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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN SPITZER and YURI URALSKY

Appeal 2018-005903
Application 14/066,904
Technology Center 3700

Before JILL D. HILL, LEE L. STEPINA, and ARTHUR M. PESLAK, *Administrative Patent Judges.*

STEPINA, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–6 and 8–13.[2] We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Nvidia Corporation. Br. 3.

[2] Claims 7 and 15–20 are withdrawn from consideration. Br. 21–24 (Claims App.).

CLAIMED SUBJECT MATTER

The claims are directed to a method and system for gathering time-varying metrics. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A method of gathering performance data, the method comprising:
>
> using a client device, dividing an application session associated with an application into a set of sub-sessions;
>
> measuring a time-varying parameter associated with said application by gathering performance data associated with said time-varying parameter over time during each sub-session of said set of sub-sessions on said client device; and
>
> sorting said performance data for each sub-session into a histogram.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Friedrich	US 5,958,009	Sept. 28, 1999
Turicchi	US 2006/0265192 A1	Nov. 23, 2006
Ritts	US 2011/0018884 A1	Jan. 27, 2011

REJECTIONS

I. Claims 1–6 and 8–13 are rejected under 35 U.S.C. § 101 as being directed to an abstract idea without significantly more.

II. Claims 1, 4, 8, and 11 are rejected under 35 U.S.C. § 102(a)(l)/(a)(2) as anticipated by Turicchi.

III. Claims 2, 3, 9, and 10 are rejected under 35 U.S.C. § 103 as unpatentable over Turicchi.

IV. Claims 5 and 12 are rejected under 35 U.S.C. § 103 as unpatentable over Turicchi and Friedrich.

V. Claims 6 and 13 are rejected under 35 U.S.C. § 103 as unpatentable over Turicchi and Ritts.

OPINION

Rejection I, Eligibility

Appellant makes arguments for the patent eligibility of claims 1–6 and 8–13 as a group. *See* Br. 11–13. We select claim 1 as the representative claim, and claims 2–6 and 8–13 stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (citation omitted).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *See Alice*, 573 U.S. at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is "directed to." *Id.* at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, i.e., the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental

economic practices (*Alice*, 573 U.S. at 219-20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. (15 How.) 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (citation omitted). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 566 U.S. at 77) (alteration in original). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

In January of 2019, the PTO published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (hereinafter "Memorandum"). Under Step 2A of that guidance, we first look to whether the claim recites:

(1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and

(2) additional elements that integrate the judicial exception into a practical application (see MPEP § 2106.05(a)-(c), (e)-(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look, in Step 2B, to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field (see MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum.

Step 1 -- Statutory Category

Claim 1 recites a method of gathering data, and, therefore, is a process. *See* Br. 20 (Claims App.).

Abstract Idea

In determining that claim 1 is directed to a judicial exception to patent eligibility, the Examiner takes the position that the claim is directed to collecting data, performing calculations on the data, and displaying the results, which is an idea of itself, and also can be performed by a human using pen and paper. Non-Final Act. 2.

Appellant argues that the claims are not directed to an abstract idea. Br. 12. According to Appellant, the claim limitations "relate to application sessions that cannot possibly be performed by a human using a pen and paper because the claimed embodiments relate to data concerning the

execution of an application that is imperceptible to humans." *Id.* (emphasis omitted).

Step 2A, Prong 1 -- Recitation of Judicial Exception

Claim 1 recites the steps of 1) "measuring a time-varying parameter," 2) "gathering performance data," and 3) "sorting said performance data into a histogram." Br. 20 (Claims App.).

These steps involve receiving and analyzing of data. In the context of claim 1, this language amounts to reciting a mental process of evaluating. *See In re BRCA1 & BRCA2-Based Heredity Cancer Test Patent Litig.*, 774 F.3d 755, 763 (Fed. Cir. 2014); *see also* Memorandum at 52 (defining mental processes as "concepts performed in the human mind (including an observation, evaluation, judgment, opinion" (footnote omitted)); *see also Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) ("The concept of data collection, recognition, and storage is undisputedly well-known. Indeed, humans have always performed these functions."). The specific type of sorting (to create a histogram), is merely an extension of this mental process. Thus, we agree with the Examiner that claim 1 recites a mental process, which is within one of the three categories of abstract ideas set forth in the Memorandum. Accordingly, the outcome of our analysis under Step 2A, Prong 1, requires us to proceed to Step 2A, Prong 2. *See* Memorandum, 84 Fed. Reg. at 54.

