

Statement of

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“The State of Patent Eligibility in America: Part II”

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Chairman Tillis, Ranking Member Coons, and distinguished members of the subcommittee, thank you for the opportunity to appear before you today to discuss the state of patent eligibility in America and the draft legislation you are developing with your counterparts in the House of Representatives. My name is David Jones, and I am the Executive Director of the High Tech Inventors Alliance (“HTIA”).

HTIA is a coalition of high technology companies that was created to advocate on patent policy issues like the one that is the subject of this hearing. Our members are some of the most innovative technology companies in the world, creating the computer, software, semiconductor and communications products and services that support growth in every sector of the economy. We rely on a well-functioning patent system and collectively invest over \$60 billion in R&D each year, generating technological advances protected by more than 115,000 patents. HTIA companies also contribute significantly to employment and the U.S. economy, providing more than 1.2 million jobs and generating more than \$500 billion in annual revenues worldwide.¹

The purpose of today’s hearing is to consider whether Section 101 of the Patent Act – which defines the subject matter that can be patented – should be amended to overrule the Supreme Court’s test for determining whether a claimed invention is patent eligible. We oppose such an amendment and firmly believe that both the Court’s historical precedents and the traditional limitations on statutory subject matter should be retained. HTIA and its members do not believe that the Supreme Court’s test is unworkable, excessively unpredictable, or harmful to U.S. innovation. To the contrary, the current test has improved patent clarity, has decreased spurious litigation, and has furthered the patent system’s core purpose of promoting technological innovation. During the last several years, the U.S. software industry has prospered and reflected rapid changes that did not exist when business method patents were being incorrectly allowed prior to the Supreme Court’s reaffirmation of more rigorous requirements for eligibility.

Although HTIA supports retention of the current test, we recognize that it may present challenges for segments of stakeholders in other sectors. It is not our intent to deny these difficulties or take a position on whether or how they should be addressed. We do, however, caution that any legislative solution should be narrowly-tailored to specific, demonstrated problems. HTIA has strong objections to making wholesale changes to Section 101 that would abandon traditional limitations on statutory subject matter and fundamentally alter not just the legal test for determining eligibility but also the broad underlying principles that are used to define what types of subject matter may be patented. To date, no persuasive evidence has been proffered by participants in other sectors to show any dramatic impact.²

The draft legislation is anything but a narrowly-tailored solution. It does not seek to make targeted changes to address specific aspects or applications of the current test in response to stakeholder

¹ HTIA members include Adobe, Amazon, Cisco, Dell, Google, Intel, Oracle, and Salesforce. For more information, see <https://www.hightechinventors.com/>.

² For example, although medical diagnostics is often cited as the area of life sciences most impacted, according to Crunchbase, almost \$400 million was invested in bio-diagnostics during the month of May, 2019, alone. Search of Crunchbase dated June 2, 2019 for Health Diagnostics in May 2019, detailing Whole Biome, (\$35 million), Tempus (\$200 million), Thrive Earlier Detection (\$110 million), Endogastrics Solutions (\$15 million), Let’s Get Checked (\$30 million), and Sandstone Diagnostics (\$2.5 million).

concerns. Rather, it proposes fundamental changes to the statutory provision defining the types of inventions that may be patented. If enacted, these would represent by far the most significant changes to patent eligibility in the history of this country. The draft bill does not stop there – it also proposes to explicitly abrogate two centuries of case law elucidating the basic principles of eligibility. Finally, the draft proposes a new approach to eligibility – based in part on the existing utility doctrine – that seems unlikely to prove substantially clearer or more predictable than the current test. In sum, this is less a reform of patent eligibility than a complete reset.

HTIA has numerous concerns about the draft bill, but our most fundamental objections to the proposed approach can be summarized as follows:

