

USPTO Joins EPO in Rejecting AI as Inventor

On April 22, 2020 the USPTO (US Patent and Trademark Office) published a petition decision explaining that, under current law, only natural persons may be named as an inventor in a patent application.¹ In its decision, the USPTO held that interpreting "inventor" broadly to encompass machines would contradict the plain reading of the patent statutes that refer to persons and individuals.

The USPTO decision relates to US Patent Application No. 16/524,350 (the '350 Application), filed July 29, 2019, entitled "*Devices and Methods for Attracting Enhanced Attention*." The EPO (the European Patent Office) and UKIPO (United Kingdom Intellectual Property Office), rendered similar decisions in 2019, regarding related applications EP3563896² (filed November 11, 2018) and GB1818161.0 (filed November 7, 2018)³, respectively.⁴

Procedural Summary

The USPTO Application Data Sheet (ADS) requires listing the inventor/s of inventions claimed in a patent application. The '350 patent application ADS identified a single inventor with a given name "[DABUS]" and the family name "(Invention generated by artificial intelligence)." The Applicant was identified as the Assignee "Stephen L. Thaler." During the ordinary course of application pre-examination processing, the USPTO issued a Notice to File Missing Parts of Nonprovisional Application to identify each inventor by his or her legal name. In response, the Applicant filed a petition to review and vacate the Notice requirement of naming the inventor by his/her legal name. The USPTO issued a second Notice and subsequently dismissed the Applicant's petition. In response to the dismissal, the Applicant filed another petition under 37 CFR 1.81 requesting reconsideration of the dismissal of its earlier petition. The present USPTO petition decision is issued in response to the last petition filed by the Applicant.

Petitioner Argument

In its petition, Applicant/Petitioner argued that a "creativity machine," [DABUS] (the inventor listed on the ADS), is programmed as a series of neural networks that have been trained with general information in the field of endeavor to independently create the invention and that DABUS was not trained on any special data relevant to the instant invention. Instead, DABUS, the machine, not a person, recognized the novelty and salience of the instant invention and thus is the inventor. Petitioner argued that an "inventor" could be construed to cover machines.

Petitioner outlined numerous policy considerations to support the position that a patent application can name a machine as an inventor. For example, petitioner contended that allowing a machine to be listed as an inventor would incentivize innovation using AI systems, reduce the improper naming of persons as inventors who do not qualify as inventors, and support the public notice function by informing the public of the actual inventors of an invention.



USPTO Argument

The USPTO reasoning for the denial of the Applicant's petition and rejection of "machine as the inventor" was that statutes and prior court decisions hold that only natural persons are capable of conception, which is a key element of inventorship.

In supporting this rationale, the USPTO cited Title 35 of the United States Code, which consistently refers to inventors as natural persons. For example, 35 U.S.C. § 101 states "*Whoever* invents or discovers any new and useful process, machine, manufacture, or composition of matter ... may obtain a patent therefore, subject to the conditions and requirements of this title" (emphasis added). "Whoever" suggests a natural person. Similarly, 35 U.S.C. § 115 refers to individuals and uses pronouns specific to natural persons - "himself" and "herself" - when referring to the "individual" who believes himself or herself to be the original inventor or an original joint inventor of a claimed invention in the application.

Citing and relying on prior Federal Circuit decisions, the USPTO reasoned that when explaining the distinction between inventorship and ownership of an invention by a corporation, the Federal Circuit has held that: "only natural persons can be 'inventors.'"⁵ The USPTO further recited Federal Circuit that "Conception is the touchstone of inventorship, the completion of the mental part of invention ... To perform this mental act, inventors must be natural persons and cannot be corporations or sovereigns."⁶

The USPTO grants a patent if it appears that an applicant is entitled to a patent under the law pursuant to 35 U.S.C. § 151. The granting of a patent under 35 U.S.C. § 151 for an invention that covers a machine does not mean that the patent statutes provide for that machine to be listed as an inventor in another patent." The USPTO argued that policy considerations, set forth by Petitioner, notwithstanding, do not overcome the plain language of the patent laws as passed by the Congress and as interpreted by the courts.

