Questions for the Record from Senator Alex Padilla
Senate Judiciary Committee
"The Patent Eligibility Restoration Act – Restoring Clarity, Certainty, and Predictability to the U.S. Patent System"
Tuesday, January 23, 2024

Questions for David Jones, HTIA

1. **Mr. Jones, in your testimony you highlight categories of patents that you're concerned would be newly eligible under Section 101 should the *Patent Eligibility Restoration Act* (PERA) become law. Can you provide a concrete example of a patent that was deemed ineligible post Alice/Mayo that PERA would arguably make eligible that best illustrates the concerns with this legislation for your members? What impact would this new eligibility have on consumers?**

   Virtually all the patents that have been invalidated under *Alice* would be deemed eligible under PERA, so there are many concrete examples. Two of the more relatable are patents that were asserted against photographers that claimed, respectively, "a process for providing event photographs for inspection, selection and distribution via a computer network" and "a method for providing on-line event photographs includes the steps of capturing multiple photographs during an event, and associating identifying data with each photograph taken." Because a human being could not practically perform these processes without the use of a machine (*i.e.*, a computer and a camera in this case), both would appear to be eligible under PERA. The experience of one small business against whom these patents were asserted is described by Michael Skelps, the General Manager of Capstone Photography, in his op-ed that was published in the Hill.[1]

   Regarding the impact on consumers, the whole purpose of the patent system is to provide inventors with exclusive rights that allow them to constrain competition and charge higher prices. The increased profit from these higher prices is the incentive to innovate that is provided by the patent system. In a well-functioning patent system, the hope is that consumers will benefit more from the increased pace of innovation than they will be harmed by increased prices. Unfortunately, PERA would substantially increase prices to consumers without producing any significant countervailing benefits from innovation. This is because PERA would expand patent eligibility to non-technological fields, such as business methods, where patent protection has been shown to reduce rather than increase R&D investment.[2] Thus, the predictable impact of PERA on consumers would be to increase prices and reduce selection, while at the same time depriving them of the benefits they otherwise would have had from increased innovation.

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[1] Michael Skelps, *Supreme Court's Alice decision protected my small businesses from patent trolls*, The Hill, July 7, 2016; https://thehill.com/blogs/congress-blog/judicial/286691-supreme-courts-alice-decision-protected-my-small-businesses-from/.

[2] *See, e.g.*, Srinivasan, Sridhar, Do Weaker Patents Induce Greater Research Investments? (December 22, 2018); https://ssrn.com/abstract=3185148.

2. **During the hearing, you started to elaborate on the areas where you agreed with Mr. Mark Deem on the patent system affording insufficient intellectual property protection for worth rights. Can you elaborate on those areas of agreement?**

   In general, I agreed with Mr. Deem that it is difficult to obtain patent protection for diagnostics and that it did not seem appropriate for the technology he described to be subject to a subject matter eligibility rejection. Based on the USPTO data, it does appear that diagnostics is the one significant area other than business methods where there are systematic challenges in obtaining patent protection. However, there are strong differences of opinion regarding whether that reduction in patent protection has enhanced or deterred innovation in diagnostics.

3. **How does the approach to subject matter eligibility in PERA compare with that taken by other countries? And is there research showing a difference in quality and access to innovation for consumers, and ability to compete for innovators here in the U.S., relative to those jurisdictions?**

   PERA would expand the scope of patent eligibility in the U.S. far beyond that of any other jurisdiction by effectively eliminating any meaningful restrictions on statutory subject matter. Most other jurisdictions differ from PERA in two important ways.

   First, almost all other major jurisdictions have a technicity requirement in their patent laws. For example, the European Patent Convention allows patents in "fields of technology," China extends eligibility only to "technical solutions," and Japan allows patenting only of "technical ideas utilizing the laws of nature." In the U.S., a similar requirement has been imposed through the judicial exceptions to Section 101. PERA would eliminate all judicial exceptions, resulting in a scope of patent eligibility that is completely unprecedented in this country or any other.

