INTERNATIONAL JOURNAL OF LEGAL SCIENCE AND INNOVATION

[ISSN 2581-9453]

Volume 3 | Issue 5

2021

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The Reality of Software Patenting in India in Context of the Ferid Allani Order

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ABSTRACT

Software patents are known to be a comparatively newer concept and due to their generally unfamiliar nature, they have proved to be quite gruelling and arduous in their examination. With the advent of the digital era, thousands of software patent applications reached the Indian Patent Office but their examination has proved to be immensely challenging due to the inconsistency in the Indian Patent law regime and also because of the restricted volume of precedents surrounding software patents. There have been ceaseless debates encircling the term 'per se' in S. 3(k) of the Patents Act, 1960 with respect to patent-eligible and patent-ineligible subject-matters. With the Ferid Allani order of 2020 by the IPAB, there was a remarkable shift in the method of examination of Computer Related Inventions. The order is noteworthy because the High Court of Delhi directed the IPO to examine the invention based on its 'technical advantages' and 'technical efficiency' rather than focusing on the form. This judgement however, doesn't come without any drawbacks. This article focuses on the unpredictability of the Indian Patent law regime and the Guidelines on Computer related inventions coupled with the complicated nature of software inventions. The article in its latter portion attempts to analyze the order by the IPAB to understand what its possible consequences could be on future patent applications related to software inventions and on what aspects both the IPAB and the High Court could have been more elaborate.

I. INTRODUCTION

The TRIPS (Trade Related Aspects of Intellectual Property Rights) Agreement[2] came into effect in January, 1995 between all the members of the WTO with the aim of encouraging international trade and protecting intellectual property rights such as copyrights, patents, trademarks, industrial designs, etc. The agreement is divided into seven parts, of which part II categorises the different types of intellectual property rights available to innovators and creators. It states that, "Members may, but shall not be obliged to, implement in their law more extensive protection than is required by this Agreement, provided that such protection does not contravene the provisions of this Agreement. Members shall be

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[2] The agreement on Trade-Related aspects of Intellectual Property Rights, *effective from 1 Jan, 1995*,33 I.L.M. 1197 (hereinafter referred to as 'TRIPS Agreement')

free to determine the appropriate method of implementing the provisions of this Agreement within their own legal system and practice."[3] Appraising the above provision, it is evident that TRIPS is a minimum standards agreement wherein the member nations are obliged to incorporate the provisions given in the articles into their own domestic legal systems but also secure the prerogative to determine whether to enumerate a more extensive protection than the one provided.[4] Members have the right to decide the most suitable method for the implementation of such property rights under their own domestic legal system depending on whether a country follows the common law or the civil law system. We can take the example of protection rights provided to software inventions under different jurisdictions. In the U.S patent law regime, under Sec. 101, Title 35 of the U.S. Code, patent *'eligible subject-matter'* has been defined as "any new and useful, process, machine, manufacture, or composition of matter, or any new and useful improvement thereof"[5]. So, a broad definition has been provided for what is constituted under patents. This means that when an invention is related to software, it has the potential to come under one of these categories and can be granted patent protection. However,

this doesn't warrant that there are no limitations to the provision. Nevertheless, when we compare the U.S. position with that of the European Patent Convention (EPC), it is apparent that the U.S. law has a lower threshold for granting software patents than the European Convention as under Art 52(2)(c) of the EPC, it has been mentioned that "schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;"[6] shall not be regarded as inventions for the purposes of the convention. But, Over the years, through various judicial opinions it has been established that if a computer program is capable of displaying some *'technical effect'*, then it can be granted patent protection. From the above provisions of the U.S. code and of the EPC, it can be gathered that it would be less challenging for the inventor to receive patent grants for software inventions under the U.S. law regime.

