

March 16, 2015

The Honorable Michelle Lee
Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office
United States Patent and Trademark Office
600 Dulany Street
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via email: 2014_interim_guidance@uspto.gov

RE: Comments on “2014 Interim Guidance on Patent Subject Matter Eligibility” 79 Fed. Reg. 74618 (December 16, 2014)

Dear Under Secretary Lee:

I am writing to comment on the Interim Eligibility Guidance that the U.S. Patent and Trademark Office (“Office”) recently published in response to the *Alice* decision and other recent Supreme Court cases on patent eligible subject matter. *See Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*, 134 S.Ct. 2347 (2014).

By way of background, I am a patent practitioner licensed to practice before the Office. In my career, I have prosecuted many hundreds of patent applications and filed dozens of appeals before the Patent Trial and Appeal Board. These applications are generally directed to software inventions, including software inventions that invoke mathematical and economic concepts. Accordingly, I have extensive experience prosecuting patent applications that are related, at least facially, to the *Alice* decision. Of course, my comments here are not intended to suggest that any claim that I have prosecuted is vulnerable to allegations of invalidity.

I am writing in my own capacity and not on behalf of any firm or client associated with me.

Previous Comments

I previously submitted public comments on the Office’s “Preliminary Instructions” to the examining corps in response to the *Alice* decision. Those comments are available here:

<http://www.uspto.gov/sites/default/files/patents/law/comments/al-f-werking20140731.pdf>

Many of my comments and recommendations here remain essentially the same as in my earlier comments at the above link. Accordingly, I suggest that the Office regard the comments here as supplements to my earlier comments.

Specific Recommendations

Recommendation 1: The Office Should Draw on Other Settled Areas of Intellectual Property Law to Identify Essential Limiting Principles on the Abstract Idea Exception to Patent Eligibility

A great challenge for the Patent Office—which gives birth to every patent—is that the Supreme Court’s decisions on patent eligibility risk expressing hostility, not just toward bad patents, but toward patents in general. For example, the Court faults patents for “preempting” subject matter, but the preemptive nature of patents finds its roots in the Constitution, which empowers Congress to grant inventors the “exclusive right” to their inventions. U.S. Const. Art. I, § 8. Similarly, the Court faults patents for claiming “abstract ideas,” yet patents, by their nature, protect inventive ideas—and all ideas are abstract in the literal sense.

In other words, the “exceptions” to the plain text of 35 U.S.C. § 101 sometimes appear to be the creations of judges who do not just dislike bad patents, but who simply dislike patents. For example, the dean of patent law, Donald Chisum, has observed that Justice Douglas, who essentially created the “abstract idea” exception in *Gottschalk v. Benson*,¹ was “notoriously hostile to the patent system.”² Others have used modern databases to empirically quantify Justice Douglas’ “one-man crusade against patent protection.”³

In the future, the Supreme Court might address these concerns by establishing clear limiting principles. For example, the Court might carefully distinguish between impermissible “preemption” and constitutionally sanctioned “exclusive rights.” Similarly, the Court might

¹ 409 U.S. 63 (1972).

² Chisum, Donald S., Patenting Intangible Methods: Revisiting Benson (1972) After Bilksi (2010) (October 27, 2010). Available at SSRN: <http://ssrn.com/abstract=1698724> or <http://dx.doi.org/10.2139/ssrn.1698724>.

³ See also Jay Dratler Jr. and Stephen M. McJohn, Licensing of Intellectual Property, at p. 4-48-3. Relevant excerpt available at Google Books: <https://books.google.com/books?id=ibtRO4PqdDEC>.

define “abstract ideas” to distinguish them from inventive “ideas” that are worthy of a patent. Unfortunately, the Court has yet to establish such limiting principles. In fact, the Court explicitly refuses to define the key term “abstract idea.” *See Alice*, 134 S.Ct. at 2357.

While waiting for the Supreme Court to establish limiting principles, the Office must be especially careful when examining patent applications for “preemption” and “abstract ideas.” The Office must exercise caution simply because the ability to exclusively protect an inventive idea is not a trivial or accidental feature of a patent. Rather, this single power—the ability to exclusively protect an inventive idea—is the defining feature and lifeblood of patent law. Surgeons must be especially careful when cutting near arteries and, by analogy, the Office must be especially careful when cutting around this critical purpose and function of patents—rewarding inventors with exclusive rights to their inventive ideas. The Supreme Court itself has recognized this danger by observing that “we tread carefully in construing this exclusionary principle lest it swallow all of patent law [because] [a]t some level, ‘all inventions [...] embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.’” *Id.* at 2354 (internal citations omitted).

In accordance with the Court’s direction to “tread carefully,” the Office can exercise caution by drawing on other areas of settled intellectual property law to identify essential limiting principles on the abstract idea doctrine. Specifically, the Office can identify limiting principles for “abstract ideas” by observing that the Supreme Court has a long history of case law that describes “ideas” as being favorable, rather than inimical, to patentability. This includes both (A) the law on conception and reduction to practice and (B) the law on copyright and the distinction between ideas and expressions.

First, the law on conception provides a powerful limiting principle on the abstract idea doctrine. The law makes clear that *every valid* patent begins with an idea. The Supreme Court holds that “[t]he primary meaning of the word ‘invention’ in the Patent Act unquestionably refers to the inventor’s conception rather than to a physical embodiment of that *idea*[.]” (emphasis added). *Pfaff v. Wells Electronics, Inc.*, 525 U.S. 55, 60 (1998). Similarly, in a distinct but related context, the Court has stated that “the federal patent scheme creates a limited opportunity to

obtain a property right in an *idea*[,]” (emphasis added). *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 149 (1989). Moreover, this “idea” first exists only in the “mind” of the inventor rather than the physical outside world. See *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1376 (Fed. Cir. 1985) (*quoting* 1 *Robinson On Patents* 532 (1890)).

