We Need High Court Guidance On 'Abstract Idea'

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In Bilski v. Kappos, 561 U.S. 593 (2010), the U.S. Supreme Court was faced with the challenge of defining the law of patent eligibility under 35 U.S.C. § 101 for the first time since the early 1980s. The Supreme Court held that the “machine-or-transformation test,” while “an important and useful clue” of patent-eligibility, was not the sole test for determining whether an invention is a patent-eligible process. Bilski v. Kappos, 561 U.S. 593, 604 (2010). It did not establish an alternative test, but instead reviewed its previous precedent to find that the patent-at-issue was indeed invalid as directed to the abstract idea of “hedging risk.”

In doing so, Bilski created a new form of “abstract idea” as a judicial exception to patent-eligibility under the statute: “a fundamental economic practice long prevalent in our system of commerce.” 561 U.S. at 611. Alice reaffirmed this new category of “abstract idea.” Alice Corp. v. CLS Bank Int’l, 134 S. Ct. 2347, 2356 (2014).

Since Alice, the lower courts and the U.S. Patent and Trademark Office have struggled to define the parameters of this new form of judicial exception. For example, the Federal Circuit in Ultramercial — on its second remand from the Supreme Court — expanded the exception beyond “fundamental” or “long prevalent” practices, to include novel ideas.

Ultramercial LLC v. Hulu LLC, 772 F.3d 709, 715 (Fed. Cir. 2014). Unfortunately, the Supreme Court declined the opportunity to address that error at the time. Ultramercial LLC v. Wildtangent Inc., No. 14-1392, cert denied (S. Ct. June 29, 2015).

The Supreme Court has been asked to resolve this issue repeatedly since Ultramercial, and has been asked yet again in a pending petition for a writ of certiorari filed by Broadband iTV Inc. ("BBiTV"). BBiTV's petition raises several important issues in the patent-eligibility analysis, such as the role of the presumption of validity, as discussed last week in our article "Time For High Court To Clarify Presumption Of Patent Validity."

With reference to the meaning of an "abstract idea," BBiTV's petition asks the Supreme Court to decide:

Whether the judicially-created exception for "abstract ideas" broadly includes any abstraction of a claim (including novel business practices or methods of organizing human activities) or only "fundamental" and "long-standing" (i.e., pre-existing) practices and methods, as recognized by this Court in Bilski v. Kappos, 561 U.S. 593, 611 (2010) and Alice Corp. Pty. v. CLS Bank Int'l, 134 S. Ct. 2347, 2356–57 (2014).

Petition for Certiorari, Questions Presented, Question 3, Broadband iTV Inc. v. Hawaiian Telecom Inc., No. 16-1241 (filed April 13, 2017) (available **here**).

This article first summarizes generally the prior Supreme Court guidance on patent eligibility.

Then it discusses the how the BBiTV district court failed to properly apply the court's directives in Alice and Bilski as to this new form of judicial exception.

Finally it discusses how this same error has become so rampant in the lower courts that it is time for the Supreme Court to address this issue.

The Supreme Court Law of Patent Eligibility

The Patent Act clearly defines patent-eligible subject matter:

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

35 U.S.C. § 101.

As the Supreme Court has repeatedly recognized, 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)); see also J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc., 534 U.S. 124, 130 (2001) ("As this Court recognized over 20 years ago in Chakrabarty, the language of § 101 is extremely broad.") (citation omitted); Chakrabarty, 447 U.S. at 308–09 ("The relevant legislative history also supports a broad construction ... Congress intended statutory subject matter to 'include anything under the sun that is made by man.'").

Nevertheless, the Supreme Court's 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; see also Chakrabarty, 447 U.S. at 309; Mayo Collaborative Servs. v. Prometheus Labs., Inc., 566 U.S. 66, 70 (2012); Association for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107, 2116 (2013); Alice, 134 S. Ct. at 2354.

