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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT CHARLES AMLAND, HUGH RYAN,
JASON HOWARD, and BHARAT SUTARIYA

Appeal 2017-005578
Application 14/156,001
Technology Center 3600

Before MURRIEL E. CRAWFORD, NINA L. MEDLOCK, and
MATTHEW S. MEYERS, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner's final decision rejecting claims 1–5, 7–15, and 20. Claims 6 and 16–19 have been cancelled. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

BACKGROUND

Appellants' invention is directed to generating readmission risk prediction models for determining the risk of readmission for patients and using the patients readmission risk in determining proper inpatient interventions and/or outpatient activities. Spec. 2

Claim 1 is illustrative:

1. One or more non-transitory computer storage media storing computer-useable instructions that, when used by one or more computing devices, cause the one or more computing devices to perform operations comprising:

identifying one or more patient conditions for a patient previously discharged from a clinical facility;

selecting, from a plurality of readmission risk prediction models, a readmission risk prediction model based on the one or more patient conditions, each readmission risk prediction model from the plurality of readmission risk prediction models having been generated for one or more given conditions using clinically relevant data from patients diagnosed with the one or more given conditions;

receiving, over a communications network, patient data for the patient;

computing a readmission risk score for the patient based on the readmission risk prediction model and the patient data;

determining an outpatient treatment recommendation based on the readmission risk score; and

providing the outpatient treatment recommendation for presentation to a clinician.

Appellants appeal the following rejection:

1. Claims 1–5, 7–15, and 20 are rejected under 35 U.S.C. § 101 as directed to patent- ineligible subject matter.

PRINCIPLES OF LAW

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014).

In determining whether a claim falls within the excluded category of abstract ideas, we are guided in our analysis by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Id.* at 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–97 (2012)). In accordance with that framework, we first determine whether the claim is “directed to” a patent-ineligible abstract idea. *See Alice*, 134 S. Ct. at 2356 (“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.”); *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.”); *Diamond v. Diehr*, 450 U.S. 175, 184 (1981) (“Analyzing respondents’ claims according to the above statements from our cases, we think that a physical and chemical process for molding precision synthetic rubber products falls within the § 101 categories of possibly patentable subject matter.”); *Parker v. Flook*, 437 U.S. 584, 594–95 (1978) (“Respondent’s application simply provides a new and presumably better method for calculating alarm limit values.”); *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972) (“They claimed a method for converting binary-coded decimal (BCD) numerals into pure binary numerals.”).

The patent-ineligible end of the spectrum includes fundamental economic practices, *Alice*, 134 S. Ct. at 2357; *Bilski*, 561 U.S. at 611; mathematical formulas, *Parker*, 437 U.S. at 594–95; and basic tools of scientific and technological work, *Gottschalk*, 409 U.S. at 69. On the patent-eligible side of the spectrum are physical and chemical processes, such as curing rubber, *Diamond*, 450 U.S. at 184 n.7, “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores,” and a process for manufacturing flour, *Gottschalk*, 409 U.S. at 69.

If the claim is “directed to” a patent-ineligible abstract idea, we then consider the elements of the claim—both individually and as an ordered combination—to assess whether the additional elements transform the nature of the claim into a patent-eligible application of the abstract idea. *Alice*, 134 S. Ct. at 2355. This is a search for an “inventive concept”—an element or combination of elements sufficient to ensure that the claim amounts to “significantly more” than the abstract idea itself. *Id.*

In addition, 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 idea and is not patent-eligible under § 101. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011) (“[A] method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101.”).

Claims involving data collection, analysis, and display are directed to an abstract idea. *Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (holding that “collecting information, analyzing it, and displaying certain results of the collection and analysis” are “a familiar class of claims ‘directed to’ a patent ineligible concept”); *see also In re TLI Commc’ns LLC*

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Patent Litig., 823 F.3d 607, 611 (Fed. Cir. 2016); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016).

ANALYSIS

Rejection under 35 U.S.C. §101

The Examiner holds that the claims are directed to identifying, selecting, receiving, computing, determining and providing information. The Examiner determines that these steps can be done mentally and are similar to the concepts identified as abstract ideas by the courts (e.g., comparing new and stored information and using rules to identify options and using categories to organize, store, and transmit information). Final Act. 3. The Examiner finds that the additional elements recited in the claims beyond the abstract idea of one or more models and communication networks do not provide an inventive concept. The additional elements, according to the Examiner comprise only a microprocessor and memory to simply perform generic computer functions of identifying, selecting, receiving, computing, determining, and providing information. Final Act. 3.

We agree with the Examiner's holding that the claims are directed to an abstract idea and with the finding that the additional elements do not provide an inventive concept.

