



## **CONGRESS MUST CORRECT INCOHERENT LAW REGARDING WHAT INVENTIONS ARE ELIGIBLE FOR PATENT PROTECTIONS**

Patent protections are the foundation of the U.S. competitive edge in global innovation, across technologies and industries. Since 1870, U.S. law has provided patent protections to an expansive array of inventions, encouraging exploration and discovery in all corners of science, engineering and medicine, and other disciplines. Section 101 of the Patent Act, which defines the categories of inventions eligible for patent protections, for nearly 150 years broadly offered patents to “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof . . . .”

Strong, predictable patent rights incentivize inventors to assume the risky investment of time and resources necessary to innovate. Patent owners are entitled to charge licensing fees in exchange for permission to use the patented invention, or to exclude others from using their invention altogether during the life of the patent. Patents thus permit innovators to recoup the investment they made in their R&D enterprise, perpetuating a cycle that rewards inventors for risk-taking and accelerates consumer access to innovative technologies. By providing an expiration date for all patents, the patent system ensures that technological solutions and breakthroughs are shared for all to use and serve as a foundation for further innovation.

Over the past decade, however, a series of Supreme Court decisions, culminating in *Alice Corp. v. CLS Bank*, has carved out entire categories of inventions from patent eligibility under Section 101, making it harder for innovators to obtain patents, defend them against challenge, or enforce them against infringement. In some cases, the Supreme Court’s jurisprudence, and its application by the lower courts and the U.S. Patent and Trademark Office, has effectively eliminated patent protections for entire industries, including medical diagnostics and software. By denying patent protections to U.S. researchers and inventors, the courts are driving innovative R&D overseas, threatening U.S. leadership in both global technology and innovation at precisely the time that China is seeking to challenge U.S. leadership, harming our national security.

### **Congress Must Enact Legislation to Clarify What Inventions are Eligible for Patent Protections and Secure the Leadership of U.S. Technologies in the Global Innovation Economy**

- Under the Supreme Court’s interpretation of Section 101, exactly which technologies are eligible for patent protections is unclear and unpredictable to inventors, difficult for patent examiners to apply, and applied inconsistently by the courts.
- Last year, one Federal Circuit judge wrote a dissent in a patent case calling patent eligibility law “incoherent,” and explaining that “[t]he law . . . renders it nearly impossible to know with any certainty whether the invention is or is not patent eligible.” *Interval Licensing v. AOL*, 896 F.3d 1335, 1348 (Fed. Cir. 2018) (Plager, J.).
- Former Federal Circuit Chief Judge Paul Michel has pointed out, “in scores of appeals, [the Federal Circuit] has struggled to make sense of the opaque Supreme Court decisions,” and has “introduced its own confusing notions and language.”

- The difficulty of identifying “abstract ideas” and “inventive concepts” demands legislation from Congress to clarify the rules surrounding patent eligibility. According to another Federal Circuit judge, “the law needs clarification by a higher authority, perhaps by Congress, to work its way out of what so many in the innovation field consider are § 101 problems . . . Section 101 issues certainly require attention beyond the power of this court.” *Berkheimer v. HP, Inc.*, 890 F.3d 1369, 1375 (Fed. Cir. 2018) (Lourie, J.).

### **Making Patent Eligibility Subject to the Whims of Patent Examiners and Judges, Places the United States at a Competitive Disadvantage in Global Innovation, and Threatens National Security**

- China, Europe, Korea, and other countries continue to grant patents for inventions the U.S. has deemed ineligible, ensuring that innovative companies and inventors that operate and patent in those jurisdictions have a competitive edge in global innovation. Foreign dominance of any critical technology presents significant national security concerns, as competitors, many with ties to hostile governments, control wireless networks, computer hardware, medical devices and other technologies used by individuals, businesses, and governments in the United States. The World Intellectual Property Organization (WIPO) recently reported that China is now rivaling the U.S. in the patenting of artificial intelligence technologies, potentially providing China with a competitive advantage in the further development and control of AI technology.
- In a recent [study](#), scholars at George Mason University examined nearly 18,000 patent applications filed in the U.S., Europe, and China, that were rejected in the United States on Section 101 grounds. The study found that of the almost 18,000 applications rejected and abandoned in the United States, nearly 1,700 were granted in Europe, China, or both.
- These findings are alarming. If U.S. companies and universities cannot obtain patent protections at home for groundbreaking technologies, they cannot compete globally. Instead, countries that do offer patent protections to those technologies will have an advantage in the patenting and commercialization of their technologies and cures.

### **The Supreme Court’s Decisions in *Bilski*, *Mayo*, and *Alice* Have Created Unfair and Unreliable Rules for Inventors, Patent Examiners, and Courts as to What Inventions are Eligible for Patents**

- Historically, Section 101 has served as an initial filter regarding the question of what is a patentable invention or discovery.
- Beginning in 2010, the Supreme Court began to carve out “judicial exceptions” to Section 101’s broad grant of patent rights.
  - In *Bilski v. Kappos*, 561 U.S. 593 (2010), the Supreme Court invalidated a patent for a method for hedging against the risk of price changes in commodities market, on the grounds that it was directed to an “abstract idea.”
  - In *Mayo Collaborative Servs. v. Prometheus Labs*, 132 S. Ct. 1289 (2012), the Supreme Court held invalid a patent for treating certain gastrointestinal autoimmune disorders, like Crohn’s Disease, because it was directed to a “law of nature.”

- In *Alice Corp. v. CLS Bank*, the Supreme Court established the current test for patent eligibility under Section 101. In addition to asking whether a patent is directed to an abstract idea, the Court’s test in *Alice* requires judges to identify an “inventive concept” in a patented invention before finding it eligible for patent protections.
- These cases invite patent examiners and judges to use their subjective judgment, rather than a clear legal standard, to determine whether an invention is “inventive” enough to merit patent protection, leading to rejected applications or invalidated patents for innovative inventions in multiple industries.

### ***Alice* and Its Predecessors Hinder Innovation by Limiting What Inventions are Eligible for Patents**

- Both the federal courts and the U.S. Patent and Trademark Office have used the *Alice* case to invalidate or decline to grant patents on innovative inventions.
- Last October, the U.S. District Court for the District of Massachusetts overturned a patent granted to CardioNet, the inventor of a new heart monitoring device that detected changes in the variability of heartbeat timing to detect heart disease. The court found that monitoring the irregularity of a heartbeat is an abstract idea, and the monitor operated by using a general computer, therefore the device was not eligible for a patent.
- In another example, the USPTO denied a patent to FotoNation, an imaging company, for technology that tracks an object or person that appears in a video stream. This technology had multiple potential applications—including assisting law enforcement in tracking criminal suspects moving through crowds on surveillance videos; helping military and civilian drones track objects on the ground; and improving the quality and stability of smartphone and other mobile videos—but was denied a patent under Section 101.
- Both CardioNet and FotoNation’s technologies were denied patent protections after years of R&D and the investment of time and money. These two examples demonstrate how innovation can be hindered by limiting what inventions are eligible for patents.