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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RYAN ALAN BRUSH

Appeal 2017-004372
Application 13/803,459¹
Technology Center 3600

Before HUNG H. BUI, DAVID CUTITTA II, and PHILLIP BENNETT,
Administrative Patent Judges.

BUI, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellant seeks our review under 35 U.S.C. § 134(a) of the Examiner’s Final Office Action rejecting claims 1, 2, and 5–19, which are all the claims pending in the application. Claims 3, 4, and 20 are cancelled. Claims App’x. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.²

¹ According to Appellant, Cerner Innovation, Inc. is the real party in interest. App. Br. 3.

² Our Decision refers to Appellant’s Appeal Brief filed March 4, 2016 (“App. Br.”); Examiner’s Answer mailed October 4, 2016 (“Ans.”); Final Office Action mailed October 8, 2015 (“Final Act.”); and original Specification filed March 14, 2013 (“Spec.”).

STATEMENT OF THE CASE

Appellant’s invention relates to “utilizing patient population health data [including any updates] to identify members of a population who qualify for one or more health intervention programs.” Spec. ¶¶ 5–6; Figures 4–5; and Abstract.

Claims 1, 12, and 18 are independent. Claim 1 is illustrative of the claimed subject matter, and is reproduced below with disputed limitations in italics:

1. One or more non-transitory computer storage media having computer-executable instructions embodied thereon that, when executed by a computing system comprising at least a plurality of parallel processors, facilitate a method of identifying members of a population who qualify for one or more health intervention programs, the method comprising:
 - receiving one or more sets of raw patient population health data, the one or more sets of raw patient population health data received in a plurality of disparate formats;
 - automatically mapping the one or more sets of raw patient population health data to one or more high-level concepts or concept groupings;*
 - storing the one or more sets of mapped patient population health data in association with a distributed storage system, wherein each distributed storage is co-located with at least one of the plurality of parallel processors;
 - executing, via the plurality of parallel processors, a first set of high-level clinical logic against the one or more sets of mapped patient population health data;
 - automatically generating an identification of one or more members of the population who qualify for the one or more health intervention programs.

App. Br. 32 (Claims App’x).

EXAMINER'S REJECTIONS & REFERENCES

(1) Claims 1, 2, and 5–19 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to an abstract idea. Final Act. 2–3.

(2) Claims 1, 2, 5–9, 11, and 18–19 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Mazar et al. (US 2004/0103001 A1; published May 27, 2004) and Sillay et al. (US 2014/0257047 A1; published Sep. 11, 2014). Final Act. 4–8.

(3) Claims 10 and 12–17 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Mazar, Sillay, and Clements (US 2013/0144790 A1; published Jun. 6, 2013). Final Act. 8–11.

ANALYSIS

§ 101 Rejection of Claims 1, 2, and 5–19

In *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014), the Supreme Court reiterates an analytical two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 79 (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*, 134 S. Ct. at 2355. The first step in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts,” such as an abstract idea. *Id.* If the claims are directed to eligible subject matter, the inquiry ends. *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016). If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims

“individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 566 U.S. at 79, 78). In other words, the second step is to “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.* (citing *Mayo*, 566 U.S. at 72–73).

In rejecting claims 1, 2, and 5–19 under 35 U.S.C. § 101, the Examiner determines these claims are directed to an abstract idea of “processing patient population health data” “using categories to organize, store, and transmit information,” akin to the abstract ideas of organizing, storing, and transmitting information discussed in *Cyberfone*, and comparing information and using rules to identify options discussed in *SmartGene*. Final Act. 2; see *Cyberfone Sys., LLC v. CNN Interactive Grp., Inc.*, 558 F. App’x 988 (Fed. Cir. 2014); *SmartGene, Inc. v. Advanced Biological Labs., SA*, 852 F. Supp. 2d 42 (D.D.C. 2012), *aff’d* 555 F. App’x 950 (Fed. Cir. 2014).

The Examiner further determines the additional elements in the claims do not amount to significantly more than the judicial exception, because (1) the additional elements, whether taken individually or in combination, are “generic computer structure that serves to perform generic computer functions” and (2) these generic components “perform functions that are well-understood, routine, and conventional activities previously known to the pertinent industry.” Final Act. 3; Ans. 3.

