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MY INTELLECTUAL PROPERTY LAW GUIDE

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MIPLG COMMENTS ON WIPO ISSUE PAPER ON INTELLECTUAL PROPERTY AND ARTIFICIAL INTELLIGENCE OF 13 DECEMBER 2019

In response to the call for comments published by the World Intellectual Property Organisation (WIPO) and upon careful consideration of the various issues as drafted by the WIPO Secretariat, MIPLG publishes its comments and observations as follows:

1. **PATENTS**

ISSUE 1- INVENTORSHIP AND OWNERSHIP

(i) Should the law permit or require that the artificial intelligence (AI) application be named as the inventor or should it be required that a human being be named as the inventor? In the event that a human inventor is required to be named, should the law give indications of the way in which the human inventor should be determined, or should this decision be left to private arrangements, such as corporate policy, with the possibility of judicial review by appeal in accordance with existing laws concerning disputes over inventorship?

Comment:

Generally, the right to a patent is granted to an inventor, which is usually a person. According to the Nigerian laws, an 'inventor' is either the natural or artificial person or a 'statutory inventor' (see *Companies and Allied Matters Act, Cap C2, LFN 2010, s. 37; Copyright Act, Chapter C28, LFN 2004, s. 2(1)(a)&(b) and Patents and Designs Act, Chapter P2 LFN 2004, s. 2(1))*. An artificial person is a company which gains legal personality through incorporation. This has long been entrenched in the *principle of juristic/ corporate personality.* Currently, AI is not envisaged as an 'inventor' under the relevant laws in Nigeria and other developing countries and therefore falls outside the statutory scope of definitions.

Even though there is no denying the fact that AI is a technological phenomenon that is bound to continue making huge waves in all aspect of intellectual property (IP) laws and intellectual property rights (IPRs), it is presently not in the foremost interest of most developing nations to direct their legislative reforms towards the incorporation and allowance of AI as 'inventor' in the IP spectrum. This is hinged on socio-economic and technological considerations that are beyond the scope of this issue paper. IP has as one of its primary goals to encourage innovation by incentivizing inventors. Rather, the law as it is should only be modified to take

cognizance of the adoption of AI in the inventive process, while the inventor remains a natural or juristic person. The purport of this requirement for developing countries is to foster technological growth and development, as well as incentivize innovation, achievable through association with natural/ corporate inventors.

In this event therefore, the applicable policies relating to tortious liability (i.e. vicarious liability) and juristic personalities for corporation should govern the appropriation of responsibilities for those inventions created by AI and registered by their natural/ juristic persons. This should also be subject to judicial review.

ii. The inventorship issue also raises the question of who should be recorded as the owner of a patent involving an AI application. Do specific legal provisions need to be introduced to govern the ownership of autonomously generated AI inventions, or should ownership follow from inventorship and any relevant private arrangements, such as corporate policy, concerning attribution of inventorship and ownership?

Comment:
Flowing from comments in (i) above, it is submitted that *sui generis* modifications to the current legal systems governing IPRs, particularly patents and copyrights should be adopted to the extent that the natural/ corporate person, rather than the AI is recorded as the inventor (and/or 'author' in instances of copyright). It is also submitted that such autonomously generated inventions would not have existed without the underlying human factor that generated the initial algorithm, which formed the bedrock for the continual information inflow into the AI. Even though it may be argued that the AI may have evolved beyond such initial program. For purposes of certainty and clarity however, it would be better for ownership to follow inventorship, having into consideration the suggestions in (i) above.

iii. Should the law exclude from the availability of patent protection any invention that has been generated autonomously by an AI application?

Comment:
Following our submission in (i) and (ii) above, autonomously generated AI inventions should not be excluded from patentability. Rather, they should be subject to the specific laws governing the subject matter.

ISSUE 2- PATENTABLE SUBJECT MATTER AND PATENTABILITY GUIDELINES

(i) Should the law exclude from patent eligibility inventions that are autonomously generated by an AI application? See also Issue 1(iii), above.

