Case No. 2007-1130
(Serial No. 08/833,892)

United States Court of Appeals for the Federal Circuit

IN RE BERNARD L. BILSKI and RAND A. WARSAW,
Appellants

En banc hearing for appeal from The United States Patent and Trademark Office, Board of Patent Appeals and Interferences

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Brief for *amicus curiae*, JASON V. MORGAN, supporting neither side

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Dated: April 7, 2008

No. 2007-1130
(Serial No. 08/833,892)

United States Court of Appeals for the Federal Circuit

IN RE BILSKI

CERTIFICATE OF INTEREST

Counsel for *amicus curiae*, Jason V. Morgan, certifies the following:

1. The full name of every party or *amicus* represented by me is:

   Jason Vernon Bishop Morgan

2. The name of the real party in interest if the party named in the caption is not the real party in interest:

   Not applicable

3. The following are the parent corporations and the publicly held corporations that own 10% or more of stock of any part or *amicus* represented by me:

   Not applicable

4. The names of all law firms and the partners and associates that have appeared for the party in the lower tribunal or are expected to appear for the party:

   Juneau Partners Patent & Trademark Firm, PLLC:
   Todd L. Juneau

Dated: April 7, 2008 _____
Todd L. Juneau

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STATEMENT OF INTEREST OF *AMICUS CURIAE*

Jason V. Morgan is a registered patent agent (55,464), an experienced software developer, and a student at The George Washington University Law School, where he has primarily studied intellectual property law. Spurred by his exposure to the controversial nature of patent law within the software industry, Mr. Morgan has drafted multiple articles that address patentability issues.[1] Mr. Morgan's interest is ensuring that the legal rules governing the United States patent system maximize the goal of promoting "the Progress of … useful Arts."[2] The opinions expressed herein are his.

This *amicus* brief is filed under the authority of the February 15, 2008 per curiam order of the United States Court of Appeals for the Federal Circuit in this case.[3] It was filed by April 7, 2008, within the 30 filing day deadline, as extended by Federal Rule of Appellate Procedure 26(a)(3).

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[1] *See* Jason V. Morgan, *Chaining Open Source Software*: *The Case Against Software Patents*, unpublished school paper, University of Utah (submitted 1999 and last modified 2002), available at ⟨http://lpf.ai.mit.edu/Patents/chaining-oss.html⟩ and Jason V. Morgan, *Open Source Software and Software Patents*: *Finding the Common Ground in a Patent Pool*, unpublished Bachelor of Science thesis, University of Utah School of Computing (2002), available at ⟨http://opensource.mit.edu/papers/morgan.pdf⟩.

[2] U.S. CONST. art. I § 8, cl 8.

[3] *In re Bilski*, Court Order, Case No. 2007-1130 (Serial No. 08/833,892) at 2 (Fed. Cir. Feb. 15, 2008), available at ⟨http://www.cafc.uscourts.gov/opinions/07-1130%20order.pdf⟩.

QUESTION PRESENTED

This court asked the parties in this case to supplement their briefs to address five questions. This *amicus* brief addresses most of the five questions indirectly, only directly focusing on the second question:

> What standard should govern in determining whether a process is patent-eligible subject matter under section 101?

SUMMARY OF ARGUMENT

Stating precise rules that divide the universe of innovations into those that are and are not patentable under 35 U.S.C. § 101 is an undertaking that should not be taken lightly. Past attempts to state such rules led to unsatisfactory results, creating unnecessary barriers to the protection of patentable innovations. Some of the key bright-line rules have been rolled back, reducing the role of § 101 patentability analysis, but encouraging applicants to seek patent rights in matters outside the scope of § 101.

The United States Patent and Trademark Office's proposed solution is for the courts to reverse the momentum of patentability law—to allow patent examiners to adopt a new bright-line rule for rejecting applications for failure to meet the § 101 requirements of patentability. Bilski and Warsaw have taken the mirror tact, encouraging this court adopt a bright-line rule for finding that applications meet the § 101 requirements of patentability.

Adopting either position will harm the effectiveness of § 101 in separating innovations deserving of patent protection from those that should be insulated from the potential mischiefs that the United States patent system can attract. This brief recommends that this court adopt a series of factors to guide § 101 patentability analysis. This brief also recommends allowing the Patent and Trademark Office to defer reaching difficult conclusions of law.

ARGUMENT

> *Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.*[4]

BRIGHT-LINE § 101 PATENTABILITY RULES LEAD TO CONFUSION

Separating patentable and unpatentable subject matter is a challenging prospect. While 35 U.S.C. §101 is worded very broadly, there are limits to the universe of patentable subject matter.

The presumption influencing legal debate on patentability for at least twenty-seven years is that, in codifying the patent statues in 1952, the "Congress intended statutory subject matter to 'include anything under the sun that is made by man,' "[5] at least for any invention that is "a machine or a manufacture."[6] Tempering this presumption are judicial exceptions to patentable subject matter, the most famous exceptions being "laws of nature,

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[4] 35 U.S.C. § 101.

[5] *Diamond v. Diehr*, 450 U.S. 175, 182; 209 U.S.P.Q. 1, 6 (1981).

