



The Boundaries of Patent-Eligible Processes in *Bilski*

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Friday, May 09, 2008 — Yesterday, the U.S. Court of Appeals for the Federal Circuit heard oral arguments in *In re Bilski* and *Warsaw*, No. 2007-1130 (Fed. Cir.), to consider the boundaries of patent-eligible subject matter.

In recent times, and particularly since as early as September 2007, the issues raised in *Bilski* have been a focal point of public attention. In particular, two recent decisions by the Federal Circuit, *In re Nuijten* and *In re Comiskey*, reawakened the debate as to the scope of patent-eligible subject matter under 35 U.S.C. § 101. Prior to these cases, the Federal Circuit had not visited the issue since its *State Street* and *AT&T* decisions in 1998 and 1999.

As is becoming more common, the Federal Circuit received (this time at its own request) over 30 amici submissions on the five questions it posed for *Bilski*.

In an unusual circumstance, the Federal Circuit also decided to allow two amici to participate in yesterday's oral argument. In particular, the Court allowed Professor John F. Duffy to present on behalf of Regulatory DataCorp, Inc. ("RDC"), and Mr. William Lee to present on behalf of Bank of America ("BOA") and certain other financial service entities.

In describing the boundaries of what should be considered patent-eligible subject matter, RDC took a broader but more moderate view seeking to avoid new bright line rules, whereas BOA took a view that was "at the far end of the bell curve" as BOA's counsel phrased it. Of course, also participating in oral argument were Applicants' counsel, David Hanson, and Acting Solicitor Raymond Chen, on behalf of the Director of the Patent and Trademark Office ("PTO").

On April 23, 2008, we published a guest column entitled "In Re *Bilski* Roll Call and Score Card." There we categorized the various amici briefs by the sector and type of entity that submitted each brief, and the positions advocated by those entities in response to the five questions posed by the Federal Circuit.

Yesterday, Charley Macedo and Jung Hahm attended the oral argument to get a first hand impression of how the Federal Circuit might deal with the issues related to patent-eligible processes.

In what was more reminiscent of a Supreme Court argument than an argument before the Federal Circuit, the line to enter the courthouse began before noon and continued to grow resulting in a packed Courtroom.



In this guest column, we address the details of the arguments that were made yesterday to the Federal Circuit.

Part I provides a brief summary of the procedural history in the Bilski case that lead to yesterday's oral arguments and Part II provides a summary of yesterday's arguments before the Federal Circuit.

For a detailed explanation of the various amici's positions in their briefing please see our prior Guest Column.

Part I: The Procedural History Of In Re Bilski And Warsaw

Messrs. Bilski and Warsaw filed their patent application on April 10, 1997, prior to the State Street decision. Representative Claim 1 is directed to a method of hedging risk and provides as follows:

1. A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:
 - (a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;
 - (b) identifying market participants for said commodity having a counter-risk position to said consumers; and
 - (c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.

The Examiner rejected the application for failing to comply with 35 U.S.C. § 101 (patent-eligible subject matter), and the Applicants subsequently appealed the rejection to the Board of Patent Appeals and Interferences ("BPAI").

On March 6, 2006, in a decision that was over 40 pages long, the BPAI affirmed the rejection. See *Ex parte Bilski*, 2006 WL 4080055 (B.P.A.I. Sept. 26, 2006). When issued, this informative decision caught the patent bar's attention because it took positions that, on their face, seemed contrary to the BPAI's precedential decision issued shortly before in *Ex parte Lundgren*, 76 U.S.P.Q.2d 1385 (B.P.A.I. 2005).

The Applicants then appealed to the Federal Circuit, whose three judge panel held oral arguments on Oct. 1, 2007, shortly after the *Nuijten* and *Comiskey* decisions issued. No decision was rendered by the panel.

Instead, on Feb. 15, 2008, the Federal Circuit sua sponte issued an order advising that the case would be heard by the full court en banc, and posed the following five questions:



1. Whether claim 1 of the [Bilski] patent application claims patent-eligible subject matter under 35 U.S.C. § 101?
2. What standard should govern in determining whether a process is patent-eligible subject matter under section 101?
3. Whether the claimed subject matter is not patent-eligible because it constitutes an abstract idea or mental process; when does a claim that contains both mental and physical steps create patent-eligible subject matter?
4. Whether a method or process must result in a physical transformation of an article or be tied to a machine to be patent-eligible subject matter under section 101?
5. Whether it is appropriate to reconsider *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), and *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352 (Fed. Cir. 1999), in this case and, if so, whether those cases should be overruled in any respect?

