PATENT FILE

Judgment day

Should patent rights be obtainable for inventions "invented" by artificial intelligence?

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Recent news of artificial intelligence (AI) algorithms inventing on their own has prompted discourse about whether a machine can be named as an inventor on a patent. The US Patent and Trademark Office (USPTO) recently stated its position on that in a decision[1] published on 27 April 2020. The USPTO stated that an "inventor" under US patent law can only be a "natural person", echoing similar recent decisions by the UK Intellectual Property Office (UK IPO) and the European Patent Office (EPO). These decisions leave open a more important question: Should there be any circumstance in which a patent can be granted on subject matter "conceived" by a machine? We argue that there should be, and expect that marketplace pressures to innovate faster, along with future developments in AI technology, will soon bring greater importance to this question.

In 2018 and 2019, Stephen L Thaler filed patent applications with the UK IPO, EPO, and the USPTO for inventions purportedly created by a machine (an AI) known as "DABUS". The applications named DABUS as the sole inventor. Thaler argued to the USPTO that an "inventor" should not be limited to natural persons, asserting that it was DABUS, not a person, "which recognised the novelty and salience" of the invention. In rejecting Thaler's arguments,[2] the USPTO pointed to 35 USC section 100(a), which defines "inventor" as "the *individual* or... *individuals*... who invented or discovered the subject matter of the invention."[3] The USPTO also cited section 101 of the statute, which begins with, "*Whoever* invents or discovers..."[4] concluding that "whoever" suggests a natural person. Further, the USPTO relied upon court cases holding that neither a state nor a corporation can be an "inventor."[5]

The USPTO's interpretation of "inventor" can be challenged. For example, might a human owner or operator of an AI that conceives[6] something new reasonably claim to be the "inventor", as the first person who discovered that new thing (thereby tracking the "discovers" element of section 101)? It is unclear how the courts would decide that issue. Congress can and arguably should (for reasons discussed below) step in by modifying the statutory definition to provide that an "inventor" can be an AI, or to include an express exception that permits the granting of patents for inventions conceived by AI.

Broader policy issue

Perhaps the more important question is, notwithstanding current law, should a patent ever be grantable for an invention conceived by AI?[7] For example, should a human or corporation who owns or operates an AI for the purpose of inventing be able to obtain a patent on the resulting inventions?[8]

For centuries humans have employed other humans to invent on their behalf, for profit. Hence, the patent rights to an invention made by an employee as part of her employment can be, and typically are, assigned to the employer. The employer thereby benefits from their investment (eg, in the employee's compensation) by obtaining exclusive rights to the invention. Denying that benefit to someone simply because they employ a machine to invent, rather than a human, does not serve well any overriding public policy.

The policy underlying US patent law, as stated in the US Constitution, is "to promote the progress of science and useful arts,"[9] ie, to promote innovation. That requires providing those in the business of innovation with a fair opportunity to receive meaningful returns on their investments. DABUS as an artificial inventor is undoubtedly just the beginning; the ability of AI to invent may someday surpass humanity's ability to do so. And while the suggestion of that may portend "danger! danger!" in the eyes of many, the use of AI as an innovation tool clearly has the potential to improve people's lives immeasurably. Precluding the patenting of AI-conceived inventions not only fails to serve, but actually undermines, the policy of "promot[ing] the progress of science and the useful arts."[10]

The law often lags far behind societal changes, particularly technological advances. Congress should take the opportunity now to keep up with the nascent AI revolution (since resistance is futile) by legislating to provide that AI-conceived inventions are patentable. This issue will likely take on increasing urgency, driven by the appearance of ever more sophisticated AI algorithms that "invent".

Footnotes
1. *Decision on Petition*, In re US patent application no 16/524,350, USPTO, 27 April 2020.
2. Id.
3. Id. (emphasis added).
4. Id. (emphasis added).
5. *Univ of Utah v Max-Planck-Gesellschaft,* 734 F.3d 1315 (Fed Cir 2013) (state); *Beech Aircraft Corp v EDO Corp*, 990 F.2d 1237, 1248 (Fed Cir 1993) (corporation).
6. Arguably, "conception" is not unique to biological intelligence.
7. This issue parallels the issue, recently addressed by the courts, of whether a monkey can sue for infringement of copyright in a "selfie" taken by the monkey. *Naruto v Slater,* No 16-15469 (9th Cir 2018) (monkey lacks standing to sue). That issue is beyond the scope of this article.
8. The question of whether the AI itself should be allowed to own such a patent is also beyond the scope of this article.
9. US Const, Art I, Sec 8, Cl 8.
10. Id.

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