POLSINELLI. What a law firm should be.™

The USPTO's AI Inventorship Guidance

The USPTO published its new "Inventorship Guidance for AI-assisted Inventions" on the Federal Register on February 13, 2024. This new guidance was in part a response to the Federal Circuit's *Thaler* decision, which ruled that AI systems cannot be "inventors" and in part a response to the Biden Administration's recent "Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence."

The USPTO's Guidance:

In short, the USPTO concludes that AI systems cannot be inventors, only natural persons can be inventors. *See Thaler v. Vidal*, 43 F.4th 1207, 1213 (Fed. Cir. 2022) *cert. denied* 143 S.Ct. 1783 (2023). As a result, in the USPTO's view, "inventions" can exist that *have no human inventor* and are accordingly orphaned. Such orphaned inventions are not patent eligible: "Therefore, a rejection under 35 U.S.C. § 101 and 115 should be made for each claim for which an examiner or other USPTO employee determines from the file record or extrinsic evidence that at least one natural person, *i.e.,* one or more named inventors, did not significantly contribute." Because the usage of AI in the inventive process can result in rejections and impact patentability, applicants and practitioners now must make determinations of inventorship with an eye toward determining whether an inventor even exists at all.

The USPTO's starting points are well-grounded in the statutory framework and caselaw – tools cannot be inventors, or co-inventors – only natural persons qualify. Even if Congress were to amend the Patent Act in hopes of overruling *Thaler*, the Patent Clause of Article III would still mandate this result, as it references "Inventors," and it would be inconceivable that the Framers thought of inventors as anything other than humans. Of course, it logically follows that if an AI tool cannot be an inventor, then it cannot qualify as a co-inventor, as the law does not differentiate between inventors.

Next, the USPTO concludes that an invention can exist without any inventor. The USPTO states that: "[it] recognizes that while an AI system may not be named an inventor or joint inventor in a patent or patent application, an AI system – like other tools – may perform acts that, if performed by a human, could constitute inventorship under our laws."

To make this assessment, the USPTO turns to the various cases used to determine joint inventorship, specifically the *Pannu* decision. See *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1351

(Fed. Cir. 1998). The USPTO crucially relies upon the first *Pannu* factor, which recites that "[a] person who shares in conception of a claimed invention is a joint inventor of the invention." Here, the USPTO concludes that an AI tool might be the only thing that performs the act of "conception" and since AI's are not permitted to be inventors, an orphaned invention exists. As the USPTO states "a new inventor cannot be named if no natural person made a significant contribution to an AI-assisted invention."

Finally, because in the USPTO's view inventions can exist without inventors, applicants and practitioners must now conduct more complicated inventorship investigations and determinations. As the USPTO is authorizing examiners to issue inventorship and *patent eligibility* rejections arising from AI participation in the inventive process, the failure to properly disclose AI participation in the inventive process may now result in violations of 37 C.F.R. § 1.56.

A Better Way Forward:

A more sensible approach would be to do nothing and simply ignore the usage of AI systems in the inventive process. This would correctly treat AI's as just another tool, rather than an instrument of forbidden techno-sorcery. No one is concerned that computers, mass spectrometers, cameras and gas chromatography machines are routinely used in or adjuncts to the inventive process and these tools were every bit as miraculous seeming as LLMs and other generative AI tools appear today.

While the USPTO correctly recognizes that AI tools neither qualify as inventors or co-inventors, the USPTO incorrectly believes that inventions can exist without human inventors. This fundamental error infects the remainder of the USPTO's guidance, and the result will be slower innovation, more technology held as trade secrets, and a further spread of the "plague" that is inequitable conduct allegations. Contrary to the USPTO's belief, the purpose of the patent system is not to promote "human ingenuity," but "the progress of science and useful arts."

Logically, an invention cannot exist without an inventor any more than a child can exist without a parent. Yet, this is precisely the position of the USPTO. Despite considering AI systems mere tools, the USPTO simultaneously considers AIs to possess minds, just without brains: "[A]n AI system – *like other tools* – may perform acts that, if performed by a human, could constitute inventorship under our laws." (emphasis added). Tools have never invented anything, no matter how sophisticated the tool.

The USPTO's reliance on inventorship case law, and in particular the *Pannu* factors fundamentally lacks important context. Heretofore, every inventorship analysis conducted by the courts has assumed that at least one inventor exists. Some inventors are added, and some non-inventors are removed. No court has eliminated *all* of the inventors using the *Pannu* factors.

Next, this potential lack of inventors, according to the USPTO, will result in the lack of patent eligibility pursuant to § 101. This also seriously mistakes the courts' § 101 analyses (*Alice*, *Mayo, Diamond*, etc.). These decisions focus almost exclusively on the *subject matter* of a purported invention, not their genesis. Indeed, it should be noted that the § 101 analysis has little to do with the statutory language, but instead somewhat dubious Supreme Court doctrines that prohibit the patenting of abstract ideas and natural phenomena.

In view of this USPTO guidance, what is the likely result?

First, Inventions that might risk becoming patent ineligible due to AI participation during the inventive process may now, where possible, be held as trade secrets. While trade secrets are useful and an important component of a robust intellectual property system, holding more technical information privately, on the margin, slows innovation and results in multiple firms inefficiently duplicating research. Despite the USPTO believing that promoting “human ingenuity” is the purpose of the patent system, the Constitution states that the purpose is the “progress of the science and useful arts.” The fact that human inventors might profit thereby is incidental, the goal is technical progress.

Second, applicants and practitioners are placed in yet another double bind of disclosure or non-disclosure. Disclosing the use of AI in the inventive process might in the short-term lead to rejections pursuant to § 101 and § 115 as the USPTO states. Further, any characterization of AI usage during prosecution will be scrutinized during litigation. However, the failure to disclose AI usage might make matters worse. Moreover, the USPTO does not seem to have considered the broad definitions of AI systems that are used, for example, in the Biden Executive Order that prompted its own guidance statement. The breadth of these definitions will inevitably make any disclosure more complicated.

Simply treating AI systems as tools and essentially ignoring their role in the inventive process eliminates the wasteful investigations and agonizing over AI-related disclosures and the inevitable unwanted satellite litigation attendant to any fraught disclosure issue.

Finally, even in those likely rare instances where a human merely instructs an AI tool to perform some tasks or solve some problem and then subsequently recognizes the resulting solution, that human has arguably performed an inventive act. The USPTO seems to underestimate the difficulties in working with generative AI systems (prompt engineering is indeed a skill). Moreover, even if intuition suggests rejecting this scenario as inventive, a better tool to analyze the worthiness of such an invention would be *obviousness*. If any human could instruct that AI tool and achieve that result, then such a result is likely utterly predictable and/or obvious to try and the purported invention would not satisfy § 103. Relying on obviousness has the benefit of grounding the analysis of whether a patentable invention exists in knowable technical facts, rather than philosophical and ultimately unanswerable questions about cognition.