The Federal Circuit's en banc order also invited amici to participate in the briefing and set a schedule for the parties' submissions, the amici submissions and oral argument.

In response, over thirty amici briefs were submitted, including one prepared by our firm on behalf of Reserve Management Corporation, PCT Capital LLC, Rearden Capital Corp. and Sales Optimization Group. Our prior guest column provides a roll call of the amici, categorizing them by sector and type of entity, and a score card of the positions they took in response to the five questions.

After the amici briefs were submitted, BOA made a motion to participate in oral argument, and other amici followed suit.

The Court then issued an order setting a date by which all amici interested in participating in oral argument should submit their respective requests. The order also set a date by which the Court would decide which amici would participate.

Ultimately, the Federal Circuit chose two amici from the financial services sector to participate. RDC, which took a view of patent-eligible subject matter that was broader and needed to remain flexible, and BOA, which took a position advocating for a narrower, more extreme view of patent-eligible subject matter.

Part II: Summary Of Yesterday's Oral Argument

All twelve active judges of the Federal Circuit participated in the arguments. Senior Judge Clevenger, who had participated in the original Bilski three judge panel, did not participate. Instead, Judge Clevenger sat as a member of the audience in a packed courtroom to hear the debate.



A. Appellant's Counsel

The Oral Argument commenced with a presentation by Appellant's counsel, David Hanson of the Webb Law Firm. Mr. Hanson began by trying to explain to the Court why Claim 1 of the Bilski application was not an abstract method. The theme advocated by Bilski's counsel was that State Street and AT&T were properly decided.

In particular, he argued that State Street's "useful, concrete and tangible result" test was a "fine" test that was consistent with the Supreme Court's precedent in Benson, Flook and Diehr and met by Claim 1 of Bilski's application.

Mr. Hanson also, however, tried to distinguish those three cases and State Street and AT&T on the grounds that those cases involved mathematical formulae or algorithms, whereas, in his view, Bilski's Claim 1 did not. He argued that Bilski's Claim 1 was in fact grounded in reality because it covered real life activity, and thus should be considered patenteligible subject matter.

Mr. Hanson also advocated for a test that relied upon physicality, explaining that information can be as physical as matter and energy. According to him, when one transforms information from one form to another, as in an offer, an acceptance and a contract, such a transformation meets the transformation test set forth in the Supreme Court's precedent.

Judge Rader questioned Mr. Hanson on whether the Court needs a separate test in this area, posturing whether it was enough that the statute lists the four categories of patent-eligible subject matter in 35 U.S.C. § 101 (i.e., process, machine, manufacture, or composition of matter) and leaves it to the remainder of the statute (e.g., 35 U.S.C. §§ 102, 103 & 112) to determine whether a claim should be allowed.

In response, Mr. Hanson noted that there are already three judge-made exceptions to patent-eligible subject matter: abstract ideas; natural phenomenon; and laws of nature.

In this regard, both the Court and parties recognized that the issue presented by Bilski is: What constitutes an abstract idea?

The Court's questions suggested that the panel recognizes on the one hand that an abstract idea is not patent-eligible subject matter, and on the other hand that a "useful, concrete and tangible result" is patent-eligible. The hard part is figuring out where to draw the line on innovations that fall in between. Judge Newman called this area in between the "grey" area.

Judge Newman in particular was looking for advice on if this was a case that fell within the grey area and, if so, what guidance the Court should provide in determining which side claims in the grey area will fall. Many of the judges recognized that total mental steps are not patent-eligible subject matter.

In response to this line of questioning, Mr. Hanson argued that the touchstone should be



whether something is happening in the real world. According to Mr. Hanson, Claim 1 of the Bilski application happens in the real world and is therefore patent-eligible.

