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ARTIFICIAL INTELLIGENCE AND ITS APPLICABILITY TO PATENT AND DESIGNS DISPUTE IN NIGERIAN INDUSTRIAL PROPERTY SYSTEM

By

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Abstract: Industrial property is at the heart of technological contraptions and all other forms of industrialization, including Artificial Intelligence (AI). In fact, with ideas and inventions as the ‘coinage’ of the twenty-first century, the effect which digitization has on Industrial property is even more profound. Invariably therefore, Industrial property has had one of the longest and most interesting relationships with technological advancement which has, overtime demanded that there must be a concurring review of the laws for each advancement in technology to ensure that rights are managed properly and disputes resolved efficiently. In pursuance of these, AI programs which aid patent search and analysis, create infringement claims and documents, as well as make evidence-of-use collections for patent and designs (P & D) dispute resolution have been applied across the globe. However, due to some notable constraints and uncertainties, AI has not been sufficiently applied to the Nigerian Industrial system and this has further amplified the challenges already encountered in the system, especially as it concerns dispute and dispute resolution. This paper therefore adds to the extant literature on the subject by adeptly discussing the essentials of the integration of AI in Nigeria’s Industrial property system. In particular, the article analyses the complexities and challenges arising from this application, the feasibility, legal implications and the benefits it brings to the terrain of P & D dispute in Nigeria. It further delves into the extant impacts of this integration on the global landscape, aptly weighing the demands of AI on the existing legal framework for P & D – The Patent and Designs Act of 1971 - while also seeking ways to strike a correlative balance between them, with emphasis on maintaining efficient and timely regulations in Nigeria’s Industrial property system.

Keywords: Artificial Intelligence (AI), Patents, Designs, Dispute, Industrial Property.

INTRODUCTION

In the face of severe Industrial property litigation concerns and complications, the concerted, ongoing transition from manual to AI-driven patent and designs dispute management is inevitable. Invariably, Artificial Intelligence is revolutionizing the sphere of Industrial property through programs and tools that facilitate the automation of patents

and designs dispute management which when appropriately utilized hold promise of promoting the dispute management and resolution process of patents and designs, as well as orchestrating laudable and positive impacts in the Industrial property landscape generally. However, while in execution of its expansion scheme, AI has created

further complications and concerns in the sphere of Industrial property and this has restricted some territories from holistically adopting its programs in their Industrial property system. Nigeria is one of those countries.

Against this backdrop, this paper concentrates on the possibilities, challenges and opportunities for application of AI in patents and designs dispute in Nigeria's Industrial property system.

2.0 RESEARCH METHODOLOGY

The primary objectives of this paper include the conduction of an extrapolative study on the application of Artificial Intelligence in patent and design disputes in Nigerian Industrial property system, as well as a critical analysis of the impacts of these AI programs on patent and designs dispute resolution in Nigeria. In furtherance of these objectives, this paper adopts an approach that centres on literature review and webinar engagement. This basically involves the analysis of journals, textbooks, articles and blogs directly centred on the subject matter, as well as literature materials that are not exactly on the theme but are closely affiliated with it.

The authors further engaged in webinars on the subject matter such as the IP Watchdog 2024 Webinar themed: "Patent Drafting & Prosecution – A Comparison of Leading Gen AI Patent Tools" by Dolcera Corporation. An evaluation of some of these patent AI tools, especially IP author was also done in the process.

This approach enabled the authors gain the requisite understanding and information to properly conduct the constructive analysis engaged in this paper. Thus, in reviewing related scholarly works, the authors was able to view the subject matter from various perspectives and weigh it against many narratives. Then, through webinar engagement, an interaction with some of these AI tools and programs was made possible, thereby exposing the authors to a wealth of insights on certain AI tools capable of being integrated into the Industrial property space, as well as their applicability and practicability.

