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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte STEPHEN BERNARD and VINCENT CIGNARELLA[1]

Appeal 2017-004926
Application 13/677,782
Technology Center 3600

Before BRADLEY W. BAUMEISTER, JASON V. MORGAN, and MICHAEL J. ENGLE, *Administrative Patent Judges*.

MORGAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Introduction

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–33. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Invention

The Specification discloses a method for creating a dollar index that includes multiplying determined weightings of dollar/foreign currency pairs

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[1] Appellant is the Applicant, Dow Jones & Company, Inc., identified in the Appeal Brief as the real party in interest. Appeal Br. 2.

with respective reported closing prices to generate coefficients to multiply with current pair prices. Abstract.

Representative Claim (*key limitations emphasized*)

1. A method for creating a dollar index based on global foreign exchange turnover, comprising:

selecting, from a survey on foreign exchange turnover, data for plural dollar/foreign currency pairs;

creating a subset of data from the daily total daily averages of each currency pair and determining the percentage weighting of each currency pair by the total value of the subset;

creat[*ing*] *a proportionally weighted dollar index by multiplying the determined weighting of each currency pair with a reported closing price of that currency pair to generate a coefficient for that currency pair*;

determining a subsequent current value of the index by multiplying each generated coefficient with a current price for a currency pair; and

periodically reweighting the dollar index responsive to a subsequent survey on foreign exchange turnover.

Rejections

The Examiner rejects claims 1–33 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 9–10.

The Examiner rejects claims 1–13 and 15–33 under 35 U.S.C. § 103(a) as being unpatentable over Carr et al. (US 2011/0119168 A1; published May 19, 2011) ("Carr"), Leven et al. (US 2012/0109846 A1; published May 3, 2012) ("Leven"), and Wardley et al. (US 7,958,033 B2; issued June 7, 2011) ("Wardley"). Final Act. 10–28.

The Examiner rejects claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Carr, Leven, Wardley, and Heyner et al. (US 2012/0317052 A1; published Dec. 13, 2012) ("Heyner"). Final Act. 28–29.

ADOPTION OF EXAMINER'S FINDINGS AND CONCLUSIONS

We agree with and adopt as our own the Examiner's findings of facts and conclusions as set forth in the Answer and in the Action from which this appeal was taken. We have considered Appellant's arguments, but do not find them persuasive of error. We provide the following explanation for emphasis.

35 U.S.C. § 101

Determinations and Contentions

The Examiner concludes that claim 1, which includes the creation of a dollar index based on global foreign exchange turnover, is directed to a fundamental economic practice that represents an abstract, patent-ineligible idea. *See* Final Act. 9–10. The Examiner further concludes that the additional elements of claim 1 do not make the claimed invention significantly more than the underlying abstract idea. *Id.* at 10.

Appellant contends the Examiner erred because claim 1 is directed to a tool that "uses specific methods to reach out to varying sources of information to create a dollar index based on foreign exchange turnover." Appeal Br. 8. Appellant argues "[b]y the nature of the software transformations of various sources of raw data to the . . . claimed tool, as well as according to the non-obvious nature of the claimed tool," claim 1 is directed to patent-eligible subject matter. *Id.* at 8–9. Appellant also argues "the Examiner does not even refer to separate individual claims, each of which add features." Reply Br. 2; *see also* Appeal Br. 8.

Analysis

To be statutorily patentable, the subject matter of an invention must be a "new and useful process, machine, manufacture, or composition of matter, or [a] new and useful improvement thereof." 35 U.S.C. § 101. There are implicit exceptions to the categories of patentable subject matter identified in § 101, including: (1) laws of nature; (2) natural phenomena; and (3) abstract ideas. *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). The Supreme Court has set forth a framework for distinguishing patents with claims directed to these implicit exceptions "from those that claim patent-eligible applications of those concepts." *Id.* (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012)). The evaluation follows a two-part analysis: (1) determine whether the claim is directed to a patent-ineligible concept, e.g., an abstract idea; and (2) if so, then determine whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to significantly more than the patent-ineligible concept itself. *See Alice*, 134 S. Ct. at 2355.

