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Navigating Inventorship for AI-Assisted Inventions – The USPTO Issues New Guidance

Go-To Guide:

- The USPTO has issued new guidance on how to address inventorship in AI-assisted inventions.
- Using AI in developing inventions requires careful attention to who the real inventor is.
- Only “natural persons” can be inventors on U.S. patents.
- A natural person must “significantly contribute” to any AI-assisted invention.
- The USPTO has set forth five principles to help determine a “significant” contribution to an AI-assisted invention.

The U.S. Patent and Trademark Office (USPTO) has been actively engaging with stakeholders on the topic of artificial intelligence (AI)-assisted inventions and inventorship. In response to an August 2019 request for comments, the USPTO received extensive feedback, which was summarized in an [October 2020 report](#). Further discussions took place during the June 2022 Artificial Intelligence/Emerging Technologies Partnership meeting and April/May 2023 public listening sessions. In February 2023 the USPTO issued a [Request for Comments Regarding Artificial Intelligence and Inventorship](#) and received [69 written comments](#).

Given the heightened worldwide interest in AI, on Oct. 30, 2023, President Biden issued the [Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence](#), which sets forth policies and principles to promote responsible AI innovation and competition. Following the executive order, the USPTO issued [Inventorship Guidance for AI-assisted Inventions](#) (the Guidance). The Guidance outlines the statutory framework and judicial interpretation of inventorship, emphasizing that conception is a mental act performed by natural persons. It also provides principles for determining inventorship in AI-assisted inventions, including the requirement for a “significant contribution” by natural persons to the conception of the invention. The Guidance clarifies that the same principles of inventorship apply to design and plant patents as they do to utility patents and includes [examples](#) to assist the public and patent examiners. The USPTO also stated that the development of guidance for AI-assisted inventions is an iterative process and may be updated based on stakeholder feedback and further judicial decisions. The USPTO also recognizes that AI raises other patent system questions, such as subject matter eligibility, obviousness, and enablement, which will be addressed in future guidance.

The present Guidance does not have the force of law but sets out the USPTO’s policy interpretation of inventorship requirements. It supersedes earlier guidance and will be used by patent examiners going forward, subject to any further revisions. The current Guidance is in accord with the USPTO’s prior decisions on inventorship, which were upheld by the Court of Appeals for the Federal Circuit in *Thaler v. Vidal*, 43 F.4th 1207 (Fed. Cir. 2022), *cert denied*, 143 S. Ct. 1783 (2023). That case affirmed that only natural persons can be inventors.

Given the increasing use of AI systems in the invention creation process, applicants should take extra care in ensuring that each named inventor in a patent application or patent has provided a significant contribution to a claimed invention. As the Guidance states, “[i]nventorship is improper in any patent or patent application that includes a claim in which at least one natural person did not significantly contribute to the claimed invention, even if the application or patent includes other claims invented by at least one natural person.”

In the realm of AI-assisted inventions, as set forth below, the USPTO has outlined certain guiding principles intended to assist patent applicants and USPTO personnel in determining whether a natural person’s contribution to an AI-assisted invention is “significant.”

1. **Natural Person’s Use of AI:** Utilizing an AI system in the invention process does not disqualify a natural person from being considered an inventor. If the individual makes a significant contribution to the AI-assisted invention, they may be recognized as an inventor or co-inventor.
2. **Problem Recognition and Research Goals:** Simply identifying a problem or having a broad research objective does not qualify as conception for inventorship. A person who merely presents a problem to an AI system is not automatically an inventor of the resulting invention. However, if the individual significantly shapes the AI prompt to produce a specific solution, this could be considered a significant contribution.
3. **Reduction to Practice:** The act of reducing an invention to practice (e.g., making or describing something that actually works) by itself does not constitute a significant contribution to inventorship. A person who merely acknowledges the AI system’s output as an invention, especially when its use and function are obvious to those skilled in the field, is not necessarily an inventor. Yet, a person who enhances the AI’s output in a meaningful way or who successfully

experiments with the output may be considered an inventor, even if conception (i.e., recognizing and appreciating the invention) is only established after the invention is reduced to practice.

4. **Development of Essential Building Blocks:** An individual who creates a fundamental component that leads to the claimed invention may be seen as having made a significant contribution to the invention’s conception, even if they were not involved in every step that led to the invention. This includes those who design, build, or train an AI system specifically to address a problem and elicit a particular solution. This may be considered a significant contribution to the resulting invention.
5. **“Intellectual Domination” Over AI:** Merely having control or oversight over an AI system does not make someone an inventor of inventions produced through the AI system. Ownership or management of the AI system, without a substantial contribution to the invention’s conception, does not confer inventorship.

These principles emphasize the importance of a natural person’s active and significant contribution to the conception and development of an AI-assisted invention. The USPTO’s Guidance aims to clarify the complex issue of inventorship in the context of AI and ensure that proper credit is given to those who contribute to the creation of new inventions. Patent practitioners should carefully consider these principles when determining inventorship in AI-assisted inventions to ensure their patent applications align with USPTO expectations and legal standards.

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