3.0 CONTEXTUALIZATION: ARTIFICIAL INTELLIGENCE AND THE NIGERIAN INDUSTRIAL PROPERTY SYSTEM

The fourth industrial revolution brought along a plethora of technological advancements, and the evolutionary nature of these technologies has

safely driven us to the point of Artificial Intelligence. Unlike the previous technologies which sought to and eventually replaced physical labour with digitized tools, thereby automating physical tasks, AI is programmed to automate intellectual and psychological tasks. It is, indeed the 21st century technology peak which has disruptively affected all industries, the Industrial property system inclusive.

The first definition of the term was given in 1956 by John McCarthy where it was defined as, "the development and use of machines to execute tasks which usually required human intelligence". It can simply be encompassed in the term, cognitive computing. Cognitive computing refers to AI systems that simulate human thought to solve problems using neural networks, machine learning, deep learning, natural language processing, speech and object recognition, and other technology. AI is the technology that mimics human intelligence. This perspective has been highlighted and elucidated by the school of thought which defines AI as "a branch of computer science dealing with the reproduction of mimicking of human-level intelligence, self-awareness, knowledge and thought in computer programmes". As expected, this peg of industrialization gradually infiltrated and affected all spheres of human existence, the Industrial property system inclusive.

All two-dimensional and three-dimensional inventions capable of industrial application constitute what is commonly known as the Industrial property. This basically includes the rights over inventions and innovations known as patents and the rights over Industrial designs (designs). They are both regulated by the Patent and Designs Act 1970 (PDA). Accordingly, under the Nigerian PDA, a patent is granted in relation to an invention for a product or process that is:

- a. new or constitutes an improvement on a patented activity and results from inventive activity; and
- b. capable of industrial application

Although the PDA clearly stipulates the conditions and requirements that must be satisfied before an invention can be regarded as eligible for the grant of patent rights, the Nigerian Patent Registry does not, as a basic rule of the system insist on a strict satisfaction of the stipulated conditions. In fact, the

Patents and designs registry does not examine the inventions seeking registration, the registrar only registers those inventions once they are in compliance with the following requirements:

- a. the patent application must be made in the prescribed form;
- b. there must be a description of the invention with any drawings and plans;
- c. the applicant must make a claim or claims in relation to the invention;
- d. there must be a declaration by the true inventor (where required);
- e. a power of attorney (where required); and
- f. the payment of the prescribed fee.

Thus, it is on the satisfaction of the aforementioned requirements that patent rights are granted in Nigeria, without any substantive examination on the patentability of the inventions. This has led to the grant of rights for many inventions that are ordinarily and in actuality not patentable. It is, therefore safe to say that this absence of substantive examination by the Patent and Designs Registry has spearheaded the excessive occurrence of patents dispute and litigation in Nigeria.

Similarly, the PDA makes provisions for the eligibility of industrial designs for the grant of such rights in Nigeria and under this Act, an industrial design is not registrable unless it fulfils the following requirements:

- a. must be new;
- b. must not be contrary to public order or morality.

In the same vein, the Patent and designs registry operates a registration system in cases of industrial designs application as opposed to an examination system. Thus, in determining whether or not a design is eligible for registration under the PDA, the registrar does not examine the designs based on the foregoing, but on other formal requirements which are focused on the document of application and not its subject matter.

Generally, the Industrial property system involves all the regulations, tools and processes that ensure the effective management of rights over industrially applicable two-dimensional and three-dimensional products, as well as processes.

