SIIA Accelerating Innovation in Technology, Data & Media

"The State of Patent Eligibility: Part II"

Statement of Christopher A. Mohr
Vice President for Intellectual Property and General Counsel

Software and Information Industry Association

Before the Senate Committee on the Judiciary

Subcommittee on Intellectual Property

June 5, 2019

Introduction

Mr. Chairman, Ranking Member, and members of the Committee, on behalf of the Software and Information Industry Association (SIIA) and its members, thank you for this opportunity to testify before you today on changes to section 101 of title 35. At the outset, we wish to commend the Committee and its staff for the transparency and effort that they expended in the round tables that resulted in this discussion draft. SIIA was grateful to be part of that process, and looks forward to working with the Committee as it considers statutory patent eligibility.

SIIA is the principal U.S. trade association for the software and digital content industries. With over 800 member companies, SIIA is the largest association of software and content publishers in the country. Our members range from start-up firms to some of the largest and most recognizable corporations in the world. The innovative companies that make up SIIA's membership rely on patents to protect their inventions, but also depend on the ability to manufacture, develop, and sell their products free from improper assertions of exclusive rights. Consequently, SIIA's members are involved in patent litigation as both patentees and accused infringers; they cannot be categorized as generally plaintiffs or generally defendants.

SIIA members have benefited greatly from the patents they own. Yet they also rely on the limits of patent protection, as those limits preserve and protect their ability to innovate. As such, SIIA's collective membership sits at the crossroads of the countervailing interests in many of the ongoing intellectual property debates in recent years. Our members are keenly focused on issues surrounding intellectual property protection and the effect of IP laws on the pace-setting companies in our digital age. Patent eligibility is central to those issues.

SIIA welcomed the Supreme Court's unanimous *Alice* decision, which applied one of the oldest established doctrines in that area.[1] In that case, the Court considered the validity of a patent on a computerized method of exchanging financial obligations between two parties using a third party intermediary to mitigate settlement risk, using a two part-test to determine whether the method was eligible for patent protection. First, the court asks whether the claim at issue

---

[1] Alice Corp. Pty. v. CLS Bank Int'l, 573 U.S. 208 (2014).

were directed at a "patent-ineligible concept."[2] If yes, then the inquiry turns to whether the claim "contains an 'inventive concept' sufficient to 'transfor' the claimed abstract idea into a patent-eligible application."[3] Under step two, the court was careful to distinguish between those claims that merely appended "conventional steps" or a token reference to a generic computer to the abstract idea, and those that "improved an existing technological process."[4]

Our members depend on a sound and stable intellectual property system. The patent eligibility requirement in 35 U.S.C. § 101 and the Supreme Court's interpretation of that requirement for over two centuries have helped ensure that patents support rather than hinder innovation, which is of critical importance to the software industry. The case law's focus on requiring a software patent (and other computer implemented inventions) to claim an improvement in computer technology or recite a technical solution to a technical problem supports innovation in software. Patents devoid of any technical contribution often block those who seek to make true technical advances. Rather than spurring innovation, patents on non-technical subject matter are an impediment because they contribute nothing to the progress of technology while imposing a tax on software innovators through unnecessary litigation and licensing.

The *Alice* decision had both substantive and procedural benefits. Procedurally, it sometimes enabled the invalidation of non-technological patents at the motion to dismiss stage of litigation, rather than at the end of discovery, or on summary judgment, prior to an expensive trial.[5] This is possible, for instance, when the patent is clear on its face that the claimed invention involves no purported advance in technology.

Substantively, it prevented the claiming of a variety of ordinary activities "on a computer" and freed up innovation in the software industry. At the same time, however, it permitted important patents to issue on true technical innovations, rewarding our members for their material contributions to technological fields. SIIA views the decision as a natural and beneficial evolution of the patent law that helpfully illuminates the bounds of patentable subject matter for computer-implemented inventions.

---

2 *Id.* at 218.

3 *Id.* at 221.