Similarly, the law on reduction to practice also provides a powerful limiting principle on the abstract idea doctrine. To complete invention, an inventor must reduce the invention to practice. Yet, to obtain a patent, the inventor need not reduce the invention to practice in a manner that is nonobvious or uses unconventional techniques. On the contrary, the Office’s Board of Patent Appeals and Interferences (the precursor to the Patent Trial and Appeal Board) has defined conception as “a disclosure of an invention which enables one skilled in the art to reduce the invention to a practical form *without* ‘exercise of the inventive faculty[.]’” (emphasis added). See *Gunter v. Stream*, 573 F.2d 77, 79 (C.C.P.A. 1978) and M.P.E.P. § 2138.04 (“Conception”) (*quoting* *Gunter* in guiding examiners on the definition of conception).

To be clear, the America Invents Act (“AIA”) does not prevent the Office from relying on the law of conception and reduction to practice as a limiting principle on the abstract idea doctrine. The AIA removed the “reduction to practice” language from § 102. The AIA also switched the general priority date from the date of invention to the date of filing. Nevertheless, the switch from analyzing priority according to the filing date, instead of the invention date, does not suggest that invention has ceased to occur in the manner outlined in earlier case law (i.e., conception followed by reduction to practice). For example, even after the AIA, inventors must still reduce their inventions to practice, if only by filing an application that satisfies 35 U.S.C. § 112(a). Moreover, the law on conception and reduction to practice continues to apply directly to certain interferences, derivation proceedings, and legacy patent applications.

Second, the Supreme Court has a long tradition of redirecting inventors from copyrights to patents when their inventions fall on the “idea” side of the idea/expression dichotomy. For example, the Court holds that “[u]nlike a patent, a copyright gives no exclusive right to the art disclosed; protection is given only to the expression of the idea—not the idea itself.” *Mazer v. Stein*, 347 U.S. 201, 217 (1954). Similarly, the Court has stated:

We assume that the plaintiff's design suggested a method of camouflaging parachutes, and we further assume only for the purpose of discussion, that the *idea* of camouflaging parachutes was original with the plaintiff, and *was patentable*. [...] The only monopoly which the copyright gave him was the exclusive right to reproduce the design, as an artistic figure. (emphasis added).

Fulmer v. United States, 103 F.Supp. 1021, 1021-22 (1952). *See also Baker v. Selden*, 101 U.S. 99 (1880).

All of these Supreme Court cases establish the general principle that Congress intended patents to protect inventive “ideas” so long as the patents satisfy the other criteria of patent law, including reduction to practice. In some rare cases, under Supreme Court precedent an idea may be so mathematical, ancient, or fundamental that it constitutes, not just an “idea,” but an impermissible “abstract idea”—which is a legal term of art of limited scope and utility, as discussed regarding my Recommendation 2 below on page 6. But the fact that, in certain rare cases, a judge may properly categorize an “idea” as an “abstract idea” should not detract from the principle that, in general, Congress intended patents to protect inventive ideas. Patents and ideas are not natural enemies—they are friends.

To be more precise, based on the settled Supreme Court authority outlined above, the Office can safely instruct the examining corps as follows:

Examiners should observe that, *without more*, the following do *not* implicate the abstract idea exception or prevent an inventor from obtaining a patent:

- **that the claim, in essence, is directed to an idea that occurred to the inventor;**
- **that the idea, as conceived in the inventor's mind, had no tangible or physical form in the outside world;**
- **that, in translating the idea from the inventor's mind to the physical outside world, the inventor did not use further inventiveness, creativity, nonobvious techniques, or nonconventional methodologies—in other words, the entirety of the “inventiveness” is found in the idea rather than its reduction to practice;**
- **that the inventor created a work that falls on the “idea” side of the idea/expression dichotomy.**

These principles follow naturally from the settled Supreme Court law on invention and copyright. They provide powerful limiting principles on the abstract idea doctrine. Moreover, no

one can fairly say that, in *Bilski* and *Alice*, the Supreme Court intended to disturb or overrule these settled principles of intellectual property law.

These limiting principles may seem so powerful that they essentially eviscerate the abstract idea doctrine and render it a “dead letter.” *C.f. Mayo Collaborative v. Prometheus Labs.*, 132 S.Ct. 1289, 1303 (2012) (making a parallel point in the context of the “natural law” exception to § 101). Not so. The bulleted guiding principles above say that “without more” the examiner cannot reject an application under the abstract idea doctrine. Nevertheless, examiners may still properly invoke the abstract idea doctrine when “more” is present. They may do so by identifying, not just an idea, but an “abstract idea,” which is a legal term of art that, under Supreme Court law, refers to a fundamental mathematical or economics concept, as discussed below in Recommendation 2 on page 6. Patent applicants that try to take fundamental math and economics concepts, and do nothing more with them than say “apply it,” will still receive proper rejections from the Office. Nevertheless, the Office should not allow the abstract idea doctrine, with its narrow applicability, to bleed over into the rest of patent law, which is generally directed to rewarding inventors for their inventive “ideas,” as discussed above.

