

Intellectual Property

Cross-border issues following U.S. artificial intelligence inventorship decision

By **Zachary Higbee**



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(May 31, 2023, 9:29 AM EDT) -- As courts worldwide consider the tidal wave of legal actions brought by Stephen Thaler and his ostensible artificial intelligence (AI) partner, the Device for Autonomous Bootstrapping of Unified Science (DABUS), regional variances in the legal precedents for AI may open new cross-border issues leading to the inadvertent losses of rights for unwary patent owners.

Thaler calls DABUS a “creativity machine,” a type of AI that generates outputs without specific prompts or inputs. In filing patent applications for DABUS’s outputs, “Thaler maintains that he did not contribute to the conception of these inventions and that any person having skill in the art could have taken DABUS’ output and reduced the idea in the applications to practice” (*Thaler v. Vidal* 2022 U.S. App. LEXIS 21712; *Thaler v. Vidal* 2023 U.S. LEXIS 1763).

Under U.S. law, the inventors on a patent application are the individuals who conceive of the invention, and Thaler believed DABUS to be the proper and sole inventor of the claimed subject matter. In considering Thaler’s patent applications, U.S. courts have conclusively held that applicable U.S. law prohibits DABUS from being listed as an inventor on a patent application, noting that only human beings can qualify as inventors.

Some commenters have suggested that Thaler’s applications and others like it are now left without protection, hindering innovation because AI inventors cannot have their inventions properly recognized and protected. I believe, however, that these arguments misunderstand the *Thaler* decisions and overstate the damage to AI-related patent applications. The proper takeaway from Thaler’s loss is not that AI contributions are ineligible for patent protection, but that Thaler failed to name the correct inventor.

The core of inventorship is “conception,” and U.S. precedent clarifies that the “question of conception is properly directed to whether there was ‘formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention’” (*Bosies v. Benedict* 27 F.3d 539, 543 (Fed. Cir. 1994)[ii]). Because an AI system cannot be an “inventor” in the United States, its contributions cannot equate to the formation of the invention in the inventor’s mind, and an AI system cannot legally “conceive” of an invention.

Rather than precluding patenting, the act of invention shifts to the human who first forms the definite and permanent idea in their mind — similar to how other sophisticated tools help inventors achieve conception — and does not steal or negate human conception. However, this means that while DABUS would be an inventor in countries that recognize AI inventorship, Thaler may be the inventor of the same subject matter in countries that do not recognize AI inventorship.

While most countries and legal systems that have considered the issue have reached conclusions like that of the United States (i.e., that AI systems cannot legally qualify as inventors), some jurisdictions, such as South Africa, have allowed Thaler to register patents with DABUS as the sole inventor. Canadian courts have not yet considered the DABUS issue but may soon do so.

Porting these inventions from countries where AI inventorship is recognized into non-AI-inventorship jurisdictions can lead to significant problems. For example, to claim priority to a non-U.S. application, the U.S. Patent Office's current position is that "U.S. and foreign applications must name the same inventor or have at least one joint inventor in common," and "*a right of priority does not exist in the case of an application of sole inventor A in the foreign country and sole inventor B in the United States, even though the two applications may be owned by the same party*" (*Manual of Patent Examining Procedure* 213.02 (emphasis added)). While this policy may be updated in the future, Thaler might currently be prohibited from claiming priority in the United States to a first-filed South African patent application listing DABUS as the sole inventor because Thaler would be the sole inventor in the U.S. counterpart application.

Conversely, countries that recognize AI inventorship may prohibit Thaler from claiming priority for applications filed in non-AI-inventorship countries (depending upon local laws not analyzed here). Similar issues may arise in the context of assignments and ownership, which are based on the identity of the inventor.

One straightforward option for claiming priority in the United States is to ensure that the application filed in a foreign country and listing an AI inventor includes sufficient wide-ranging claims of a *human co-inventor* with the AI system. As we noted, it is the U.S. Patent Office's policy that "U.S. and foreign applications must name the same inventor or *have at least one joint inventor in common*" (emphasis added). For claiming priority in the United States, it would seem sufficient to have the same human inventor on both the non-U.S. and the U.S. applications. Another solution may be to file applications simultaneously in multiple jurisdictions without any priority claim, assuming foreign-filing licence issues are properly addressed.

Whenever possible, applicants working on AI-related inventions who believe that the AI system may have contributed materially to the invention should research and plan their filings at the outset of preparing the patent applications.

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