Step 1:

We agree with the Examiner that claim 1 is directed to a patent-ineligible abstract idea (creation of a dollar index based on global foreign exchange turnover). Final Act. 9–10. Specifically, claim 1 reasonably can be characterized as being directed to a fundamental economic practice, to a mathematical calculations in the field of dollar valuation, or to a combination thereof. *See* Spec. ¶ 8 (conventional "indexes attempt to measure the dollar's value . . . [but] do not truly measure the dollar's value based on current trading volume").

To that end, claim 1 is similar to the claims determined to be unpatentable in *Bilski v. Kappos*, 561 U.S. 593, 599 (2010) (the patent-ineligible claims explained how energy suppliers and consumers could hedge against demand risks through steps or mathematical formula). Furthermore, the Federal Circuit has held that if a method can be performed by human thought alone, or by a human using pen and paper, it is merely an abstract, patent-ineligible idea. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011). Mental processes—e.g., calculating and determining values, as recited in claim 1—remain unpatentable even when automated to reduce the burden on the user of what once could have been done with pen and paper. *Id.* at 1375 ("That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*," 409 U.S. 63 (1972)."). The method of claim 1 can be performed by human thought alone. Moreover, merely adding abstract mathematics to another abstract idea (e.g., dollar valuation) does not render the combination non-abstract. *See RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017), *cert. denied*, 138 S. Ct. 672 (2018).

Appellant argues the method of claim 1 "improve[s] computer/online functionality" in a non-abstract manner. Reply Br. 3 (citing *Enfish, LLC v. Microsoft Corp.*, 56 F. Supp. 3d 1167 (C.D. Cal. 2014), *aff'd in part, vacated in part, rev'd in part*, 822 F.3d 1327 (Fed. Cir. 2016)). However, unlike with patent-eligible claims focused "on an improvement to computer functionality itself" (*Enfish*, 822 F.3d at 1336), the plain focus of claim 1 is, at best, on an economic task "for which a computer is used in its ordinary capacity" (*id.*).

Appellant also argues the method of claim 1 "should not be considered abstract simply because [it] manipulate[s] data." Reply Br. 3 (citing *Recent Subject Matter Eligibility Decisions*, Memorandum (Nov. 2, 2016), available at https://www.uspto.gov/sites/default/files/documents/McRo-Bascom-Memo.pdf). Specifically, Appellant argues the invention of claim 1—through reliance "on particular data types, setting of weights, etc., along with further claim limitations"—is analogous to a patent-eligible "use of specific rules to set morph weights and transition parameters." Reply Br. 3–4 (citing *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)). However, we find nothing in claim 1 "specifically designed to achieve an improved technological result in conventional industry practice." *McRO*, 837 F.3d at 1316. "[M]ere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology." *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017).

For these reasons, we agree with the Examiner that claim 1 is directed to an abstract idea. Final Act. 9.

Step 2:

Appellant also argues "[b]y the nature of the software transformation of various sources of raw data [by] the . . . claimed tool, as well as according to the non-obvious nature of the claimed tool, the claims are patent eligible under 35 U.S.C. 101." Appeal Br. 8–9. However, we agree with the Examiner that claim 1 does not include additional recitations to make claim 1 "amount to significantly more than the abstract idea itself." Final Act. 9.

Recitations directed to a "wholly generic computer implementation" are generally not the sort of additional features that provide "any 'practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.'" *Alice*, 134 S. Ct. at 2358 (alteration in original (quoting *Mayo*, 566 U.S. at 77)). Despite Appellant's characterization of claim 1 as including a "software transformation" (Appeal Br. 8), claim 1 lacks even generic computer features. The method of claim 1 can be performed completely within the human mind or with pen and paper.

