

**INTELLECTUAL PROPERTY OF AN AI DEVICE – ISSUES AND CHALLENGES -  
Part 2**

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***Abstract***

The researchers would be working on the present paper in continuance of the previous paper “Intellectual Property of an AI Device- Issues and Challenges.” To put the pertinent issue in the limelight, the researchers have previously issued various aspects of an AI Device such as the technological evolution, the legal case laws which took place due to the incompatibility of the patent of an AI Device and ultimately, the choice of an individual, which plays a very important role in the clocks of everyday lives.

In continuance of the previous paper, the researchers would like to discuss further aspects of the topic whereby we would be focussing on the crucial aspects of the juncture between an algorithm, business model or a mathematical formula and the frontend product that the market receives. The researchers firmly believe that society works in a greater indispensable synchronization and technology, as a factor, should help for the greater cause.

Technology is developing at a rapid pace. Newer software’s getting released every fall and various technological giants are inventing constantly for the necessities of mankind and mother Earth. Strikingly, the question that we are analysing today would be “Are the supporting systems, such as the legal policies and frameworks, really welcoming the newer technologies which are being released?”

Additionally, we would also work on the question “Whether the intellectuality of an individual or an entity has an indirect right over the privacy, choice of an individual or a group of people?” to which primarily the researchers are in a state of inquisitiveness as to which concept prevails entirely and lastly, we would still be discussing the present issue of granting an intellectual property to an AI Device.

The researchers would further work on broader legal complexities in India for the evolving technology in Artificial Intelligence.

## INTRODUCTION

Technology is a cobweb in itself. While concluding our previous paper, we were not imagining a real-time scenario where there is an absence of technology. When we examine the rudimentary versions of prevalent advanced technology, we will get reminded of the basic structure of each technological invention. For example, a simple tool like HTML (Hypertext Mark-up Language) became a major player in today's web designs.

In fact, web designing in itself is a job which consists of great talent and HTML would just be a tool for a greater cause. There are many other languages such as C, C++ etc. which definitely help in the greater software product rolled out in the market. Now, these are just the tools which help us to create software to function well. In another context, the programming behind a software product may also be called an "Algorithm."

A copyright owner's efforts to prevent an Internet search engine from promoting access to infringing photos in an appeal. Perfect 10, Inc. filed a lawsuit against Google Inc., alleging, among other things, that Google infringed on Perfect 10's copyrighted photos of naked models. Perfect 10 sued Amazon.com and its subsidiary A9.com in a similar case (collectively, "Amazon.com"). The court has observed that Computers are linked through networks known as the 'Internet.' 'The Internet is a global network of networks that all use the same communications technology.' Through a medium known as a webpage, computer owners can share the information stored on their systems with other Internet users. A webpage is a collection of text interwoven with HTML instructions saved on a computer. A webpage does not keep images; instead, the HTML instructions offer a location for where the images are stored, whether on the webpage publisher's computer or on another computer. In general, web pages are open to the public and can be accessed with a web browser from any computer connected to the Internet.<sup>1</sup>

When I had an erudite discussion with our distinguished Professor, she has enlightened us on the point of mutual consent whereby, she had highlighted that the scope of choice of an individual diminishes the moment they consent to give their information. The Professor has

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<sup>1</sup> Perfect 10, Inc. v. Google Inc., 508 F.3d 1146 (9th Cir. 2007).

also clued us in the process by stating that even a simple cookie might expose an individual to give away his/her details while using a web page.<sup>2</sup>

We were provided insight by our distinguished professor that almost every electronic gadget asks us permissions for our personal details in regard to our discussion on various aspects concerning the privacy of an individual in the usage of an AI Device. One such, would be EULA (End User License Agreement) wherein our professor has enlightened us that such agreement should be agreed by the user consciously, thereby avoiding further loss of privacy.<sup>3</sup>

Furthermore, our professor has also optimistically pointed out that a “Data generated by an AI/AI Device would itself be an intellectual property”<sup>4</sup> wherein it is crucial to observe that fact that data is the today and tomorrow of this nation and everything runs on data. Remarkably, the opinion of the Professor has also been an added feather to the jurisprudence of the Intellectual Property.<sup>5</sup>

