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Subject Matter Eligibility Guidance from the Federal Circuit: *Thales Visionix v. United States*

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Both the courts and the Patent and Trademark Office (PTO) have struggled to define the metes and bounds of the subject matter eligibility analysis under 35 U.S.C. § 101. The Court of Appeals for the Federal Circuit's recent decision on March 8, 2017 in *Thales Visionix Inc. v. United States*¹ further clarifies the first step of the eligibility analysis, while confirming the significance of that step.

Under § 101, patent protection is available to “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” Patent claims directed to laws of nature, natural phenomena, and abstract ideas, however, are not patent-eligible subject matter.² Courts and the PTO evaluate the subject matter eligibility of claims under a two-step framework set forth by the Supreme Court in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*³ and *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*. Step one asks “whether the claims at issue are directed to a patent-ineligible concept.”⁴ If the claims are not directed to an ineligible concept, then the inquiry ends and the claims are subject matter eligible.⁵ If the claims are directed to an ineligible concept, step two of analysis determines if the claims “contain[] an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.”⁶

In *Thales*, the Federal Circuit determined the claims at issue were not directed to patent-ineligible subject matter at step one in the *Mayo/Alice* framework.⁷ The claims involved an inertial tracking system that could be used in aircraft navigation.⁸ The patent at issue, U.S. Patent No. 6,474,159, includes two independent claims—an apparatus claim and a method claim—reproduced below:

¹ No. 2015-5150 (Fed. Cir. Mar. 8, 2017).

² *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014).

³ 132 S. Ct. 1289 (2012).

⁴ *Alice*, 134 S. Ct. at 2355.

⁵ *Enfish, LLC v. Microsoft Corp.*, 822 F. 3d 1327, 1339 (Fed. Cir. 2016).

⁶ *Alice*, 134 S. Ct. at 2357 (quoting *Mayo*, 132 S. Ct. at 1294.)

⁷ Slip op. at 11.

⁸ *Id.* at 2.

Independent Claim 1

A system for tracking the motion of an object relative to a moving reference frame, comprising:

- a first inertial sensor mounted on the tracked object;
- a second inertial sensor mounted on the moving reference frame; and
- an element adapted to receive signals from said first and second inertial sensors and configured to determine an orientation of the object relative to the moving reference frame based on the signals received from the first and second inertial sensors.

Independent Claim 22

A method comprising determining an orientation of an object relative to a moving reference frame based on signals from two inertial sensors mounted respectively on the object and on the moving reference frame.

Prior inertial tracking systems determined the orientation of an object in a moving platform relative to the earth.⁹ This prior approach suffered from inaccuracies and required another type of sensor to correct for these errors.¹⁰ The invention claimed in the '159 patent solved these problems by determining the orientation of the object within the reference frame of the moving platform, not the earth.¹¹ This approach improves the accuracy of the inertial tracking system, allows the system to operate without an additional sensor to account for errors, and involves simpler installation.¹²

The Federal Circuit's analysis began by recognizing that the "Supreme Court's formulation makes clear that the first-stage filter is a meaningful one, sometimes ending the § 101 inquiry."¹³ Accordingly, the court committed to "articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful."¹⁴

The court next reviewed two other Federal Circuit cases that previously determined that certain claims were not directed to ineligible subject matter under step one. The claims at issue in the first case, *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*,¹⁵ were found to be directed to a laboratory technique for preserving liver cells, rather than the natural law that cells could survive multiple freeze-thaw cycles, because a particular application of the natural law was claimed rather than the natural law itself.¹⁶ The court also recognized that the claims in the second case, *Enfish LLC v. Microsoft Corp.*, were not directed to simply any form of storing tabular data (characterized as an abstract idea), but rather to a specific improvement to the way computers operate in the form of a self-referential table that functions differently than conventional databases.¹⁷

The Federal Circuit then looked to the Supreme Court's decision in *Diamond v. Diehr*¹⁸ for guidance. While the claims in *Diehr* included a mathematical formula, the Supreme Court held the formula was implemented or applied "in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect."¹⁹ The Federal Circuit observed that "the *Diehr* claims were directed to an improvement in the rubber curing process, not a mathematical formula."²⁰

Based on its evaluation of *Rapid Litig.*, *Enfish*, and *Diehr*, the Federal Circuit concluded that the claims

⁹ *Id.* at 2-3.

¹⁰ *Id.*

¹¹ *Id.* at 3.

¹² *Id.* at 3-4.

¹³ *Id.* at 6 (quoting *Elec. Power Grp. LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016)).

¹⁴ *Id.* at 6-7.

¹⁵ 827 F.3d 1042 (Fed. Cir. 2016).

¹⁶ *Id.* at 7.

¹⁷ *Id.* at 7.

¹⁸ 450 U.S. 175, 177 (1981).

¹⁹ *Thales*, slip op. at 8 (quoting *Diehr*, 450 U.S. at 192).

²⁰ *Id.* at 8.

of the '159 patent in *Thales* were not directed to patent-ineligible subject matter.²¹ The court found that the claims were directed to a system and a method including a particular configuration of inertial sensors used to more accurately determine the orientation of an object on a moving platform.²² The court further clarified that the claims were not directed to any mathematical equation because any equations utilized with the claimed system would “serve only to tabulate the position and orientation information” in the claimed configuration of two inertial sensors.²³ The court supported its conclusion by explaining that the inertial sensors were configured in an unconventional manner that resulted in a reduction of errors, could be installed with any type of moving platform, could be installed more simply, and required no external information from another sensor.²⁴

The Federal Circuit’s robust step one analysis in *Thales* demonstrates that the first-stage of the subject matter eligibility filter is indeed a meaningful one.²⁵ As such, Applicants at the PTO facing a § 101 rejection may benefit in spending more time with an examiner at step one. Furthermore, a focus on articulating alleged ineligible subject matter with specificity should help prevent generalized characterization of the claims that avoids meaningful analysis. The Federal Circuit’s treatment of mathematical relationships in *Thales* is instructive in distinguishing between claims directed to an ineligible abstract idea, as compared to claims directed to an eligible and particular application of that abstract idea. What effect, if any, *Thales* will have on PTO policy remains an open question.