Step 2A, Prong 2 -- Integrated Into a Practical Application

If a claim recites a judicial exception, then, in Step 2A, Prong 2, we determine whether the recited judicial exception is integrated into a practical application of that exception by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and

(b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application. *See* Memorandum. This evaluation requires an additional element or a combination of additional elements in the claim to apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the exception. *See id.*

The Examiner finds that process of "gathering performance data associated with said time-varying parameter over time during each sub-session of said set of sub-sessions" recited in claim 1 as well as the step of carrying out the recited functions using a client device is merely the recitation of "functions performed by a generic computer performing routine data processing steps." Non-Final Act. 2.

Appellant argues that dividing an application session associated with an application and measuring a time-varying parameter associated with the application is "clearly rooted in computer technology that is not known to have been previously performed manually." Br. 12 (emphasis omitted).

To the extent that Appellant is arguing that the claimed process improves how the computer operates, we disagree. The claimed functions are merely extra-solution activity, such as data gathering and dividing the data into smaller portions, as well as providing an output. *See* Memorandum at 55 n.31.

Appellant also argues that "the claimed **histograms generated through the claimed procedures** can be used to *improve execution of the application*." Br. 13 (italics added).

Appellant's argument is not persuasive. Claim 1 recites "sorting said performance data for each sub-session into a histogram." Br. 20 (Claims App.). The Specification discloses that "these histograms may provide detailed information for use in micro stutter detection and analysis for a given application session (or sub-session). Spec. ¶ 33. The method recited in claim 1 does not improve the functioning of the computer itself, instead, the method merely generates a histogram for a particular kind of information. Further, in claim 1, we see no improvement to another technical field. Nor do we see any transformation or particular machine of the kind that renders an abstract idea patent-eligible. Thus, claim 1 does not integrate the abstract idea into a practical application. Consequently, claim 1 is directed to the recited abstract idea and requires further analysis under Step 2B

Step 2B -- Well- Understood, Routine, Conventional Activity

In Step 2B, we determine whether the claim adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field. *See* Memorandum.

Appellant argues that, "when taken as an ordered combination, the limitations provide *unconventional* steps that confine the abstract idea to a particular useful application." Br. 13 (italicization added). Appellant follows this sentence by stating "the claimed **histograms generated through the claimed procedures** can be used to improve execution of the application." *Id.*

Appellant's argument that generating histograms is unconventional is unavailing because it merely *concludes* that the ordered combination of steps

is unconventional and results in improved function. Appellant provides no persuasive argument in support of this conclusion.

Further, as the Examiner correctly finds, Turicchi discloses that "[a]nother important tool in analyzing computer system performance is generating a histogram for a selected metric." Turicchi ¶ 43; *see also* Non-Final Act. 5. Thus, the use of histograms in this field was known. Appellant's Specification identifies the computing resources generically (Spec. ¶ 45; *see also* Non-Final Act. 3) and identifies that the histogram generation module shown in Figure 1E and 2 as "part of a graphics system (e.g., graphics driver) residing in memory within client device 100," thus indicating that implementation of the abstract idea is performed using known computers.

Appellant also argues that claim 1 does not preempt all techniques for gathering performance data. *See* Br. 11. However, as our reviewing court has explained, "the principle of preemption is the basis for the judicial exceptions to patentability" and "[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice*, 573 U.S. at 216). Although "preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Id.* Moreover, "[w]here a patent's claims are deemed only to disclose patent ineligible subject matter under the [*Alice*/*Mayo*] framework . . ., preemption concerns are fully addressed and made moot." *Id.*; *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir.), ("[T]hat the claims do not preempt all price optimization or may be limited

to price optimization in the ecommerce setting do not make them any less abstract.") cert. denied, 136 S. Ct. 701 (2015).

