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Intellectual Property Update

U.S. Patent Office Provides New Guidance on AI-Assisted Inventions

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As generative AI tools and machine learning (ML) platforms have become central to research and development in many fields, inventors, patent counsel, and the U.S. Patent Office (USPTO) have wrestled with how inventions developed with AI should be treated under U.S. patent law. Although it is clear that only a "natural person" can be named as an inventor, the particular balance between AI-assistance and human inventorship remains an undeveloped area in U.S. patent law.

On November 26, 2025, the USPTO released new guidance addressing this issue, in essence stating that AI systems used in the inventive process should be treated like any other tool when assessing patentability, and the central inquiry focuses on conception (2025 Guidance). The 2025 Guidance rescinds guidance issued by the USPTO in February 2024 that stated that the law of joint inventorship should be applied when assessing the patentability of an invention developed with the assistance of an AI system (2024 Guidance).

Under the 2024 Guidance, whether a human made a sufficiently significant contribution to an innovation that would allow him to be a named an inventor was judged using factors from *Pannu v. Iolab Corp.*, 155 F.3d 1344 (Fed. Cir. 1998), which considered whether the human:

a) contributed in some significant manner to the conception or reduction to practice of the invention;

b) made 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

c) did more than merely explain to the real inventors well-known concepts and/or the current state of the art.

While the 2024 Guidance was a welcome attempt by the USPTO to clarify when inventions developed with the assistance of AI are patentable, it left a number of issues unresolved.[1] For example, by applying the *Pannu* factors to AI-assisted inventions, the guidance appeared to assume that AI could be an inventor, notwithstanding unambiguous law that only natural persons may be inventors.[2] The 2024 Guidance also did not define precisely what the USPTO considered an "AI tool" subject to disclosure requirements, as opposed to other technological tools.[3]

The 2025 Guidance rejects reliance on the Pannu factors and makes clear that "[t]here is no separate or modified standard for AI-assisted inventions." Rather, "[t]he same legal standard for determining inventorship applies to all inventions, regardless of whether AI systems were used in the inventive process." That standard centers around conception – "the formation in the mind of the inventor, of a definite and permanent idea of the complete

[1] See Alexander Kersten, Assessing the Patent and Trademark Office's Inventorship Guidance for AI-Assisted Inventions, June 3, 2024 (available at https://www.csis.org/analysis/assessing-patent-and-trademark-offices-inventorship-guidance-ai-assisted-inventions).
[2] Id.
[3] Id.

and operative invention, as it is hereafter to be applied in practice." The U.S. Court of Appeals for the Federal Circuit has stated that conception is complete when "the inventor has a specific, settled idea, a particular solution to the problem at hand, not just a general goal or research plan." *Burroughs Wellcome Co. v. Barr Labs., Inc*., 40 F.3d 1223, 1228 (Fed. Cir. 1994).

The use of AI systems in the inventive process, according to the 2025 Guidance, does not alter that central inquiry. AI systems are "instruments used by human inventors." "They are analogous to laboratory equipment, computer software, research databases, or any other tool that assists in the inventive process." Whether a human involved in creating an invention with the assistance of AI is properly named an inventor is evaluated under the traditional conception standard. Only when multiple humans are involved in creating an invention with the assistance of AI are the *Pannu* factors applied to determine whether each person qualifies as a joint inventor. "The fact that AI tools were used in the development process does not change the joint inventorship analysis among the human contributors."

The 2025 Guidance has a number of implications for inventors and their counsel.

- *Ensure human "conception":* Inventors who rely heavily on AI outputs should document how the inventor used the AI, such as what prompts were given, what modifications or selections the inventor made, and how the inventor refined or validated outputs.
- *Treat AI like a drafting tool, not a co-inventor*: The 2025 Guidance makes clear that an AI system should not be listed as an inventor, as only a natural person can be an inventor under Thaler v. Vidal, 43 F.4th 1207 (Fed. Cir. 2022), and an application that lists an AI system as an inventor will be rejected.
- *Focus on traditional patentability criteria*: Given that the use of AI-systems does not change inventorship doctrine, the traditional requirements under 35 U.S.C. §§ 101, 102/103, and 112 remain paramount. In the context of software inventions, for example, applicants should carefully draft claims to emphasize technical improvements, real-world applications, and practical solutions, not just abstract algorithms. This aligns with the USPTO's recent subject-matter eligibility updates.
- *Adopt internal record-keeping and disclosure practices*: As indicated in the 2025 Guidance, the USPTO will presume the validity of the inventors listed on the application oath/declaration. However, patent owners should be prepared in the event they have to prove human inventorship, for example, during patent litigation, licensing, and/or IP diligence. Accordingly, counsel should advise R&D teams using AI systems to maintain logs or records of inventor conception information and AI usage—e.g., prompts, versions, changes made, and human selections. This helps establish human contribution and may be important for later validity or inventorship disputes. Similarly, companies may want to update their internal IP procedures and disclosure forms to ask explicitly how AI was used—not to "disclose" AI per se, but to provide evidentiary support for human conception
- *Advise clients on realistic expectations and risks*: While the guidance provides reassurance that AI-assisted inventions remain patentable in principle, the lack of a bright-line test means there remains some uncertainty about what exactly qualifies as sufficiently "human." Especially for highly AI-driven inventions (e.g., generated molecular designs), inventorship and validity challenges may be more likely. In some cases—especially where human input is minimal—counsel may want to consider alternative IP protection strategies, rather than rely solely on patent protection.

Conclusion

The 2025 Guidance marks a significant milestone in the integration of artificial intelligence into the U.S. patent system. By clarifying that AI remains a tool and not an inventor, and by insisting that traditional inventorship doctrine apply uniformly, the USPTO has provided welcomed clarity at a time of rapid technological change.

For patent practitioners and inventors using AI, the message is clear: AI can accelerate your innovation, but you need human conception to secure patent rights.

Advising clients proactively—updating internal IP policies, improving record-keeping, and thinking carefully about how AI is used in conception—will be critical in maximizing the opportunities (and minimizing the risks) that AI-enabled invention presents.

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This Intellectual Property Update is intended to keep readers current on developments in the law. It is not intended to be legal advice. If you have any questions, please contact Ted McDonough at (609) 989-5096 or tmcdonough@eckertseamans.com, Trevor Bannister at (412) 566-6080 or tbannister@eckertseamans.com, or any other attorney at Eckert Seamans with whom you have been working.