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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JACOB S. SAGI and ROBERT E. WHALEY

Appeal 2016-004573
Application 13/944,054[1]
Technology Center 3600

Before, JOSEPH A. FISCHETTI, KENNETH G, SCHOPFER, and ALYSSA A. FINAMORE, *Administrative Patent Judges*.

FISCHETTI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the Examiner's Final Rejection of claims 1, 3–8, and 10–18. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We AFFIRM.

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[1] Appellants identify Nasdaq, Inc. as the real party in interest. Appeal Br. 3.

THE INVENTION

Appellants claim financial indexes which are used to track the performance of financial instruments. (Spec. 1).

Claim 1 reproduced below, is representative of the subject matter on appeal.

> 1. A computer-implemented method, comprising:
>
> at a computing device that includes a processor, a data storage device, and an input/output (I/O) interface, wherein the computing device is configured to perform data processing operations related to a relative performance index, wherein the relative performance index is based on prices of a publically traded security and a publically traded benchmark security that is different from the publically traded security, the computing device performing actions that include:
>
> receiving, at the I/O interface and via a data communication network, data message information that indicates:
>
> a current price for the security;
>
> a previous price for the security;
>
> a previous price of the benchmark security; and
>
> a current price of the benchmark security;
>
> determining, at the processor, a value for the relative performance index, wherein the determining the value for the relative performance index includes:
>
> multiplying a previous relative performance index value by two ratios that include a first ratio and a second ratio, wherein:
>
> the first ratio is related to the current price for the security divided by the previous price for the security; and
>
> the second ratio is related to the

> previous price of the benchmark security divided by the current price of the benchmark security; and
>
> recording, in the data storage device, receipt of margin for one or more positions in a derivative instrument that derives its value from the relative performance index.

The following rejection is before us for review.

Claims 1, 3–8, and 10–18 are rejected are rejected under 35 U.S.C. § 101.

ANALYSIS

35 U.S.C. § 101 REJECTION

We will sustain the rejection of claims 1, 3–8, and 10–18 under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Representative independent claim 1 recites in pertinent part, a relative performance index which is:

based on prices of a publically traded security and a publically traded benchmark security that is different from the publically traded security, the computing device performing actions that include:

receiving, at the I/O interface and via a data communication network, data message information that indicates:

a current price for the security;

a previous price for the security;

a previous price of the benchmark security; and

a current price of the benchmark security;

determining, at the processor, a value for the relative performance index, wherein the determining the value for the relative performance index includes:

multiplying a previous relative performance index value by two ratios that include a first ratio and a second ratio, wherein:

the first ratio is related to the current price for the security divided by the previous price for the security; and

the second ratio is related to the previous price of the benchmark security divided by the current price of the benchmark security; and

recording, in the data storage device, receipt of margin for one or more positions in a derivative instrument that derives its value from the relative performance index.

Appeal Br. 23–24.

The Supreme Court

> set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, . . . determine whether the claims at issue are directed to one of those patent-ineligible concepts. If so, we then ask, "[w]hat else is there in the claims before us?" To answer that question, . . . consider the elements of each claim both individually and "as an ordered combination" to determine whether the

> additional elements "transform the nature of the claim" into a patent-eligible application. [The Court] described step two of this analysis as a search for an "'inventive concept'"—*i.e.*, an element or combination of elements that is "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself."

Alice Corp. Pty. Ltd. v CLS Bank Int'l, 134 S. Ct. 2347, 2355 (2014) (citations omitted) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)).

To perform this test, we must first determine whether the claims at issue are directed to a patent-ineligible concept.

Although the Court in *Alice* made a direct finding as to what the claims were directed to, we find that this case's claims themselves and the Specification provide enough information to inform one as to what they are directed to.

The steps in claim 1 result in the receipt of margin for one or more positions in a derivative instrument that derives its value from the relative performance index. The Specification also states:

> Index futures contracts and index options provide other approaches for investors to invest, trade, or hedge based on the performance of an index. An index futures contract is a futures contract on a financial index such as the S&P 500 index, whereas index options are instruments that give the holder the right to receive cash settlements based on changes in the underlying index on which the option is based. A call index option would

> ordinarily give a payout if the index rises above its strike price, whereas a put index option would give a payout if the index falls, below its strike price.

