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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RONALD BECKER WILLIAMS

Appeal 2019-000579
Application 14/148,095
Technology Center 2100

Before JAMES R. HUGHES, JAMES W. DEJMEK, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

HUGHES, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Claims 1–20 are pending, stand rejected, are appealed by Appellant,¹ and are the subject of our decision under 35 U.S.C. § 134(a). *See* Final Act. 1–2; Appeal Br. 1.² We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a) (2017). Appellant identifies the real party in interest as International Business Machines Corp. *See* Appeal Br. 1.

² We refer to Appellant’s Specification (“Spec.”), filed Jan. 6, 2014; Appeal Brief (“Appeal Br.”), filed Feb. 10, 2018; and Reply Brief (“Reply Br.”), filed Oct. 31, 2018. We also refer to the Examiner’s Final Office Action (“Final Act.”), mailed Aug. 9, 2017; and Answer (“Ans.”) mailed Aug. 31, 2018.

CLAIMED SUBJECT MATTER

The invention, according to Appellant, “relates generally to management of information technology (IT) systems” (Spec. 1:6–7), and specifically, to methods of categorizing activity in a computing system having a database using “a data model [that] extends . . . an entity/resource association to include a ‘quality’ of that association, where the quality is defined by an ordered set of relative values/characteristics” (Spec. 4:2–4). *See* Spec. 4:2–5:4; Abstract. Claims 1 (reciting a method), 8 (reciting an apparatus), and 15 (reciting a computer program product in a computer readable medium), are independent. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method of categorizing activity in a computing system having a database, comprising:

 configuring the database according to an entity/resource data model that is extended to include a quality enumerator;

 monitoring an interaction between an entity and a resource to define an entity/resource association;

 at capture of the interaction, annotating the entity/resource association according to an enumerated set of relative quality values by associating, as the quality enumerator, a quality to the entity/resource association, the quality being one of a set of relative qualities as defined in the enumerated set of relative quality values, and wherein the quality associated is dependent on a characteristic of the interaction; and

 recording in the database the entity/resource association together with the quality that has been annotated to provide improved information storage and retrieval in the computing system;

 wherein at least one of the monitoring, associating and recording steps is carried out in software executing in a hardware element.

Appeal Br. 25 (Claims App.).

REFERENCES

The prior art relied upon by the Examiner as evidence is:

| Name | Reference | Date |
|------------------|--------------------|--|
| Platt et al. | US 8,375,068 B1 | Feb. 12, 2013 |
| Brezinski et al. | US 8,613,066 B1 | Dec. 17, 2013 |
| Nakashima | US 2014/0068423 A1 | Mar. 06, 2014 (filed Aug. 06, 2013) |

REJECTIONS^{3,4}

1. The Examiner rejects claims 1–20 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. *See* Final Act. 2–3; Ans. 3–7.
2. The Examiner rejects claims 1–4, 6–11, 13–18, and 20 under 35 U.S.C. § 103 as being unpatentable over Platt and Nakashima. *See* Final Act. 4–8.
3. The Examiner rejects claims 5, 12, and 19 under 35 U.S.C. § 103 as being unpatentable over Platt, Nakashima, and Brezinski. *See* Final Act. 8–9.

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103. Because the present application has an effective filing date (Jan. 6, 2014) after the AIA’s effective date, this decision refers to 35 U.S.C. § 103.

⁴ The Examiner modified the § 101 rejection (*see* Final Act. 2–3) and presented a new ground of rejection under § 101 in the Examiner’s Answer (*see* Ans. 3–7). The Examiner also withdrew the written-description rejection under 35 U.S.C. § 112(a) (*see* Final Act. 3–4) in the Examiner’s Answer. *See* Ans. 9. We do not address Appellant’s arguments directed to the withdrawn rejection. *See* Appeal Br. 12–14.

