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+91 70421 48991  
editor@ijlar.com  
www.ijlar.com

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## **Introduction**

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## Preface

The Indian Journal of Legal Affairs and Research is a testament to our unwavering commitment to excellence in legal scholarship. This volume presents a curated selection of articles that reflect the diverse and dynamic nature of legal studies today. Our contributors, ranging from esteemed legal scholars to emerging academics, bring forward a rich tapestry of insights that address critical legal issues and offer novel contributions to the field. We are grateful to our editorial board, reviewers, and authors for their dedication and hard work, which have made this publication possible. It is our hope that this journal will serve as a valuable resource for researchers, practitioners, and policymakers, and will inspire further inquiry and debate within the legal community.

## **Description**

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# **“STUDY OF FAIR LICENSING OF AI GENERATED PATENTS THAT BECOME STANDARD ESSENTIAL PATENTS”**

AUTHORED BY - RADHIKA AGRAWAL

PhD candidate

ICFAI Foundation for Higher Education (IFHE) - Law School, Hyderabad

## **Abstract**

It has become impossible to view any emerging technology absolutely divorced from intellectual property (i.e. IP). Amongst other IP, patents exist to protect the novelty and inventiveness of the human mind. This stands conflicted today with the involvement of artificial intelligence (i.e. AI) in creating intellectual property on its own. But we must not forget that AI gets its functioning abilities based on what limit is decided by the human creating that AI. AI is governed by machines that work on algorithms programmed by humans. As AI can also produce new inventions, it may fall within the purview of patent law. There is no specific law yet or definition agreed upon, globally, to ascertain rights and responsibilities that come with AI based patents.

Patents being of economic value, may be subject to license agreements between parties involved. Negotiation of terms is the key to avoid disputes later on. But in case disputes occur then courts are the resort. Any contractual agreement is essentially supposed to be fair, reasonable and non discriminatory. But it has been termed as FRAND licensing for the sake of denoting licenses between parties to use Standard Essential Patents (SEPs) in technological pursuits. SEPs are those common patents that are needed for use by Standard Setting Organisations (SSOs) to create standard technologies like WiFi. Such SEPs help in maintaining interoperability and universality in technical systems.

In such a licensing format, how are companies or industries going to negotiate with an AI who is the creator of a patent which is to be used as a standard essential patent. The possibility of

guidelines regarding AI and its negotiating powers are needed in the future. Because the evolution of AI in IP is not going to disappear but only grow, evolve and branch out in areas we may possibly not even realize. Instead of simply following the suit that the western countries or technologically advanced countries may deploy in their IP regime, India must take initiative to frame rules and guidelines which are needed according to our technological prowess and progress.

**Keywords:** *intellectual property, artificial intelligence, FRAND license, standard setting organizations, standard essential patents, innovation, technology.*

## Introduction

The dynamics of contemporary developments in the field of Artificial Intelligence (i.e. AI) have been quite volatile. It has an incredible ability to have a juxta-position with every domain imaginable to the human race. From AI chatbots to smartwatches to medical equipment. AI has become omnipresent. This renders it under a special spotlight. AI was first discussed in 1956 in the Dartmouth Conference, wherein researchers had talked about the possibility of ‘human-like’ thinking through machines. Almost seven decades down the line we see an insurmountable rise of involvement of these ‘machines’ now called AI. The creation of AI typically encompasses building algorithms that are fed data. This huge set of databases is connected by creating neural pathways. These patterns are later recognised by the AI to arrive at an output. However, this is not as simple and direct as it sounds. But it is also not as complex or harmful as may be imagined in sci-fi movies where world’s survival is at stake!

Another noteworthy development in recent decades has been that of Intellectual Property (i.e. IP). Theorists have given various theories to attribute ownership of ‘property’ to the creator or inventor. With the advent of creations like copyright over a musical piece or a company logo trademark, it was understood that intangible assets must also be given privileges and protection from unfair use. Patent is another IP that may or may not be tangible. Its protection is sought after in almost all developed and developing economies. The elemental aim to encourage innovation remains the same in all legislations. There is a niche area of patents which are the Standard Essential Patents (i.e. SEPs). These patents require unique protection due to their nature of use. SEPs are those

patents that are essential to manufacturing of some common standard used in devices by multiple companies. Hence, the 'exclusive' character of the patent, which is the essence of it, is in jeopardy. Such patents unfortunately have no concrete protection against unfair exploitation due to lack of legislation, globally, in this regard. That is another issue but the main focus of this paper is to understand how SEPs protection would come to fruition if the inventor of such patents is an AI.

