In 2001 NTP initiated proceedings for infringement of three patents. In 2003 an injunction was granted which was at that time stayed. In February 2006 the terms of that injunction had come under increasing scrutiny as there was no longer a reason to stay the injunction. There was significant debate about the terms of the injunction, as to whether Blackberry users should be allowed time to be moved onto other forms of technology before the injunction took effect and whether government and emergency workers would be excluded from the scope of the injunction.<sup>12</sup> In 2005 NTP rejected a US\$450 million settlement offer. Commentators suggested that the settlement could be as high as US\$1 billion. In March 2006 RIM agreed to pay US\$612.5 million to settle the long running patent dispute. In May 2006 a company called Visto (this company in turn has NTP as a shareholder) announced a new patent action again seeking an injunction and damages against RIM for the Blackberry technology.<sup>13</sup>

It is high profile patent enforcement matters of this kind that are generating an enormous focus on this intellectual property

right, its economic potential and implications for technology companies.

### 3. WHAT IS A PATENT?

To take the focus of this paper even closer to patents, this section will look at the basic elements of a patent under Australian law.

A patent is the right to exclude others from the narrow bounds of the claim to monopoly and thus is a state sanctioned “anti competitive” device. The policy justification for the impact on the marketplace of this state sanctioned monopoly is that such incentive is necessary to allow businesses the confidence of investing time in research and development knowing that their competitors don’t automatically take advantage of their research and development work. In exchange for the monopoly, inventors must publish for all the world the best method known to them of implementing their invention and claim the boundaries of their monopoly.

The requirements for a valid patent are that it be novel that is, the exact same thing must not have been disclosed or done in public at any time greater than one year prior to the filing of the patent. The requirement of novelty is a narrow one. In that a prior publication or act must clearly disclose each of the essential integers of a claim in order for an invention not to be novel. Also, the invention must not be obvious in light of the common general knowledge in Australia as at the date of filing of the patent. To defeat a patent on the ground that it is obvious requires evidence from non-inventive workers skilled in the art, which convinces a court that in light of the common general knowledge at the priority date the invention was obvious. A court is reluctant to look at the invention with the benefit of hindsight indicating that a “scintilla of inventiveness” is adequate.<sup>14</sup> In some fields the level of

inventiveness is quite narrow and those are fields where there is a large collection of patents such that the innovations which remain available are only incremental. An example is the area of software as it is applied to gaming technologies.

From a validity perspective, if an invention is novel and not obvious then the form of a patent is examined. The body of the specification has to fairly disclose the invention and the claims need to be fairly based on the disclosure. This is to ensure that the public is given a proper disclosure of the invention sufficient to warrant the 20 year monopoly which follows the grant of a standard patent.

Innovation patents which have existed in Australia since 2001 must not be obvious and are required to be innovative (this is as opposed to being inventive which is required for a standard patent). A revised standard of inventiveness is foreshadowed by the legislation but it has not yet been judicially interpreted. In exchange for this lower standard of inventiveness a patent holder is only granted an 8 year monopoly. In many software patents this is a more than an adequate period of protection. The downside of the innovation patents alone being a strategy to employ for a software patent is that they are not capable of forming the basis of an international registration. Some companies choose to create innovation patents as divisional patents of their standard patent applications where they wish to have an aspect of the invention examined quickly and enforced quickly before that similar process could take place with a standard patent.

The claims of a patent lie at the heart of a patent specification and it is the examination and interpretation of these that dictate any infringement analysis. This is where the true boundaries of the monopoly are set out. There are a

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series of well known rules in relation to the interpretation of the patent claims<sup>15</sup> but on the whole English words are given their ordinary meaning unless they are otherwise defined in the body of the specification or are terms of art, in which case the involvement of an expert skilled in the art might be relevant to interpreting the words of a claim. Each “essential” element of an independent claim must be present in an infringing method or product for it to infringe the claim. Even missing out one step or integer in a patent is sufficient to avoid infringement. In modern patent drafting practice it is very difficult to come up with an inessential integer with the courts preferring the view that if a step is inessential it won’t find its way into the patent specification. A “workaround” is thus the process of deciding which integer of a patent could be left out of a method or product such that it does not infringe the patent.