Although claim 1 limits, in various ways, the recited method of gathering performance data, and, therefore, would seem to exclude numerous other data gathering methods, we do not agree that claim 1 recites anything significantly more than the abstract ideas discussed above in Step 2A. In particular, the various actions recited in claim 1 that differentiate the recited method from other data gathering methods relate to the abstract idea, not to an innovation of the kind that benefits the claimed subject matter under a Step 2B analysis.

We have considered all of Appellant's arguments in support of the patent-eligibility of claim 1, but find them unpersuasive. Accordingly, we sustain the rejection of claims 1–6 and 8–13 under 35 U.S.C. § 101.

Rejection II, Anticipation

Claim 1 recites, *inter alia*, "measuring a time-varying parameter associated with said application by gathering performance data associated with said time-varying parameter over time." Br. 20 (Claims App.).

Appellant argues that Turicchi relates to data collection for the system in general and not to any specific application. Br. 15. According to Appellant, there is no teaching in Turicchi that performance data, specific to an application, is measured. *Id.* Nor does Turicchi disclose that "the system components, upon which usage measurements are taken, include applications." *Id.*

The Examiner responds that Turicchi's Figure 7 shows a computer that collects data on applications 75. Ans. 11. In addition, the Examiner

notes that, because Turicchi collects data on systems, and the systems run applications, Turicchi is collecting application data. *Id.*

Appellant has the better position. Although we appreciate that the system of Turicchi uses "multiple applications 75," Turicchi discloses that "the applications, for example, can control processes 40, 50 and 60 to gather, store (for example, in storage 73), and analyze the data being gathered." Turicchi ¶ 39. Using applications to control processes that collect data is not collecting data of the application. Rather, the data being collected is system performance data such as the percent of memory in use. Turicchi ¶ 2.

We appreciate the Examiner's position that Turicchi discloses that "any data stream can be handled in the manner discussed so as to preserve the integrity of the data over periods of time without unduly mathematically changing the value of the data." Ans. 11 (quoting Turicchi ¶ 29). However, even if the Examiner's assertion were correct and such a teaching in Turicchi would have rendered obvious the process of collecting and processing data on individual applications (*see* Ans. 11), there is no obviousness rejection of claim 1 before us.[3] A preponderance of the evidence does not support the Examiner's finding that Turicchi measures a time-varying parameter associated with an application by gathering performance data associated with the time-varying parameter over time, as required by claim 1. We do not sustain the rejection of claim 1, and claim 4 depending therefrom as anticipated by Turicchi.

[3] The Examiner also asserts that "Friedrich . . . anticipates at least claim 1." *See* Ans. 11. However, the Examiner has provided no analysis of Friedrich for claim 1, and no rejection of claim 1 based on Friedrich is before us.

System claim 8 requires a data gathering module that includes the "measur[ing] a time-varying parameter associated with said application by gathering performance data associated with said time-varying parameter over time" limitation discussed above regarding claim 1. The Examiner relies on the same findings and reasoning to reject claim 8 as discussed above regarding the rejection of claim 1. *See* Non-Final Act. 4–5. Accordingly, for the same reasons discussed above with respect to the rejection of claim 1, we do not sustain the rejection of claim 8, and claim 11 depending therefrom, as anticipated by Turicchi.

Rejections III–V, Obviousness

Rejections III–V address only claims that depend from claims 1 or 8. The Examiner does not rely on 1st and 2nd derivatives being known mathematical definitions, or on the additional disclosures of Friedrich and Ritts in any way that would remedy the deficiency discussed above regarding Rejection II with respect to the requirements of claim 1. *See* Final Act. 6–8. Accordingly, we do not sustain the rejection of dependent claims 2, 3, 9, and 10 as unpatentable over Turicchi, the rejection of claims 5 and 12 as unpatentable over Turicchi and Friedrich, or the rejection of dependent claims 6 and 13 as unpatentable over Turicchi and Ritts.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–6, 8–13	101	Eligibility	1–6, 8–13	
1, 4, 8, 11	102(a)1/(a)2	Turicchi		1, 4, 8, 11
2, 3, 9, 10	103	Turicchi		2, 3, 9, 10
5, 12	103	Turicchi, Friedrich		5, 12
6, 13	103	Turicchi, Ritts		6, 13

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
Overall Outcome:			1–6, 8–13	

TIME PERIOD FOR RESPONSE

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