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Case Comment

Patentability of Algorithmic Processes in India: The Battle Between Blackberry and The Controller of Patents

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Abstract: On 30th August 2024, the Delhi High Court (DHC) delivered two landmark decisions that have drawn attention to the treatment of software-based inventions in Indian patent law. The center of these ruling was the appeals filed by the Blackberry Limited against the rejection of their two patent applications. The first application, titled "Administration of Wireless System", was rejected on the ground that the claims pertained to a set of instructions and software without inventive hardware feature. While, the second application, titled "Auto-Selection of Media Files", was rejected for being related to algorithms and computer program per se. This paper aims to examine the court's reasoning in both cases to assess the consistency of the decisions. By examining these decisions, the paper look into the Indian jurisprudence in dealing with the patent claims for software and algorithms, thereby throw light on the evolving patentability standards in India for AI and software-driven innovations.

Keywords: Blackberry case; section 3(k); algorithm; computer program; Delhi High Court; Indian patent act

1. Introduction

In India, a classic confusion persists in the context of distinguishing whether an invention is incorporating an algorithm or a computer program, this is mostly because of the nature of the subject matter itself. Section 3(k) of the Indian Patent Act, 1970 says that "computer program per se" are not patentable, but this created a grey area where examiners have to figure out whether an invention is an unpatentable abstract idea or a practical technical application of a computer program. Recognizing this, the 2017 Guidelines for Examination of Computer-Related Inventions (CRI Guidelines) also address this difficulty and stated that "while the judgment of mathematical methods or business methods is comparatively easier, it is the computer programme per se or algorithms related inventions that require careful consideration of the examiner." Most of the jurisdiction around the world are struggling with the question on how to handle the issue of computer implemented inventions, software related processes, and their incorporation with hardware. Countries like Unites States and those under the European Patent Office have developed test to examine whether such inventions provide a "technical solution to a technical problem" or go beyond mere abstract ideas.

The ongoing struggle to strike a balance between promoting innovation and avoiding monopolization of abstract ideas highlights the complexity of this issue. As technology advances at an unprecedented pace, the landscape of innovation is becoming increasingly complex, especially in areas like software development, Artificial Intelligence (AI), etc… These advancements often blur the line between the abstract ideas and the practical application, making it challenging for Court and policy makers to determine what qualifies as patentable subject matter.

Against this backdrop, this paper will refer to the two Delhi High Court (DHC) decisions on appeal against the rejection of two patent applications filed by Blackberry Limited. These cases provide an opportunity to assess objective is to determine whether the decisions can stand together within the same legal framework or if they conflict, as both cases involve objections under the same category (i.e. Section 3(k)). To explore this, the paper reviews the DHC's jurisprudence on Section 3(k) over the past few years, to examine how the Court uses to decide whether an invention is just an algorithm or computer program or if it includes something more technical that makes it eligible for a patent. The analysis section will examine the Court's test for inventions incorporating algorithms and evaluate whether it successfully distinguishes between invention incorporating algorithms or computer program.

2. Blackberry Cases

2.1 Case I:

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The first Blackberry case related to an appeal on the subject patent application titled "Administration of Wireless Systems" bearing Application Number 1762/DEL/2008 was filed on 25th July, 2008[1]. The present invention is about a system with several wireless servers that can communicate with at least one mobile wireless device, making it easier to configure data between the servers. This case was rejected by the controller as "computer programme per se" under Section 3(k)[2] of the Indian Patent Act 1970. Wherein, the impugned order stated that the invention was directed towards "set of instructions and software" which was purely functional and lacking any inventive hardware features.

