Responses to Questions for the Record

Senate Committee on the Judiciary Subcommittee on Intellectual Property Hearing on
"Artificial Intelligence and Intellectual Property - Part 1: Patents, Innovation, and Competition"

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Below please find the questions from Senator Tillis as well as my responses.

1. *Under current U.S. patent law AI cannot be named as an inventor.*

    a. *What is the motivation and benefit of attempting to change patent law to allow an AI to be named as an inventor?*

Please see the response to part b below.

    b. *What impact, if any, would this have on innovation – in other words, do you foresee some detriment to innovation due to AI not being able to be named an inventor?*

I do not support changing patent law to allow AI to be an inventor, as I think that any potential benefits would be outweighed by the negative consequences. I address these issues on pages 212-15 in the following law review article, in a section titled "The Problems with Naming AI Systems as Inventors":

John Villasenor, Reconceptualizing Conception: Making Room for Artificial Intelligence Inventions, 39 SANTA CLARA HIGH TECH. L. J. 197 (2023), https://digitalcommons.law.scu.edu/chtlj/vol39/iss2/2/.

    c. *If an AI alone cannot be named inventor, what are your thoughts regarding allowing an AI to be named as a co-inventor if named alongside that which we currently consider an inventor (i.e., a "natural person")?*

While allowing AI to be named a co-inventor may sound like a simple way to address this issue, I believe it is more complex than it might initially appear. An AI system cannot sign an oath or declaration, it cannot give sworn testimony in a deposition, and it cannot assign the invention to a third party. More generally, allowing AI systems to be co-inventors would in effect create two classes of inventors—human and AI, with all the complications that would inevitably result.

For instance, it would be hard to determine what level and type of AI use would require naming an AI system as a co-inventor. This change would also spur a whole new category of validity challenges in litigation (e.g., through allegations that a human-only list of inventors improperly *excluded* AI, or that a joint human/AI list of inventors improperly *included* AI).

2. *The Intellectual Property Office of Singapore has promoted the patenting of AI-related inventions by offering accelerated examination.*

   Do you think that the USPTO should be doing more to encourage and support AI-related patent applications in the U.S.?

One question is what is meant by "AI-related inventions." As mentioned in my written and in-person testimony, there are inventions *about* AI, inventions made *using* AI, and patent applications *written* with the use of AI. In answering this question, I will assume that AI-related is intended to refer to inventions about AI. I think the USPTO should not give special preference to examining patent applications about AI. While AI is extremely important, the same could be said of many other areas of innovation, and I do not believe patent applications about AI should be given a more privileged status than patent applications regarding other technologies in terms of examination priority.

3. *In February 2023 the USPTO issued a request for public comments (RFC) seeking stakeholder input on the current state of AI technologies and inventorship issues that may arise in view of the advancement of such technologies.*

   a. *What were your key takeaways from this RFC?*

   b. *Was there anything that wasn't addressed that should have been?*

I submitted a public comment in response to this RFC, which is available here: https://www.regulations.gov/search/comment?filter=PTO-P-2022-0045-0012

4. *With regard to patent eligibility law, do you agree that the lack of certainty hampers innovation when it comes to the field of AI-related patent applications and patents?*

Clarity regarding patent eligibility is clearly beneficial. That said, some level of uncertainty is inevitable given that the continuing need to map new fact patterns into existing statutory and case law. As long as this uncertainty can be resolved relatively expeditiously, it is a normal and expected part of the dynamic at the intersection of patent law and emerging technologies.

5. *Patent Examiners at the USPTO currently use an agency search tool called Patents End to End (PE2E) to perform prior art searches. This tool leverages AI and is being developed to further support AI search capabilities.*

   a. *What are your thoughts on this?*

   b. *How else should the USPTO leverage AI to help with prior art searches?*

Without understanding more about the specifics of how this tool works, I am not in a position to offer comments about it.

6. *Do you agree that recognizing an AI as an inventor would require statutory changes to Section 103 to adapt the obviousness test to AI? If so, what would be the most appropriate and feasible way to assess whether a claimed invention would be obvious to an AI?*

Before even getting to Section 103, as the *Thaler* litigation has made clear, recognizing AI as an inventor would require a statutory change to 35 U.S.C. § 100(f), which defines "inventor" as an "individual" (or "individuals" in the case of joint invention). The Federal Circuit has ruled that under 35 U.S.C. § 100(f), an "individual" (and therefore an inventor) must be a natural person.

If Congress were to make a change to allow AI systems to be inventors (which, as I stated in my testimony, I do not believe is advisable), there would be an additional question of whether Section 103 should also change. I address this issue in part in my written testimony, in which I emphasize that the knowledge of a person of ordinary skill in the art should be tied to what a *person* would know. That in turn ties directly to the issue of obviousness. In short, I am not aware of a compelling reason to change the statutory text of Section 103 in view of AI (and, there are some compelling reasons *not* to change it).

7. *There has been talk regarding whether advances in AI warrant a sui generis ("of its/their own kind") IP protection – a new form of IP protection separate from patent, copyright, trademark, and trade secret – for data rights.*

   What are your thoughts on this?

I think creating a new category of AI-specific IP protection would create a cascade of issues, including line-drawing challenges regarding defining the scope of advances that would fall into this category. While AI has many facets and many uses that raise novel and important IP questions, I do not see creating an entirely new category of IP as the answer.

8. *Given where AI now stands in practice – its's a powerful tool that speeds the innovation process, but it does not itself innovate – what specific regulatory and/or legislative action should be and should not be taken this Congress?*

Whether AI itself innovates is an interesting question, and one on which I expect there would be a diversity of views among experts. That said, as a more general matter I think that rushing into AI regulation has multiple risks, especially given the inherent difficulty of predicting how AI technology will develop. Also, as I mentioned in my testimony, there are plenty of non-AI-specific laws and regulations that would apply to AI systems.

If there is a demonstrated need where existing regulatory frameworks are insufficient in relation to AI, then it does indeed make sense to consider targeted, thoughtful regulation. However, any such regulation should be designed in a manner that avoids impeding innovation or undermining American global economic competitiveness.

9. *With jurisdictions appearing to require disclosure of AI operation, including source code, for software-based innovations is trade secret a viable option for the protection of AI code?*

And if not, are there steps that regulators and governments can take to help make AI code subject to trade secret protection?

The use of AI should not eviscerate trade secret rights. Trade secret protections regarding computer code (including AI code) are an important mechanism to protect the results of investments that companies make to develop differentiated, market-competitive products and services. Of course, that does not mean that trade secret status should be an absolute barrier to inquiry. There are contexts in which there are compelling reasons for outside parties to gain access to trade secret source code. However, there are also mechanisms (such as protective orders in litigation) to enable that access without compromising trade secret status.