Unlike claim 1, independent claims 19 and 32 contain features such as "a processor and interface" or "a processor and user interface." However, Appellant did not identify any teachings in the Specifications showing these recitations are directed to anything more than a generic computer implementation of the recited abstract process. *See* Appeal Br. 4–5 (no citations to the Specification provided in the summary of the claimed matter for recitations directed to "a processor and interface" and to "a processor and user interface"). Moreover, the Specification's relevant disclosures evince generic, rather than specialized meanings for these recitations. *See, e.g.*, Spec. Figs. 1, 5, 6, ¶¶ 32, 33, 81, 86. "Nothing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016). Accordingly, we sustain the Examiner's 35 U.S.C. § 101 rejection of claim 1 as being directed to patent-ineligible subject matter.

Additional Claims:

Appellant argues the Examiner erred by failing to "even refer to separate individual claims." Reply Br. 2. Appellant argues "various of the dependent claims describe additional aspects of the tool" such as "selectable or customizable time plot periods [or] frequencies, [a] global map, [and] plug in or other package aspects." Appeal Br. 8. However, Appellant does not show that any of the additional recitations of the dependent claims make any claims *significantly more* than the underlying abstract idea identified by the Examiner. *See also* Final Act. 9–10; Ans. 4. In particular, the features identified by Appellant (i.e., selectable time plot periods, a global map, etc.) merely relate to minor variations of the main abstract idea discussed above. Even with such minor variations, the claims are still abstract rather than being *significantly more* than the underlying abstract idea.

Accordingly, we also sustain the Examiner's 35 U.S.C. § 101 rejection of claims 2–33.

35 U.S.C. § 103(a)

Findings and Contentions

In rejecting claim 1 as obvious, the Examiner finds Wardley's weighing of commodities according to a liquidity factor—combined with Carr's construction of currency strength indices and Leven's international finance analysis involving multiple currencies—teaches or suggests to *create a proportionally weighted dollar index by multiplying the determined weighting of each currency pair with a reported closing price of that currency pair to generate a coefficient for that currency pair*. Final Act. 13 (citing Wardley col. 2, ll. 23–25, col. 13, ll. 27–29); *see also* Ans. 16; Carr ¶ 2; Leven ¶ 1. The Examiner finds that Carr's periodic currency index

updates, combined with Leven's use of data from the Bank for International Settlements (BIS) Tri-Annual Survey, teaches or suggests *periodically reweighting the dollar index responsive to a subsequent survey on foreign exchange turnover*. Final Act. 12 (citing Carr ¶¶ 11–12, 24–25; Leven ¶ 72); *see also* Ans. 16.

Appellant contends the Examiner erred because "Wardley simply relates to a liquidity-based commodity index in which historical liquidity-related data for a commodity is used to determine whether to include a commodity in an index and also used to weight commodities in the index." Appeal Br. 14 (citing Wardley, Abstract); *see also* Reply Br. 5.

Appellant also contends the Examiner erred because "Carr only generally teaches constructing and weighting a currency index for a currency basket using only past statistical time series behaviors of the currency pairs." Appeal Br. 9 (citing Carr, Abstract); *see also* Appeal Br. 10 (citing Carr ¶¶ 10, 25); Reply Br. 4. Appellant argues Leven does not relate to claim 1 because "Leven only mentions the BIS survey in a limited capacity . . . for a particular circumstance to determine how to balance trade weight against investor flow." Appeal Br. 12; *see also* Reply Br. 4–5.

Analysis

Appellant's argument that Wardley is limited to "liquidity-based commodity" indexing is unpersuasive. Appeal Br. 14. Wardley teaches the use of "a liquidity factor" to weight each of a "plurality of commodities proportionate to said liquidity factor of another of said plurality of commodities." Wardley col. 2, ll. 23–25. A commodity's liquidity "may be based on a trading volume of a contract for [the] commodit[y] over a trailing period." *Id.* col. 2, ll. 33–35. We agree with the Examiner that this use of a

liquidity factor teaches or suggests "multiplying a factor with a price [that] will yield" a coefficient in the manner claimed. Final Act. 13.