Procedural History

- Application was filed on July 29, 2019, naming a single inventor with a given name "[DABUS]" and the family name "(Invention generated by artificial intelligence)." The Applicant was identified as the Assignee Stephen L. Thaler."
- A substitute statement under 37 CFR 1.64 in lieu of declaration under 35 U.S.C. § 115(d) listing "DABUS (the invention was autonomously generated by artificial intelligence)" as the inventor was executed by Stephen L. Thaler, who was identified as both the legal representative of DABUS and the Applicant.
- A statement under 37 CFR 3.73(c) identifying Stephen L. Thaler as the assignee of the
- entire right, title, and interest in the application.
- An assignment document assigning the entire right, title and interest of "DABUS, the Creativity machine that has produced the invention" to Stephen L. Thaler. Stephen L. Thaler executed the document on behalf of both DABUS, as legal representative of the assignor, and on behalf of himself as the assignee.
- A "STATEMENT OF INVENTORSHIP" ("Inventorship Statement") which provides clarifying remarks on the inventorship of the '350 application. Briefly, the letter states the invention was conceived by a "creativity machine" named "DABUS" and it should be named as the inventor in the '350 application.
- USPTO, on August 8, 2019, issued a Notice to File Missing Parts of Nonprovisional Application, providing that the ADS "does not identify each inventor by his or her legal name" and an \$80 surcharge is due for late submission of the inventor's oath or declaration.

- A petition under 37 CFR 1.181 was filed on August 29, 2019, requesting supervisory review of the August 8, 2019 Notice, and to vacate the August 8, 2019 Notice for being unwarranted and/or void.
- A second Notice to File Missing Parts of Nonprovisional Application was issued on December 13, 2019 ("December 13, 2019 Notice"), explaining the time period for reply runs from the mail date of the December 13, 2019 Notice.
- The petition of August 29, 2019 was dismissed in a decision issued on December 17, 2019.
- The instant petition under 37 CFR 1.181 was filed on January 20, 2020, requesting reconsideration of the decision issued December 17, 2019, which decision refused to vacate the August 8, 2019 Notice.
- A submission was filed in the above -identified application on February 17, 2020 that provided the USPTO with authority under 35 U.S.C. § 122 and 37 CFR 1.14(e) to publish this decision.
- The petition to vacate the August 8, 2019 Notice to File Missing Parts of Nonprovisional Application was DENIED and the opinion was published on April 22, 2020.

EPO Rationale

On January 27, 2020, the EPO published the grounds for its decision, rejecting Applicant's designation of a machine, DABUS, as the inventor (Form 1002).⁷

The decision was rendered after oral proceedings which took place on November 25, 2019. The EPO ruled that the application does 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. In rendering this decision, the EPO primarily referred to Article 81 Rule 19 of EPC, which prescribes that the European patent application designate the inventor and that, if the applicant is not the inventor, it contains a statement indicating the origin of the right to the European patent.

UKIPO Rationale

On December 4, 2019 UKIPO published its decision, rejecting Applicant's designation of a machine, DABUS, as the inventor. UKIPO identified 3 main issues for decision: (1) First, can a non-human inventor be regarded as an inventor under the PATENTS ACT 1977 (Act)? (2) Second, in what way has the right to the grant of a patent, which rests primarily with the inventor or actual deviser of the invention, been transferred to the Applicant: Is Mr. Thaler entitled to apply for a patent in preference to DABUS simply because he is the owner of DABUS? (3) Finally, if the answer to either of these two questions is no then, based upon the very clear statements provided by the Applicant in respect of his involvement in these inventions, is the comptroller required to wait until the end of the 16-month period prescribed by rule 10(3) before taking the applications to be withdrawn, or can this be done immediately?