Specification 1:22–29. And, the Specification states:

> While various financial instruments are known, generally none of such exchange traded instruments provide an investor with direct exposure to a comparative performance of one security to another, different security.
>
> Described are a family of indexes along with derivative instruments, e.g., exchange-traded options and futures instruments whose underlying payoffs are based on valuations of algorithmically determined relative performance indexes. Each such novel index is constructed to track comparative performance of a traded financial instrument, such as a security vs. that of a second financial instrument, i.e., a benchmark (reference security). The derivative products provide a return, based on the level of the constructed index. In general, any traded security can be used with any benchmark security. The indexes are algorithmically constructed indexes and are referred to herein as "algorithmically constructed relative performance indexes" or (ACRP) indexes.

Specification 2:2–13. The Specification further states:

> An ACRP Index, together with derivative products whether exchange-traded futures and options contracts, allows investors to take precise hedging or speculation positions on a specific stock relative to a specific benchmark security. Stock portfolio indexes such as the S&P 500 Index, NASDAQ 100 and so forth can be used as

> well as options/futures on such indexes; leveraged and reverse leveraged ETFs and options/futures on such products also can be used as the benchmark security.

Specification 17:4–9. We find that this evidence shows that claim 1 is directed to calculating margin for one or more positions in a derivative instrument that derives its value from a relative performance index. It follows from prior Supreme Court cases, and *Gottschalk v. Benson*, 409 U.S. 63 (1972) in particular, that the claims at issue here are directed to an abstract idea. Determining margin for one or more positions in a derivative instrument that derives its value from a relative performance index is a fundamental economic practice because the relative performance index ACRP, used in determining the margin, is described as a direct hedge. (*See* Specification 8:25–28). Hedging is a long standing practice in the financial world to cover risk. The patent-ineligible end of the 35 U.S.C. § 101 spectrum includes fundamental economic practices. *See Alice Corp. Pty. Ltd.*, 134 S. Ct. at 2355–57.

Additionally, the claim computes the value for the relative performance index, and thus is a mathematical algorithm which is also patent-ineligible. The claim recites this computation as:

> *multiplying a previous relative performance index value by two ratios that include a first ratio and a second ratio, wherein:*
>
> *the first ratio is related to the current price for the security divided by the previous price for the security; and*

> *the second ratio is related to the previous price of the benchmark security divided by the current price of the benchmark security.*

We treat "analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category." *Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016). Thus, determining margin for one or more positions in a derivative instrument that derives its value from a relative performance index is an "abstract idea" beyond the scope of § 101.

As in *Alice Corp. Pty. Ltd.*, we need not labor to delimit the precise contours of the "abstract ideas" category in this case. It is enough to recognize that there is no meaningful distinction in the level of abstraction between the concept of an intermediated settlement in *Alice* and determining margin for one or more positions in a derivative instrument that derives its value from a relative performance index, at issue here. Both are squarely within the realm of "abstract ideas" as the Court has used that term. That the claims do not preempt all forms of the abstraction, or may be limited to security transactions, does not make them any less abstract. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1360–61 (Fed. Cir. 2015).

The introduction of a computer into the claims does not alter the analysis at *Mayo* step two.

> [T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea "while adding the words 'apply it'" is

> not enough for patent eligibility. Nor is limiting the use of an abstract idea "'to a particular technological environment.'" Stating an abstract idea while adding the words "apply it with a computer" simply combines those two steps, with the same deficient result. Thus, if a patent's recitation of a computer amounts to a mere instruction to "implemen[t]" an abstract idea "on ... a computer," that addition cannot impart patent eligibility. This conclusion accords with the preemption concern that undergirds our § 101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of "additional featur[e]" that provides any "practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself."

Alice Corp. Pty. Ltd., 134 S. Ct. at 2358 (alterations in original) (citations omitted).

"[T]he relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea . . . on a generic computer." *Alice Corp. Pty. Ltd.*, 134 S. Ct. at 2359. They do not.