- **First, the draft would effectively erase existing barriers to patenting non-technological subject matter by overruling the current eligibility test and abrogating the judicial prohibition against patenting abstract ideas.** Patent protection should be reserved for technological inventions, and any expansion of eligibility into non-technical fields is inconsistent with the purpose of the patent system, would weaken the ability of patents to incentivize technological innovation, and would impose substantial costs and litigation risk on U.S. businesses. While the draft bill does propose a new test to replace the abrogated case law, we do not believe the proposed test would be effective in preventing the patenting of non-technological subject matter. This result would impede, rather than encourage, innovation. In addition to potentially allowing business method patenting, scientific principles and mathematical equations would appear to satisfy the new eligibility test so long as performed on a computer. Patents on scientific principles, newly-discovered laws of nature, and mathematical relationships will interfere with access to basic tools of scientific research and harm the practical ability of companies and individuals to innovate. And business method patents drive unproductive litigation that disrupts internal R&D and drains resources out of productive companies, while contributing nothing to the incentives for technological innovation.
- **Second, no compelling case has been presented for making statutory changes of this magnitude or for abrogating the entirety of the case law relating to such a fundamental and long-standing doctrine.** Upending the existing eligibility rules creates a significant risk of unintended consequences and would involve enormous uncertainty, disruption, and cost. Congress should not consider such a consequential change absent clear evidence of pervasive harm to the core incentive function of the patent system.
- **Third, the draft bill fails to include changes to Sections 103 and 112 that are necessary to address the problems and gaps in the law that would result from the proposed amendments to Section 101.** In discussions leading up to this point, the response to stakeholders who expressed concerns about the problems that would result from a weaker eligibility standard was that these problems were more appropriately addressed by other provisions of the Patent Act. Yet, apart from a minor clarification to Section 112, the draft does not include any of the changes that would be required to enable other sections of the statute to effectively address these problems.

The remainder of this testimony begins by explaining these three general objections, after which a brief summary of comments and concerns on the specific language of the proposed bill text is included.

1. HTIA supports retaining the current eligibility test, which appropriately limits protection to technological inventions by enforcing the long-standing and well-founded rule against patenting abstract ideas.

For more than 150 years, the Supreme Court has interpreted the Patent Act to prohibit patenting of abstract ideas, laws of nature, and natural phenomena.³ This traditional rule was reaffirmed in a trio of Supreme Court decisions handed down between 2010 and 2014.⁴ These implicit exceptions have played a crucial role in limiting eligible subject matter since the time of the Founding and are closely tied to the language of the U.S. Constitution giving Congress the power to enact patent laws to promote the progress of the “useful Arts.”⁵ This language was incorporated into the first U.S. Patent Act, which authorized patenting of advances in “any useful Art.”⁶ This term was used to describe the types of innovation that are eligible for patenting, and – at the time of the Founding – meant generally the same thing as the term “technology” does today.⁷ As used in both the Constitution and the original Patent Act, the word “useful” was meant to distinguish the types of practical, concrete innovations that are subject to patenting (*i.e.*, technological advances in the “useful arts”) from the academic and conceptual advances that are not (*i.e.*, new ideas, insights, and discoveries within the “liberal arts” and “fine arts”).

The limitation of eligibility to advances in the useful arts reflects the widely-accepted view that patents are neither intended nor well-equipped to address all types of innovation across the entire spectrum of human endeavors. Rather, as mandated by constitutional grant of authority to enact patent laws,⁸ the purpose of the patent system is specifically limited to encouraging *technological* innovation.

The prohibition against patenting abstract ideas plays a crucial role in ensuring that the patent system fulfills its constitutional purpose of promoting the progress of technology. Consistent with this goal, the Supreme Court’s eligibility test articulated in *Mayo* and *Alice* is intended to prevent patenting of inventions that do not embody an advance in technology. Conversely, the Court has indicated advances in technology – by definition – are not abstract ideas, suggesting that an invention is eligible if it “improve[s] the functioning of the computer itself” or “effect[s] an improvement in any other

³ *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012).

⁴ *Bilski v. Kappos*, 561 U.S. 593 (2010); *Mayo Collaborative Services v. Prometheus Laboratories, Inc.* *Mayo v. Prometheus*, 566 U.S. 66 (2012), and *Alice Corp. v. CLS Bank International*, 573 U.S. 208 (2014).

⁵ U.S. Const. art. I, § 8, cl. 8.

⁶ Ch. 7, 1 Stat. 109, 110 (1790). In fact, while the first U.S. patent law is often referred to as the Patent Act of 1790, it was actually entitled “An Act to promote the progress of useful Arts.” *Id.*

⁷ See, e.g., Karl B. Lutz, *Patents and Science: A Clarification of the Patent Clause of the U.S. Constitution*, 32 J. Pat. Off. Soc’y 83, 87 (1950). “Useful arts” originally referred to the practical skills and methods of manufacture and craftsmanship taught as vocational subjects (*i.e.*, ways of *making*) as distinct from “liberal arts” which were academic subjects taught for intellectual development (*i.e.*, ways of *thinking*).