[6] S.Rep.No.1979, 82d Cong., 2d Sess., 5 (1952), available at ⟨http://digital-law-online.info/misc/SRep82-1979.pdf⟩ and H.R.Rep.No.1923, 82d Cong., 2d Sess., 6 (1952), available at ⟨http://digital-law-online.info/misc/HRep82-1923.pdf⟩.

natural phenomena, and abstract ideas."[7]

Even though the language of § 101 and the *Diehr* exceptions seem plain, applying them is difficult because they invite a multitude of nuanced interpretations. Nuanced § 101 analysis is necessary because there is a line between what classes of innovations are meant to be patentable and what classes on innovations should not be protected by patents. It is just a difficult line to clearly define and one that is subject to much debate.

Efforts to establish bright-line rules of patentable subject matter lead to confusion. One source of confusion is that, to capture the nuances of § 101, bright-line rules, such as the printed matter patentability exception, tend to become complex and fragile. Another source of confusion is that bright-line rules that might have made sense in previous circumstances, such as the now-defunct business methods patentability exception, are stretched and distorted to fit unforeseen, drastically different classes of innovations.

The printed matter patentability exception is complex and fragile

The printed matter patentability exception is a good example of how bright-line rules for establishing the boundaries of patentable subject matter tend towards complexity and become difficult to apply without breaking.

[7] *Diehr*, 450 U.S. at 185; 209 U.S.P.Q. at 7.

Patentability of printed matter is restricted because "a mere arrangement of printed matter, though seemingly a 'manufacture,' is rejected as not being within the statutory classes."[8] Printed matter seems to be an exception to the presumption that any machine or manufacture under the sun made by man is within the scope of § 101, demonstrating the fragility of the clearest of bright-line rules.

Applying the printed matter exception is challenging; some patentable innovations seem to primarily comprise printed matter. Patentability rests on whether the invention claims include structure and whether "a novel relationship exists between [the] printed matter and the claimed structure."[9] Whether sufficient structure has been claimed and whether the relationship between the printed matter and the claimed structure is sufficiently novel is not necessarily a straight-forward fact-finding endeavor.

Rejecting a claimed invention under the printed matter exception can turn into a complicated legal analysis. This analysis requires understanding legal holdings such as why one innovation was not a printed matter because its claims required "a particular sequence of digits to be displayed on the

[8] MPEP ed. 8 rev. 6, § 706.03(a), 700-70 (Sept. 2007).
[9] *In re Miller*, 418 F.2d 1392, 1395; 164 U.S.P.Q. 46, 48 (Cust. & Pat. App. 1969).

outside surface of a band [where the] digits are related to the band in two ways: (1) the band supports the digits; and (2) there is an endless sequence of digits-each digit residing in a unique position with respect to every other digit in an endless loop."[10]

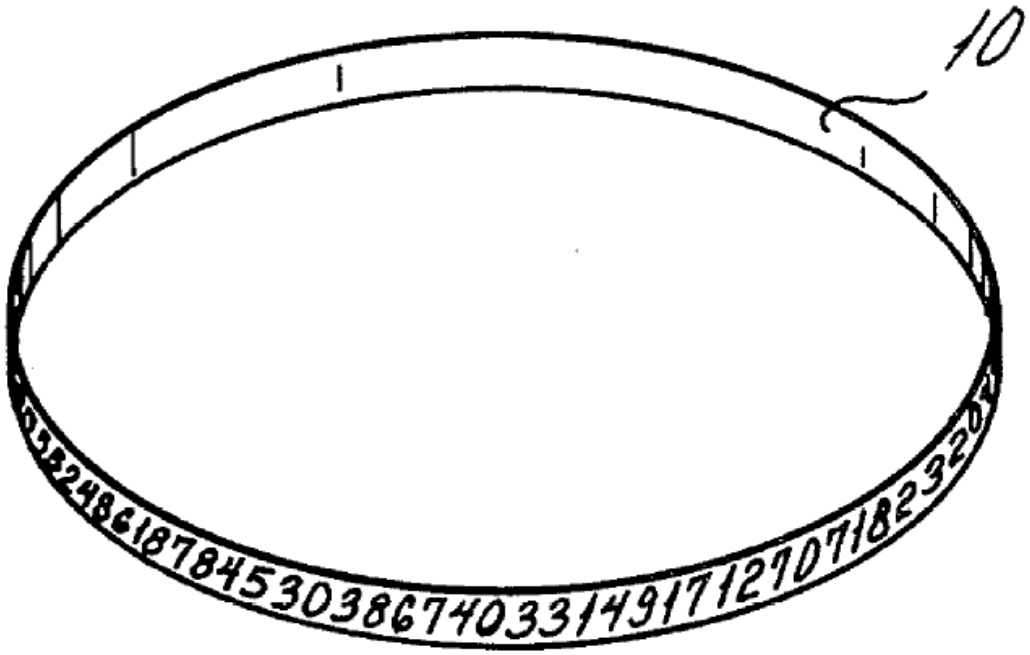

Figure 1. The invention that *In re Gulack* held as patentable—i.e., not subject to the printed matter exception[11]

Instead of a bright-line rule that can be easily applied using factual findings, the printed matter exception interpretation of nuanced legal doctrine. The efficacy of the rule has come under some criticism:

[10] *In re Gulack*, 703 F.2d 1381, 1386–1387; 217 U.S.P.Q. 401, 405 (Fed. Cir. 1983).
[11] U.S. Patent No. 4,441,633 fig. 5.

