



US INVENTOR OPPOSES PERA AS WRITTEN, DEMANDS PUBLIC POLICY JUSTIFICATION

PERA Makes Most Artificial Intelligence Ineligible for Patent Protection

The [Patent Eligibility Restoration Act of 2023 \(PERA\)](#) was introduced in June by Senators Tillis (R-NC) and Coons (D-DE). According to Tillis' [statement](#) in its introduction PERA “*will restore patent eligibility to important inventions across many fields...*”

The stakes are high for getting Section 101 right. Unfortunately, PERA, as written, falls short of achieving its intended objective. Instead, PERA codifies the same eligibility morass under new language, potentially making it even worse.

What's the Problem with Section 101?

Under Section 101, the Supreme Court created an exception to the word “any” called an “abstract idea,” which has resulted in the denial of patent protection for thousands of meritorious inventions implemented in software, fields like artificial intelligence, cybersecurity, quantum computing, blockchain, 5G/6G, enterprise systems and more. Other biotech exceptions affect gene therapies, medical diagnostics, and more.

While the Supreme Court's exceptions to Section 101 invalidate over 50% of challenged patents in district court litigation, the effect is even more insidious in patent examination. In 2017, George Mason University [identified nearly 1700 patents](#) that were not eligible for patent protection in the U.S., but their companion applications in Germany and China received patents.

Patents are a [natural anti-monopoly](#), enabling new competitors to enter a market by providing a personal property right that can be collateralized to attract investment. If you can't patent your inventions, you likely won't attract early-stage investment to start up the startup. Thus, the abstract idea exception has hindered the introduction of new competitors in markets controlled by Big Tech, further consolidating their monopolies, and enabling Chinese Communist Party (CCP) controlled multinationals to take the lead in many technologies.

Technologies affected by Section 101 exceptions are the same ones that the CCP seeks to control in the China 2025 Initiative. Indeed, the Supreme Court's Section 101 mess has enabled China to take the global lead in [37 of 44 technologies](#), many of which are not eligible for patent protection in the U.S. under the abstract idea and other judge-made exceptions that apply to biotech.



PERA Starts by Making Nearly All Inventions Implemented in Software Patent Ineligible

PERA abrogates all judge-made exceptions, including the abstract idea in its preamble (however, not in the law), yet it introduces new exceptions disqualifying entire swaths of technology as ineligible for patent protection. An invention is ineligible if:

“(B)(i) Subject to clause (ii), a process that is substantially economic, financial, business, social, cultural, or artistic, even though not less than 1 step in the process refers to a machine or manufacture.”

Nearly any invention can be categorized as *economic, financial, business, social, cultural, or artistic*. Most inventions implemented in software are claimed as a process. This extraordinarily broad language means that inventions implemented in software are ineligible for patent protection right from the starting gate.

Tillis said, *“clear, strong, and predictable patent rights are imperative to enable investments in the broad array of innovative technologies...”*. PERA’s lack of any definitions for its most crucial terms makes patents anything but *“clear, strong, and predictable.”*

It is unclear what makes an invention fall *“substantially”* into an ineligible category or even what these categories encompass. For instance, it cannot be predicted whether inventions in the technical fields of cybersecurity or enterprise systems sold to large corporations are considered *substantially business*. Likewise, is blockchain *substantially finance*? Is ChatGPT *substantially artistic, cultural, or social*? These essential questions are unanswerable.

Congress has the sole authority to define U.S. public policy. However, PERA fails to define any public policy that justifies its massive exclusions, nor does it define the terms critical to its implementation.

Instead, Congress punts its authority to the courts, which will then define public policy by interpreting the words of PERA. The process of building sufficient case law to determine what’s in and what’s out will take years. During that time, investment into anything that risks falling into PERA’s undefined ineligibility exclusions will be hobbled.

However, if an invention falls into an excluded category, the exclusion can be overcome in the next clause.

Prove Negatives to Save the Patent

PERA provides a so-called “savings clause” under (ii):

“(ii) The process described in clause (i) shall not be excluded from eligibility for a patent if the process cannot practically be performed without the use of a machine or manufacture.”

Setting aside that the burden is reversed, becoming the patent owner's burden to prove the invention is not ineligible, the patent owner must prove two negatives – the “*process cannot practically be performed*” and “*without the use of a machine or manufacture.*”

Under this language, if there is just one conceivable implementation that the invention can “*practically be performed without the use of a machine,*” the invention cannot be saved and remains ineligible for patent protection.

Once again, PERA is silent on the public policy justification or a clear definition of *practically*, passing its authority to define public policy to the courts, and thereby introducing further uncertainty in the implementation of the Act.

What is AI?

