# Update on Federal Register Notice on Artificial Intelligence (AI) Patent Issues

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As noted in our previous post, the U.S. Patent and Trademark Office (USPTO) published a request for comments for a list of questions regarding Artificial Intelligence (AI) Patent Issues in the Federal Register on August 21, 2019. While the comment period has closed, a few developments regarding AI patent issues have occurred that are particularly relevant.

- The European Patent Office (EPO) has refused two European patent applications that designated an artificial intelligence called DABUS as the inventor, following a non-public hearing on November 25, 2019. The EPO has not yet published its reasons for refusing the applications but merely stated that "they do not meet the requirement of the European Patent Convention (EPC) that an inventor designated in the application has to be a human being, not a machine." The refusal refers to Article 81 and Rule 19 of the EPC. The EPO further noted "A reasoned decision may be expected in January 2020."

- The United Kingdom Intellectual Property Office (UKIPO) also has refused to accept the DABUS applications, saying they shall be taken to be withdrawn at the expiry of the 16-month period. The Office has published a decision setting out its reasons on December 4, 2019.

    - In the decision, the UKIPO Hearing Officer, Huw Jones, citing sections 7 and 13 of the Act (The Patents Act 1977) and Rule 10 of the Rules (The Patents Rules 2007), Officer Jones said "the Office accepts that DABUS created the inventions" in the patent applications but that as it was a machine and not a natural person, it could not be regarded as an inventor. *Decision*, p. 4. Moreover, as DABUS has no rights to the inventions, the Officer stated it is unclear how the applicant derived the rights to the inventions from DABUS: "There appears to be no law that allows for the transfer of ownership of the invention from the inventor to the owner in this case, as the inventor itself cannot hold property." *Id.* at p. 6.

    - Officer Jones further noted that while he agreed inventors other than natural persons

were not contemplated when the EPC was drafted, "it is settled law that an inventor cannot be a corporate body." Accordingly, since the "applicant acknowledges DABUS is an AI machine and not a human, so cannot be taken to be a 'person' as required by the Act." *Id.* at p. 5.

- However, the Hearing Officer also added that the case raised an important question: given that an AI machine cannot hold property rights, in what way can it be encouraged to disseminate information about an invention? He said: "As the applicant says, inventions created by AI machines are likely to become more prevalent in future and there is a legitimate question as to how or whether the patent system should handle such inventions. I have found that the present system does not cater for such inventions and it was never anticipated that it would, but times have changed and technology has moved on. It is right that this is debated more widely and that any changes to the law be considered in the context of such a debate, and not shoehorned arbitrarily into existing legislation." *Id.* at p. 7.

- The UKIPO Formalities Manual was updated in October last year to say that an AI inventor is not acceptable. However, the Hearing Officer said this had no bearing on the decision in this case. The Hearing Officer also referenced the similar pending EPO case.

- The applicants, The Artificial Inventor Project, are [planning to appeal both decisions](#).

A few comments in response to the Federal Notice also have been published:

- [Intellectual Property Owners Association (IPO)](#): The IPO takes the position that under current laws in the U.S. and elsewhere, inventors cannot be non-natural persons. The established rules for inventors and conception can be applied to AI-related inventions in a straightforward fashion.

  - The IPO opined that AI related inventions should be held to the same eligibility considerations that pertain to software (and hardware). The IPO further commented that there should not be any disclosure/enablement related considerations unique to AI inventions because section 112(a) does not set forth different written description or enablement standards for different technical fields.

  - The IPO also suggested that examination guidelines should be crafted with the goal of promoting U.S. competitiveness in the global market and suggested "certain clarifications in U.S. patent law might help avoid ambiguities as to whether subject matter created by an AI tool is owned by the user or owner of the AI tool."

- [Institute of Electrical and Electronics Engineers (IEEE-USA)](#): IEEE-USA urged the USPTO to focus on correcting the problems facing all computer implemented technologies as a primary approach to providing strong patent protections to AI based inventions. IEEE suggested looking to other areas of IP law for models as it relates to inventorship. For example, the IEEE cited [Naruto v. Slater](#) ("monkey selfie case") which denied a monkey copyright authorship of a selfie taken by the monkey. The rulings were based in part on the constitutional authorization to reward human authors and inventors. Accordingly, the IEEE also believes that AI cannot be inventors.

- IEEE suggested that patent applicants in computer implemented technologies would benefit from increased certainty around the amount of disclosure that is enabling for computer implemented technology. (Noting Williamson v. Citrix, holding the use of the word "module" invokes means plus function language has caused uncertainty in what amount of disclosure is necessary to adequately describe a module having conventional functionality.)

- IEEE further emphasized that AI research and development has an urgent need to be nurtured and noted that "AI would benefit from resolving the current uncertainty in the scope of patentability of computer implemented technology."

- R Street, a nonprofit, nonpartisan, public policy research organization, also contributed comments:

  - R Street noted that a long-standing definition of conception requires "formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention." R Street states that computers cannot be inventors for at least two reasons 1) inventors must be human under the Patent Act; and 2) computers do not have minds and cannot satisfy the legal requirements of inventors.

  - R Street agreed that no special considerations should apply to AI enablement or written description requirements.

  - However, R Street commented that AI may impact the level of a person of ordinary skill in the art. Particularly with respect to "obvious to try" rationale and what is considered a "small" number of alternatives.

  - R Street noted that "to the extent the USPTO is interested in whether it should advocate for policy change to enable machines to receive patents, the answer is no."

  - R Street takes an interesting stance in saying "inventions generated by an AI system would only be patentable when a human recognizes and evaluates the significance of the AI system's results."

The initial consensus regarding AI inventorship seems to be that AI cannot be an inventor under current law. While pending cases in the EPO and UKIPO seem to be destined for appeal and further court decisions, AI inventorship is still up for debate in the U.S.