Of course, as judicially created exceptions, the court has repeatedly recognized they should be narrowly applied. Alice expressly made this point: "we tread carefully in construing this exclusionary principle lest it swallow all of patent law." 134 S. Ct. at 2354. At some level, "all inventions ... embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." Id. (quoting Mayo, 566 U.S. at 71). "Thus, an invention is not rendered ineligible for patent simply because it involves an abstract concept." Alice, 134 S. Ct. at 2354; see also, e.g., Myriad, 133 S. Ct. at 2116; Mayo, 566 U.S. at 71.

Thus, the 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." Bilski, 561 U.S. at 611 (quoting Diamond v. Diehr, 450 U.S. 175, 187 (1981)); see also Le Roy v. Tatham, 63 U.S. 132, 137 (1859) ("There can be no patent for a principle; but for a principle so far embodied and connected with corporeal substances as to be in a condition to act and to produce effects in any trade, mystery, or manual occupation, there may be a patent.").

This key principle — that a patent claim may be directed to a practical application of a fundamental principle — was expressly reaffirmed in Mayo, 566 U.S. at 71, and Alice, 134 S. Ct. at 2355.

In performing this analysis, the claims must be read as a whole, and not dissected. Diehr instructs:

It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis. This is particularly true in a process claim because a new combination of steps may be patentable even though all the constituents of the

combination were well known and in common use before the combination was made.

450 U.S. at 188. This point was also reaffirmed in Alice, when it required the claims to be considered as an "ordered combination." 134 S. Ct. at 2359.

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 (explaining that upholding the patent "would pre-empt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea")); see also Myriad, 133 S. Ct. at 2116; Mayo, 566 U.S. at 85 ("repeatedly emphasized this ... concern that patent law not inhibit further discovery by improperly tying up the future use of" abstract ideas).

A Bilski/Alice "Abstract Idea" Must Be a Fundamental or Long-Standing Concept

In Alice, the Supreme Court reviewed the history of its patent-eligibility precedents and recognized that, prior to Bilski, the "abstract idea" exception had only been applied by the court to "mathematical formulas." Alice, 134 S. Ct. at 2355–58; Bilski, 561 U.S. at 610–11; see also Gottschalk v. Benson, 409 U.S. 63, 72 (1972) (claimed algorithm "would wholly pre-empt the mathematical formula"); Parker v. Flook, 437 U.S. 584, 594-95 (1978) ("application's only innovation was reliance on a mathematical algorithm"). In Diamond v. Diehr, the Court explained that mathematical algorithms themselves could not be patented because such "manifestations of nature" were not truly "new." 450 U.S. 175, 189 n.12, 185, 190 (1981). Even if the algorithms were newly "discovered" by man, they are pre-existing truths that "must be assumed to be within the 'prior art.'" Id. at 189 n.12 (emphasis added); see also Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107, 2116 (2013) ("[p]roducts of nature are not created"); Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 132 (1948) (the patent-at-issue "was not the product of invention. There is no way in which we could call it such unless we borrowed invention from the discovery of the natural principle itself").

Thus, prior to Bilski, the three judicial exceptions — laws of nature, natural phenomena and abstract ideas (i.e., mathematical formulas) — were pre-existing 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 created a new category of "abstract idea" by finding 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 recognized that "hedging risk" could have been found an abstract idea in Bilski on the alternative basis that hedging risk could

be reduced to a "mathematical formula," but instead expressly relied on the fact that hedging risk was an "abstract idea" because it was "a fundamental economic practice." See Alice, 134 S. Ct. at 2356–57. It did so because the abstract idea in Alice — "intermediated settlement" — was easily identifiable as a similar "fundamental economic practice long prevalent in our system of commerce." Id. at 2356.