⁸ The frequent assertion that Congress has recognized that patent protection should extend to “everything under the sun made by man” is a mischaracterization of the legislative history of the 1952 Patent Act. The full sentence from the House Report that is the source of the quotation reads: “A person may have ‘invented’ a machine or a manufacture, which may include anything under the sun that is made by man, but it is not necessarily patentable under section 101 unless the conditions of the title are fulfilled.” H.R. Rep. No. 82-1923, at 6 (emphasis added).

technology or technical field.”⁹ The lower courts have embraced this formulation for analyzing claims to computer-implemented inventions.¹⁰

While there were some initial difficulties in applying the *Mayo-Alice* test, it has evolved – at least with respect to inventions in software and other high-tech fields – to focus the determination of eligibility on precisely the right criterion: whether the claimed invention reflects an advance in technology. This distinction is fundamentally important to the efficacy of the patent system. In order to create an effective incentive to invest in technological development, those whose efforts contribute to the progress of technology must receive a benefit that is not available to those who do not. Thus, for the promise of patent protection to provide the desired incentive, patents must be granted only for inventions that represent an advance in technology.

In sum, as applied to inventions in the tech sector, the Supreme Court’s test focuses on the right question, reliably produces the correct result, and furthers the purpose of the patent system mandated by the Constitution. For these reasons, HTIA believes that the current test should be retained and that the courts should be encouraged to continue to improve and refine its application through the common law process of incremental development of case law. While HTIA does not believe legislation to be warranted or advisable, in the event that Congress decides to move forward with a bill that overrules the test and abrogates the existing case law, it is critical that Congress not also abandon the underlying principle that only inventions that embody an advance in technology are entitled to patent protection.

2. Any legislative action should be predicated on evidence of harm and narrowly tailored to address demonstrated, well-defined problems.

HTIA would respectfully urge the subcommittee to move forward with legislation only if such intervention is clearly warranted based on evidence that the Supreme Court’s test is causing demonstrable harm to innovation. A change of this magnitude cannot reasonably be justified based on complaints from the patent bar, a handful of cases involving sympathetic facts that reached an unpopular result, or anecdotes about the negative impact on particular companies. Rather, an assessment of whether changes to Section 101 are needed should focus on the primary purpose and intended beneficiaries of the patent system, not just its biggest users. As pointedly stated by the Supreme Court, “the primary purpose of our patent laws is not the creation of private fortunes for the owners of patents but is ‘to promote the progress of science and useful arts.’”¹¹ The system’s primary beneficiaries are not patent owners or their attorneys, but rather the American public. Accordingly, HTIA would respectfully suggest that the dissatisfaction of the patent bar and complaints about lack of certainty from some patent owners are not – standing alone – satisfactory justifications for considering such fundamental changes to patent eligibility. Rather, any decision to legislate in this area should be predicated on evidence of harm to innovation that undermines the patent system’s core purpose of

⁹ *Alice*, 573 U.S. at 225.

¹⁰ *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016) (“[W]e find that the claims at issue in this appeal are not directed to an abstract idea within the meaning of *Alice*. Rather, they are directed to a specific improvement to the way computers operate, . . .”); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) (“We therefore look to whether the claims in these patents focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.”); *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) (“[T]he claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.”).

¹¹ *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 511 (1917).

promoting the progress of technology. Even assuming *arguendo* that the anecdotal evidence that has been provided suggests there is a problem with the Supreme Court's test (which we strongly dispute), a more rigorous, evidence-based analysis is needed to define the scope and magnitude of the problem before a reasoned decision can be made about how to address it.

If the negative consequences flowing from the current test are really as dire as those advocating its abrogation have claimed, one would expect the impact of the Supreme Court's decisions to be reflected in various data quantifying activities such as corporate R&D expenditures, early-stage investment decisions, performance of startups, and patenting behavior. Analysis of these and other relevant data – such as the U.S. Patent and Trademark Office's (USPTO's) data on rejections and allowances – is the only way to know whether there is a problem and, if so, how big it is and who is being affected. It is possible that the advocates of legislation are right and that further investigation will uncover evidence of widespread harm to innovation. Or it may turn out that those who are more skeptical of the need for broad reforms are correct, and further analysis will indicate that only small changes are warranted or that a narrowly-tailored solution would be more appropriate. Whatever the outcome, the important point is that nobody here today – including HTIA – knows how a rigorous analysis would come out. Adopting a solution before the problem has been fully defined is a bad idea.

