

USPTO Holds That an Artificial Intelligence (AI) Cannot Be an Inventor

In Stanley Kubrick's 1968 film, *2001: A Space Odyssey*, a manned exploratory mission to Jupiter is sabotaged by an artificial intelligence (AI) named HAL, which became famous for its line, "I'm sorry, Dave, I'm afraid I can't do that." Arguably that film first brought the concept of AI into mainstream public awareness. More recently, news of AI algorithms purportedly inventing things on their own has prompted discourse about whether a machine can be or should be named as an inventor on a patent.

The U.S. Patent and Trademark Office (PTO) has just made clear its position on that question. In a decision published on April 27, 2020, the PTO stated that an "inventor" under U.S. patent law can only be a "natural person," i.e., a human. The PTO's decision echoes similar recent decisions by the United Kingdom Intellectual Property Office (UKIPO) and the European Patent Office (EPO).

Factual Background

In 2018, Stephen L. Thaler filed patent applications with the UKIPO and EPO for inventions purportedly created by a machine (an AI) known as "DABUS." In published decisions dated December 2019 and February 2020, respectively, the UKIPO and EPO both held that a machine, and DABUS in particular, is not a person and therefore cannot be named as an inventor on a patent granted by those offices.

Thaler filed U.S. patent application no. 16/524,350 on July 29, 2019, for "DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION" (the application itself currently remains unpublished). The application papers were accompanied by an application data sheet (ADS) that listed, as the sole inventor, the given name "DABUS" and the family name "Invention generated by artificial intelligence." In lieu of a standard inventor declaration, Mr. Thaler, who was also identified as the assignee of the invention and the legal representative of DABUS, submitted a substitute statement under 37 C.F.R. 1.64, which enables an applicant to proceed without the signature of the inventor when the inventor's signature cannot be obtained through reasonable efforts. This was also accompanied by a Statement of Inventorship stating that the invention was conceived by a "creativity machine" named "DABUS" and that DABUS should be named as the inventor in the '350 application.

The PTO subsequently issued a Notice to File Missing Parts on the basis that the ADS "[did] not identify each inventor by his or her legal name." In response, Mr. Thaler filed a petition in August 29, 2019, under 37 CFR 1.181, requesting that the notice be vacated as being unwarranted and/or void. After the petition was dismissed in a decision dated December 17, 2019, Mr. Thaler filed a second petition under 37 CFR 1.181 on January 20, 2020, requesting reconsideration of the decision. In the second petition, Mr. Thaler argued that inventorship should not be limited to natural persons, asserting that it was DABUS, not a person, "which recognized the novelty and salience" of the claimed invention.

PTO's Opinion

In its April 27, 2020, decision, the PTO rejected Mr. Thaler's arguments, holding that only a natural person can be an inventor, echoing the UKIPO's and EPO's positions. The PTO pointed to 35 U.S.C. § 100(a), which defines an "inventor" as "the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention." The PTO further noted that section 101 of the statute states, "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter . . . may obtain a patent," and that the term "whoever" suggests a natural person. Additionally, section 115 further uses pronouns that are specific to natural persons, such as "himself" and "herself," the PTO observed.

The PTO also found support for its decision in cases from the U.S. Court of Appeals for the Federal Circuit, citing *Univ. of Utah v. Max-Planck-Gesellschaft*, 734 F.3d 1315 (Fed. Cir. 2013) (a state cannot be an "inventor"), and *Beech Aircraft Corp. v. EDO Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993) (a corporation cannot be an "inventor"). Finally, the PTO pointed to provisions of the Manual of Patent Examining Procedure (MPEP), which defines "conception" as "the complete performance of the mental part of the inventive act" and it is "the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice." The PTO found that the terms "mental" and "mind" in this definition indicated that conception (and therefore "invention") must be performed by a natural person.

Observations and Unanswered Questions

Notably, the PTO did *not* say that a patent cannot issue at all on the invention in the Thaler application, although many might believe that to be the implication. Still, an interesting open question is whether there is a way to patent subject matter created during operation of a machine. For example, might a human being, such as the owner, operator, or programmer of the AI, legitimately claim to be the "inventor" of something produced by an AI (e.g., to the extent they are the first *person* who "discovered" the subject matter)? In that regard, is an AI different from any other tool used by human beings in the inventive process?

Some might consider the answers to these questions to be self-evident; others, perhaps not. Unfortunately, we will have to wait a while longer for these questions to be answered definitively. Meanwhile, one hopes that being denied a patent in its own name will not prompt DABUS to view humans as a threat and thereby unleash a war of vengeance against all humankind.

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