> This disarray leaves inventors and patent drafters in a dilemma over what standard their invention will be measured. Will it be the rule that the printed matter is acceptable unless the claim is for an abstract idea intelligible only to the human mind or will it be that claims is rejected unless the applicant can demonstrate a new and non-obvious function relationship to the substrate?[12]

While the printed matter exception is challenging, the "results of this rule are good, since it prevents patents from protecting writings more properly within the scope of copyright."[13] It would be more effective though to avoid treating printed matter as a bright-line test of patentability—factors directed to the purpose of this exception would be easier to apply.

The business method patentability exception was based on out-of-context extracts from good cases and ultimately stretched too far

The evolution of the printed matter patentability exception is an example of a bright-line rule becoming brittle. The troubled history of the now-defunct business methods patentability exception shows how bright-line rules can be too elastic and stretch beyond recognition.

The early cases used to establish the business methods patentability exception did not try to set forth broad patentability guidelines. Closer inspection shows that they do not even seem to bar business methods. These

[12] *Johnston v. Dudas*, appellate petition to the Supreme Court, 2004 WL 1877792, 20, *cert. den'd* 543 U.S. 877 (2004).
[13] Lee A. Hollaar, *Legal Protection of Digital Information*, 254 (BNA Books 2002), available at ⟨http://digital-law-online.info/lpdi1.0/treatise54.html⟩.

early cases show courts grappling with patent claims for new types of rights; but on innovations that lacked novelty. In the process of providing an opinion, the courts gave multiple explanations as to why the claims were invalid. Some of those explanations evolved into the per se business methods exception.

The issue of whether an improved method of conducting business could be patentable arose in one important case, *Hotel Security Checking Co. v. Lorraine Co.*[14] The question was whether the claimed innovation of John Tyler Hicks, "a system of bookkeeping made applicable to the conditions existing in hotels and restaurants,"[15] was patentable even though the "fundamental principle of the system [was] as old as the art of bookkeeping"[16] and even though it could not be maintained that "the physical means described by Hicks … apart from the manner of their use, present any new and useful feature."[17] One of Hick's claims read:

> 1. The herein-described improved means for securing hotel or restaurant proprietors or others from losses by the peculations of waiters, cashiers or other employees, which consists of a sheet provided with separate spaces, having suitable headings, substantially as described, said headings being designatory of the several waiters to

[14] 160 F. 467 (2nd Cir. 1908).
[15] *Id.* at 469.
[16] *Id.*
[17] *Id.*

whom the several spaces on the sheet are individually appropriated, in conjunction with separate slips, each so marked as to indicate the waiter using it, whereby the selling price of all the articles sold may be entered in duplicate, once upon the slip of the waiter making the sale, and once upon his allotted space upon the main sheet, substantially as and for the purpose specified.[18]

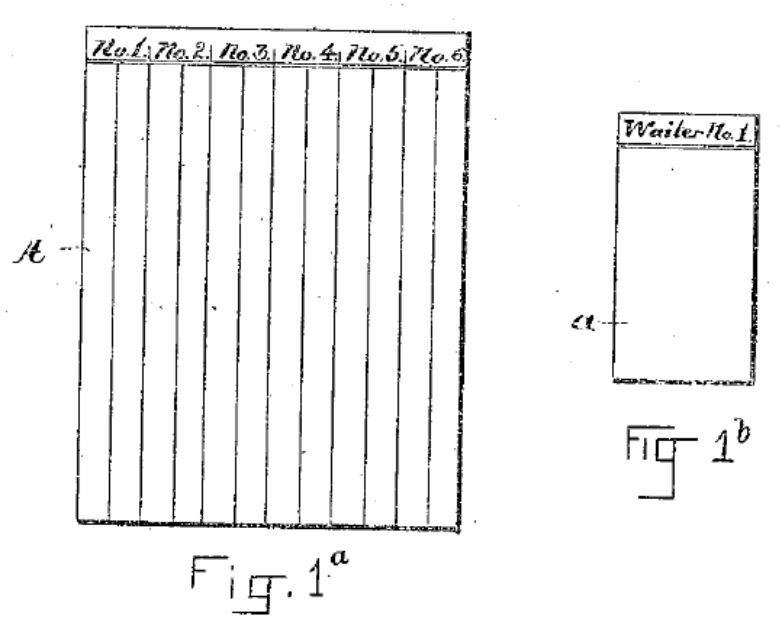

Figure 2. Hick's double-entry bookkeeping device: a sheet with slips.[19]

The court did not dwell whether the innovation was one that Congress had intended to be patentable. The court held that the "essential features were old, the changes, elaborations and improvements of the patent belong to the evolution of the business of restaurant and hotel keeping, and would, we think, occur to any clever and ingenious person familiar with the needs

[18] U.S. Patent No. 500,071 p. 3 lines 61–77.
[19] U.S. Patent No. 500,071 fig. 1 (sub-figures layout rearranged).

of that business."[20] The court relied on reasoning analogous to analysis under § 103 rather than on § 101-style subject matter analysis.