Judge Michel objected to the “useful, concrete and tangible result” test as being of little guidance. He found them to be merely “adjectives” which none of the counsel could adequately define. Every time counsel tried, a new adjective was provided that resulted in an equally unsatisfying answer.

Judge Linn focused on the language from Diehr that a physical transformation is “the clue” to patent-eligible processes. One of the raging debates was whether “the clue” meant that the physical transformation test was sufficient or necessary.

Judge Linn and others also raised the question of whether the breadth or specificity requirements attached to 35 U.S.C. § 101, or §§ 102, 103 & 112. Mr. Hanson, on behalf of the Appellants, and Professor Duffy, arguing on behalf of RDC, both recognized that it was an inquiry that was applicable to all these sections.

In particular, Mr. Hanson recognized that an overly broad claim is likely to cover an abstract idea. Later, as discussed below, Professor Duffy advocated that the considerations that govern 35 U.S.C. § 101 necessarily do consider the other policy considerations, which is why the Supreme Court uses language akin to “novelty” (from § 102) and overbreadth (from § 112) in discussing 35 U.S.C. § 101.

Judge Dyk wanted to know where each counsel obtained the tests that they were advocating. Unfortunately, it was difficult for anyone to show that any bright line test came from the statute or was consistent with Supreme Court precedent.

B. RDC

Next, Professor Duffy argued on behalf of RDC. Professor Duffy took the position that the Federal Circuit should avoid drawing sharp lines on patent-eligible subject matter as advocated by the PTO and BOA for two reasons.

First, Professor Duffy explained that the Patent Office had previously asked the Supreme Court to adopt the same rule that the PTO and BOA were now advocating in Bilski and the Supreme Court declined to adopt the rule.

Before Professor Duffy could identify the second reason, however, Judge Dyk interjected and asked Professor Duffy what he thought the correct standard would be. Professor Duffy urged the Court to stay within the confines of Supreme Court precedent.

In other words, if the claim falls within one of the four enumerated statutory classes under 35 U.S.C § 101, and does not fall within one of the three exceptions, it should be patent-eligible subject matter.



He further urged the Court to not engraft additional exceptions beyond the three enumerated by the Supreme Court. Mr. Duffy encouraged the Court to avoid adopting the very test that Judge Dyk was requesting.

Judge Michel asked Professor Duffy whether the Court had the authority to interpret the three exceptions and/or create a fourth exception.

According to Professor Duffy, the Court certainly had the power to interpret the scope of the three enumerated exceptions, but indicated that he would not comment on whether the Court could fashion a fourth exception without knowing what it would be.

Professor Duffy suggested to the Court that they avoid making bright line rules because they may have unintended results in the future. In advocating this, Professor Duffy pointed out that the Supreme Court tried and failed to make such bright line rules and therefore, in *Benson*, declined to adopt the exact same rule the PTO is now advocating.

Both the PTO and BOA took the position that even though the Supreme Court in *Benson* and *Flook* recognized that patent-eligible processes should not be limited to processes which are tied to a machine or transform matter, the Federal Circuit should nonetheless adopt rules which would limit patent-eligible processes to those two categories of subject matter.

Professor Duffy, on the other hand, persuasively argued that the Supreme Court in *Benson*, *Flook* and *Diehr* specifically declined to accept an invitation by the PTO to adopt such a rule.

Professor Duffy also directed the Federal Circuit to *O'Reilly v. Morse*, 56 U.S. 62 (1854) as an example where the bright-line tests would not work. In *O'Reilly*, the Court found Claim 8, in which a signal was tied to a wire, was not patenteligible, but found Claim 5, which claimed an alphabet (i.e., Morse code), was patent-eligible.

Thus, the bright line litmus test being advocated by the PTO and BOA would be contrary to this Supreme Court precedent.

Judge Dyk asked Professor Duffy if it was the intent of Congress to be “amorphous” in describing what is considered patent-eligible subject matter. Duffy responded by clarifying that Congress’s intent in creating 35 U.S.C. § 101 was to be “broad” (not amorphous).

Thus, whole areas of technology, like financial engineering, should not be foreclosed from being patent-eligible without explicit permission from Congress to do so.

C. The PTO

Raymond Chen argued next on behalf of the Director of the PTO. Mr. Chen began his argument by answering Judge Dyk’s question on what test the Federal Circuit should use.



