



Time to Correct Section 101 Patent-Eligibility Law in the US

- *LawyerIssue.com*, April 20, 2016

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The current state of the law on patent-eligibility under 35 U.S.C. § 101 reflects confusion among US courts that is causing harm to patent owners, inventors, and the marketplace.

This confusion has persisted throughout the development of the patent-eligibility jurisprudence since the US Supreme Court's decision in *Bilski v. Kappos*, 561 U.S. 593 (2010) and, more recently, since the Supreme Court's decision in *Alice Corp. v. CLS Bank*, 134 S. Ct. 2347 (2014), and has resulted in the pervasive invalidation of patents involving computer-implemented inventions. See, e.g., [Kelly Mackin, Federal Circuit Guidance Is Needed Because District Courts Are Misapplying Alice, IP Watchdog \(Apr. 7, 2016\)](#); [Kelly Knaub, Patent Holder Asks Fed. Circ. to Clarify Alice in Netflix Case, Law360 \(Dec. 22, 2015, 11:41 PM\)](#).

There is an alarming trend among US courts of misapplying *Alice* in determining what constitutes an “abstract idea” versus what is sufficient to demonstrate that a claim is directed to a practical application of an abstract idea rather than merely the abstract idea itself.

Specifically, it is becoming increasingly common for US courts to err in defining the alleged abstract ideas by:

- (1) improperly including “novel” business practices or methods of organizing human activities; and
- (2) including detail well beyond the level of detail envisioned by *Alice* or *Bilski*.

Precedent of the US Supreme Court has never sanctioned such a broad scope for the judicially-created exception to patent-eligible subject matter under Section 101.

Further, there is a growing and erroneous trend among US courts to misapply step two of the *Alice* framework by:

- (1) ignoring “inventive” aspects of the claimed invention that are “non-routine” merely because a generic computer was involved; and
- (2) ignoring technological improvements that are effected by the claims as a whole merely because a generic computer was involved.

While *Alice* made clear that “the mere recitation of a generic computer cannot transform a



patent-ineligible abstract idea into a patent-eligible invention,” it is equally clear that the use of a generic computer does not automatically make a claim patent-ineligible. See *Alice*, 134 S. Ct. at 2358. Thus, these inventive and technological elements cannot be ignored merely because they are part of a computer-implemented invention.

Since *Alice*, more than 100 patents and thousands of claims have been declared invalid under 35 U.S.C. § 101 by US courts using an overly broad interpretation of *Alice*. The detrimental effect on software, biotechnology, and other computer-implemented inventions is so severe, that former director of the US Patent and Trademark Office, David Kappos, counsels clients to seek patent protection in countries other than the United States and calls for the abolition of Section 101. [Ryan Davis, Kappos Calls for Abolition of Section 101 of Patent Act, Law 360 \(Apr. 14, 2016\)](#).

The Historical Law on Patent-Eligibility

The Patent Act defines patent-eligible subject matter as

“any new or useful process, machine, manufacture or composition of matter, or any new or useful improvement thereof.”

35 U.S.C. § 101. The US Supreme Court has repeatedly recognized that this statutory language is very broad:

“In choosing such expansive terms modified by the comprehensive ‘any,’ Congress plainly contemplated that the patent laws would be given wide scope.”

Bilski, 561 U.S. at 601 (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980)).

Nevertheless, Supreme Court precedent provides three judicially-created exceptions to Section 101’s broad patent-eligibility principles: “laws of nature, physical phenomena, and abstract ideas.” *Bilski*, 561 U.S. at 601; *Chakrabarty*, 447 U.S. at 309; *Mayo Collaborative Servs. v. Prometheus Labs.*, 132 S. Ct. 1289, 1293 (2012); *Ass’n for Molecular Pathology v. Myriad Genetics.*, 133 S. Ct. 2107, 2116 (2013); *Alice*, 134 S. Ct. at 2354.

Of course, as judicially-created exceptions, the Supreme Court has repeatedly recognized they should be narrowly applied. *Alice* expressly made this point:

[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law.