Alice supported the "fundamental," "long prevalent," and "long-standing" 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 court expressly declined to expand the "abstract ideas" category beyond mathematical formulas and "fundamental economic practice[s] long prevalent in our system of commerce."[1]

However, because Alice did not "delimit the precise contours of the 'abstract ideas' category," id. at 2357, the lower court in BBiTV's case, like other district courts, was confused over the scope of that judicial exception. As a result, these lower courts have misapplied this doctrine and improperly expanded the "abstract idea" category to include "novel" business practices or methods of organizing human activities. Indeed, the Supreme Court's rationale for creating the exception to patent-eligible subject matter under § 101 — that pre-existing fundamental truths such as laws of nature or mathematical algorithms are not truly the subject of "invention" — does not extend to newly discovered methods of organizing human activity or business practices not already known. Nor has the Court ever applied the exception for "abstract ideas" to such novel concepts.

Yet, like many lower court decisions since Alice, the BBiTV district court applied an incorrect interpretation of the court's patent-eligibility precedent to misidentify an alleged "abstract idea" that was neither the equivalent of traditional "preexisting, fundamental truths" such as Einstein's E=mc2 or Newton's law of gravity, nor "a fundamental economic practice long prevalent in our system of commerce" such as Bilski's hedging risk or Alice's intermediated settlement.

Thus, the BBiTV district court erred 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 used in Alice or Bilski.

Each of these errors is typical of the errors being committed since Alice by the lower courts and requires the court's correction.

Specifically, the BBiTV district court identified the "abstract idea" as something akin to "using the same hierarchical ordering based on metadata to facilitate the display and locating of video content." This is certainly neither a fundamental truth nor a longstanding economic concept, and the BBiTV district court even acknowledged that it was a "novel" concept. See, e.g., Broadband iTV Inc. v. Oceanic Time Warner Cable LLC, 135 F. Supp. 3d 1175, 1185 (D. Haw. 2015) ("The Court previously identified the following as the 'novel' underlying idea of the invention: 'creating a method for uploading videos via Internet with accompanying metadata, which allows the videos to be automatically listed in a cable company's EPG for viewer selection.' ... This is essentially the abstract idea identified by TWC: 'using the same hierarchical ordering based on metadata to facilitate the display and locating of video content.'"). This abstraction of the invention described by the '336 patent is instead describing a specific innovation in the technological field of VOD.[2]

Furthermore, the BBiTV district court's characterization of this detailed abstraction of the claim as an "abstract idea" runs afoul the court's warning that courts should "tread carefully in construing this exclusionary principle lest it swallow all of patent law." Alice, 134 S. Ct. at 2354; Mayo, 566 U.S. at 71. After all, "[a]t some level, 'all inventions ... embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.'" Alice, 134 S. Ct. at 2354 (quoting Mayo, 566 U.S. at 71) (emphasis added); see also Diehr, 450 U.S. at 189 n.12 ("all inventions can be reduced to underlying principles of nature"). And considering this detailed abstraction of the claim as the alleged "abstract ideas" essentially dictates the outcome of the patent-eligibility analysis before Alice step two is reached. For one, by erroneously including the "novel" aspects, instead of merely the "long standing" aspects into the alleged "abstract idea," the BBiTV district court removed the aspects of the claim that in step two of the Alice analysis would be properly considered as "something more." This is clearly not in accordance with the court's guidance in Mayo and Alice.

If the BBiTV district court had recognized the relevant abstract idea to be "delivery of content" (which would correspond in level of abstraction to "hedging risk" or "intermediated settlement" in Bilski and Alice), then the inventive abstractions identified by these courts would, by definition, show that the claims were not directed to those broad abstract ideas under Alice step one, or, alternatively, would be enough to supply an inventive concept under step two of the Alice framework.

The BBiTV District Court Errors Are Prevalent Enough to Require High Court Review and Correction

The errors made by the BBiTV district court are not isolated incidents. Too many district courts have followed the incorrect holding in Ultramercial, that novel and inventive business processes are "abstract ideas," contrary to the limited expansion of the "abstract idea" exception in Bilski and Alice.