Due to the ongoing coronavirus pandemic, many businesses and industries were stirred and troubled but according to NASSCOM, due to the expeditious growth in digital advancement and tech adoption, the IT sector in India is anticipated to record a growth of 2.3% year to year from 2021.[7] In India, softwares are already protected under the Copyrights Act of 1957 in which

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[3] TRIPS Agreement, Art. 1.1, *effective from 1 Jan, 1995*,33 I.L.M. 1197 (hereinafter referred to as 'TRIPS')

[4] Overview: the TRIPS Agreement, World Trade Organisation, (Aug. 15, 2021, 4:30 PM), https://www.wto.org/english/tratop_e/trips_e/intel2_e.htm

[5] 35 U.S.C. § 101, 66. Stat. 797 (1952)

[6] The Convention on the grant of European Patents, Art. 52(2)(c), *opened for signature Oct. 5, 1973,* 13 I.L.M. 268

[7] *See* Alexander W. Bartik, Marianne Bertrand, Zoe Cullen, Edward L. Glaeser, Michael Luca and

Christopher Stanton, The impact of covid-19 on small business outcomes and expectations, Proceedings of the National Academy of sciences of the United States of America (2020), (Drawing upon results of surveys done on small business in America and how they were affected during the COVID pandemic), https://www.pnas.org/content/117/30/17656 ; *But see* NASSCOM, Technology leading India's recovery post covid: NASSCOM, nasscom, https://nasscom.in/sites/default/files/media_pdf/Press%20Release%20-%20Indian%20Technology%20Industry%20Poised%20for%20a%20Significant%20Growth.pdf

'literary works' include computer programmes, tables and compilations including computer databases.[8] The biggest shortcoming of opting for a copyright protection for a software invention is that it would only cover the source code and competitors can steer clear of the law by making modifications to the code.[9] However, if patent protection were to be provided to softwares, then it will not just cover the source code but the protection will be wide enough to cover algorithms, methods, functions, etc. This is the reason why it is often advised to opt for patent protection when the invention is related to softwares as patenting protects both the product and the process. According to real options investment theory, patent protections provided to innovations have the potential of inviting a large amount of private R&D investment. This is because grant of patents offers the patentee temporary monopoly rights to their innovations which would in turn reduce the effect of market uncertainty.[10] In a world where people are dependant every hour of every single day on digital gadgets and machines that use computer programmes and codes, it is essential to ease the process of granting patents to softwares and to bring a level of certainty to the procedure involved in granting them. Inventions that are instrumented within softwares are protected under Copyright law, which are different from

software inventions that can be granted patent protection. This distinction however causes a lot of confusion for innovators.[11] Trouble also arises from the fact that software patents have not been defined under the Patents Act, 1970, but attempts have been made to bring some clarity regarding the term through case laws, judicial opinions and other guidelines from time to time.

II.   SOFTWARE PATENTS AND THE CONCEPT OF 'PER SE'

There are two forms of software- the static source code and the dynamic object code. The distinction between these two forms creates a ton of complications while examining patent applications relating to software inventions. Computer programs consist of documents containing a set of instructions that have to be executed by a computer. Once the program is executed, the set of instructions are enforced in real time. The confusion arises from the fact of whether to consider the document containing the set of instructions as a program or its execution in real time. The answer is both since both of these forms represent a machine.[12]

Art. 27 of the TRIPS manifests that software inventions are covered under the scope of patents stating that, "patents shall be available for any inventions, whether products or processes, in all

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[8] The Copyright Act, 1957, § 2, cl. o, No. 10, Acts of Parliament, 1957 (India)

[9] Andrew Rapacke, Software patent vs copyright, Rapacke Law Group, (Sept. 1, 2021, 5:53 AM), https://arapackelaw.com/saas-startups/software-patent-vs-copyright/

[10] Dirk Czarnitzki and Andrew A. Toole, Patent protection, market uncertainty and R&D investment, The review of Economics and Statistics, Vol.93 No.1, 147 (2011)

