USPTO Guidance for Artificial Intelligence (AI) Assisted Inventions

AI-Assisted Inventions can be Patentable

- AI can be used as a tool like any other tool in the invention process
- Need at least one human inventor

Inventor is not

- AI cannot be listed as an inventor
- Natural person if simply utilizing AI without contribution to conception

Analysis for Inventorship

- USPTO offers 5 guiding principles for “Significant Contribution Test” (like joint inventorship)
- Developing essential components (like datasets) designed to address a problem that help AI produce invention could qualify as inventor.

Notes for Practice

- This guidance applies to all past and future applications
- Foreign applications may list AI as inventor. These would need amended before submitting to USPTO

What is Hot in IP?

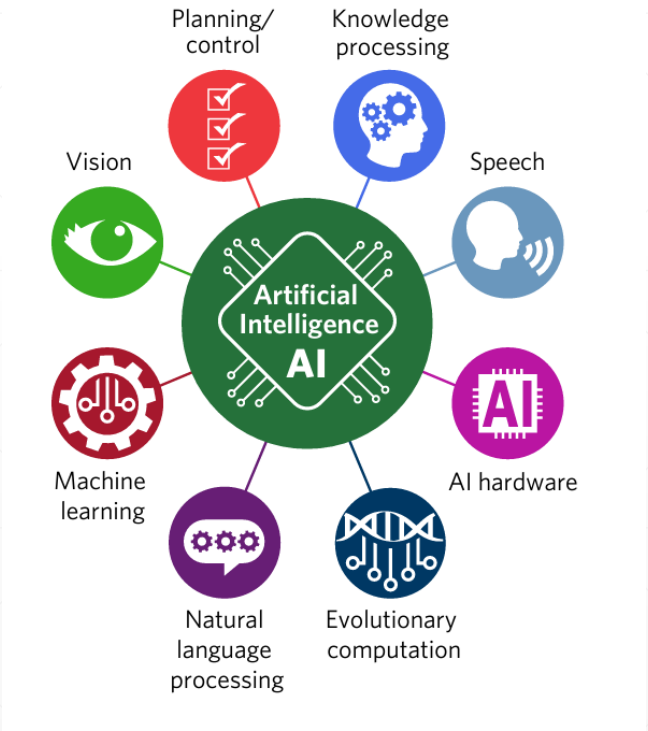
March 13, 2024

Notice by USPTO 02/13/2024

- Guidance for Inventions with Artificial Intelligence (AI) Assistance
  - Patentability
  - Determination of Inventorship
  - Practical Notes
    - Duty of inquiry and disclosure
    - Foreign priority application

AI in Patents is Not New:

AI has been used broadly across different technologies



Prior to Recent USPTO Guidance:

- 1976-2018 AI patent applications increased by 100%
- Prompted by 2023 Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (EO14110)
  - *The USPTO Director shall "within 120 days of the date of this order, publish guidance to USPTO patent examiners and applicants addressing inventorship and the use of AI, including generative AI, in the inventive process, including illustrative examples in which AI systems play different roles in inventive processes and how, in each example, inventorship issues ought to be analyzed"*

Source: USPTO IP Data Highlights, Inventing AI No. 5, Oct 2020

Case Law Preceding USPTO AI-Assisted Invention Guidance

- *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";
- *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";
- *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.

Pannu Test

1. "contribute[d] in some significant manner to conception or reduction to practice";
2. 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
3. did more than merely explain well-known concepts or the current state of the art

Summary of USPTO Guidance on AI assisted inventions

- AI cannot be named as an inventor. It is a tool like any other tool in the invention process
- AI-assisted inventions "*are not categorically unpatentable*"
- Inventorship depends on a natural person significantly contributing to claimed invention
- Inventorship analysis should focus on human contributions
  - Apply *Pannu* factors similar as when analyzing whether a joint inventor
  - USPTO offered 5 guiding principles to aid in applying Pannu factors (Significant contribution Analysis)
  - USPTO offered two examples
    - Engineering- Transaxle for remote control car
    - Pharmaceutical- Drug for treating cancer

- Practice Notes:
  - Guidance applies to utility, design and plant patents
  - Duty of disclosure guidance is retroactive applying to all patent applications and issued patents filed before or after February 13, 2024
  - No oath, declaration or substitute statement should be filed on behalf of an AI system
  - Foreign applications that name an AI system as an inventor will not be accepted. US application must have at least one common inventor who is a natural person.

Source: USPTO Webinar on Inventorship Guidance

5 Guiding Principles applying Pannu Factors to Analyze Inventorship

1. Natural person's use of an AI system in creating an AI-assisted invention does not negate the person's contributions as an inventor
2. Merely recognizing a problem or having a general research plan or goal does not rise to level of conception. A significant contribution could be shown in how the person constructs the prompt in view of a specific problem to elicit a particular solution.
3. Reducing an invention to practice alone is not significant contribution that would rise to level of inventorship. A person taking output from AI system and makes significant contribution to output to create an invention is an inventor.
4. Natural person who develops essential building block from which claimed invention is derived may have contributed significantly to conception where designing building or training AI system is a significant contribution to invention
5. Owning or overseeing AI system without providing signification contribution does not make an inventor

Source: USPTO Webinar on Inventorship Guidance

Future Topics Resulting from Executive Order

- Subject matter eligibility
- Copyright