



**COMMENTS OF PUBLIC KNOWLEDGE REGARDING REQUEST FOR COMMENTS RELATED TO
PATENT SUBJECT MATTER ELIGIBILITY**

Docket No. PTO–P–2016–0041

Public Knowledge respectfully submits the following comments in response to USPTO’s Request for Comments dated October 17, 2016, addressing the topics of Roundtable 2 (“Exploring the Legal Contours of Patent Subject Matter Eligibility”). Public Knowledge is a non-profit organization that is dedicated to preserving the openness of the Internet and the public’s access to knowledge, promoting creativity through balanced intellectual property rights, and upholding the rights of consumers to use innovative technology lawfully.

I. Introduction

The requirement of subject matter eligibility under 35 U.S.C. § 101 is a pillar of U.S. patent law, crucial to ensuring that it ultimately serves its constitutional purpose to “promote the Progress of Science and useful Arts.” As interpreted and applied under *Alice Corp. v. CLS Bank Int’l*,¹ § 101 helps to address some of the patent system’s most vexing problems in the Information Age, to the benefit of consumers, entrepreneurs, innovators and many other stakeholders.

These comments make three central points:

- Under *Alice*, § 101 is proving to be an effective check against the harms caused by many patents on software and/or business methods, while not categorically excluding such fields from patent eligibility.
- Lower courts have and will continue to develop the contours of the *Alice* framework, adding more concrete and predictable guidance for comparable types of inventions and patent claims.

¹ 124 S. Ct. 2347 (2014).

- Other provisions of patent law cannot serve as an effective replacement for the “threshold” patent-eligibility inquiry of § 101.²

For these reasons, legislative efforts to revise § 101 are both unnecessary and unwise.

II. Under *Alice*, Section 101 Provides a Necessary and Effective Safeguard Against Harmful Software and Business Method Patents

It is widely recognized that patents covering software, information technologies, and business methods have been at the center of the patent system’s most intractable problems over the past two decades—from the issuance of too many low-quality patents to the proliferation of bad-faith litigation by non-practicing entities to the dense and unpredictable patent thickets that have enveloped many important products and services.³ This recent history has taught us that software patents often have overbroad claims, are not examined with the most material prior art, and confound the reliable application of requirements for patentability, such as obviousness and definiteness.⁴ There are good reasons to doubt that many software patents advance innovation or any other policy goal, with a substantial academic literature questioning their necessity and net value to society.⁵

Under *Alice*, subject matter eligibility has re-emerged as an important defensive tool against many harmful software and business method patents. Data from the last two years shows that a significant number of such patents and patent applications have been invalidated or rejected for claiming patent-ineligible subject matter.⁶ For example, a recent study of

² *Bilski v. Kappos*, 561 U.S. 593, 602 (2010).

³ See Colleen V. Chien, *Reforming Software Patents*, 50 HOUS. L. REV. 325, 356–360 (2012); Gerard N. Magliocca, *Patenting the Curve Ball: Business Methods and Industry Norms*, 2009 BYU L. REV. 875, 891 (2009); John R. Allison & Starling D. Hunter, *On the Feasibility of Improving Patent Quality One Technology at a Time: The Case of Business Methods*, 21 BERKELEY TECH. L.J. 729, 730–31 (2006).

⁴ See James Bessen & Michael Meurer, PATENT FAILURE 23 (2008); (noting a “fundamental uncertainty over the boundaries of [software] patents”); Magliocca, *supra* note 2, at 887–88.

⁵ *E.g.*, Bessen & Meurer, *supra* note 4 at 150–55 (2008); see also Charles Duan, A FIVE PART PLAN FOR PATENT REFORM 4 (Public Knowledge 2014), available at <http://fordhamconference.com/wp-content/uploads/2014/10/8A-6-Duan-Charles.pdf>.