The court in *Hotel Security* did say that a "system of transacting business disconnected from the means for carrying out the system is not, within the most liberal interpretation of the term, an art,"[21] or process as it reads in § 101,[22] and that "[a]dvice is not patentable."[23] This statement alone should not have been read as a broad bright-line rule. At best, the language reads like an early version of the abstract ideas patentability exception. This reading makes particular sense in light of court's statement that "[i]f at the time of Hicks' application, there had been no system of bookkeeping of any kind in restaurants, [the court] would be confronted with the question whether a new and useful system of cash-registering and account-checking is such an art as is patentable under the statute."[24] The court declined to answer this hypothetical, relying solely on the finding that Hick had not "made a contribution to the art which [was] new and useful."[25]

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[20] *Hotel Security Checking Co.*, 160 F. at 470.
[21] *Id.* at 469.
[22] *See* S.Rep.82-1979, *supra* note 6 at 5 and H.R.Rep.82-1923, *supra* note 6 at 6.
[23] *Hotel Security Checking Co.*, 160 F. at 469.
[24] *Id.* at 472.
[25] *Id.*

In re Wait[26] is another early case related to patentability of business method patents worth scrutiny. The PTO relied upon *Hotel Security Checking* and *In re Wait* for many years to support the rule that "a method of doing business can be rejected as not being within the statutory classes."[27] Just like *Hotel Security Checking*, *In re Wait* did not support a business method patentability exception either:

> Before this court there has been filed an elaborate and, we may add, a quite interesting brief in which a large number of authorities are cited and analyzed. There was also an oral argument on appellant's behalf, during the course of which it was suggested that an opportunity is here afforded this court to render a decision which might possibly clarify questions growing out of applications for patents relating to what is called 'methods of doing business.'
>
> However inviting this field may be, the court does not deem it proper to deviate from its usual practice of determining only the relevant questions presented by the application actually before it, avoiding dicta in so far as possible.[28]

In re Wait was not decided on subject matter grounds, but on lack of novelty.[29]

Despite the shaky foundation on which the business methods patentability exception was built, the Patent and Trademark Office used it

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[26] *In re Wait*, 73 F.2d 982; 24 U.S.P.Q. 88 (Cust. & Pat.App. 1934).
[27] MPEP ed. 6 rev. 1 § 706.03(a), 700-14 (Aug. 1993).
[28] *In re Wait*, 72 F.2d at 982; 24 U.S.P.Q. at 88.
[29] *In re Wait*, 72 F.2d at 983; 24 U.S.P.Q. at 88.

extensively, using it in significantly different arts such as software patents, until this court finally retired the "error-prone, redundant, and obsolete"[30] § 101 analysis tool in *State Street Bank*.[31] Today, the end of this bright line rule evokes smiles even at the Patent and Trademark Office.[32]

The useful, concrete, tangible result test does not work either, and has invited a flood of applicants for innovations outside of § 101

State Street Bank, and subsequently *AT&T*,[33] helped rollback flawed, bright-line rules against patentability under § 101 such as the business method exception and the *Freeman-Walter-Abele* test.[34] Unfortunately, many now believe that these cases promoted the *In re Alappat* "useful, concrete, and tangible result"[35] from a mere test to screen abstract ideas into "the sole test for patent eligibility" under § 101.[36]

The Board of Patent Appeals and Interference's 66 page informative

[30] *In re Schrader*, 22 F.3d 290, 298 (Fed. Cir. 1994) (Newman, J., dissenting).
[31] *State Street Bank v. Signature Financial Group, Inc.*, 149 F.3d 1368; 47 U.S.P.Q.2d 1596 (Fed. Cir. 1998).
[32] *See Ex parte Bilski*, Appeal No. 2002-2257 at 69 n. 2 (BPAI Informative Decision 2006) (McQuade, APJ, concurring).
[33] *AT&T v. Excel Communications, Inc.*, 172 F.3d 1352; 50 U.S.P.Q.2d 1447 (Fed. Cir. 1999).
[34] *AT&T*, 172 F.3d at 1359; 50 U.S.P.Q.2d at 1453–54.
[35] 33 F.3d 1526, 1544; 31 U.S.P.Q.2d 1545, 1557 (Fed. Cir. 1994).
[36] *In re Bilski*, Brief for Appellee Director of the United States Patent and Trademark Office, Case No. 2007-1130 (Serial No. 08/833,892) at 4 (June 13, 2007).

opinion indicted this new interpretation of § 101 as too loose.[37] Concerns about the subject matter that may be allowable under § 101 range were diverse. One concern was that "[c]laims that can only be performed by a human, such as dance and sports moves, meditation techniques, etc., present difficult questions under § 101."[38]

Concerns that the threshold limits of § 101 have been lowered too far may be overrated. Early cases that supposedly created the business methods patentability exception were able to rest easily on doctrines of novelty. It is likely that many of the applications that have supposedly flooded the Patent and Trademark Office can be easily resolved using tighter, more objective doctrines such as novelty, nonobviousness, or enablement. The *Bilski* application itself may be rejectable on § 102 or § 103 grounds given that the claim appears on its face to read on hedging, "a well-known strategy in which a party enters into one transaction specifically to reduce or cancel the risk taken in another transaction."[39]

Still, this court should not gloss over the PTO's concerns. Over-protection of innovations discourages future innovators who may

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[37] *Ex parte Bilski*, Appeal No. 2002-2257 (BPAI Informative Decision 2006).
[38] *Id*. at 31.
[39] *In re Bilski*, Brief for Appellee, *supra* note 36 at 5.

accomplish the same technological goals of patent applications "without using any part of the process or combination set forth [by the patent applicants]."[40] Over-protection also encourages an intellectual property gold rush mentality, flooding the PTO with superfluous applications and tying courts to flimsy infringement suits.