   Second, almost all other major jurisdictions have broad statutory exceptions for non-technical subject matter like abstract ideas, aesthetic creations, the presentation of information, mental acts, and methods of doing business. The U.S. has historically had similar exclusions, but they are judicial rather than statutory. The explicit intent of PERA is that "[a]ll judicial exceptions to patent eligibility are [to be] eliminated." While PERA does contain a few statutory exclusions, it does not exclude many of the major categories that are excluded under foreign laws. And the handful of statutory exclusions that it does contain are so narrow as to be useless in practice. For example, the exclusion relating to mental processes would not apply if any step of the process occurs outside the human mind, which means that merely recording the result of a mental process would be sufficient to establish eligibility. In sum, PERA would result in the U.S. extending patent protection to categories of subject matter that to my knowledge have never been patent eligible in any country.

4. **Mr. Jones, in your written testimony, you claimed that current patent eligibility jurisprudence is predictable and encourages innovation. Most of the panelists**

disagreed with you. Would you please provide the empirical evidence and data that you believe shows that current law is predictable and encourages innovation?

As I noted in my testimony, the USPTO has published a study examining the application of section 101 that considered both patent-eligibility rejection rates and the variability of examiners' eligibility determinations.[3] This study found by 2020, both rejection rates and examiner variability were lower than they were before the *Alice* case was decided.[4] I also cited an academic study that examined all 368 patent eligibility decisions that were made by the Federal Circuit between 2012 and 2022.[5] The authors found that patent eligibility decisions by district courts and the Patent Trial and Appeal Board are affirmed at the high rate of 87%, indicating that eligibility determinations are (at least according to the Federal Circuit) overwhelmingly correct. Perhaps more importantly, the study also found that there was relatively little evidence of disagreement among Federal Circuit judges regarding how to apply the Supreme Court's patent-eligibility jurisprudence. As the authors noted in a summary of their study, "under one of the most well-established metrics for measuring the predictability in the law, § 101 proved to be *more predictable* than other areas of patent law over the past decade."[6] In my oral testimony, I further noted that the USPTO's own internal quality metrics indicate that Section 101 is the most accurately applied by examiners of the major statutory requirements.[7] I also cited a number of additional studies that indicated, *e.g.*, that *Alice* resulted in increased R&D investment[8] and that there was "a positive association between *Alice* and both R&D spending by software firms and patenting by firms that held relatively more software patents prior to the Court's opinion."[9] Finally, in previous testimony, I cited additional data and studies.[10]

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[3] *See* USPTO, Adjusting to *Alice*: USPTO patent examination outcomes after *Alice Corp. v. CLS Bank International* (April 2020).

[4] *See id.* at pp. 5-7.

[5] *See* Datzov, Nikola and Rantanen, Jason, Predictable Unpredictability (July 28, 2023). Available at SSRN: https://ssrn.com/abstract=4380434 or http://dx.doi.org/10.2139/ssrn.4380434.

[6] The Predictability of the Mayo/Alice Framework—A New Empirical Perspective, PatentlyO, Nov. 15, 2023 (emphasis added). For another academic expert's perspective on the predictability of the current jurisprudence, *see* Chris Holman, Further Thoughts on Patent Eligibility and Predictability, PatentlyO, Nov. 20, 2023 ("[I] was not surprised by [Rantanen and Datzov's] conclusion that the courts are generally applying the Supreme Court's patent eligibility precedent in a relatively predictable manner. I have not conducted such a systematic review of patent eligibility decisions, but over the years I have read quite a few of them, and for some time I have felt that I can usually predict which way the court will go in deciding these cases. . . . . Occasionally I am surprised by a decision, but from what I have seen the courts are generally treating the 'abstract ideas' exception as a bar to the patenting of non-technological innovations.").