⁶ See Lincoln Essig and Damien Howard, *Impact of the USPTO Examination Guidelines on Software Patents Post-Alice* (Knobbe Martens, September 2, 2016), available at https://www.knobbe.com/news/2016/09/impact-uspto-examination-guidelines-software-patents-post-alice#_ftn5 (in art units most susceptible to concerns about subject matter

infringement actions found that 76% of defendants' motions to dismiss under *Alice* were granted when filed in the initial stages of litigation.⁷ Reviews of specific rejections and invalidations under *Alice* show example after example of patents that broadly claimed relatively simple concepts, such as "a patent on the concept of using a computer to help users plan meals while achieving dieting goals," and "a patent that claimed the concept of running a bingo game on a computer."⁸

§ 101 is not only valuable as a shield against specific harmful patents. More broadly, limits on patent subject matter eligibility protect the interests of consumers in the patent system. Problematic patents can "harm competition and hinder innovation by forcing market participants to pay licensing royalties, incur substantial legal expense to defend against infringement claims, engage in design-around efforts that raise costs and/or hinder product performance," all of which are costs that can be passed onto end customers in the form of higher prices and/or lower quality goods and services.⁹ Furthermore, apart from the rejection and invalidation of harmful patents, *Alice* likely serves other policy goals. For example, there is

eligibility, finding that over 80% of issued patents received a rejection under § 101 during examination); see also Tristan Gray-Le Coz and Charles Duan, *Apply It to the USPTO: Review of the Implementation of Alice v. CLS Bank in Patent Examination*, 2014 PATENTLY-O PATENT L.J. 1, 2 (2014), available at <http://patentlyo.com/media/2014/11/GrayLeCozDuan.pdf> (finding that, after issuing new examination guidelines under *Alice* in 2014, USPTO withdrew 830 patent applications from allowance).

⁷ Susan Decker, *When a Tech Patent Is Neither*, BLOOMBERGBUSINESSWEEK (Aug. 17, 2016), available at <https://www.bloomberg.com/news/articles/2016-08-17/why-hundreds-of-software-patents-are-being-thrown-out> (reporting a "66 percent success rate" when motions are filed in later stages of litigation, and also reporting that "[c]ourts have invalidated more than 370 software patents" under *Alice*); see also Robert R. Sache, *Two Years After Alice: A Survey of the Impact of a 'Minor Case' (Part 1)* (BilskiBlog Jun. 16, 2016), available at <http://www.bilskiblog.com/blog/2016/06/two-years-after-alice-a-survey-of-the-impact-of-a-minor-case.html>.

⁸ Timothy B. Lee, *Software patents are crumbling, thanks to the Supreme Court*, Vox (Sept. 12, 2014) available at <http://www.vox.com/2014/9/12/6138483/software-patents-are-crumbling-thanks-to-the-supreme-court>; see also Gray-Le Coz and Duan, *supra* note 6, at 4–7; Daniel Nazer, *Happy Birthday Alice: Two Years Busting Bad Software Patents*, Electronic Frontier Foundation (Electronic Frontier Foundation Jun. 20, 2016), available at <https://www.eff.org/deeplinks/2016/06/happy-birthday-alice-two-years-busting-bad-software-patents>.

⁹ Carl Shapiro, *Patent System Reform: Economic Analysis and Critique*, 19 BERKELEY TECH. L.J. 3, 1017, 1019 (Summer 2004).

some evidence that *Alice* may boost the “informational value of patents” by creating additional incentives for applicants to improve both the disclosure in their specifications and the specificity of their claims.¹⁰

III. Federal Courts Should Be Allowed to Continue Developing Post-*Alice* Case Law Without Legislative Intervention

In the two-and-a-half years since *Alice* was decided, both the Federal Circuit and district courts have applied § 101 and the exception of abstract ideas in a wide variety of cases. In the process, they have built upon *Alice*’s core framework, providing more concrete and predictable guidance on the contours of subject matter eligibility, especially when applied to certain types of inventions, patent claims, and issues that may arise in comparable cases. For example, in *Enfish, LLC v. Microsoft Corp.*,¹¹ the Federal Circuit found that software-related claims were not “directed to an abstract idea under step one of the *Alice* analysis” because they were “directed to a specific improvement computer functionality,” as opposed to “a situation where general-purpose computer components are added post-hoc to a fundamental economic practice or mathematical equation.”¹² This is not to say that all ambiguities and tensions have been resolved in the law of patent-eligible subject matter, but they are best addressed through the ongoing development of case law. In this regard, USPTO should consider how to foster and accelerate this process—for example, by allowing section 101 challenges to be raised in *inter partes* reviews.