[11] Ania Jedrusik and Phil Wadsworth, Patent protection for software-implemented inventions, WIPO Magazine, (Sept. 2, 2021, 6:24 AM), https://www.wipo.int/wipo_magazine/en/2017/01/article_0002.html

[12] Software patents in Europe, Kim g. Hansen, Stockholm Institute for Scandinavian Law, (Oct. 10, 2021, 3:31 PM), https://scandinavianlaw.se/pdf/47-9.pdf also, citation 22 of the document

fields of technology, provided that they are new, involve an inventive step and are capable of industrial application."[13] In the exceptions to the given article, nothing has been mentioned about software nor the term *'technology'* has been used. Upon careful consideration of the above article, it can be concluded that software inventions shall be granted patents if they satisfy certain conditions which needs the invention to be new, consisting of an inventive step and having certain industrial application. Unfortunately, these three criteria in themselves have proved to be exceedingly intricate and arduous in their applications from time to time. This provision has been embodied in the Patents Act, 1970 in India via Sec. 2(i)(j) which states that, "invention means a new product or process involving an inventive step and capable of industrial application;"[14] So, for a product or process to be of patentable subject-matter, the conditions of novelty, non-obviousness and the capability of industrial application have to be fulfilled. These integrants have been explained in the Patents Act, 1970 and have also been signified through various judgements. The exception to the above provision states that, "a mathematical or business method or a computer programme per se or algorithms;"[15] shall not be considered as patent-eligible subject-matter. 'Computer Programme' has been defined under the Copyright Act of 1957 as "a set of instructions expressed in words, codes, schemes or in any other form, including a machine-readable medium, capable of causing a computer to perform a particular task or achieve a particular result;"[16] Through the years, this exception has agitated the Indian Patent Office while deciding patents applications in relation to CRIs (Computer Related Inventions) because of the term 'per se'. In 2017, the Office of the Controller General of Patents, Designs and Trademarks, issued the Revised Guidelines for Examination of Computer Related Inventions (CRIs). These guidelines were issued with the purpose of examining and understanding the exceptions cited under Sec.3(k) of the Patents Act, 1970 and to differentiate between patent eligible and ineligible subject-matter.[17] The complication with relation to patent applications for CRIs in India was that, there was no uniform method in regulating patent applications.[18] Hence, these guidelines were brought into effect. The phrase 'per se' has neither been defined under the Patents Act, 1970 nor under any other Indian Statute. Hence, the dictionary meaning for the same has to be used for the purposes of examining patent applications, as has been elucidated under the 2017 Guidelines. The dictionary meaning for 'per se' is explained as 'by itself, 'in itself', 'as such' or 'intrinsically'. The explanation to this has been provided in the case *Telefonktiebolaget LM Ericsson (Publ) v.*

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[13] TRIPS Agreement, Art. 27
[14] The Patents Act, 1970, after the 2002 Amendment, § 2, cl. (i), Sub. cl. (j), No. 39, Acts of Parliament, 1970 (India).
[15] *Inserted through the Patents (Amendment) Act, 2002, No. 38 of 2002.*
[16] The Copyright Act, 1957, § 2, cl. (ffc), No. 10, Acts of Parliament, 1957 (India).
[17] Guidelines for examination of CRIs, 2017, para 1.3, (India)
[18] Guidelines for examination of CRIs, 2017, para 1.3, (India)