New bright-line rules, such as the proposed tangible result or physical device test, will also become brittle or stretched

Instead of relying on grounds outside of § 101 to reject the Bilski patent application, the Patent and Trademark Office's response to the alleged shortcomings of *State Street Bank* and *AT&T* seems to be a plea to, once again, adopt a bright-line rule barring patentability under § 101. This time, the rule that the PTO hopes will be adopted is that "A Section 101 'Process' Must Either Be Tied to a Particular Apparatus or Transform an Article to a Different State or Thing."[41]

There are certain perils associated with adopting the PTO's proposed rule. First, confusion would be introduced immediately by establishing rules specifically for analyzing subject matter eligibility of process innovations. Second, another bright-line rule in this complex area of law will ultimately

[40] *O'Reilly v. Morse*, 56 U.S. 62, 113 (1854).
[41] *In re Bilski*, Brief for Appellee, *supra* note 36 at 6.

be overstretched or become brittle.

The PTO's proposed rule seems to be so narrowly targeted that even the worst patent applications could be worded to pass through its net. Instead of discouraging applicants from filing for rights in areas outside the scope of § 101, this rule would encourages the growth of patent thickets as applicants file multitudes of weak, narrow patents.

The skeptics could be right in saying that "[t]he quest for a bright line test for determining whether a claimed invention embodies statutory subject matter under 35 U.S.C. § 101 is an exercise in futility."[42]

PATENTABILITY ANALYSIS UNDER § 101 SHOULD HELP PROMOTE INNOVATION

The main drawback of bright-line § 101 patentability rules is that they draw the focus away from the question of how to promote innovation, triggering endless debates regarding what did Congress intend patent law to protect. Whatever analytical tools are used to draw the line through § 101, those tools must be developed with the ultimate goal of promoting innovation in mind.

Using bright-line rules to identify patentable subject matter is problematic. Such rules must be carefully written to anticipate unforeseen

[42] *See Ex parte Bilski*, *supra* note 32 at 67 (McQuade, APJ, concurring).

subject matter. Applying bright-line rules of patentability under § 101 under varying circumstances leads to either complex and fragile patentability decision-trees or incorrect rejection or allowance of applications due to over-application.

Generally, it is best for the PTO and the courts to avoid dealing with § 101 patentability issues to the extent possible. Where a claimed invention meets all of the requirements of other areas of patent law such § 102, § 103 and § 112, analysis under § 101 is appropriate.

§ 101 issues cannot be ignored though: every patent that issues raises the question of whether the subject matter of the innovation falls within the scope of § 101. Thus, it is critical that this court provide solid guidance.

THIS COURT SHOULD ADOPT FACTORS FOR § 101 PATENTABILITY ANALYSIS

Bright-line § 101 rules are problematic. The preferred alternative is to adopt factors for analysis. This would play on the strengths of the PTO in making fact-specific findings on a case-by-case basis[43] and would avoid trying to rely on the ability of patent examiners to gaze into heavily-nuanced of legal doctrine. Factors should also help guide public debate by providing a framework for discussing the goal of promoting innovation.

[43] *See Ex parte Bilski*, *supra* note 32 at 68 (McQuade, APJ, concurring).

Factor-based analysis would help strengthen patent application rejections and patent invalidations

A proper set of factors can immensely improve the quality of patentability analysis under § 101. Unlike bright-line rules, which can quickly become a bird's nest of exceptions and alternatives, a good set of factors can be kept simple and easy to manage. Yet, a carefully selected set of factors can be surprisingly nuanced. Even a list of 10 factors that either favor patentability or disfavor patentability would enable 1024 different outcomes. Yet the fact-finder would only have to only understand how to apply 10 factors, not 1024 detailed rules.

Fact-intensive factors discourage wasteful appeals and hasten legitimate appeals. Wasteful appeals are encouraged under bright-line rules because parties always have some way of distinguishing their cases. When the outcome is based on nuanced legal analysis, there is always hope of nudging the law just a little bit. When initial fact-finders are given great deference, there is less room for argument and less need to reconsider factual issues repeatedly.

Factor-based analysis would help constructively channel public debate about the Patent Act's efficacy and the role of patent law

Properly selected factors for patent eligibility under § 101 could help improve the quality of public debate regarding patent law. If the factors are

selected with the goal of promoting innovation in mind, there will be less debate about semantics and more discussion about progress.

Intelligent selection of key factors are needed to ensure that the patent system promotes innovation

While adoption of factor-based analysis of patentability can improve the quality of the patent system, but there is no guarantee that adopting factor-based analysis will be the silver bullet that automatically kills bad patents while missing all the good ones. Patentability factors must be constructed with the ultimate goal of promoting innovation as the purpose of every factor. Careful forethought is critical; otherwise factor-based analysis could be as difficult to apply to new subject matter as the worse bright-line rules.