Comment:
Refer generally to the comments in issue 1 above.

(ii) Should specific provisions be introduced for inventions assisted by AI or should such inventions be treated in the same way as other computer-assisted inventions?

Comment:
For purposes of clarity, there should be specific provisions for inventions assisted by AI. Such provisions should, however, not exclude AI-assisted inventions from patentability. The guidelines put in force by the European Patent Office (EPO) as regards computer implemented inventions and AI is a step in the right direction as a concrete measure to ensure clarity.

ISSUE 3- INVENTIVE STEP OR NON-OBVIOUSNESS

(i) In the context of AI inventions, what art does the standard refer to? Should the art be the field of technology of the product or service that emerges as the invention from the AI application?

COMMENT:
It is submitted that the determination of this issue should be resolved on a case-by-case basis. Ordinarily, the patent application should disclose whether AI has been a factor in the invention process. Depending on the answer, this should determine the applicable standard to be adopted in examining the inventive process. Hence, for those inventions that have been substantiated and/or have more to do with inputs from AI, then the standard should be that of an AI Algorithm skilled in the art (i.e. the field of technology of the product or service the applicants seeks to obtain monopoly); while the default standard of an examiner/person skilled in the art - PHOSITA for those without AI inputs.

This however raises the issue of TRANPARENCY. Applicants would likely omit the fact that the product or service was generated by the input of an AI in other to avail themselves of the default standard and raise their chances of obtaining a patent. To counter this practice, it would be incumbent on policy makers to raise the deterrence level to automatic cancellation of the patent *ab initio* upon eventual disclosure with concrete evidence.

Consequently, the 'art' as stated, should be in relation to the art in that field of technology of the product or service that emerges as the invention from the AI application.

(ii) Should the standard of a person skilled in the art be maintained where the invention is autonomously generated by an AI application or should consideration be given to replacing the person by an algorithm trained with data from a designated field of art?

Comment:
Flowing from comments in 3(i) above, different considerations should be applied to AI autonomously generated inventions.

(iii) What implications will having an AI replacing a person skilled in the art have on the determination of the prior art base?

Comment:

For those specific inventions that has been determined as being partially, completely or autonomously generated by AI, having an AI determine the standard creates a level playing ground for such inventions. It also expands the horizon for works in the public domain, which can be considered prior art.

(iv) Should AI-generated content qualify as prior art?

Comment:
Subject to the considerations suggested above, AI-generated content should qualify as prior art.

ISSUE 4- DISCLOSURE

(i) What are the issues that AI-assisted or AI-generated inventions present for the disclosure requirement?

Comment:
The major problem which may be occasioned by AI-assisted or AI-generated inventions on the disclosure requirement is the full representation of the algorithms. This may prove a rather daunting task.

(ii) In the case of machine learning, where the algorithm changes over time with access to data, is the disclosure of the initial algorithm sufficient?

Comment:
Yes, the initial algorithm will be sufficient. The data may change over time, but the algorithm is relatively constant since the AI application merely adapts to available data.

(iii) Would a system of deposit for algorithms, similar to the deposit of microorganisms, be useful?

Comment:
A system of deposit of algorithms is not necessary, because the process of disclosure involves the lodging of the algorithms in the patent office. Algorithms are different in form and nature from micro-organisms. Algorithms also form a subject matter of an IPR referred to as trade secret, which economic value remains constant subject to the continuous secrecy/confidentiality of the information.

(iv) How should data used to train an algorithm be treated for the purposes of disclosure? Should the data used to train an algorithm be disclosed or described in the patent application?

Comment:
Yes, data used to train an algorithm should be disclosed or described in the patent application. The reason for this is because most data are usually the subject matter of other forms of IPRs and ownership, and as such, should form part of the disclosure to effectively arm the PHOSITA to replicate the data for later use and development.