[7] https://www.uspto.gov/sites/default/files/documents/MRF-data-FY23.xlsx

[8] Srinivasan, Sridhar, Do Weaker Patents Induce Greater Research Investments? (December 22, 2018). Available at SSRN: https://ssrn.com/abstract=3185148 or http://dx.doi.org/10.2139/ssrn.3185148.

[9] Helmers, Christian and Love, Brian J., Patent Law Reform and Innovation: An Empirical Assessment of the Last 20 Years (September 22, 2023); https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4580645.

[10] David W. Jones, Testimony Before the Subcommittee on Intellectual Property, "The State of Patent Eligibility in America: Part II," June 5, 2019.

In contrast, Director Kappos's testimony cited a trade press article, a student note, and an academic article reporting the results of an opinion survey conducted in 2017.[11] Notably, Director Kappos and others continue to cite this opinion survey prominently, despite the fact that venture capital investment data are now available for the seven years since the survey was conducted. Presumably, the proponents of PERA would cite the actual data rather than an outdated opinion survey if those data supported their contentions.

5. What is the experience of your member companies in obtaining patent protection in quantum computing in the U.S and in other jurisdictions?

HTIA member companies are among the top applicants and recipients of patents in the field of quantum computing.[12] None of my members report having any significant challenges obtaining appropriate patent protection in the U.S., although some have expressed concerns about their ability to obtain protection in other jurisdictions. This appears to hold for other patent applicants as well, given that "the US patent office remains the leader in quantum computing patents filed, with the number filed in China in 2nd place," with China receiving fewer than half of the quantum computing applications as the United States.[13]

6. How did Alice/Mayo impact patent litigation and how would PERA impact patent litigation?

The U.S. Supreme Court's decision in *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208 (2014), has had a tremendously beneficial effect on patent litigation in the United States. During the decade and a half before *Alice*, virtually any type of subject matter was patentable under the Federal Circuit's misguided decision in *State Street Bank & Trust Co. v. Signature Financial Grp*., Inc., 149 F.3d 1368 (Fed. Cir. 1998). *Alice* overruled *State Street* and returned the patent system to its roots. Under *Alice*, patents once again can only be obtained for improvements to technology.

Thus under *Alice*, patents can no longer be obtained or enforced for business methods and other human activities that have traditionally been outside the patent system. *Alice* has been robustly applied over the last decade to block patents for ideas such as running a type of business; for advertising and sales strategies; for investment schemes, ways of structuring a transaction, or financial instruments; and for copyrighted media content, games, and other forms of entertainment.

Alice has also restored the long-standing requirement, first articulated by the U.S. Supreme Court in *Corning v. Burden*, 56 U.S. 252 (1853), and *O'Reilly v. Morse*, 56 U.S.

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[11] David O. Taylor, Patent Eligibility and Investment, 41 Cardozo Law Review 2019 (2020); https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3340937.

[12] See, e.g., Elliott Mason, Quantum patent trends update: 2022 (February 13, 2023) (listing HTIA members as three of the top ten filers of quantum patents); https://quantumconsortium.org/blog/quantum-patent-trends-update-2022.

[13] *Id.*

62 (1853), that a patent must claim an actual *means* or *method* for achieving a result. Under this well-settled rule, it is improper for a patent to simply claim the *result* or *objective* itself, and thereby claim all possible means of achieving that objective (including those invented by others in the future). This rule prohibits, for example, software patents that end with a claim to "a module that solves for X"—and that can then be asserted against anyone who does the real work of figuring out the solution to problem X.

PERA would destroy all the progress made since the *Alice* decision. Under PERA, *any* type of subject matter—business methods, advertising techniques, legal contracts, games and entertainment, or claims to mere objectives or results—could be claimed in a patent so long as the invention cannot be "practically performed" without the use of a "machine or manufacture."

As witnesses testifying in support of PERA made clear at the January 23 Senate IP Subcommittee hearing, the "practically performed" test would mean that any process that requires communicating across long distances in "real time," or that requires storage and retrieval of large amounts of data—and thus practically requires the use of computers and electronic communications equipment—would become patent eligible. Under PERA, a patent would no longer need to describe and claim an *improvement* to technology. Rather, to be eligible, the patent need only *use* technology—including off-the-shelf technology that was developed by others.

