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## Making Sense Of CLS Bank In View Of Prometheus, Alappat

Law360, New York (January 21, 2014, 6:54 PM ET) -- Nineteen years ago, in *In re Alappat*,<sup>[1]</sup> the Federal Circuit held that a mathematical transformation of data to be performed by a general purpose computer was patent-eligible under 35 U.S.C. § 101, reasoning that a computer is a machine and machines are patent eligible. Buried deep within Alappat was a dissent by Chief Judge Glenn Archer<sup>[2]</sup> containing reasoning virtually identical to that in *Mayo v. Prometheus*<sup>[3]</sup> decided by the U.S. Supreme Court almost two decades later.

On March 31, 2014, the Supreme Court will again hear argument on patent eligibility, deciding the question presented in *Alice Corp. v. CLS Bank*,<sup>[4]</sup> of whether claims to computer-implemented inventions are directed to patent-eligible subject matter within the meaning of § 101. Although the Federal Circuit did not discuss Chief Judge Archer's Alappat dissent in *CLS Bank v. Alice Corp.*,<sup>[5]</sup> its fractured, divisive set of opinions extensively invoked Alappat, implicitly putting the dissent back in play.

Throughout the history of § 101, bright-line rules have been created, only to be modified, and then discarded (some may remember the doomed patchwork of the "Freeman-Walters-Abele" test). Yet, the bedrock principle that new ideas and natural products are not themselves the subject of patent law has never been abandoned. That fundamental principle is not unique to patent law: Copyright law, authorized by the same constitutional clause, protects only "expression" of ideas and not ideas themselves. This principle is so important that the Supreme Court has even held that states are preempted from enacting laws that would allow for the protection of ideas. A corollary principle also can be seen: patent eligibility is about more than just whether a claim mentions structure.

We discuss these principles and their practical application to the issue of patent eligibility. As we will also discuss, Chief Judge Archer explored these principles more deeply in Alappat, providing fascinating illumination to the current debate on this subject.

### CLS Bank v. Alice

The patents in *CLS Bank* are directed to a trading platform for minimizing risk in financial transactions by using a "trusted third party" to settle obligations between two other parties. In other words, two parties agree to a trade in the future, but, before one party receives payment, a third party makes sure the other party will also receive payment. The patents claim a method, a computer-readable medium, and a system for managing financial risk this way.

In a per curiam en banc ruling, the Federal Circuit found the claims were not patent eligible under § 101. The reasoning supporting that outcome is fractured in 135 pages comprising six different opinions. While no one garnered a majority, Judge Alan Lourie's opinion was joined by four judges. Three judges joined Chief Judge Randall Rader, setting

the stage for the main battle lines.

Judge Lourie, relying heavily on Prometheus, set forth an “integrated approach” to § 101 that consisted of identifying the core abstract idea of the claims at issue and then determining if the claims contained sufficient substantive limitations to prevent the patentee from covering the full scope of the abstract idea itself.

In contrast, Chief Judge Rader argued that such a dissection of claims was not what Congress intended for § 101 and would incorrectly expand patent ineligibility. Focusing on preemption of abstract ideas, Chief Judge Rader argued instead that claims should be considered “as a whole” under § 101. Furthermore, Chief Judge Rader’s opinion seemed less willing to accept that there is no bright-line rule for patent eligibility. Ultimately, Judge Lourie’s approach resulted in the ineligibility of all the claims, while Chief Judge Rader found that the method claims were not eligible, but the system claims were.

The stark contrast between these decisions is, in part, based on a fundamental disagreement on the application of the majority holding in Alappat, under which a patent for manipulating data to be output on a computer display was eligible subject matter under § 101. Chief Judge Archer’s dissent in Alappat argued that patent eligibility asked more basic questions about what invention the applicant was seeking a patent for, in light of the disclosure of the patent itself. The opinion is very similar to Prometheus.[6]

## **The Two Philosophies Underlying Section 101 Decisions**

Section 101 permits patents for the “invention or discovery” of “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof,” subject further to the conditions and requirements of all the patent laws. Over 200 years of United States jurisprudence holds that the invention or discovery in these categories must reside in the applications of ideas and principles, rather than the discovery of “laws of nature, natural phenomena, and abstract ideas” themselves.[7]