134 S. Ct. at 2354. Thus, the Supreme Court has long distinguished between claims directed to an “abstract idea” (or one of the other patent-ineligible fundamental principles) and a **practical application** of an abstract idea, which is patent-eligible. As *Bilski* explained, “an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.” 561 U.S. at 611 (quoting *Diamond v. Diehr*, 450 U.S. 175, 187 (1981)).



This key principle—that **a patent claim may be directed to a practical application of a fundamental principle**—was expressly reaffirmed in *Mayo*, 132 S. Ct. at 1293–94, and *Alice*, 134 S. Ct. at 2355. The ultimate inquiry is whether the claim **preempts** an abstract idea. *Alice*, 134 S. Ct. at 2354 (“We have described the concern that drives this exclusionary principle as one of pre-emption.”) (citing *Bilski*, 561 U.S. at 611–12).

In reviewing the history of patent-eligibility, *Alice* recognized that, prior to *Bilski*, the “abstract idea” exception had only been applied to “mathematical formulas.” *Alice*, 134 S. Ct. at 2356. Thus, prior to *Bilski*, the three judicial exceptions—laws of nature, natural phenomena, and abstract ideas (i.e., mathematical formulas)—were preexisting fundamental truths that exist in principle apart from any human action. See *Bilski*, 561 U.S. at 619–20 (Stevens, J., concurring); cf. *Alice*, 134 S. Ct. at 2356. In essence, these fundamental truths were treated the same.

However, *Bilski* did not rely on the fact that the concept of “hedging risk” could be reduced to a “mathematical formula” in classifying it as an abstract idea. Instead, *Bilski* also found the concept of “hedging risk” to be an “abstract idea” because it was “a fundamental economic practice long prevalent in our system of commerce.” *Bilski*, 561 U.S. at 611.

Alice explored the bounds of an abstract idea even further. It found that the abstract idea—“intermediated settlement”—was easily identifiable as a “fundamental economic practice long prevalent in our system of commerce.” *Alice*, 134 S. Ct. at 2356. *Alice* supported the “fundamental,” “long prevalent,” and “longstanding” nature of the practice of intermediated settlement by, *inter alia*, citing to publications from 1896 and textbooks to demonstrate how well-known and deep-rooted an economic concept it was. *Id.*; see also *Bilski*, 561 U.S. at 611. Because intermediated settlement was so similar in kind to the “long prevalent” concept of hedging risk in *Bilski*, *Alice* stopped the analysis there, and did not feel a need to “labor to delimit the precise contours of the ‘abstract ideas’ category.” *Id.* at 2357. Thus, the Supreme Court expressly declined to expand the “abstract ideas” category beyond mathematical formulas and “fundamental economic practice[s] long prevalent in our system of commerce.”

Recently, *Alice* provided the following two-part framework for determining patent-eligible subject matter under Section 101, as first articulated in *Mayo*:

- (1) Are the claims at issue directed to a patent-ineligible concept?
- (2) If so, what else is there that transforms the abstract idea into a patent-eligible application?

Alice, 134 S. Ct. at 2355 (citing *Mayo*, 132 S. Ct. at 1289). The misapplication of this new two-part test has caused much of the confusion permeating the courts.

Step One: US Courts Are Misidentifying Alleged “Abstract Ideas” and Whether Claims



Are Directed To One

1. Misidentifying “novel” methods as “abstract ideas”

When *Alice* and *Bilski* expanded the “abstract idea” exception beyond “preexisting truths,” such as mathematical formulas, the Supreme Court relied on the fact that “hedging risk” and “intermediated settlement” were “fundamental” and “long prevalent in our system of commerce.” See *Alice*, 134 S. Ct. at 2356; *Bilski*, 561 U.S. at 611. Thus, the Supreme Court has never considered “novel” business practices or methods of organizing human activities to be “abstract ideas.” Yet, US courts have improperly expanded the holdings in *Alice* and *Bilski* to include “just discovered” methods of organizing human activity within the category of the judicially created “abstract idea” exception.