Here, Blackberry contended that the Controller's refusal order is lacking proper justification and reasoning, constituting what is termed as a non-speaking order.[3] They argued that invention addresses a technical problem by deliver a technical solution to resolve conflicts between multiple servers and prioritize one server's instruction, ensuring proper operation of the device.[4] Blackberry further emphasized that the presence of a computer program did not diminish the technical effect of the invention as a whole.[5] They also contended that Section 3(k) exclusion is applicable to inventions which are purely abstract in nature and claims that their patent, which includes hardware and practical applications, is not merely abstract or a computer program. To counter the Respondent's argument that it's an algorithm-based invention, the Appellant references the Vicom System Inc. decision, which distinguishes between technical process and mathematical process/ algorithm.[6]

The court assessed the case by examining two key issues: (1) Whether the technical contribution of the subject patent is merely a set or sequence of instructions? (2) Whether the substance of the subject patent is directed towards algorithmic processes?

In addressing the first issue the Court analyse the patent claims along with the Complete Specification to determine "whether the claimed invention goes beyond a series of instructions or if it primarily constitutes a set of if-then-else iterations that do not meet the criteria for patent protection under Section 3(k) of the Act."[7] The Court observed that the invention exhibited technical contribution to address a specific problem. However, in line with judgment in Lava International v. TLM Ericsson, the Court refused to grant the patent since the core functionality relies heavily on conditional logic and procedural step.[8] Hence, the Court agreed with the controller's objection under Section 3(k).

Thereafter, to assess the second issue, the Court then looked into the applicability of the qualifier "per se" and explained that a close reading of Section 3(k) reveals that the term "per se" applies specifically to computer program but not to algorithms.[9] The Court reasoned that if an invention goes beyond computer program, it might still be considered patentable if it includes a technical contribution. However, algorithms are abstract in nature and are they are excluded from patentability, without looking into the question of technical contribution.

The Court referred to the key points from *Lava International Ltd v. TLM Ericsson*, that the patent application could be patentable even if an algorithm provides a "further technical effect" within a system. However, with respect to the present case the Court opined the Blackberry's patent focuses on algorithmic instructions specifically for managing and transmitting the data, which was purely a procedural function and it did not provide any unique technical effect.[10] Additionally, the Court observed that Blackberry's reference to the *Vicom Inc.* judgement was irrelevant as, the use of "as such" by Board of Appeal in EU allowed exceptions for mathematical methods if they produced a technical effect does not apply under Indian Law.[11]

2.2 Case II:

The second Blackberry case related to an appeal on the subject patent application titled "Auto-Selection of Media Files" bearing Application Number 717/DEL/2009 was filed on 25th July, 2008. Herein, the invention relates to a system and method for managing media content based on the measure of a user's likeability. This invention was rejected by the controller, stating that it was related to "algorithm and computer program per se" and falls under Section 3(k) of The Patent Act, 1970.

The Court here acknowledged that it cannot to simply classified as just a computer program or algorithm; instead, the invention involved a technical implementation[12], combining hardware and software to managing media content. [13]Although the invention involve computer programs described as a device that support the media files using algorithmic steps, combine algorithms with computer program, which are then be implemented via software.[14]

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1 *Blackberry Limited v. Assistant Controller of Patents and Designs*, High Court of Delhi, C.A. (COMM.IPD-PAT) 229/2022

2 What are not inventions - The following are not inventions within the meaning of this Act: (k) a mathematical or business method or a computer programme per se or algorithms;

3 *Dolby International AB vs The Assistant Controller of Patents and Designs* (2023: DHC:1854)

4 *Blackberry Limited v. Assistant Controller of Patents and Designs*, High Court of Delhi, C.A. (COMM.IPD-PAT) 229/2022, Para 15.

5 *Ferid Allani v. Union of India* (2019 SCC OnLine Del 11867); *HTC Europe Co. Ltd. v. Apple Inc*.([2013] EWCA Civ 451)

6 The European Patent Office's decision in T 208/94 (Vicom Systems Inc.)

7 *Blackberry Limited v. Assistant Controller of Patents and Designs*, High Court of Delhi, C.A. (COMM.IPD-PAT) 229/2022, Para 31.

8 *Blackberry Limited v. Assistant Controller of Patents and Designs*, High Court of Delhi, C.A. (COMM.IPD-PAT) 229/2022, Para 41.

