



# Restoring Predictability to Patent Eligibility

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## Executive Summary

The law surrounding patent eligibility, or the standard for what types of invention are able to be patented, has changed dramatically over the last fifteen years. What started as a broad and inclusive standard, “anything under the sun that is made by man,” has now been narrowed and made much more confusing by a quartet of Supreme Court cases in the early 2010s.

Because of the ambiguity about what types of inventions are eligible to receive a patent, firms are rethinking their investments in inventive and innovative activity; without the possibility of receiving a patent to protect that investment, some firms are moving their R&D activity to other jurisdictions with clearer and more inclusive standards, while others are leaving the innovation space altogether.

The Patent Eligibility Restoration Act (PERA) is intended to address this problem by clarifying what types of inventions may be patented by returning to a broad and inclusive standard and eliminating the confusing precedent imposed by the Supreme Court’s cases, while still providing a list of exclusions to patent eligibility to ensure that invention and innovation can continue to

flourish. By restoring a level of predictability to patent eligibility, PERA will encourage firms to continue their cutting-edge inventive and innovative activities in the United States.

## I. Historically broad, Section 101 of the Patent Act allowed innovative activity and the US economy to flourish.

Section 101 of the Patent Act states that “[w]henever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new or useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”<sup>1</sup> When adopted, the understanding was that this requirement was quite broad and inclusive. Specifically, inventions that satisfy 101 “may include anything under the sun that is made by man ....”<sup>2</sup>

The Supreme Court, in the 1970s and 1980s, respected this broad reading of section 101, quoting the “anything under the sun that is made by man” language to allow patenting of a “live, human-made micro-organism.”<sup>3</sup> Although the standard was inclusive, the

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Supreme Court noted that there were some exceptions, specifically laws of nature, natural phenomena, and abstract ideas, citing its own precedent from the 1970s, as well as earlier cases.<sup>4</sup>

Although these exceptions to section 101 patent eligibility did not appear in the statute and were judicially created, the broad and inclusive interpretation that was applied between 1980 and 2010 allowed innovation in the United States to prosper at staggering rates. Important advancements in the fields of computers, software, telecommunications, transportation, pharmaceuticals, diagnostics, and artificial intelligence, among others, were developed and patented in the United States. The American economy prospered from this innovative activity as well.

## **II. Supreme Court precedent and lower courts' application of those cases has led to significant uncertainty about patent eligibility.**

In 2010, the Supreme Court began issuing a stream of patent eligibility cases that narrowed and confused the patent eligibility standard.<sup>5</sup> Rather than prohibiting the patenting of laws of nature, natural phenomena, and abstract idea, the cases taken together disallow the patenting of inventions that involve or are “directed to” one of these exceptions. This determination of whether an invention is directed to an exception became step one of the patent eligibility test.

Noting that all inventions at some level rely on or apply a law of nature, natural phenomenon, or abstract idea, the Supreme Court added a second step to the patent

eligibility test, asking whether the claim recites additional elements that show an “inventive concept” beyond the exception.<sup>6</sup>

Unfortunately, the Supreme Court provided no guidance about what it means for an invention to be “directed to” a judicially created exception, nor what an “inventive concept” would entail. Even more basic, the Supreme Court specifically declined to define what is meant by the “abstract idea” exception. Since 2014, many petitions have been filed at the Supreme Court seeking clarity on these points and other aspects of patent eligibility, but the Supreme Court has declined to take up the issue in the last decade.

Faced with this lack of guidance, lower courts have begun applying the two-step patent eligibility test with inconsistent results. Inventions that have traditionally been eligible for patenting, including machines and manufactured objects, diagnostic methods, and computer systems, have in a number of instances been denied patent eligibility. Productive firms, doing R&D in areas where patents have been long been part of the innovation ecosystem, are now faced with great uncertainty about whether their investments in innovation will be eligible for patenting, leading some of these firms to shift to jurisdictions that have less ambiguous patent eligibility rules, such as China, Japan, and some European countries, while other firms are investing less in R&D altogether.

## **III. PERA restores inclusiveness and predictability to patent eligibility while still providing important guardrails against**

## **patents that would undermine invention and innovation.**

The Patent Eligibility Restoration Act (PERA) seeks to return section 101 patent eligibility to the broad and inclusive standard it should be, while still acknowledging that some inventions may not be appropriate for patenting. By eliminating the judicially created exceptions and the current two-step patent eligibility test, and by providing instead a clear, easy-to-apply standard, PERA restores the predictability sought over the last decade. By restoring inclusiveness and predictability, PERA also provides guidance for innovative firms regarding the patent eligibility of their R&D investments.

Despite claims to the contrary, PERA does not allow for any invention or discovery to be patented. It does not completely dismiss an inquiry into patent eligibility, nor will anything and everything be patentable. First, patent eligibility under section 101 is just one of a number of tests that an invention must pass in order to be patented. Second, PERA includes a list of exceptions that protects basic ideas and discoveries, necessary for future research, from being patented, in order to allow innovation to continue unhindered.

### **a. Patent eligibility is just one inquiry before obtaining a patent; eligible inventions must still meet all other requirements of patentability.**

Patent eligibility under section 101 is just one of the statutory requirements that an invention must meet before being patented. The other requirements of patentability provide rigorous tests, ensuring that patents are not granted for anything and everything.

In fact, many of the ways that the current ambiguous patent eligibility standard has been applied are duplicative with the other statutory requirements of patentability. Restoring inclusive and broad patent eligibility will simply allow or ensure that these other stated requirements are being subjected to the appropriate level of scrutiny.