In *Versata Dev. Grp. v. SAP Am.*, 793 F.3d 1306 (Fed. Cir. 2015) (“*Versata*”), despite the fact that the Federal Circuit had previously recognized in a prior appeal that the commercial embodiment of the patent-in-suit “received praise as a ‘breakthrough’ that was ‘very innovative,’” (*Versata Software, v. SAP Am.*, 717 F.3d 1255, 1259 (Fed. Cir. 2013), cert. denied, 134 S. Ct. 1013 (2014)), it nonetheless held that the novel concept of “[u]sing organizational and product group hierarchies to determine a price is an abstract idea that has no particular concrete or tangible form or application.” 793 F.3d at 1333.

Unfortunately, such an analysis is commonplace throughout the courts. For example, the one district court in Hawaii relied on the *Versata* decision to find something akin to “using the same hierarchical ordering based on metadata to facilitate the display and locating of video content”—which the court expressly recognized to be a novel concept—to be directed to an abstract idea by comparing it to, *inter alia*, “the broad concept of using organizational and product group hierarchies to determine prices for products and customers” found to be an abstract idea in *Versata*. *Broadband iTV v. Oceanic Time Warner Cable*, 2015 U.S. Dist. LEXIS 131726, at *20 (D. Haw. Sept. 29, 2015) (“*BBiTV-TWC*”); *Broadband iTV v. Hawaiian Telcomm.*, 2015 U.S. Dist. LEXIS 131729, at *16 (D. Haw. Sept. 29, 2015) (“*BBiTV-HT*”). This interpretation of the “abstract idea” category drastically expands the exclusionary principle beyond Supreme Court precedent, rather than “tread[ing] carefully” as directed by *Alice*. 134 S. Ct. at 2354.

1. Improperly Defining the “Abstract Idea” Merely Using Abstractions of the Claims

There is also a trend among US courts of improperly including substantially more detail into the alleged “abstract idea” than allowed for by Supreme Court precedent. By erroneously including the “novel” aspects, instead of merely the “long standing” aspects into the alleged “abstract idea,” the courts remove the aspects of the claim that in step two of the *Alice* analysis would be properly considered as “something more.”

In *Versata*, the Federal Circuit erred in adopting overly-detailed abstractions of the



claims instead of “fundamental,” “long prevalent” and broadly-phrased “methods of organizing human activity” to which the claims purportedly relate. In particular, *Versata* did not simply identify the claims as pertaining to the abstract idea of “determining price,” but instead identified the claims as “directed to the abstract idea of determining a price, using organizational and product group hierarchies.” 793 F.3d at 1333. While “determining price” may be a “fundamental” and “long prevalent” principle, there is no evidence that “determining price, **using organizational and product group hierarchies**” was prevalent prior to the invention. To the contrary, the record reflects that *Versata*’s software was a “breakthrough” that was “very innovative.” 717 F.3d at 1259 (citing J.A. 1304).

In *Netflix, Inc. v. Rovi Corp.* (“*Netflix*”), another case infected by this type of analysis, the district court characterized the alleged abstract idea of the claims of one of the patents-in-suit as “filtering search results using selectable categories.” 114 F. Supp. 3d 927, 941 (N.D. Cal. 2015). While perhaps “filtering” search results may have been prevalent prior to the invention, by redefining the alleged abstract idea to include “using selectable categories,” the court improperly front-loaded a potential “inventive concept” into the alleged abstract idea. Accordingly, that detail was then discounted in step two, when a court is supposed to consider the “inventive” aspects that were not “long prevalent” under the *Alice* framework. See *id.* at 943.

Step Two: US Courts Are Over-Discounting Claim Elements and Failing to Recognize “Something More”

US courts have erred in step two of the analysis by erroneously ignoring “inventive” aspects of the claimed invention, that are not “routine or conventional,” and invalidating these patent claims merely because those inventive aspects use a computer.