9 *OpenTV Inc. v. The Controller of Patents and Designs*, 2023:DHC:3305, Para. 72. In OpenTV Inc. the Court held that the bar in India over business methods is absolute and note qualified. The similar position would also be applicable for algorithms.

10 *Blackberry Limited v. Assistant Controller of Patents and Designs*, High Court of Delhi, C.A. (COMM.IPD-PAT) 229/2022, Para 51.

11 *Blackberry Limited v. Assistant Controller of Patents and Designs*, High Court of Delhi, C.A. (COMM.IPD-PAT) 229/2022, Para 55.

12 *Blackberry Limited v. Controller of Patents and Designs*, High Court of Delhi, C.A.(COMM.IPD-PAT) 318/2022, Para 32.

13 *Blackberry Limited v. Controller of Patents and Designs*, High Court of Delhi, C.A.(COMM.IPD-PAT) 318/2022, Para 26.

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Since the invention is implemented using software, the Court checked for its technical effect or contribution and concluded that the invention significantly improves the device's capability, allowing it to operate more efficiently without needing an additional storage, and thus can be considered as a technical effect and a valuable technical contribution.[15]

3. Previous Jurisprudence on Section 3(k)

Before conducting a critical analysis of the court's decision, it is essential to review the key Court cases that have addressed software and algorithmic patents to understand how the judicial interpretation has evolved in this matter.

Section 3(k) of the Indian Patent Act has been shaped by a long legislative history and numerous judicial interpretations. Wherein, Delhi High Court (DHC) has looked at cases to examine when the inventions involving computer program can be considered patentable under Indian Patent Law. Over time, the DHC has analysed various aspect of these cases to clarify this matter and one of the significant cases in line is *Ferid Allani vs Union of India & Ors (2019)*. Here, the DHC states that restriction on patenting is in respect of "computer program per se.." i.e. software on it owns and does not extend to all inventions incorporating computer programs.[16] The purpose of the word "per se" is to clarify that genuine inventions incorporating computer program are not to be rejected simply because they include software. Instead, if they result in a technical contribution, they may be eligible for a patent, despite using a computer program.[17] Through the *Microsoft Technology Licensing, LLC v. Assistant Controller of Patents & Designs,* the Court tried to figure out the mistakes done by the controller while examine the applications related to Computer Related Inventions (CRI) and clarified that the presence of novel hardware is not a mandatory requirement for a purely software invention to be patentable, as per the 2017 CRI guidelines.18

Further, the Court has come up with a wide option of test to access CRI's. The prominent cases came before the DHC with the proposed test are, the *Microsoft Technology Licensing, LLC vs Assistant Controller of Patents and Designs C.A.(COMM.IPD-PAT) 29/2022* (2023), *Telefonktiebolaget LM Ericsson (Publ) vs Lava International Ltd* (2024) (hereinafter referred to as 'Ericsson') and *Microsoft Technology Licensing, LLC vs Assistant Controller of Patents and Designs C.A.(COMM.IPD-PAT) 185/2022 (2024).* In the first case the Court pointed that the invention should be assessed for its technical advancement and its practical application in solving real-world problems rather than simply tag it as 'computer program per se' as it involves algorithms and computer-executable instructions.[19] Later, in Ericsson Case, the Court states that if the invention is solely focuses on elements such as mathematical method, business method, algorithms, or computer program per se then they are generally not patentable. However, even if an invention incorporates these elements in a way that enhances or transform the functionality of a system or device, it could be qualify for patent protection.[20] Hence, the Court set the threshold to overcome the restriction in Section 3(k). Also, in Microsoft Case, the Court put forward that the inventive should not only improve the functionality of the system but also it should deliver an innovative technical advantage.[21] Thus, the DHC has interpreted Section 3(k) using a mix of tests, which are a collection of unclear and vague criteria that create confusion about what is required to overcome section 3(k) (whether a technical effect or technical advancement or technical solution to a technical problem, and or further technical effect).