### **Research methodology**

To conduct study in this arena, a doctrinal research methodology has been used in this paper. Wherein, an exploratory research of existing literature and policies has been done. It is impossible to ignore the intertwining of Artificial Intelligence with a plethora of other disciplines. Globally, researchers, scientists and legal scholars are exploring the possibilities of adverse and positive impacts of AI in their respective fields. Hence, it is relevant to conduct a study of AI's effect on patents, especially standard essential patents.

### **Research objectives**

1. To understand the evolution of Artificial Intelligence.
2. To learn about fairness in AI.
3. To clarify liability of AI machines in decision making.
4. To understand sentience and humanity that AI can display.

### **Research questions**

1. How has AI pervaded the IP domain, especially that of patents?
2. What is the extent to which AI machines can be moral and fair as compared to humans?
3. Can AI machines be held liable for its actions?
4. What would be the implications of sentience in AI machines and its judgment abilities ?

SEPs are licensed by the patent owner to multiple industries or companies for use. To ensure fairness in contracts, the FRAND guidelines are a globally accepted format. FRAND stands for Fair, Reasonable And Non Discriminatory guidelines. It must be obvious for any contract for that matter to be fair, reasonable and non discriminatory. But there is a need felt to emphasize it more

when working on a SEP license agreement. This is due to issues like ambiguity in clauses of contract, lack of transparency, the tendency to read between lines when dispute arises. This gives space for the stronger party to tilt the terms benefiting them.

This is far from fairness. Many times the SEP holder seeks injunctions from court to stop sale of manufactured products that infringe their patent. The lack of regulatory mechanism in this regard worldwide has rendered SEP holders and industry leaders in a soup. It is like walking on a tightrope to balance fair competition, access to the latest technology to the public and protection of IP rights of the licensor. Evolution of AI in the domain of Patents Scientists have been exploring the possibilities of machines that have the ability to store data in its memory and retrieve results as requested by the inputs given. The aim at the fundamental level is to speed up the time taken by humans (scientists) to arrive at a solution.

This can enhance the process of further research where human intervention and innovation is needed. But recently the term innovation has been associated with AI too and not just humans. The name of Dr. Stephen Thaler in the domain of AI is indispensable. He has been researching in the field of machine learning since the 1970s. Recently, he has claimed that his 'Creativity Machine' has the ability to create original artwork among others. He claims that this work has been done by the 'intelligent' machine on its own based on the datasets and patterns ingrained in its memory over time.

It is globally understood that patentability criteria encompasses three elements such as, the novelty of the invention, inventiveness of the potential patent product or process and its applicability in the industry. The last element is necessary because the industrial applicability is what makes the patented product or process worth being used i.e. commercialized for the benefit of the inventor, owner and the public at large. An AI machine, today, holds the power to invent like a human being. With human intervention, it can further scale its abilities. AI has the biggest advantage of being fast. In seconds it can process data that may be incomprehensible to humans in that given time.

The previously available data in the world that is common to all is accessible to the AI machines as much as it is to humans. There is no unfair advantage here given to the AI machines that can

create. For instance, a person skilled in an art would render a potential patent redundant based on its knowledge using available search tools. The same can be done by AI but with more wide coverage of data in a much quicker timespan.

### **How moral and fair can AI be?**

When learning a subject, Benjamin Bloom's taxonomy provides an understanding of the levels that must be achieved to gain better understanding of the subject in concern. This is applicable on humans as this concept was conceptualized in 1956. The process of learning includes remembering the data, understanding it, the ability to apply it apart from theory, the ability to analyze information, evaluation of output and creating an opinion out of it. This works at a cognitive level in the human brain. The same is mimicked by the AI. This can be done by AI but not at as advanced a stage without human intervention. Human ability to make decisions is based on many factors of reasoning, circumstances, experiences, morals, beliefs among others. The 'morality' or biases of an AI output is bound to be affected by the programming of the AI. This is so because the AI has been ultimately fed data which is bound to have biases of a human and is designed by a human!