While further investigation may produce evidence of harm, it is not immediately apparent from the high-level data on investment in innovation. Rather, these data suggest that innovation is thriving in the tech industry following *Alice*. Contrary to dire predictions that the Supreme Court's eligibility test would decimate protection for (and incentives to invest in) software, the R&D investment in the software and internet industry has outpaced overall R&D growth, doubling since the *Alice* decision.¹² In 2018, venture capital funding of software startups hit a historic high of \$45 billion, 40% more than in 2014, and -- according to the National Venture Capital Association – last year was a "banner year" for VC funding across all sectors.¹³

Some have claimed that legislation is needed because the Supreme Court's test is hurting innovation in key technologies, arguing that *Alice* makes it virtually impossible to obtain patent protection for key technologies such as software and Artificial Intelligence (AI) and that this is undermining innovation and harming investment in technology startups. However, there appears to be little evidence supporting this claim. In reality, empirical studies have demonstrated that the Supreme Court's eligibility decisions have had only a modest impact on applicants' ability to obtain patents and that the decrease in patenting is largely concentrated in a few narrow art areas. For example, one academic study found that overall rejection rates at the patent office have risen only modestly and that the majority of that increase was attributable to rejections of business method claims. The reality, as noted by the authors, is that "the vast majority of inventions examined by the office are not significantly impacted by 101."¹⁴

¹² PWC 2018 Global Innovation Fact Pack, slide 28, <https://www.strategyand.pwc.com/media/file/2018-Global-Innovation-1000-Fact-Pack.pdf>.

¹³ National Venture Capital Association, Venture Monitor, 4Q 2018, https://files.pitchbook.com/website/files/pdf/4Q_2018_PitchBook_NVCA_Venture_Monitor.pdf. Even the areas frequently cited as being most impacted by the Supreme Court's eligibility test seem to be doing quite well. In addition to the U.S. software industry growing rapidly, investment in medical diagnostics appears to be strong, with \$400 million invested in health diagnostic companies in May 2018, alone. *Supra* note 2.

¹⁴ Colleen Chien and Jiun Ying Wu, *Decoding Patentable Subject Matter*, 2018 Patently-O Patent L.J. 1 (2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3267742.

Moreover, since this study was completed, rejection rates at USPTO – which were not high to begin with – have reportedly decreased significantly as a result of the examination guidance on patent eligibility promulgated earlier this year.

The claim that the *Alice* decision has had a catastrophic impact on innovators’ ability to obtain patent protection is simply not supported by the available data on patent office rejections. Rather, the evidence suggests that, in almost all areas of technology, applicants are not having any significant difficulty in obtaining patent protection as a result of the Supreme Court’s eligibility decisions. This includes AI – a favorite example of those arguing for legislation – where the number of patents issued has more than doubled every year since *Alice* was decided.¹⁵

While most applicants are not facing challenges, there are a few, relatively narrow subject matter areas where this is not the case. The biggest of these is business methods. For business method patents, *Alice* did actually have a calamitous effect. It has become much harder to get USPTO examiners to allow business method claims, and – once issued – these patents face a significantly higher risk of being found invalid if challenged in litigation or at Patent Trial and Appeals Board (PTAB) at USPTO. However, this does not indicate reform is needed, but suggests the exact opposite. As the name suggests, business methods patents typically claim purported innovations in business processes or operations, as opposed to innovation in a field of technology. So, the fact that business method patents are facing challenges simply indicates that the Supreme Court’s test is working as it should and rejecting entitlement to patent protection for claims that have nothing to do with technology.