Our sojourn in the previous paper has concluded at such a point where the Hon’ble Delhi High Court has interpreted that *Section 3(k) of the Indian Patents Act, 1970*<sup>6</sup> is not the end of granting patents to all the devices which is an outcome of computer programming per se.<sup>7</sup> The inquisitive question that we’d like to ask ourselves today would be, Is it really a riddle solved? To which a famous American Lecturer Raplh Emerson stated “All is a riddle, and the key to the riddle is another riddle”<sup>8</sup>

In another case, similarly to many other definitions in the Act and its predecessors, exceedingly broad phrases have been used. The only rationale for this could be a desire to encompass future technological advancements in broad terms. Human creativity and the appropriate protection of it should not be hampered by legislative lethargy. Computer programmes are a good example. Because of the Act's broad phrasing according to the Chinese Laws unlike Indian Laws, they were able to be protected as literary works. The topic was only addressed by the Chinese Legislature in the amending Act. This basic concept of the Act leads us to believe that

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<sup>2</sup> Stated by our Distinguisd Prof. Dr. Nandini C P, B.A.L., LL.M., M.M.M., Ph.D., Associate Professor, DSNLU.

<sup>3</sup> Neil Wilkof & Shamnad Basheer, Overlapping Intellectual Property Rights.

<sup>4</sup> Id.

<sup>5</sup> Stated by our Distinguished Prof. Dr. Nandini C P, B.A.L., LL.M., M.M.M., Ph.D., Associate Professor, DSNLU.

<sup>6</sup> The Patents Act, 1970, s. 3(k).

<sup>7</sup> Ferid Allani v. Union of India and others, 2019 Indlaw DEL 3788.

<sup>8</sup> Stated by Ralph Emerson, Available at <http://www.picturequotes.com/all-is-a-riddle-and-the-key-to-a-riddle-is-another-riddle-quote-430880> (Last visited 10th October, 2021).

the definitions in the Act should be construed "flexibly so that it would encompass new technologies as they developed, rather than narrowly so that the Legislature would be forced to revise the act on a regular basis."<sup>9</sup>

Genuinely, the daily tasks for us would be the riddle and technology would be the key to unlock the riddle. But the algorithm behind it is itself becoming a counter-riddle to which our paper today analyses the later stage of development of an Artificial Intelligence and it is a pertinent point of view today to accept that Artificial Intelligence cannot be perfect because, firstly, it improves from time to time with a given data, which might or might not be aggregated.

Secondly, Artificial Intelligence in itself is not a perfect existing element because the humans who manufactured it, are themselves not and everyone is unique and complex within themselves. It is quite a late leap to take by many technology companies to actually improve the newer concepts of Artificial General Intelligence (AGI) and machine learning which we will be studying today in the upcoming few contexts of this paper.

### **ARTIFICIAL GENERAL INTELLIGENCE-A LEAP IN TECHNOLOGY**

Everyone should remember one fundamental i.e., nothing goes short in work and long in outcomes. For example, it is not an overnight work by the Indian Science and Research Organisation for the Mars Orbiter Mission done in the year of 2014 and it took them approximately 780 days to launch the PSLV (Polar Satellite Launch Vehicle) into the stars.<sup>10</sup> In the same way, the greatest AI Device today includes the complex programming beneath it.

A dysfunctional AI Device would still not serve the purpose irrespective of the better algorithms behind them. Many services which operate around driverless cars were previously involved in accidents too.<sup>11</sup> Waymo Cars, which is a robo-taxi service operator has been involved in a number of accidents. Now, we cannot really blame the hardware or the mechanical failure behind it because, cars themselves, have been there ever since Karl Benz.

Correspondingly, there are many Landmark Cases wherein the primary issue of computer programmes for the eligibility of patients was discussed. One such Landmark Case Law would

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<sup>9</sup> Golden China TV Game and Ors. v. Nintendo Co. Ltd, [1996] ZASCA 103.

<sup>10</sup> Mars Orbiter Mission, available at:- <https://www.isro.gov.in/pslv-c25-mars-orbiter-mission>, (Last visited 10<sup>th</sup> October, 2021).