Recommendation 2: The Office Should Follow DDR Holdings and Ultramercial by Essentially Limiting Abstract Ideas to Fundamental Math and Economics

In my previous comments on the Office’s “Preliminary Instructions,” I wrote that “the Office [should] limit its examples of abstract ideas to the specific kinds of abstract ideas that the Court has identified: pure or fundamental mathematics (in *Benson*, *Flook*, and *Diehr*) and fundamental economic practices (in *Bilski* and *Alice*).” Since then, the Federal Circuit has implicitly supported my recommendation by analyzing the “abstract idea” question by asking whether the “idea” in dispute constitutes either fundamental math or economics. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 113 U.S.P.Q.12d 1097 (Fed. Cir. 2014). Specifically, the court first stated that “[a]lthough the Supreme Court did not” precisely define the term “abstract idea,” the “Court has provided some important principles.” *Slip op.* at 17. The court then affirmed that “mathematical algorithms [...] are abstract ideas.” *Id.* at 17-18. Similarly, the court affirmed that “fundamental economic and conventional business practices are also abstract ideas.” *Id.* Tellingly, the court does not mention any other categories of abstract ideas. Finally, the court upheld the patent

eligibility of the claims in dispute by observing that they “do not recite a mathematical algorithm [...] [n]or do they recite a fundamental economic or longstanding commercial practice.” *Id.* at 19.

Notably, the Federal Circuit in *DDR Holdings* failed to mention two of the Office’s four proposed categories of “abstract ideas”: “an idea ‘of itself’” and “certain methods of organizing human activities.” That silence is deafening. The Federal Circuit does not mention these other alleged types of “abstract ideas” because they find no clear support in the law. Notably, the Federal Circuit’s decision in *Ultramercial* (which some have argued contradicts *DDR Holdings*) does not undermine my recommendation here, because the claim in *Ultramercial* comfortably fits within the “fundamental economic practice” category of “abstract ideas,” and so there is no need to create further categories.

My earlier comments elaborate on reasons why the Office’s other two examples of “abstract ideas” are problematic. For now, I will simply repeat two reasons. First, the “idea ‘of itself’” category threatens to “swallow all of patent law” (*Alice*, 134 S.Ct. at 2354) because Congress intended patents to protect inventive ideas, as outlined above (see Recommendation 1 beginning on page 2). For essentially the same reason, and as other commentators have observed, the “idea ‘of itself’” category confuses step 1 of the *Mayo* analysis (“is the claim directed to an abstract idea?”) with step 2 (“does the claim recite significantly more than the abstract idea?”). If anything, the Office should interpret Supreme Court dicta about “idea[s] ‘of [themselves]’” as directed to step 2 of the *Mayo* analysis.

Second, the Office’s example of “certain methods of organizing human activities” risks overstating the Supreme Court’s holding in *Bilski*. The verb “organiz[e]” only appears in the majority *Bilski* opinion when summarizing Judge Dyk’s minority opinion below, which held that “methods of organizing human activity” are categorically ineligible for patent protection—a minority opinion that the Supreme Court goes on to criticize:

It is true that patents for inventions that did not satisfy the machine-or-transformation test were rarely granted in earlier eras, especially in the Industrial Age, as explained by Judge Dyk’s thoughtful historical review. [...] But times change.

Bilski v. Kappos, 130 S.Ct. 3218, 3227 (2010). The verb “organiz[e]” later appears in *Bilski* in Justice Steven’s opinion—another minority opinion, which quotes Judge Dyk’s minority opinion with approval. *Id.* at 3240. Thus, the controlling majority in *Bilski* never endorses the Office’s proposal that “certain methods of organizing human activity,” as opposed to fundamental economic practices, constitute “abstract ideas.”

A careful reading of *Alice* confirms that there is no clear support from the Supreme Court majority for the proposition that “certain methods of organizing human activity,” other than fundamental economic practices, are patent ineligible. The key passage in *Alice* reads:

Although hedging is a longstanding commercial practice, it is a method of organizing human activity, not a “truth” about the natural world “that has always existed[.]” One of the claims in *Bilski* reduced hedging to a mathematical formula, but the Court did not assign any special significance to that fact, much less the sort of talismanic significance petitioner claims. Instead, the Court grounded its conclusion that all of the claims at issue were abstract ideas in the understanding that risk hedging was a “fundamental economic practice.”

Alice, 134 S.Ct. at 2356-57. Admittedly, the Court does mention “method[s] of organizing human activity.” But the Court does not reference “organizing human activity” to conclude that such methods are patent ineligible. Instead, the Court cites “organizing human activity” simply to distinguish *Bilski*’s claim from “preexisting, fundamental truth[s].” Methods of organizing human activity are not “preexisting, fundamental truth[s]” if only because human beings have not always existed. But this does not mean that “methods of organizing human activity” are, by definition, patent ineligible. On the contrary, the final sentence of the quoted key passage makes clear that the Court “grounded its conclusion” of patent ineligibility on the “fundamental economic practice” language rather than the “organizing human activity” language. *Id.* As in *DDR Holdings*, the Court focuses the analysis on whether the claim is directed to fundamental math and economics—not to whether the claim is directed to “certain methods of organizing human activity” or “idea[s] ‘of [themselves.]’”

After the key passage quoted above, the Court in *Alice* only mentions “methods of organizing human activity” one more time—again in a minority opinion. The concurring opinion in *Alice* by

Justice Sotomayor, joined by Justices Ginsburg and Breyer, quotes Judge Dyk’s concurring opinion in *Bilski* for the proposition that “methods of organizing human activity” are categorically excluded from patent eligibility.

In summary, the “organizing human activity” language generally derives from a long line of minority opinions—by Judge Dyk, Justice Stevens, and Justice Sotomayor—rather than expressing the clear intent of the controlling Supreme Court majority. The fact that all of these opinions failed to gain a majority vote suggests that they misstate the law. Even if the majority in *Alice* referenced “method[s] of organizing human activity” once, the Office should carefully parse *Alice* to recognize that this did not constitute the reason *why* the Court affirmed the invalidity of the *Alice* patent. Nor does the Court’s reference to “method[s] of organizing human activity” suggest a new category of abstract ideas beyond fundamental concepts in economics.