Especially given the continuing judicial attention to subject matter eligibility, a legislative effort to revise section 101 would be unwise. When it enacted the America Invents Act,¹³ Congress wisely decided to leave alone several major provisions of the Patent Act, to avoid the risk that even minor changes could unsettle decades of established law while also preventing further refinements through case law. This sort of forbearance is appropriate for § 101 at the present time.

¹⁰ Clark D. Asay, *The Informational Value of Patents*, 31 BERKELEY TECH. L.J. 259, 312-313 (2016).

¹¹ 822 F.3d 1327 (Fed. Cir. 2016).

¹² *Id.* at 1328-29 (Fed. Cir. 2016); *see also OIP Technologies, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015).

¹³ PUB. L. 112-29.

IV. Other Patentability Requirements Do Not Fulfill the Purposes of § 101

Some critics of *Alice* have suggested that the purposes of behind § 101 are more appropriately addressed through other provisions of the Patent Act—for example, by rejecting broad patent claims on simple functional concepts as obvious under § 103. This is incorrect. Even where other patentability requirements could theoretically do the work of § 101, there are strong reasons to doubt their practical effectiveness. To begin with, none of these other provisions prevented the issuance over the past twenty years of an enormous number of low-quality patents covering software and electronic commerce. In many different ways, the examination process can structurally favor the patent applicant, allowing dubious claims to overcome well-grounded rejections.¹⁴ This is especially true for difficult questions such as obviousness, where a “large margin of uncertainty” as well as a “lack of information, asymmetric incentives to challenge grants and rejections, asymmetric numbers of obvious and nonobvious applications, budgetary incentives, and examiner count incentives” can all conspire in favor of allowing claims that should be rejected.¹⁵

The practical barriers to invalidating a patent are even higher in litigation. Most grounds for invalidity are questions of fact that cannot be resolved until deep into a case, requiring major investments of time and money to pursue. Many patent plaintiffs, including most non-practicing entities, will structure their litigation and settlement strategies to avoid any such adjudication.¹⁶ And of course, a patent defendant must overcome the presumption of validity with clear and convincing evidence—a difficult standard to meet whether on summary judgment or at trial.

This is why § 101 plays a unique role, apart from other requirements for patentability. It imposes a “threshold condition” to the availability of a patent, “however useful, novel, and nonobvious” an invention may be.¹⁷ While declining categorical exclusions of business methods and software patents, the Supreme Court has correctly recognized that the problems of

¹⁴ Roger Allan Ford, *The Patent Spiral*, 164 U. PA. L. REV. 827, 830-31 (2016).

¹⁵ Wen Xue, *Obviousness Guidance at the PTO*, 5 NYU J. INTELL. PROP. & ENT. L. 306, 318-19 (2016).

¹⁶ See Mark Lemley, *The Surprising Resilience of the Patent System*, 95 TEX. L. REV. 1, 44 (2016).

¹⁷ *Bilski*, 561 U.S. at 621 (quoting *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 483 (1974)).

abstraction in patent law require “a limiting principle.”¹⁸ “If a high enough bar is not set when considering patent applications of this sort [covering business methods and similar matter], patent examiners and courts could be flooded with claims that would put a chill on creative endeavor and dynamic change.”¹⁹ In litigation, this means § 101 challenges can typically be raised as a matter of law and decided in the early stages of a case.²⁰ Thus, they are especially effective against overbroad patents of dubious validity, where a plaintiff might otherwise exploit the structure and expenses of litigation to pursue a settlement prior to final adjudication.

None of these comments are meant to oppose the parallel application of other patentability requirements against overly-broad or imprecise patent claims. For example, courts should apply § 112(f) more rigorously to software claims, construing any functional limitations as means-plus-function.²¹ However, this does not mean that definiteness can entirely replace § 101.

V. Conclusion

Public Knowledge thanks USPTO for providing the opportunity to submit these comments. If there are any questions relating to the matters presented herein, the undersigned would be happy to provide further information as necessary.

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¹⁸ *Id.* at 608.

¹⁹ *Id.*

²⁰ *See, e.g., Genetic Techs. Ltd. V. Merial L.L.C.*, 818 F.3d 1369, 1373 (Fed. Cir. 2016).

²¹ *See generally* Mark A. Lemley, *Software Patents and the Return of Functional Claiming*, 2013 WIS. L. REV. 905.