

# WIPO Conversation

## on Intellectual Property (IP) and Artificial Intelligence

14 February 2020

Re: Draft Issues Paper on Intellectual Property Policy and Artificial Intelligence, WIPO/IP/AI/2/GE/20/1

Dear Mr. Gurry

WIPO's initiative to develop a list of issues concerning the impact of AI on IP policy as a basis of future discussion is greatly appreciated.

VESPA is the Swiss Association of European and Swiss patent attorneys working in private practice. We herewith provide our comments on selected (patent-related) aspects of the draft issues paper.<sup>1</sup>

### Issue 1: Inventorship and Ownership

- i) *Should the law permit or require that the AI application be named as the inventor or should it be required that a human being be named as the inventor?*

To put the answer into perspective, it is important to note that the IP5 offices unanimously held in 2018 that an inventor must be a human being.<sup>2</sup> This has recently been affirmed by the Receiving Section of the EPO in two cases where 'a type of connectionist artificial intelligence' called DABUS has been named as the inventor.<sup>3</sup> The reasoned decisions have meanwhile been published.<sup>4</sup> The decisions can still be appealed; the applicable time limit for an appeal is 6 April 2020.

The EPO's DABUS decisions give extensive reasons why in the EPO's view the inventor must be a human being, *inter alia* based on the *travaux préparatoires* of the EPC. However, it is still being discussed amongst practitioners whether the legislator's mentioning of 'person' in the *travaux préparatoires* was intentionally limiting at that time – or whether the legislator did just not yet anticipate any non-human, creative activity. Accordingly, at least to the extent the EPC is concerned, there is not yet clarity whether the inventor must be a

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<sup>1</sup> The draft issues paper is available on the WIPO website <[https://www.wipo.int/edocs/mdocs/mdocs/en/wipo\\_ip\\_ai\\_ge\\_20/wipo\\_ip\\_ai\\_ge\\_20\\_1.docx](https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ip_ai_ge_20/wipo_ip_ai_ge_20_1.docx)> (accessed 11 February 2020).

<sup>2</sup> Report from the IP5 expert round table on artificial intelligence (Munich, 31 October 2018), B.4; <[https://www.fiveipoffices.org/material/ai\\_roundtable\\_2018\\_report/ai\\_roundtable\\_2018\\_report](https://www.fiveipoffices.org/material/ai_roundtable_2018_report/ai_roundtable_2018_report)> (accessed 11 February 2020).

<sup>3</sup> The decisions in cases EP 18 275 163 <<https://register.epo.org/application?number=EP18275163>> and EP 18 275 174 <<https://register.epo.org/application?number=EP18275174>> had been announced after oral proceedings on 25 November 2019 on the ground that the requirement of the EPC that an inventor designated in the application has to be a human being, not a machine. See the EPO's press release of 20 December 2019, <<https://www.epo.org/news-issues/news/2019/20191220.html>> (accessed 11 February 2020).

<sup>4</sup> See EPO's press release of 28 January 2020 (<<https://www.epo.org/news-issues/news/2020/20200128.html>>, accessed 11 February 2020), with hyperlinks to the reasoned decisions.

human being; an appeal in the DABUS case(s) might provide (more) legal certainty in this respect.

Assuming that an invention has been autonomously generated by AI means that no human being can be named as an inventor. If such an invention is new, non-obvious and susceptible of industrial application, it will be hard to accept – at least on the long run – that such an invention cannot be patented for the mere formal reason that no human being can be identified as an inventor. Depriving such inventions from patent protection for mere formal reasons might arguably contravene the gist of the patent system to promote innovation.

On a side note, it is interesting that apparently a Chinese court recently ruled that an AI-generated article is susceptible to copyright protection.<sup>5</sup> This is particularly remarkable since copyright involves a moral right that remains with the author / creator of the copyright-protected work product. If this does not prevent AI-generated content from susceptibility to copyright protection, why should an inventor have to be a human being?

*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?*

A human inventor has rights in the invention that he made or contributed to. In the event a human inventor is required to be named vis-à-vis the office, the law should of well make clear in which way this is to be done. However, data protection and privacy is a widespread concern nowadays, and each human inventor should be given the option to not be identified to the public at all, or to only make certain details available (e.g. only the name but not the address).

- 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?*

In case of inventions autonomously generated by AI, the ownership in the respective AI itself could govern ownership of the invention. No specific legal provisions are currently deemed necessary.

- iii) *Should the law exclude from the availability of patent protection any invention that has been generated autonomously by an AI application? See also Issue 2, below.*

No. See i), above.

## **Issue 2: Patentable Subject Matter and Patentability Guidelines**

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

No. See i), above.

