

Patent Counseling & Prosecution

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USPTO Issues Inventorship Guidance for AI-Assisted Inventions - AI-Assisted Inventions are Not Categorically Unpatentable

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Key Takeaways:

- AI-assisted inventions are not categorically unpatentable. The use of AI to develop an invention does not preclude the patentability of the invention if a natural person made a significant contribution to the claimed invention.
- Each inventor named in a patent application, or patent, must be a natural person who has made a significant contribution to the claimed invention.
- While the guidance does not impose new or additional requirements on individuals associated with filing and prosecuting patent applications, considerations should be made for AI-assisted inventions. Specifically, such individuals:
 - Do not have a duty to disclose to the USPTO whether a filing relates to an AI-assisted invention, unless one or more claims cannot be attributed to a significant contribution of the invention by a natural person.
 - Do have a duty of reasonable inquiry regarding proper inventorship of an invention, which may involve inquiring how AI is being used in the invention creation process so as to appropriately assess whether contributions made by natural persons rise to the level of inventorship.

On February 13, the United States Patent and Trademark Office (USPTO) issued inventorship [guidance](#), **effective immediately**, for inventions created with the assistance of artificial intelligence (AI). The guidance addresses questions and provides insight relating to the patentability of AI-assisted inventions, inventorship for AI-assisted inventions, and duties owed to the USPTO by individuals associated with filing and prosecuting patent applications covering AI-assisted inventions. The guidance applies to utility, design, and plant patents and patent applications. The following includes key takeaways from the USPTO guidance, a brief overview of what is stated by the USPTO guidance, and an overview of actions interested clients can take immediately and in the future.

Guidance Background

The guidance was issued in response to the “Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence” issued by President Biden on October 30, 2023,¹ and provides guidance to patent examiners and applicants on patent eligibility to address innovation using AI, based on public feedback received by the USPTO and in view of the Federal Circuit’s holdings in *Thaler v. Vidal*, 43 F.4th 1207 (Fed. Cir. 2022)², *cert. denied*, 143 S. Ct. 1782 (2023).

Inventorship Standard and Significant Contribution by a Natural Person

The guidance outlines the statutory and judicial framework for establishing inventorship in a patent application or a patent, and builds on the existing inventorship framework and the “significant contribution test” from *Pannu v. Iolab Corp.*, 155 F.3d 1344 (Fed. Cir. 1998).³ The key question considered by the guidance is not whether the contributions of an AI system to an invention would rise to the same level of inventorship if those contributions were made by a natural person, but instead whether the natural person named on a patent made a significant enough contribution to be named as an inventor.

According to the guidance, determination of whether natural persons significantly contributed to an AI-assisted invention is made on a claim-by-claim basis, where each claim in the patent or patent application must have resulted from a significant contribution by at least one natural person.

Guiding Principles

While there is no bright-line test to ascertain whether a natural person's contribution to an AI-assisted invention is considered significant, the guidance has provided the following non-exhaustive list of principles that can help inform the determination:

1. The use of an AI system does not categorically negate the person's contributions as an inventor.
2. Simply restating a recognized problem or goal in a prompt submitted to an AI system does not rise to the level of a significant contribution. However, a prompt drafted in view of a specific problem, to elicit a particular solution from the AI system, could be considered a significant contribution.
3. Merely recognizing that the output of an AI system is an invention is not a significant contribution. For example, simply carrying out instructions provided as output from an AI system, without modification, does not amount to a significant contribution. In some situations, however, conducting successful experiments using the AI system's output, and making significant alterations to the output as a result of the experiments, could be considered a significant contribution.
4. An inventor need not be present for or participate in each activity that led to the conception of the claimed invention. For example, in situations in which the designing, building, or training of the AI system is a significant contribution to the invention created with the AI system, the natural person(s) who designed, built, or trained the AI system in view of a specific program to elicit a particular solution could be an inventor.
5. Simply owning or overseeing an AI system that is used in the creation of an invention does not render the owner/overseer an inventor, unless they have provided a significant contribution to the conception of the invention.

Implications of Guidance in Patent Practice

Duties Owed to the USPTO

The guidance does not implement any new requirements with respect to the duties owed to the USPTO, but does outline considerations for evaluating potential AI-assisted inventions.

Duty of Disclosure

The guidance does not implement a new requirement to disclose the use of AI, beyond what is required in rare circumstances by USPTO rules. Under existing requirements,⁴ evidence that demonstrates a named inventor did not significantly contribute to the invention because the person's purported contribution was made by an AI system qualifies as information that raises a prima facie case of unpatentability and would be subject to disclosure rules by the USPTO.

Duty of Reasonable Inquiry

Under existing requirements for the duty of reasonable inquiry,⁵ patent practitioners should inquire about the proper inventorship. The guidance notes that, given the ubiquitous nature of AI, this inventorship inquiry could include questions about whether and how AI is being used in the invention creation process. In making inventorship determinations, it is appropriate to assess whether the contributions made by natural persons rise to the level of inventorship discussed above.

Naming Inventors

The guidance provides that prior requirements regarding naming and correcting inventorship⁶ apply to AI-assisted inventions. In situations where no natural person significantly contributed to the claimed invention and inventorship therefore cannot be corrected, the claim must be canceled or amended.

Requirements for Information

Under existing practice and requirements, if an examiner or other USPTO employee has a reasonable basis to conclude that one or more named inventors may not have contributed significantly to the claimed subject matter of an application, the examiner or other USPTO employee may request inventorship information from the application regarding inventorship even if the information is not material to patentability. USPTO Director Kathi Vidal⁷ further explains that:

The USPTO will continue to presume that the named inventor(s) in an application are the actual inventor(s). ... Only in the rare instance where an examiner determines from the file record or extrinsic evidence that one or more of the named inventors may

not have invented the claimed subject matter, would questions of inventorship be raised during examination.

Benefit/Priority Claims to Prior-Filed Applications

For applications and patents claiming priority to prior-filed applications, such prior-filed applications must name the same natural person in common or have at least one joint inventor who is a natural person in common. A priority claim to a foreign application that names an AI system as a sole inventor will not be accepted. The guidance further provides that for a U.S. patent application claiming priority to a foreign application that names a natural person(s) and a non-natural person (e.g., AI) as joint inventors, the application data sheet accompanying the U.S. application must list as inventor(s) only the natural person(s) who significantly contributed to the invention, including one in common with the foreign application.

What Interested Clients Can Do Immediately and in the Near Future

Going forward, it will be important for companies and patent practitioners to consider potential use of AI in the innovation process. Patent practitioners should, in appropriate cases, ask inventors about the use of AI in the development of their inventions. Companies may consider updating their invention disclosure forms, where applicable, to include questions relating to the use of AI to create a particular invention. Below are some example questions to consider for inclusion in an invention disclosure form.

- Were any inventive features of the disclosure obtained using AI?
- If so, did a human significantly contribute to the development of such features (e.g., beyond providing a generally recognized problem or general goal as an input to an AI model and/or merely reducing an output of an AI model to practice)?

Companies may also consider training potential inventors (e.g., engineers, researchers) on the implications of AI-assisted inventions.

The USPTO is seeking public comment on the guidance through May 13, 2024, and may modify the guidance, issue further guidance, or issue additional examples. The USPTO is also hosting a public webinar ([registration required](#)) on March 5, 1–2pm ET to provide an overview of the guidance and answer questions relating to the guidance.

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