At the outset, Appellant argues the Examiner has not established a *prima facie* case of patent ineligibility under 35 U.S.C. § 101 because the

Examiner fails to “identify and explain in the record the reason why a claim is [directed to] an abstract idea” “based on the evidence ‘as a whole.’” App. Br. 13–14. This argument is not persuasive because (1) patent eligibility is a question of law that is reviewable *de novo* (see *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012)); and (2) we are aware of no controlling authority that requires the Office to provide factual evidence to support a finding that a claim is directed to an abstract idea.³ The Federal Circuit has repeatedly noted that “the prima facie case is merely a procedural device that enables an appropriate shift of the burden of production.” *Hyatt v. Dudas*, 492 F.3d 1365, 1369 (Fed. Cir. 2007) (citing *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992)). The court has held that the USPTO carries its procedural burden of establishing a prima facie case when its rejection satisfies the requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for rejection, “together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.” *In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011). Thus, all that is required of the Office is that it set forth the statutory basis of the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. *Id.*, see also *Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (Section 132 “is violated when [t]he

³ *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1366 (Fed. Cir. 2018) holds that the question of whether certain claim limitations represent well-understood, routine, conventional activity under *Alice* step 2 may raise a disputed factual issue. That question, however, is not at issue in this case. As in *Berkheimer*, in determining that the claims are directed to an abstract idea, the Examiner compared the claims to claims held to be abstract in prior judicial decisions. Compare Final Act. 2 with *Berkheimer*, 881 F.3d at 1366–67.

rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection.”).

Appellant does not contend that the Examiner’s rejection under § 101 cannot be understood or that the Examiner’s rejection, otherwise, fails to satisfy the notice requirements of § 132. Indeed, Appellant’s understanding of the rejection is clearly manifested by their response as set forth in the briefs.

Alice/Mayo—Step 1

Turning now to the first step of the *Alice* inquiry, Appellant argues: (1) “a claim must be ‘directed’ to the abstract idea **on its face**” as required by *Alice* and (2) their “claims are not directed to the abstract idea of using categories to organize, store, and transmit information *on their face* at least because, as stated in the preamble of claim 1, the claim *facilitates identification of members of a population who qualify for one or more health interventions programs.*” App. Br. 17–18. According to Appellant, “*Alice* supports the position that a novel and non-obvious solution to a technical problem is not an abstract idea.” App. Br. 19. As such, Appellant argues: (1) “[t]he claim is directed to a solution of a technological problem or covers an improvement in a technological process”; and (2) “[t]he claims . . . provide a solution that is ‘necessarily rooted in computer technology’ in that the claims disclose an improvement to the functioning of the computer.” App. Br. 19–21 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014)).

Appellant’s arguments are not persuasive. At the outset, we note Appellant’s characterization of *Alice* is misplaced. “[T]he concept of inventiveness [under § 101] is distinct from that of novelty” and “[t]he

inventiveness inquiry of § 101 should therefore not be confused with the separate novelty inquiry of § 102 or the obviousness inquiry of § 103.” See *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1312 (Fed. Cir. 2016). Furthermore, contrary to Appellant’s arguments, *Alice* does not require courts or the PTO to determine whether a claim must be “directed” to the abstract idea “**on its face**”; instead, we are required under *Alice* to review all claims at some level of generalization and determine whether those claims are directed to an abstract idea. However, there is no “single universal definition of ‘abstract idea.’” *Amdocs*, 841 F.3d at 1288. Because there is no “single universal definition of ‘abstract ideas,’” the Federal Circuit has required us to “examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided.” *Amdocs*, 841 F.3d at 1312 (citing *Elec. PowerGrp., LLC v. Alstrom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016)); accord USPTO, *July 2015 Update: Subject Matter Eligibility* (July 30, 2015) (instructing Examiners that “a claimed concept is not identified as an abstract idea unless it is similar to at least one concept that the courts have identified as an abstract idea.”).

In this case, the Examiner finds, and we agree, that Appellant’s claims are directed to an abstract idea of “processing patient population health data” “using categories to organize, store, and transmit information,” akin to the abstract ideas of organizing, storing, and transmitting information discussed in *Cyberfone*, and comparing information and using rules to identify options discussed in *SmartGene*. Final Act. 2.

Information as such is intangible, and data analysis and data transmission are also abstract ideas. See, e.g., *Microsoft Corp. v. AT & T*

Corp., 550 U.S. 437, 451 n.12 (2007); *Alice*, 134 S. Ct. at 2355; *Parker v. Flook*, 437 U.S. 584, 589, 594–95 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972). Information collection and analysis, including when limited to particular content, is within the realm of abstract ideas. *See, e.g., Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1349 (Fed. Cir. 2015); *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (“collecting information, analyzing it, and displaying certain results of the collection and analysis” are “abstract-idea processes”); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (“organizing information through mathematical correlations”); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (“1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory” are abstract ideas).

We are also not persuaded that “[t]he claim is directed to a solution of a technological problem” or “provide[s] a solution that is ‘necessarily rooted in computer technology’ in that the claims disclose an improvement to the functioning of the computer” as Appellant argues. App. Br. 19–21. None of the functions/steps recited in Appellant’s claims 1, 12, and 18 provide, and nowhere in Appellant’s Specification is there any description or explanation as to how these data processing steps are intended to provide: (1) a “solution . . . necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,” as explained by the Federal Circuit in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014); (2) “a specific improvement to the way computers operate,” as explained in *Enfish, LLC v. Microsoft Corp.*,

822 F.3d 1327, 1336 (Fed. Cir. 2016); or (3) an “unconventional technological solution . . . to a technological problem” that “improve[s] the performance of the system itself,” as explained in *Amdocs*, 841 F.3d at 1302.