According to Mr. Chen, the test can be found in *Diehr* where the Supreme Court said “Transformation and reduction of an article ‘to a different state or thing’ is the clue to the patentability of a process claim that does not include particular machines.”

In particular, Mr. Chen argued that there were two “boxes” in which a process could fall into to be patent-eligible subject matter: Box 1: the process is tied to a machine; or Box 2: matter is transformed.

The Court repeatedly asked Mr. Chen whether computers transform matter. In response, Mr. Chen said that processes implemented on a computer do not need to transform matter to be patent-eligible under the PTO’s proposal.

Rather, because these processes are tied to a machine they would be patent-eligible as falling into box 1, and thus would not need to meet the test of box 2.

Judge Rader vigorously questioned Mr. Chen on what basis the PTO contended that there were only two boxes. Mr. Chen relied on *Diehr* as the source for this test, to which Judge Rader voiced his doubt.

Many of the Court’s questions to the PTO remained unanswered:

- When asked what test the PTO applied in 1952 for patent-eligible subject matter, Mr. Chen responded that he did not know.
- Judge Bryson asked whether the process of throwing a curveball is a transformation of matter. Mr. Chen had no answer for this question or follow up questions on the subject.
- Judge Newman explained her reading of *Benson*, *Flook* and *Diehr* as an evolution where the rule of patent-eligible subject matter needed to keep up with the changes in technology. She wanted to know if the PTO had studied what effect it would have on innovation if the Federal Circuit removed business methods as patent-eligible subject matter. Mr. Chen replied that the PTO had not made such a study.
- The Court asked if a chiropractic method for adjusting a back would be patent-eligible subject matter. Mr. Chen did not respond to this question,
- Both Judges Bryson and Rader asked whether the method of throwing a curveball could be considered patent-eligible subject matter. Judge Rader in particular thought it would make sense to let this method be patent-eligible, but use 35 U.S.C. §§ 102, 103 and 112 to reject the claim as unpatentable. Mr. Chen said that this would be difficult to answer without knowing more.

One of the few questions that Mr. Chen was able to respond to was posed by Judge Moore. In particular, Judge Moore wanted to know if software innovation is one of the new categories that the PTO would be open to consider as patenteligible subject matter based on where the



law stood 15 to 20 years ago.

According to Mr. Chen, the PTO's proposed rule would not affect software patents since they are tied to a computer. (There are over a 100,000 patents issued related to software implemented inventions).

Judge Lourie asked whether the processes contained in computer software are merely mental steps that are implemented using a computer. If that was true, then why would the processes found in the software be patent-eligible, when these same process would not be patent-eligible absent the computer.

For example, Judge Lourie explained his view tax software is merely mental processes that are performed on a computer and is patent-eligible. However, Judge Lourie used to do his own taxes on paper before the advent of tax software.

Judge Lourie wanted to know why writing down one's taxes is not patent-eligible, but using those same processes in a software program would be. (Of course, this analogy fails to recognize that when Judge Lourie did his taxes by hand, he did it with a physical pen and paper which accomplishes a transformation of matter: the ink on the paper. A computer's manipulation of data is also a transformation of matter).

Ultimately, many if not all of the Judges seemed to recognize that we live in an information age. Therefore the patent laws and the rule on patent-eligible subject matter must adapt to this reality.

D. BOA et al.

Finally, William Lee, on behalf of BOA et al. presented the narrowest and most extreme view of what should be the potential scope of patent-eligible subject matter. Mr. Lee characterized his own position as "at the far end of the bell curve."

BOA's lawyer argued for a factor based test that was predicated on "three fundamental principles."

First, abstract ideas and processes are not patent-eligible. (This is a position which there seemed to be of little dispute).

Second, processes resulting in the physical transformation of matter are patent-eligible.

Third, Mr. Lee advocated that a computer implemented invention should only be patent-eligible if the program put the computer to an "unconventional" use. An innovation which was purely mental steps would not be patent-eligible if only post solution steps are implemented on the computer. (This position seemed to draw the greatest criticism, and rightly so, since it really has no support in the statute, Supreme Court precedent or even Federal Circuit precedent as



Judge Michel pointed out).

