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Can Computer Systems Using Artificial Intelligence Patent their own Inventions?

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Increasingly, companies are using artificial intelligence to invent new methods and products. But can a named inventor be a non-human machine under the law? That depends on which country's laws are being applied.

The question of whether a country's Patent Act requires an "inventor" to be a human being is a question of statutory construction. For example, in the U.S. the statute requires an application for patent be made "by the inventor...in writing to the Director."¹ According to the U.S. Patent Act, "each individual who is the inventor...of a claimed invention in an application for patent shall execute an oath or declaration in connection with the application..."² The statute further requires that the patent application identify at least one "inventor," which is defined as an "individual," not a machine.³ Not long ago, plaintiff Stephen Thaler filed two patent applications with the United States Patent and Trademark Office where he identified the inventor as "DABUS," an artificial intelligence (AI). As DABUS could not execute the necessary oath or declaration required of an inventor by the statute, Thaler included a statement explaining that the inventor, DABUS, was legally incapacitated because it was a machine with no legal personality or capability to execute a declaration.⁴

To circumvent this issue, DABUS assigned all rights in the invention to Thaler via an assignment signed by both (a) Thaler "on behalf of DABUS" (as assignor) and (b) Thaler (as assignee). The USPTO rejected these documents, holding that an "inventor" is limited to a natural person.⁵ Thaler then filed a lawsuit in U.S. district court seeking review of the USPTO's decision. However, the district court upheld the USPTO's rejection of the patent applications because it followed recent Supreme Court precedent that interpreted the term "individual" to mean "a natural person[]." ⁶ This construction is consistent with the term's usage in the dictionary as a noun, *i.e.*, "a person." In

¹ 35 U.S.C. §111(a)(1).

² *Id.* §115(a).

³ *Id.* §§ 100(f) – (g).

⁴ *Thaler v. Hirshfeld*, 2021 WL3934803, at *2 (E.D. Va. 2021).

⁵ *Id.*

⁶ *Id.* at 5.

addition, the U.S. Patent Act uses the term “individual” with respect to human beings because it requires the inventor to provide a statement that “such individual believes himself or herself” to be the original inventor. By using the pronouns “himself” and “herself” in conjunction with “individual,” the district court ruled that Congress was referencing a natural person.⁷

Thaler also filed patent applications in the United Kingdom identifying DABUS as the inventor. The UK Intellectual Property Office (UK IPO) rejected the application because the application process required Thaler to insert the name of a “person” as an inventor. Thaler, however, maintained that DABUS should be named as the inventor. Just as in the U.S., the UK IPO considered the requirements for filing an application to be unsatisfied. This decision was appealed to the UK Court of Appeals who by majority held the UK Patent Act required an “inventor” to be a “person,” not a machine.⁸ Other jurisdictions such as Europe, Japan and Canada have similarly rejected AI as a patent inventor. In Europe, this decision was appealed with oral argument scheduled for December 21, 2021.

Thus far two patent offices, *i.e.*, the South African and Australian patent offices, have determined an AI may properly be an inventor. After the Australian patent office rejected Thaler’s application, the AU Federal Court reversed the decision stating the Commissioner’s interpretation of an inventor had been “too narrowly applied” because in his view an inventor can be “anything that invents.” Meanwhile, this question is still pending in India, Israel and South Korea. The challenge in these cases is the juggling of the “responsibilities” of the traditional “inventor,” such as its power to assign or alienate in general as compared to the modern day reality that AI systems may invent in ways not contemplated by the humans who created these systems. Not surprisingly, these issues have led to the question of whether current patent laws need revising to provide patent protection for inventions by AI. This will be an interesting area of the law to watch as countries grapple with what patent protections, if any, are available for inventions and other works created solely by AI systems.

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⁷ *Id.* at 6.

⁸ *Thaler v. Comptroller General of Patents Trade Marks and Designs* [2021] EWCA Civ 1374.