PERA would also effectively overrule hundreds of decisions of the U.S. Court of Appeals for the Federal Circuit that have issued over the last ten years. It is difficult to fathom just how destabilizing PERA would be for the U.S. patent system and for the American manufacturing and technology sectors. The result would be enormous uncertainty for a broad spectrum of U.S. industries and billions of dollars in additional (and unnecessary) litigation costs, most of which would be passed along to American consumers in the form of higher prices.

Questions from Senator Tillis
for David Jones
Witness for the Senate Committee on the Judiciary Subcommittee on Intellectual Property
Hearing "The Patent Eligibility Restoration Act – Restoring Clarity, Certainty, and Predictability to the U.S. Patent System"

1. **In 2018 judges on the Federal Circuit issued a concurring opinion to the court's denial of *en banc* rehearing in *Berkheimer v. HP Inc.*, in which they stated that "the law needs clarification by higher authority, perhaps by Congress, to work its way out of what so many in the innovation field consider are [Section] 101 problems."**

   Has anything changed in your opinion since 2018 that would mitigate the concerns raised by these judges or have things actually gotten worse?

   The caselaw has become clearer since *Berkheimer*, and the *Berkheimer* decision itself has reduced the likelihood of success of a motion to dismiss based on patent eligibility, which mitigated one of the principal complaints that patent owners had expressed. So, by any objective standard, things clearly have not gotten worse. Additionally, as I indicated in my written and oral testimony, there is little or no *objective* evidence of any significant lack of clarity.

   I do, however, partially agree with Judge Lourie's concurrence in *Berkheimer*. He expressed the concern that the Supreme Court's decision in *Mayo* has been applied in a way that has substantially limited the potential for patent eligibility in the field of medical diagnostics. As I discussed in the hearing, I agree that the combination of the *Mayo* and *Myriad* decisions does appear to have significantly diminished the ability to obtain patent protection for diagnostic advances. However, I should also note that the question of whether that has been good or bad for innovation in diagnostics has been hotly debated by experts with far more experience in the field than I possess.

2. **In response to a March 2021 letter from myself and Senator Cotton, the USPTO launched the "Deferred Subject Matter Eligibility Response Pilot Program," which invited selected patent applicants to defer consideration of subject–matter eligibility issues until other patentability issues are resolved.**

   What are your thoughts on deferring consideration of subject–matter eligibility issues during patent examination?

   I have no particular concerns with deferring the determination of subject matter eligibility until near the end of examination so long as the proper standard is applied.

3.

   a. How has the current state of patent eligibility inhibited the development of next generation technologies?

The current state of patent eligibility hasn't inhibited the development of next generation technologies. HTIA member companies are at the forefront of technologies like AI and quantum computing, are among the largest patent owners in the world, and have experienced no negative effects from the current jurisprudence. In fact, the available data suggest that current patent eligibility law has advanced the development of next generation technologies.

b. What is the long-term technological and economic impact of the current eligibility jurisprudence?

Both the long-term technological and economic impacts are strongly positive. For further discussion, please see my written testimony and my prior testimony to the Subcommittee.[1]

c. Can you quantify, in easy to understand terms, the economic impact of the current state of patent eligibility?

A recent study confirmed that there has been "a positive association between *Alice* and both R&D spending by software firms and patenting by firms that held relatively more software patents prior to the Court's opinion."[2] So, the impact has been positive for innovation, which is positive for long-term economic growth.

d. In other words, how much is the current uncertainty costing our economy in terms of jobs, innovation, and development?

The premise of this question is simply false. As discussed in my written testimony, there is no reliable evidence of any significant uncertainty or economic cost. I cited USPTO's own rejection rates, the USPTO's own internal quality metrics, an empirical analysis by respected academics, and various other objective indicators that suggest there is no problem. In contrast, those contending that substantial uncertainty exists have relied on statements of opinion, press articles, and an outdated opinion survey. Given that they have had a decade to do so, I would assume that these advocates would have produced objective evidence supporting their position if such evidence existed.