Notably, the word “certain” (in “certain methods of organizing human activity”) comes from the Office—not the Supreme Court. The “organizing human activity” language is most closely associated with minority opinions arguing for a categorical rule against patents on “methods of organizing human activity,” as outlined above. Accordingly, the authors of these minority opinions had no need for the “certain” qualifier. In an apparent attempt to acknowledge that these minority opinions failed to establish a categorical prohibition on patents for “methods of organizing human activity,” the Office has inserted the qualifier “certain” into the Interim Guidance. Yet the word “certain” cannot do the work that the Office might expect. At best, the modified phrase “certain methods of organizing human activity” leaves examiners guessing in the dark about *which* methods of organizing human activity are among the “certain” ones that constitute abstract ideas and which ones are not.

In contrast to the Office’s “certain methods of organizing human activity” language, the Supreme Court’s prohibitions on patenting fundamental mathematical algorithms and economic practices are hard bright-line rules that examiners can more easily administer. For at least this reason, the better interpretation of *Alice* is that the “certain” methods of organizing human activity that are impermissibly abstract are simply those methods that constitute “fundamental economic practices,” as in *Bilski* and *Alice. Id.* In that case, the “methods of organizing human behavior”

language is redundant to the “fundamental economic practice” language. In summary, the Supreme Court has *never* identified an impermissibly abstract “method of organizing human activity” *other than* a fundamental economic practice—and the Office should not start creating new categories of abstract ideas now.

To be sure, I do not recommend that the Office create a bright-line rule that “methods of organizing human activity” could *never* be patent ineligible without also constituting fundamental math or economics. The Supreme Court tends to frown on bright-line rules in patent eligibility law other than its own. *See Mayo*, 132 S.Ct. at 1303 (2012). Nevertheless, the “organizing human activity” language generally derives from a long line of minority opinions rather than controlling Supreme Court precedent, as outlined above. Accordingly, the “organizing human activity” language, like the “idea ‘of itself’” language, does not deserve an equal position, in the Office’s four examples of abstract ideas, next to fundamental math and economics. The Federal Circuit in *DDR Holdings* did not treat these four categories as equals and neither should the Office.

To be more precise, I recommend that the Office instruct the examining corps as follows:

When evaluating whether a patent claim is directed to an abstract idea, examiners should recognize that the Supreme Court has only invalidated a patent claim as directed to an abstract idea when the claim falls within one of two categories:

- **pure or fundamental mathematics (as in the binary conversion in *Benson*, the “smoothing algorithm” in *Flook*, and the Arrhenius equation in *Diehr*);**
- **fundamental or ancient business practices (as in hedging in *Bilski* and intermediated settlement in *Alice*).**

The Supreme Court has not stated that these are the only two exclusive categories of abstract ideas. Nevertheless, the Court has not suggested what other categories might exist. Accordingly, examiners should focus their analysis of the abstract idea doctrine on these two established categories and avoid creating new categories of abstract ideas except in extraordinary circumstances. In general, examiners should remember both the expansive policy behind § 101 and the Supreme Court’s instructions to “tread carefully” and to “not read into the patent laws limitations and conditions which the legislature has not expressed.” *See Alice*, 134 S.Ct. at 2354 and *Bilski*, 130 S.Ct. at 3226. Examiners should also remember the statutory limits on the Office’s general powers to create and interpret substantive patent law during examination. *Merck & Co., Inc. v. Kessler*, 80 F.3d 1543, 1549-50 (Fed. Cir. 1996).

Recommendation 3: The Office Should Reverse Some Revisions to the Original Claim Language in the Examples of Research Corp. Technologies, Inc. and SiRF Technology Inc., Because the Revisions Contradict the Central Holding in Alice that the Addition of Routine and Conventional Computing Features Cannot Confer Patent Eligibility

In its list of exemplary patent eligible claims,⁴ the Office revised the asserted independent method claim in *Research Corp. Technologies, Inc.*⁵ (“RCT”) as follows:

1. A computer-implemented method for ~~the~~ halftoning ~~of a~~ gray scale ~~images by utilizing a pixel by pixel comparison of the image against,~~ comprising the steps of:
generating, with a processor, a blue noise mask by encoding changes in which pixel values across a plurality of blue noise filtered dot profiles at varying gray levels;
storing the blue noise mask is comprised of a random non-deterministic, non-white noise single valued function which is designed in a first memory location;
receiving a gray scale image and storing the gray scale image in a second memory location;
comparing, with a processor on a pixel-by-pixel basis, each pixel of the gray scale image to a threshold number in the corresponding position of the blue noise mask to produce visually pleasing dot profiles when thresholded at any level of said gray scale images a binary image array; and
converting the binary image array to a halftoned image.

Similarly, the Office revised the asserted method claim in *SiRF Technology Inc.*⁶ as follows:

~~12.~~ A method for calculating an absolute position of a GPS receiver and an absolute time of reception of satellite signals comprising:
providing pseudoranges that estimate the range of the calculating pseudo-ranges, at a mobile device comprising a GPS receiver to a, a microprocessor, a display, and a wireless communication transceiver, by averaging PN codes received by the GPS receiver from a plurality of GPS satellites;
providing an estimate of an wirelessly transmitting the calculated pseudo-ranges from the mobile device to a server, wherein the server comprises a central processing unit (CPU);
calculating, by the server CPU, absolute time of reception of a plurality of satellite signals;
providing an estimate of that the PN codes were sent from the GPS satellites to the GPS receiver using the pseudo-ranges and an estimated position of the GPS receiver; providing satellite ephemeris data;
computing using a mathematical model to calculate, by the server CPU, absolute position and of the GPS receiver based on the pseudo-ranges and calculated absolute time using said pseudoranges by updating said estimate of an;

⁴ http://www.uspto.gov/patents/law/exam/abstract_idea_examples.pdf.

