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PAULSON, SHEETAL R.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* PAUL CANNON, CHARLES DONNICI, TANNER MARVIN,  
and JOSHUA BRASEL

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Appeal 2017-010519  
Application 14/266,352<sup>1</sup>  
Technology Center 3600

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Before CARLA M. KRIVAK, HUNG H. BUI, and JON M. JURGOVAN,  
*Administrative Patent Judges.*

BUI, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner’s final rejection of claims 1–20, which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.<sup>2</sup>

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<sup>1</sup> According to Appellants, the real party in interest is Cerner Innovation, Inc. App. Br. 3.

<sup>2</sup> Our Decision refers to Appellants’ Appeal Brief (“App. Br.”) filed March 31, 2017; the Reply Brief (“Reply Br.”) filed August 10, 2017; Examiner’s Answer (“Ans.”) mailed June 23, 2017; Final Office Action (“Final Act.”) mailed October 3, 2016; and original Specification (“Spec.”), filed April 30, 2014.

## STATEMENT OF THE CASE

Appellants' invention relates to a method and system that "facilitate patient searches by providing a search quality indicator for presentation to a user entering a patient search input" to indicate to the user a likelihood that "the search input will return search results that will allow the user to identify a search result corresponding with a desired patient." Abstract. Appellants' invention provides "a common name data store . . . that lists common names appearing in a patient database," and "[w]hen a user enters search input, the common names data store is queried to determine if the search input matches a common name in the common names data store." Spec. ¶¶ 23–24. If a match is determined, a notification may be provided to the user indicating "that the search input includes a common name, the search will return too many results, and/or additional search criteria should be entered." Spec. ¶ 44.

Claims 1, 12, and 19 are independent. Claim 1 illustrates Appellants' invention, as reproduced below:

1. One or more 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:

receiving user input via at least one of a plurality of input fields in a patient search user interface, each input field corresponding with a different type of search criteria;

determining a search quality score without querying a patient database, the search quality score being determined based on the user input using an algorithm that includes a weighting for each type of search criteria; and

providing a search quality indicator based on the search quality score for presentation in conjunction with the patient search user interface.

App. Br. 23–27 (Claims App.).

### EXAMINER’S REJECTION

Claims 1–20 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Final Act. 2–6.

### ANALYSIS

In *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014), the Supreme Court reiterates an analytical two-step framework previously set forth in *Mayo Collaborative Servs. v. Prometheus Labs., 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. *See Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017); *see also 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 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) (alterations in original).

In rejecting independent claims 1, 12, and 19, and dependent claims 2–11, 13–18, and 20 under 35 U.S.C. § 101, the Examiner finds these claims are directed to the abstract idea of “[c]ollecting known information and using rules to compare within a patient database to determine a search quality score” based on received inputs, which is similar to data collection and manipulation techniques previously identified by the courts. Final Act. 3 (citing *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057 (Fed. Cir. 2011)); Ans. 6–7 (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016)).

The Examiner also finds the claims do not include additional elements sufficient to amount to significantly more than the abstract idea, as the claims merely require a “generic computer structure that serves to perform generic computer functions.” Final Act. 4–5. The Examiner finds that determining a “search quality score . . . without querying the patient database does not show significantly more since it uses a general purpose computer to calculate a score.” Final Act. 8.

*Alice/Mayo—Step 1*

Turning now to the first step of the *Alice* inquiry, Appellants contend independent claims 1, 12, and 19 are not directed to an abstract idea because the claims are similar to the claims in *McRO*. App. Br. 10–12 (citing *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)); Reply Br. 4–5. Particularly, Appellants argue the claims “recite a *specific combination* of steps” that improve over “existing patient search systems’ failure to handle ambiguous search queries through the use of specific rules

to generate a patient search score without querying the patient database.” Reply Br. 4; App. Br. 12. Appellants argue the claimed search quality score advantageously “indicate[s] the likelihood the search input will return search results that will allow the user to identify a search result corresponding with a desired patient.” App. Br. 11.

