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January 17, 2017

The Honorable. Michelle K. Lee,  
Under Secretary of Commerce for Intellectual Property and Director  
United States Patent and Trademark Office  
600 Dulany St, Alexandria, VA 22314

**Subject: Response to the Request for Comments on Patent Subject Matter  
Eligibility 81 Fed. Reg. 71485 (October 17, 2016)**

Dear Director Lee:

The National Association of REALTORS® (NAR) is pleased to have the opportunity to present its views on the United States Patent and Trademark Office “Notice of Roundtables and Request for Comments Related to Patent Subject Matter Eligibility” as published in the Federal Register on October 17, 2016, 81 Fed. Reg. 71485 (“Notice”). The Request for Comments seeks public input to direct the Office’s continuing efforts towards improving its existing subject matter eligibility guidance and training examples in view of recent decisions by the Supreme Court and Court of Appeals for the Federal Circuit.

**I. Introduction**

NAR, whose members identify themselves as REALTORS®, represents a wide variety of real estate industry professionals. REALTORS® have been early adopters of technology and are industry innovators who understand that consumers today are seeking real estate information and services that are fast, convenient and comprehensive. Increasingly, technology innovations are driving the delivery of real estate services and the future of REALTORS® businesses

Abusive patent litigation remains a serious threat for REALTORS® and main street businesses of all sizes across the country. REALTORS® are often end users of technology and as a result, have been inundated by abusive and deceptive patent demand letters by patent assertion entities (PAEs), commonly referred to as “patent trolls.” These patent trolls use overly broad patents, threats of litigation, and licensing fee demands in an effort to extort payments from real estate businesses across the country. These patent trolls often prey on small businesses of all kinds, which do not have the resources to fight such false claims. Fighting these claims has a real cost: for REALTORS® it means less capital and fewer resources available for investing back into our businesses that in turn drive economic growth.

Real estate businesses, tenants, brokers and service providers have been threatened and targeted with spurious patent infringement claims, in contexts that include the following:

- Brokers implementing website technology to allow zooming in to located points of interest on a map and creating home search alert function
- Building owners and tenants that use standard, off-the-shelf routers to provide Wi-Fi access for hotspots in lobbies, restaurants, atriums, and other common areas of buildings;



- The Multiple Listing Service, a critical tool for real estate agents that uses location-based search capabilities to identify homes and other properties available for sale or lease; and
- Businesses that attach scanned documents to emails to execute contracts, closings, and other commonplace real estate transactions.

Rather than researching and litigating patent infringement claims, our members wish to channel their resources to serve their core functions to satisfy the real estate needs of the American people – and create jobs in the process.

For these reasons, we strongly believe that addressing the patent troll problem at the front-end through rigorous application of subject matter eligibility jurisprudence will provide a powerful tool to deter the types of nuisance litigation that has become all too familiar to our industry.

## II. Existing Case Law, Properly Applied, Excludes Unpatentable Subject Matter

The Supreme Court’s long-standing jurisprudence confirms reasonable boundaries to the statutory scope of patentable subject matter. While Congress could take steps to codify this jurisprudence, its continued acquiescence in the Court’s developed standards has sufficiently expressed Congressional agreement with the judicial exceptions. Additional effort to amend 35 U.S.C. § 101 could distract from other, worthwhile legislative efforts supported by NAR, including H.R. 9, “The Innovation Act” (Goodlatte, R-VA) and S. 1137, “Protecting American Talent and Entrepreneurship Act (PATENT Act)” (Grassley, R-IA; Leahy, D-VT). NAR agrees with and supports the Court’s patentability exceptions, and the continued application of its jurisprudence by lower courts in ways designed “to secure the just, speedy, and inexpensive determination of”<sup>1</sup> patent lawsuits in particular.

Specifically, the Supreme Court’s *Mayo* and *Alice* decisions,<sup>2</sup> along with major Federal Circuit cases applying it to computer-implemented inventions,<sup>3</sup> incorporates into well-understood American jurisprudence concepts similar to the statutory European exceptions to patent subject matter eligibility. Those decisions also give the Patent Office and the courts sufficient theoretical tools to identify and protect legitimate patentable innovation. Legislative codification or addition of limitations and exceptions could backfire both by eliminating flexibility to identify true future invention, as well as by providing statutorily protected claim drafting work-arounds that could “make the determination of patentable subject matter depend simply on the draftsman’s art.” *Parker v. Flook*, 437 U.S. 584, 593 (1978).