4.0 PATENT AND DESIGN DISPUTE RESOLUTION IN NIGERIA: CHALLENGES

The importance of efficient dispute resolution in the Industrial property system cannot be overemphasized. This is indisputably so for where the Industrial property rights of individuals and corporations are not adequately protected, they are discouraged from acquiring these rights in the first place. However and quite unfortunately, enforcement of patent and designs rights has proven to be the primary challenge facing the Nigeria Industrial property system. The court which is supposed to be the hope of the common man has been bedevilled with a lot of technicalities which have, as expected eroded justice in the Nigerian legal jurisprudence and has, quite unfortunately rubbed off on the Industrial Property System. The case of *Mode Ng Nigeria Application Limited v Visocom Limited et al* is very instructive in this regard. Therein, 2017 witnessed the dismissal by the Federal High Court of a dispute involving the invalidation of all patents granted by the Nigerian Patent Registry in respect of a software often used by telecommunication companies, on the grounds that the said invention is non-patentable, owing to its failure to meet the requirements of the Nigerian Patent and Design Act 1970. The suit was dismissed on technical ground without proper consideration of the merits of the case.

This issue has plagued the Nigerian court system since inception and the Industrial property sphere of the legal industry should be the most alarmed, for when individuals and businesses cannot get their rights enforced in the courts of law on grounds of technicalities, then they will see no need to get those rights in the first place.

5.0 APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN GLOBAL PATENT AND DESIGN PROTECTION AND DISPUTE RESOLUTION: PROSPECTS IN NIGERIA

Nearly all areas of patent and designs (P & D) management as well as the dispute prevention and resolution process have been significantly affected by AI programs and tools. As expected, the impacts are both laudable and favourable. However, given that Nigeria is yet to integrate these AI programs into her system, these tools are discussed in the light of their impacts on the global landscape and their prospects in Nigeria.

5.1 Invention Disclosure

Invention disclosure is, inarguably one of the first steps towards a successful P & D application, an efficient P & D management and a seamless P & D dispute resolution. Thus, the existence of tools like Google Patents aid the automated tracking of inventions by monitoring existing inventions and identifying key concepts, inventions and their inventors. Services such as “All Prior Art” and its sister company, “All The Claims” use AI to churn out millions of computer-generated technical disclosures with the explicit goal of creating prior art to prevent future patents. AI also streamlines the disclosure process to prevent irrelevant and excessive information.

5.2 Patent and Designs Search/Invalidation

Automated search and retrieval of patent documents have been routine for over two decades. In spite of this, it has been reported that only an approximate 50% of global patent documents have been translated to searchable text, most of which are not yet in a readily accessible format. However, given that improving the accessibility of patent documents and patented inventions is of primary importance, AI is being applied to automate and eventually augment the process of patent search and prior art analysis. Through AI patent tools such as Natural Language Processing and machine learning techniques, identifying relevant patents and categorizing information can be broken down into a series of defined steps and effected with maximum efficiency and speed. In doing this, it becomes easier to complete thorough and accurate patent search and prior art analysis, thus expediting patent invalidation process and reducing infringement rates. This affects dispute resolution in two primary ways. First, by reducing the rate of infringement, Artificial intelligence abates drastically the likelihood of patent disputes. This, therefore proves to be a way of settling potential P & D disputes by ensuring they do not arise at all. Secondly, in the event of any dispute on P & D, the ease in patent search and prior art analyses expedites and simplifies the resolution process. Thus, patent and designs dispute is helped significantly by the ability of AI tools to enhance effective patent search and prior art analysis.

5.3 Patent and Designs Drafting

The preparation of a cease and desist letter, patent infringement claim and other litigation documents are as herculean as the drafting of a patent

application. Preparing such documents can be time-consuming and expensive and has, thus discouraged individuals and small-scale enterprises from making claims when their patents have been infringed or even seeking patent rights in the first place. Therefore, a reduction in cost without significant impact on efficiency is appropriately desired. In furtherance of this, AI programs have been developed to analyse the content of such documents and create these documents as well. An example of such program is the IBM patented technique. With the aid of statistical techniques which enable a computer to learn from a large set of sample documents, these AI tools are able to replicate more documents accurately and more efficiently, create claims and diagrams, remove profanities, create embodiments and describe diagrams, thus saving time and increasing efficiency.