The decreased availability of business method patents does not pose any risk of harm to innovation. Unlike technological inventions, there is little or no evidence that extending patent protection to business methods provided additional incentives to innovate or encouraged investment in R&D.¹⁶ In fact, there is some evidence that the availability of business methods patents actually *lowered* research intensity among firms that sought them and that R&D investment by these firms *increased* as a result of the *Alice* decision.¹⁷

In contrast to the dearth of evidence that business method patents benefit innovation, there is ample evidence of harm. Empirical studies indicate that business method patents are much more likely to be litigated and impose extraordinarily high costs on industry. One such study found that financial patents were litigated at a rate that was at least 27 *times* greater than that of other patents.¹⁸ The median

¹⁵ 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/>.

¹⁶ See, e.g., Robert M. Hunt, “Business Method Patents and U.S. Financial Services,” *Contemporary Economic Policy*, Vol. 28, No. 3, pp. 322-352, July 2010 (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1627385) (finding no evidence that the availability of business method patents in the wake of the *State Street Bank* decision had a positive effect on research intensity in the financial services sector).

¹⁷ Sridhar Srinivasan, *Do Weaker Patents Induce Greater Research Investments?* (December, 2018) (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3185148) (finding that firms that had previously sought patent protection for business methods decreased patenting while increasing R&D investment as a result of the *Alice* decision).

¹⁸ Lerner, Josh. 2008. “The Litigation of Financial Innovations,” *The Journal of Law & Economics* Vol. 53, No. 4 (November 2010), pp. 807-831 (working paper version available https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1267555) (finding financial patents litigated at a rate 27 to 39 times greater than that of patents as a whole).

cost of litigating a patent case through trial where more than \$25 million is at risk is around \$5 million.¹⁹ For patents on technological inventions, this cost is necessary to achieve the underlying benefit to innovation incentives. For business method patents, there is no underlying benefit to innovation incentives to be preserved through enforcement. Any associated litigation costs are therefore a dead weight loss, and each business method patent will – on average – result in more than 27 times the litigation (and commensurate costs) than a typical non-business-method patent.

But the costs imposed by business method patents do not stop with the direct financial costs of the legal suit. Patent litigation is also enormously disruptive, and – unlike most other types of commercial litigation – often has a direct impact on the defendant’s employees who are directly engaged in R&D work. Because of the technical nature of a patent case, engineers are frequently directly involved in the litigation, as well as efforts to reduce the risk presented by litigation by designing around an asserted patent. Prior to the *Alice* decision, large technology companies were commonly defending dozens – and sometimes hundreds – of patent cases at any given time. A disproportionate number of these involved business method patents, which produce enormous aggregate costs, pulled engineers away from working on innovation, and reduced the resources available for R&D. Not only does this harm innovation, but the substantial costs either come out of the pockets of shareholders or are passed on to consumers in the form of higher prices. As a result, business method patents harm innovation, while imposing significant losses on the U.S. economy, and all without any countervailing benefit. In sum, the evidence suggests that business method patenting does not encourage (and instead affirmatively harms) investment in R&D, while generating litigation costs and disruption that are vastly disproportionate to other types of patents. If the purpose of the patent system is to “promote the progress of the useful arts,” then the reduction in business method patenting reflects a significant improvement, rather than a problem that needs to be fixed

Because the impact of the test in the tech sector is largely limited to business method claims, the effect on incentives to invest in R&D has likely been positive, and overruling the *Alice* decision would be counterproductive to the goal of encouraging technological innovation. The evidence and arguments that have been advanced by proponents to date simply do not provide any reasonable justification for wholesale changes to Section 101 or the complete abrogation of two centuries of eligibility case law as proposed by the draft legislation.

3. The draft bill fails to include changes to Sections 103 and 112 that are necessary to address significant problems and gaps in the law that would result from the proposed amendments to Section 101.

One of the most frequent criticisms of *Mayo* and *Alice* – and a principal argument relied on by proponents of abrogating the Supreme Court’s eligibility case law – is that the test articulated in these decisions conflates the requirements of Section 101 with those of Sections 103 and 112. In discussions leading up to this point, stakeholders – such as HTIA and its members – frequently expressed concerns that eliminating the aspects of Supreme Court’s test that were deemed guilty of “conflation” would eviscerate the ability to challenge patent validity under Section 101 and would enable a flood of overly-broad patents with no technological merit to be granted and asserted in litigation. In response,

¹⁹ See “AIPLA Survey of Costs of Patent Litigation and Inter Partes Review,” *PatentAttorney.com*, Jan. 30, 2017 (available at <https://www.patentattorney.com/aipla-survey-of-costs-of-patent-litigation-and-inter-partes-review/>).

proponents of legislation argued repeatedly that these problems should never have been part of the eligibility test in the first place and were more appropriately addressed by other provisions of the Patent Act (generally Sections 103 and 112). Absent significant changes, however, Sections 103 and 112 are not capable of effectively addressing these problems. If the argument for legislation abrogating the case law is that Section 101 should not “do the work” of other sections, then the same legislation needs to make sure that these other sections can actually do that work. However, apart from a relatively minor (but welcome) clarification to Section 112, the proposed bill does not reflect any attempt to address the significant gaps in the law that would result from the proposed changes to patent eligibility.