In 2024, the Madras High Court (MHC) issued its first authoritative decision on the patentability of computer program in the case of *Microsoft Technology Licensing, LLC v. Assistant Controller of Patents [OA/36/2020/PT/CHN]*. Here, the MHC agreed with the DHC's understanding of Section 3(k) and stated that if a computer related invention (CRI) results in a technical effect that improves functionality and efficacy, or if it provides a technical solution to a technical problem, it should not be barred under section 3(k).[22]

Moreover, in *Ab Initio Technology LLC vs Assistant Controller of Patents and Designs C.A.(COMM.IPD-PAT) 26/2021 (2024)*, the DHC examined the legislative evolution of Section 3(k) and relevant judicial precedents.[23] It noted that the exclusion should apply to computer program per se only when they show a technical effect or provide a technical solution to a technical problem. In this judgement the DHC continued its restrictive interpretation of Section 3(k), which excludes inventions that are purely business methods, mathematical methods, a computer program per se or algorithms. Here, the Court applied the "technical effect" test and demonstrated that the invention achieved technical effect through increased functional dependency analysis and workload distribution via parallel processing.

4. Legal Analysis of the Court's Decision

In the Blackberry Case I, the Court agreed with the Controller's decision that the claimed patent sought protection for a pure algorithm, while in the second case the Court had a different opinion from the Controller and distinguished the invention as going

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15 *Blackberry Limited v. Controller of Patents and Designs*, High Court of Delhi, C.A.(COMM.IPD-PAT) 318/2022, Para 36.

16 *Ferid Allani vs Union of India & Ors* (2019 SCC OnLine Del 11867), Para 10.

17 Report of the Joint Committee on the Patents (Second Amendment) Bill, 1999 (19th December, 2001): "In the new proposed clause (k) the words "per se" have been inserted. This change has been proposed because sometimes the computer programme may include certain other things, ancillary thereto or developed thereon. The intention here is not to reject them for grant of patent if they are inventions. However, the computer programmes as such are not intended to be granted patent. This amendment has been proposed to clarify the purpose."

18 *Microsoft Technology Licensing, LLC v. Assistant Controller of Patents & Designs* (2023) C.A.(COMM.IPD-PAT) 140/2022, Delhi High Court, Para 6.

19 *Microsoft Technology Licensing, LLC v. Assistant Controller of Patents & Designs* C.A.(COMM.IPD-PAT) 29/2022 (2023), Para 45.

20 *Telefonktiebolaget LM Ericsson (Publ) vs Lava International Ltd* (2024), Delhi High Court, Part 21, p. 296.

21 *Microsoft Technology Licensing, LLC vs Assistant Controller of Patents and Designs* (2024) C.A.(COMM.IPD-PAT) 185/2022, Delhi High Court, Para 33.

22 *Microsoft Technology Licensing, LLC v. Assistant Controller of Patents* [OA/36/2020/PT/CHN] (2024), Madras High Court, Para 36.

23 *Ab Initio Technology LLC vs Assistant Controller of Patents and Designs* (2024) C.A.(COMM.IPD-PAT) 26/2021, Delhi High Court, p 10-

beyond a mere algorithm or computer program. Through the Blackberry Cases (Case I and Case II) the Court created a stricter test of patentability of inventions using algorithms following the *Telefonktiebolaget LM Ericsson (Publ) vs Lava International Ltd (2024)* as these ruling emphasize that "if the algorithms are directed at enhancing the functionality of a system or a hardware component, the effect or the functionality derived by the system or the hardware component is a patentable subject matter. However, the algorithm itself is not a patentable subject matter." The test proposed in Blackberry Case I is similar to those in earlier tests (as discussed in previous part). In both the Blackberry cases, the Court highlighted that to bypass the patentability exclusion under Section 3(k), the invention involving algorithm must show either a significant change in hardware[24] or an improvement in its functionality[25]. While examining this matter, Case II cleared the bar, but case I did not, as it was considered as pure algorithm. So, the Court's decision to make a change or improvement in hardware functionality for inventions using algorithms is puzzling because it is stricter than the usual tests for computer programs. For computer programs, the test focuses on technical effect or technical contribution, without always needing a direct impact on hardware. This stricter rule for algorithms makes it unclear why the Court treat them differently from computer programs, which have more flexible rules. In the battle between algorithms and computer programs, the significant question is to demarcate between whether an invention incorporates an algorithm or a computer program or goes beyond to something which include patentable subject matter. This distinction requires careful consideration while examining as these two terms are central to assessing the invention's patentability.[26]