⁵ *Research Corp. Technologies v. Microsoft Corp.*, 627 F.3d 859, 865 (Fed. Cir. 2010).

⁶ *SiRF Technology, Inc. v. International Trade Com'n*, 601 F.3d 1319, 1331 (Fed. Cir. 2010).

transmitting the absolute ~~time and the estimate of~~ position of the GPS receiver from the server to the mobile device; and
displaying a visual representation of the absolute position on the display of the mobile device.

In general, these revisions are problematic because they apparently violate the central holding of *Alice* that simply adding “purely functional and generic” computer features will not confer patent eligibility on otherwise ineligible claim language. *Alice*, 134 S.Ct. at 2360. For example, in the case of the *RCT* claim, the Office has:

- revised the preamble to state “computer-implemented method” instead of “method”;
- added a generic “processor”;
- added a generic “memory location”;
- relocated language about “pixels” from the preamble to the body of the claim, thereby ensuring that the language has patentable weight;
- added “generating,” “storing,” “receiving,” “comparing,” and “converting” steps.

Similarly, in the case of the *SiRF* claim, the Office has:

- added a generic “microprocessor”;
- added a generic “display”;
- added a generic “transceiver”;
- added a generic “server”;
- added a generic “CPU”;
- added steps of “wirelessly transmitting” and “displaying” data.

Although I can speculate about the Office’s motives, it remains unclear why the Office felt compelled to revise the original claim language from these cases. Of course, one obvious explanation is that the Office felt concerned about the patent eligibility of the patented claims. Naturally, the Office may have sought claims that were at the “edge” of patent eligibility, thereby providing examiners with guidance on the boundary between patent eligible and ineligible subject matter. Moreover, the Office may have felt concerned that, even if the Federal Circuit blessed these claims in 2010, the Supreme Court would not have blessed them in 2015 after *Alice*. For example, Chief Judge Rader authored the *RCT* decision, but subsequently “lost”

the patent eligibility debate in *Alice*, which he considered the “greatest failure of my judicial career.”⁷

Even a comparison between these two revised claims reveals apparent internal inconsistencies. Why revise the preamble of the *RCT* claim to recite “computer-implemented” but not the *SiRF* claim? Why revise the body of the *RCT* claim to recite “processor” but revise the body of the *SiRF* claim to recite “microprocessor”? There are no clear answers to these questions, but the examining corps needs clear guidance on whether to force applicants to make precisely these kinds of amendments to secure a patent.

Even if the Office’s motivations are understandable, the revisions and additions that the Office has made to these claims cannot confer patent eligibility under *Alice*. Instead of adding an “inventive concept,” which *Alice* requires, the revisions simply add “purely functional and generic” computer features, which *Alice* concludes are irrelevant to patent eligibility, as discussed above. *See Alice*, 134 S.Ct. at 2355 and 2360.

In view of the above, the Office’s revisions to these claims sends exactly the wrong message to the examining corps. The revisions tell the examining corps that it should force applicants to amend their claims to insert “purely functional and generic” computer features into their claims, such as “processor[s],” “memory location[s],” “display[s],” “server[s],” and “CPU[s].” But these are precisely the same sorts of features that the Supreme Court identified in *Alice* as essentially doing nothing for patent eligibility.

As a longstanding practitioner before the Office, I can assure you that these revisions simply encourage a culture among the examining corps of requiring applicants to insert token, functional, generic, and/or conventional computer features to overcome a rejection under the abstract idea doctrine. I cannot tell you how many times examiners have allowed applications after requiring applicants to merely amend claims to recite a “server” or a “processor” even though, under *Alice*, these terms have no talismanic significance. Of course, I am not suggesting that the Office require *more* of applicants than previously; I am simply observing that the revisions that the Office typically requires—like the revisions that the Office made to the *RCT*

⁷ See <http://www.law360.com/articles/482264/software-patent-ruling-a-major-judicial-failure-rader-says>.

and *SiRF* claims—have essentially no legal significance under Supreme Court law on subject matter eligibility and, therefore, that the Office should require *less*.

At the end of the day, the Office may decide that the claims in *RCT* and *SiRF* are no longer patent eligible after *Alice*. The Office may agree with me that this is another unfortunate consequence of the *Alice* decision. For that reason, the Office may withdraw these examples from their lists of exemplary patent eligible claims. I would understand that decision even if I disagree with it (i.e., even if I disagree with the Supreme Court’s decision in *Alice*). But, whatever the Office does, it should not try to paper over patent eligibility issues with these claims by adding precisely the sort of “purely functional and generic” computer features that the Supreme Court criticized in *Alice*. Under a fair reading of *Alice*, the Office has two options: (A) either cite the *RCT* and *SiRF* claims essentially unchanged or (B) concede that the Supreme Court has effectively invalidated them and withdraw them from the Interim Guidance.