The Supreme Court has rightly characterized 35 U.S.C. § 101 as “a dynamic provision designed to encompass new and unforeseen inventions.” *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Intern., Inc.*, 534 U.S. 124, 135 (2001). A statute intended to promote the progress of science and the useful arts must, by nature, contain sufficient flexibility to protect an as-yet unknown future patent eligible invention. Therefore, Congressional focus on the scope of patentable subject matter could mis-direct effort towards amendments which inadvertently only address yesterday’s improperly issued patents. Congress’ valuable past reforms, and proposed reforms supported by NAR, provide Courts and the USPTO with tools and guidance sufficient to reject patents that do not contribute to the store of public knowledge, for example patents which merely reciting known software tools run on general purpose computers and applied to routine solutions of existing business problems, or patents that purport to claim far more than they teach by claiming all methods of procuring worthwhile outcomes.

As discussed in greater detail below, courts and patent examiners should continue to apply existing case law, with particular attention to the interplay and overlap among §§ 101, 102, 103, and 112, to prevent issuance and to eliminate patents that claim abstractions, claim outcomes divorced from specific tools to procure those outcomes, and patents whose sole contribution to the public store of knowledge consists of artful drafting.

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<sup>1</sup> Fed. R. Civ. P. 1.

<sup>2</sup> *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289 (2012); *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 134 S. Ct. 2359 (U.S. 2014).

<sup>3</sup> *DDR Holdings, LLC v. Hotels.com*, 773 F.3d 1245 (Fed. Cir. 2014); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016); *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253 (Fed. Cir. 2016); *In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607 (Fed. Cir. 2016).

### III. Subject Matter Preemption Gives Courts and Examiners a Valuable Analytical Tool For Eliminating Overly Broad, Vague, Invalid Patents

The Supreme Court’s jurisprudential guidance on how to evaluate the potential subject matter preemption of a claim provides a powerful analytical tool to evaluate the validity of a claim. Properly applied by patent examiners and the courts, it eliminates patents with invalid, overly broad claims. Particularly applicable to claims with subject matter directed towards computer-implemented inventions, the Office should give patent examiners sufficient guidance to apply this framework during examination. Importantly, the Office, and lower courts, should also incorporate Federal Circuit guidance on the interpretation of claims relying on the drafting permission of 35 U.S.C. § 112(f) to identify and eliminate patents and applications which claim outcomes divorced from disclosed structures. These concepts are closely related, because a patent with claims that do not include structural limitations more likely claim all methods of achieving a result, rather than the disclosed method of coming to the result. The abstract idea test, particularly coupled with strict application of 35 U.S.C. § 112(f), prevents patenting a result where “it matters not by what process or machinery the result is accomplished.” *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1854).<sup>4</sup>

The Supreme Court has long held that § 101 contains an important implicit exception, excluding from patentability laws of nature, natural phenomena, and abstract ideas.<sup>5</sup> These exceptions protect the “basic tools of scientific and technological work.” *Mayo*, 132 S.Ct. 1289, 1293 (2012). In *Alice*, the Supreme Court endorsed a two-step “framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” 134 S.Ct. at 2355. First, the court determines if the claims at issue are directed to a patent-ineligible concept. *Id.* If not, the inquiry ends: the claims are patentable.<sup>6</sup> If, however, the claims are directed towards potentially ineligible abstractions, the court must “determine whether the additional elements transform the nature of the claim into a patent-eligible application.” *Alice*, 134 S.Ct. at 2355.