The following suggested factors are an attempt at constructing factors that will further the goal of promoting innovation. These should not be the only factors considered in ascertaining patentability under § 101, but this short list of factors could form a solid basis for analysis.

Is the claimed invention, on its face, a process, machine, manufacture, or composition of matter that is not a natural phenomena, or abstract idea?

Meeting the threshold requirements of the § 101 is a necessary step in securing a patent right. Meeting the requirements on their face is not enough

to show that an invention is patentable subject-matter. The printed matter exception shows that not every manufacture under the sun made by man is statutory subject matter, while "the holding that the discovery of that method could not be patented as a 'process' forecloses a purely literal reading of § 101."[44] Trying to precisely define the meaning of what a process, machine, manufacture, or composition of matter, turns patentability disputes into arguments over semantics instead of channeling efforts towards promoting innovation. It is thus better to read the meaning of these terms broadly for purposes of this factor. Other factors can frame subject matter patentability issues more effectively.

Conversely, the three *Diehr* exceptions, "laws of nature, natural phenomena, and abstract ideas,"[45] should be read narrowly. They too, invite arguments of semantics. For example, there are still those who argue that software patents should be abolished as patents of mathematics, or abstract ideas, because "[a]ny legal attempt to force a wedge between pure math and software will fail because the two are one and the same"[46] even though the reasoning behind such assertions would also abolish patents for machines,

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[44] *Parker v. Flook*, 437 U.S. 584, 589; 198 U.S.P.Q. 193, 197 (1978).
[45] *Diehr*, 450 U.S. at 185; 209 U.S.P.Q. at 7.
[46] Ben Klemens, "Software Patents Don't Compute," IEEE Spectrum 56, 59 (July 2005).

which "must obey the laws of physics in their operation,"[47] and patents for compositions of matter, which "must follow the laws of chemistry."[48]

The main effect of this approach to attacking patentability of subject matter by carefully dissecting the precise meaning of every word of § 101 is that it distracts from the main issue of whether a finding of patentability of a particular subject matter will ultimately forward the goal of promoting innovation.

Moreover, § 101 questions can often be resolved through the plain meaning of other words in the statute. It is not really necessary to state that a claim to a law of nature or natural phenomena is not a process, machine, manufacture, or composition of matter. Laws of nature and natural phenomena "are not *new* processes, machines, manufactures, or compositions of matter. They may not have been unknown, but they existed before their first discovery."[49] Certain abstract ideas, such as unapplied mathematics, "lack utility, since they have no particular use, much like a composition of matter whose uses are unknown."[50] Other abstract ideas may not be enabled sufficiently, thus supporting rejection under § 112.

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[47] Hollaar, *supra* note 13 at 252.
[48] *Id*.
[49] *Id*.
[50] *Id*.

Is the claimed invention new?

In most instances, analysis under § 102 or § 103 of the patent code will answer the question of whether an invention is new, thus making the question of patentability under § 101 moot. This factor is still important though in filtering out unpatentable discoveries. Tension has existed between practice and theory since ancient times:

> [T]he evolution of physics -- or, at least, mechanics -- is based on an interplay between practice and theory. The practical use comes first, theory second. Artisans build machines and use them but do not think about why they work. Theorists explain the machines and then derive principles that can be used to construct more complex machines.[51]

While the importance of the theoretical understanding of the world in furthering the progress of innovation, the patent system is not designed to directly reward those who identify why existing innovations work. The patent application examination process plays an important role in ensuring that those who can explain why things work cannot take away from the public those things that were already in use.

Does the claimed invention produce a useful, concrete, and tangible result?

The Patent and Trademark Office has a robust process for ascertaining

[51] Guy Gugliotta, "The Ancient Mechanics And How They Thought," *New York Times*, April 1, 2008, sec. F p. 1 col. 0.

whether a claimed invention meets the utility requirements of § 101.[52] It appears to be effective at ascertaining whether utility is substantial, but the question of tangibility is not fully developed.[53] Some thought should be given to tangibility, although the meaning of tangibility should be read broadly and lack of tangibility usually should not lead to automatic rejection. For example, while amusement is an intangible result, a new device that is solely designed to amuse would likely be patentable.

Can the claimed invention be adequately protected by other forms of intellectual property if openly practiced?

Patent law does not exist in a vacuum. Innovators often have other forms of intellectual property that can be used to protect their innovations. Writers and artists have copyright law to prevent copying of their works. Businesses have trademark law to protect goodwill by enabling sellers of goods and services to distinguish themselves. When alternative protection is available that would adequately protect the claimed features of an invention, it would be appropriate to hold that the claimed invention falls outside the scope of § 101.

Trade secret protection should not be given much consideration, if any,

[52] MPEP ed. 8 rev. 6, § 2107, 2100-19–37 (Sept. 2007).
[53] *See Id.* at 2100-12.

as part of this factor. Too many patentable innovations can be safely hidden. Software technologies, for example, are increasingly retained on centralized servers, limiting the ability of curious engineers to poke and prod in an effort to extract useful secrets. Patent rights should not be denied to an innovator who is willing to share such secrets with the world simply because the innovator could choose to withhold the secrets instead.

Is the claimed invention in an area in which patent or intellectual property protection cannot properly extend?