<sup>11</sup> Waymo Cars Involved in 18 accidents over 20 months, available at <https://venturebeat.com/2020/10/30/waymos-driverless-cars-were-involved-in-18-accidents-over-20-month/>, (Last Visited 10<sup>th</sup> October, 2021).

be *Alice Corp. Pvt. Ltd. v. CLS Bank Int.* where the Petitioner is the assignee of a number of patents that describe a method for reducing "settlement risk," or the chance that just one party to a financial transaction will fulfil its obligations. The patent claims, in particular, are intended to make it easier for two parties to swap financial responsibilities by using a computer system as a third-party intermediary. "A method for exchanging financial obligations, a computer system configured to carry out the method for exchanging obligations and a computer-readable media holding programme code for performing the method for exchanging obligations" are all claimed in the patents in suit. Respondents (collectively, CLS Bank) brought litigation against the petitioner, claiming that the patent claims at issue are invalid, unenforceable, or not infringed. Infringement was asserted by the petitioner as a counterclaim. The *Supreme Court* set out a methodology for deciding "whether the claims in question are directed to a patent-ineligible concept. If the claims are valid, all claim elements must be assessed "to establish if (they) contain an 'inventive notion' adequate to transform the claimed abstract idea into a patent-eligible application."<sup>12</sup>

However, the algorithm behind is still a jinx to solve. The PYMK tool, as we have also discussed in the previous paper, has also failed in this regard. People who don't even know other people were suggested in the PYMK (People You May Know) section. An early Facebook Executive, namely, one Dave Morin pointed that the algorithm for the PYMK tool has 2 purposes, either it can help the user to make friends with people who can make the user happy or more excited, otherwise, it can suggest various profiles to the user, who, if connected, adds value to Facebook itself as the primary motive of PYMK was to contribute to the higher retention numbers.<sup>13</sup>

This will also give an experienced user the worst experience in the long term as many unrelated people will be suggested through the tool. Also, semi-stalking factor has been considered as a variable to the PYMK tool which is vicious to the user. What we would like to say by these series of incidents is that Artificial Intelligence in general has been capable of all these aspects which have been affecting the lives of many individuals, from the accidents of a self-driving cars to getting PYMK suggestions of stranger.

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<sup>12</sup> *Alice Corp. Pvt. Ltd. v. CLS Bank Int. Et Al*, 134 S. Ct. 2347.

<sup>13</sup> The Untold History of Facebook's Most Controversial Growth Tool, available at: <https://marker.medium.com/the-untold-history-of-facebooks-most-controversial-growth-tool-2ea3bfeaaa66>, (Last visited on 10<sup>th</sup> October, 2021).

One good solution would still be Artificial General Intelligence (AGI). Artificial General Intelligence, to be precise, is the advanced stage of developed AI where we could also say that it is the higher possible branch of AI. It is also predicted that the prototype of an Artificial General Intelligence would still be possible by 2040. To go into the basic structure of this, Artificial Intelligence in itself is categorized into 2 kinds which are Narrow AI and Strong AI.<sup>14</sup>

Narrow AI is that sort of artificial intelligence which is programmed to do a certain task and there is a saturation level to it. For example, if you tell your smartphone to make a call using Bixby, Bixby might make the call and do nothing else after that, where the task in itself is considered to be complete, thereby you cannot call your assistant while on call or while multi-tasking through your smartphone.

Now, on the other hand, artificial general intelligence can be determined as a strong artificial intelligence which has compatible with the cognitive mind of a human. However, the scope of development of AGI varies from that of Artificial Intelligence because in AI itself there are different identifications of it as there is no one AI. For example, there is Bixby, Siri and Google Assistant.

Therefore, the cognitive development of artificial general intelligence can be similar to that of a human mind where the age of the mind plays a vital role. AGI could be programmed to the cognitive skills of a six-year-old or an eight-year-old child who is capable enough to communicate socially with people or it can be programmed to a 4-year-old who can just barely identify objects.