(v) Should the human expertise used to select data and to train the algorithm be required to be disclosed?

Comment:
Further to comment in 4(iii) above, the human expertise used to select data and train the algorithm form the subject matter of trade secrets and need not be a requirement subject to disclosure.

ISSUE 5- GENERAL POLICY CONSIDERATIONS FOR THE PATENT SYSTEM

(i) Should consideration be given to a *sui generis* system of IP rights for AI-generated inventions in order to adjust innovation incentives for AI?

Comment:
Following the preceding comments, a certain defined system of rights is required in order to adjust innovation incentives for AI. This would have to be weighed based on the individual capacities and technological acumen of states and their readiness to face the consequences of such legislative decisions.

(ii) Is it too early to consider these questions because the impact of AI on both science and technology is still unfolding at a rapid rate and there is, at this stage, insufficient understanding of that impact or of what policy measures, if any, might be appropriate in the circumstances?

Comment:
It is submitted that the law must be in tune with technological development. Hence, it is not too early to start giving serious considerations to legislative frameworks that would regulate the phenomenon. It is therefore imperative that the subject matter is considered as it emerges.

2. **COPYRIGHT AND RELATED RIGHTS**
ISSUE 6- AUTHORSHIP AND OWNERSHIP

(i) Should copyright be attributed to original literary and artistic works that are autonomously generated by AI or should a human creator be required?

Comment:
Refer generally to comments submitted under issues 1 – 5.

As a reiteration and based on the unique technological deficiencies that is the bane of developing nations, copyright should not be solely attributable to AI, in other to encourage innovation and generate returns on investment (ROI).

(ii) In the event copyright can be attributed to AI-generated works, in whom should the copyright vest? Should consideration be given to according a legal personality to an AI application where it creates original works autonomously, so that the copyright would vest in the personality and the personality could be governed and sold in a manner similar to a corporation?

Comment:

Suggestions proffered under issues 1 – 5 are adopted in whole, particularly, comment under issue 6(i)

(iii) Should a separate *sui generis* system of protection (for example, one offering a reduced term of protection and other limitations, or one treating AI-generated works as performances) be envisaged for original literary and artistic works autonomously generated by AI?

Comment:
The term duration granted to copyright subject matters (as well as other IPRs) has always been a huge point of contention. It is nevertheless submitted that creating a *sui generis right* similar to the European Union (EU)'s database right protection, which subsists for limited period of time and is based on the economic value rather than the traditional *standards of originality, idea/expression dichotomy and tangible medium of expression* should primarily be adopted for such AI autonomously generated works.

ISSUE 7- INFRINGMENT AND EXCEPTIONS

(i) Should the use of the data subsisting in copyright works without authorization for machine learning constitute an infringement of copyright? If not, should an explicit exception be made under copyright law or other relevant laws for the use of such data to train AI applications?

Comment:
Any use of a copyright work without authorization constitutes an infringement where such use is not an exception provided under the relevant copyright law(s). This principle should be directed applicable to unauthorized use of copyright works in AI applications training. There may be need for express provisions to be made under copyright laws for such exceptions to subsist (i.e. the fair use doctrine). Certain considerations such as research and development may be sufficient grounds on a case by case analysis.

(ii) If the use of the data subsisting in copyright works without authorization for machine learning is considered to constitute an infringement of copyright, what would be the impact on the development of AI and on the free flow of data to improve innovation in AI?

Comment:
The development of AI and improvement of innovation in AI will not be hindered as AI developers may acquire licenses or relevant authorizations to utilize copyright works where necessary. Importantly for those data/ works which ownership cannot be readily ascertained (i.e. orphan works), the policy considerations adopted for such cases in WIPO should apply *in toto.*

(iii) If the use of the data subsisting in copyright works without authorization for machine learning is considered to constitute an infringement of copyright, should an exception be made for at least certain acts for limited purposes, such as the use in non-commercial user-generated works or the use for research?

