Proskauer

Impact of the Leadership in Critical Technologies Act on U.S. Artificial Intelligence, Semiconductors and Quantum Computing

The Patent Playbook on **June 3, 2025**

On the heels of the recent reintroduction of the PERA and PREVAIL Acts of 2025, a bipartisan group of lawmakers in Congress has introduced the Leadership in Critical and Emerging Technologies ("CET") Act. The goal of the Leadership in CET Act is to "encourage innovation by, and the leadership of, the United States with respect to critical or emerging technologies" – specifically, artificial intelligence, semiconductor design, and quantum information science.

The proposed legislation would instruct the United States Patent and Trademark Office ("USPTO") to establish and carry out a pilot program to expedite the examination of patent applications having at least 1 claim directed to an "eligible critical or emerging technology." The proposal establishes three general categories and several subcategories that satisfy the eligibility requirements:

Categories	Subcategories
Artificial Intelligence	Machine Learning
	Deep Learning
	Reinforcement Learning
	Sensory Perception or Recognition
	Artificial Intelligence Assurance or Assessment Technique
	Foundation Model
	Generative Artificial Intelligence System or Multimodal or Large Language Model
	Synthetic Data Approach for Training, Tuning, or Testing
	Planning, Reasoning, or Decision Making
	Improvement of Artificial Intelligence Safety, Trust, Security, or Responsible Use
Semiconductor Design or an Electronic Design Automation Tool	N/A
Quantum Information Science	Quantum Computing

Categories	Subcategories
Materials, Isotopes, or Fabrication Techniques for Quantum Devices	
Quantum Sensing	
Quantum Communications or Networking	

In addition to the eligibility requirements, there are at least two additional prerequisites to qualify for the pilot program: (1) a particular inventor cannot use the pilot program more than five times, regardless of whether they are filing as a solo inventor or if they are a member of a group of inventors, and (2) the applicant cannot be "a foreign entity of concern" ("FEOC"). For the purposes of this bill, an FEOC is defined in section 9901 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (15 U.S.C. 4651). Generally, FEOCs are nonstate actors potentially posing economic or security threats to the United States.

If the Leadership in CET Act is enacted, the USPTO would have one year to establish the pilot program, and it would last for at least 5 years (or the date on which 15,000 applications have been accepted, if sooner), with the possibility of renewal for an additional 5 years (or an additional 15,000 applications). The proposed legislation would also require the USPTO to publish statistical information about the pilot program on their website: (1) the number of applications submitted, (2) the number of applications accepted, and (3) the number of patents issued under the pilot program.

Takeaway

The proposed legislation would expedite the patent examination process for inventions involving AI, semiconductor, and quantum computing technologies by allowing the USPTO to place qualifying applications at the front of the line. By expediting the patent examination process, the Leadership in CET Act provides qualifying innovators a competitive edge – faster patent grants can lead to earlier commercialization opportunities, attract investment, and establish market leadership.

The Leadership in CET Act's emphasis on expedited patent processing underscores the importance of a well-structured intellectual property ("IP") strategy for companies in these emerging industries. A sound IP strategy can help in identifying potential infringement risks, navigating complex patent landscapes, and maximizing the value derived from innovations. For example, a robust patent portfolio can serve as a deterrent against infringement and provide leverage in licensing negotiations.

The proposed legislation should not come as a surprise to those monitoring the AI, semiconductor, and quantum computing industries. As we recently discussed in relation to quantum computing, there have been significant investments recently in these industries by the world's biggest companies and emerging start-ups. These companies, in parallel, will be ramping up their efforts to secure intellectual property protection to enforce and monetize their advancements in these industries. If enacted, the Leadership in CET Act, along with the PERA and PREVAIL Acts of 2025, would significantly improve the ability of the American AI, semiconductor, and quantum computing industries reap the benefits of those efforts.

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