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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GARY L. GASTINEAU

Appeal 2017-008080
Application 13/665,547¹
Technology Center 4100

Before JASON V. MORGAN, NABEEL U. KHAN, and
MICHAEL J. ENGLE, *Administrative Patent Judges*.

ENGLE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from a final rejection of claims 1–54. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Technology

The application relates to “trading securities futures products on financial instruments for which a net asset value or other specified value such as a closing price is periodically calculated.” Spec. ¶ 2.

¹ According to Appellant, the real party in interest is Eaton Vance Management. App. Br. 1.

Illustrative Claim

Claim 1 is illustrative and reproduced below with certain recitations at issue emphasized:

1. A computer-based method for trading *an exchange-listed securities futures product (SFP) on an underlying financial instrument for which a net asset value (NAV) can be calculated at or after a specified time*, said SFP in the form of a security futures on said underlying, wherein said underlying is at least one of an exchange-traded fund, an ETF, an option, an option's underlying, and a structured product, such trading conducted on a secondary market on or away from an exchange, the method comprising:

executing a trade of *said SFP* on the secondary market;

determining a price of said executed trade, wherein

said determined price is from a set of prices that are specified relative to (i) *said NAV* or (ii) said NAV with a specified basis adjustment,

said set of prices comprising

(a) a first price that is at a specified discount to either (i) said NAV or (ii) said NAV with a specified basis adjustment;

(b) a second price that is either (i) at said NAV or (ii) at said NAV with a specified basis adjustment; and

(c) a third price that is either (i) at a specified premium to said NAV or (ii) at a specified premium to said NAV with a specified basis adjustment; and

submitting said executed trade for settlement at said determined price;

wherein said executing, determining, and submitting are performed by one or more processors.

Appealed Rejections

Claims 1–54 stand rejected under 35 U.S.C. § 101 as being directed to ineligible subject matter. Final Act. 11.

Claims 1–10, 12–16, 18–28, 30–34, 36–46, 48–52, and 54 stand rejected under 35 U.S.C. § 103(a) as obvious over the combination of Madhavan (US 7,533,048 B2; May 12, 2009) and Horan (US 2003/0225662 A1; Dec. 4, 2003). Final Act. 12.

Claims 17, 35, and 53 stand rejected under 35 U.S.C. § 103(a) as obvious over the combination of Madhavan, Horan, and Wilce (US 7,231,362 B2; June 12, 2007). Final Act. 19.²

ISSUES

1. Did the Examiner err in concluding that claim 1 was directed to an abstract idea without significantly more under § 101?
2. Did the Examiner err in finding the combination of Madhavan and Horan teaches or suggests the limitations of claim 1?

ANALYSIS

§ 101

Section 101 defines patentable subject matter, but the Supreme Court has “long held that this provision contains an important implicit exception” that “[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (quotation omitted). “Eligibility under 35 U.S.C. § 101 is a

² The Examiner also rejected claims 1–54 for double patenting. Final Act. 9–10. Although Appellant’s initial terminal disclaimers “were disapproved” (Ans. 4), Appellant subsequently filed new terminal disclaimers on August 24, 2017, which were approved on August 25, 2017.

question of law, based on underlying facts.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018). To determine patentable subject matter, the Supreme Court has set forth a two part test.

“First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts” of “laws of nature, natural phenomena, and abstract ideas.” *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014). “The inquiry often is whether the claims are directed to ‘a specific means or method’ for improving technology or whether they are simply directed to an abstract end-result.” *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1326 (Fed. Cir. 2017). A court must be cognizant that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas” (*Mayo*, 566 U.S. at 71), and “describing the claims at . . . a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016). Therefore, we consider claims “in their entirety to ascertain whether their character as a whole is directed to excluded subject matter.” *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015). “If the claims are not directed to an abstract idea [or other patent-ineligible concept], the inquiry ends. If the claims are ‘directed to’ an abstract idea, then the inquiry proceeds to the second step of the *Alice* framework.” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016).

In the second step, we “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.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 79, 78). The Supreme Court has “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.” *Id.* (quotation omitted).

Here, the Examiner determines:

The claims are directed towards the abstract idea of a computer system that the abstract idea of trading an exchange listed securities futures product including the steps of executing a trade..., determining a price..., and submitting said executed trade..., which is a fundamental economic practice, as well as a method of organizing human activities. The claims are directed to a fundamental economic practice because they are describing concepts relating to economy and commerce. . . . The claims are directed towards a method of organizing human activity because they describe concepts relating to interpersonal and intrapersonal activities, as well as, the claims could be conducted by an individual by hand.