The lower the age bar, the narrower the AI becomes thereby becoming an AI instead of an Artificial General Intelligence. Now, Google wanted to create AGI in such a manner so as to get the final product to think like a human child which makes it pretty confined for an Artificial Intelligence. Whereas, Facebook AI Research aims to create AGI in such a manner so as to make the final product think like a human.<sup>15</sup>

A mixture of emotions varies among the age group of humans combined together. A human child thinks differently when compared to an adult and a teenager. Now let us not forget the

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<sup>14</sup> Top 4 AI companies leading in the race towards Artificial General Intelligence, available at: <https://towardsdatascience.com/four-ai-companies-on-the-bleeding-edge-of-artificial-general-intelligence-b17227a0b64a>, (Last Visited on 11<sup>th</sup> October, 2021)

<sup>15</sup> Id.

fact that AI is a data+algorithm and AGI would also be on a similar foundation. The only difference between the both of them would be the algorithms behind them which in turn makes them understand and give an output through the final products. For example, Google Home, Amazon Echo Dot etc.

### **LEGAL ASPECTS IN IP OF AN AI DEVICE IN COMPARISON WITH AGI**

Those products are still AI and this is a rapid advancement that many technological giants are aiming for. The question we are still searching for is, “How can Indian IP Laws accommodate the IP of an AI Device without clashing itself with the developing principle of AGI?” to which, unfortunately, we can still say that the IP Laws in India are still confined to the CRI (Computer Related Inventions) Guidelines and at present, the technological arena itself changed.

Computers became a grandparent’s instrument and, in this era, we have reached such a technological evolution and progress where CD became the old floppy disks and the User Interface (UI) of an AI Device is improved so that majority of work can be done without opening the laptop too. Development of User Interface leads to the majority of tasks being completed on a smartphone.

Is it just a coincidence that we are using MS Word and scanning various documents all from our little smartphones? We would say that UI has developed in tranquillity wherein when all the major tech companies are working on AI, a few work on UI too. For example, Samsung is largely researching UI Core for its smartphones and when the UI is at its optimum level of functioning, even algorithms can be performed on these smartphones. Auto-Calibration for a device would a snap of a finger.

Yet, the legal framework in India is still, unfortunately, not matching up to the rapid pace of technological advancement. Having said that, we would also be stating that the technological advancement in itself might still be hype or a myth because the individual who desired Facebook to become a metaverse is giving an explanation today as to why the whole services were disrupted across the globe.<sup>16</sup>

Also, even the technological products rolled out by the company are not having AI too. Best example would be the Ray-Ban smart glasses that they rolled out considering them to be the

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<sup>16</sup> After longest Facebook outage, Mark Zuckerberg issues a personal apology, available at:- <https://www.hindustantimes.com/world-news/after-longest-facebook-outage-mark-zuckerberg-issues-a-personal-apology-101633390409487.html>, (Last visited on 11<sup>th</sup> October, 2021)

first-generation smart glasses.<sup>17</sup> Possible question that we would be having by now is “Is this an AI Device or is just a technological product with higher algorithm behind?” To which we would say that it has a higher backend algorithm with a very limited AI.

The further contexts of our paperwork on the aspects of algorithms and the existing legal framework are in contrast with the developing AGI and AI Devices.

### **LEGAL FRAMEWORK & CHALLENGES**

As already mentioned in Part 1<sup>18</sup>, *Section 3(k) of the Patent Act* clearly indicates that algorithms, business models or mathematical formulas don't come under the ambit of inventions<sup>19</sup> which are defined under *Section 2(j) of Act*<sup>20</sup> as a process involving inventive/innovative step or process along with having an industrial use/application. *Section 2(j)(a)*<sup>21</sup> defines an inventive step as a feature of an invention that involves a technological advance over prior knowledge, has economic significance, or both, and renders the invention not evident to a person versed in the art."

A patentable product must pass the test of “non-obviousness” i.e., “using it as a patent term means that the invention must not be evident or obvious to a person who is ordinarily skilled in the field pertaining to the invention.” In other words, the innovation must be novel in comparison to the prior art. It should not be only a workshop enhancement or a broad reorganisation of the invention's components/features. This non-obviousness test should be conducted from the perspective of a person with average proficiency in the art, rather than an expert in that technology. When determining the innovative step, the adjudicator must evaluate the "inventive step" on the scale and parameters of a person typically versed in that art.