5.4 Office Action Response

This can be likened to the patent drafting and claim preparation function such that instead of patent attorneys to spend time and preparing office action responses themselves, tools like IP author, Solve Intelligence, Lex Machina, Relativity, vLex, Clearbrief, among others aid in efficient and comprehensive element identification, provide very precise answers that preserve the claim scope during claim amendments and provide clear logical structure in argumentation. Thus, these AI programs create office action response shell, review office action, compare cited prior art with patent application or infringement claim, present various arguments, amend patent application and prepare patent office action response. All reliably and timely.

5.5 Patent and Designs Classification

The essence of P & D classification is basically to promote ease of patent search and enhance a seamless dispute resolution process. Thus, machine learning algorithms can be utilized to adequately classify patented inventions into categories that are relevant for both an efficient record keeping and an impeccable litigation process. In making these classifications, AI analyses the patent claims and descriptions, thus forecasting patent grant rates and potential infringements.

5.6 Evidence-of-use Collection

Evidence 360 is an example of AI tools that facilitate evidence collection during P & D dispute

resolution process. Thus, instead of the plaintiff combing and scouring for proof of use by the infringing party, he simply engages this AI tool and a lot others which perform automates searches through publications, patents and other online sources, filters out the irrelevant information, identifies entities associated with evidence found and generates comprehensive reports on evidence-of-use. This feature, thus saves time, ensures efficient evidence-of-use collection and expedites the dispute resolution process.

5.7 Claim Charting

Claim charting is a subset of the patent drafting feature of AI programs. Machine learning algorithms scrutinize patent claims, maps such claims to relevant prior arts and creates diagrams and graphs to illustrate these relationships. Using advanced AI algorithms, the platform can automatically map potentially infringing products to patents, eliminating the need for tedious manual comparisons. The large and expansive database of these AI programs further enables them to detect infringements on national and global landscapes.

Furthermore, it is expedient to mention that there are AI tools and programs that predict the outcome of litigation processes. The certainty this provides may hamper the need for litigation processes during P & D disputes and thus, instigate individuals and enterprises to resort to other dispute resolution techniques such as arbitration, mediation and negotiation. This, therefore promotes the peaceful, flexible and time-saving resolution of P & D dispute. The prospects for Nigeria are embedded in the entirety of these global possibilities. Apparently, the Nigerian Industrial property system is already getting alarmed at the bulk of infringement cases and difficulty in attending to all of them adequately. It is, therefore pertinent that these AI tools be applied in the Nigerian Industrial system to reduce the rate of patent and designs dispute and promote the dispute resolution process.

6.0 FEASIBILITY AND IMPACTS OF AI APPLICATION IN NIGERIAN INDUSTRIAL PROPERTY SYSTEM

For all its boisterousness and laudable impacts, Artificial Intelligence tools are, surprisingly not utilized in Nigeria's Industrial property system. The Nigerian system still holds on to the 'brick and mortar' patent and designs application and dispute

resolution process in spite of the highly beneficial possibilities of AI which are extant in the global administration of patents/designs regulation today. Apparently, certain factors are responsible for this 'supposed' repulsion to AI by the Nigerian Industrial property system and the exploration of these factors raises pertinent legal and policy questions. What are the legal implications of integrating and applying AI in the Nigerian Industrial property system? Are there are positions of law in the extant system that operate to negate this AI application? If and when successfully applied, what benefits does AI hold for patent and designs dispute in Nigeria? What further issues arise from this application? These and more are, herein discussed.