Recommendation 4: Consider Endorsing the Federal Circuit’s “Manifestly” Abstract Standard for Analyzing the Abstract Idea Doctrine

After *Bilski*, which “never provides a satisfying account of what constitutes an unpatentable abstract idea,” see *Bilski*, 130 S.Ct. at 3236 (Stevens, J., concurring in the judgment), the Federal Circuit attempted to clarify this muddy area of the law in its *RCT* decision. I recommend that the Office explicitly endorse the clarifying test that the Federal Circuit established in *RCT*. Specifically, I recommend that the Office instruct the examining corps as follows:

When evaluating whether a patent claim is directed to an “abstract idea,” examiners should apply this controlling test from the Federal Circuit:

“With that guidance, this court also will not presume to define ‘abstract’ beyond the recognition that this disqualifying characteristic should exhibit itself so manifestly as to override the broad statutory categories of eligible subject matter and the statutory context that directs primary attention on the patentability criteria of the rest of the Patent Act.” *Research Corp. Technologies v. Microsoft Corp.*, 627 F.3d 859, 868 (Fed. Cir. 2010).

By “guidance,” the Federal Circuit referred to the Supreme Court’s invitation, in *Bilski*, for the Federal Circuit—which has a statutory mandate to clarify and unify patent law—to “develop[]

other limiting criteria that further the purposes of the Patent Act and are not inconsistent with its text.” *Bilski*, 130 S.Ct. at 3231.

Chief Judge Rader’s attempt in *RCT* to clarify the abstract idea exception is valiant and admirable. The “manifestly” abstract standard is flexible enough to avoid criticism from a Supreme Court that discourages the Federal Circuit from making hard bright-line rules. Simultaneously, the “manifestly” abstract test maintains some fidelity to the intent of both the drafters of § 101 of the Patent Act and the 1952 Congress that ratified the statute in essentially its current form.

The Office should consider endorsing the “manifestly” abstract test for patent eligibility for the following reasons. First, as outlined above, the test represents good policy in the form of a compromise between the Supreme Court, on the one hand, and Congress and the Federal Circuit, on the other. Second, the Office lacks discretion in deciding whether to apply the law. Specifically, the Office, like future panels of the Federal Circuit, remains bound by a previous Federal Circuit precedential panel decision until overruled by Congress, the Supreme Court, or the Federal Circuit *en banc*. See Fed. Cir. Rule 35. Third, the test provides a kind of limiting principle on the abstract idea doctrine. Without any limiting principle, the abstract idea doctrine is so vague that it threatens to overwhelm the examining corps and the Patent Trial and Appeal Board (“PTAB”) with questions of patent eligibility—questions that, without further clarity, will appear to be decided on a random examiner-dependent and PTAB panel-dependent basis. Notably, the Office has already expressed some endorsement of the *RCT* decision by citing a revised version of the *RCT* method claim in its examples of patent eligible subject matter, as discussed above regarding Recommendation 3 on page 11.

The main challenge with the “manifestly” abstract test is that it is not a “limiting criteri[on,]” as the Supreme Court specified in *Bilski*. 130 S.Ct. at 3231. The Supreme Court invited the Federal Circuit to establish further “limiting criteria” because the Court had just eliminated the “machine or transformation” test that primarily served that function. In the absence of the “machine or transformation” test the Supreme Court was naturally concerned that the plain text of § 101 remains so broad that it continues to need further judicial refinement. But instead of further

limiting the plain text of § 101, as intended by the Supreme Court, the “manifestly” abstract test broadens the scope of patent eligible subject matter otherwise prohibited by vague Supreme Court precedent. Accordingly, if the Office endorses the *RCT* test more explicitly, then the Office risks the possibility that the Supreme Court will strike down the test, as the Court has done for so many other bright-line rules from the Federal Circuit. Nevertheless, on this issue, it may be better to beg for forgiveness than to ask for permission.

Recommendation 5: Instruct the Examining Corps to Focus Examination Resources, within Reasonable Limits, on Prior Art Over Technical Rejections

In my previous comments, I recommended that “the Office should return to its longstanding policy, stated in the M.P.E.P. [§ 706.03 (8th Ed., rev. 9)] as recently as the eighth edition but removed from the ninth, of emphasizing prior art rejections over technical rejections.” I continue to recommend that the Office make this instruction to the examining corps. In these further public comments here, I will identify specific reasons that the Office may cite to justify and defend a future decision to restore the policy of focusing on prior art.

First, Congress has signaled to the public that prior art rejections have some priority over technical rejections. The Patent Act refers to §§ 102 and 103—but not §§ 101 and 112—as “conditions of patentability.” Similarly, the Patent Act explicitly identifies §§ 102 and 103 (i.e., “conditions of patentability”), as well as § 112—but not § 101—as defenses to infringement. 35 U.S.C. § 282(b).⁸ Moreover, Congress continues to use this language, which emphasizes prior art over technical rejections, by referencing § 282(b) in defining the limits of the new postgrant review proceeding. 35 U.S.C. § 321(b).

Congress has also signaled that the Office should focus on prior art in defining postgrant review procedures. Congress limited both *ex parte* reexamination and legacy *inter partes* reexamination to “patents and printed publications.” *See, e.g.*, 35 U.S.C. §§ 301 and 302. Similarly, Congress limited *inter partes* review—by far the most popular postgrant proceeding from the AIA—to “patents or printed publications.” 35 U.S.C. § 311. These statutory limitations are especially

⁸ *See generally* Hricik, David. “Why Section 101 is Neither a “Condition of Patentability” nor an Invalidity Defense.” Available at <http://patentlyo.com/hricik/2013/09/why-section-101-is-neither-a-condition-of-patentability-nor-an-invalidity-defense.html>.

telling because they do not even permit the Office to consider novelty and obviousness rejections (including public use and prior sale rejections) that are not based on “patents or printed publications.” *See generally* M.P.E.P. § 2258 I.B. (“Matters Other Than Patents or Printed Publications”). Admittedly, Congress did authorize the Office to consider these other issues of patentability in postgrant review procedures. But Congress placed strict limitations on this authorization: a requirement, in postgrant review, for the petitioner to file the petition within a nine-month window of time, *see* 35 U.S.C. § 321(c), and a requirement, in covered business method review, for the petitioner to have “been sued for infringement of the patent or [have] been charged with infringement, *see* AIA § 18(a)(1)(B). It remains unclear why Congress would generally limit *ex parte* reexamination, *inter partes* reexamination, and *inter partes* review proceedings to “patents and printed publications” unless Congress determined that (A) patentability errors based on prior art are relatively more important to correct than other errors based on technical rejections and (B) the Office, by its nature, has a comparative advantage in analyzing these prior art challenges in an efficient and streamlined manner.

