

**ARTIFICIAL INTELLIGENCE AND PATENT LAWS IN INDIA**

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**ABSTRACT**

The relationship among Artificial Intelligence and patent laws has two implications, the first it associates to the patentability of Artificial Intelligence itself, and the secondly it associates to the patentability of invention made by the utilization of AI.

In the background of strength in software, Indian firms and inventors are well placed to take benefits of the AI revolutions via patent acquisitions and associated uniqueness. Though, for that to take place, some vital portions have to be tactically composed. The clear and well described patent policies, legal changes to identify inventions and patentability problems, comprehensive patent examination guideline, constancy in patent reviews, and proper data set and database protections would go far in enhancing AI innovation progresses in India.

This study also identifies the issues of IP Ownership of AI created works. It argues that providing authorships to AI inventors and owners are vital to the future development of the AI industry. Conversely these issues not only conventional concepts of patents, but also bring to light different questions associated to the ruling of such inventions among others. In addition, this article facilitates the study of the issues faced by AI technologies in legal as well as technological aspects, to file in India, that can assist to boost the filing and eventually assist to enhance the AI in India.

This research work concluded by proposing the requirement for reformations or renaissance in the field of Patent laws to accommodate new forms of technological development.

**INTRODUCTION**

“Success in creating Artificial Intelligence would be the major event in human history. Unfortunately, it might also be the last, unless we learn how to avoid the risks.”

– Stephen Hawking

Humans have often tried to find new modes to perform various tasks simply with least efforts. For this, new technologies have been expanded and are still being built up, one of which is the technology of Artificial Intelligence. Though the concept of artificial intelligence invented way back around the 1950s, the field still needs many research and development even in the developed nations. The idea that humans could, at some point, develop machines that actually “think” for themselves and act autonomously has been embedded in our literature and culture since the beginning of civilization.

AI is considered as an important factor of the Fourth Industrial Revolution. The conception of Artificial Intelligence (AI) is a compound issue. Although the concept is not of recent origin, but has attained such remarkable thrust in the recent time that it has become a theme of debate not only for scientist, but also for academician, policy-maker and industrialist. This is mainly because the field of AI is so broad that it influences almost all areas of contemporary world<sup>1</sup>.

Artificial Intelligence (AI) refers to those systems of computer science that demonstrate intelligent behavior and are concerned with building smart machines. AI is already having a significant impact on the creation and distribution of goods and services. One sector that has been revolutionized by AI is healthcare, where drug discovery and development has been speeding up<sup>2</sup>. There are numerous basics that need to be considered whereas examining patent laws and the great effect of AI on patent law. Patent laws are depended on the assumptions that inventor is human

<sup>1</sup> Darrell M. West and John R. Allen, How artificial intelligence is transforming the world, Brookings, 2018

<sup>2</sup> Vaishali Singh, Mounting Artificial Intelligence: Where are we on the timeline? Scconline, June 7, 2018

being; it presently struggles to manage inventors that is a machine. Patents are inventions based legal documents that define and provide the bearer with limited right to keep out others from manufacturing, sell, or distribute these inventions. The infringements of these limited rights of the patent holders are known as patent infringements. The patent is permitted by the Indian Government for limited periods. This is to say that if the right permitted to the patentee is exercised by someone else who is not authorized by the patentee, then it will be concerned violations of patent right, and the individuals are made accountable for the same. S. 104-114 of the Patents Act, 1970 gives provision in regards to the patent infringements<sup>3</sup>. AI is subject matter of different patents depended on invention in the area of machine learning, data analytics, NLP and NLS and machine learning. AI is utilized to automate existing resources, comprising HR and data to create ROI for companies.