6.1 LEGAL IMPLICATIONS AND ETHICAL CONSIDERATIONS

The application of Artificial Intelligence in the Nigerian Industrial property system will, of course raise severe legal implications and make certain demands on the extant IP system. As earlier highlighted, Nigerian patents and designs registry operates a registration system, as opposed to an examination system. This implies that the registry can only pry into matters relating to registration, renunciation of rights, nullification of rights, and a few other matters that do not directly concern dispute and dispute resolution. More so, in considering whether or not an invention or a design is suitable or eligible for registration, the registrar is prohibited from probing it against the requirements of novelty and non-disclosure in cases of industrial designs rights application and novelty, inventive activity and industrial application in cases of patent application. Thus, the duties and powers of the P & D registry are highly limited. It is also noteworthy that the Nigerian Patent and Designs registry does not have any dispute resolution mechanism for resolving oppositions to P & D' rights grant or infringement disputes. It is, in fact other agencies such as border control agencies that play greater roles in the enforcement of certain rights. The Nigerian Customs Service (NCS) for instance, is empowered to seize, detain and destroy counterfeit goods brought into Nigeria. Hence, the registry is neither involved in the enforcement and management of rights nor the resolution of disputes. While this system has worked seamlessly for decades, it

cannot accommodate the integration and application of AI tools and programs. Therefore, for these AI programs to be maximized, the registrar has to be permitted to examine using the patent search and invalidation mechanisms of Artificial Intelligence, collect evidence-of-use in cases of P & D infringement using the programs invented for such purposes, among others.

Therefore, the implication of this is that for AI programs to be maximized and adequately applied in P & D dispute resolution in Nigeria, certain aspects of the laws overseeing and regulating the patents and designs management have to be slightly altered.

Again, in as much as the immense potentials are indisputable, it is also essential to consider the ethical implications of AI integration and application in patent and designs dispute in Nigeria's Industrial property system. Artificial Intelligence thrives on data and this raises concern about data privacy and security. The core legislative provision in Nigeria underscoring this right is Section 37 of the CFRN 1999 (as amended) which states, "the privacy of citizens, their homes, correspondence, telephone conversations and telegraphic communications is hereby guaranteed and protected". Not being sufficient, the Nigerian Data Protection Act made further provisions underscoring the position of the law that citizens have a right to their personal and non-personal data to the exclusion of any other person, natural or juristic. However, the application of AI in the Nigerian Industrial property system will require that the data of individuals be fed into the AI tools, algorithms and machines which is bound to raise data privacy and security issues. Besides, the search and analysis of prior art may require the use of personal or non-personal data of individuals without their consent, and under our laws, the improper collection and use of data with or without the appropriate and requisite consent of the persons involved amounts to data privacy violations and data security breaches. More so, AI algorithms can inherit biases from the data and content they train on. When they are, therefore used in P & D dispute resolution process, these biases tend to rub off on the content they produce and this negatively affects the outcome of the process.

The lack of transparency of AI algorithms also raises ethical implications. Many AI systems

operate as "black boxes", their decision-making process shrouded in mystery. This reduces the chances of human oversight, AI responsibility and interpretability.

6.2 BENEFITS TO THE NIGERIAN INDUSTRIAL PROPERTY SYSTEM

The impacts of Artificial Intelligence on patents and designs (P & D) dispute are, as expected laudable and invasive of all spheres of application and usage, such that aid is offered in both pre-litigation and litigation processes without compromising quality. Therefore, in as much as Nigeria has not fully embraced the possibilities these tools promise as a result of some challenges, it is important to explore the enormous benefits AI holds for the Nigerian Industrial property system.

6.2.1 Reduction of case dismissal on technical grounds

The dominant bash faced by the Nigerian court system is the stronghold on technicalities and rigid procedure. As has been stated afore, this has rubbed off on the Industrial Property system and led to the perpetration of "justified" injustice on a lot of parties. However, AI programs ensure perfection and accuracy in the preparation of documents and collection of evidence-of-use, thus reducing such technical errors. The accuracy of these AI programs is also essential in identifying potential infringements and ensuring that negotiations on licensing or rights transfer and other legal actions are based on formidable and defensible grounds. More so, the ability of some AI tools to predict litigation outcomes enable these tools to forecast such technical dismissals, thus enabling them to be corrected prior to the commencement of the litigation process.