BOA's lawyer explained that the Judges' curveball example would not be patent-eligible subject matter. However, even Mr. Lee conceded, that to be patent-eligible it would not require that the baseball be chemically changed.

The panel did not appear to accept Mr. Lee's point. Mr. Lee did characterize his argument as being at "the far end of the bell curve" in that transformation of data alone is not sufficient to be patent-eligible subject matter.

Judge Rader asked why the transformation of the path of the curveball was not sufficient to make the method patenteligible.

Mr. Lee simply responded that under the Supreme Court's test it would not be patent-eligible. When Judge Rader asked why Congress had not added a section to the patent statute specifically prohibiting the kinds of processes that Mr. Lee now advocated should not be patent-eligible processes, Mr. Lee responded unsatisfactorily.

According to Mr. Lee, at the time of the original enactment of the patent statute, the founding fathers avoided business method patents because of their dissatisfaction with the Statue of Monopolies in England. Mr. Lee offered no support for this contention.

In fact, in our brief on behalf of Reserve Management Corporation et al. we showed that many patents issued in the 1800's that covered business concepts, legal contracts and methods of insuring tax payments. See, e.g., US Patent Numbers 389,818, 883,380, 918,280, 959,879, 1,045,331, 1,150,708, 1,254,870, 1,419,739, and US Reissue Patent Numbers RE11,270.

In the end, Judge Michel expressed his concern that the Court needed to set forth a test for patent-eligible subject matter which would provide real world guidance to the Patent Office examiners.

His stated fear was that the Court would be forced to decide hundreds of cases involving patent-eligible subject matter if the PTO was not provided some more detailed guidance than found in the Supreme Court precedent.

Judge Michel wanted to know where the unconventional use test came from. He also wanted know if Mr. Lee agreed with Judge Dyk's test from *Comiskey* that the computer must be necessary to the invention.

Judge Dyk took issue with Mr Lee's post solution test, by asking if the computer program was the solution.

Judge Lourie returned to his question if a computer program is really only mental steps.

In the end, the Court seemed to be left without answers to many of their questions, and no



clear and acceptable bright line (or even “fuzzy line”) test to set forth.

Conclusion

When we arrived at the courthouse an hour and a half before the argument was scheduled to begin, about a hundred people were in line in front of us. Thereafter, another hundred or so came after us. The courtroom was packed with lawyers, press, business people, and even some judges.

This attention, like the over thirty amici submissions, reinforces just how important business-related patents are to the U.S. economy. While not everyone agrees that business-related patents are beneficial, everyone at yesterday’s argument recognized that innovation in this area exists and is important to foster.

If we assume that good patents achieve this goal, then the answer from yesterday’s argument should not be to use patent-eligible subject matter as a filter, but rather, as Judge Rader suggests, the answer should be to allow the other parts of the Patent Act to weed out the bad patents.

In yesterday’s oral arguments the Court asked five abstract questions about the meaning of the word “abstract” and then sought useful, concrete and tangible answers.

Unfortunately, the answers were not forthcoming. Many members of the Court showed a reluctance to adopt a “pornography-like” rule: I know it when I see it. Such a rule would not provide any guidance to the PTO examiners reviewing business method patent applications.

The Court therefore turned to the tests proposed by each counsel and pressed them to define the words of their respective tests. However, it became clear that no satisfactory definitions were available to allow a more refined test. This demonstrates why, as Professor Duffy advocated, the Court should avoid trying to provide any bright line tests.

During the argument, the Patent Office said it would not advocate a bright line test. Hoping for any test that would provide him guidance, an exasperated Judge Michel asked if the Patent Office would at least provide a “blurry line test.” Unfortunately, even a satisfactory “blurry line test” was not forthcoming at the argument.

Whether the Court will be able to muster enough Judges to agree on a majority opinion including a bright line (or even a blurry line) test the Court is seeking remains to be seen.

For now, it appears that the majority of the Court wants to preserve the patent-eligibility of software innovations, and recognizes that at least some innovations in information technology should also be patent-eligible. Which such innovations should be included is where the debate was focused. If and how the Court reaches this result is yet to be seen.



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This article is not intended to express the views of the firm or its clients.

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