Comment:
See comment in Issue 7 (ii) above.

(iv) If the use of the data subsisting of copyright works without authorization for machine learning is considered to constitute an infringement of copyright, how would existing exceptions for text and data mining interact with such infringement?

Comment:
To the extent that the use of copyright works fall under the exceptions for text and data mining, there may be no conflicts.

(v) Would any policy intervention be necessary to facilitate licensing if the unauthorized use of data subsisting in copyright works for machine learning were to be considered an infringement of copyright?

Comment:
No policy intervention will be necessary to facilitate licensing. Licensing may be facilitated by existing copyright licensing bodies.

(vi) How would the unauthorized use of data subsisting in copyright works for machine learning be detected and enforced, in particular when a large number of copyright works are created by AI?

Comment:
The detection of infringement of copyright protection as is the case in other fields of IP is dependent on the alertness of the right-holder to identify infringement and protect his rights through existing enforcement mechanisms.

ISSUE 8- DEEP FAKES

(i) Since deep fakes are created on the basis of data that may be the subject of copyright, to whom should the copyright in a deep fake belong? Should there be a system of equitable remuneration for persons whose likenesses and "performances" are used in a deep fake?

Comment:
Provided that the necessary consent/ license is acquired by a deep fake creator, copyright in a deep fake should belong to the deep fake creator. Deep fake performances should be considered a type of 'performance' under copyright laws, entitling equitable remuneration to persons whose likenesses are used in a deep fake performance.

ISSUE 9- GENERAL POLICY ISSUES

(i) Are there seen or unforeseen consequences of copyright on bias in AI applications? Or is there a hierarchy of social policies that needs to be envisaged that would promote the preservation of the copyright system and the dignity of human creation over the encouragement of innovation in AI, or vice versa?

Comment:
AI and human creations should be recognised and preserved. However, none should be better encouraged at the expense of the other. The lapses in economic statuses of countries may affect the need to better encourage one over the other but IP laws should find a balance so as not to discourage human well-being in developing and least developed countries.

3. **DESIGN**

ISSUE 11- AUTHORSHIP AND OWNERSHIP

(i) Should the law permit or require that design protection be accorded to an original design that has been produced autonomously by an AI application? If a human designer is required, should the law give indications of the way in which the human designer should be determined, or should this decision be left to private arrangements, such as corporate policy, with the possibility of judicial review by appeal in accordance with existing laws concerning disputes over authorship?

Comment:
See comments under issues 1 – 10 above.

It is however submitted that based on the differing test/standard for determining infringements in copyright (i.e. substantial similarity test) and designs (i.e. overall impression of an average person), the determination of autonomous works created by AI *may* be accorded design protection (in conjunction with a natural/corporate person) subject to the works being of *original artistic craftsmanship*.

(ii) Do specific legal provisions need to be introduced to govern the ownership of autonomously generated AI designs, or should ownership follow from authorship and any relevant private arrangements, such as corporate policy, concerning attribution of authorship and ownership?

Comment:
Refer to comment in 11(i) above.

4. **TECHNOLOGY GAP AND CAPACITY BUILDING**

ISSUE 12- CAPACITY BUILDING

(i) What policy measures in the field of IP policy might be envisaged that may contribute to the containment or the reduction in the technology gap in AI capacity? Are any such measures of a practical nature or a policy nature?

Comment:
It is suggested in conjunction with other socio-economic, technological and political considerations that the following modes of operation should be adopted in capacity building as follows:

- Creation of more opportunities that would foster IP technological transfer. From the developing and LDCs' perspective, this can manifest with the

inclusion of broader IP courses in the formal school curricula (primary, secondary and tertiary institutions) of the growing and larger population of these affected nations.

- Another mode is the opportunity for startup accelerators to site their businesses in these countries to aid SMEs (which are responsible for 90% of the economic growth and development in the affected countries) in contributing more to the advancement of their countries.