It's beyond ironic that AI's most significant potential lies [in economics, finance, business, social media, culture, and art](#), which are precisely the excluded categories under PERA. Nevertheless, the possibilities for enhancing our lives with AI are boundless, restrained only by the imagination and dedication of the people who invent its uses and structure AI to do it.

IBM [defines AI](#) as: “*At its simplest form, artificial intelligence is a field, which combines computer science and robust datasets, to enable problem-solving. [...] These disciplines are comprised of AI algorithms which seek to create expert systems which make predictions or classifications based on input data.*”

According to the [Webster Dictionary](#), an algorithm is defined: “*In mathematics and computer science, an algorithm is a finite sequence of rigorous instructions, typically used to solve a class of specific problems or to perform a computation.*”

AI algorithms are “*a finite sequence of rigorous instructions,*” hence they are processes. A simplified AI algorithm patent claim may be generally sequenced as:

- 1) get data *a* and *b*;
- 2) perform [mathematics](#) on data *a* and *b*;
- 3) return new data; and
- 4) get the next data and repeat 1).

Most AI algorithms continuously iterate across huge sets of data at an incredibly rapid pace, fetching new data and returning new results in each iteration. Frequently, an AI system comprises multiple algorithms concurrently processing the same data, each returning its own unique set of results. Additional AI algorithms may operate on the generated results. Ultimately, the AI system returns “*predictions or classifications.*”



How Will AI Fare Under PERA?

Judge Giles Rich famously stated that the name of the game is the claim. In other words, when a court evaluates a patent's validity, its focus is the claim.

Claim operations of acquiring and retrieving data are well-known and routine computing processes, which courts dismiss as not inventive.

In most AI claims, the remaining operation is performing mathematics. However, mathematics has been performed for thousands of years with a pen and paper. So, the courts will likely find, as they have for years, that "*the process*" can "*practically be performed without the use of a machine or manufacture*" because mathematics can be performed using a pen and paper. This is a kill shot dooming AI algorithms using mathematics.

The savings clause will also prove meaningless for vast swaths of inventions implemented in software that employ other forms of algorithms, analysis procedures, classification methods, and strategies. There is a very high potential that virtually all inventions implemented in software will be found ineligible by the courts and the USPTO.

Section 101 is Unique to U.S. Law

Section 101 answers the question: of all possible inventions, which are eligible to be examined by the USPTO for patent protection? This is a question of future inventions. Restrictions risk eliminating patent protection for entire swaths of innovation, which we know nothing about today.

[Section 282](#) only allows challenges to the validity of an issued patent under Section 102 (anticipation), Section 103 (obviousness), Section 112 (enablement), and Section 251 for reissued patents. A challenge under Section 101 is intentionally not authorized.

However, Section 101 judicial exceptions sidestep Section 282 by allowing eligibility challenges in a motion to dismiss the pleadings, which argues that the patent is an abstract idea and, therefore it doesn't really exist. If there is no patent, the infringement case is not properly pled. The courts grant these motions at a rate greater than 50% of challenged patents.

Importantly, Section 101 is unique to U.S. law, which means that inventions that fail to meet eligibility requirements here are still eligible for patent protection in most other countries, including China.

PERA creates a statutory authorization to challenge under Section 101, where no similar challenge exists in any other country. But PERA goes even further by adding authorization for discovery limited to Section 101 eligibility. This puts the patent owner at a significantly greater



disadvantage than the current judge-made law because patent claims construction will begin without the benefit of full discovery.

Regrettably, PERA does not fix Section 101's eligibility imbalance between the U.S. and China. Instead, it codifies and enhances it, permanently putting U.S. innovation into a self-imposed competitive disadvantage with the rest of the world.

PERA Must Remain a Vehicle for Section 101 Debate

Judge-made law regarding Section 101 eligibility is severely restricting U.S. innovation, allowing our adversaries like China as well as others to take the lead in global innovation. This is severely damaging U.S. national and economic security.

Congress must fix Section 101 correctly. The influence of powerful lobbies must be leveled by arguing the merits of the legislation openly and transparently in Congress.

The authors of PERA must provide a clear and sound public policy justification for making such huge swaths of technologies ineligible for patent protection where there are no similar restrictions in other countries.

Once Congress agrees to a public policy position on Section 101, then the words of PERA must be precisely defined to ensure that the policy is effectuated in legislation, leaving no ambiguity for judge-made law to override it.

US Inventor Position on PERA As Written

For the foregoing reasons, US Inventor opposes PERA as written, but PERA should not die. It presents a valuable opportunity to initiate open and transparent debate in Congress so that the U.S. public policy regarding patent eligibility can be properly formed, and legislation can be crafted to effectuate that public policy.