While § 101 is very broad, there are areas that are outside of the scope of patent law or outside the scope of intellectual property law altogether. Innovators may be prohibited or hindered in their efforts to obtain patent rights because of public policy constraints. One famous constraint, found in the Atomic Energy Act of 1954, is the denial of patent rights "for any invention or discovery which is useful solely in the utilization of special nuclear material or atomic energy in an atomic weapon."[54] Similarly, an innovator may face indefinite delays in securing rights if the publication of an application or the granting of a patent "might, in the opinion of the Commissioner of Patents, be detrimental to the national security."[55] Even if

[54] 42 U.S.C. § 2181(a).
[55] 35 U.S.C. § 181.

a patent right is granted, a patent holder does not have the right to enjoin the United States government from making use of those rights—the only relief available is "the recovery of his reasonable and entire compensation for such use and manufacture."[56]

While these restrictions are not really § 101 questions, they do show that Congress has never intended the goals of patent system or the interests of innovators to trump all questions of public policy. Some consideration should be given to as to whether a claimed innovation is one that is protectable under patent law or any other form of intellectual property law.

For example, it is unlikely that Congress intended for intellectual property protection to ever prevent an innovator from exercise the right to file for a patent application. A claim to the "process of protecting a novel joke which comprises filing a patent application defining the novel features of the joke"[57] should not be protectable under patent law or any other form of intellectual property law. If this mirthful claim were to be allowed, it would make it an act of infringement to file for an improvement on the invention, directly contradicting the rights of a subsequent inventor to secure

[56] 28 U.S.C. § 1498.
[57] U.S. Patent App. No. 20060259306, claim 1.

a patent to "any new and useful improvement [of the invention]."[58] A patent cannot prohibit the right of inventors to use the patent system anymore than a patent could prohibit the right of alleged tortfeasors or tort claimants to make use of new legal theories.

While public policy considerations should not be completely ignored in trying to flesh out the scope of § 101, it is important to limit reliance on public policy to restrict patent rights in a very limited class of innovations.[59] Not only are public policy considerations, such as what society believes to be immoral, subject to change, but allowing many questionable classes of subject matter through the patent system can be used to promote public policy goals. For example, citizens concerned about unsolicited commercial email, or "spam,"[60] might take on the role of angel patent trolls by patenting new spamming technologies and then using their patent rights as legal tool against infringing spammers.

Does practice of the claimed invention primarily depend on the exercise of judgment or skill?

Innovations that can only be practiced through the exercise of

[58] 35 U.S.C. § 101.
[59] *C.f., Juicy Whip, Inc. v. Orange Bang, Inc.*, 185 F.3d 1364, 1366–67; 51 U.S.P.Q.2d 1700, 1702 (Fed. Cir. 1999).
[60] *United States v. Kelly*, 482 F.3d 1047, 1055 n. 2 (9th Cir. 2007).

judgment or skill may be outside the scope of § 101 in many cases. By being the first man to run the four-minute mile, Roger Bannister enabled others to make that same run simply by showing that it could be done, but he would not have been able to seek patent protection on the process of running a mile in four minutes or less. Conversely, the fact that a new vehicle may require a skilled driver for safe operation does not preclude patent protection.

Does the scope of the claimed invention include substantial non-patentable subject matter?

The position that a "claim which covers both statutory and nonstatutory subject matter should be held unpatentable"[61] is too strong. A claim may contain nonstatutory subject matter if read unreasonably broad. Or, a miniscule amount of nonstatutory subject matter may be contained in a claim as a result of deficiencies in the English language. Moreover, adding additional elements to make a claim narrow enough to fall completely within the scope of statutory subject may obscure the core features of the invention. Still, this factor should thus be given great weight in making § 101 determinations.

[61] *Ex parte Bilski*, *supra* note 37 at 39.

Would potential infringers be likely to practice the claimed invention outside the scope of patentable subject matter?

Focusing too much attention on unlikely hypothetical infringers is likely to be counterproductive in efforts to encourage innovation. In other forms of rejection, a potential infringer is usually an implicit part of the rejection. § 102 rejections protect potential infringers who practice the art as it existed before the patent applicant's innovation. § 103 are similar, protecting those who might chance on obvious improvements to the known art. § 112 protects those who are able to practice the new art from a patent applicant who withholds enable information from the public.

Similarly, if a § 101 rejection is made, some profile of likely potential infringers should be developed, otherwise a patent applicant may be denied protection to protect non-existent people.

Is the claimed invention an improvement on a patent that is known to be within the bounds of § 101?

Effort can be saved in resolving many § 101 disputes if a claimed invention is an improvement over an invention that is known to be within the scope of § 101. This factor should be given less consideration if a full analysis has not been done on the previous invention. This factor could also work against the patent applicant if the previous invention proved to be outside the scope of § 101. Still, the value of this factor could be immense

in speeding through § 101 analysis.

Is the scope of the claimed invention within reasonable boundaries of the applicant's enabling disclosure?

While this factor goes more to the heart of enablement under § 112 than subject matter scope under § 101, it is a factor worth considering. Broad claims are appropriate when an innovator has pioneered a new art, but claims may need to be more limited in more settled areas or when there are other trail blazers exploring the same frontier. Innovators are able to secure reasonable flexibility in the scope of their claims, thus enabling them to preclude others who might learn from their innovations and make trivial changes to avoid infringement. This flexibility is limited when an innovator "claims an exclusive right to use a manner and process which he has not described and indeed had not invented, and therefore could not describe when he obtained his patent."[62]

Can alternative wording reasonably be used to exclude non-patentable subject matter?