Additionally, other lessons learned from the Blackberry cases are: (1) to improve the chances of patentability under Section 3(k) of the Indian Patent Act, it is very essential to focus on the technical contributions of the invention by clearly demonstrating how the algorithm enhances functionality, like improving hardware performance, data management capacity and so on. (2) Claim should focus highlighting the interaction software and hardware, demonstrating how the software work with hardware and improves its operation, thereby makes it clear that the invention is more than mere abstract idea. (3) it is important to avoid describing the invention in a way too vague or theoretical. Instead, the claims should be clearly show how the invention is works in real life and what practical advantages does it offers. By adhering to these principles, applicants can avoid the issues that lead to rejection under Section 3(k) of the Indian Patent Act. They can highlight the technical value of their inventions, demonstrating how they solve a real-world problem or improving system functionality, and thereby improving their chance of securing a patent.

5. Conclusions

The differing judgments in the Blackberry cases highlight the crucial importance of how claims and specifications are prepared. The Court in Blackberry case I relied on the complete specification to analyze these matters and concluded that it directed towards a series of programmatic steps, thereby falling under the category of unpatentable computer program and fails to establish a technical effect. Whereas in case II the Court observed the complete specification and concluded that it had a subject matter which goes beyond mere algorithm by demonstrating its impact on technical functionality, making it potentially patentable and not barred under Section 3(k). However, these cases reveal that there is still a path to patentability if algorithm demonstrates a tangible technical contribution. For instance, if an invention involving an algorithm provides a technical solution such as improving system performance or enhancing hardware functionality, it may qualify for patent protection. In the Second case the Court is not providing a conclusive decision on whether the invention incorporated an algorithm or a computer program. One thing is that computer program is not excluded under Section 3(k) if it provides a technical effect that enhances the functionality of a system or if it provides a technical solution to a technical problem. If the invention involving algorithm the same test applies. To resolve these ambiguities, Indian Courts often refers to foreign jurisprudence, particularly US and European cases, for guidance to help determine when a computer program can be considered patentable and not excluded under Section 3(k) of the Indian Patent Act. Even though, the question "whether an invention is incorporating an algorithm or a computer program?" still remain unresolved, the varied and flexible set of tests used for computer programs will be applied to algorithms too.

References

Guidelines for Examination of Computer Related Inventions (CRIs).2017. Available online: https://ipindia.gov.in/writereaddata/Portal/IPOGuidelinesManuals/1_86_1_Revised__Guidelines_for_Examination_of_Computer-related_Inventions_CRI (Accessed on 23 November).

Indian Patent Act. 1970. Available online: dated_till_23_June_2017 (Accessed on 23 November 2024).

Report of the Joint Committee on the Patents (Second Amendment) Bill. 1999. Available online: ages/Patents-Act-REPORT-OF-THE-JOINT-COMMITTEE-19-Dec-2001 (Accessed on 23 November 2024).

Sherman, B. 2011. SCP/15/3 - Experts' Study on Exclusions from Patentable Subject Matter and Exceptions and Limitations to the Rights. WIPO. 2011. Available online: https://www.wipo.int/edocs/mdocs/scp/en/scp_16/scp_16_ref_scp_15_3-annex2 (Accessed on 23 November 2024).

[24] *Blackberry Limited v. Assistant Controller of Patents and Designs*, High Court of Delhi, C.A. (COMM.IPD-PAT) 229/2022, Para 52

[25] *Blackberry Limited v. Controller of Patents and Designs*, High Court of Delhi, C.A.(COMM.IPD-PAT) 318/2022, Para 32

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