4 Alice, 208 U.S. at 223.

5 Berkheimer v. HP Inc., 881 F.3d 1360, 1368 (Fed. Cir. 2018).

It with these general principles in mind that we discuss the discussion draft, which makes several fundamental and sweeping changes to the law of patent eligibility.

SIIA opposes the discussion draft for several reasons. First, the data does not support the need for such a sweeping change, as software innovation has flourished under the *Alice* decision. Investment continues to flow into research and development in the internet and software sectors. In our view, that investment environment is not an accident: the case law that has developed in *Alice's* wake essentially requires patent claims to recite a technical solution to a technical problem or an improvement in the relevant technology in order for claims to be patent-eligible.

Second, even assuming *arguendo* that some need for amendment of Section 101 existed—and we do not speak for any interests beyond those in the software sector—the draft bill's simplicity of language belies the complexities and harms that await when its language is applied to our members' activities. It would turn back the clock and enable the patenting of non-technical business methods claimed "on a computer," encouraging the type of low-quality business method patents that plagued the industry prior to the *Alice* decision. And, under the guise of creating certainty, it would adopt a test that invites a whole new raft of litigation and examiner confusion over the meaning of "usefulness." While we appreciate the effort that the draft makes to improve section 112, these changes are insufficient to overcome our concerns over the enormous uncertainty created by the bill's provisions and—as applied to the software and information industries—the premise from which the draft springs.

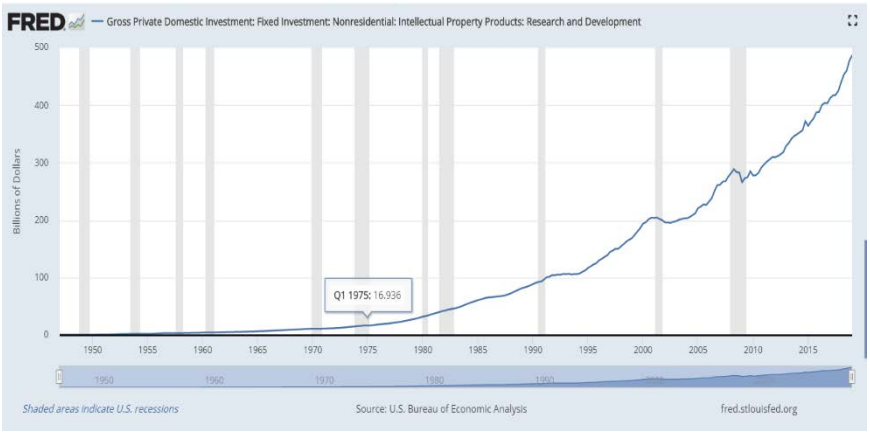
The balance of SIIA's testimony discusses these concerns.

I. Since Alice, Investment in Software and Technology is Booming.

The intellectual property system is the proverbial goose that is laying golden eggs. Before jettisoning two hundred years of precedent governing the basic question of eligibility, one would expect to see a patent system in crisis. If section 101 jurisprudence were stifling innovation broadly, one would expect to see employment, wages and investment declining. The opposite has occurred.

A. Research and Development Has Continued on an Upward Trend

Fixed investment into intellectual property products is decidedly on an upward slope that has steepened since the Alice decision: [6]



In 2015 alone, R&D investments in the software and internet industry grew faster than any other industry: "[s]oftware & Internet [R&D spending] grew at over 27%, far greater than the growth of all other industries from 2014 to 2015."[7] And that spending is increasing as a percentage of R&D generally, from 15% of total R&D spending in 2010 to 24% in 2020.[8] Companies that reported faster revenue growth than their competitors allocated more R&D investment to software.[9] That same positive trajectory is on the startup side as well: since 2014, venture capital funding for startup software and internet companies is up by 88% compared to the three years prior.[10] And in 2016, venture capital raised $41.6 billion for startups, the highest amount in 10 years.[11]

---

6 Federal Reserve Economic Data, https://fred.stlouisfed.org/series/Y006RC1Q027SBEA#0

7 PwC, 2015 Global Innovation 1000: Innovation's New World Order at 14, October 2015.

8 (PWC, 2016 Global Innovation 1000, October 2016).