Lava International Ltd.[19], where the court clarified the disorientation surrounding Sec.3(k). The court expounded that when an algorithm is integrated within a hardware component to bring about a technological change or improvement resulting in a practical effect or physical realisation, then such an algorithm will not be covered under the exceptions mentioned in Sec. 3(k). The court further clarified that if an algorithm is mentioned in the patent application, then just because it is mentioned would not mean that the invention is nothing but an algorithm. This principle has also been reinstated in the 2017 Guidelines which are a revision to the 2016 Guidelines that made it mandatory for the presence of a novel hardware for a software invention to be considered for a patent grant. The 2017 Guidelines elucidate that the major consideration while examining patent applications related to software inventions should be on the substance of the invention rather than the form. According to the Guidelines, it is important to check whether the invention is of a technical nature involving technical advancement or should have some sort of economic significance. It is not important for the invention to fulfill both the criteria. While considering technical advancement, the cardinal factor to keep in mind is if the technical change or improvement is obvious to the person skilled in the art. If the change or advancement is obvious to the person skilled in the art, such technical advancement cannot give rise to the

dignity of the inventive step. Technical advancement must be seen as a kind of solution to an existing problem which could not be solved by a person skilled in the art in the given field. Technical advancement has been defined under the 2013 Guidelines which explain that technical advancement would mean a contribution to the state of art in any field of technology. It further clarifies that even though technical effect gives rise to technical advancement, not all technical effects result in technical advancement.[20]

III. THE FERID ALLANI CASE

Facts of the case:

The case refers to the petitioner, a Tunisian citizen who filed an application[21] in the Indian Patent Office seeking patent grant regarding *'method and process for accessing information sources and services on the web'* in 2002. The claims mentioned in the application were both regarding the device and the method. The application had a meandering journey full of various twists and turns which clarified the position of software patents in India to some extent. Meanwhile, it also raised some concerns regarding the procedure followed for determining the same.

The application comes from the PCT International Application[22], which claimed priority from the French Application[23]. After the examination of the application, the First Examination Report (FER) was issued in 2005 where certain issues were raised by the IPO

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[19] Telefonktiebolaget LM Ericsson (Publ) v. Lava International Ltd., (2016) 67 PTC 596 Del.
[20] Draft Guidelines for examination of CRIs, 2013, para 3.16, (India)

[21] IN/PCT/2002/705/DEL
[22] PCT/FR00/03759 of 2000
[23] 99/16704 of 1999

specifying that the claims don't effectuate the condition of novelty as mentioned in S. 2(1) (j) of the Patents Act, and hence, fall under the exceptions stated in S. 3(k) of the Act. In 2008, the High Court of Delhi passed an order directing the IPO to review the patent application. The IPO however rejected the application again which made the petitioner file an appeal before the IPAB under S. 117(A)2 of the 1970 act. The appeal was dismissed as well by the Appellate Board. In 2013, the petitioner filed a writ petition before the High Court of Delhi regarding the matter. In 2019, an order was passed by the High Court to re-examine the patent application. The High Court in its order also iterated that the exclusion in S.3(k) only covers *'computer programs per se'* and not all inventions based on computer programs. The High Court additionally stated that since in the modern world most inventions have some form of computer program instrumented in them, it would be degenerative to not consider the patentability of such inventions just because they have computer programs in them. The court cited examples in the field of Artificial Intelligence, blockchain technologies and other digital products to explain that the most important factor to consider while determining patentability of a CRI are the effects these programs generate both in digital and electronic products. In February, 2020, the IPO via an order again refused the application claiming that the invention lacked novelty and falls under the ambit of S.3(k). The matter then went before the IPAB which by an order granted patent to the invention in July, 2020 i.e., only five months before the expiry of the patent.

<u>Findings of the court:</u>

The court commented that the patent application for the invention requires to be examined in the context of the various judgements and observations induced in the process of interpretation of S.3(k) of the act, the Guidelines on CRIs and other legislative materials available relating to the same.