Holding innovators to perfection in claiming their inventions is problematic given that the language of claims is far from perfect. No one

[62] *O'Reilly v. Morse*, 56 U.S. at 113.

even knows the exact scope of claims unless they are litigated.[63] When alternative language is readily available that excludes non-statutory matter without eviscerating the scope of the claimed invention, then a patent applicant should be held to a higher standard than when reasonable alternative language is elusive.

THE PATENT AND TRADEMARK OFFICE SHOULD BE ALLOWED TO DEFER FINDINGS OF LAW UNDER § 101

As a practical matter, it may make sense if the Patent and Trademark Office were to defer some findings of law under § 101 when the question of subject matter eligibility is close. The PTO should not be required to adopt rule of doubt that would entitle patent applicants to patent applications when the PTO has unresolved doubts about whether a claim is statutory subject matter. However, the PTO should have the option of allowing a patent with a caveat on the record that doubt as to patentability remains. In those cases, where the open question of patentability that turn on interpretations of law, the patentability question could remain open, waiting like Schrödinger's cat for a judge's observation to resolve the law.

The main fear preventing this from happening is that the patent

[63] *See generally, Markman v. Westview Instruments, Inc.*, 517 U.S. 370; 38 U.S.P.Q.2d 1461 (1996).

system would be debilitated were some § 101 questions to await litigation.[64] Such fear is unwarranted given that most patents, good or bad, probably are not enforced and most issued patents probably do not raise serious questions of patentability under § 101.

Factors-based § 101 analysis would help make such a system work in two ways. First, patent examiners would make the initial factual determinations under the various factors. These would be on the record, enabling the public to consider the likelihood of the patent standing up in court and to support a quick motion for summary judgment in a legal proceeding. If, as a matter of law, the § 101 factors support the validity of the patent, then the patent was valid from the issuance. If, as a matter of law, the § 101 factors invalidate the patent, then the patent was improperly issued, but litigation costs were kept to a minimum because of the PTO's fact-finding efforts.

The second reason why these § 101 factors would support a system where the legal findings of § 101 are delayed until needed is that the PTO could keep a record of what innovations share similar characteristics for purposes of patentability under § 101. Whenever a question of § 101 law

[64] *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 18; 148 U.S.P.Q. 459, 467 (1966)

settled, the PTO could quickly identify similar innovations and reevaluate whether the question of law under § 101 is a still close question.

This type of system would avoid the problematic case of a patent application that should issue being held up in the patent prosecution process on § 101 grounds. During the delay, innocent practitioners in the field of the innovation's art may independently start practicing the art. When the patent finally issues, the innocent practitioners may find that they had become reliant on a technology that is no longer in the public domain.

Delays such as these are important issues. They are as debilitating as any failure to filter out bad patents. In the software world, patent protection is plagued by the perception that it is "too much, too long, too late."[65] It has even been suggested that an intermediate form of protection should be provided where examination of the innovation is postponed until litigation.[66]

Allowing the deferral of even a subset of very challenging legal issues would have immediate positive impact because it would divide the fact-finding and law-interpretation tasks more effectively than they are divided today.

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[65] Lee A. Hollaar, "A New Look at Patent Reform," J. of the Pat. & Trademark Society 743, 745 (September 2005), available at ⟨http://digital-law-online.info/papers/lah/jptos-mini-patent.pdf⟩.

[66] *See generally id.*

CONCLUSION

While § 101 is only 36 words in length, the nuances packed into nearly every word could fill volumes. Bright-line rules are not ideal § 101 analysis tools. Defining factors that reach into the heart of what § 101 must accomplish would be a better suited approach to managing the statute's complexity. Moreover, to further the goals of patent law, the Patent and Trademark Office should be allowed to delay reaching legal conclusions under § 101 when the construction of § 101 is better-suited to judicial efforts.

Whether or not this court chooses to adopt recommendations from this brief, it should be clear that a precise definition of § 101 is the Holy Grail of patent law. When pursuing it, this court should always bear in mind that the ultimate goal of patent law is "To promote the Progress of … useful Arts."[67]

Respectfully submitted,

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Jason V. Morgan

Filed under representation by his attorney,

Dated: April 7, 2008

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Todd L. Juneau

[67] U.S. CONST. art. I § 8, cl 8.

CERTIFICATE OF COMPLIANCE

1. This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 32(a)(7)(B):

> The brief contains 6,770 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii).

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Dated: April 7, 2008

_____
Todd L. Juneau

CERTIFICATE OF SERVICE

I hereby certify that on April 7, 2008, through Jason V. Morgan, I caused one original and thirty copies of the brief for *amicus curiae*, Jason V. Morgan, supporting neither side, to be filed with the clerk for the United States Court of Appeals for the Federal Circuit by hand.

I hereby certify that on April 7, 2008, through Jason V. Morgan, I caused two copies of the foregoing brief for *amicus curiae*, Jason V. Morgan, supporting neither side, to be served upon the following counsel of record by first-class mail:

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