

PATENTING OF SOFTWARE

The concept of “intellectual property” in India over the last few years has taken on some epic proportions for a number of reasons. One of the primary reasons could be attributable to the growing awareness among the urban Indian population of the significance and, more importantly, the commercial benefits in protecting its intellectual property rights both within and outside India. Some of the other factors are the rapid development of the technology, pharmaceutical and bio technology industries in India where the assets of these industries lie primarily within the intellectual property that they create and develop. Finally, one cannot ignore the advent of the foreign influence on the Indian consciousness. This foreign influence could be motivated for purely selfish reasons, in that, the foreign companies have either established their subsidiaries in India or have entered into businesses in one form or the other with Indian entities, thereby creating the need for them to ensure protection of their intellectual property.

I don't know if these changes are because of an epiphany that the collective consciousness of India had or it was a “below the radar” progress which suddenly came to light but whatever the reasons, the changes appear to have happened almost overnight and the Indian populace has taken a definite proverbial bite of the “intellectual property” apple. This emerging trend is given a further boost by the changing legal environment in India.

Some examples of legislations enacted in recent times towards protection of intellectual property in one form or the other, are the Information Technology Act, 2000, the new trademarks act and the recent ordinance to the Patent Act.

Although the Information Technology Act came into effect only in 2000, amendments to the Act are already being discussed by the legislature in keeping with the technological advancements in the world. Then, we have the new trademark act which came into effect in 2003 which recognizes both trade marks and services marks as opposed to the earlier act which only gave legal validity to trade marks.

Finally, as on January 1, 2005, the new Patents Amendment Ordinance, 2004 (“Ordinance”), which amends the Patents Act, 1970 (“Act”), has been promulgated after receiving assent from the President of India. Since 1995 this is the third amendment, which seeks to comply with India's commitment under Agreement on Trade Related Intellectual Property Rights (“TRIPS”). Apart from bringing in the product patent regime in the area of pharmaceuticals and agro chemicals, one of the seminal amendments this Ordinance seeks to bring is to permit the patenting of embedded software. Thus, hitherto, where the Patent Act prohibited patenting of computer software per se, the Ordinance qualifies this by stating that “a computer programme per se” is not patentable “other than its technical application to industry or a combination with hardware”. Therefore, a computer programme which can possess a technical application to the industry or a computer programme combined with hardware would be capable of being granted a patent under the current Indian laws.

This amendment will without doubt provide a huge incentive for our information technology industry, such as the semiconductor industry, to innovate, create and develop embedded software as they can be assured of the same level of protection in India as they may enjoy elsewhere in the world.

However, before we start hailing the advent of a new era and equating the patenting of software in India to Edison's invention of the light bulb, it would be well worth our while to take a pause and examine the realities of software patenting. We could do this by looking at examples of countries in which software patenting has already become the order of the day, such as in the USA.

The patentability of software-related inventions is currently one of the most heated areas of debate. Software has become patentable in recent years in most jurisdictions (although with restrictions in certain countries, notably those signatories of the European Patent Convention or EPC) and the number of software patents has risen rapidly¹. The patentability of "business methods" (often software-based) has further fuelled the debate, especially as concerns the possibility that low quality patents might block or impede the fledgling electronic commerce sector.

Since 1998², software-related inventions (and mathematical algorithms in general) are patentable in the United States of America (US) as long as they produce a "*useful, concrete and tangible*" result, in addition to the usual criteria (novelty, non-obviousness and industrial application). However, in Europe and to some extent in Japan, they are only patentable if "*sufficiently technical in nature*" (which excludes business methods in particular), a position which has been recently confirmed in Europe, although the legislative process is still ongoing.³

In Europe, there is an increasing, though still relatively low, use of patents by independent software developers in raising finance or in licensing. The main source of protection that has allowed the software industry to grow has been the law of copyright.

¹ OECD 2004/01 Report on Patents and Economic Performance available at <http://swpat.ffii.org/papers/oecd0401/index.en.html> (October 10, 2005)

² In the wake of the decision of the U.S. Court of Appeals for the Federal Circuit, of 23 July 1998, in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, patent applications for business methods have soared.

³ *Supra*, note 1

Another study⁴ relying on the USA, as a test case, finds that “the patentability of computer programme related inventions has helped the growth of computer programme related industries in the USA, in particular, the growth of SMEs and independent software developers into sizeable indeed major companies”. However, the study also clearly identifies concerns about the patentability of computer implemented inventions or software in the USA. These concerns are broadly summarized as follows:

1. The grant of allegedly "clearly invalid patents" (in particular for e-commerce), i.e., patents which are granted for inventions that are either not new or where inventive step is prima facie lacking.
2. Patents for computer-implemented inventions or software might further only strengthen the major companies' market positions.
3. Patents for incremental innovation which is typical of the software industry entail the economic costs of figuring out the patent holders and negotiating the necessary licenses.