Specifically, in addition to patent eligibility, patent applications are examined to ensure satisfaction of sections 102, 103, and 112 of the Patent Act. In broadest terms, section 102 of the Patent Act forbids patenting an invention that is not new.<sup>7</sup> This provision does a lot of work to screen out inventions that might otherwise fit into the previously imposed judicially created exceptions to patent eligibility. Section 103 of the Patent Act prevents a patent from being obtained on an invention that is an obvious tweak of an existing invention, ensuring that patents are not granted on trivial or non-innovative improvements or combinations of known items.<sup>8</sup> Section 112, among other things, requires the patentee to provide a disclosure of the invention sufficient to allow others to understand what the invention is, as well as make and use the invention.<sup>9</sup> This requirement is viewed as part of a quid pro quo, providing the public with information about the invention in exchange for the patent grant.

Each of these other requirements of patentability are long-standing, well-developed, and statutorily based standards that ensure that patents are only granted for inventions that are new and innovative and that are sufficiently described to add to the public's knowledge base. Courts, innovative companies, and the Patent Office have extensive expertise in the application of these requirements to innovative technologies.

Broadening the scope of inventions eligible for patenting just increases the number of inventions that can be assessed against these other requirements for patentability.

**b. The exceptions to PERA provide clear guidance to ensure that certain basic knowledge is not eligible for patenting, allowing this knowledge to continue to be used in inventive and innovative activity.**

Rather than rely on judicially created exceptions, confusingly interpreted by the Supreme Court and subject to an ambiguous two-step test, the exceptions to patent eligibility under PERA are statutory exclusions more akin to how the Supreme Court and others understood section 101 prior to 2010. The specific exclusions are related to natural phenomena and abstract ideas, but clearly delineate what is not eligible for patenting.

Three of the exclusions are for inventions that often previously fell into the category of abstract idea, but are limited to specific attempts to patent the idea, or basic knowledge, rather than a real-world application of that idea, as the current patent eligibility case law has done. These exclusions are for:

- A mathematical formula not part of a useful invention
- A claimed process that is “substantially economic, financial, business, social, cultural, or artistic” and that can be “performed without the use of a machine or manufacture”
- A mental process performed solely in the human mind

These exclusions clarify what is meant by an abstract idea and prevent from patenting basic knowledge (such as math formulas) and unembodied ideas (processes performed solely in the human mind or without the use of a machine).

The other two exclusions address natural phenomena, and specifically genes and other natural material as they exist in the human body and nature. Under the initial conception of patent eligibility as being “anything under the sun made by man,” these would be not patent eligible, as they are simply natural materials that exist without man’s intervention or creation.

## **Conclusion**

The ambiguity with respect to patent eligibility under section 101 is harming innovation in the United States, driving innovative firms and activity overseas where the laws are more clear. PERA is a much-needed solution to this issue, removing much of the uncertainty that the Supreme Court’s precedent has injected into this space. The predictability restored by PERA does not mean that everything and anything will be patented—there are other robust requirements before an invention is granted a patent, provided by sections 102, 103, and 112 of the Patent Act. Moreover, the statutory exclusions of PERA ensure that discoveries or ideas that were traditionally not eligible for patenting prior to 2010 are still not patent eligible. PERA resets the doctrine of patent eligibility to a time when innovation flourished in the United States; enacting PERA would allow that innovation to yet again flourish.



## Endnotes

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<sup>1</sup> 35 U.S.C. § 101.

<sup>2</sup> S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H. R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952).

<sup>3</sup> *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).

<sup>4</sup> See *id.*, (citing, *inter alia* *Parker v. Flook*, 437 U.S. 584 (1978) and *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)).

<sup>5</sup> *Bilski v. Kappos*, 561 U.S. 593 (2010); *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012), *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576 (2013); *Alice Corp. Pty. Ltd. v. CLS Bank International*, 573 U.S. 208 (2014).

<sup>6</sup> *Alice Corp.*, *supra* note 5, at 217-18 (citing *Mayo*, *supra* note 5, at 72-73).

<sup>7</sup> 35 U.S.C. § 102(a) (“A person shall be entitled to a patent unless the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention” or subject to a patent application filed by another before the effective filing date of the claimed invention.) There are exceptions in 102(b), but the focus is still ensuring that the invention being patented is new.

<sup>8</sup> 35 U.S.C. § 103 (“A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention would have been obvious ... to a person having ordinary skill in the art to which the claimed invention pertains. ...”).

<sup>9</sup> 35 U.S.C. § 112(a) (“The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same....”). Section 112(b) also requires the patentee to “particularly point[] out and distinctly claim[] the subject matter which the inventor ...regards as the invention.”

## ABOUT THE AUTHOR

**Kristen Jakobsen Osenga** joined C-IP<sup>2</sup> as a Senior Scholar in 2014 and as Senior Fellow for Innovation Policy in Spring 2023. She is Associate Dean of Academic Affairs and the Austin E. Owen Research Scholar & Professor of Law at University of Richmond School of Law, where she teaches and writes in the areas of intellectual property, patent law, law and language, and legislation and regulation. Her scholarship has focused on patent eligible subject matter, commercialization of patented innovation, and the intersection of law and linguistics in patent claim construction, among other aspects of patent law. Her scholarly articles can be downloaded [here](#). Dean Osenga is a frequent speaker at symposia on patent law and intellectual property and has made numerous presentations to academic, bar, and industry audiences. Prior to joining academia, she practiced patent law and clerked for Judge Richard Linn of the United States Court of Appeals for the Federal Circuit.

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