Similarly, in establishing the Office, Congress repeatedly emphasized the importance of scientific and technical understanding over legal expertise. For example, in establishing satellite offices, Congress instructed the Director to “consider the availability of scientific and technically knowledgeable personnel in the region from which to draw new patent examiners at minimal recruitment cost.” *See* Pub. L. 112–29, § 23, 125 Stat. 336 (2011). Similarly, Congress instructed the Director to “maintain a library of scientific and other works and periodicals, both foreign and domestic, in the Patent and Trademark Office to aid the officers in the discharge of their duties.” 35 U.S.C. § 7. Further, Congress instructed the Director to “revise and maintain the classification by subject matter of United States letters patent, and such other patents and printed publications as may be necessary or practicable, for the purpose of determining with readiness and accuracy the novelty of inventions for which applications for patent are filed.” 35 U.S.C. § 8.

Notably, Title 35 does not contain any other comparable provisions that instruct the Director to maintain a library of *legal* documents, to train examiners in *legal* reasoning to make *technical* rejections (as opposed to “novelty” rejections), or to otherwise hire examiners with *legal* training. For example, Congress directed that “administrative patent judges,” but not necessarily

examiners, “shall be persons of *competent legal knowledge* and scientific ability[.]” (emphasis added) 35 U.S.C. § 6(a). For the same reasons, the Office requires administrative patent judges, but not examiners, to graduate from law school and to pass a state bar exam.

In all of the above statutes—including §§ 6, 7, 8, 101, 102, 103, 112, 282, 311, and 321—Congress suggests these general themes:

- the Patent Office is a house of prior art such that it must maintain a prior art “library” and a system of prior art “classification” to determine the “novelty of inventions”;
- examiners need “scientific and technical” skills to examine patent applications against that prior art;
- errors in prior art rejections are relatively more important to correct than technical rejections;
- the most cost-effective use of Office resources is to focus on prior art rejections.

In sum, Congress signals that patent examiners do possess, and *should* possess, a comparative advantage in analyzing prior art rejections over technical rejections. Accordingly, Congress has *repeatedly* directed, or at least suggested, that the Office operate during examination under a general presumption in favor of prior art rejections. For similar reasons, some studies have found that the PTAB reverses technical rejections, such as indefiniteness, more frequently than it reverses prior art rejections.

My recommendation to focus on prior art over technical rejections might appear radical in the age of *Bilski* and *Alice*. Nevertheless, as I observed in my previous public comments, this was actually the Office’s longstanding policy in M.P.E.P. § 706.03 as recently as August 2012.

Even if Congress had not passed these statutes to confirm this general policy, the policy still makes perfect sense for the following reasons. First, even if a patent violates a technical requirement, the violation will generally cause only minimal harm to the public so long as the patent claims are novel and nonobvious. The reason for this is that the patent does not rob the public of anything that the public already possesses. On the contrary, by definition, novel and nonobvious patent claims may only prevent the public, for the limited term of the patent, from freely practicing an invention that was never previously known or suggested. In general, novel

and nonobvious claims cannot shrink the public domain. So, in the worst case, the patent simply leaves the public in the same position as before the patent, without possession of the invention. Moreover, during the patent term the public will be free to study and potentially license the invention. And, after the expiration of the patent term, the public will be absolutely free to practice it.

Second, as prominent scholar Mark Lemley has observed, the Office operates under severe resource constraints in terms of time, money, labor, and expertise.⁹ Because of these constraints, the Office will never attain the aspirational goal of perfect examination—a goal which might even be incoherent considering the internal contradictions in Supreme Court case law on patent eligible subject matter. Accordingly, under the severe constraints placed on the Office, it would be wise to allocate resources, within reasonable limits, to where the Office has a comparative advantage—in analyzing prior art rejections instead of technical rejections.

There are numerous reasons why the examining corps might reasonably focus on prior art more than the federal courts. First, the examining corps possesses technical knowledge that federal judges and juries generally lack. In contrast, federal judges possess legal skills and knowledge that examiners generally lack. Second, the abstract idea doctrine can simplify issues in litigation by avoiding a *Markman* hearing and extensive discovery. In contrast, patent examination generally lacks both *Markman* hearings and discovery such that the abstract idea exception complicates, rather than simplifies, the examination process. Third, the vast majority of patent claims undergo substantive amendments during examination. Applicants generally make these amendments in response to prior art rejections regardless of the abstract idea doctrine. Accordingly, as applicants amend their claims to address prior art, thereby making the claims narrower and less preemptive, concerns about the abstract idea doctrine may naturally resolve themselves. In contrast, patent owners cannot amend their claims in federal court.

⁹ See Lemley, Mark A., Rational Ignorance at the Patent Office (February 2001). Northwestern University Law Review, Vol. 95, No. 4, 2001. Available at SSRN: <http://ssrn.com/abstract=261400> or <http://dx.doi.org/10.2139/ssrn.261400>.