9 PWC, 2016 Global Innovation 1000, October 2016.

10 PwC / CBInsights MoneyTree™ data explore, available at http://www.pwc.com/moneytree (showing that U.S. VC funding for internet and software companies totaled $55.13B for Q2 2011-Q2 2014; funding for Q3 2014-Q3 2017 totaled $104.22B).

11 (2017 NVCA Yearbook). See also Patent Progress, Innovation is Alive and Well,

The picture of the American IP system is a resoundingly healthy one. R&D, venture funding, startup activity and even the number of patent filings have been on a steady climb since 2012.[12] And as applied to software specifically, a recent paper found that since 2014-when *Alice* was decided, "firms exposed to *Alice* decreased their patenting activity but increased their R&D expenditure (scaled by assets) relative to firms unaffected by Alice."[13] Rather than expend resources on defensive filings, technology firms are instead pushing those resources back into innovation.[14]

B. Alice is Rarely a Bar to Patentability

Alternatively, if *Alice* were creating a material bar to claiming patents, one might reasonably expect that the number of rejections based on section 101 would increase in the years since it was decided. But analysis of the data as released by the PTO does not support that as a general matter. An analysis of the number of patent applications that were abandoned between 2010 (the year that the Supreme Court decided *In re Bilski* rejecting a patent on an abstract idea) and mid-2017 rejections demonstrate that section 101 is rarely a cause of rejection:

---

https://www.patentprogress.org/2018/02/08/innovation-alive-well-rd/.

[12] High Tech Inventors Alliance, Innovation is Thriving, available at https://docs.wixstatic.com/ugd/3929b0_74c746db8c9e4cf9ad37421bb614ec02.pdf.

[13] Sridhar Srinivasan, Do Weaker Patents Induce Greater Research Investments?, at 2 (Dec. 2 2018), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3185148.

[14] *See id.* at 5.

Source: Patent Progress[15]

This data shows that of the roughly 64,600 applications that received a rejection from an examiner based on section 101, that rejection served as the sole basis for abandonment only 3.3% of the time.[16] Often, the Section 101 rejection was overcome. When other grounds of rejection are considered, only 9.9% of the time does an application that had an initial 101 rejection still face that rejection at abandonment.[17] And of course, the number of applications that percentage is based on – those that faced a Section 101 rejection initially – is only a small percentage of the more than 600,000 applications typically filed in a year.

Most of the increased rejections based on Section 101 since the *Bilski* and *Alice* decisions relate to business method claims, and applicants seeking claims outside this area typically face little or no risk of a Section 101 rejection. [18] In the field of artificial intelligence, the number of applications more than doubled in 2018, continuing a trend going back to

---

15 Josh Landau, The Alice Drizzle—Barely Even Noticeable, Patent Progress, available at https://www.patentprogress.org/2018/01/10/alice-drizzle-barely-even-noticeable/.

16 *Id.*

17 *Id.*

18 Increase In § 101 Rejections Due Almost Entirely To Rejected Business Methods, available at https://www.patentprogress.org/2018/12/06/increase-in-§ (Dec. 6 2018).

when *Alice* was decided.[19] This data confirms our members' experience: current law is working for the software industry, and is fostering innovation.

To the extent that the Committee intends the discussion draft to provide patent protection to specific areas in the diagnostics and life sciences, this would be most effectively accomplished by focusing legislative changes towards those particular areas. Changes to patent eligibility should be narrowly-tailored to address specific problems rather than engender disruption to stakeholders—like SIIA's members—who are not experiencing any significant challenges as a result of existing eligibility case law.

II. The Federal Circuit Jurisprudence is Predictable.

Although we acknowledge the criticisms of the current approach to patent eligibility, the benefits of *Alice* have outweighed any negative policy impact in the software and information industries. The *Alice* test and the lower courts' implementation of it has refocused the eligibility analysis on technological improvements, aligning the doctrine of subject matter eligibility as it applies to software patents with the purposes of the patent system to promote technical innovation. Despite the hue and cry in some quarters, reports of software innovation's death were greatly exaggerated.