²¹ *Id.* at 10-11. While the claims of the '159 patent survived scrutiny at the Federal Circuit, they did not fare so well before the Patent Trial and Appeal Board (PTAB) during *inter partes* review. See *Elbit Sys. of Am. v. Thales Visionix, Inc.*, IPR2015-01095 (PTAB Oct. 14, 2016). Prior to the *Thales* decision by the Federal Circuit, the PTAB invalidated the independent claims and several dependent claims as being obvious under § 103, while confirming the validity of other dependent claims. *Id.* The Federal Circuit’s decision in *Thales* is nevertheless instructive for how courts and the PTO should apply subject matter eligibility analysis under § 101.

²² *Thales*, *slip op.* at 9-11.

²³ *Id.* at 9.

²⁴ *Id.* at 9-10.

²⁵ See *id.* at 6.

No Respite on the Horizon for CBM Patents

Andrew B. Cohn



Andrew B. Cohn

The Patent Trials and Appeals Board (“PTAB”) and the Federal Circuit have continued their hostility to payment and financial technology patents, recently invalidating three patents and reversing a large damage award in *Smartflash LLC v. Apple Inc.*, see *Smartflash LLC v. Apple Inc.*, Case No. 2016-1059 (Fed. Cir. March 1, 2017 (*Smartflash*)).

In *Smartflash*, the Federal Circuit invalidated three patents held by Smartflash LLC (“Smartflash”) that were asserted against Apple Inc. (“Apple”) two years ago, resulting in a decision of \$533 million in damages in favor of Smartflash. However, the overturning of the two-year old verdict from the Eastern District of Texas seemed likely after the PTAB found, in multiple CBM patent reviews, that the claims of Smartflash’s asserted patents were not patent-eligible under the test provided by the U.S. Supreme Court in *Alice*. The Federal Circuit then followed with a holding that Smartflash’s patents were directed to patent ineligible concepts, agreeing with the District Court that the claims were directed to the abstract idea of “conditioning and controlling access to data based on payments,” but disagreeing that the claims included meaningful limitations to “transform the abstract idea into a patent-eligible invention”, *Smartflash* at 14.

Smartflash originally brought suit against Apple (as well as Samsung Electronics Co. (“Samsung”), alleging that Apple’s iTunes store infringed three patents: U.S. Patent No. 7,334,720 (“’720 patent”), U.S. Patent No. 8,118,221 (“’221 patent”), and U.S. Patent No. 8,336,772 (“’772 patent”) (collectively, the “Smartflash patents”). That suit was stayed awaiting the decisions by the PTAB in the pending CBM patent reviews. Generally, the Smartflash patents were directed to “a portable data carrier for storing and paying for data to computer systems for providing access to data to be stored”, *Smartflash* at 3-4. Addressing issues surrounding the piracy of digital content, the Smartflash patents describe a process to receive a payment to access requested data, validate the payment data, and then write and control access to

the requested data using rules that are based on the provided payment. Independent claim 3 of the '720 patent is representative:

3. A data access terminal for retrieving data from a data supplier and providing the retrieved data to a data carrier, the terminal comprising:

...

code to read payment data from the data carrier and to forward the payment data to a payment validation system;

code to receive payment validation data from the payment validation system;

code responsive to the payment validation data to retrieve data from the data supplier and to write the retrieved data into the data carrier; and

code responsive to the payment validation data to receive at least one access rule from the data supplier and to write the at least one access rule into the data carrier, the at least one access rule specifying at least one condition for accessing the retrieved data written into the data carrier, the at least one condition being dependent upon the amount of payment associated with the payment data forwarded to the payment validation system.

After the District Court adopted the magistrate judge's recommendations that the claims were not invalid under 35 U.S.C. §101, *Smartflash* was awarded \$533 million in damages based on the determination that Apple infringed their patents, *Smartflash* at 6-7. Following the jury award, Apple (as well as Samsung) requested and received grant for review of the patents under the AIA's CBM patent review. In the first half of 2016, the PTAB invalidated the three patents at issue, while invalidating another four of *Smartflash*'s patents in early November 2016. The Federal ultimately adopted a rationale similar to the PTAB in their decision.