The proposed changes to Section 101 would have significant implications for many aspects of patent law, but HTIA is particularly concerned about the substantial negative consequences of: 1) removing barriers to patenting non-technological subject matter; and 2) weakening the practical ability to police excessively preemptive claims.

With respect to the first concern, the proposed legislation overrules the Supreme Court’s eligibility test and explicitly abrogates the underlying judicial exceptions and the body of caselaw that excludes abstract ideas, laws of nature, and natural phenomena from patent eligibility. This eliminates the basis for the exclusion of non-technological subject matter as well as the only effective mechanism for enforcing this limitation. As discussed above, the extension of patenting to non-technical subject matter is fundamentally inconsistent with the purpose of the patent system and would preclude the promise of patent protection from creating effective incentives to invest in technological innovation. In addition to eviscerating the ability of patents to serve their core purpose, this expansion would entail enormous practical challenges with respect to examination of claims falling outside established fields of technology. The dearth of subject matter expertise in non-technical fields among examiners, the complete lack of patent prior art (because patents have not previously been granted in these fields), and the nearly universal absence of prior art repositories or databases would make adequate examination virtually impossible. To avoid these problems, it is essential that any legislation abrogating the judicial exceptions also adopt an alternative statutory mechanism that prevents the patenting of non-technical subject matter and predicates eligibility on a technological contribution.

There are multiple ways in which such a technological contribution requirement could be implemented, several of which were suggested by HTIA and others during the roundtable process. For example, in the draft bill’s new test proposed to be codified in Section 100(k), “contribution to” could simply be substituted for the words “utility in,” changing the relevant portion of the proposed definition to extend eligibility to “any invention or discovery that provides a specific and practical **contribution to** any field of technology through human intervention.” Alternatively, an affirmative technology requirement could be added to Section 101 by adding language clarifying that a claimed invention is eligible only if it embodies an advance over the prior art in any field of technology. If these approaches are unacceptable due to concerns about “conflation,” another option is to amend Section 103 to incorporate something similar to the European Patent Office’s “inventive step” analysis. This would only require adding a simple statement to Section 103 that, in assessing obviousness, the non-technological features and elements of a claimed invention shall be excluded from consideration and shall not be deemed relevant to differentiating a claimed invention from the prior art.

With respect to the second concern, the Supreme Court’s eligibility test has played a significant role in deterring excessively broad, overly preemptive claims. Claims that cover ideas *per se* (such as purely

functional claims) rather than their practical application, are ineligible under existing case law. And adding token recitations of generic technology that do not meaningfully limit the scope of a claim are deemed insufficient to salvage an otherwise ineligible claim under the Supreme Court's test. As a result, the current test has created beneficial incentives for applicants to more specifically claim the technological aspects of their invention as well as a mechanism for addressing excessive claim breadth. The draft legislation would eliminate the rule that deems token recitation of a computer or other technology insufficient to establish eligibility and would abrogate the judicial exceptions, eliminating one of the most effective mechanisms for addressing overbreadth and the beneficial incentives it has created. In addition to the new test that is proposed, several provisions in the draft bill (such as the requirement that claims be considered as a whole and that Section 101 be construed by courts in favor of eligibility) as well as the nature of the newly-eligible subject matter (which would inherently be more abstract, less concrete, and more difficult to claim with particularity) seem likely to exacerbate problems with overbreadth.