Using the Mayo/Alice framework, the Federal Circuit has found a patent-eligible technological improvement in computer implemented inventions where the claims “provided an Internet-based solution to solve a problem unique to the Internet that (1) did not foreclose other ways of solving the problem, and (2) recited a specific series of steps that resulted in a departure from the routine and conventional sequence of events after the click of a hyperlink advertisement.” *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1371 (Fed. Cir. 2015) (discussing *DDR Holdings, LLC v. Hotels.com*, 773 F.3d 1245 (Fed. Cir. 2014)). Specifically in *DDR*, the patent disclosed a specific set of physical linkages that involved a data store, server, computer, that together, and through the claimed interconnectivity, accomplished the process of displaying composite webpages having the look and feel of the source web page.<sup>7</sup> The Court found that the claims therefore also satisfied the machine-or-transformation test, and were not so manifestly abstract as to render them invalid for failing to claim patentable subject matter under 35 U.S.C. § 101.<sup>8</sup>

Similarly, in *Enfish*, the Federal Circuit upheld as patent-eligible claims disclosing a logical model, called a “self-referential model,” because the claims provided “a specific improvement to the way computers operate.” 822 F.3d at 1330, 1336. In *Enfish*, the Federal Circuit stated that courts should inquire at step one of *Alice* – as opposed to step two – “whether the focus of the claims is on the specific asserted improvement in computer capabilities.” 822 F.3d at 1336–37. Following *Enfish*, in *McRO*, the Federal Circuit emphasized that the concern underlying the exceptions to § 101 is not tangibility, but preemption.<sup>9</sup> In *McRo*, the Court found that the claimed specific structure of the rules-based means of automating lip synchronization meant

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<sup>4</sup> See also *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1316 (Fed. Cir. 2016) (automating lip synchronization and facial expressions of three-dimensional animated characters satisfied section 101 where claim incorporated specific features of the disclosed rules as claim limitations, thereby not preempting alternative approaches that use different rules or techniques).

<sup>5</sup> *Mayo*, 132 S.Ct. 1289, 1293 (2012); *Diamond v. Diebr*, 450 U.S. 175, 185 (1981); see also *Bilski v. Kappos*, 561 U.S. 593 (2010); *Diamond v. Chakerabarty*, 447 U.S. 303, 309 (1980); *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1853); *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 112–120 (1854); cf. *Neilson v. Harford*, Webster’s Patent Cases 295, 371 (1841) (English case discussing same).

<sup>6</sup> See, e.g., *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016) (determining at step one that the claims were not directed to an abstract idea and, therefore, not discussing step two).

<sup>7</sup> 773 F.3d 1245 (Fed. Cir. 2014).

<sup>8</sup> *Id.*

<sup>9</sup> 837 F.3d 1299, 1316 (Fed. Cir. 2016).

the claims did not broadly preempt all such processes. Instead, the claims limited the rules to specific characteristics that do not cover all possible approaches to solving the problem.<sup>10</sup>

*In re TLI* further reminded patentees and examiners that mere tangibility does not satisfy step one of the Alice/Mayo inquiry.<sup>11</sup> Claims directed to “the use of conventional or generic technology in a nascent but well-known environment, without any claim that the invention reflects an inventive solution to any problem presented by combining the two” are invalid. *In re TLI*, 823 F.3d at 612. Most recently, the Federal Circuit’s decision in *Affinity Labs* emphasized that the Mayo/Alice framework requires that claims directed to an abstract idea implemented with generic equipment must identify specific technology or instructions that explain how the device does what it purports to do or directs practitioners how to carry out the claims.<sup>12</sup>

Coupled with the Alice/Mayo inquiry as applied by the Federal Circuit, 35 U.S.C. § 112 provides an additional line of analysis for identifying overly broad claims that preempt too much subject matter. A claimed invention which satisfies the Court’s section 101 jurisprudence may nonetheless lack a sufficient concrete disclosure or omit required structure from functional claims so as to attempt to claim a broad swath of un-invented outcomes.<sup>13</sup> A patent claim sufficient to pass the coarse eligibility filter of the two step Alice/Mayo analysis may nonetheless be invalid as indefinite under the Federal Circuit’s equally important section 112 jurisprudence. Patents which claim computer-implemented means-plus-function limitations can only satisfy 35 U.S.C. § 112 if the specification discloses an algorithm for performing the claimed function. The specification can express the algorithm in any understandable terms, including as a mathematical formula, in prose, as a flow chart, or in any other manner that provides sufficient structure. However, simply disclosing generic software without providing some detail about the exact algorithmic method to accomplish the function does not provide required structure.<sup>14</sup> The usefulness of § 112 was further solidified by the Federal Circuit’s recent clarification in *Williamson v. Citrix Online, LLC* of how to determine whether a claim invokes section 112(f). In *Williamson*, the Court reversed its previous case law that required a limitation to be essentially devoid of anything that can be construed as structure before overcoming the drafting presumptions associated with electing to use or omit the word “means.”<sup>15</sup> Instead, and particularly relevant to claims for inventions implemented on general purpose computers, where the claim limitation invokes a function or result, but no algorithmic structure to procure that result, the limitation invokes 112(f) and the patent specification must supply the necessary structure. If the specification recites an algorithm, that limits the scope of the claim. If the specification has no algorithm, the claim has indefinite scope and is invalid.