The Delhi High Court in a case discussed the basic concepts of inventive step or non-obviousness while making reference to *Section 3(f)*<sup>22</sup> which clarifies “simple arrangement, re-arrangement, or duplication of known devices, each functioning independently of one another

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<sup>17</sup> Introducing Ray-Ban Stories: First-Generation Smart Glasses, available at: <https://about.fb.com/news/2021/09/introducing-ray-ban-stories-smart-glasses/>, (Last visited on 11<sup>th</sup> October, 2021).

<sup>18</sup> Sri Vaishnavi.M.N. & Kanupuri Sri Hamsa, Droit Penale, ILJIPR, ISSN: 2582-8762, Vol.1, Issue II (2021). <https://dpiljpr.in/wp-content/uploads/2021/10/3.-I2-DIET-IP-ROLE-OF-IPR-IN-PREVENTION-OF-COPYCAT-CULTURE-IN-THE-FASHION-INDUSTRY.pdf>

<sup>19</sup> *Supra I.*

<sup>20</sup> The Patents Act, 1970, s. 2(j).

<sup>21</sup> The Patents Act, 1970, s. 2(j)(a).

<sup>22</sup> The Patents Act, 1970, s. 3(f).

in a known fashion, is not patentable subject matter” and *Section 3(d)*<sup>23</sup> which specifies that “the mere use of a known process, machine, or device will not be regarded a patentable invention unless the known process results in a new product.”<sup>24</sup> The Supreme Court of United States of America in a case has clarified that for understanding and analysing the patentability on the condition of non-obviousness, the applicable legislation, the use of the invention and whether the invention was obvious or not must be considered.<sup>25</sup>

It is well known that the ideal requirement/goal for obtaining patent is that the product should not be altered and ironically, in contrast the algorithms, computer codes/software etc., would have to be constantly altered or modified. Though the algorithms are under the protection of *Copyright Law*, these laws don't provide such protection as the nature of the product changes from being a mere algorithm to being a functional inventive product with industrial use and the such protection can only be granted to the author for the concerned original work.<sup>26</sup> Hence, it can be understood that the AI Devices would not get absolute protection.

Many advanced Artificial Intelligence products or programmes have been developed in the past few years with the development in the technology and machine learning. One such instance is an AI named ‘Alpha Go’ which was developed by a British Artificial Intelligence Company named ‘Deep Mind’ which is also acquired by Google. Alpha Go has one of leading played in the world in a traditional Chinese board game and it has even won against world champions in 2016.<sup>27</sup> This was huge success and became an example for how AI algorithms can deal with complicated and advanced tasks especially with the fact that the particular Chinese board game was more though than chess which requires good amount of mental ability.<sup>28</sup> Deep Mind and such other companies are looking forward to create and develop Artificial General Intelligence.

Artificial General Intelligence is a very advanced form of AI. In the words of philosopher Nick Bostrom, he believes that not only Artificial General Intelligence can perform or function like human beings but also AGI can transcend human intelligence and has a great scope of

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<sup>23</sup> The Patents Act, 1970, s. 3(d).

<sup>24</sup> Asian Electronics Ltd. v. Havells India Limited, I.A. No. 8205/2009 in CS(OS) 1168/2009.

<sup>25</sup> KSR International Corporation v. Teleflex Inc., 550 US 398, 402 (2007).

<sup>26</sup> R.Dhiraj, “The Law of Copyrights in India”, Subbaraya Aiyar Padmanabhan & Ramamani, available at: [http://www.saprlaw.com/taxblog/copyright\\_final.pdf](http://www.saprlaw.com/taxblog/copyright_final.pdf) (Last Visited on 13<sup>th</sup> October, 2021).

<sup>27</sup> C. Metz, Google’s AlphaGo Continues Dominance with Second Win in China, *Wired* (May 25, 2017), [www.wired.com/2017/05/googles-alphago-continues-dominance-second-win-china](http://www.wired.com/2017/05/googles-alphago-continues-dominance-second-win-china) (Last Visited on 27<sup>th</sup> October, 2021).