#### 4. FUTURE DIRECTIONS AND STRATEGIES FOR USE OF PATENT PORTFOLIOS

In Australia the cost of pursuing a patent through to registration starts from around A\$8,000.00.<sup>16</sup> In the US the costs start from around US\$10,000.00.<sup>17</sup> A patent in Australia is comparatively much more expensive than one for the US when you take into account that a US patent gives access to a much larger market. Australians sometimes opt for filing in the US only or filing in both Australia and the US. Internationally an indicative average is that one invention leads to 8 subsequent filings in other jurisdictions.<sup>18</sup> Another international average is the filing of one patent for every US\$500,000 in research and development expenditure.<sup>19</sup> The strategy as to which overseas markets are chosen in a patent application adds significantly to the overall cost of patent registration. Any significant invention should be protected in all relevant international markets. For

software related inventions this might include for example Japan, UK, Germany, USA, China and Australia. Increasingly China is a nominated jurisdiction for the filing of patents and over the next 15 years the intellectual property systems in that country will mature to the point where enforcement becomes an accepted part of the ownership of intellectual property rights. As demonstrated above the Chinese are increasing their rate of patent acquisition globally at a faster rate than any other country. All indications are for an increased importance for intellectual property rights in that jurisdiction.<sup>20</sup>

Microsoft founder Bill Gates was originally opposed to software patents thinking it might undermine the basis on which the software industry operates. Microsoft’s current reported strategy is to exceed 3,000 patents to be filed in each year. In March 2006 Microsoft announced its 5000<sup>th</sup> granted US patent with over 7000 patents worldwide.<sup>21</sup> A major filer of patents in the US has been Hewlett Packard. In 1999 it commenced an aggressive patenting campaign which led to the filing of 5,000 patents worldwide in 2001 alone.<sup>23</sup> IBM has a current total of over 40,000 patents worldwide and files in the order of 3,000 patents each year.<sup>22</sup> Jim Stallings Vice President for IP and Standards at IBM commented on IBM strategy in this way:

*“We see all of this as being no longer as much of a legal discussion as it was in the past, its becoming a business discussion. The C-level executives need to recognise intellectual property is about their business – the future of what they are going to be as a company – whereas in the past, this has been a legal issue with lawyers and policy wonks determining IP.”<sup>24</sup>*

Another interesting trend to note for the future of patent ownership is the patent holding company. An

Australian company QPSX is a purchaser and enforcer of patents.<sup>25</sup> This company is listed on the Australian Stock Exchange and is currently involved in patent mining the CSIRO’s patent portfolio with QPSX retaining 50% of licensing revenue it generates. QPSX has been consistently exploring opportunities to gain revenues from patent enforcement and probably leads Australia with this business model.<sup>26</sup>

A US example in a similar space to QPSX is Intellectual Ventures.<sup>27</sup> Mr Myhrvold a founder of Intellectual Ventures spent time at Microsoft before setting up Intellectual Ventures. Intellectual Ventures is buying patents including those that could pose legal threats to some of its investors. The company conducts brainstorming sessions where it has a number of inventors gather around in a think tank environment to plot future directions of technology and appropriately trained attorneys and lawyers are present to capture those inventions and make them the subject of the patent specifications. It has reportedly secured in excess of 1,000 patents.<sup>28</sup> When asked to comment on emerging trends Myhrvold commented:

*“where is all this headed? Myhrvold reflects on his early days at Microsoft when he was criticized for selling pure software, a collection of ethereal bits unattached to something tangible like computer hardware. Today, this “ethereal” industry is one of America’s largest, and Myhrvold repeats almost as a mantra, “Intellectual property is the next software.” In other*

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*words, he expects a whole new industry of firms like Intellectual Ventures that deal only in the currency of ideas. He is so sure of it, he has even adopted a new hobby; studying for the patent bar exam.”<sup>29</sup>*

The established players in the IT sector view what they term “patent trolls”, companies (such as Intellectual Ventures) with no business but the trading and enforcing of IP rights as a significant threat. In May 2006 Intel, Cisco Systems and Hewlett Packard announced the establishment of the Coalition for Patent Fairness aimed at reforms in patent litigation to combat so called patent trolls.<sup>30</sup> Their self interest in such a challenge is obvious.

Australian businesses will find they are paying licence fees to foreign patent holders if their businesses are to operate in global markets. A patent strategy is necessary to ensure the value of efforts and innovation are protected and rewarded and that market differentiation is preserved. Australian technology companies will only become serious global competitors where their business has a properly developed patent strategy and a portfolio of patents.