According to the 2013 draft guidelines on CRIs, *'technical effect'* is explained as a solution to a technical problem[24]. Further certain examples of technical effect were mentioned which include higher speed, reduced hard-disk access time, more economical use of memory, more efficient data base search strategy, etc. As mentioned in the order of the IPAB, the invention goes back to 1999, a time when internet technology had hardly been explored, hence making the given invention new compared to the then traditional search engines. The invention has been described as a method and process aimed at finding the precise and exact information the user is looking for but in a localized manner, which means that there exists a limitation to the use of the internet bandwidth. The invention uses what is called *'preliminary selection steps'* where the information is locally extracted from the user's computer. After each of these steps, the query of the user becomes more polished and certain. This means that the user is made to target a very specific and well-defined information. After this, a website is locally generated, without any use of

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[24] Draft Guidelines for examination of CRIs, 2013, para 3.15, (India)

the internet bandwidth. Therefore, this limits the use of the internet bandwidth and saves up data as the bandwidth is used only once per search. The prior art which existed before this invention made use of the bandwidth even before the results were provided wasting precious data. So, the invention is a form of *'efficient search strategy'*. In the present case, the invention unlike other search engines of the time could retrieve the detailed information which the user is looking for and using the same information, take the user to the desired internet resource rather than generating a series of results. The result provided to the user is accurate and exactly what the user was looking for. The mean time used for accessing the web is significantly reduced because of this method as the user doesn't have to click on the list of results to check for the required information. Since, this invention delays in sending the final request until the query is well-informed, the internet bandwidth is used only once per request. This method also helps in reducing the internet traffic. Due to the use of the bandwidth only once, the invention also proved to be economical. So, it can be concluded that the invention was successful in solving many technical issues apparent at that time it was created.

Certain cases were discussed by the IPO in supporting their claims in rejecting the patent application. One of the cases mentioned was *Aerotel Ltd. V. Telco Holdings Ltd.*[25], which introduced a four-step test to review patent applications. It asked for the application to – (a) Construe the claim properly, (b) Identify the actual contribution, (c) Ask whether the contribution falls solely within excluded subject-matter, (d) Check whether the contribution is technical in nature.

In *Symbian Ltd. V. Comptroller General of Patents*[26], the Court of Appeal formulated that while applying the Aerotel test, steps three and four have to be read in connection with one another and not in isolation. The court specified that while examining patent applications, *'the contribution'* has to be identified to determine whether it is covered under the ambit of *'the excluded matter itself'* solely while also highlighting the need for it to be *'technical'* in nature. This method of putting the Aerotel test into use had also been previously clarified in the case of *Astron Clinica Ltd. V. Comptroller General*[27].

Drawbacks of the judgement:

It can be concluded from the previous sections of this paper that software patents have had a complicated history in India starting from the Patents (Second Amendment) Bill, 1999, where *'computer programs'* were mentioned for the very first time under the exclusions to patentable subject-matter. After the bill's reference to the Joint Parliamentary Committee, the term *'per se'* was added. Following this, there have been various proposals for amendments to the Patents Act, Draft Manuals on Patent Practice and Procedure and also quite a few drafts and

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[25] Aerotel Ltd. v. Telco Holdings Ltd., (2006) EWCA Civ 1371

[26] Symbian Ltd. v. Comptroller General of Patents,

(2008) EWCA Civ 1066

[27] Astron Clinica Ltd. v. Comptroller General of Patents, (2008) EWHC 85 (pat)

finalised versions of Guidelines for Examination of CRIs.

With the amount of software innovations increasing exponentially all over the world, it has become exceedingly complex in determining the prior art (can prove to be both expensive as well as time consuming[28]. One of the major concerns raised through this case is that the order doesn't mention the reason or explanation as to why the application was sent back for re-examination. Previously, while examining the application, the IPAB had rejected it citing lack of *'technical effect'* or *'technical advancement'* as the reasons. The order mentions that the re-examination should be based on the Guidelines on CRIs, and other legislative materials, but nowhere does it mention what exactly needs to be assessed again i.e., why the application was sent for re-examination in the first place.[29]