## **LITERATURE REVIEW**

Karthiayani (2018)<sup>4</sup> in her research paper tried to examine the correlation of AI and IPR laws to recognize why work of AI system is not considered to be suitable for safeguard under various IPR laws in India. A special focus is laid on the Patents Act, 1970 and some provisos of Patents Act that perform as roadblocks in allowing such safeguard to Artificial Intelligence. Moreover the necessity for amendment to the enactment is analyzed with recent development of AI. The study concluded by proposing the requirement for reformations in patent laws to lodge new form of technological development.

Shubham (2017)<sup>5</sup> examined the methodology for acknowledgment of legal personhood to AI. This study critically analyzed the approaches to tackle the challenges related to patents in AI. It proposes unitary theories to ease accepting of current legal personalities, therefore giving up cogent arguments which reasonably point towards the extensions of legal personalities to artificially intelligent beings. It would make the current laws strengthened against issues occurring from the growth of AI.

Devarhubli (2018)<sup>6</sup> proposes that the development of AI has triggered a pointer towards the IP protection of AI-generated materials. Usually, IP protection is granted for 'original' creations. But with AI-generated materials, can the IP protection be extended for them? Traditionally, both copyright and patent laws have relied on the concept of author or inventor as a natural person. But the creativity and knowledge exhibited by AI systems in the past has raised concerns regarding IP protection of such knowledge.

Aggarwal A (2019)<sup>7</sup> in his article tried to explore some of the factors of IPRs that mainly sort out Patent process. Artificial Intelligence has the prospective to defy the key legal principle that is structure of Patent laws. Whether A.I. created inventions must be provided safeguard under patent laws, and if so, who should be concerned as the inventors for such Artificial Intelligence Systems made invention is the most basic question that require to be identified immediately.

## **PATENT AND AI**

Patent laws recognize the limited rights of patent holders to get business advantages from his inventions. Patents are special rights permitted to the owners of inventions to the production, uses, and marketing the inventions, given that the inventions meet some situations set down in law.<sup>8</sup>

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<sup>3</sup> Anubhav Pandey, Patent enforcement through courts in India, ipleaderonline, April 21, 2017

<sup>4</sup> Karthiayani A, Artificial Intelligence And Intellectual Property Laws In India: Is It Time For Renaissance? International Journal of Law Management & Humanities, Volume 1, Issue 2, 2018

<sup>5</sup> Shubham Singh, Attribution of legal personhood to artificially intelligent beings, Bharati Law Review, July – Sept., 2017

<sup>6</sup> Gururaj D. Devarhubli, Artificial Intelligence (AI) and its Impact on IP Laws of India & US, International Journal of Law Management & Humanities, Volume 1, Issue 3 , 2018

<sup>7</sup> Amit Aggarwal, AI and IPRs: Redefining patent laws in India, Economic Times, Dec 19, 2019

<sup>8</sup> Anubhav Pandey, Patent enforcement through courts in India, ipleaderonline, April 21, 2017

The correlation among patent law and AI is growing in the present technological scenario. AI built gadget function rightly in the same way to calculators and some other associated technologies at first glance. AI enabled computer can now do activity that spotlight on their own important observation, may be permitting them to make anything. Whereas this is a significant technological attainment, it also creates legal issues, particularly in patents act.

The Sect 2(1)(p) of Patents Act define 'patentees' as an individual who is entered in the Register of Patent as grantees or proprietors. It has not evidently described the expression 'person' and Sec 2(1)(s) just stated that 'persons' include the government.

Sec 6 of the Patents Act, 1970 state that applications for patents for any inventions can be done only by the true and first creator of the inventions or the individuals given upon appeal only assigned by such persons. While, Sec 2(y) confined the definitions of factual and first creator to the degree of barring the main shipper of an invention into India, or a person to whom a creation is first conveyed abroad, and nothing more<sup>9</sup>.

While these provisions may be analyzed to determine whether an 'inventor' can include AI, reliance should be placed on Form 1 for the 'Application for the Grant of Patent'. As per this form, an applicant may be a natural person or a non-natural person that includes a small entity, a startup or 'others'. Further, the form also provides an option for the inventors named to be the same as the applicants. This open-ended categorization leaves ample room for a broad interpretation that has within its ambit, a non-human like AI. However, it remains to be seen how the DABUS application will be treated under the Indian patent framework.