Federal Circuit decisions have established guideposts from which the software members can make informed decisions about which of their inventions will be protected, and which will not. In the wake of the *Alice* decision, the Federal Circuit has focused the 101 inquiry on whether the patent claims describe an improvement in how computers or other technology functions.

Claims found to be abstract ideas and, therefore, patent-ineligible share certain key characteristics. For example, claims that lack any restrictions on how a result might be obtained are typically ineligible.[20] A claim that describes advertising on the internet without a particular concrete and

---

[19] *See, e.g.,* George Leopold, *ML Patent Apps Still Soaring*, datanami, *February 27, 2019* (reporting a 116% increase in 2018), https://www.datanami.com/2019/02/27/ml-patent-apps-still-soaring/.

[20] *See Internet Patents,* 790 F.3d at 1348 (denying a patent on the "back" and "forward" buttons on a browser without data loss, but without describing how the result is accomplished).

technological means to accomplish that will fail,[21] as will claims to information processing that are untethered to specific technology, or that could be performed with a pencil and paper.[22] Other areas where claims are frequently found to be abstract and therefore ineligible include methods of organizing human activity, such as the rules of games,[23] fundamental economic principles,[24] and printed matter.[25]

These categories of abstract ideas, which have been developed over centuries, function to exclude non-technological subject matter from patenting. Indeed, the lower courts' analysis of the claim subject matter recites an abstract idea within one of these categories focuses on the question of whether the claim also recites an improvement to the relevant technology. The categories help ensure that only those who have contributed to their art by advancing technology receive the patent's reward. They also discourage overbroad, preemptive claims, and require patentees to focus claim language on the technological solution that they created.

III. The Discussion Draft Radically Rewrites the Law of Patent Eligibility

The discussion draft jettisons these historical principles. First, the draft expressly abrogates over two hundred years of precedent on abstract ideas and other implicit exceptions to eligibility. Second, the draft removes the words "new and" from the general description of patent eligibility of section 101, making any "useful process, machine, manufacture or composition of matter, or any useful improvement thereof," and requires the courts to consider the claimed invention as a whole, without disregarding any claim limitation. It also creates a rule of construction in favor of eligibility, and bars

---

21 *See* Ultramercial, Inc. v. Hulu, LLC, 772 F.3d 709, 715-16 (Fed. Cir. 2014)

22 *E.g.,* Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co., 916 F.3d 1363, 1366 (Fed. Cir. 2019) (streaming data from bedside medical device to a screen); Return Mail, Inc. v. United States Postal Serv., 868 F.3d 1350, 1367 (Fed. Cir. 2017) (patent claiming the encoding of particular pieces of mail for return service), cert. granted in part sub nom. Return Mail, Inc. v. U.S. Postal Serv., 139 S. Ct. 397, 202 L. Ed. 2d 309 (2018)

23 *See* In re Marco Guldenaar Holding B.V., 911 F.3d 1157, 1159 (Fed. Cir. 2018) (rejecting patent claims in dice games).

24 *E.g.,* Credit Acceptance Corp. v. Westlake Servs., 859 F.3d 1044, 1054 (Fed. Cir. 2017).

25 *E.g.,* In re Jie Xiao, 462 F. App'x 947, 951 (Fed. Cir. 2011) (excluding wild card characters on tumbler lock as printed matter).

judges from basing the determination of eligibility on any consideration relevant to section 112 (indefiniteness), 102 (novelty), or 103 (non-obviousness).

Third, it adds a definition of "useful" to section 100, stating that it means "any invention or discovery that provides specific and practical utility in any field of technology through human intervention."

And fourth, it amends section 112 to require a claim element expressed as a specified function without the recital of structure and material to be construed to cover the structure, material or acts described in the specification.