4. One of the key concerns from innovators is that, absent additional clarity in this space, we're going to start seeing American companies start developing their inventions overseas in jurisdictions which have broader standards of patent eligibility.

Do you agree with that concern and, if you do, what evidence have you seen to suggest that technological inversion is already occurring?

The TRIPS agreement requires that all signatories treat foreign inventors and patent owners exactly the same as domestic ones. This means that an American company would gain absolutely no legal advantage from moving its development activities to another country

[1] David W. Jones, Testimony Before the Subcommittee on Intellectual Property, "The State of Patent Eligibility in America: Part II," June 5, 2019.

[2] Christian Helmers & Brian J. Love, *Patent Law Reform and Innovation: An Empirical Assessment of the Last 20 Years; https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4580645.*

because it would be treated no differently by the U.S. or any of the other 163 signatories. So, to the extent that this could theoretically be a problem, there would have to be a concern that American companies were moving development to one of the very small number of non-signatory countries, which is simply not the case.

5. I understand that the current patent eligibility jurisprudence may be working and producing results that are beneficial specifically for the high-tech sector.

However, how can we modify our legislation to fix the very real problem in life-sciences without harming the innovative companies that you represent?

As an initial matter, it is not just the high-tech sector that appears to be benefiting from the current patent eligibility jurisprudence. The *Alice* decision appears to have provided benefits across multiple industries, including retail, financial services, hospitality, and manufacturing. In fact, the industries that have benefitted appear to account for significantly more than half of the U.S. economy.

There are at least two ways to modify your legislation to address problems in the life sciences without harming those outside of life sciences. The first is to abrogate only the caselaw on laws of nature and products of nature, while leaving the precedents on abstract ideas intact. The second would be to create a separate, *sui generis* form of protection for any fields with the life sciences that you believe have been negatively affected, as discussed in my testimony.

6.

a. Are there any changes to patent examination practices that we should consider coupling with patent eligibility reform?

In general, improving the rigor and accuracy of examination would be beneficial, but mere changes to examination practices would do little to ameliorate the harm that would result from PERA.

b. In 2019, we discussed potential changes to written description, scope, and enablement in Section 112.

Are there other areas of the patent examination process we should consider amending in order to address "low quality" patents?

Yes. If PERA were enacted, it would be essential to amend Section 103 to require an advance in technology along the lines of the redlined language reproduced below. Most other jurisdictions have this type of limitation as an aspect of eligibility or obviousness. PERA would abrogate the caselaw that has generally operated to limit patent protection to technological inventions. Absent a "technicity" requirement in Section 101 or an "advance in technology" type of requirement in Section 103, PERA would extend patentability to almost all non-technological subject matter, which would result in the U.S. being completely

out of step with international norms and would also foment chaos at the USPTO and in district court litigation.

§ 103. - Conditions for patentability; non-obvious subject matter

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 as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. **A patent shall not be obtained unless the claimed invention discloses a non-obvious contribution over the prior art within the field of technology to which the claimed invention pertains.** Patentability shall not be negated by the manner in which the invention was made. **In determining whether a claimed invention is patentable under this section, non-obviousness shall be determined without consideration of or regard to any non-technological feature of the claimed invention or any non-technological difference over the prior art.**

7. **PERA relies on language that some have suggested are undefined and/or that should not be left to the courts to weigh in on. For example, terms such as "substantially" and "practically."**

What are your thoughts on this?

As discussed in my testimony, in my view the term "practically" in the new "practically performed" test would lead to a level of systematic unpredictability orders of magnitude worse than anything experienced under the current jurisprudence. The notion that eligibility in many cases would turn on a question of fact like whether a claimed process can be practically performed without the use of a machine or manufacture seems extremely ill-advised.