CBM and Federal Circuit Review of the SmartFlash Patents

The legal test as to whether claims in a patent are eligible under 35 U.S.C. §101 is now relatively well

established, although how those legal tests should be applied is an open question. After the *Mayo Collaborative Services v. Prometheus Laboratories, Inc.* and *Alice* decisions, a two-step test has been adopted to determine subject matter eligibility. Invoking the first step of that test in *Smartflash*, the Federal Circuit looked at whether the claims were directed to an "abstract idea," which included determining whether the claims are directed to "an improvement of computer functionality." In finding that the claims of the *Smartflash* patents focused not on "the specific asserted improvement in computer capabilities," but instead "on a process that qualifies as an 'abstract idea' for which the computers are invoked merely as a tool," the Federal Circuit stated that the "asserted claims here invoke computers merely as tools to execute fundamental economic practices", *Smartflash* at 9-10. The Federal Circuit reasoned that because the data was retrieved, gated, and output based on payment validation and access rules that were dependent on a payment, the claims were directed to an abstract idea of "conditioning and controlling access to data based on payment", *Id.*

The Federal Circuit differed with the District Court in the second step of the two-step test, which seeks to identify whether there is an "inventive concept" that is sufficient to "'transform the nature of the claim' into a patent-eligible application" by determining whether there is any element or combination of elements that amount to significantly more than the abstract idea, *Smartflash* at 10. In *Smartflash*, the Federal Circuit found that the inventive concepts within the claims were merely "routine computer activities", (*Id.* at 11.) While the District Court believed that the claims "recite[d] specific ways of using distinct memories, data types, and use rules that amount to significantly more than the underlying abstract idea," the Federal Circuit stated that steps such as "transmitting, retrieving, and writing data," executed by generic computer hardware, are insufficient to provide patent eligibility, *Id.* at 12.

The Federal Circuit was not swayed by *Smartflash*'s arguments, finding the claims at issue analogous to "the type of Internet activity that we found ineligible in [*Ultramercial, Inc. v. Hulu, LLC*]." In particular, while *Smartflash* attempted to analogize the subject matter of its claims to that found patent eligible in *DDR*

Holdings, it appears the key difference between in the two outcomes was the Federal Circuit's inability to find a "pre-Internet analog" as it found in *DDR Holdings, LLC v. Hotels.com*. Similarly as with the abstract idea found in *Ultramercial* the Federal Circuit then analogized the abstract idea in the Smartflash patents to a real-world example, which doomed the claims.

The finding by the PTAB of invalidity of the Smartflash patents in the CBM patent reviews had a large influence in the outcome of this case. CBM patent reviews are meant to be implemented for those patents that include data processing or other limitations involved in "the practice, administration, or management of a financial product or service." Unlike Inter Partes Review, CBM patent reviews may review the claims of the patents for subject matter eligibility under 35 U.S.C. §101. It is particularly noteworthy that there have only been four instituted CBM patent reviews (of 232 trials instituted) where no reviewed claims were invalidated, [see slide 11](#). Furthermore, although the challenges to the instituted claims in a CBM patent review may vary, these four instituted CBM patent reviews having no instituted claims held unpatentable represents just one percent of the total CBM petitions received by the USPTO, two percent of the CBM patent review trials instituted, and three percent of all final written PTAB decisions

It seems as though the Federal Circuit has taken a similarly dim view of many patents that involve financial technology, or use financial processes to accomplish the means of the underlying invention. Although the payment technology described in Smartflash's patents provided ancillary, but required, support to the gating of data and information on a device, the Federal Circuit found that the recitations in the claims "execute[d] fundamental economic practices." As discussed above, the data in the Smartflash patents is made available dependent on rules that are particular to a payment. Smartflash focused their arguments on the innovation claimed in the patents and directed to the protection of data written to a device as well as the gating of access to all or portions of the data, rather than on whether the patents provided a new payment mechanism. However, the Federal Circuit found that the claims were directed to a "fundamental economic practice" by analogizing the claims to *Ultramercial* and noting

that they are unwilling to find patent eligibility for claims directed to Internet activity that can easily be analogized to a real-world analog. Additionally, the District Court's statement that "[a]lthough in some claims the language is functional and somewhat generic, the claims contain significant limitations on the scope of the inventions" likely hurt Smartflash more than helped. The Federal Circuit was quick to find an abstract idea and analogize it to a fundamental economic practice based on these statements, which likely led to ultimate finding of invalidity. Thus, where claims in a patent can arguably be construed to broadly cover a "fundamental economic practice," patentees will likely face an uphill battle when arguing validity.

Considering the PTABs high rates of invalidation of claims in CBM patent reviews, it appears that the use of economic terms in patent claims may weigh against subject matter eligibility. In order to avoid potential CBM patent review or Federal Circuit invalidation, it is advisable to specifically recite the more technical aspects and processes occurring between two or more machines, and avoid high level, conceptual descriptions and claims. Although patent attorneys by nature tend to go for the broadest claims, this may not be the path to success moving forward. Instead, consideration should be given to removing economic terms in claims, or even eliminating/reducing their use throughout the specification. Instead, there may be value in specifically reciting more technical terminology for needed economic limitations (which can be defined in the specification), as well as identifying more than the generic computer components and architecture in the claims, which was relied on by Smartflash at the District Court and was insufficient to survive review at the Federal Circuit.

The *Smartflash* decision is not surprising on its own; recent history is rife with invalidations of patents directed to fundamental economic processes, and the 3690 art group (business methods – finance) has had a very low allowance rate since *Alice*, although more allowances of financial or payment related claims have been seen recently as the USPTO has continued to clarify guidance under *Alice*. However, the Smartflash case provides another example of a relatively large loss to a patentee due to the invalidation of their patent(s) for being directed to a "fundamental economic

practice,” even where there has been differing opinions over whether the claims include an “inventive concept” that amounted to sufficiently more than the abstract idea. This may signify that post-grant, the first step of the Alice test will be the largest burden to those patentees inventing in spaces that may be considered financial.

Additionally, in *Smartflash*, Apple argued that *Smartflash* was a non-practicing entity (“NPE”), and was merely trying to profit off of Apple’s innovation of the iTunes store. However, this argument raises questions over whether the new interpretation of Section 101 through the *Alice/Mayo* framework has gone too far in an attempt to eliminate “weak” patents. Moving forward, the incentives provided for inventors must be balanced against the need to eliminate improperly granted patents, or else innovative and useful technology may be stifled. This becomes especially true when protecting new financial technology as mobile and electronic payments become the prevailing processes by which we interact financially.

Secure Access Denied Access in Third CBM Eligibility Decision by Federal Circuit

Aaron C. Taggart



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As a result of the Federal Circuit’s decision in *Secure Access, LLC v. PNC Bank National Association* in late February, it is not likely that a flood of Covered Business Method (“CBM”) reviews will be coming any time soon. By statute, CBM reviews are reserved for patents relating to “a financial product or service,” and under the Federal Circuit’s narrow reading of that statute, the number of CBM reviews will likely remain quite small relative to the number of Inter Partes Reviews (“IPR”). Although relatively few in number, CBM reviews have generated a number of precedential Federal Circuit opinions recently.

In *Secure Access*, the Federal Circuit reversed the Patent Trial and Appeals Board’s (“PTAB”) decision

finding that claims relating to website authentication were eligible for CBM review. No. 16-1353, slip op. at 3 (Fed. Cir. Feb. 21, 2017). Although earlier precedent, such as *Blue Calypso, LLC v. Groupon, Inc.*, could be interpreted to suggest that the scope of CBM review was relatively broad, the Federal Circuit’s more recent cases take a much narrower reading of the controlling statute. Following its previous decision in *Unwired Planet, LLC v. Google Inc.*, the Federal Circuit in *Secure Access* again held that the PTAB’s statutory interpretation regarding the scope of CBM reviews was overly broad, and reversed the PTAB’s CBM decision.

It is clear from *Secure Access* that CBM reviews, although broad in regard to the types of invalidity arguments available, are only applicable to a narrow group of patents. Unlike IPR proceedings, where the challenger is limited to invalidity under § 102 or § 103 based on patents or printed publications, a party may raise any invalidity arguments except best mode in a CBM review. However, only a “CBM patent” is subject to CBM reviews. CBM patents are defined as those that “that claim[] a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service.” AIA § 18(d)(1). The Federal Circuit emphasized in *Secure Access* that a CBM review is a powerful weapon for patent infringement defendants when available, but it will continue to have limited applicability.

As discussed above, leading into the *Secure Access* decision, the Federal Circuit had previously addressed the scope of patents eligible for CBM review under AIA § 18(d)(1) in *Blue Calypso* and *Unwired Planet*. In *Blue Calypso*, the Court affirmed the PTAB’s CBM final decision, finding that claims directed to advertising systems on mobile devices were subject to CBM review. 815 F.3d 1331, 1338-41 (Fed. Cir. 2016). The Court’s analysis turned on the claim term “subsidy,” which was construed to mean “financial assistance” and understood to be “central to the claims.” *Id.* at 1339-40. Because the claims were “directed to methods in which advertisers *financially* induce ‘subscribers’ to assist their advertising efforts,” they were properly subject to CBM review. *Id.* at 1340.

In contrast, the Federal Circuit had vacated the PTAB’s final decision in *Unwired Planet* as based on an overly broad and incorrect interpretation of AIA § 18(d)(1).

841 F.3d 1376, 1380 (Fed. Cir. 2016). The Court took issue with the PTAB's focus on "whether the patent claims activities that are financial in nature, incidental to a financial activity, or complementary to a financial activity." *Id.* Although the PTAB appears to have quoted that language directly from the *Blue Calypso* opinion, the court found that interpretation overly broad and inconsistent with the plain language of the statute. *Id.* The patent in *Unwired Planet* addressed "privacy preferences that determine whether client applications are allowed to access their device's location information," and the court remanded for the PTAB to determine if CBM was proper under the correct statutory interpretation. *Id.* at 1377 (internal quotations omitted).

Secure Access is the latest case to address the scope of CBM reviews, and resulted in the Court finding that the PTAB was incorrect in subjecting U.S. Patent 7,631,191 ("the '191 Patent") to CBM review. Slip op. at 3. The '191 Patent is directed to systems and methods for authenticating a webpage. '191 Patent, Title, Abstract. Notably, the claims are broadly worded and refer to authenticating data at a "host computer" by inserting an "authenticity key" into a "preferences file." *Id.*, claims 1, 17. While the claims do not explicitly refer to a financial product or service, the specification does provide examples of how the claimed authentication process could be used for security in a sales transaction, and how the claimed invention may be useful to banks and other financial institutions generally. See *Secure Access*, slip op. at 4-7.

Aside from the references to banks and financial transactions in the specification, the PTAB also considered *Secure Access*'s enforcement conduct. *Secure Access* had alleged infringement by a large number of banks and other financial institutions, and while recognizing that "the factor was not determinative," the PTAB found that evidence weighed in favor of finding the '191 Patent to be a CBM patent.

Ironically, on the one issue the parties agreed upon – the standard of review – the Court disagreed with them both. Declining the "arbitrary and capricious" standard they proposed, the Court instead adopted a *de novo* standard of review. Without using the words "*de novo*," the Court noted that the Board's finding was based on an incorrect understanding of the statutory definition of a CBM patent, and therefore presented a question of law.

It appears that *Secure Access* took for granted that the Board's statutory interpretation was correct, likely because the Board's decision simply quotes the language of AIA § 18(d)(1). In contrast, the Board's decision in *Unwired Planet* explicitly relied on an interpretation of CBM patents that differed from the statutory definition. 841 F.3d 1376, 1380. Undoubtedly, the standard of review here influenced the Court's ultimate analysis, and as explained further below, the remedy.