Section 101 seems to arise more recently (i.e., relative to the start of patent law) in computer-related and biotechnology contexts because, in these areas, we see information itself equated at times with structural limitations. The Section 101 issues tend to become significant in two related situations: (1) the invention resides in the discovery of a law of nature (e.g., a protein’s creation in the body) or idea (e.g., a set of mathematical or business operations) and that is what is claimed, or (2) the invention includes the discovery of an application of a newly discovered law of nature or idea and the patentee seeks broad exclusivity by claiming as close as possible to the law or idea itself.

Two philosophies can drive the denial of patent eligibility in these situations. The first is the principle that patents should not monopolize fundamental research, which would thereby preempt others from making useful discoveries within the broadly claimed field. This problem is often responded to by focusing on some form of structural limitation in the claim, coupled with reasoning about whether the claims thereby wholly preempt the idea itself. This discussion does not necessarily care deeply about the substance of that limitation.

The second, at times murkier, philosophy is that patents should not be awarded where the invention in fact resides in the discovery of a new natural law or abstract idea without substantial application of that law or idea. This philosophy runs throughout Supreme Court precedent, and is not necessarily satisfied merely by the fortuity of structural limitations appearing in the claims. For example, if the mere existence of structure was dispositive, Prometheus, Parker v. Flook[8] and Gottschalk v. Benson[9] would have come out the other way, and Diamond v. Diehr[10] would have been a much shorter opinion. This philosophy is also why Judge Lourie’s opinion could find all claims ineligible, even if they mentioned structure.

In *Alappat*, Chief Judge Archer explains this second principle of patent eligibility with an analogy to the discovery of a new song. All would agree that music is not the stuff of patent law. But what if the abstract idea of music were to be claimed in the form of a "compact disc," with the claim defining the structure by referring generally to an arrangement of pits in the plastic material in a manner so as to encode the song (including the musical composition itself in the claim). What if that mention of structure was enough for the claim to pass through the § 101 gate? Novelty would not invalidate the claim because the plastic structure as claimed did not previously exist in that form (due to the novel arrangement of pits). Further, patent law is not capable of judging music to be obvious or not.

Since the U.S. Patent and Trademark Office and accused infringers must substantiate claims of obviousness, the result could be the approval of a patent for the discovery of a new song. And should patent law evolve to have judges deciding obviousness *vel non* of music anyway? This may be a very specific hypothetical, but it is a good thought exercise for broader issues that arise if ideas are made eligible for patent protection depending simply on whether or not a claim happens to recite structure.

Chief Judge Archer explained that basic principles of patent law and Supreme Court precedent demand that protection be awarded for the applications of ideas and laws, rather than the ideas or laws themselves, and that courts look more deeply at the patent disclosure beyond simply asking if the claim happens to mention structure.

The existence of this fundamental principle should not be missed by parties facing these issues in litigation. Not only has the Supreme Court reaffirmed it repeatedly in patent cases, but the court has also held that it is so important that a state is prohibited from filling in the gap by allowing protection of ideas. In *Bonito Boats v. Thunder Craft*,<sup>[11]</sup> for example, the Supreme Court invalidated a state law extending protection to ideas, finding that it "conflicts with the strong federal policy favoring free competition in ideas which do not merit patent protection."

To further illuminate thinking on this point, Chief Judge Archer quoted the insights of George Curtis, who observed in his seminal treatise 140 years ago that inventions can be thought of as arrangements of "particles" (in more modern terms, structures, materials, etc.), which by their arrangement invoke the operations of natural laws and forces, achieving useful effects. Without necessarily identifying them as such, we frequently can see courts discussing these elements (arrangement of structure, natural laws and forces invoked by that arrangement, and results achieved) in speaking about issues of patent eligibility.<sup>[12]</sup>

## **CLS Bank, Prometheus and Alappat**

Pursuant to *Prometheus* and Chief Judge Archer's dissent in *Alappat*, a court first asks: What does the patent claim (and specification show) the invention is for? The patent record is basically taken at face value in this process. In *Prometheus*, the court first focused on determining the underlying abstract idea or natural law encompassed in the claims. In *CLS Bank*, the abstract idea underlying the claims was reducing risk in financial transactions between two entities by trading through a trusted third-party intermediary.