Taking the claim elements separately, the function performed by the computer at each step of the process is purely conventional. Using a computer to take in data, compute a result, and return the result to a user amounts to electronic data query and retrieval—some of the most basic functions of a computer. All of these computer functions are well-understood, routine, conventional activities previously known to the industry. In short, each step does no more than require a generic computer to perform generic computer functions.

Considered as an ordered combination, the computer components of Appellants' method add nothing that is not already present when the steps are considered separately. Viewed as a whole, Appellants' claims simply recite determining margin for one or more positions in a derivative instrument that derives its value from a relative performance index. The claims do not, for example, purport to improve the functioning of the computer itself. Nor do they effect an improvement in any other technology or technical field. Instead, the claims at issue amount to nothing significantly more than instructions to determine margin for one or more positions in a derivative instrument that derives its value from a relative performance index. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice Corp. Pty. Ltd.*, 134 S. Ct. at 2360.

As to the structural claims, they

> are no different from the method claims in substance. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea. This Court has long "warn[ed] ... against" interpreting § 101 "in ways that make patent eligibility 'depend simply on the draftsman's art.'"

Alice Corp. Pty. Ltd., 134 S. Ct. at 2360 (alterations in original).

With this understanding we turn to Appellants' arguments wherein Appellants argue,

> The ACRP Index, together with derivative, allows investors to take precise hedging or speculation

> positions on a specific stock relative to a specific benchmark security that could simply not otherwise be accomplished using other approaches. This technology provides tangible, real world benefits that cannot be accomplished using "paper and pencil" in any way that would be helpful to an investor operating in the complex world of electronic trading dominated by extremely fast and extremely complex electronic data processing and communications technology.

(Appeal Br. 17).

We disagree with Appellants because the issue is not whether the claimed invention provides a real world benefit, but rather whether the claims purport to improve computer functioning or "effect an improvement in any other technology or technical field." *Alice Corp. Pty. Ltd.*, 134 S. Ct. at 2359. The improvement here we find is in the calculation of an index which is an abstraction—a fundamental business practice and an algorithm. The claims do not claim a particular way of programming or designing the software to create the index, but instead merely claim the resulting process. *See McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) ("whether the claims in these patents focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery").

We are also not persuaded by Appellants' argument that,

> [t]his technology provides tangible, real world benefits that cannot be accomplished using "paper

> and pencil" in any way that would be helpful to an investor operating in the complex world of electronic trading dominated by extremely fast and extremely complex electronic data processing and communications technology

(Appeal Br. 17) because "the fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter." *FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089, 1098 (Fed. Cir. 2016) (citing *Bancorp Servs. L.L.C. v. Sun Life Assurance Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012)).

We further are not persuaded by Appellants' argument that, "[r]eceiving very specifically-defined information in data messages via an I/O interface and a data communications network is not abstract or an idea" (Appeal Br. 12) because first, the claim does not require data messages, but rather "data message information," which is broader than a data message. Second, even if the claim did recite data messages, the claims as a whole do not "focus on a specific means or method that improves the relevant technology," but rather are "directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *See McRO, Inc.* 837 F.3d at 1314.

We are further not persuaded by Appellants' argument that the claims presently on appeal are analogous to those in *Trading Technologies Int'l, Inc. v. CQG, Inc.* (Appeal Br. 20–21) because as the district court found, the claims in *Trading Technologies* were directed to solving a problem that

existed with prior art devices, namely, GUIs. *See Trading Techs. Int'l, Inc. v. CQG, Inc.*, No. 05-cv-4811, 2015 WL 774655 *4 (N.D. Ill. Feb. 24, 2015). No such problem has been identified here, and we are not persuaded that the claims are not directed to an abstract idea.

Appellants' remaining arguments have been addressed in our opening analysis above.

CONCLUSIONS OF LAW

We conclude the Examiner did not err in rejecting claims 1, 3–8, and 10–18 under 35 U.S.C. § 101.

DECISION

The decision of the Examiner to reject claims 1, 3–8, and 10–18 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED