



Patentable Subject Matter: Refining the Boundaries

- *IP Law360, November 02, 2007*

Author(s): Charles R. Macedo

Friday, November 02, 2007 — There have been more developments and proposed changes to U.S. Patent Law over the past year or so than in most of the twelve month periods that even seasoned patent practitioners can remember.

The Supreme Court reversed long-standing Federal Circuit law, the Federal Circuit reconsidered its own decisions, the United States Patent and Trademark Office (“USPTO”) proposed new rules governing the procedures associated with patent applications, and Congress has considered some of the most sweeping changes to U.S. Patent Law since the current statutory scheme was first enacted in 1952.

The latest chapter in this series of changes concerns the issue of what can be patented, which has been raised by three highly anticipated cases appealed from the Board of Patent Appeals and Interferences (“BPAI”) to the Federal Court. See *In re Nuijten*, 2007 WL 2728397 (Fed. Cir. Sept. 20, 2007) (signal claims for watermarking technology); *In re Comiskey*, 2007 WL 2728361 (Fed. Cir. Sept. 20, 2007) (human implemented arbitration process – no machine required); *Ex Parte Bilski*, 2006 WL 4080055 (BPAI Sep. 26, 2006) (informative, appeal pending at Federal Circuit, Appeal No. 07-1130) (energy risk management method).

While we wait with bated breath for the outcome of *Bilski*, the precedential Federal Circuit decisions in *Nuijten* and *Comiskey* have re-drawn the boundaries of patentable subject matter to limit the scope of patent protection available for business method and other patents.

The September 20, 2007 Federal Circuit decisions, *Nuijten* and *Comiskey*, effectively set a limit on the range of available patentable subject matter under 35 U.S.C. §101. In *Nuijten*, the Court held that a claim solely directed to an electronic signal is unpatentable subject matter when it is not otherwise tied to a process of manipulating such a signal or a storage medium containing such a signal.

Similarly, in *Comiskey*, the Court held that the claimed method of arbitrating a dispute was not patentable subject matter, when that method was not necessarily performed by a computer or some other tangible medium.

These two Federal Circuit decisions will cause many applicants, patentees and accused infringers to reevaluate pending and issued claims in light of the new standards governing patentable subject matter under Section 101 of the Patent Act.

Background



Section 101 of the Patent Act limits the issuance of patents by the USPTO for only a definite scope of patentable subject matter such that:

“[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore...”

Section 101 defines four statutory categories of patentable subject matter: processes; machines; articles of manufacture; and compositions of matter.

For many years, it was well understood among patent practitioners that a patent claim merely covering a so-called method of doing business would not be recognized as patentable subject matter under Section 101.

However, this understanding changed in 1998 with the decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998). Judge Rich, writing for the Federal Circuit, recognized that the prior conventional wisdom — that so-called methods of doing business were inappropriate subject matter for patent protection — was simply wrong. Dismissing this per se exclusion as “an ill-conceived notion,” the Federal Circuit stated that the proper determination of whether a claim included patentable subject matter under Section 101 should be whether an invention produced a “useful, concrete and tangible result.”

State Street, 149 F.3d at 1373. This controversial – and at that time somewhat unexpected – decision signaled the opening of the flood gates for “business method” patent applications.

As a byproduct, the holding in *State Street* fostered business and innovation centered on these newly patentable ideas, as well as public criticism for many patents that were considered improvidently granted. Legislative reaction to the Court’s new confirmation of business methods as patentable subject matter came in the form of the passage of the American Inventors Protection Act in 1999, which created the “First Inventor Defense” to an assertion of infringement of a claim directed to a method of doing business. See 35 U.S.C. §273.

In so doing, Congress not only recognized that the Court’s decision in *State Street* left many inventors who could have applied for patent protection without a significant defense to a charge of patent infringement for a method they had been implementing for years, but also impliedly confirmed the Court’s acceptance of business methods as patentable subject matter under Section 101.

Despite the broad holding in *State Street* and its progeny and the legislative acquiescence to its holdings, for many years afterwards the USPTO erected numerous obstacles for applicants to maneuver around in order to gain patent protection for methods of doing business. For example, it was routine for an examiner to issue a “technological arts” rejection for any business method application claim that was not explicitly tied to a computer.

This practice continued until the 2005 BPAI decision, *Ex Parte Lundgren*, 76 U.S.P.Q. 2d 1385



(BPAI 2005), which recognized that such “technological arts” rejections were improper in light of the Federal Circuit’s State Street test.