Let us assume that a patent is registered under the name of an AI as the inventor, in this scenario the AI is also the owner. Hence, in case of such a patent being treated as a SEP, it has to be licensed by the owner i.e. the AI. The question is how a human or a company that wants to use the particular SEP will negotiate with an AI. This brings us to the ultimate question if AI is capable of taking 'wise' decisions. This case of decision making like a human being was replicated by the IBM Watson<sup>1</sup> for Oncology. Watson advises on personalised treatment plans for cancer patients just like a human(doctor) would. This has given doctors time to focus on other issues that demand more research and studies. Consider a situation where a cancer patient is not willing to undergo chemotherapy and requests oral medicines. In this scenario a doctor may understand this on humanitarian grounds and accommodate the needs of the patient. But Watson might become rigid and press on the requirement of undergoing chemotherapy based on chances of healing. This is true decision making based on available data.

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<sup>1</sup> Jason Chung & Amanda Zink, Hey Watson - Can I Sue You for Malpractice - Examining the Liability of Artificial Intelligence in Medicine, 11 ASIA PACIFIC J. HEALTH L. & ETHICS 51 (2018).

Such human-like decision making which has a touch of emotions can be made available in AI by training them to do so. But this would lead to achieving 'sentience' in AI machines. This is a bone of contention among scientists and engineers with respect to ethics. Research says that AI machines today are nowhere near the advancement that sentience<sup>2</sup> truly is.

Sentience in AI is a long way to go. Recently, Google engineers Margaret Mitchell and Blake Lemoine<sup>3</sup> were fired from its Ethical AI team because they claimed that the AI models they were working on showed consciousness. Lemoine claimed that the AI machine responded in a humorous way to the sarcasm that he had thought of while executing the input. Google says that AI models can replicate such behavior based on previous patterns observed by the machine. In no way, Google claims, it shows sentience. Dr. Stephen Thaler too addresses the issue that there is no commonly agreed definition about sentience. It is generally understood as expression of feelings, critique and opinions. Dr. Thaler, in an interview, states that sapience is different from sentience. Sapience is based on accumulated knowledge and wisdom. Whereas, sentience in AI machines can be calibrated according to the needs of humans. This erases the fear of an AI overtaking the world by its power of sentience.

Hence, negotiating terms of a contract to license a SEP to manufacturers can be superficial by an AI machine. It will require human intervention to accommodate flexibility with the rigidity of concrete data processed by the AI. Futuristically, there should be a policy that is fundamentally agreed upon, globally, that is based on sentience. The policy has to elaborate the extent to which sentience can be scaled in an AI machine based chatbox or assistant tool.

This limitation will help to maintain transparency in the development in this domain. But this does not solve the whole problem of dealing with an AI generated patent licensing. Responsibility in case of disputes in licensing Assuming that an SEP is licensed to a manufacturer by agreement between the AI inventor and the manufacturer (licensee). If later on there is a development of a fault in the patented product that led to loss to the licensee then who shall be held accountable is the question. In a study that addresses liability with respect to a cancer treatment AI named Watson,

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<sup>2</sup> Id. at 52.

<sup>3</sup> Nicholas Korpela, *Machines Behaving Badly: The Morality of AI*, 4 LAW, TECH. & HUM. 233 (2022).

the probability of treating Watson's recommendations as a medical student is considered. It is believed that the vicarious liability would fall on the physician under whom the student was working i.e. the doctor operating Watson.

IBM<sup>4</sup> has partly exaggerated the results that Watson can showcase. It does not ask for new data from the patient on its own. Human intervention is needed for that. It basically functions as a question-answer model that provides quick solutions. Thus, Watson's autonomous behavior cannot be completely established. It will take time and further research and more data to be given to the AI so it can create patterns and store the data in its memory to ask questions. This limitation of Watson is actually a blessing in disguise that allows the researchers and experts in the field of sentient AI to develop consciousness with certain controls set.

Drawing from this analogy, we can infer that AI machines like 'Creativity Machine' have the ability to invent novel products or processes. And if the AI is given the title of an inventor then there shall be two scenarios. One that the AI itself is the owner and licensor, so negotiating contract terms with it cannot be considered completely reliable without human intervention. This is being said based on recent working AI that have not yet achieved sentience. On the other hand, if the owner of AI's patent is a human then all the responsibility shall fall on the person assigned to negotiate. The latter case is in use currently as has been seen in the court rulings with respect to Dr. Thaler's case of getting the title of inventor for his AI's inventions. South Africa became the first country to give AI the title of inventor. But upon delving in the country's patent laws it is realized that it does not probe into the aspects of personhood.