Ans. 4–5 (first three ellipses in original).

For both steps one and two, Appellant argues that “there is no pre-emption.” App. Br. 10, 23–24. We agree with the Examiner, however, that “questions on pre-emption are inherent in and resolved by the § 101 analysis” under the *Alice/Mayo* two-step framework. Ans. 6. “While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). “Where a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.” *Id.*

Appellant also argues “the claimed invention covers a novel approach for addressing longstanding problems in the mutual fund industry.” App. Br. 18. Similarly, Appellant argues that the claims cannot be directed to a “*fundamental* economic process” because “the purported ‘abstract idea’ . . . simply did not exist prior to Applicant’s invention” and therefore “cannot possibly be considered to constitute the foundation upon which economic practice has been built.” *Id.* at 12–13 (emphasis added). However, “under the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility.” *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016). As the Supreme Court has said, “[g]roundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry.” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2117 (2013).

The recent case of *SAP America* is instructive. In that case, the Federal Circuit said “[w]e may assume that the techniques claimed are groundbreaking, innovative, or even brilliant, but that is not enough for eligibility.” *SAP Am.*, 898 F.3d at 1163 (quotation omitted).

The claims here are ineligible because their innovation is an innovation in ineligible subject matter. Their subject is nothing but a series of mathematical calculations based on selected information and the presentation of the results of those calculations (in the plot of a probability distribution function). No matter how much of an advance in the finance field the claims recite, the advance lies entirely in the realm of abstract ideas, with no plausibly alleged innovation in the non-abstract application realm. An advance of that nature is ineligible for patenting.

SAP Am., 898 F.3d at 1163.

The Federal Circuit has reached a similar result in cases specifically involving pricing. For example, in *Versata*, the claims were “directed to the abstract idea of determining a price, using organizational and product group hierarchies, in the same way that the claims in *Alice* were directed to the abstract idea of intermediated settlement, and the claims in *Bilski* were directed to the abstract idea of risk hedging.” *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1333 (Fed. Cir. 2015). The Federal Circuit held that any improvement was to pricing, not technology: “Examination of the claims—as a whole and in terms of each claim’s limitations—reveals that the claims are not directed to improving computer performance and do not recite any such benefit. The claims are directed to price determination and merely use a computer to improve the performance of that determination—not the performance of a computer.” *Id.* at 1335. The Federal Circuit further held that any remaining elements were “well-understood, routine, conventional”: “For example, the limitations of claim 17 involve arranging a hierarchy of organizational and product groups, storing pricing information, retrieving applicable pricing information, sorting pricing information, eliminating less restrictive pricing information, and determining the price. All of these limitations are well-understood, routine, conventional activities previously known to the industry.” *Id.* at 1334.

Here, we agree with the Examiner that the claims are directed to “the abstract idea of trading an exchange listed securities futures product including the steps of executing a trade..., determining a price..., and submitting said executed trade...” Ans. 4 (ellipses in the original). More specifically, the price is determined relative to the net asset value (NAV) of the underlying asset of the securities futures product, whether at NAV or at a

specified discount or premium to NAV. *See* claim 1. The Specification readily concedes that securities futures products, executing a trade, determining a price, and settlement of a trade were all well-understood, routine, and conventional. *E.g.*, Spec. ¶¶ 21–22, 32–34. The alleged invention instead comes from pricing a securities futures product relative to NAV. Thus, as in *Versata*, any improvement is in pricing, not technology. And as in *Versata*, such pricing is an abstract idea. 793 F.3d at 1333–35.

For the second step of the *Alice/Mayo* framework, Appellant quotes or paraphrases much of claim 1 and argues that “[b]ecause these additional elements or functions may be viewed as the points of novelty relative to any analog or digital art, they must be beyond those recognized in the art or by the courts as being well-understood, routine or conventional.” App. Br. 20–22 (quotations omitted). We agree with the Examiner, however, that “[t]he limitations that appellant is referring to are limitations that are directed to the abstract idea,” not something *beyond* the abstract idea. Ans. 8. “It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.” *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018).