However, despite what seemed to be clear and appropriate statements in Lundgren as to what were and were not appropriate grounds for rejecting a claim as being unpatentable subject matter, the BPAI continued to issue other seemingly contradictory non-precedential decisions. Cf. *Bilski*, supra.

Then, no less an authority than the Supreme Court stepped into the debate. In *Lab Corp. of Am. Holdings v Metabolite Labs., Inc.*, 126 S. Ct. 2921 (Jun. 22, 2006), the Supreme Court took up an appeal as to what constitutes patentable subject matter in the context of a medical diagnostic process.

However, prior to ruling on the merits, the Court dismissed the appeal as “improvidently granted” following a submission by the Bush Administration.

In the dissent to the dismissal, Justice Breyer significantly observed and two of his fellow Justices agreed that although the decision in *State Street* set forth the “useful, concrete and tangible result” test, “this Court has never made such a statement and, if taken literally, the statement would cover instances where this Court has held the contrary.” *Lab Corp.*, 126 S. Ct. at 2928 (Breyer J., dissenting).

Separately, Congress’ legislative efforts to “reform” U.S. Patent Law are being pursued with greater vigor than in years past. The House of Representatives has already passed a controversial patent reform bill (see H.R. 1908, 110th Cong., Sec. 10 (2007)), which has garnered the attention of many patent practitioners, industry groups and even the UAW.

The Tax Bar has even taken additional frontal assaults at patentable subject matter and has sponsored numerous efforts to reform the scope of patentable subject matter associated with patents covering “tax strategies.”

As a specific business method patent carve-out, the bill passed by Congress seeks to exclude so called “tax strategy” patents from Section 101 patentable subject matter. See H.R. 1908, 110th Cong., Sec. 10 (2007).

These legislative proposals are particularly troubling in that they create pork barrel-type exceptions to the Patent Law, where there is truly no justification for such exceptions.

Meanwhile, back at the Patent Office, the USPTO issued “Interim Guidelines” All Content Copyright 2007, Portfolio Media, Inc. 3 and the BPAI issued another informative (i.e., non-precedential) decision in *Bilski*.

In *Bilski*, Administrative Patent Judge Barrett (who also penned the dissent in *Lundgren*) wrote an extensive analysis recasting the prior *Lundgren* decision to suggest that, while there is no separate “technological arts” test, a claim must nonetheless transform matter from one state



to another for a non-machine implemented process to be patentable as he proposed in his prior dissent in Lundgren.

The BPAI also issued other decisions rejecting various patent claims on the basis that they included unpatentable subject matter. These cases, including the two which just issued, were presented to the Federal Circuit for decision. See Nuijten, Comiskey and Bilski.

Now the Federal Circuit has issued its new decrees governing the scope of patentable subject matter under Section 101 in Nuijten and Comiskey, which are examined here, and we all await its pronouncement in a third appeal under consideration in Bilski.

In re Nuijten

The split Federal Circuit decision of Nuijten addressed a Section 101 rejection of patent claims directed solely to a transitory electrical signal.

In essence, the majority affirmed the BPAI's rejection of the disputed application claims on the basis that transitory embodiments were not statutory subject matter even though the disputed claims were directed to "physical but transitory forms of signal transmission."

The majority also recast the holding of the State Street decision, which indicated that the determination of an invention's practical utility superseded a determination of which of the four statutory terms most correctly classified the invention.

The Court in Nuijten interpreted this statement as a reaffirmation of the exclusive scope of patentability governed by Section 101 as opposed to meaning that a determination pursuant to the four statutory classifications was irrelevant.

According to this recent decision, the determination of patentability pursuant to Section 101 is still governed by the four enumerated statutory categories of patentable subject matter.

The disputed patent application claims corresponded to digital watermarking technology, a signal processing technique for embedding informational data onto a signal such that the embedded data is imperceptible to the user during normal operation.

As examples, the Court cited the following claims: All Content Copyright 2007, Portfolio Media, Inc. 4

Claim 1. "A method of embedding supplemental data in a signal comprising the steps of: encoding the signal [in a specific manner] and modifying selected samples of the encoded signal [in a specific manner]."

Claim 14. "A signal with embedded supplemental data [having certain characteristics]."

Claim 15. "A storage medium having stored thereon a signal with embedded supplemental



data [having the same certain characteristics].”

While Claims 1 and 15, as well as the claims dependent thereon were allowed and not in dispute under appeal, Claim 14, and certain claims dependent thereon, which were merely directed to a signal, stood rejected under 35 U.S.C. §101 as unpatentable subject matter.

The majority opinion affirmed the BPAI’s rejection of certain claims for lack of patentable subject matter on two separate grounds.

First, even though a signal necessarily needs some sort of physical carrier, the signal as claimed had no physical attributes and was therefore merely an “abstract idea.”

The 2-1 majority held that the disputed claims must necessarily recite some physical form, regardless of precisely what form that may take.

So, even though the majority accepted that its decision turned “on a somewhat esoteric and metaphysical point” that there must necessarily be a physical carrier of a signal in order to have a signal that conveys information, the court nonetheless affirmed the rejection of the disputed claims pursuant to Section 101 because the claims were directed to an “abstract idea” not tied to a statutory category of patentable subject matter.

For comparison, the court noted the examiner had allowed several claims in the same application; notably, those that included a limitation directed to an encoder to be used in the process of watermarking, and a storage medium to accept the signal with such a watermark.

Second, the Court upheld the BPAI’s decision finding the disputed claims failed to fall into one of the four statutory categories of Section 101 (i.e. process, machine, manufacture, or composition of matter) and therefore were necessarily unpatentable subject matter.

Though in doing so, the Court recognized that its holding, which declined to classify the disputed claims as a “manufacture,” was the toughest decision.

In summarily rejected the disputed claims as unpatentable subject matter, the majority held: (1) the claims could not be classified as a process because there were no “acts” or “series of acts” that transformed a thing; (2) the claims could not be classified as a machine because there was no “concrete structure”; (3) the claims could not be classified as a manufacture because although there is a man-made portion of the claims, a transient electric signal is not “some tangible article or commodity”; and (4) a signal is not a composite of “two or more substances.”

A separate opinion filed by Judge Linn concurred with the majority’s holding “that a ‘signal,’ as used in the claims at issue, refers to something with a ‘physical form’.”

However, Judge Linn dissented from the restrictive definition used by the majority and urged that the disputed claims should properly be classified as a “manufacture.”



Using the circumstances presented to the Court in *O'Reilly v. Morse*, 56 U.S. 62 (1853) (holding the system and signs of Morse Code were patentable) as an analogy, the dissent noted that the disputed claims required that some input material be transformed to a new form.

Because the claims had at least some physical nature, the claims constituted a man-made discovery that could be patentable subject matter under Section 101.

Despite the majority's refusal to find a claim directed merely to an electronic signal as patentable subject matter, the Court has, at least for now, left intact the ability of an applicant to claim methods of processing electronic signals and storage medium having electronic signals stored thereon under Section 101.

In re Comiskey

In the other Federal Circuit decision on September 20, 2007, the Court in *Comiskey* held that claims directed to a method and system for mandatory arbitration of unilateral and bilateral legal documents were unpatentable subject matter under Section 101.

As examples, the Court cited the following claims:

Claim 1. "A method for mandatory arbitration resolution regarding one or more unilateral documents comprising [certain steps];"

Claim 17. "A system for mandatory arbitration resolution regarding one or more unilateral documents comprising [various modules and databases in a computer system];"

Claim 32. "A method for mandatory arbitration resolution regarding [bilateral contractual documents] comprising [certain steps]."

Claim 46. [A system for mandatory arbitration resolution regarding bilateral contractual documents comprising certain steps].

In *Comiskey*, the Court treated independent Claims 1 and 32, which had no limitation directed to a "module" or computer system, as distinct from independent Claims 17 and 46, which were tied to a computer system.

The Court rejected the first group of claims (i.e. Claims 1 and 32), relying in part on applicant's concession, as unpatentable pursuant to Section 101 "when they merely claimed a mental process standing alone and untied to another category of statutory subject matter even when a practical application was claimed."

Even to the untrained eye, this language seems eerily similar to the "technological arts" rejection, long thought to be extinct.

By contrast, the Court recognized that the second group of claims (Claims 17 and 46), which



were tied to a computer, were patentable subject matter.

However, the Court characterized these as merely adding a modern general purpose computer or communication device to claims that were directed to an otherwise unpatentable mental process.

In doing so, the Court provided guidance on remand that the “routine addition of modern electronics to an otherwise unpatentable invention typically creates a prima facie case of obviousness.”

The procedural posture of this case is, by itself, quite significant. Initially, although the appeal was brought on the BPAI’s affirmation of the examiner’s Section 103 rejections for obviousness to both groups of claims, the Federal Circuit exercised its discretion to reject the first group of disputed claims sua sponte.

The Court noted that since the requirements of Section 101 were a “threshold” issue of patentability, the Court could and, clearly, must take this issue first before going on to address the real issue raised on appeal; namely obviousness.

By setting up a “threshold” test, this decision may allow the USPTO to apply Section 101 to reject more so-called business method patent application claims at an earlier stage.

Though the Comiskey Court acknowledged that the State Street decision “supports the patentability of business methods generally,” the Court also highlighted the fact that State Street notably did not provide a different standard of patentability for business method patent application claims.

As such, business method should be treated similarly to any other process claims. In doing so, the Federal Circuit indicated that the standard of patentability according to Section 101 has two fundamental aspects: (1) there must be some practical application to the claimed discovery and (2) the practical application must fall within one of the four statutory categories under Section 101.

The Federal Circuit noted that State Street recognized that once a court determines that the subject matter of the claim will fall in a statutory category, it is not important in which statutory category it falls.

However, the Comiskey Court clarified that this does not mean that the USPTO or a Court is relieved from confirming that the subject matter of the claim falls in at least one of the statutory categories.

In sum, according to the Court in Comiskey, claims directed to methods of doing business “standing alone and untied to another category of statutory subject matter” do not pass the “threshold” of patentability, but those claims that do are patentable subject matter under Section 101.



The decision in *Comiskey* may turn out to be a significant step towards restricting the viability of business method patent claims as it not only restricts the scope of patentable subject matter under Section 101, but also seems to reestablish a “technological arts” rejection though under slightly different terms.

While this decision seems to be contrary to the earlier-decided and binding authority of *State Street*, it will undoubtedly result in more litigation and disputes over what constitutes patentable subject matter for business method claims.

Ex Parte Bilski

In *Ex Parte Bilski*, the BPAI affirmed the examiner’s Section 101 rejection of application claims directed to a method for hedging consumption risk for trading commodities. As an example, the Board analyzed Claim 1, which reads:

A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising [the steps of initiating a series of transactions with consumers, identifying market participants, and then initiating a series of transactions with market participants].

After addressing in detail the issues raised by *Lundgren* and the Interim Guidelines promulgated after that decision, the majority affirmed the rejection of Claims 1-11 as containing unpatentable subject matter based on analysis under the three tests identified in the concurrence/dissent of *Lundgren*; namely the “transformation” test, the “abstract idea” test, and the “useful, concrete, and tangible result” test.

The appeal in *Bilski*, No. 2007-1130 (Fed. Cir.) was heard by Judges Bryson, Clevenger, and Moore on October 1, 2007 and a decision is expected to be forthcoming.

It will be interesting to see whether the Federal Circuit will recognize a claim that is directed to a process of initiating a series of transactions, which clearly produces a useful, concrete, and tangible result and requires human acts beyond pure mental steps, as patentable subject matter under Section 101.

New Test Under Section 101

Though the decision of *Bilski* is still forthcoming, the most recent Federal Circuit decisions on patentability, *Nuijten* and *Comiskey*, set a standard of patentability under Section 101 that is perceptibly stricter than in previous years, even when applying the same tests.

The Federal Circuit presumably requires that patent application claims directed to a method of doing business must first pass the “threshold” to patentability. Thereafter, according to the recent decisions in *Nuijten* and *Comiskey*, in order to be patentable subject matter under Section 101 a patent application claim must be:



a process that covers an “act” or “series of acts” (and is tied to another category of patentable subject matter per *Comiskey*); or

a machine that is a “concrete thing;” or

a manufacture that is a “tangible article or commodity;” or

a composition of matter that is a composite of “two or more substances.”

Conclusion

Although *Comiskey* and *Nuijten* are only the two most recent decisions by the Federal Circuit attempting to define the scope of patentable subject matter pursuant to Section 101, they should by no means be considered the final word on this matter.

It seems that in this round of cases the Federal Circuit is taking a more restrictive view on what is worthy of being patentable subject matter. But as seen in previous years, there is an ebb and flow to the interpretation of the everchanging boundary of what constitutes patentable subject matter under Section 101.

The boundary between mere abstract ideas, not worthy of patenting, and business methods, worthy not only of letters patent but also of the envy of the business community, is a fine line that will likely be re-drawn at least once again in the near future.

By [Charles R. Macedo](#) and [Peter R. Vogel](#)
Amster Rothstein & Ebenstein LLP

[Charles R. Macedo](#) is senior counsel and Peter R. Vogel is an associate at Amster. Their practice specializes on intellectual property issues. The authors thank [Michael J. Kasdan](#), an associate at Amster, for his helpful comments. This article is not intended to express the views of the firm or its clients.