OPINION

Subject Matter Eligibility—35 U.S.C. § 101

Legal Principles

Under 35 U.S.C. § 101, a patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” The Supreme Court has “long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 77–80 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 573 U.S. at 217. The framework requires us first to consider “whether the claims at issue are directed to one of those patent-ineligible concepts.” *Alice*, 573 U.S. at 217. If so, we then examine “the elements of [the] 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*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78, 79). That is, we examine the claim 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*, 573 U.S. at 217–18 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

In January 2019, the Patent Office published revised guidance concerning this framework and the application of § 101. USPTO’s 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (hereinafter “2019 Revised Guidance”). Under that guidance, we first look to whether the claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, mental processes, or certain methods of organizing human activity such as a fundamental economic practice or managing personal behavior or relationships or interactions between people) (hereinafter “Step 2A, prong 1”); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h)) (hereinafter “Step 2A, prong 2”).⁵

See 2019 Revised Guidance, 84 Fed. Reg. at 51–52, 55.

A claim that integrates a judicial exception into a practical application applies, relies on, or uses 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 judicial exception. *See* 2019 Revised Guidance, 84 Fed. Reg. at 54. When the judicial exception is so integrated, then the claim is not directed to a judicial exception and is patent eligible under 35 U.S.C. § 101. *See* 2019 Revised Guidance, 84 Fed. Reg. at 54.

Only if a claim: (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then evaluate

⁵ All references to the MPEP are to the Ninth Edition, Revision 08-2017 (rev. Jan. 2018).

whether the claim provides an inventive concept. *See* 2019 Revised Guidance 84 Fed. Reg. at 56; *Alice*, 573 U.S. at 217–18.

For example, we look 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.⁶

See 2019 Revised Guidance, 84 Fed. Reg. at 56. With these principles in mind, we turn to the merits of the § 101 rejection.

The Examiner’s Conclusions and Appellant’s Arguments

The Examiner rejects Appellant’s claims 1–20 as being directed to patent-ineligible subject matter. *See* Final Act. 2–3; Ans. 3–7. Specifically, the Examiner concludes that the “claimed invention is directed to a judicial exception (. . . an abstract idea) without significantly more” (Final Act. 2) because, *inter alia*, “the additional limitations of claim 1 and similar claims 8 and 15, considered individually and as ordered combination, are not significantly more than an abstract idea” (Final Act 3). In the Examiner’s Answer, the Examiner concludes that the claims

are directed to the abstract idea of categorizing activity including the steps of monitoring an interaction between an entity and a resource, annotating the entity/resource association, and recording the entity/resource association. The claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional computer elements, which are recited at a high level

⁶ Items (3) and (4) are collectively referred to as “Step 2B” hereinafter and in the 2019 Revised Guidance.

of generality, provide conventional computer functions that do not add meaningful limits to practicing the abstract idea.

.....

[And, the] additional elements such as computing system, apparatus, processor, computer memory, and non-transitory computer readable medium are component[s] of a generic computer [that] perform generic functions.

Ans. 3–4.

Appellant contends the Examiner erred in rejecting the claims as being directed to patent-ineligible subject matter. *See* Appeal Br. 5–11; Reply Br. 2–11. Specifically, Appellant contends, *inter alia*, that the “[w]hen all of the claim elements in each of these particular operations are considered, it is evident that [the recited] steps, both individually and certainly as an ‘ordered combination,’ are neither well-known nor conventional” and the “Final Rejection does not provide the proper *Alice* step two analysis.” Appeal Br. 11. Appellant further contends that the Examiner’s “rejection as presently phrased does not even state that the additional claim elements are well-understood, routine or conventional,” and “the *Berkheimer* guidelines requires that the Examiner provide explicit proof of such alleged facts.” Reply Br. 9; *see* Reply Br. 7–10.

Inventive Concept

We have reviewed Appellant’s claims and contentions in detail and in light of current precedent and guidance (*supra*). For the reasons explained below, Appellant has persuaded us that the Examiner erred regarding Step 2B of the Eligibility Analysis. Because this issue is dispositive, we begin with Step 2B rather than a detailed claim construction or analysis under the 2019 Revised Guidance Step 2A.