This § 112 case law provides an additional tool for both examiners and courts to weed out invalid business method and computer software related patents that might otherwise survive the 101 subject matter eligibility inquiry. An invention that involves computer software should be eligible for patent to the extent the structure (the algorithm) performing the claimed process is disclosed either in the claims or the specification. Much like computer implemented inventions, business methods are eligible for patenting in so far as they disclose and claim the structure that facilitates the method. This § 112 analysis is consistent with the Alice/Mayo requirement that a software or business method implemented through a device explain how the device does what it purports to do or directs practitioners on how to carry out the claims. Without that, the specification and claims do not provide sufficient particularity and clarity to inform skilled artisans of the bounds of the claim, or may

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<sup>10</sup> *McRO*, 837 F.3d at 1315.

<sup>11</sup> *In re TLI Communications LLC Patent Litigation*, 823 F.3d 607, 611 (Fed. Cir. 2016) (method for uploading digital images from a cellular telephone to a server, which would then classify and store the images was abstract and patent ineligible despite reciting concrete and tangible components).

<sup>12</sup> *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266 (Fed. Cir. 2016) (affirming finding of invalidity under § 101 on Rule 12(b)(6) motion and the finding that claims directed to a “means for delivering regionally broadcasted radio or television content to an electronic device located outside a region of the regionally broadcasted content” were invalid for claiming an abstract idea implemented with generic equipment, and “untethered to any specific or concrete way of implementing” the claimed abstract idea, “entirely functional in nature”, and did not claim “how to implement” the idea).

<sup>13</sup> See *Research Corporation Technologies v. Microsoft Corp.*, 627 F.3d 859 (Fed. Cir. 2010).

<sup>14</sup> *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1312 (Fed. Cir. 2012).

<sup>15</sup> *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (overruling *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, *Inventio AG v. ThyssenKrupp Elevator Americas Corp.*, 649 F.3d 1350, *Flo Healthcare Solutions, LLC v. Kappos*, 697 F.3d 1367, *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, and holding claims invalid for indefiniteness where the specification did not disclose sufficient structure corresponding to the “distributed learning control module” referred to in means-plus-function claims).

express such vague concepts in broad and overreaching terms that the written description does not enable a person of ordinary skill in the art to replicate the process without undue experimentation – in effect, outsourcing to the reader that requirement to actually invent of a process to reach the outcome described in the claims. However, if a business method meets the requirements of §§ 102, 103, 112, and is neither directed to an abstract idea nor preempts all methods of achieving the end result, it may be patentable. Similarly, if a claimed computer implemented invention meets the requirements of §§ 102, 103, 112, and is neither directed to an abstract idea nor preemptive of all methods of achieving the end computerized result, it may be patentable.

The Office should provide examiner guidance to ensure application of these existing tools that screen out applications and claims which overreach, claiming broad outcomes without inventing and disclosing specific methods or systems for procuring those outcomes. Additional legislative changes may not be necessary if examiners and the courts continue to apply the existing standards. Vigorous application of existing standards at the examination stage and in early dispositive motions in court is particularly relevant for American companies, including NAR members, who are routinely threatened by assertion of vague patents that claim aspirational computer-procured outcomes while disclosing no particular, concrete, limited way of achieving them.