### **Issues and challenges of patenting of AI**

The key issue to the patenting of Artificial intelligence related software is the constitutional one inflicted by Sec 3(k) of Patents Act that limits the patenting of computer programmes. To qualify as patentable in the existing laws, the AI applications are required to be according to the Guideline for Examinations of CRIs by the Indian Patent Office. This requirement considerably diminishes the patentability of Artificial Intelligence invention and technology.

Section 6 of the Indian Patents Act, 1970 states that "an application for a patent for any invention can be made only by the true and first inventor of the invention or the persons assigned by such person".<sup>10</sup> Even if, Sec 2(y) of the Act doesn't particularly consent "true and first inventor" to comprise natural individuals, though, in practice it is often assumed to be natural persons.

Inventions by Artificial Intelligence are the prospect of innovations. Inventing a computer is normally utilized to make new technologies, like latest design of BMW of self driving vehicles. A small number of individuals think that it is only time being before Artificial Intelligence is accountable for the most of creations in the globe. The same raise the problem of how the Patent Systems must care for the modern technology invented exclusively by A.I. with inadequate human commitment to identify human inventors. The questions of whether, and to whom, patent can be permitted for A.I. invention is yet to be identified by the law and the court.

An important need for inventorships is creating key contributions to the invention. In TS Holdings vs. Schwab case<sup>11</sup>, Mr Barry Schwab was appointed to make videos to be utilized in vehicle promotion. He had got patents on the succeeding inventions, and the company later claimed that he must be comprised as inventors<sup>12</sup>.

The case mentioned above establishes that a human using inventing AI is not an inventor for purposes of Patent Law. To initiate AI invention, a person may input seed information, including existing technologies – for instance, for neural networks or relevant parameters to be optimized. Such acts are seen as merely providing AI with access to existing knowledge in the field.

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<sup>9</sup> Chrysa K. Kazakou, The impact of artificial intelligence on intellectual property rights, Property Rights alliance, 20, 2020

<sup>10</sup>Section 6 of the Indian Patents Act, 1970

<sup>11</sup> TS Holdings, Inc. et al v. Schwab, No. 4:2009cv13632 - Document 115 (E.D. Mich. 2012)

<sup>12</sup> Cattoor, S., Letten, I. and Loose, A. (2020), 'Inventorship of AI Made Inventions', IRDI, pp. 7-17

Furthermore, the fact that a person – finances, owns, or operates the AI is insufficient to qualify that person as an inventor. In such situations, a person may be responsible for an invention, but they have not invented a new technology. A primary goal of the patent system is the dissemination of technological advances. If AI patents are refused, it will lead to software creators not disclosing their AI inventions themselves and rather keeping them a trade secret. The same will certainly go against the primary goal of the patent regime. Unfortunately, most legal systems are not yet equipped to answer these questions in black and white.

In *Ferid Allani vs UOI*<sup>13</sup> case, the Delhi HC points out that the law associating to software patent by interpreting Sec 3(k) of the Patents Act, the patent eligibility provisions that associates to computer programmes. The court viewed that this was done to make sure that real creations that are expanded depended on computer program aren't refused. Therefore, if the inventions show 'technical effects' or 'technical contributions' it will be patentable although it might be related to computer programmes. The permission of these patents have opened the field for patent application associated to AI and other digital creations which might computer program related. A study of legal purposes and present public policies reveal an intention to safeguard the right of the inventors who create intellectual property and can utilize his ethical right. Conversely, Artificial Intelligence can't be permitted ethical rights nor appears to have the advantages aimed by legislations or public policies..