Fourth, the abstract idea doctrine addresses the extraordinary situation in which a patent owner obtains a broad and invalid patent that attempts to take a fundamental math or economics concept and simply state “apply it.” These patents are relatively rare but they become more common in federal court due to a selection bias. Specifically, the patents that are most egregious and vulnerable to challenge are more likely to be litigated. In contrast, the Office examines *every* patent application so there cannot be any selection effect. Because there cannot be any selection effect in the Office, it is safe to say that applications with claims as egregious as those in *Bilski* and *Alice* will be relatively rare. The vast majority of applications that pass through the Office—in all of the various Technology Centers—are not directed to claiming bare and fundamental concepts in math and economics.

Other experts also suggest that the Office avoid § 101 unless absolutely necessary. For example, all of the following explicitly and enthusiastically endorse the same policy:

- Federal Circuit Judge Plager, joined by Judge Newman (“courts could avoid the swamp of verbiage that is § 101 by exercising their inherent power to control the processes of litigation”);¹⁰
- Former Office Director Kappos (“if there was a mistake we made when working on the AIA, it was our failure to move Section 101 to Section 999”);¹¹ and
- Scholars Dennis Crouch and Robert Merges¹² (“it is best not to try to map the swampy terrain of § 101 in any great detail [but instead] [w]henver possible, we argue, try something else: just avoid it.”).

Avoiding the § 101 inquiry is also consistent with the statutory interpretation canon of constitutional avoidance. Historically, some Supreme Court justices have observed that the Constitution limits Congress’ power to grant patents. *See A. & P. TEA CO. v. Supermarket*

¹⁰ *MySpace, Inc. v. GraphOn Corp.*, 672 F.3d 1250, 1260 (Fed. Cir. 2012).

¹¹ *See e.g.*, “Former USPTO head Kappos offers devastating critique of overly broad patent reform” available at <http://www.iam-media.com/blog/detail.aspx?g=3d0450f8-1655-482e-9b5b-59f632ad6089> (summarizing a public speech by Kappos, a transcript of which is available at <http://www.iam-media.com/files/Kappos%20speech.pdf>).

¹² Crouch, Dennis D. and Merges, Robert P., *Operating Efficiently Post-Bilski by Ordering Patent Doctrine Decision-Making* (2010). *Berkeley Technology Law Journal*, Vol. 25, p. 1673, 2010; UC Berkeley Public Law Research Paper No. 1953512; University of Missouri School of Law Legal Studies Research Paper No. 2011-23. Available at SSRN: <http://ssrn.com/abstract=1953512>.

Corp., 340 U.S. 147, 154 (1950) (“The Congress acts under the restraint imposed by the statement of purpose in Art. I, § 8.”) (Douglas, J., concurring, joined by Black, J.). More recently, the Supreme Court has invoked the constitutional goal of promoting innovation when justifying its judicial exceptions to the plain text of § 101. *See Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 126 (2006) (Breyer, J., joined by Stevens and Souter, JJ., dissenting from dismissal of writ of certiorari) (“[S]ometimes *too much* patent protection can impede rather than ‘promote the Progress of Science and useful Arts,’ the constitutional objective of patent and copyright protection.”) (emphasis in original) and *Mayo*, 132 S.Ct. at 1293 (“And monopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it.”). To the extent that the Court bases its exceptions to § 101 on constitutional restraints—an extent which is admittedly limited—the Office should avoid the abstract idea doctrine for the same reasons that tribunals generally avoid other constitutional controversies. *See, e.g.*, Lisa A. Kloppenberg, *Avoiding Constitutional Questions*, 35 B.C. L. REV. 1003, 1025 (1994).

In view of the above, I recommend that the Office either restore the prior version of M.P.E.P. § 706.03 or instruct the examining corps as follows:

During examination, examiners should generally allocate their time and attention to efficiently use Office resources and their own scientific and engineering skills, without giving undo attention to technical rejections based on complicated or challenging case law. In many cases, technical rejections such as double patenting and the abstract idea exception to § 101 will resolve themselves naturally through amendments that the applicant makes in response to prior art rejections. For the same reasons, technically trained examiners may often reach agreement with applicants more quickly about prior art concerns than other technical rejections. Accordingly, examiners must always conduct a complete examination but should also always allocate their time and resources according to their most efficient use.

Recommendation 6: Identify Examples of Patent Eligible Claims from Other Issued Patents Besides Those Withstanding Judicial Scrutiny

All of the examples of patent eligible claims in the Office's Federal Register Notice, and in the corresponding online document,¹³ appear to come from judicial opinions analyzing the question of patentable subject matter. But I see no reason why the Office should limit its examples to litigated claims. Litigated patent claims represent just a tiny fraction of all patent claims—a fraction that is likely to be statistically unrepresentative of the whole. Indeed, litigated claims may be litigated simply because they are vulnerable to invalidity challenges, or else the patent challenger may otherwise accept a license. Certainly, some less litigated (but perhaps heavily licensed) patent claims may be perfectly valid. For example, the Office could consider claims from these famous patents:

- Patent No. 5,960,411 on Amazon 1-Click (which twice survived reexamination);
- Patent No. 6,285,999 on Google PageRank;
- Patents Nos. 8,401,009 and 8,448,084 on Twitter features;
- Any other notable patents within successful technology standards, such as IEEE 802.11;
- Any other notable patents in the fields of software and e-commerce from the National Inventors Hall of Fame and Museum.¹⁴

Respectfully submitted,

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¹³ http://www.uspto.gov/patents/law/exam/abstract_idea_examples.pdf

¹⁴ <http://www.uspto.gov/about-us/uspto-locations/alexandria-va/national-inventors-hall-fame-and-museum>