Moreover, a recent empirical study⁵ on the patentability of computer programmes in the USA has shown that there is no empirical evidence on the relation between the number of software patents and R&D investments, meaning that permitting the patenting of software is not a useful way to stimulate innovation. This study undermines one of the major arguments in support of the patent regime.

Finally and interestingly, a study by Oz (1998)⁶ shows that copyright protection is used more often than patent protection even in the USA where there are no limitations on software patenting.

The Ordinance in India is akin to the concept of software patenting in Europe where the focus is not on software or computer programmes perse but that the software or computer programmes should be “sufficiently technical in nature”, or in other words, it should have a “technical application to industry” or should be a combination with hardware.

On the other hand, in the USA, the US PTO does not require patentable inventions to be of a "*technical*" (that is, material) nature, but that they just fulfill a "*usefulness*" criterion. This is the reason that in the USA, it has led to patenting of even abstract rules and methods for performing human activities, known as "*business methods*", which has happened without any legislative decision. Here, it would be relevant to note that the USA form of issuing patents for software has resulted in a number of trivial patents being

⁴ Supra, note 4

⁵ Bessen and Hunt; *The software patent experiment*; Working Papers 03-17, Federal Reserve Bank of Philadelphia, 2004 (October 10, 2005)

⁶ Quoted in Kaiser and Ronde 2004; *A Danish View on Software-Related Patents*

granted such as to the well-known *one-click-only* online shopping patent granted to Amazon.com. These trivial patents are also the reason for recent discussions about the patentability of business methods in the USA. Some observers believe that it is possible that the US Supreme Court restricts the patentability of software-related patents, in particular that of business methods.⁷

Hence, we see that from the above summary of studies, that even in USA, where the form of granting patents for software has been the longest in existence, it is facing a definite number of problems, particularly with regard to the quality of examination of such patents on the issue of “quality of prior art search”, clarity on the technology and of course, the competence of the examiners for whom this a rapidly evolving and complex field.

India, for its part, seems to have adopted the more conservative approach of the European patenting norms for software. Whether, in reality this will be implemented on a rigid basis or will become broad in scope through application (as in the US), and, more importantly, whether the Ordinance would, in fact, result in increased innovation and inventions in the software industry, remains to be seen.

In any case, any company seeking to file a patent application for software under the Ordinance should ensure that its invention firstly, follows the three basic tests of inventive step, novelty and usefulness. Therefore, it is important that the software sought to be protected is not merely a new version or an improvement over an existing code. Further, in accordance with the specific requirements of the Ordinance with regard to patentability of software, the software should necessarily have a technical application to the industry or be intrinsic to or “embedded” in hardware. This is to prevent against any future litigation or claims of infringements being raised, which is a distinct probability even after a patent has been granted.

Moving to a more optimistic note, we must be cognizant of the fact that we have always had very strong and aggressively drafted laws relating to copyrights, trademarks, and patents in India. The issue India faced earlier was in recognizing the value of one’s intellectual property rights and thereby, enforcing the relevant laws to their fullest capacity. Thus, there always seemed to be a disconnect between policy and practice.

Here again, I believe we have seen an almost chrysalis like process in judicial activism. It is now not a rare event in India to conduct source code raids, obtain ex parte orders against persons using another’s intellectual property and even preventing ex employees from working for a competitor for a specific period of time. In a recent decision (January 3, 2005), the Delhi High Court for the first time in Indian history awarded the plaintiff, Time Magazine, with punitive/exemplary damages for infringement of intellectual property by the defendant. In this case, Time Magazine was awarded Rs. 5 lakhs compensatory damages and Rs. 5 lakhs punitive/ exemplary damages plus interest and costs.

⁷ See *ibid*

India has a very unique opportunity to make a mark in the silicon design space because of its strong semi conductor engineering capacity and its obvious competence in software design and services. With India's traditional strength in software development as well as its growing expertise in chip design, several top semiconductor and system companies are setting up their R&D centres in India with emphasis on embedded software. Apart from every possible international semi conductor entity having some sort of presence in India, Indian companies, themselves, are engaged in the business of semi conductors, either through providing the required services or directly developing embedded software.

Therefore, the Ordinance definitely has its use and relevance in today's India, particularly for our growing domestic semi conductor industry. This, alongwith judicial tempering will definitely ensure a judicious use of patent protection while allowing the industry to grow through innovations and inventions, thereby, mitigating the risks of trivial patents chocking the life out of real innovations and inventions. This is the reason a patent should always be treated as a "double edged sword", to be wielded with caution and sensitivity.

I definitely have a vision for India and this includes India being a force to reckon with in areas where it was hitherto acting as merely a back office player; be it pharmaceuticals, software products or the new age semi conductor industry. Be warned: the developments you see today are only a precursor of things to come and I'm confident while I say that this is not a prophecy but a visible, tangible and definitely, indisputable, reality.

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