For example, in addressing step two in *Versata*, the Federal Circuit considered such inventive aspects of “arranging a hierarchy of organizational and product groups” and “eliminating less restrictive pricing information,” but ultimately determined that the claims lacked “sufficient additional limitations to transform the nature of any claim into a patent-eligible application of an abstract idea.” 793 F.3d at 1334. This was because “the function performed by the computer at each step is purely conventional.” *Id.* Further, when considered as an ordered combination, the Federal Circuit found the claims did not pass step two since the unconventional “organizational and product group hierarchies” were performed by a generic computer. *Id.*

While *Alice* does stand for the proposition that “the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention,” this means that use of a generic computer itself does not confer patentability; **however, use of a computer does not destroy patent-eligibility.** See *Alice*, 134 S. Ct. at 2358. *Alice* mandates that the additional elements, even if added by the computer, are relevant and must be considered both separately and as an ordered combination, in step two. *Id.* at 2355. These computer limitations may add the inventive concept required for patent-eligibility. Cf. *id.* at 2357–58 (comparing *Benson*, in which



“the computer implementation did not supply the necessary inventive concept,” with *Diehr*, in which the “additional steps” that included making calculations on a computer did supply the required inventiveness); *DDR Holdings v. Hotels.com*, 773 F.3d 1245, 1258 (Fed. Cir. 2014) (finding claims-at-issue patent-eligible because they were directed to a novel solution, using a potentially “well-known” concept, to solve a technology-driven problem).

Similarly, in *Netflix*, after characterizing the ‘709 Patent as being directed to the “novel” “abstract idea of generating viewing recommendations,” the court went on to discount the computer-implemented steps because they purportedly “do not go beyond routine, conventional means of generating viewing recommendations.” 114 F. Supp. 3d at 946–47. But if “generating viewing recommendations” was indeed novel, then how could the claim be using “routine, conventional means of generating viewing recommendations?”

Relatedly, US courts have failed to follow the Supreme Court’s guidance that all of the additional elements of each claim be considered both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent-eligible application. *Alice*, 134 S. Ct. at 2355.

In *Versata*, the Federal Circuit barely paid lip service to the claims “as an ordered combination” in applying step two of the analysis. Rather than analyzing the patent claims “as a whole,” *Versata* made the conclusory statements that “the components of each claim add nothing that is not already present when the steps are considered separately. Viewed as a whole, the claims simply recite the concept of price determination by using organizational and product group hierarchies as performed by a generic computer.” 793 F.3d at 1334. Unlike in *Alice* and *Mayo*, *Versata* simply failed to evaluate all of the additional novel and unconventional elements of each claim “as an ordered combination.” In doing so, *Versata* ignored the technical improvements advanced by the claims as a whole.

This error of stripping elements out of the claim in an *Alice* analysis is far too widespread among US courts. In *BBitV-TWC* and *BBitV-HT*, the district court’s failure to even reproduce the detailed claim at any point in the opinion exemplifies the tendency among many courts to neglect to meaningfully consider all of the limitations of the claims. Instead of including the full claims in the opinions, the court resorted only to “summar[ies],” which the court itself recognized did not “capture all of the precise terms used in the patent itself.” See 2015 U.S. Dist. LEXIS 131729, at *15–16, n.12; 2015 U.S. Dist. LEXIS 131726, at *19–20, n.15. Thus, the court could not have considered all of the additional elements of the claim, both separately and as an ordered combination, as dictated by *Alice*.

Conclusion

The Supreme Court has repeatedly affirmed that a method or process is not unpatentable simply because it contains an abstract idea, law of nature, or a mathematical algorithm. See *Mayo*, 132 S. Ct. at 1293–94; *Alice*, 134 S. Ct. at 2354 (“an invention is not rendered ineligible



for patent simply because it involves an abstract concept.”).

Despite these admonitions, many US courts have misread the recent guidance in *Alice* as de facto eliminating “business method” patents and effectively banning computer-implemented inventions from the patent system. While some courts have heeded the US Supreme Court’s admonition that *Alice* does not lead to the conclusion that all computer-implemented claims are directed to abstract ideas, unfortunately, many others have not followed this guidance, indiscriminately killing computer-implemented patents by ignoring the computer elements in the claims as irrelevant. As one district court observed, although “intervening precedent [since *Benson* and *Flook*] and Congressional action have demonstrated that software is patentable,” “[t]he aftermath of *Alice* tells a different but misleading story about software patentability.” *Enfish v. Microsoft*, 56 F. Supp. 3d 1167, 1172 (C.D. Cal. 2014).

The time is now for the US Courts and/or Congress to rectify these grave errors.

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