NEW USPTO GUIDELINES ON AI-ASSISTED INVENTIONS LEAVE MANY QUESTIONS UNANSWERED

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US Intellectual Property Alert

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The US Patent and Trademark Office (USPTO) recently issued what it labeled as Inventorship Guidance for AI-Assisted Inventions [Docket No. PTO-P-2023-0043].[1] Despite its name, the document provides little in the way of certainty that one could not garner from reviewing recent precedent addressing the issue of artificial intelligence (AI) inventions. To begin with, the USPTO warns that its "guidance does not constitute substantive rulemaking and does not have the force and effect of law."[2] Rather, "[t]he guidance sets out agency policy with respect to the USPTO's interpretation of the inventorship requirements of the Patent Act in view of" controlling jurisprudence, but "[r]ejections will continue to be based on the substantive law, and it is those rejections that are appealable to the PTAB and the courts."[3] Adding to the confusion attendant to the actual purpose thereof, the guidelines admonish that, "[t]o the extent that earlier guidance from the USPTO, *including certain sections of the Manual of Patent Examining Procedure* is inconsistent with the guidance set forth" in such guidelines, "USPTO personnel are to follow these guidelines," and "[t]he MPEP will be updated in due course."[4]

Putting aside whether this type of instruction to the patent examining corps constitutes rulemaking, it is clear that the USPTO intends these guidelines to be more than mere travelogue through recent decisions on the proper role of AI in patentable inventions. That said, it is worth noting the caselaw that the USPTO elected to address in the context of the policy underlying the US patent system, which "is designed to encourage *human* ingenuity."[5] The following is a synopsis of the more salient caselaw discussed in the guidelines:[6]

Thaler v. Vidal held "that only a natural person can be an inventor, so AI cannot be," given the common meaning of "individual" in the statutory definition of "inventor";[7]

University of Utah v. Max-Planck-Gesellschaft Zur Forderung Der Wissenschaften E.V. held that, to perform the mental act of conception, which is the touchstone of inventorship, "inventors must be natural persons";[8] and

Pannu v. Iolab Corp. held that, to be an "inventor," an individual must have contributed "in some significant manner" to the claimed invention, with the putative significant nature of the contribution being informed by several factors identified by the court.[9]

In light of the foregoing (and other) decisions, the USPTO recognized that AI-assisted inventions are patentable where a natural person has made a "significant" contribution to the claimed invention, therefore qualifying as an "inventor" of such invention.[10] As to the decision in *Pannu* regarding such significance, the USPTO acknowledged that "[d]etermining whether a natural person's contribution in AI-assisted inventions is significant may be difficult to ascertain, and there is no bright-line test."[11] This recognition brought the USPTO to the specific guidelines it promulgated to "help inform the application of the *Pannu* factors in AI-assisted inventions:

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1. A natural person's use of an AI system in creating an AI-assisted invention does not negate the person's contributions as an inventor. The natural person can be listed as the inventor or joint inventor if the natural person contributes significantly to the AI-assisted invention.
2. Merely recognizing a problem or having a general goal or research plan to pursue does not rise to the level of conception. A natural person who only presents a problem to an AI system may not be a proper inventor or joint inventor of an invention identified from the output of the AI system. However, a significant contribution could be shown by the way the person constructs the prompt in view of a specific problem to elicit a particular solution from the AI system.
3. Reducing an invention to practice alone is not a significant contribution that rises to the level of inventorship. Therefore, a natural person who merely recognizes and appreciates the output of an AI system as an invention, particularly when the properties and utility of the output are apparent to those of ordinary skill, is not necessarily an inventor. However, a person who takes the output of an AI system and makes a significant contribution to the output to create an invention may be a proper inventor. Alternatively, in certain situations, a person who conducts a successful experiment using the AI system's output could demonstrate that the person provided a significant contribution to the invention even if that person is unable to establish conception until the invention has been reduced to practice.
4. A natural person who develops an essential building block from which the claimed invention is derived may be considered to have provided a significant contribution to the conception of the claimed invention even though the person was not present for or a participant in each activity that led to the conception of the claimed invention. In some situations, the natural person(s) who designs, builds, or trains an AI system in view of a specific problem to elicit a particular solution could be an inventor, where the designing, building, or training of the AI system is a significant contribution to the invention created with the AI system.
5. Maintaining 'intellectual domination' over an AI system does not, on its own, make a person an inventor of any inventions created through the use of the AI system. Therefore, a person simply owning or overseeing an AI system that is used in the creation of an invention, without providing a significant contribution to the conception of the invention, does not make that person an inventor."[12]

The USPTO also pointed to the "extensive" jurisprudence regarding conception in the context of inventorship disputes under pre-America Invents Act section 102(g), which the USPTO suggests may be "instructive" as to the significant nature of a purported inventor's contribution.[13] Notwithstanding that jurisprudence, the actual guidelines propounded raise more questions than they answer. For example, it is difficult to discern where an unpatentable "intellectual domination" of the fifth guideline ends and the specific "prompt to elicit a particular solution" from the second guideline begins.[14]

Despite the questions they raise, the AI Guidance makes clear that the patentability of AI-assisted inventions will very much be a case-by-case inquiry, and it behooves a patent applicant to emphasize the role of a human inventor in the conception of the claimed invention. This can be done, for example, by fashioning claims to the extent possible to highlight the conceptual contribution of the human inventor. However, the USPTO added a cautionary note to the guidelines reminding applicants of the duties of disclosure and inquiry owed by patent applicants.[15] Thus, the claims as drafted, and indeed the disclosure generally, must have a tether to the actual inventive work underlying the subject application.

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Relatedly, the USPTO reiterated the requirement of an inventor's oath accompanying every patent application.[16] That oath is to include a representation that the inventor "believes himself or herself to be the original inventor or an original joint inventor of a claimed invention in the application."[17] As such oath is subject to criminal penalties for false statements contained therein, it is imperative that careful attention be paid to the actual inventive contribution of the inventor submitting the oath vis-à-vis the contribution of an AI system.

In sum, in seeking patent protection for AI-assisted inventions in light of the USPTO's new guidelines, an applicant should consult with competent prosecution counsel capable of fashioning disclosures and associated claims designed to highlight the inventive contribution of human inventors consistent with the legal obligations governing the submission of information to the USPTO.

FOOTNOTES

[1] 89 Fed. Reg. 10,043 (Feb. 13, 2024) [hereinafter, AI Guidance].

[2] *Id*. at 10,045.

[3] *See id*.

[4] *See id*. (emphasis added).

[5] *See id*. at 10,046 (emphasis in original).

[6] Each of the cited decisions are based upon fairly lengthy analyses of the US patent statute. The discussion herein does not purport to replicate those analyses.

[7] 43 F.4th 1207, 1213 (Fed. Cir. 2022), *cert denied*, 143 S. Ct. 1783 (2023).

[8] 734 F.3d 1315, 1323 (Fed. Cir. 2013). *See also* Beech Aircraft Corp. v. EDO Corp., 990 F.2d 1237, 1248 (Fed. Cir. 1993).

[9] 155 F.3d 1344, 1351 (Fed. Cir. 1998).

[10] AI Guidance at 10,049.

[11] *Id*. at 10,047.

[12] *Id*. at 10048–49 (internal footnotes omitted).

[13] *Id*. at 10,047.

[14] *Compare id*. at 10,048, *with id*. at 10,049.

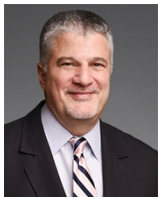
[15] *See id*. at 10,049–50.

[16] *See id*. at 10,050–51.

[17] 35 U.S.C. § 115(b).

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