Consistent with the Federal Circuit's characterization of the case as a question of statutory interpretation, the Court parsed the language of AIA § 18(d)(1) in detail. In the Court's view, the issue before it was whether the claims of the patent must explicitly refer to a financial product or service, or whether it is enough that the claimed product or service be "used in the practice . . . of a financial product or service." *Secure Access*, slip op. at 12-15. The Court held that "[i]t is the claims, in the traditional patent law sense, properly understood in light of the written description, that identifies a CBM patent." *Id.* at 15. Contrary to appellees contention, "the written description alone cannot substitute for what may be missing in the patent 'claims,' and therefore does not in isolation determine CBM status." *Id.* at 14.

In reaching its narrow reading of the CBM statute, the Federal Circuit expressed concern that a contrary reading would "obliterate" the limits of IPR reviews by opening virtually any patent to the broader range of invalidity arguments available in CBM reviews. *Id.* at 14-15. Directly addressing the PTAB's reliance on how the invention was used, the Court noted that "nearly everything that is invented can and likely will be used in someone's sale of a good or service." *Id.*

Judge Lourie dissented, and appeared to take an equitable approach, noting that the patent owner's "litigation pattern" was indicative of how the patent owners envision their invention being used. *Secure Access*, slip op. at 3-5 (Lourie, J., dissenting). In Judge Lourie's view, a patent owner who has sued a large portion of the banking industry should not be able to escape the rigors of CBM review by arguing their patent is not sufficiently related to "a financial product or service." *Id.* While recognizing that the PTAB below may have misconstrued the statute, the dissent would have affirmed the PTAB for reaching the correct conclusion regardless. *Id.* at 6-7.

In light of its view that the PTAB applied the statute incorrectly, *Secure Access* requested a remand to the Board for a proper application, taking for granted the Board’s interpretation of the statute as sound. *Secure Access*, slip op. at 19-21. Instead, the Court reversed the Board’s finding that the ‘191 Patent was a CBM patent, holding that “an affirmative finding, applying the proper statutory definition, that this patent so qualifies [as a CBM patent] would be, in terms of the APA standard, arbitrary or capricious.” *Id.* Accordingly, this case illustrates how the standard of review applied can impact the remedy available, as well as the analysis.

It seems that between the *Secure Access*, *Unwired Planet* and *Blue Calypso* rulings, the Federal Circuit has provided ample guidance going forward in determining whether a patent falls within the statutory definition for CBM patents. However, that guidance could still change, as Google and others have requested *en banc* review of the *Unwired Planet* ruling. Given the arguable discrepancy between the broad interpretation of CBM review in *Blue Calypso* and the considerably narrower view espoused in *Unwired Planet* and *Secure Access*, the Court may well take up the issue *en banc* to reconcile these competing views.

What to Know About Post-Grant Review and the Biotech Industry

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The AIA made several significant changes to United States patent law, including the establishment of post-grant proceedings before the Patent Trials and Appeals Board (PTAB)



Nicole Johnson

where patents have the potential of being invalidated in a much more efficient and expedient manner. In the five years since the AIA was enacted, two types of post-grant proceedings, Inter Partes Review (IPR) and Post-Grant Review (PGR), have become increasingly popular tools for biotechnology companies to resolve patent disputes.

A Comparison of Litigation, IPR, and PGR

To use post-grant proceedings before the PTAB effectively, it is important to observe how patent invalidity challenges in district court compare to post-grant proceedings (i.e., IPRs and PGRs) before the PTAB. Some sophisticated strategies integrate both district-court proceedings and post-grant proceedings before the PTAB to effectively stage a multifront attack during patent disputes. For example, some strategies may employ a combination of both district court litigation and an IPR proceeding before the PTAB to increase likelihood of a favorable outcome and oftentimes increase the motivation for parties to settle sooner, or position a case for success should litigation ensue.

Excerpted from Life Science Leader. To read the full article, please [click here](#) (subscription required).

How Patent Enforcement Laws May Be Getting Some New Ink

Kenneth G. Parker and Brittany Parks



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On 2 December 2016, the Supreme Court of the US (SCOTUS) decided to review the US Court of Appeals for the Federal Circuit’s (CAFC) decision in *Impression Products v Lexmark Intl.*¹ The case

presents two significant questions regarding the theory of “patent exhaustion”:

- Whether patent law can restrict the use or resale of a patented item after the first authorised sale of that item in the US; and
- Whether the authorised sale of a patented item outside the US exhausts the US patent rights in that item.

¹ *Impression Prods, Inc v Lexmark Intl, Inc*, 816 F 3d 721 (Fed Cir 2016), cert granted (US 2 Dec 2016) (No 15-1189).

The answers to these questions will have an important impact on patent enforcement in the US and internationally. Due to the complexity of the case, this article will first summarise the relevant background issues and procedural history, and then discuss the significant repercussions that SCOTUS' decision may have on the technology industry.

THE PATENT EXHAUSTION DOCTRINE

For over a century, the patent exhaustion doctrine, also called the “first sale” doctrine, has limited the scope of patent rights. It holds that the first authorised sale of a patented item terminates the patent rights to that item. In other words, a patent holder’s rights are “exhausted” upon the first authorised sale of a patented item.² A patent holder, therefore, cannot use patent law to enforce post-sale restrictions on the use or resale of the item. For instance, the patent exhaustion doctrine allows everyday people to buy patented electronics, or even running shoes, and resell them at a garage sale or online without any interference from the original patent holder.