6.2.2 Increased Efficiency

There is no denial of the fact that AI tools promote the efficiency, accuracy and thoroughness of the patent application and dispute resolution process. The ability of AI P & D programs to quickly scan various P & D databases, spot potential infringements quite accurately, predict and forecast emerging inventions, designs and trends, and create seamless drafts containing comprehensive claims and descriptions makes them essential for efficient P & D management/dispute resolution process. AI also excels in identifying patterns and relationships that might be overlooked by human analysts and this is particularly beneficial in patent analytics

services as it provides a deeper insight into the patent landscape, aiding strategic planning in innovation-driven sectors.

6.2.3 Speed

Traditional P & D search, drafting, analysis and dispute resolution are time-consuming processes. However with AI programs, the timeframe for all these processes is significantly reduced with the result even more comprehensive and accurate. This is, indeed helpful to the owners of rights and their attorneys as the rigorous and time-consuming processes of litigation can, thus be avoided.

6.2.4 Mitigated costs

With AI's precision and efficiency, the workload during patent and designs dispute can be significantly reduced, consequently reducing the costs of resolving these disputes. Therefore, people are encouraged to obtain P & D rights knowing full well that their rights will be properly managed and protected in an efficient and cost-effective way.

6.3 ISSUES ARISING THEREFROM

Patent law has technology in its DNA and as a result, capturing the essence of patent law amidst the emergence of these novel technology forms has, of course become very complex. The major challenge, howbeit has been to determine whether technology, particularly AI qualifies as a patentable subject matter under patent law. By virtue of the Patent and Designs Act, inventions are patentable in Nigeria if they are new or novel, resulting from inventive activities and are capable of technical or industrial application whether or not they arose from already existing patentable inventions. However, given that technology was not at its zenith at the time, programs and devices like AI were not considered and hence, not incorporated into the laws. Issues, therefore began to arise.

In 2018, a man named Stephen Thaler filed an application to the United Kingdom Intellectual Property Office (UKIPO) containing a statement of "inventorship" of certain inventions wherein he named an AI machine christened "Device for the Autonomous Bootstrapping of Unified Sentience" (DABUS) as the inventor noting that he acquired the right to the grant of patent by virtue of his ownership of DABUS. The deputy director, Huw Jones, however rejected the grant on the basis that the law, in all indications makes a clear expectation that an inventor and person, for the purpose of

patent rights should be a natural person – a human and not a machine. Therefore, "DABUS is an AI machine and not a human, so cannot be taken to be a "person" as required by the Act". Thaler, being dissatisfied appealed to the United Kingdom High Court. In that case, the court, per Smith J. held thus: "I conclude that DABUS is not, and cannot be an inventor within the meaning of the UKPA because DABUS is not a person... It is, therefore quite impossible to say that simply because (i) DABUS has invented something and (ii) Dr.Thaler owns DABUS, Dr.Thaler is entitled to the grant of a patent." A further appeal by Dr.Thaler to the UK Court of Appeal was also rejected. There, the court stated succinctly that "Machines are not persons. The fact that machines can now create inventions, which is what Dr.Thaler says happened in this case would not mean that machines are inventors within the meaning of the Act". The controversy remains unresolved.

A specific critical issue is created from this controversial scenario. Can tools of Artificial Intelligence be comfortably utilized in resolving patent and designs dispute where, as has been stated afore, AI machines are granted no patent rights for their inventions? This issue resonates more deeply with the Nigerian Industrial Property system which is already struggling for breath under the suffocating impact of Artificial Intelligence and the tools that augment it.

Furthermore, AI systems are increasingly being recognized for their predictive capabilities, as they can analyse existing data and trends to forecast future technological developments, sparking a debate as to whether such predictions should be considered as prior art. Besides, as a requirement for eligibility, inventions seeking protection under the patent laws of Nigeria ought to be completely new and non-obvious to a skilled person in that field of technological advancement. Thus, can inventions that have become not just obvious to an AI program but completely predicted and foreseen be considered new for the purpose of patent protection?