#### **IV. Existing Case Law Rightly Excludes Patents On Methods That Do Not Involve a Machine or Transformation**

While future innovation could demonstrate otherwise, courts and the Patent Office have rightly exhibited grave skepticism regarding method claims that do not involve a machine or transformation.<sup>16</sup> A patent claim to a method untethered from either a machine or a transformation of matter most likely expresses a purely mental practice, or one that a person can accomplish with pen and paper. While in theory that may not completely preclude the possibility of an invention, in current practice such claims typically reflect highly questionable computer-implemented “inventions” that consist of little more than practicing the prior art more efficiently. Both the Supreme Court and Federal Circuit have consistently held that claims which offer no more than using computers to do “more quickly” tasks that humans could otherwise perform (albeit slowly or with more effort) do not, without more, present patentable subject matter.<sup>17</sup> Manipulations of public or private legal obligations or relationships, business risks, or other such abstractions also cannot meet the “transformation” portion of the machine-or-transformation test because they are neither physical objects or substances, nor representative of physical objects or substances.<sup>18</sup> Thus, requiring a claimed method to be tied to a machine or transformation provides an additional tool for preventing the issuance of claims directed to abstract ideas without meaningful, structural limitations.

Although patent eligible methods most likely must involve some sort of machine or transformation of matter, merely instructing the use of a general purpose computer cannot satisfy the “machine” part of the test. For computer implemented methods, the patent must disclose and claim the structure operating the machine. In the context of computer implemented invention, disclosure of an algorithm provides the necessary structure such that the patents teaches and claims how the computer hardware are specially programmed to procure the novel outcome. Such a test aids courts and examiners in upholding and allowing claims that may be directed to more abstract concepts, but that nonetheless do not pre-empt all future invention by both providing an inventive and patentable contribution to the art and limiting the scope of the claims to the actual contribution found in the patent.

*Enfish, LLC v. Microsoft Corp.* provides clarification on the Supreme Court’s *Alice/Mayo* two step inquiry and guides lower court’s evaluation of computer implemented inventions. The *Enfish* opinion demonstrates for lower courts how to identify a

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<sup>16</sup> See *Bilski v. Kappos*, 561 U.S. 593, 604, 130 S. Ct. 3218 (2010) (“the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101. The machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible ‘process.’”).

<sup>17</sup> *Bancorp Services, L.L.C. v. Sun Life Assurance Co. of Canada*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (citation omitted); see also *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 134 S. Ct. 2359, 2360 (2014) (claims ineligible despite requiring “simultaneous[ly]” sent instructions, which could not be done absent computer (citation omitted)); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (computer-implemented claims not eligible where functions can also be performed “mentally” “without a computer”).

<sup>18</sup> *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 717 (Fed. Cir. 2014).

sufficiently non-abstract, inventive, and fully enabled computer-implemented invention that discloses and claims a structure – an algorithm – which properly limits the invention to the disclosed structures which achieve the claimed outcome.<sup>19</sup>

## **V. Courts and the Patent Office Should Continue to Emphasize Reducing the Hold-Up Value of Vague, Broad, Invalid Software Patents**

NAR is particularly sensitive to the issue of Patent Assertion Entities (“PAE”) using expense of litigation to extract hold-up value from broad, vague patents claiming computer-implemented outcomes, a practice routinely exploited by these entities. This problem largely arises from patents issued in computer software arts, but those patents affect all industries because of the ubiquity of computers and computer networking in all aspects of modern economic life.

The FTC released a study on Patent Assertion Entity Activity on October 6, 2016.<sup>20</sup> The 2016 FTC Report identified two distinct PAE business models, Portfolio PAEs and Litigation PAEs.<sup>21</sup> The 2016 FTC Report found that Litigation PAEs typically sued potential licensees and settled shortly afterward by entering into license agreements with defendants covering small portfolios, often containing fewer than ten patents. The licenses typically yielded total royalties of less than \$300,000. THE FTC found this number particularly meaningful because, according to estimates by the American Intellectual Property Law Association, \$300,000 represents the approximate lower bound of early-stage litigation costs of defending a patent infringement suit.<sup>22</sup> Given the relatively low dollar amounts of the licenses, the 2016 FTC Report determined that the behavior of Litigation PAEs is consistent with nuisance litigation.<sup>23</sup>