Solidifying changes to section 112 notwithstanding, the draft's approach represents an even more aggressive, overbroad, and one-sided approach than was discussed during the round tables. There, staff proposed—and then abandoned—a truncated list of excluded subject matter on the basis that it would lead to litigation and uncertainty over what these terms actually meant. That approach could have—at least in theory—prevented some harm from an overbroad eligibility standard by targeting the expansion towards the life sciences and prevented the recurrence of the kinds of overbroad business method claims that plagued the technology sector before the *Alice* decision.

A. The Draft Removes the Patent Law's Focus on Finding a Purported Improvement in the Relevant Technology, such as a Technological Solution to a Technological Problem.

Unfortunately, the draft omits that already under-inclusive list, abrogated all prior case law, rejected any kind of practical application test, and took a less desirable approach. It removes the word "new" from section 101 and replaces it with a mandate that section 101 is to be construed to favor eligibility. The main limitations on eligibility appear in the draft's definition of "useful," which is defined as an invention that provides "specific and practical utility in any field of technology through human intervention."

The draft's language of "specific and practical" utility has a history in the patent law that can be traced to cases involving chemical compounds that require those compounds to have a function: mere discovery or creation is not enough.[26]

---

[26] See, e.g., Brenner v. Manson, 383 U.S. 519, 529 (1966) (denying patent protection for lack of "specific utility"); Anderson v.

The utility requirement, however, forms only a "low barrier to utility in most cases,"[27] and constitutes a "low barrier to patentability."[28]

That expansion is not helped by inclusion of the phrases "field of technology" or "human intervention." Those phrases have no established meaning other than their plain ones, and litigation will ensue over their breadth—creating the same kinds of uncertainty and litigation exist now. For example, the language could easily be read to encompass a method for playing board games on a computer, or for filming a cooking show. A patent on a "forward and back" button can enable browsers to go between web pages, and would not exist or operate but for human intervention. The same could be said for hedging strategies employed "on a computer." According to the draft, the fact that conventional means are used for those hedging strategy does not bar eligibility, and in any close case the court must find in favor of eligibility. In short, this language does not (and does not appear intended to) maintain the focus of eligibility law on whether a claim reflects a technical solution to a technical problem.

The fact that some bad patents might be detected as non-novel or obvious is not a panacea. Although we appreciate the clarifying changes that were made to section 112, the language appears to do little more than cement the Federal Circuit's *Williamson v. Citrix* decision,[29] which overruled prior Federal Circuit case law holding that in the absence of the word "means," a "strong" presumption existed that section 112(f) did not apply.

This codification, while helpful, is insufficient to overcome SIIA's concerns that the discussion draft's approach will lead to a recurrence of overbroad business method patents that plagued the patent system and the courts before the *Alice* decision came down. In order for this kind of expansion of section 101 to be workable for the software and information industries, it must be accompanied by sweeping changes to other sections of the patent law that would prohibit the claiming of non-technical subject matter, and permit challenges

---

Natta, 480 F.2d 1392, 1395 (C.C.P.A. 1973) (rejecting for failure to show specific and practical utility).

[27] See generally 2 Moy's Walker on Patents § 6:1 (4th ed.)

[28] *Id.* § 6:8.

[29] Williamson v. Citrix Online, LLC, 792 F. 3d 1339 (Fed. Cir. 2015) (overruling prior case law creating a

to eligibility as a matter of law. In the absence of those changes, we must oppose enactment of the draft.

Conclusion

The main objections to the *Alice* regime stem from the fact that the cases consider issues arising under section 102 and 103, which is illogical. There is, however, an old saying that the life of the law is not logic, but experience. The software and information industry's experience with the abstract idea doctrine and *Alice* in particular has been a positive one. Disposing of that historic doctrine in the absence of evidence of harm to the industry seems to us to be unwise.

Thank you again for the opportunity to testify and for the effort to obtain diverging views on this issue. We look forward to working with you as this process continues.

Respectfully submitted,

Christopher A. Mohr

Vice President for Intellectual Property and General Counsel