### **Humanizing AI**

In a case<sup>5</sup> regarding two patents essential to the IEEE standard 802.11, a company (Agere) holding these patents had offered to license its 802.11 standard to Realtek for five percent of its final selling price. The company being offered the patent on license (Realtek) had concerns about later patent

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<sup>4</sup> Jason Chung & Amanda Zink, Hey Watson - Can I Sue You for Malpractice - Examining the Liability of Artificial Intelligence in Medicine, 11 ASIA PACIFIC J. HEALTH L. & ETHICS 63 (2018).

<sup>5</sup> Gregory K. Leonard & Mario A. Lopez, Determining RAND Royalty Rates for Standard-Essential Patents, 29 ANTITRUST 91 (2014).

infringements. Due to which the parties had a breakdown of communications and there was no resolution of apprehensions regarding licensing or infringement issues. Realtek's concerns were quite understandable as previously, in the case of *Microsoft v. Motorola*<sup>6</sup> there was a transnational issue with respect to licensing of an SEP granted to Microsoft by Motorola. It was contended by the Seattle court that once an SEP agreement based on FRAND terms is signed, the licensor relinquishes rights to seek injunction against use of the SEP.

Applying such a scenario to an AI machine, that is a patent-holder becomes complex. It can be simplified if the ability of the AI and its sentience is set as per anticipation. Setting expectations will help navigate the FRAND terms. The recent consideration of an AI Act by the European Union is a strong step towards global recognition of the need to agree on a standard.

An AI machine can get into agreements, it can converse and crack jokes, it can suggest medicines, it can calculate what humans cannot do in decades in a few seconds.

### **AI as its own judge**

In case an artificial intelligence machine gets into an SEP contract with a manufacturer, it will have to decide and judge what is agreeable to it and what not. This negotiation is embedded in decision making. Decisions made by AI are based on logical reasoning. But in reality, for example, a judge considers multiple aspects while giving a judgment, consciously and subconsciously. Humans are prone to biases which can be eliminated in AI. This is appreciable but removing the emotional quotient from judgments would become harsh<sup>7</sup>. This was said by Justice Perry that while ensuring efficiency in judgments, legislators might neglect the discretionary principles for the want of judgments in black or white binary format.

But decision making is not that easy to be answered in yes or no. Sentience in AI would play a big role in giving judgments that consider factors beyond rigid laws. Sentience and interpretation of

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<sup>6</sup> *Kassandra Maldonado, Breaching RAND and Reaching for Reasonable: Microsoft v. Motorola and Standard-Essential Patent Litigation*, 29 *BERKELEY TECH. L.J.* 460 (2014).

<sup>7</sup> *Tania Sourdin, Judge v Robot? Artificial Intelligence and Judicial Decision-Making*, 41 *U.N.S.W.L.J.* 1128 (2018).

statutes will have to go hand in hand to determine the fate of AI beyond its assistive and generative capabilities.

With the EU AI Act<sup>8</sup> in consideration, it is the right time for the global IP community to accommodate changes. It is evident that patent laws across countries are going to be affected by the AI Act. The EU may not impose it on any country but since IP and AI development are not restricted by geographical boundaries, changes in patent laws will become indispensable. The Act divides AI into risk<sup>9</sup> categories of high risk among others. This may limit development of certain technologies to be patented. Opposition to potential patents may increase in this period. This Act seems to be implemented by the year 2025. Seemingly, 2024 is an important year for industry and researchers to consolidate their efforts accordingly.

Because these changes will create ripples beyond geographical borders.

### **Conclusion**

Avoiding confirmation bias - The global society must not fail to harness the potential of AI and its intersection with various arenas. As humans, we have a confirmation bias to only agree to those narratives that are familiar to us. Hence, we tend to shun new and emerging technologies at first. But true wisdom would be to welcome development of AI machines. But of course with limitations placed to balance apprehensions of sentience taking over humans. Exponential growth can be seen from acceptance of AI in the field of intellectual property.

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<sup>8</sup>Artificial Intelligence Act, (2023), [https://www.europarl.europa.eu/doceo/document/TA-9-2023-0236\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/TA-9-2023-0236_EN.pdf).

<sup>9</sup> Id.