According to the 2016 FTC Report, “Ninety-three percent of reported Litigation PAE licenses followed a lawsuit against the eventual licensee and 77% were valued at less than the estimated cost of defending a patent lawsuit through the end of discovery – a threshold below which litigation settlements might be considered nuisance value.”<sup>24</sup> In addition, “when licenses followed litigation, those litigations tended to settle early; of the cases that settled, 34% did so within six months of filing, 66% within one year, and 83% within 18 months.”<sup>25</sup> The FTC further determine that, although Litigation PAEs generated a minority of the reported PAE licensing revenues in the study, they accounted for the vast majority of total lawsuits filed.”<sup>26</sup> The findings of the FTC Report suggest that PAEs use the high cost of patent litigation to extract settlements which may be far in excess of the value of the underlying patent – particularly if the patent is not valid and thus has no value other than the cost of defending. Better screening by examiners and use of the related validity tools of 35 U.S.C. §§ 101, 102, 103, and 112 at early pleading stages can help curb this abuse by lowering the cost of demonstrating the invalidity of asserted claims.

## **VI. Emphasizing Section 112 as a Useful Tool in Rejecting Vague and Conceptual Claims Will Prevent the Issuance of Invalid Software Patents**

The Office has the primary obligation to remedy litigation abuse by PAEs by not issuing vague, over broad, purely functional patents. It should emphasize this in guidance to examiners, notably with respect to functional claiming of computer implemented inventions.

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<sup>19</sup> *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016) (claims were not directed to unpatentable subject matter, even though invention could be run on general-purpose computer).

<sup>20</sup> FED. TRADE COMM’N, PATENT ENTITY ACTIVITY: AN FTC STUDY (2016) [https://www.ftc.gov/system/files/documents/reports/patent-assertion-entity-activity-ftc-study/p131203\\_patent\\_assertion\\_entity\\_activity\\_an\\_ftc\\_study\\_0.pdf](https://www.ftc.gov/system/files/documents/reports/patent-assertion-entity-activity-ftc-study/p131203_patent_assertion_entity_activity_an_ftc_study_0.pdf) (“2016 FTC Report”).

<sup>21</sup> *Id.* at 3.

<sup>22</sup> 2016 FTC REPORT at 3 n. 7 (citing AM. INTELLECTUAL PROP. LAW ASS’N, REPORT OF THE ECONOMIC SURVEY 35 (2013) (“AIPLA 2013 REPORT”). AIPLA periodically surveys the costs of patent litigation. As cited by the 2016 FTC Report, in 2013, the AIPLA “reported that the cost of defending an NPE patent litigation through the end of discovery, which litigation budgets typically use as a milestone for filing any summary judgment motions, is between \$300,000 and \$2,500,000, depending on the amount in controversy.”

<sup>23</sup> 2016 FTC REPORT at 3 and n. 7 (citing AIPLA 2013 REPORT).

<sup>24</sup> 2016 FTC REPORT at 9.

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

In order to survive the enablement analysis under § 112, inventions in the computer arts must disclose the structure (typically the algorithm) that procures any beneficial result of the claimed system or method. By requiring a disclosed algorithm, examiners can eliminate purely aspirational applications, and can also more readily identify legitimate points of novelty and non-obviousness as between various applications by careful review of the disclosed algorithms.

Again, existing case law provides examiners all the tools they require to properly identify and limit the scope of computer-implemented inventions to structures actually invented and disclosed by a particular applicant.<sup>27</sup> As the Federal Circuit discussed in *Research Corporation Technologies v. Microsoft Corp.*, in “section 112, the Patent Act provides powerful tools to weed out claims that may present a vague or indefinite disclosure of the invention.” To this end, computer software related patent that presents a process sufficient to pass the threshold Alice/Mayo eligibility inquiry, may nonetheless be invalid as indefinite. The existing jurisprudence of § 112 requires examiners to reject claims that do not provide sufficient particularity and clarity to inform skilled artisans of the bounds of the claim. Additionally, examiners should emphasize the importance of the specification. A purely aspirational specification, describing worthwhile outcomes coupled only with references to generic computer equipment does not enable a person of ordinary skill in the art to replicate the invention. Instead, it requires undue experimentation by merely inviting the reader to come up with her own structure to solve the problem identified and the outcome or result found in the claims. Thus, 35 U.S.C. § 112 should invalidate claims which may conceptually satisfy Alice, Mayo, and the Federal Circuit’s recent applications of those tests but contain only aspirational language for the ultimate solution.