While a solution to our first concern (*i.e.*, adoption of an effective means for preventing patents on non-technical inventions) would also partially address concerns about deterring overbreadth, we believe that changes to Section 112 to more directly address the problem would also be necessary. One strategy for addressing this issue that we and others have proposed is to go a step further than the proposed amendment to Section 112 (f) and adopt a rule of construction requiring that all claims (rather than just functional claim elements) be construed to cover the structure, material, or acts described in the specification and such equivalents thereof as are known as of the effective filing date of the claimed invention. This would help to ensure claims were construed to cover what the inventor had actually invented and described and would codify the impediment to stretching claims to cover later-arising technologies that already exists in the case law on Section 112(f). Alternative potential improvements include amending Section 112(a) to explicitly reflect separate written description and enablement requirements as follows:

The specification shall contain a **specific** written description of the **claimed subject matter in such full, clear, concise, and exact terms as to demonstrate that the inventor or joint inventors were in possession of the full scope of the claimed subject matter on or before the effective filing date of such claim. The specification shall also describe** the manner and process of making and using **the claimed invention** 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, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

Additionally, it would be helpful to amend Section 112(b) to explicitly state that a claim is indefinite unless sufficient structure, material, or acts are recited in the claims or (in the case of a claim invoking Section 112(f)) in the specification. And, finally, HTIA believes the subcommittee should consider clarifying that compliance with the requirements of Section 112 are issues of law to be decided by the court, which would allow more effective enforcement of these requirements and increase the efficiency of litigation by potentially enabling disposition of cases at an earlier point in litigation.

Whatever the solutions may be, HTIA strongly believes that addressing these problems is essential to preserving a working patent system and to the viability of any legislative effort that seeks to abrogate the current approach to eligibility.

4. Specific comments on the proposed legislative draft

As an initial matter, we would like to express appreciation for the thorough and transparent process that has been employed in the effort to develop legislation addressing Section 101. While we have grave doubts about the wisdom of any potential legislation in this area, we commend the efforts that have been undertaken to solicit and consider stakeholder feedback and appreciate the opportunity to provide brief comments on the draft legislative language. That being said, HTIA strongly favors retaining the current eligibility test and allowing the courts to continue to refine its application through a case-by-case common-law process.

While we appreciate the obvious effort that has gone into the draft language, and applaud the inclusion of a reference to “fields of technology” and the amendment to Section 112, HTIA has deep concerns about the proposal and the impact it would have if enacted. Despite our general opposition to the effort to abrogate current law, HTIA believes that it is important to have an open and serious debate on this issue. To that end, we have endeavored to provide candid and substantive (if brief) feedback on each of the key provisions below.

a. Statutory Definition of “Useful”: New Section 100(k)

- The proposed draft would create a new subsection (k) in Section 100 defining “useful” as “any invention or discovery that provides specific and practical utility in any field of technology through human intervention.” While we believe the inclusion of a specific reference to a “field of technology” is a step in the right direction, we have several significant concerns with this formulation as the basis for defining eligibility.
- Because the test requires that the invention have utility in a field of technology, rather than requiring that the invention itself embody an *advance or contribution* in a technical field, the test is unlikely to provide any significant limitation on the patenting of non-technical subject matter. We believe that it is essential that eligibility be predicated on a technological contribution or advance and would suggest substituting “advance” or “contribution” for the term “utility.”
- As written, this formulation would impose an extremely low bar for eligibility assuming the term “utility” in the definition is understood to be a reference to the existing utility requirement. Apart from perpetual motion machines and other “inoperable” inventions that could only produce the asserted benefit by operating in violation of basic laws of physics, utility rejections at USPTO are very rare. Understandably, USPTO does not want examiners rejecting applications based on their individual, subjective views of whether a claimed invention actually produces a benefit, so examiners must typically accept an applicant’s assertion of utility absent clear evidence to the contrary. Similarly, invalidation of a patent for failure to satisfy the utility requirement is almost unheard of. Typically, if an invention is capable of use and provides any benefit – no matter how small – that will be sufficient to satisfy utility.
- While this may not be what was intended, the test, in conjunction with the requirement that claimed inventions be considered as a whole, would potentially be satisfied by any

recitation of physical means (*i.e.*, “on a computer”). Even if a pure business method would not be deemed to provide utility in a field of technology, it seems likely that a business method on a computer would. Given how low a bar the current utility requirement imposes, the new utility language may be interpreted to be satisfied by a business method on a computer solely on the basis that the alleged invention expands the potential uses of computers to include the recited business method, thus providing utility (expanded scope of use) in any field of technology (computers). This is especially true considering that the Federal Circuit repeatedly found computer-implemented business methods to be eligible on the basis of being “useful, concrete, and tangible” during the late 1990s and 2000s.²⁰