In conclusion, in addressing the above three issues UKIPO concluded, respectively, that: (1) Since DABUS is a machine and not a natural person, it found that it cannot be regarded as an inventor for the purposes of section 7 and 13 of the Act. (2) 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 cannot itself hold property. (3) It saw no benefit in accelerating the application withdrawal process even though it will be almost impossible to demonstrate that the actual deviser of the invention was in fact a person, as opposed to DABUS.⁸

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About the Author



Soody Tronson, MS/JD, has over 25 years of interdisciplinary experience in technology, business, management, education, and law in start-up and fortune 100 companies.⁹ Soody is the Founding Managing Counsel at **STLG**¹⁰, a boutique Silicon Valley law firm counseling domestic and international clients in intellectual property and technology transactions in a wide range of technologies. Soody is also the Founder and CEO of **Presque**¹¹, a startup venture creating wearables that fundamentally change and improve the health of women and infants, positively disrupting the status quo. The book *“Women Securing the Future with TIPPSS for IoT Trust, Identity, Privacy, Protection, Safety, Security for the Internet of Things,”* which she co-authored was recently published by Springer.¹²

After holding technical and management positions at Schering Plough and Hewlett-Packard where she took several products to market; and practicing law at HP, and a successfully acquired medical device start up, and two national law firms, HellerEhrman and Townsend and Townsend; Soody formed STLG.

Presque was formed in 2017 to develop and commercialize a line of wearables based on Soody’s original design. Guided by the belief that we each have a sphere of personal influence and it is our civic duty to use it for the betterment of our community, Soody is deeply committed to creating positive change. She serves in advisory, board, and leadership capacities with several organizations including AWIS STEM to Market national Accelerator and its Palo Alto Chapter; California Lawyers Association Executive Committee of the Intellectual Property Section, Licensing Executives Society USA/Canada, and the Palo Alto Area Bar Association. As a member of the Silicon Valley Leadership Group, a diverse public policy association of dynamic companies shaping the future innovation economy, she is actively engaged with the Technology and Innovation, Health, and Education and Work Force Development, and The Women Executives Committees. One of her most fun ventures has been as co-founder of **HighNote Co.**, a third wave coffee roasting company.¹³

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- ¹ USPTO. Office of Petitions. *Decision re USPN 16/524,350* [Online]. Available at: https://www.uspto.gov/sites/default/files/documents/16524350_22apr2020.pdf (Accessed April 25, 2020)
- ² EPO. European Patent Register. EP Patent Application EP3563896 [Online]. Available at: <https://register.epo.org/application?number=EP18275174&lng=en&tab=doclist> (Accessed April 25, 2020)
- ³ UKIPO. *Decision re GB1818161.0* [Online]. Available at: <https://www.ipo.gov.uk/p-challenge-decision-results/o74119.pdf> (Accessed April 25, 2020)
- ⁴ IPWatchdog. *EPO and UKIPO Refuse AI-Invented Patent Applications* [Online]. Available at: <https://www.ipwatchdog.com/2020/01/07/epo-ukipo-refuse-ai-invented-patent-applications/id=117648/> (Accessed April 25, 2020)
- ⁵ *Beech Aircraft Corp. v. EDO Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993).
- ⁶ *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1227-28 (Fed.Cir.1994)
- ⁷ EPO. European Patent Register. Grounds for Decision re EP Patent Application EP3563896 [Online]. Available at: <https://register.epo.org/application?documentId=E4B63OBI2076498&number=EP18275174&lng=en> (Accessed April 25, 2020)
- ⁸ UKIPO. Decision. *Supra*.
- ⁹ <https://www.linkedin.com/in/soodytronson/>
- ¹⁰ STLG Law Firm. <https://www.stlgip.com/>
- ¹¹ Presque. <https://www.mypresque.com/>
- ¹² Editors: Hudson, Florence (Ed.). *Women Securing the Future with TIPPSS for IoT Trust, Identity, Privacy, Protection, Safety, Security for the Internet of Things*. Springer. Available from: <https://www.springer.com/gp/book/9783030157043>
- ¹³ HighNote Coffee. www.highnotecoffee.com