## VII. Encouraging Courts to Promote Heightened Pleading Standards and Early Disclosure Will Diminish the Hold-Up Value of Invalid Software Patents

In addition to the Office’s continuing role in preventing issuance of invalid patents, recent amendments to the Federal Rules provide new guidance and encouragement to courts to ensure “the just, speedy, and inexpensive” resolution of litigation, as well as additional tools to ensure discovery expenses remain in line with the complexity and value of a lawsuit. Courts should emphasize use of these new tools to limit the cost of litigation in accordance with the Federal Rules, and thus reducing the hold-up value of bad patents. *Alice* addressed part of this problem by facilitating the early evaluation and dismissal of patent cases at the Fed. R. Civ. P. 12(b)(6) stage rather than waiting to address the issue of patent validity at summary judgment.<sup>28</sup> Rules amendments have made other tools available to district courts, including the deletion of Form 18, the long-outdated patent infringement pleading that provided unscrupulous litigants an easy opportunity to avoid filing complaints that complied with the disclosure requirements of Fed. R. Civ. P. 8 as interpreted in *Twombly* and *Iqbal*.<sup>29</sup> With the form removed from the Rules, and in light of *Twombly* and *Iqbal*, District Courts have additional freedom to employ pleading requirements in patent cases through implementation of local rules that specifically address the types of cases typically on their dockets. For instance, courts that often deal with generic drug litigation that presents as declaratory judgment actions between competitors may implement different pleading arrangements through their local rules than would a court that sees mostly cases asserting infringement of computer implemented patents. Constructive use of local rules, pleading standards, and additional attention to the balance and scope of discovery, in addition to early dispositive motions, will further promote early resolution of cases. This will facilitate reduction of a patent’s nuisance litigation value while continuing to properly compensate owners of valid and infringed patents.

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<sup>27</sup> See *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (holding claims invalid for indefiniteness where the specification did not disclose sufficient structure corresponding to the “distributed learning control module” referred to in means-plus-function claims); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016) (algorithm in patents directed to information management and database system recited sufficient structure for claimed function of configuring said memory according to logical table, and thus claim at issue was not invalid for indefiniteness under 35 U.S.C.A. § 112).

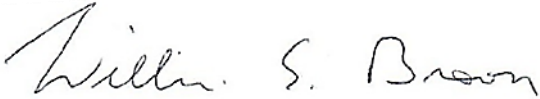
<sup>28</sup> *C.f. Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253 (Fed. Cir. 2016) (affirming finding of invalidity under § 101 on Rule 12(b)(6) motion and the finding that claims directed to a “means for delivering regionally broadcasted radio or television content to an electronic device located outside a region of the regionally broadcasted content” were invalid as directed to an abstract idea); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014) (affirming Rule 12(b)(6) judgment that claims directed to a method for allowing Internet users to view copyrighted material free of charge in exchange for watching certain advertisements were invalid under § 101 because they were directed to an abstract idea that was applied using conventional computer technology).

<sup>29</sup> *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 127 S. Ct. 1955 (2007); *Ashcroft v. Iqbal*, 556 U.S. 662, 129 S. Ct. 1937, 173 L. Ed. 2d 868 (2009).

## Conclusion

Abusive patent litigation represents a real and significant threat to American businesses. Patent trolls intentionally target small businesses precisely because of the lack of resources and expertise to defend against the intentionally vague claims of infringement contained in many demand letters. Policymakers can have a positive and important impact on reducing patent litigation abuse and return billions of dollars to productive use to grow the American economy, all without compromising the rights of legitimate patent holders.

Sincerely,

A handwritten signature in black ink that reads "William E. Brown". The signature is written in a cursive style with a large initial 'W'.

William E. Brown  
2017 President, National Association of REALTORS®