<sup>28</sup> D. Silver, A. Huang, C. J. Maddison, *et al.*, Mastering the Game of Go with Deep Neural Networks and Tree Search (2016) 529 *Nature* 484, 484–9.

improvement.<sup>29</sup> In India, there are no legislations or any such provisions till date to monitor AGI. Even some developed countries like United Kingdom as per *Article 52(2)* of the European Patent Convention (EPC)<sup>30</sup> does not include mathematical methods as patentable material which includes Artificial Intelligence and further includes AGI.

In the case of *Aerotel*,<sup>31</sup> the court emphasised on running a four-step checking mechanism in order to see whether a computer implemented mechanism can be given patent or not. The steps include “proper interpretation of the claim, determining the real or actual contribution, determine whether the real or alleged contribution falls primarily within the excluded subject matter and whether the actual or purported contribution is technical in nature.”

In *Symbian*,<sup>32</sup> the Court of Appeal noted that determining whether a computer-implemented invention is patentable requires determining if the product claiming patent protection has any technological or technical addition or contribution. The Court has attempted to answer this question using the four-stage approach outlined in its previous decision in *Aerotel* case,<sup>33</sup> in which the fourth step is used to determine whether the actual or purported contribution claiming patent protection is technical in nature. In *Aerotel* case,<sup>34</sup> the court has elucidated that the fourth-step would not be necessary if as the third- step i.e., determining whether the real or alleged contribution falls primarily within the excluded subject matter addresses the issue. It was determined so because the third and fourth steps are interlinked and while answering whether the particular contribution or output falls primarily within the excluded subject matter or not will also reveal the answer for the fourth step i.e., if the contribution is technical in nature.

Though Artificial General Intelligence has more scope of development from rudimentary versions of AI, it has not been given and would not be given the patent rights or any such other Intellectual Property rights in near future. It can be understood so in consideration of the fact that “if AI in correspondence with algorithms is being considered as ineligible for IP protection in India, then how an advanced form of such AI i.e., AGI would be given such protection.

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<sup>29</sup> N. Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford University Press, 2014).

<sup>30</sup> The European Patent Convention, art. 52(2).

<sup>31</sup> *Aerotel Ltd v Telco Holdings Ltd and Macrossan’s Application* [2006] EWCA Civ 1371.

<sup>32</sup> *Symbian Ltd. v Comptroller-General of Patents* [2008] EWCA Civ 1066.

<sup>33</sup> *Supra* 27.

<sup>34</sup> *Ibid*, para 46.

## **LIABILITY ISSUES PERTAINING TO PATENT INFRINGEMENT BY AI**

### **Accountability:**

A major issue relating to patenting of AI is infringement liability. An exclusive right to use as well as sell the invention is provided by patent. But when a person without authority uses, sells or proposes to sell this invention, infringement of liability shall arise. The infringer has to pay damages as compensation in case of infringement. So, the question with regard to AI is, who will be liable as an infringer.

According to European Parliament Resolution of 16 February 2017, “AI cannot be held liable for the acts and omissions caused to third parties. Rather, the human agent behind AI’s veil has to be traced such as operator, manufacturer or the user provided that such agent could have foreseen AI’s harmful behaviour”.<sup>35</sup> Being unable to hold someone liable for patent infringement, would encourage using AI for infringement.

### **Assessment of Infringement Liability:**

Another question would be, how should the patent infringement liability of an autonomous AI be handled? This would require the creation of a new system/method or to grant the status of a legal person to AI.<sup>36</sup>

The issue of how to assess the liability to be borne by AI needs to be addressed. It was asserted in the European Parliament Resolution that the future legislative instruments should not seek to limit damages, solely on the basis that infringement was caused by a non-human.

### **Other Relevant Issues:**

Future human inventions shall be negatively impacted by AI. Autonomous algorithms substituting inventions made by natural person would lead to atrophy of human intelligence. Hi-tech research and development jobs and industries would be eliminated because of this. A mechanism must be placed to ensure that the patent applicants do not conceal any facts regarding the involvement of AI in the inventive process.<sup>37</sup>

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<sup>35</sup> Artificial Intelligence Collides with Patent Law, available at [https://www3.weforum.org/docs/WEF\\_48540\\_WP\\_End\\_of\\_Innovation\\_Protecting\\_Patent\\_Law.pdf](https://www3.weforum.org/docs/WEF_48540_WP_End_of_Innovation_Protecting_Patent_Law.pdf). (Last Visited on 28<sup>th</sup> October, 2021).

<sup>36</sup> Id.

<sup>37</sup> Id.

With the increase usage of machine learning and artificial general intelligence, different nations have come up with different approaches to deal with the rudimentary concept which is artificial intelligence, wherein, in the further context of this project, many conditions for patenting an Artificial Intelligence across various nations have been comparatively analysed.

### **CONDITIONS FOR PATENTING AI IN DIFFERENT COUNTRIES**

The conditions to be fulfilled in order to patent artificial intelligence are different in the various countries across the globe. The scenario in a few of the major counties has been explained below.

#### ***China:***

In comparison to other countries, patents with the words “artificial intelligence” and “deep learning” have increased in China. By 2030, China envisions becoming a world leader. In terms of research, investment and development China has outdone the USA. An AI software must be “medium plus computer program process” claims and apparatus claims that recite a component implemented by a computer program, in order to get it patented.<sup>38</sup>

#### ***Singapore:***

In terms of AI-based patent filings, Singapore is the leader in the South-East Asian region. Methods that are considered mental acts or schemes are generally not considered inventions, according to eligibility guidelines for AI-related inventions.<sup>39</sup>

#### ***Japan:***

For obtaining protection for AI-related inventions, the Japan Patents Office is a comparatively patent-friendly forum. AI and Internet of Things based inventions are considered business-related inventions. Allowance rates of almost around 70% are provided for such business-

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<sup>38</sup> MC Donnel Boehnen Hulbert, Global Artificial Intelligence Patent Survey, JDSUPRA, (Dec 20, 2018), <https://www.jdsupra.com/legalnews/global-artificial-intelligence-patent-21942/>. (Last visited 23rd October 2021).

<sup>39</sup> Id.

related inventions, which is almost as high as the allowance rate for patent applications in other technological fields.<sup>40</sup>

## CONCLUSION

It is rightly pointed out by the famous Scientist Albert Einstein that “The measure of intelligence is the ability to change” and looking at the change we are having today, it can be definitely understood that the Artificial General Intelligence is a possible presence in our world in the next 50 years. However, Law and Order is a vital instrument in order to eliminate chaos and the future level of chaos is regarding the invention of a product.

We live in a data driven world where data is the measure and estimate of almost every means and end and it is also a growth tool for the Artificial Intelligence and the upcoming Artificial General Intelligence. Our major discussion with our professor enlightened us that user awareness is still a must in India as many users unknowingly consent to providing their rights of privacy by getting into the services provided by an entity.

Furthermore, our research has dwelled upon the overall development of artificial general intelligence in comparison with the present artificial intelligence and also the prevalent corresponding laws of various countries. We observed that the present laws across many nations are still developing in nature considering Artificial Intelligence is a direct rudimentary product of Algorithms.

Many countries such as India have IP Laws which independently accommodate Algorithms and the product associated with them and the impact which is played by the product on the society through the market is often blindsided. There are many incidents where AI has been in the process of infringing a Patent. In many scenarios, the final product associated with Artificial Intelligence often doesn't provide the desired services too. All these aspects have been discussed in the present paper.

The paper has also analysed many rudimentary concepts such as machine learning, algorithms from which a major part of Artificial Intelligence and its devices has come into existence and also, Artificial General Intelligence would be coming into the same, considering it to be the next level technology which would be changing the way we live too. Also, another principle

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<sup>40</sup> Id.

this paper has dealt with is the “Non-Obviousness Test” which is considered as a vital factor to grant a patent for a new invention.

We would like to conclude the paper by stating that we welcome change and our measure towards intelligence considering greater IP laws, particularly towards Artificial Intelligence Devices, but, is change really an ultimate measure for Artificial General Intelligence? To we could say that it is yet another riddle in the technological era.

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