We are not persuaded of error on the part of the Examiner by Appellants' argument that a claim is not *directed* to an abstract idea because it merely *involves* an ineligible concept. Appellants specifically argue that the Examiner's characterization describes the claim at too high a level of abstraction. App. Brief 8. Appellants characterize what the claimed subject matter is directed to at a level of abstraction lower than what the Examiner

has characterized it to be directed to. *See Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240–41 (Fed. Cir. 2016) (“An abstract idea can generally be described at different levels of abstraction. As the Board has done, the claimed abstract idea could be described as generating menus on a computer, or generating a second menu from a first menu and sending the second menu to another location. It could be described in other ways, including, as indicated in the specification, taking orders from restaurant customers on a computer.”). Appellants argue that rather than being directed to the abstract idea articulated by the Examiner, i.e., comparing new and stored information and using rules to identify options or using categories to organize, store and transmit information, the claims are directed to addressing the readmission risk of patients previously discharged from the clinical facility. Appellants further direct our attention to the specific steps recited in claim 1.

Appellants describe the abstract idea of the claims at a lower level of abstraction, however, the abstract nature remains the same. In this regard, for example, although the first step of claim 1 can be described at the level of abstraction used by the Examiner of comparing new and stored information or at the lower level of abstraction of identifying patient conditions, the abstract nature remains the same. In another example, the claimed receiving steps can be described as receiving information or at a lower level of abstraction of receiving patient data. However, the abstract nature remains the same.

We are not persuaded of error on the part of the Examiner by Appellants’ argument that the claims are a technology based solution to a technical problem and are analogous to the claims in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) and *BASCOM*

Global Internet Servs. v. AT&T Mobility LLC, 827 F.3d 1341 (Fed. Cir. 2016). App. Brief 14-15. We agree with the Examiner’s response to this argument found on page 7 of the Answer and adopt the same as our own. In this regard, we agree that determining readmission scores is not a technological improvement and does not offer a solution that is necessarily rooted in computer technology in order to overcome a problem arising specifically in the realm of computer networks. In addition, we agree that there is no improvement to the computing device or the way that the computing device receives, stores, transmits and analyzes data. Still further, there is no recitation in claim 1, for example, of a specific combination of elements that is unconventional. All that is recited is a computer storage media that is used by one or more computing devices that may be general purpose computing devices.

Appellants argue that the claims do not merely recite generic computer functions but rather recite a specific combination of limitations that are not well understood, routine and conventional. App. Brief 15

This argument is not persuasive because the Appellants do not explain what those specific combinations are. To the extent Appellants are arguing that the limitations of claim 1 necessarily amount to “significantly more” than an abstract idea because the claimed apparatus is patentable over the prior art, Appellants misapprehend the controlling precedent. Although the second step in the *Alice/Mayo* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or non-obviousness, but rather, a search for “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*,

134 S. Ct. at 2355. A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 132 S. Ct. at 1304.

Appellants' argument that the claims pose no risk of preempting an abstract idea is also not persuasive. App. Brief 16. 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); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362-63 (Fed. Cir. 2015) ("[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract."). And, "[w]here 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." *Ariosa*, 788 F.3d at 1379.

We are not persuaded by Appellants' argument that the Examiner has not established a prima facie case of patent ineligibility because the Examiner has not identified specific claim elements and has provided no analysis directed to why the claims elements do not add significantly more. App. Brief 18. The only elements in addition to the abstract idea of comparing new and stored information and using rules to identify options and using categories to organize, store, and transmit information recited in claim 1, for example, is a computer storage media and one or more computing devices. The Examiner specifically found that these recitations are recited at a high level of generality and recite generic computer functions routinely used in computer applications. Final Act. 3. The Examiner also based this finding on the disclosure in paragraph 22 of Appellants'

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Specification that the computing device can be a general purpose computing device. Final Act. 3.

Appellants' argument that the Examiner erred because the Examiner characterized the claims as different abstract ideas and not just one abstract idea is unpersuasive. Reply 4. Merely combining abstract ideas does not render the combination any less abstract. *Cf. Shortridge v. Found. Constr. Payroll Serv., LLC*, No. 14-CV-04850-JCS, 2015 WL 1739256 (N.D. Cal. Apr. 14, 2015), *aff'd*, No. 2015-1898, 2016 WL 3742816 (Fed. Cir. July 13, 2016).

In view of the foregoing, we will sustain this rejection as it is directed to claim 1. We will also sustain the rejection as it is directed to the remaining claims because the Appellants do not argue the separate eligibility of these claims.

DECISION

We affirm the Examiner's § 101 rejection.

TIME PERIOD

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)(2009).

ORDER

AFFIRMED