Next, per *Prometheus*, the court determines whether the claims do "significantly more" than simply describe these natural laws or abstract ideas and instruct the relevant group to "apply it." This effectively requires a limited dissection of the claim language to ensure that limitations are substantive and not merely routine, trivial or insignificant post-solution activity. In *Alappat*, Chief Judge Archer advocated for a similar step because, if the court "look[ed] only to whether the claim reads on structure and ignor[ed] the claimed invention, [it would] result in the awarding of patents for discoveries well beyond the

scope of the patent law.”[13]

A limited dissection of the method claims in CLS Bank finds the limitations beyond the abstract idea to be that a computer is required to create, adjust, and maintain “shadow records,” and then settle these records at the end of each day.

Judge Lourie viewed these as insignificant post-solution activity and the necessary functions required of the financial intermediary in an escrow agreement.[14] The system claims in CLS Bank required a computerized system configuration to carry out a series of steps identical to the method claims, reciting several generic, functional terms that Judge Lourie found would read on any device capable of performing the listed calculations. Similar to the “administration step” in Prometheus, Judge Lourie found that these system claims stated the abstract idea and then simply instructed that it be applied.

Chief Judge Rader’s concurrence likewise found the method claims in CLS Bank ineligible. But, Chief Judge Rader opined that the claims became eligible when the abstract idea was coupled with the recitations of the structural limitations of a computer, a data storage unit, and a communications controller coupled via machine components. The existence of structure was therefore sufficient. This type of analysis echoes the majority decision in Alappat.

Finally, per Prometheus, the court should consider the claim at issue as a whole to determine if the limitations add anything to the abstract ideas or laws of nature that were not already present when the claims were considered separately. Chief Judge Archer’s dissent in Alappat explained, similarly, that the Supreme Court in Diamond v. Diehr found patent eligibility because the invention as a whole involved a novel application of a natural law by creating a superior rubber product. By incorporating this final step in Prometheus, the Supreme Court was both following precedent and leaving the door open for new technology.

This last step is where we see a significant divergence between Judge Lourie and Chief Judge Rader’s opinions. In Chief Judge Rader’s opinion, the existence of a computer performing algorithms was itself a sufficient application. The consequences of this reasoning, however, raise perhaps the most complicated issue the Supreme Court will face: Is it within the fundamental bounds of patent law to allow inventions for mathematical algorithms or methods of doing business if an applicant does nothing more than say those algorithms or business methods are being performed by a computer?

It will be interesting to see if the Supreme Court can answer that question affirmatively in light of Prometheus -- and whether anyone begins to notice Chief Judge Archer’s Alappat dissent.

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[1] 33 F.3d 1526 (Fed. Cir. 1994) (en banc).

[2] Id. at 1551–69.

[3] 132 S.Ct. 1289 (2012).

[4] No. 13-298 (U.S. Dec. 6, 2013).

[5] 717 F.3d 1269 (Fed. Cir. 2013).

[6] See Bruce Wexler, Prometheus — a new dawn for biotech patents, *Intellectual Property Magazine* 66 (Oct. 2012).

[7] See Prometheus, 132 S. Ct. at 1292; see also Alappat, 33 F.3d at 1551-52.

[8] 437 US 584 (1978).

[9] 409 US 63 (1972).

[10] 450 U.S. 175 (1981).

[11] 489 U.S. 141, 167 (1989).

[12] These elements also bear striking resemblance to how inventions are viewed in an analysis of the doctrine of equivalents, which looks at the “way,” “function,” and “result” (respectively) of a claimed invention. We leave that topic for another day.

[13] 33 F. 3d at 1554.

[14] Chief Judge Rader’s opinion confirmed this analysis, stating “[v]iewed individually, the recited elements only recite the steps inherent in that concept (stated at a high level of generality) and implement those steps according to methods long used in escrows according to the record in this case.” CLS Bank, 717 F.3d at 1312.

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