Because the case was sent back by the court for re-examination, and was ordered to be assessed according to the present guidelines and other legislative materials, the issue was whether this would set a precedent for re-examination of previous applications that were once rejected before the latest guidelines came into picture.[30] There was no clarity regarding this issue. Under the 2015 guidelines, not only computer programmes but business methods and mathematical models were also included under patent-eligible subject-matter. Ensuing the 2015 Guidelines, the 2016 Guidelines took a completely contrasting avenue introducing a three-step test to determine patentability of a CRI which needed for it to consist of a novel hardware. The 2016 Guidelines also eliminated business methods and mathematical methods entirely from the ambit of patent-eligible matter. Thereafter, the Revised Guidelines of 2017 did away with the novel hardware requirement that was requisitioned under the 2016 Guidelines. So, it appears that there hasn't been any consistency regarding the stance with respect to software inventions.[31] This is all the more reason why there should have been a clarification regarding the re-examination of Ferid Allani's patent application and if it could also happen with other applications (that had been rejected previously) in light of the latest guidelines.

The problem with this case was that the court gave no clarity on these major points and added that they have to be explained on a case-by-case basis which again brings complications in adjudicating software inventions related applications.

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[28] Kahin Brian, The software patent crisis, Technology review, Belfer Centre for Science and International affairs, (Oct 15, 2021, 5:15 A.M.), https://www.belfercenter.org/publication/software-patent-crisis

[29] Swaraj Paul Barooah, Looking at the Ferid Allani order on software patents, spicyip (Sept. 10, 2021 7:45 PM), https://spicyip.com/2020/01/ferid_allani_software_patents.html#comments

[30] Antony Moses, Curtain Call for computer related inventions in India: An analysis of the Ferid Allani case, ipwatchdog (Sept. 11, 2021 1:24 PM), https://www.ipwatchdog.com/2020/07/25/curtain-call-computer-related-inventions-india-analysis-ferid-allani-case/id=123483/

[31] Swaraj Paul Barooah, Ping-ponging paradigm of patenting computer programmes in India ("software patenting" 1999-2020), spicyip (Sept. 13, 2021 5:45 PM), https://spicyip.com/2020/02/the-ping-ponging-paradigm-of-patenting-computer-programmes-in-india-software-patenting-1999-2020.html

IV. CONCLUSION

There are both positive and negative effects of granting patents which means that they should not be granted to trivial inventions to enhance the negative effects over the positive effects. Even though it will restrict the flow of R&D from the investors, the effects have to be balanced.[32]

In the *Fujitsu case*[33]*,* the counsel representing the Comptroller of Patents had mentioned that strict application of provisions and guidelines would limit the number of inventions from patentability which in actuality administer a significant amount of contribution to the existing technical knowledge in the field. This principle has been consciously reiterated in the Ferid Allani case where the court believes that in this dynamic and ever-developing digital age, differentiating between patent-eligible and ineligible inventions becomes crucial. Even though this case raises serious issues in relation to adjudication of software inventions, it comes as a breath of fresh air to the Indian patent law scenario. Apart from this, another important point to consider is whether the IPO has the power to give interpretative and legal meanings to terms that have not been defined under the Patents Act through the Guidelines on CRIs, a question raised during the stakeholder meeting during the policymaking of the 2017 Revised Guidelines.[34]

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[32] *See* Sudip Chaudhuri, The larger implications of the Novartis-Glivec judgement, 48 Economic and Political Weekly 10, 10 (2013), *See also* Novartis Ag v. Union of India, 6 SCC 1, (2013) (Novartis 'patent application was examined in 2005 where the Supreme Court rejected it on the grounds of the amended S.3(d) stating that the substance Novartis wanted to patent was a medication to a known drug and patent can only be granted if there are any significant differences between their therapeutic efficiencies).

[33] In re Fujitsu Ltd., Patent Application no. 9204959.2

[34] Balaji Subramanian, Behind the Scenes: The Making of the 2017 CRI Guidelines, spicyip (Sept. 15, 2021 4:20 AM), https://spicyip.com/2017/08/behind-the-scenes-the-making-of-the-2017-cri-guidelines.html