Appellant argues Wardley's "basic comparison based on a liquidity factor . . . does not relate to the" claimed invention (Appeal Br. 14) and that Wardley "simply updat[es] an index (based on liquidity) according to a current closing price" (*id.* at 15). However, Appellant fails to provide persuasive arguments or evidence distinguishing the claimed coefficient generation from Wardley's creation and use of a liquidity factor. Moreover, we agree with the Examiner that, based on the teachings of Carr and Leven, it would have been obvious to an artisan of ordinary skill to apply Wardley's teachings in the field of dollar index creation. *See* Final Act. 11–12, 14; Ans. 16.

For these reasons we agree with the Examiner that the combination of Carr, Leven, and Wardley teaches or suggests creating "a proportionally weighted dollar index by multiplying the determined weighting of each currency pair with a reported closing price of that currency pair to generate a coefficient for that currency pair," as recited in claim 1.

We also are unpersuaded by Appellant's argument that Carr's currency index creation and weighting and Leven's use of BIS survey data are unrelated to claim 1. *See* Appeal Br. 9, 12. As the Examiner correctly finds, Carr teaches or suggests periodically updating (e.g., reweighting) a dollar index. *See* Final Act. 12 (citing Carr ¶¶ 11–12, 24–25). In particular, Carr teaches or suggests "updating on a periodic (e.g., daily) basis [a] host currency index." Carr ¶ 25.

Appellant argues the bases of Carr's index updates are limited to "past statistical time series behaviors of the currency pairs." Appeal Br. 9 (citing

Carr, Abstract). However, the Examiner relies on Leven, not Carr, to teach or suggest the updates being responsive to a survey on foreign exchange turnover. Final Act. 12 (citing Leven ¶ 72).

Furthermore, Appellant does not provide persuasive arguments or evidence to support the contention that "Carr teaches against using **anything other than** Carr's particular method." Appeal Br. 13. Carr notes that, "unlike currency indices that are based on trade data," embodiments that use a statistical approach can be updated "daily or intraday or even 'tick by tick.'" Carr ¶ 12. However, Carr merely notes this benefit as being available with "some embodiments" of Carr's disclosed invention (*id.*) without criticizing, discrediting, or otherwise discouraging the use of alternative methods that may not support less frequent updates (*see In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004)).

Appellant argues "Leven only mentions the BIS survey in a limited capacity." Appeal Br. 12; *see also* Reply Br. 4. However, the Examiner correctly finds that Leven's use of non-financial and total (i.e., non-financial and financial) flows reported in BIS Tri-Annual Survey data as "a proxy for the relative importance of trade flows to investor flows" (Leven ¶ 72) relates to the use of this survey data to ascertain the "market performance of a . . . 'focus currency[]' relative to a group of other specified currencies" (Final Act. 12 (citing Leven ¶ 6)). Appellant does not persuasively distinguish the claimed use of a foreign exchange turnover in periodically reweighting a dollar index from Leven's use of the BIS survey data in constructing a currency index. Leven ¶¶ 6, 72. In particular, Appellant does not show error in the Examiner's finding that the BIS survey data is directed to a survey on foreign exchange turnover. Final Act. 12; *see also* Spec. ¶ 36

(acknowledging that a survey on foreign exchange turnover "may be any reported survey, an example of which is the Bank for International Settlements survey").

For these reasons, we agree with the Examiner that the combination of Carr, Leven, and Wardley teaches or suggests "periodically reweighting the dollar index responsive to a subsequent survey on foreign exchange turnover," as recited in claim 1. Accordingly, we sustain the Examiner's 35 U.S.C. § 103(a) rejection of claim 1.

Appellant's arguments with respect to the other independent claims, and to the dependent claims, are conclusory. Appeal Br. 15–16; Reply Br. 5–6. Therefore, for the reasons discussed above, we also sustain the Examiner's 35 U.S.C. § 103(a) rejections of claims 2–33.

DECISION

We affirm the Examiner's decision rejecting claims 1–33.

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