Although claim 1 recites “said executing, determining, and submitting are performed by one or more processors,” the case law is clear that “[a]n abstract idea . . . on a generic computer is still an abstract idea.” *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1348 (Fed. Cir. 2016); *see also* Ans. 5–6.

Accordingly, we sustain the Examiner’s rejection of claim 1, and claims 2–54, which Appellant does not substantively argue separately. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2016).

§ 103

The preamble of claim 1 recites:

A computer-based method for trading *an exchange-listed securities futures product (SFP)* on an underlying financial instrument for which a net asset value (NAV) can be calculated at or after a specified time, *said SFP* in the form of a security futures on said underlying, wherein said underlying is at least one of an exchange-traded fund, an ETF, an option, an option’s underlying, and a structured product, . . .

Claim 1 (emphases added). The body of the claim then recites “executing a trade of *said SFP*” and “determining a price of *said executed trade*, wherein said determined price is . . . relative to . . . said NAV.” *Id.* (emphases added). The other independent claims (19 and 37) recite commensurate recitations.

The Examiner finds:

Madhavan . . . discloses executing trades for mutual funds and other stocks and securities at prices that are based upon the NAV (net asset value) and closing prices from a previous day. The examiner is interpreting the mutual funds as a portfolio of assets. Using the broadest reasonable interpretation, ETFs[] are also merely a portfolio of assets.

Final Act. 7. The Examiner further finds:

Horan . . . discloses executing trades for futures or portfolios including futures on a secondary market. Securities Futures products are not defined in the claims; therefore the examiner is taking the broadest reasonable interpretation of the term securities futures products. Therefore, the futures of Horan read on the securities futures product of the claimed invention.

Final Act. 7. According to the Examiner, the preamble recitations related to the SFP have “not been given patentable weight because the recitation occurs in the preamble.” Ans. 10. The Examiner finds, nonetheless, that the cited prior art “would teach” the preamble’s SFP if it were entitled patentable weight. *See id.* at 11.

Appellant contends that Madhavan is limited to “conventional mutual funds,” not “exchange-listed” products. App. Br. 28. Appellant further argues that “the preamble language at issue is a definition of the claimed ‘securities future product’” that “provides the necessary antecedent basis for the SFP limitation” in the body of claim 1 and “is necessary to give life, meaning, and vitality to the claim.” *Id.* at 27 (quotation omitted). Because of this, Appellant argues that Horan “simply refers to conventional broad based security index futures” but “fails to disclose the specific type of SFP recited in the claims, namely, an SFP ‘on an underlying financial instrument for which a net asset value (NAV) can be calculated at or after a specified time’” and an “SFP in the form of a security futures on said underlying, wherein said underlying is at least one of an exchange-traded fund, an ETF, an option, an option’s underlying, and a structured product.” *Id.* at 32.

A “preamble may be limiting if: [A] it recites essential structure or steps; [B] claims depend on a particular disputed preamble phrase for antecedent basis; [or] [C] the preamble is essential to understand limitations or terms in the claim body.” *Georgetown Rail Equip. Co. v. Holland L.P.*, 867 F.3d 1229, 1236 (Fed. Cir. 2017) (quotation marks and brackets omitted). Here, we agree with Appellant that the antecedent basis for the claim body’s recitation of “said SFP” and “said NAV” is the preamble’s recitation of “an exchange-listed securities futures product (SFP) on an

underlying financial instrument for which a net asset value (NAV) can be calculated at or after a specified time.” Thus, at least this portion of the preamble is essential to understanding the claim body.

The Examiner is correct that Horan discloses trading futures. Ans. 12–13 (citing Horan ¶ 28). However, Appellant is correct that the Examiner fails to explain how Horan’s reference to “futures” teaches or suggests an SFP “on an underlying financial instrument for which a net asset value (NAV) can be calculated at or after a specified time.” App. Br. 32.

Accordingly, absent further findings from the Examiner, we are constrained to reverse the Examiner’s rejection of independent claims 1, 19, and 37, and their dependent claims 2–10, 12–18, 30–28, 30–36, 38–46, and 48–54.

DECISION

For the reasons above, we affirm the Examiner’s decision rejecting claims 1–54 under § 101. We reverse the Examiner’s decision rejecting claims 1–10, 12–28, 30–46, and 48–54 under § 103. Because we affirm at least one rejection of each claim, we affirm the Examiner’s decision rejecting claims 1–54.

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. § 41.50(f).

AFFIRMED