THE FACTS

Lexmark International (“Lexmark”) is a laser printer manufacturer that patented certain aspects of their printer’s toner cartridges. Once a cartridge’s ink is used up, a new or refurbished and refilled cartridge must be placed in the printer. Lexmark sells new cartridges both in the US and internationally under two types of programmes. First, Lexmark sells new cartridges at a substantial premium, often costing over a hundred dollars for a single cartridge, without any post-sale restrictions. Secondly, Lexmark sells “Return Programme” cartridges at a discount of 20%. The Return Programme cartridges carry two post-sale restrictions: (1) the buyer cannot reuse the used cartridge and, (2) the buyer can only resell the used cartridge to Lexmark.

Remanufacturers like Impression Products (“Impression”) acquire used Lexmark cartridges originally sold both inside and outside the US, refurbish and refill them with ink, and sell them in the US at competitive prices. The cartridges Impression refurbishes include both the unrestricted and restricted Lexmark versions. In response to this business practice, Lexmark sued several remanufacturers, including Impression, for direct and contributory patent

infringement. Lexmark alleged: (1) Impression violated the no-resale and no-reuse restrictions on cartridges sold in the US; and (2) Impression unlawfully imported cartridges sold internationally. In response, Impression relied on the patent exhaustion doctrine and asserted that once Lexmark sold its cartridges it could no longer enforce its patent rights over the use and resale of the cartridges in the US or abroad.

THE PROCEDURAL HISTORY

Issue one: post-sale restrictions

In the CAFC, Impression argued that SCOTUS' decision in *Quanta Computer, Inc v LG Electronics, Inc*³ – holding that a licensee’s patent rights were exhausted upon the first authorised sale of the patented item – overruled previous decisions on the issue. The CAFC disagreed and reaffirmed its previous decisions, holding that a patent holder who sells a patented item in the US can enforce clearly communicated and lawful restrictions on the use and resale of the item. Therefore, any use or resale of a patented item that runs afoul of the agreed-upon restrictions results in an infringement of the patent holder’s rights. The court distinguished *Quanta* by noting that it dealt with a licensee, not a patent holder, who authorised a sale that was not subject to any post-sale restrictions. The court reasoned that a patent holder’s rights are exhausted only when the first authorised sale of an item is without restriction, or unconditional.

Issue two: international sales

The CAFC affirmed its previous decision in *Jazz Photo Corp v International Trade Commission*,⁴ holding that when a US patent holder authorises the international sale of a patented item, the sale does not presumptively or conclusively exhaust the patent holder’s rights to that item in the US. The CAFC recognised that while a foreign sale does not automatically exhaust US patent rights, an express or implied licence may be found based on the circumstances of the sale. In making its decision, the court found that an earlier SCOTUS ruling on the issue,

² *Quanta Comput, Inc v LG Elecs, Inc*, 553 US 617, 625 (2008); *Bloomer v McQuewan*, 55 US (14 How) 539, 549 (1852).

³ *Quanta Comput, Inc v LG Elecs, Inc*, 553 US 617 (2008).

⁴ *Jazz Photo Corp v Int'l Trade Comm'n*, 264 F 3d 1094 (Fed Cir 2001).

Kirtsaeng v John Wiley & Sons, Inc.,⁵ applied only to copyright law and, therefore, did not apply to the case at hand.

THE ISSUES FOR SCOTUS

As previously noted, SCOTUS recently granted *certiorari* and will tackle the two issues presented: (1) “[w]hether a US patent owner may invoke patent law to enforce restrictions on the use or resale of a patented article after the first authorized sale of the article in the US,” and (2) “[w]hether ... a US patent owner may authorise the sale of a patented article in a foreign country, either under a foreign patent or otherwise in accordance with foreign law, while reserving its exclusive rights under US patent law.”⁶

THE POTENTIAL IMPACTS OF THE CASE

Issue one: post-sale restrictions

The CAFC has permitted post-sale restrictions on the use and resale of patented items since 1992. Many patent holders have taken advantage of these restrictions to control the use of their products post-sale, including companies like Lexmark, LG Electronics, and Apple.⁷ If SCOTUS rules contrary to the current longstanding precedent, many patent holders will have to reconsider the *meaning of their post-sale restrictions*. More specifically, technology companies will have to review and restructure their current sale agreements to assure that they do not contain post-sale restrictions. If a company leaves unenforceable sales restrictions in place after a SCOTUS holding that such restrictions are unenforceable, that act could be construed as anti-competitive conduct, subjecting the company to antitrust liability or liability under state unfair competition laws.⁸ A holding limiting post-sale restrictions could also expose technology companies to increased litigation over patent rights, as thousands of existing licence agreements will likely be called into question.

On the other hand, a decision for Lexmark may negatively impact the secondary market for patented products by placing restraints on alienation. The district court cautioned that allowing patent holders to restrict the use and resale of an item would “create significant uncertainty for downstream purchasers and end users who may continue to [be] liable for infringement even after an authorised sale to the

consumer has occurred”.⁹ Thus, postsale restrictions may limit the scope of the patent market as a whole by promoting anticompetitive ideals – allowing the elimination, in theory, of every secondary market for every single patented item sold by a patentee (think used cars). Moreover, allowing postsale restrictions may render the exhaustion doctrine moot, as patent holders may simply place such restrictions on the sale of each of their patented items to avoid the doctrine’s limitations.

Issue two: international sales

SCOTUS’ decision may have drastic implications for global commerce and technology companies. Since its decision in *Jazz Photo*, the CAFC has held that the foreign sale of a patented item does not automatically exhaust a US patent holder’s rights. Accordingly, many large commercial companies have understood this to be the default rule and have made contracts reflecting this principle. If SCOTUS holds that foreign sales do exhaust US patent rights, the ruling will have a substantial impact on a large number of US companies’ longstanding business operations overseas, because those companies will have to restructure each of their foreign licensing agreements.

Then again, if the court holds that the foreign sale of a patented article does not exhaust a US patent holder’s rights, large technology companies will be forced to review the patent licences of their entire international supply chain to confirm that their licences explicitly state that their authorised foreign purchases exhaust US patent rights. For example, iPhones are made up from hundreds of parts made around the world and are covered by approximately 250,000 patents.¹⁰ For technology companies who

⁵ *Kirtsaeng v John Wiley & Sons, Inc.*, 133 S Ct 1351 (2013).

⁶ Brief for the US as *amicus curiae* supporting petitioner in part, *Impression Prods, Inc v Lexmark Int’l* (filed 12 Oct 2016, No 15-1189).

⁷ See, eg, Single purchase agreement (2011), <https://store.apple.com/Catalog/US/Images/eduspa.pdf>.

⁸ See, eg, *Princo Corp v ITC*, 616 F 3d 1318, 1327-28 (Fed Cir 2010); See *Nat’l Collegiate Athletic Ass’n v Bd of Regents of Univ of Okla*, 468 US 85, 100 (1984).

⁹ *Lexmark Int’l, Inc v Ink Techs Printer Supplies, LLC*, No 1:10-CV-564, 2014 WL 1276133, at *7 (SD Ohio 27 Mar 2014), *rev’d and remanded sub nom Lexmark*, 816 F 3d at 779 (citing *Tessera, Inc v Int’l Trade Comm’n*, 646 F 3d 1357, 1370 (Fed Cir 2011)).

¹⁰ See Ian Barker, ‘The global supply chain behind the iPhone 6’, *betanews* (23 Sept 2014), <http://tinyurl.com/jrsxpxq>.

sell complex products like the iPhone, reviewing hundreds of thousands of patents for each and every product would impose an enormous administrative burden on those companies and increase the cost of doing business with international entities. Thus, US consumers would eventually have to pay higher prices for technological and pharmaceutical products that utilise imported patented components, which may ultimately de-incentivise US companies from doing business overseas.

SUMMARY

As it has in the past two terms, SCOTUS has a chance to dramatically alter patent law, affecting parties both within the US and internationally. Whatever the outcome may be, it will have important implications for US patent rights and technology companies. Patent holders and consumers should keep a sharp lookout for this decision, which will likely come out in the late spring or early summer of 2017.

Federal Circuit Holds a Business Method Claim Directed to a GUI to be Patent-Eligible – Will the PTO Agree?

Christian B.E. Hines



Christian B.E. Hines

It’s no secret the Federal Circuit and the United States Patent and Trademark Office (“PTO”) have been inconsistent when it comes to determining the patent eligibility of claims directed to software, leaving patent practitioners guessing as to whether their software-based inventions are patentable. As it

stands today, some district court judges and Federal Circuit panels have been very willing to find software-related inventions patent ineligible. Recently, in the *Trading Techs. Int’l, Inc. v. CQG, Inc.* (“CQG”) decision, the Federal Circuit dealt, yet again, with the question of whether software claims were patent-eligible.

In *CQG*, the CQG companies appealed the decision of the United States District Court for the Northern District of Illinois, which held the asserted claims of U.S. Patents No. 6,772,132 (’132 patent) and No. 6,766,304 (’304 patent) recited patent-eligible subject

matter under 35 U.S.C. § 101. The dispute originally arose when patent owner Trading Technologies International, Inc. (“TT”) asserted the ’132 and ’304 patents against CQG. CQG moved for a judgment as a matter of law, asserting the claims of the patents were directed to patent-ineligible subject matter. Denying CQGs motion, the district court held that the claims were not directed to an abstract idea, and also that the claims recited an inventive concept that was patent-eligible under § 101. See *Trading Techs. Int’l, Inc. v. CQG, Inc.*, No. 05-cv-4811, 2015, WL 774655 (N.D. Ill. Feb. 24, 2015)(“Dist. Ct. op.”).

The ’132 and ’304 patents claim methods and systems for the electronic trading of stocks, bonds, futures, options and similar products. *CQG* at 3. The patents are directed to solving problems that arise when a trader attempts to enter an order at a particular price but misses that price due to market movement before the order is entered and executed, as well as when trades are executed at different prices than intended due to rapid market movement. *Id.*

Accordingly, the ’132 and ’304 patents describe a trading system in which a graphical user interface displays the market depth of a commodity traded in a market, including a dynamic display for bids and asks in the market for the commodity, and a static display of prices corresponding to the bids and asks. See ’132 patent col. 3, ll. 11-16; ’304 patent col. 3, ll. 15-20.

The Federal Circuit considered claim 1 of the ’304 patent as illustrative to the invention. In the patented method of claim 13, bid and ask prices are displayed dynamically along the static display, and the method includes displaying paired orders with the static display of prices. See ’304 patent, claim 1.

Applying the two part test set forth in *Alice*, the Federal Circuit confirmed the district court. The district court found that these two patents improve upon existing graphical user interfaces that have no “pre-electronic trading analog,” and “recite more than ‘setting, displaying, and selecting’ data or information that is visible on the [graphical user interface] device.” Dist. Ct. op at *4.