6.4 NEGATIVE IMPACTS OF AI TOOLS

As endearing as the possibilities for AI application in the Nigerian Industrial property system appear, it is bedevilled with some undesired impacts for both the drafts or processes and the attorneys as well. It is important to note that some of these tools

are prone to hallucinations and therefore, make up prior art during patent search and invalidation. Unfortunately, this state of inaccuracy may amount to grave errors for the users. Also, these AI tools may not be as precise, terse or verbose as required. Thus, for descriptions which are required to be quite detailed and descriptive, AI tools can be quite terse and for claims which ought to be concise, AI tools are mostly verbose. This situation is usually challenging for the users of these AI tools.

Also, the sheer volume of potential prior art created by AI systems may overwhelm patent/designs examiners and practitioners, making it challenging to conduct thorough prior art searches and increasing the risk of overlooking relevant references. Therefore, the amount of information, relevant and irrelevant produced by these AI programs may become too much, thus complicating priority determinations.

Furthermore, overreliance on these AI programs can negatively affect the cognitive and analytic abilities of both administrators and legal professionals. This is undeniably so, because the application of AI tools which can perform an enormous percentage of the duties of legal practitioners with, arguably the same degree of accuracy, efficiency and even greater speed will definitely lead to an overreliance and excessive consultation of these tools which holds promise of reducing the intellectual capabilities of legal practitioners and administrators in the Industrial property system.

7.0 EXTRAPOLATING POTENTIAL AI INTEGRATION, OTHER CONSIDERATIONS

With the level of value AI is bringing into Industrial Property system, the future will inevitably see AI as more than a tool for effective P & D dispute resolution but as an integrated solution which offers holistic aid in the management of Nigeria's industrial property. Key activities in the system such as licensing, transfer of rights, among others hold promise of becoming entirely automated with an immutable record keeping platform. The integration of AI in P & D dispute will also promote increased adoption of this technology in P & D registries and offices.

Generally, there promises to be continued research and development in the field of AI, with researchers digging further to find better ways P &

D dispute can be assisted by AI. In furtherance of this, there promises to be continental and international collaborations on AI-driven P & D dispute resolution, which can generate to the harmonization of Industrial property regulations.

Thus, it is highly pertinent for Nigeria to incorporate AI holistically in her P & D dispute management and resolution to enable her maximize the opportunities that are apparently arising.

8.0 CHALLENGES AND LIMITATIONS

8.1 Integration with the Extant Industrial Property System

The Nigerian Industrial property system is not repellent to Artificial Intelligence and the good that comes with it. However, the rigidity of the extant system and laws has made it absolutely difficult to apply AI tools and programs into patent and designs dispute in Nigeria. Given that the Industrial property system of Nigeria and the laws that regulate it were primarily established without any contemplation of such technological breakthroughs as AI, it is not unexpected that there is no opportunity for its integration into the system. As has been stated afore, the mode of Industrial property practice in Nigeria is not one that supports the integration and application of AI, which is such that makes the application of AI in P & D dispute quite difficult. This, indeed poses a challenge to the applicability of AI in P & D dispute in Nigeria.

8.2 Data availability and quality

The laws on data privacy and protection are becoming more comprehensive and generally applicable than before and this affects the use of AI for patents and designs dispute because these programs utilize data to follow prompts and perform duties. Besides, not all available AI content are of high quality and relevance. This, therefore creates a challenge.

8.3 Quality and Relevance

Apparently, not all information and content generated by AI programs are of relevance and distinguishing between relevant content and irrelevant content in AI-generated disclosures may pose a notable challenge. Some of these AI-generated disclosures are quite likely to be obscure, ambiguous and technically deficient and do nothing to promote the progress of useful art. Thus, sieving out the relevant and high quality content from the irrelevant might pose a constant challenge

to the integration of AI programs in Nigerian Industrial Property system.

