

February 26, 2024

The USPTO Issues New Guidance on Inventorship for Artificial Intelligence-Assisted Inventions

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On February 13, 2024, the USPTO issued its anticipated “Inventorship Guidance for AI-Assisted Inventions” (“Guidance”). 89 Fed. Reg. 10043. The Guidance comes on the heels of the Federal Circuit’s decision in *Thaler v. Vidal*, 43 F.4th 1207, 1213 (Fed. Cir. 2022), in which the court held that an AI system cannot be listed as an inventor on a patent application. After considering the impact of *Thaler* and soliciting feedback from various stakeholders, the Guidance reveals how the USPTO intends to determine who, if anyone, should be credited as an inventor when AI is used to create an invention.

The Guidance illustrates the challenges that the USPTO — and ultimately the courts — face addressing AI-related issues. This alert includes quick facts on the Guidance, a synopsis of the USPTO’s analysis for determining inventorship for AI-assisted inventions, and a few RSHC first impressions.

Quick Facts on the Guidance

1. The Guidance and related resources from the USPTO are available here:
 - <https://www.federalregister.gov/documents/2024/02/13/2024-02623/inventorship-guidance-for-ai-assisted-inventions>
 - <https://www.uspto.gov/initiatives/artificial-intelligence/artificial-intelligence-resources>
2. The Guidance supersedes any inconsistent portions of the Manual of Patent Examining Procedure (M.P.E.P.), and patent examiners are required to follow it.
3. It applies to utility, design, and plant patent applications.
4. The Guidance explains that if a claimed invention was created using AI and without any “significant contribution” by a natural person, then the claimed invention violates the inventorship requirements of 35 U.S.C. § 101 and § 115.
5. It instructs examiners to reject priority claims to foreign applications that name an AI system as the sole inventor.
6. It explains that applicants have a duty to disclose information material to inventorship, which “could include evidence that demonstrates a named inventor [i.e., a natural person] did not significantly contribute to the invention because the person’s purported contribution(s) was made by an AI system.”

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The USPTO's Framework for Determining Inventorship for AI-Assisted Inventions

The Guidance sets forth a framework for determining inventorship of an invention created using artificial intelligence (an "AI-assisted invention"). Specifically, under the Guidance, a person qualifies as an inventor if the person made a "significant contribution" to an invention created using AI. 89 Fed. Reg. 10043, 10047. Whether an inventor made a "significant contribution" is based on the factors for determining joint inventorship, which are referred to by the USPTO as the *Pannu* factors.¹ *Id.* (citing *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1351 (Fed. Cir. 1998)). The Guidance specifically contemplates certain AI-assisted inventions lacking a human inventor—leaving those inventions unpatentable under 35 U.S.C. § 101 and § 115 for lack of inventorship. *Id.* at 10048.

To help applicants and examiners determine inventorship for AI-assisted inventions, the Guidance includes certain "Guiding Principles," a few of which are summarized below:

- Merely presenting a problem to an AI system may not be a significant contribution, but "a significant contribution could be shown by the way the person instructs the prompt in view of a specific problem to elicit a particular solution from the AI system."
- A person "who merely recognizes and appreciates the output of an AI system as an invention . . . is not necessarily an inventor."
- A person "who designs, builds, or trains an AI system in view of a specific problem to elicit a particular solution could be an inventor."
- "[S]imply owning or overseeing an AI system that is used in the creation of an invention" does not make the owner or overseer an inventor.

Id. at 10048-49.

The Guidance and the Duty of Disclosure.

The Guidance also addresses the duty of disclosure surrounding AI-assisted inventions. The Guidance states that applicants have a duty to disclose information material to inventorship of AI-assisted inventions, which "could include evidence that demonstrates that a named inventor did not significantly contribute to the invention because the person's purported contribution(s) was made by an AI system." *Id.* at 10049.

¹ Under the *Pannu* factors, a person qualifies as a joint inventor if he or she "(1) contribute[d] in some significant manner to the conception or reduction to practice of the invention, (2) ma[de] a contribution to the claimed invention that is not insignificant in quality, when that contribution is measured against the dimension of the full invention, and (3) d[id] more than merely explain to the real inventors well-known concepts and/or the current state of the art." *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1351 (Fed. Cir. 1998).

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RSHC First Impressions

The Guidance appears to set a low bar for what contributions the USPTO may consider “significant,” which bodes well for the patentability of AI-assisted inventions in utility patent applications. However, design patents having designs created with the assistance of AI (particularly generative AI) may be more vulnerable to rejections for lack of inventorship under the Guidance. The Guidance’s admonitions regarding the duty of disclosure also foreshadow potential claims for inequitable conduct in which patentees are accused of intentionally withholding information regarding AI-systems’ involvement in the creation of inventions.

The Guidance’s analysis may have a few potential issues. First, the Guidance fails to explain what constitutes an AI system. Thus, even though application of the Guidance may turn on whether a system used to create an invention is an “AI system” or not, the Guidance provides no reliable way to make that determination.

This could have consequences in certain circumstances. Specifically, the Guidance extends the application of the *Pannu* factors—which to date only have been used to resolve questions of joint inventorship—to solo-inventor situations involving AI. As a result, an examiner may apply different inventorship tests to solo-inventor situations depending on whether the examiner deems the invention at issue to have been created with an AI system or a non-AI computer system.

Second, the framework blurs the line between inventorship and subject matter eligibility.² Although both inventorship and subject matter eligibility are rooted in 35 U.S.C. § 101, they have been treated as distinct concepts. Inventorship addresses *who* may apply for a patent on an invention. Subject matter eligibility addresses what types of inventions can be patented (i.e., a “process, machine, manufacture, or composition of matter, or any new and useful improvement thereof”). Yet, the Guidance concludes that AI-assisted inventions created without a “substantial contribution” from a person cannot be patented, effectively closing the gap between a lack of inventorship and a lack of eligibility for patenting.

In sum, the Guidance presents an early and potentially imperfect attempt by the USPTO to address inventorship issues raised by artificial intelligence. We expect additional developments from the USPTO and the courts in the months and years to come.

If you have any questions, feel free to contact a member of RSHC’s intellectual property and/or autonomous vehicles teams.

² Indeed, the USPTO raises eligibility as one of the policy justifications for its framework, explaining that the framework helps avoid “hindering future human innovation by locking up innovation created without human ingenuity.” 89 Fed. Reg. 10043, 10047.

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