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1 Paul Heckel “*Debunking Software Patent Myths*” (1992-1995) <http://www.swiss.ai.mit.edu/6805/articles/int-prop/heckel-debunking.html>

2 PCT International Applications Filed, actual figures for table 1 are:

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
<b>Applications</b>	636	2,586	3,694	4,100	4,568	4,875	5,648	7,290	8,100	9,563	12,523	14,856

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Applications</b>	19,809	22,900	25,419	29,143	34,209	40,008	48,218	57,064	67,062	76,358

	2000	2001	2002	2003	2004
<b>Applications</b>	93,240	108,229	110,388	115,176	121,746

WIPO Statistics, *PCT Statistical Indicators Report, Annual Statistics 1978-2004*, as at April 2005. [www.wipo.int/ipstat/en/statistics/patents/](http://www.wipo.int/ipstat/en/statistics/patents/)

3 The PCT was concluded in 1970, amended in 1979, and modified in 1984 and 2001. It is open to States party to the Paris Convention for the Protection of Industrial Property (1883). The [Treaty](#) makes it possible to seek patent protection for an invention simultaneously in each of a large number of countries by filing an "international" patent application. See [www.wipo.int](http://www.wipo.int)

4 WIPO Statistics, *PCT Statistical Indicators Report, Annual Statistics 1978-2004* as at April 2005. [www.wipo.int/ipstat/en/statistics/patents/](http://www.wipo.int/ipstat/en/statistics/patents/)

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6 [www.ipaustralia.gov.au/about/statistics.shtml/patents](http://www.ipaustralia.gov.au/about/statistics.shtml/patents)

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9 “Customer Value is the Business Model”, Sasahara, Ecom Journal No. 3. <http://www.ecom.jp>

10 Lexis Nexis Butterworths, “*The Law of Ecommerce – Software and Business Method Patents*” [50,120]

11 Seattle Times, April 20 2006, “Microsoft, Autodesk lose patent infringement suit”; <http://seattletimes.nwsource.com/html/microsoft/>

12 USA Today, 19 February 2006, “End to Blackberry patent feud may finally be at hand”, <http://www.usatoday.com>

13 The New York Times, 2 May 2006, “New patent case filed over BlackBerry” <http://www.ihf.com/articles/2006/05/02/business/patent.php>

14 *Riekman v Thierry* (1896) 14 RPC 105 at 115

15 see: *Décor Corp Pty Ltd v Dart Industries Inc* (1988) 13 IPR385 at 400

16 <http://www.ipaustralia.gov.au/patents/fees-index.shtml/#roughguide>

17 [http://www.ipwatchdog.com/patent\\_cost.html](http://www.ipwatchdog.com/patent_cost.html)

18 Trilateral Co-operation, “*Trilateral Statistical Report*”, (1999), Chapter 3, available online at: [http://www.trilateral.net/tsr/tsr\\_1999/demand\\_for\\_patent\\_rights.pdf](http://www.trilateral.net/tsr/tsr_1999/demand_for_patent_rights.pdf)

19 <http://www.microsoft.com/presspass/press/2006/mar06/03-065000PatentPR.msp>

20 For example see “China’s Action Plan on IPR Protection 2006” <http://english.people.com.cn/>

21 <http://www.microsoft.com/presspass/press/2006/mar06/03+065000patent PR.msp>

22 <http://www.ibm.com/ibm/licensing/patents/portfolio.shtml>

23 “HP Files 5000 Patent Applications Worldwide in 2001”, 6 February 2002

[http://www.hp.com/hpinto/newsroom/press/2002/020206a.html?jumpid=reg\\_R1002\\_USEN](http://www.hp.com/hpinto/newsroom/press/2002/020206a.html?jumpid=reg_R1002_USEN)

24 “How open? That’s the big patent question”, Higginbotham, 25 September 2005 <http://www.news.com/>

25 See [www.qpsx.com.au](http://www.qpsx.com.au)

26 [http://www.qpsx.com/press-room/QPSX\\_pioneers\\_new\\_frontiers.html](http://www.qpsx.com/press-room/QPSX_pioneers_new_frontiers.html)

27 “Factory of the Future”, MSNBC.com Newsweek, 22 November 2004, [www.msnbc.com/id/6478691/site/newsweek/print/11/displaymode/109](http://www.msnbc.com/id/6478691/site/newsweek/print/11/displaymode/109)

28 Ibid

29 Ibid

30 “Tech firms to lobby for patent litigation reform”, ZDNet 11 May 2006, [http://news.zdnet.com/2100-9595\\_22-6071321.html](http://news.zdnet.com/2100-9595_22-6071321.html) see also possible legislative reform in the US: <http://lamarsmith.house.gov/news.asp?FormMode=Detail&ID=790>