- v) *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?*

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<sup>5</sup> Court rules AI-written article has copyright, China Daily Global, 9 January 2020; <<https://www.china-daily.com.cn/a/202001/09/WS5e16621fa310cf3e3558351f.html>> (accessed 11 February 2020).

No specific provisions are currently deemed necessary. AI-assisted inventions may well be treated in the same way as other computer-assisted inventions.

- vi) *Do amendments need to be introduced in patent examination guidelines for AI-assisted inventions? If so, please identify which parts or provisions of patent examination guidelines need to be reviewed.*

AI is an emerging technology, and the patent examination guidelines will surely need to be revisited once in a while to make sure that they are constantly fit for purpose while technology advances.

As to the EPO Guidelines, AI *per se* is considered to be of an abstract mathematical nature, irrespective of whether it can be 'trained' based on training data.<sup>6</sup> The EPO requires applicants to claim a specific use of the AI (even though the AI might well be applicable much more broadly), thereby significantly limiting the potential scope. Arguably, this should be revisited in order to not unduly deprive this emerging technology from the protection it deserves.<sup>7</sup>

### **Issue 3: Inventive Step or Non-Obviousness**

- vii) *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?*

Yes. What emerges from AI as the invention (i.e., an AI-generated invention) should dictate the field of technology that is relevant for the assessment of obviousness.

- viii) *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?*

The standard should remain the same, i.e. the item that is autonomously created by AI should dictate the field of technology that is relevant for the assessment of obviousness, and the person skilled in this field of technology should remain the benchmark in the assessment of obviousness. See also ix), below.

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

The person skilled in the art should not be replaced by AI in the assessment of obviousness. There is no need for that; it would only add further uncertainty to the assessment of obviousness. However, it might well need to be considered – at least on the long run – whether the skilled person in a certain field of technology would have made use of AI (and if so, which one) in order to solve the objective technical problem.

- x) *Should AI-generated content qualify as prior art?*

Yes. As long as it is made available to the public in a sufficiently enabling manner, there is no reason to disqualify AI-generated content as prior art.

### **Issue 4:**

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<sup>6</sup> Guidelines for Examination in the European Patent Office (November 2019), G-II 3.3.1; < [https://www.epo.org/law-practice/legal-texts/html/guidelines/e/g\\_ii\\_3\\_3\\_1.htm](https://www.epo.org/law-practice/legal-texts/html/guidelines/e/g_ii_3_3_1.htm) > (accessed 11 February 2020).

<sup>7</sup> See *amicus curiae* brief in case G 1/19 by M. Wilming, <<https://tinyurl.com/s2x4k5j>> (accessed 11 February 2020).

## Disclosure

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

AI-assisted and AI-generated inventions depend on suitable training data. If a suitable set of training data is not readily available to the skilled person without undue burden, the invention might be considered as insufficiently disclosed. See also xiii), xiv) and xv), below.

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

Sufficiency of disclosure is a requirement to be fulfilled at the filing date. Disclosure of the initial algorithm should thus be sufficient (assuming that it worked already).

- xiii) Would a system of deposit for algorithms, similar to the deposit of microorganisms, be useful?*

Yes. Likewise, a system of deposit for training data should be considered.

- xiv) 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?*

In general terms, the established principles for sufficiency of disclosure could apply.

If a suitable set of training data is not readily available to the skilled person without undue burden, the invention might be considered as insufficiently disclosed. Accordingly, the training data should be made available in or with the patent application in such cases; see also xiii), above.

If the training data is not that crucial in order to reproduce the invention, no disclosure of the training data would be necessary.

- xv) Should the human expertise used to select data and to train the algorithm be required to be disclosed?*

Yes, if the absence of this information would confront the skilled person with an undue burden in order to arrive at a suitable set of training data. Again, the established principles for sufficiency of disclosure could apply.

## Issue 5: General Policy Considerations for the Patent System

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

Not necessarily. It does not appear as an ideal scenario to have a separate system of IP rights for AI-generated invention, e.g. for the mere reason that the patent system (currently) requires the inventor to be a human being. Rather, the patent system should be kept fit for purpose in order to cope with this emerging technology. However, if this turns out to be not doable, a separate system of IP rights would be better than no potential protection for inventions emerging from AI at all.

xvii) *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?*

It surely is not too early to consider these questions. On the contrary, waiting like a rabbit in the headlights for the technology to completely unfold might be risky. However, that does not mean that overhasty decisions are to be made, i.e. to enact a separate system of IP rights. This would take quite some time in any event, and this process should go hand in hand with continuous surveillance of technological advances.

The Association of Swiss and European Patent Attorneys in Free Practice (VESPA/ACBSE) expresses its gratitude for the opportunity to comment on this important issue.

This submission has been prepared on behalf of VESPA/ACBSE by Dr. Martin Wilming ([martin.wilming@hepp.ch](mailto:martin.wilming@hepp.ch)).

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