The scope of the bar/exclusions of AI system as per Sec 3(k) of Patents Act has been declared by the Court in its decisions in "Telefonktiebolaget LM Ericsson (PUBL) vs. Lava International Ltd."<sup>14</sup>, where the court observed that "This bar of Section 3(k) does not apply when in a patent involving modern day technology, algorithms are employed in order to perform certain calculations or selections which are thereafter utilized by various hardware components or elements to produce/improve a technology and create a practical effect or result in a physical realization."

In "Darius Rutton Kavasmaneck v Gharda Chemicals Ltd" case,<sup>15</sup> the Court found that "the defendant Dr Gharda who is the managing director, of a company, did not owe any fiduciary duty to his principal company to register the patents in the company's name, as he was not under any duty to invent in his capacity as managing director. The Bombay High Court has recently found that patents filed by employees can belong to the employee if the employee was not been engaged or instructed to create inventions as part of his employment or during working hours."

In "VB Mohammed Ibrahim v Alfred Schafranek"<sup>16</sup> and *Shining Industries v Sri Krishna Industries*<sup>17</sup> give some clarifications albeit only whereas deciding whether legal persons or financial contributors can state inventorship. To both problems, the individual court ruled that inventors should give technological contributions and be natural persons.

In its latest judgment USPTO summed up that Artificial Intelligence systems could not be identified as a creator in American patent application in which AI machines called DABUS was designated as sole inventor. The DABUS judgment is absolutely an important expansion in the field of patents right. In India, in the present regimes, Artificial Intelligence system will be blocked from patents right even if the inventions meet other necessary criterion because of lack of legal personalities. The scope is that there would be essential changes would be integrated in Indian legal system taking inspirations from the DABUS judgments.

## **CONCLUSION AND SUGGESTIONS**

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<sup>13</sup> W.P.(C) 7/2014 & CM APPL. 40736/2019

<sup>14</sup> 2016 (65) PTC 556[Del]

<sup>15</sup> *Darius Rutton Kavasmaneck v Gharda Chemicals Ltd & ors* (2014) SCC Online Bom 1851.

<sup>16</sup> AIR 1960 Kant 173, AIR 1960 Mys 173

<sup>17</sup> AIR 1975 All 231

Patents are considered to be an instrument that safeguards the right of the inventors in order that they can enjoy monetary advantages out of it. This is a type of inspiration that the state provide to inventor to generate latest and innovative works. Permitting patents right to Artificial Intelligence invention would fast track innovations, even allowing advances that wouldn't have been probable via human inventiveness alone. The current condition of Artificial Intelligence in IP is challenging, in which, acknowledgement of work made by Artificial Intelligence is a footstep towards the prospect, but its execution is the actual problems.

Problems relating to patent inventorships and ownerships have been managed by various courts though; participation of various professionals and firms in the processes of expansion of inventions utilizing AI system has raised the difficulty of determining inventorships and ownerships. It is recommended that sign a contract agreement before the collaborations would be supportive to stop the ownership clashes in prospect. It is suggested that the potential invention of Artificial intelligence must not only be guarded towards the betterment of AI system but must also advantage the human race.

With recent judgments favouring grant to a software-related invention based on the technical merits, we could hope more and more AI-related inventions with distinct technical merits get granted at the Indian Patent Office. "Furthermore, considering that, the AI systems is one of the most important technologies of this era with a capability of creating inventions on its own, one way to resolve the question of inventorship related to AI inventions would be to allow "joint inventorship" between the AI and the human inventor of the AI system. With AI not being recognised as an inventor, the owners of the AI will not have any legal protection they need for the inventions that their systems create."

One of the basic purposes of Patents is to incentivize innovation and encourage R&D. Artificial Intelligence is expanding fast. The patent laws regarding AI has to be adaptive in nature and should seek to attain economic and societal wellbeing.

Therefore, better drafting techniques must be applied by the patent drafters whereas functioning on the claim of the inventions. The wording must be articulately selected targeting on functionality of the systems and slyly comprising the working principles/algorithms of the AI systems.

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