As directed by our reviewing court, a proper rejection under Step 2B requires a search for an “‘inventive concept’ sufficient to ‘transform the nature of the claim into a patent-eligible application.’” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *Alice*, 573 U.S. at 217). Under the second step of the *Mayo/Alice* framework, i.e., Step 2B, the Examiner must “look with more specificity at what the claim elements add, in order to determine ‘whether they identify an ‘inventive concept’ in the application of the ineligible subject matter’ to which the claim is directed.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016) (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016)). An “inventive concept” requires more than “well-understood, routine, conventional activity already engaged in” by the relevant industry. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1047 (Fed. Cir. 2016) (quoting *Mayo*, 566 U.S. at 79–80); see *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347–48 (Fed. Cir. 2014). The “inventive concept” “must be significantly more than the abstract idea itself, and cannot simply be an instruction to implement or apply the abstract idea on a computer.” *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016) (citation omitted). But a “non-conventional and non-generic arrangement of known, conventional pieces” may provide an “inventive concept” satisfying *Mayo/Alice* Step 2. *Id.* at 1350.

“The second step of the *Alice* test is satisfied when the claim limitations ‘involve more than performance of []well-understood, routine, [and] conventional activities previously known to the industry.’” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018) (quoting *Content Extraction*, 776 F.3d at 1347–48 and *Alice*, 573 U.S. at 225).

Appeal 2019-000579
Application 14/148,095

“Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination.”

Berkheimer, 881 F.3d at 1369; *see* 2019 Revised Guidance, 84 Fed. Reg. at 56.

As previously discussed, the Examiner rejects 1–20 as being directed to patent-ineligible subject matter (*supra*), and concludes (with respect to Step 2B) that independent claim 1 recites additional elements “such as computing system, apparatus, processor, computer memory, and non-transitory computer readable medium,” “which are recited at a high level of generality,” and are generic computer components of that perform generic functions. Ans. 3–4. The Examiner, however, fails to even mention that the identified additional elements are well-understood, routine, or conventional. The Examiner fails to make the requisite findings, much less support such findings with evidence as required by *Berkheimer*.

The Examiner’s conclusions with respect to the Step 2B (inventive concept) analysis are not supported by sufficient evidence and, therefore, are erroneous. The Examiner’s rejection and response (*supra*) have not provided the evidence required by *Berkheimer* to support the Examiner’s determinations that the claims do not recite an inventive concept (that the additional elements are generic—i.e., well-understood, routine, and conventional). *See Berkheimer*, 881 F.3d at 1369; 2019 Revised Guidance, 84 Fed. Reg. at 56 n.36.

We agree with Appellant (Reply Br. 9) that the Examiner has not established a *prima facie* case. Specifically the Examiner has not provided

any of the four categories of information required by the USPTO's guidance in its *Berkheimer* Memo:⁷

1. A citation to an express statement in the specification or to a statement made by an applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the additional element(s)
2. A citation to one or more of the court decisions discussed in MPEP § 2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s).
3. A citation to a publication that demonstrates the well-understood, routine, conventional nature of the additional element(s)
4. A statement that the examiner is taking official notice of the well-understood, routine, conventional nature of the additional element(s)

Berkheimer Memo at 3–4.

In summary, the Examiner has not provided sufficient persuasive evidence that Appellant's claim 1 recites additional elements that are well-understood, routine, and conventional with respect to Step 2B of the *Alice/Mayo* framework in the Revised Guidance. Accordingly, we are constrained by the record to reverse the Examiner's rejection of claims 1–20 under 35 U.S.C. § 101 on procedural grounds.

Obviousness Rejections of Claims 1–4, 6–11, 13–18, and 20

The Examiner rejects independent claim 1 (as well as independent claims 8 and 15, and dependent claims 2–4, 6, 7, 9–11, 13, 14, 16–18, and

⁷ Memorandum from Robert W. Bahr, entitled “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*),” dated April 19, 2018 (“*Berkheimer* Memo”). The *Berkheimer* Memo is available at <https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF> (last visited June 19, 2020).

Appeal 2019-000579
Application 14/148,095

20) as being obvious over Platt and Nakashima. *See* Final Act. 4–9; Ans. 9–13. Appellant contends that Platt and Nakashima do not teach the disputed limitations of claim 1. *See* Appeal Br. 14–19; Reply Br. 11–14.