Finding the claims were patent eligible under *Alice* Step 1, the district court determined that these patents solve problems with prior graphical user interface

devices in the computerized trading area, specifically improving speed, accuracy and usability. The district court explained the patents do not merely claim displaying information on a graphical user interface, but rather require a specific, structured graphical user interface paired with a prescribed functionality in order to address and resolve a specifically identified problem. *Id.*

The Federal Circuit agreed with the district court's step 1 analysis, but added further that the graphical user interface does not represent a long known idea, which is a threshold criterion of abstract idea ineligibility.

After having found the claims of the '132 and '304 patents patent eligible under *Alice* Step 1, the district court continued the analysis under *Alice* Step 2, agreeing with the district court determination that the recited claims recite an inventive concept. Dist. Ct. op at *8. Specifically, the district court identified the static price index as an inventive concept that allows traders to more accurately and efficiently place trades. *Id.* Further, the district court concluded that the specific structure and associated functionality of the graphical user interface removed the claims from being abstract ideas.

Finally, the Federal Circuit found "the district court's rulings [to be] in accord with precedent", juxtaposing precedent favorable and precedent non favorable to CQG. CQG at 7-9.

This case solidifies the line drawn by *DDR Holdings* that claims "necessarily rooted in computer technology" will be deemed patent-eligible. This is so even if the underlying business, like that of TT, is rooted in an area that might otherwise be deemed a covered business method. In fact, the PTO seems to agree that the '304 patent is just that, and has granted institution of CBM review on these patents. See, e.g., CBM2015-00161.

CQG is an interesting opinion for multiple reasons. First, given the non-precedential nature of this opinion, it's possible that the Federal Circuit thought it of no consequence with respect to the current body of law surrounding *Alice*. If that is true, it brings into question whether the precedential cases relied on by CQG provide sufficient guidelines. Another possibility is whether the Federal Circuit was simply concerned with

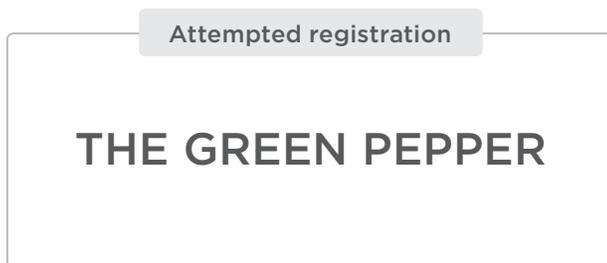
the conflict that might arise if it issued a precedential opinion that reached a conclusion opposite that of the PTO. Presumably, the Federal Circuit was aware of the PTO's decisions to institute trial over the '304 patent at the time of drafting—perhaps then the Federal Circuit wanted to send an advisory message to the PTO, which inherently found no technological invention given the CBM institution. Indeed, the Federal Circuit recently admonished the PTO for using an inappropriate definition of what constitutes a CBM patent. See, e.g., *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995 (Fed. Cir. 2016).

Regardless of the motivations of the Federal Circuit, it will be interesting to see whether the PTO continues its CBM review of these patents and, if so, how these two decisions will be rectified. While CQG is only a non-precedential opinion, practitioners will be watching and hoping for more guidance from both the PTO and the Federal Circuit as to subject-matter eligibility of software—especially in more business-method oriented technology. Reconciliation between these two decisions would be a good start.

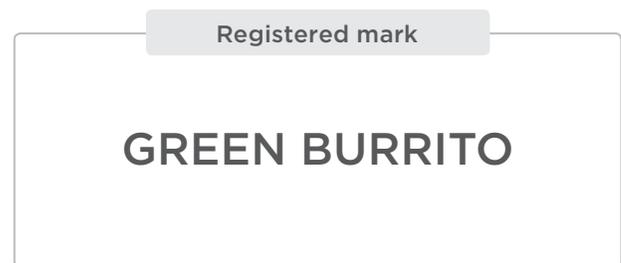
IP QUIZ

Trademark Trivia

Is there a likelihood of confusion?



For restaurant services



For restaurant services (BURRITO disclaimed)

According to the U.S. Trademark Trial and Appeal Board, the answer is YES.

The Board sustained an opposition brought by the owner of four registrations for the mark GREEN BURRITO, each containing a disclaimer of “BURRITO” and covering “restaurant services.”

Based on the testimony presented at trial and the opposer’s final brief, the Board deemed the term GREEN to be the dominant feature of both marks based in part on its positioning at the front portion of each. Further, it held that the term BURRITO is, at best, suggestive of the opposer’s services, and in the applied-for mark, GREEN modifies PEPPER and denotes a green pepper, which is common in Mexican cuisine. Despite the differences in sound, the Board held that the similarities between the marks weighed in favor of a likelihood of confusion.

Interestingly, the Board declined to acknowledge the dozens of registrations for marks consisting of GREEN followed by a noun, for restaurant services, despite having relied on evidence of third party use in denying the opposer’s Motion for Summary

Judgment. Evidence of third-party use of similar marks is typically a strong indicator that each mark is afforded a narrow scope of protection and small differences, such as the visual and aural differences between the terms BURRITO and PEPPER, are sufficient to distinguish two marks.

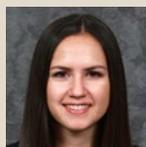
One explanation for the TTAB’s finding of likelihood of confusion lies in the applicant’s failure to submit any trial testimony or a final brief and possibly its failure to assert the third-party registrations (as opposed to third-party use). It is likely that a successful defense could have been lodged as to why the two marks can, in fact, coexist, particularly in light of the Board’s decision on summary judgment.

Carl’s Jr. Restaurants LLC v. AKM Food Svcs. LLC, Opposition No. 91204459 (March 2, 2017) [not precedential].

If you have any questions, please visit the Haynes and Boone [Intellectual Property Law](#) page of our website.



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