9.0 RECOMMENDATIONS

The interesting thing about technology, Artificial Intelligence inclusive is that whether or not it is integrated into the system, it holds promise of occasioning a disadvantage for those who do not harness it positively. Therefore, it is pertinent that the Nigerian Industrial property system begins to incorporate the AI revolution in P & D dispute management and revolution. Quite fortunately, Nigeria has not had much cases on the technology-IP clash giving her ample time to re-evaluate her laws and make certain necessary reviews to accommodate the emergence of technology and its clay on creativity. Therefore, it is important that certain positions of the law that already exist on the subject such as the registration system of the P & D registry be criticized to come up with laws that fit into the current technological advancements while still maintaining its strict legal flavour. Also, and quite importantly, the data privacy regulations should be strictly adhered to when these AI tools are being prompted so as to ensure the security of data utilized in the process.

Furthermore, in her efforts to resolve some of the issues arising from the application of AI in P & D dispute, it is important that Nigeria considers works created by AI machines and algorithms as patentable and suitable for a grant of protection under the Act. Given that the requirements for patentability are clear under the law, instead of the courts trying to analyse whether or not AI is a person capable of inventions as in the case of *Stephen L. Thaler v The Comptroller-General of Patents, Designs and Trademarks*, the courts should be more concerned with whether or not the invention itself fulfils the requirement for patentability under the law since it is the intellectual property that the law seeks to protect and not the source of the intellect.

The first and most important requirement for patentability as provided by the Patent and Designs Act of 1970 is Novelty/Newness. This considers whether or not the invention is novel to the industrial sector and once it is new and has not been published or disclosed before the time of application, it fulfils this requirement. The law also considers the inventive activity of the inventor and the industrial application of the invention. The

personality of the inventor is, therefore not part for the requirements for the patentability of an invention. It is, therefore sheer refusal to apply the law as it is and of course, a promotion of the uncertainty of the “written” law to deny AI inventions patentability on the shallow ground that patentable inventions should be created by natural persons.

Assuming but not conceding that the laws initially specifically referred to natural persons, laws are dynamic and can be interpreted, or where impossible amended to suit the sociological and scientific becoming of the society in which they are applied. This is exemplified by the fact that, initially, the law considered persons as limited to only “natural” persons. However, in the case of *Salomon v Salomon*, the court recognised body incorporates as falling within the legal definition of persons and ascribed to them the status of artificial or juristic persons. Likewise, it can be inferred that this is another recognition the law via the courts ought to make by rightly recognising Artificial intelligence as a special class of artificial persons. The law is not static, therefore, where there is need for reform, it is important that bold steps be taken to effect that reform.

Furthermore, some scholars have argued that AI machines cannot be inventors, rather they are tools with which inventors make their inventions. Howbeit, it is pertinent that these scholars and all who share their point of view be brought to the knowledge that these machines are gradually attaining a point of self-awareness whereby they wield a certain level of autonomy over their actions. As the Australian Deputy Commissioner of Patent (DCP) rightly stated in *Stephen L. Thaler [APO]*, “...there would have been no doubt that inventors were natural persons, and machines were tools that could be used by inventors. However, it is now well known that machines can do far more than this, and it is reasonable to argue that AI may be capable of being inventors”. No truer, realistic and more updated words. With the rate at which AI machines are becoming self-aware and autonomous, they should be incorporated into the legal definition of persons and should be allowed as much rights as every legal person would be entitled.

10.0 CONCLUSION

The Industrial property landscape is rapidly changing with the advancements in technology. This is indisputable, and with the current, largely positive strides of AI in the IP landscape, this change has been ultimately welcomed. However, given that the complications that come with Artificial Intelligence are numerous, it is not enough to simply welcome AI programs without implementing the requisite adaptation measures in the extant laws and system. Thus, in her bid to accommodate AI and its laudable strides in Industrial property, especially P & D dispute, it is essential that Nigeria considers the timely implementation of the aforementioned recommendations in order to facilitate an efficient application of AI in patent and designs dispute in Nigeria's Industrial property system.

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