Specifically, Appellant contends, *inter alia*, that Platt does not configure a database according to an entity/resource model as required by claim 1—“Platt does not provide for an entity/resource data model, let alone one that is extensible (*e.g.*, to include a ‘quality enumerator’) and instead simply provides a user interface with resource and color codings/rankings that are displayed” (Reply Br. 12) and, although “Platt teaches a database,” “the Examiner admits that ‘Platt does not explicitly teach’ extending that database to include a quality enumerator as the claim requires” (Reply Br. 11). *See* Reply Br. 11–12; Appeal Br. 14–16. Appellant further contends that “Nakashima does not ‘extend’ anything, let alone a model in general or an entity/resource data model in particular.” Rather, Nakashima merely describes data objects and “the data object[s] simply ha[ve] a number of data type attributes, one of which may be ‘enumerated,’” but “the notion of ‘extending’ a data model is neither disclosed nor suggested.” “[J]ust because a data type may be ‘enumerated’ . . . in an annotation object list does not mean that the type is an ‘enumerator’ . . . , let alone a ‘quality enumerator’ that is the actual phrase used in the claim.” Further, neither Platt nor Nakashima describe “a set of relative qualities” or “relative quality values” (emphasis omitted) as required by claim 1. Reply Br. 12; *see* Appeal Br. 14–17

We agree with Appellant that the Examiner-cited portions of Platt (*see* Platt col. 1, ll. 50–54; col. 4, ll. 25–30; col. 6, ll. 32–35, 38–44; col. 7, ll. 13–31; col. 15, ll. 23–47; col. 17, ll. 33–35; col. 25, ll. 11–16; Figs. 1A, 1C, 12B) and Nakashima (*see* Nakashima ¶¶ 53, 59, 60, 73; Figs. 6–7) do not

Appeal 2019-000579
Application 14/148,095

teach or suggest the disputed features of Appellant’s claim 1—“configuring the database according to an entity/resource data model that is extended to include a quality enumerator” and “at capture of the interaction, annotating the entity/resource association according to an enumerated set of relative quality values” (Appeal Br. 25 (Claims App.)). *See* Appeal Br. 14–19; Reply Br. 11–14. It is unclear from the Examiner’s rejection if (and how) Platt teaches a model that configures a database and Nakashima teaches extending a model to include a quality metric. Further, it is unclear from the Examiner’s rejection how Platt and Nakashima teach a set of relative quality values from which the quality metric is associated to the user (entity) interaction.

Consequently, we are constrained by the record before us to find that the Examiner erred in finding that the combination of Platt and Nakashima renders obvious Appellant’s claim 1. Independent claims 8 and 15 include limitations of commensurate scope. Claims 2–4, 6, 7, 9–11, 13, 14, 16–18, and 20 depend from and stand with their respective base claims.

Obviousness Rejection of Claims 5, 12, and 19

The Examiner rejects dependent claims 5, 12, and 19 under 35 U.S.C. § 103 as being obvious over Platt, Nakashima, and Brezinski. *See* Final Act. 8–9.

The Examiner does not suggest Brezinski cures the deficiencies of Platt and Nakashima (*supra*). Therefore, we reverse the Examiner’s obviousness rejection of dependent claims 5, 12, and 19 for the same reasons set forth for claim 1 (*supra*).

CONCLUSION

For the reasons discussed above, we find Appellant has shown that the Examiner erred in rejecting claims 1–20 under 35 U.S.C. §§ 101 and 103. We, therefore, do not sustain the Examiner’s rejection of claims 1–20.

DECISION SUMMARY

In summary:

| Claims Rejected | 35 U.S.C. § | Reference(s)/ Basis | Affirmed | Reversed |
|------------------------|--------------------|--------------------------------|-----------------|----------------------|
| 1–20 | 101 | Patent-Eligible Subject Matter | | 1–20 |
| 1–4, 6–11, 13–18, 20 | 103 | Platt, Nakashima | | 1–4, 6–11, 13–18, 20 |
| 5, 12, 19 | 103 | Platt, Nakashima, Brezinski | | 5, 12, 19 |
| Overall Outcome | | | | 1–20 |

REVERSED