For example, in Netflix v. Rovi, the district court repeatedly held that the "novel abstract ideas" of the claims-at-issue (e.g., bookmarking media files across devices) were "abstract ideas"

nonetheless. Netflix, Inc. v. Rovi Corp., 114 F. Supp. 3d 927, 939, 941, 946, 948 (N.D. Cal. 2015), aff'd without opinion, No. 15-1917 (Fed. Cir. Nov. 7, 2016).

Likewise, the district court in Integrated Technological Systems v. First Internet Bank of Indiana followed the Netflix court to find the concept of "transferring funds between accounts without a pre-established link" to be an "abstract idea," despite its novelty. Integrated Tech. Sys. v. First Internet Bank of Ind., No. 2:16-CV-00417-JRG-RSP, 2017 U.S. Dist. LEXIS 21309, at *9–10 (E.D. Tex. Jan. 30, 2017).

Similarly, in Virginia Innovation Sciences v. Amazon.com, the district court ignored the patentee's arguments at Alice step one that the defendant's proposed articulation of the abstract idea — "sending video from a mobile device to a different screen" — could not be an abstract idea because that concept was not conventional at the time of the invention. Va. Innovation Scis. Inc. v. Amazon.com Inc., No. 1:16-cv-00861, 2017 U.S. Dist. LEXIS 1917, at *24 (E.D. Va. Jan. 5, 2017). The district court, in accordance with Ultramercial, explained that it would instead consider the novelty of the invention at Alice step two. Id. at *29.

Moreover, because the Supreme Court in Alice chose not to "delimit the precise contours of the 'abstract ideas" category," Alice, 134 S. Ct. at 2357, but instead found it sufficient to use previous case law (e.g., Bilski) as a guide in identifying "abstract ideas," the lower courts have adopted this comparative methodology as well. Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1334–35 (Fed. Cir. 2016). Yet, the lower courts have not limited the types of "abstract ideas" to the type of pre-existing or fundamental concepts identified by the Supreme Court. As a result, the "narrow" exception to patent eligibility for "abstract ideas" has been progressively expanded by each lower court decision — relying on other lower courts — to support a broader definition of an "abstract idea." The Supreme Court's intervention is needed to provide some guidance as to the boundaries of the abstract idea "exclusionary principle lest it swallow all of patent law."

Conclusion

The errors by the lower courts in what constitutes an "abstract idea" can be traced to confusion over the different kinds of "abstract ideas" created by the Supreme Court: (1) mathematical formulas and algorithms (as discussed in Benson, Flook and Diehr) for which novelty is not relevant since they are pre-existing truths, and (2) "fundamental economic practice[s] long prevalent in our system of commerce" (as discussed in Bilski and Alice) for which novelty is highly relevant, as it would preclude the requirement that the practice be fundamental.

Hopefully, the Supreme Court will take advantage of the opportunity to correct this misapplication of the "abstract idea" exception, presented by BBiTV's cert petition. If not, Congress may be prompted by the input of organizations such as the Intellectual Property Owners Association, American Bar Association, American Intellectual Property Law Association, New York Intellectual Property Law Association and others to take more drastic actions on patent-eligibility jurisprudence.

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DISCLOSURE: Macedo and Hudak represent Broadband iTV Inc. in the Supreme Court with respect to its petition for certiorari in Case No. 16-1241, along with Paul Alston and John Rhee from Alston Hunt Floyd & Ing***.***

[1] Indeed, both Alice and Bilski included minority opinions that would have eliminated business method patents completely, but these opinions were not adopted by the majority opinions. Compare Bilski, 561 U.S. at 609 (majority opinion), with Alice, 134 S. Ct. at 2360 (Sotomayor, J., concurring). Indeed, the majority in Bilski stated that "Section 101 precludes the broad contention that the term 'process' categorically excludes business methods." 561 U.S. at 606.

[2] Indeed, the '336 claims do not fall under any of the categories of "abstract ideas" recognized by the lower courts, such as "methods of organizing human activity." The '336 patent is clearly directed to an improvement to the technological field of VOD.