Accordingly, we agree with the Examiner that Appellant’s claims are directed to the abstract idea of “processing patient population health data” “using categories to organize, store, and transmit information,” akin to the abstract ideas of organizing, storing, and transmitting information discussed in *Cyberfone*, and comparing information and using rules to identify options discussed in *SmartGene*. Final Act. 2.

Alice/Mayo—Step 2

In the second step of the *Alice* inquiry, Appellant argues: (1) their “claims recite additional features that are not routine, conventional, or well-known to the industry” and (2) the claims “show an improvement in the functioning of the computer system” because “by co-locating the distributed storage with the parallel processing nodes, processing times are improved thereby improving the functioning of the computer system.” App. Br. 22–25.

Appellant’s arguments are not persuasive. At the outset, we note that the second step of *Alice* requires 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.’” *Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 566 U.S. at 72–73). Under current Federal Circuit precedent, an “inventive concept” under *Alice* step 2 can be established by showing, for example, that the patent claims:

(1) provide a technical solution to a technical problem unique, e.g., a “solution [] necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks” (*see DDR Holdings*, 773 F.3d at 1257;

(2) transform the abstract idea into “a particular, practical application of that abstract idea,” e.g., “installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user” (*see Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016)); or

(3) “entail[] an unconventional solution ([e.g.,] enhancing data in a distributed fashion) to a technological problem ([e.g.,] massive record flows which previously required massive databases)” and “improve the performance of the system itself” (*see Amdocs*, 841 F.3d at 1302).

In this case, however, we find no element or combination of elements recited in Appellant’s claims 1, 12, and 18 that contains any “inventive concept” or that adds anything “significantly more” to transform the abstract concept into a patent-eligible application. *Alice*, 134 S. Ct. at 2357. As discussed *supra*, we are not persuaded the added computer elements such as computers, processing nodes, or parallel processors can transform the abstract idea into a patent eligible invention. As our reviewing court has observed: “[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.” *DDR Holdings*, 773 F.3d at 1256 (citing *Alice Corp.*, 134 S. Ct. at 2358)).

Additional Argument

Appellant argues that the claims do not seek to tie up or preempt the abstract idea of “storing and retrieving [electronic] receipts and automatically identifying a retailer.” App. Br. 26–27. However, this argument is not persuasive because, although “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 *Alice/Mayo* framework, “preemption concerns are fully addressed and made moot.” *Id.*

Because Appellant’s claims 1, 2, and 5–19 are directed to a patent-ineligible abstract concept and do not recite something “significantly more” under the second prong of the *Alice* analysis, we sustain the Examiner’s rejection of these claims under 35 U.S.C. § 101.

35 U.S.C. § 103(a): Claims 1, 2, and 5–19

In support of the obviousness rejection of claim 1 and similarly, claims 12 and 18, the Examiner finds Mazar teaches most aspects of Appellant’s claimed “method of identifying members of a population who qualify for one or more health intervention programs,” including:

- (1) “receiving one or more sets of raw patient population health data, the one or more sets of raw patent population health data received in a plurality of disparate formats” (Final Act. 4 (citing Mazar ¶¶ 16, 18, 22, 41–42)); and
- (2) “automatically generating an identification of one or more members of the population who qualify for the one or more

health intervention programs” (Final Act. 4 (citing Mazar ¶¶ 12, 41, 46).

To support the conclusion of obviousness, the Examiner relies on Sillay for teaching several missing features, including the disputed limitation: “automatically mapping the one or more sets of raw patient population health data to one or more high-level concepts or concept groupings.” Final Act. 4–5 (citing Sillay ¶¶ 175, 233).

Appellant does not dispute the Examiner’s factual findings regarding Mazar. Nor does Appellant challenge the Examiner’s rationale for combining Mazar and Sillay. Instead, Appellant argues the Examiner’s combination of Mazar and Sillay does not teach or suggest “automatically mapping the one or more sets of raw patient population health data into one or more high-level concepts or concept groupings” recited in claim 1 and similarly recited in claims 12 and 18. App. Br. 27–30.

We disagree. Paragraph 175 of Sillay describes that: (1) raw patient healthcare data, including individual with disease data, can be aggregated, processed, and mapped with a group of individuals diagnosed with a disease; and (2) such a map, graph, or report may be made accessible to researchers, to a group such as individuals or organizations within a government, a company, or an association. Sillay ¶ 175.

For this reason, we sustain the Examiner’s obviousness rejection of independent claims 1, 12, and 18 and claims 2, 5–11, 13–18, and 19 dependent therefrom.

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DECISION

As such, we AFFIRM the Examiner's final rejection of claims 1, 2, and 5–19 under 35 U.S.C. § 101 and 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2011).

AFFIRMED