- It is not obvious what “utility in any field of technology” is intended to mean or how it would be assessed. Utility is typically understood to mean that the invention provides an identifiable benefit. It is unclear how to interpret this in conjunction with the phrase “in any field of technology.” For example, it could be intended to require that the benefit itself is technological in nature, or that the invention must benefit a field of technology itself (*i.e.*, make a contribution or improvement in a field of technology), or it could simply mean that the invention must be capable of being beneficially used in a field of technology. Based on conversations with staff, it appears that the first meaning was likely intended. However, HTIA favors the second, and is concerned that the most likely interpretation would be the third, especially in light of the requirement that the language be construed in favor of eligibility.
- “Through human intervention” should be clarified to indicate whether it is intended to require human involvement for the beneficial use of the invention or that the invention or discovery was the result of human intervention (and is therefore not purely a product of nature). We assume the latter was intended, but this would not necessarily be the meaning that would result from a literal interpretation of the provision as written.

b. Amendments to Section 101

- The amendments to Section 101 remove the words “new and” in the current statute and add a requirement that the claimed invention be considered as a whole for purposes of determining eligibility.
- It is unclear that omission of the word “new” from Section 101 would actually have any benefit in preventing courts from inferring an unwanted implicit meaning in construing the statute. This change appears to be intended to remove the possibility of courts continuing to apply the “conventionality” analysis in the current test. However, that aspect of the test does not appear to be based in any way on the term “new.” Rather, it was described by the Supreme Court as intended to prevent applicants from avoiding application of rule against patenting abstract ideas simply by adding inconsequential elements that did not meaningfully constrain the scope of the claims (allowing a claim that in practical effect was directed to the abstract idea itself). While there is no obvious harm to removing “new,” there is also no clear benefit to doing so. Given the

²⁰ *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed Cir. 1998), *cert. denied*, 119 S.Ct. 851 (1999) (holding computer-implemented business methods were eligible so long as the claimed invention was “useful, concrete and tangible”).

possibility that it could result in some unforeseen interpretation of the amended Section 101, it may be prudent to leave the existing language (*i.e.*, retain the term “new”).

- The “invention as a whole” provision requires the court to give a mere token recitation of technological means (*e.g.*, “on a computer”) the same weight as any other limitation, which – as discussed above – would likely mean that a token recitation will almost invariably be sufficient to establish eligibility.

c. Functional Claiming Amendment to Section 112

- HTIA welcomes the proposed amendment to Section 112(f). The amendment represents a modest improvement over the current language and will eliminate lingering arguments about the effect of inclusion or omission of the words “means for” and whether particular terms should be interpreted as functional in the wake of *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (*en banc*).

d. “Additional Provisions”

- The requirement that section 101 be construed in favor of eligibility will likely lead courts to read the requirements like that in Section 100(k) for a “field of technology” to impose as low a bar on eligibility as possible, further heightening our concerns expressed above.
- The concerns regarding both the intended and the ancillary impact of wholesale abrogation are discussed extensively above. It is not necessary to abrogate all the decisions on judicial exceptions. Virtually all of the specific concerns voiced by stakeholders appear to flow from the “inventive concept” requirement. Abrogation of this specific aspect of *Mayo* and *Alice* would be sufficient and significantly less problematic in terms of ancillary impact. However, HTIA strongly opposes abrogation, irrespective of whether it operates as a wholesale rejection of the case law or is narrowly directed to a specific requirement.

Conclusion

Thank you again for the opportunity to testify on this important issue and for the thorough and transparent process that has been employed to obtain a full spectrum of views on the potential benefits and harms of legislation addressing Section 101. While we have grave doubts about the wisdom of any potential legislation in this area, we commend the efforts that have been undertaken to solicit and consider stakeholder feedback and have appreciated the opportunity to engage with you and your staff on this important issue. While HTIA strongly favors retaining the current eligibility test and allowing the courts to continue to refine its application through a case-by-case common-law process, we are also committed to engaging in the legislative process in as productive a manner as possible and – despite our concerns – stand ready to provide candid substantive feedback or additional information and explanation of our views whenever requested by the subcommittee.

Respectfully submitted,



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