Appellants’ arguments are not persuasive. At the outset, we note these arguments are not commensurate with the scope of claims 1, 12, and 19. Claims 1, 12, and 19 do not recite or require executing “ambiguous search queries” or “unambiguous searches on patient databases,” as Appellants argue. *See* Reply Br. 4; App. Br. 11. Claim 1, for example, merely requires receiving user input via an input field (“at least one of a plurality of input fields . . . each input field corresponding with a different type of search criteria”), and determining “a search quality score” and “indicator” based on that user input. The claim does not require the search quality score to “indicate the likelihood the search input will return search results that will allow the user to identify a search result corresponding with a desired patient,” as Appellants assert. *See* App. Br. 11. Performing a search or identifying search results is not required by the claim. Further, the claimed *without querying a patient database* does not evidence an improvement (e.g., “over existing patient search systems’ failure to handle ambiguous search queries,” *see* Reply Br. 4), because claim 1 is unclear as to any relationship between (i) *a patient database that is not queried* and (ii) the patient search user interface, and the received user input.<sup>3</sup> The claim

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<sup>3</sup> We also note Appellants’ Specification does in fact describe *querying a patient database* (“When a user enters search input into the patient search UI . . . the common name module 216 queries the common names data store

also does not specify or impose any bounds on the “user input,” “algorithm,” and “weighting” for the search criteria.

We therefore agree with the Examiner that Appellants’ claims and Specification do not demonstrate *technological process improvements* as *McRO* does. Ans. 7. Particularly, the court determined that *McRO*’s claim was not directed to an abstract idea because it “uses the limited rules in a process specifically designed to achieve an improved technological result” over “existing, manual 3–D animation techniques”; in contrast, Appellants’ claimed series of steps in claim 1 determines a “score” and an “indicator” based on a user’s input in an input field, and then presents the “indicator” using a user interface. *See McRO*, 837 F.3d 1299, 1316; Ans. 7; Spec. ¶¶ 23–25. We are not persuaded that Appellants’ generated score and indicator “improve[] . . . [an] existing technological process.” *See Reply Br.* 4.

Additionally, the claims in *McRO* were drawn to improvements in the operation of a computer performing a task, rather than applying a computer system to perform known data collection, processing, and displaying steps (e.g., receiving user input, determining a search quality score, and providing a search quality indicator for presentation in conjunction with a patient search user interface as in Appellants’ claim 1). *See McRO*, 837 F.3d at

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210 to determine whether the search input matches a common name”). *See Spec.* ¶¶ 23, 42. The common names data store 210, which “lists common names appearing in a patient database,” is “generated by querying the patient database to identify names that occur in the patient database more frequently than some configurable threshold number.” *See Spec.* ¶ 23. That is, Appellants’ score determination *queries one patient database* (the common names data store 210) while not querying another patient database (patient database 208). *See Spec.* ¶¶ 42, 47.

1314. Particularly, *McRO*'s claims and Specification employ "rules that define output morph weight set stream as a function of phoneme sequence and time of said phoneme sequence" to "achieve an improved technological result." *See McRO*, 837 F.3d at 1310, 1316. *McRO*'s improved technological result allows "computers to produce 'accurate and realistic lip synchronization and facial expressions in animated characters' that previously could only be produced by human animators." *See McRO*, 837 F.3d at 1313. Appellants have not demonstrated their claimed method, including determining a score and providing an indicator, "improves the relevant technology" rather than being "directed to a result or effect that itself is the abstract idea and merely invoke[s] generic processes and machinery." *See McRO*, 837 F.3d at 1314 (citing *Enfish*, 822 F.3d at 1327, 1336).

We are also not persuaded by Appellants' arguments that the Examiner overgeneralized and mischaracterized the claims using dissimilar court decisions. App. Br. 7; Reply Br. 2. Specifically, Appellants argue the claimed "features regarding *how* to provide a search quality indicator based on a search quality score without querying the patient database" are dissimilar to *Classen*'s data comparisons. App. Br. 9 ("There is no comparison of known information [in claims 1, 12, 19]. The search input is not compared against the patient database"); *see* Reply Br. 2–3. Appellants' argument is not persuasive because Appellants' claim 1, for example, does not exclude comparisons, and the Specification does in fact describe comparisons against a patient database, as discussed *supra*. *See* Spec. ¶¶ 23, 42. Appellants also argue the claims are dissimilar to *Electric Power Group* because "[t]he claimed process can only be performed in the context of a

computer-based database search system. . . . [and] cannot essentially be a mental process.” Reply Br. 3. This argument is not persuasive because the claimed data processing steps (of determining a score and presenting an indicator based on the user’s search input) are capable of being performed by pen and paper (e.g., by manually searching and estimating based on a user’s selected search criteria) and insignificant data input and output operations. Ans. 9; see *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.”); and *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333–34 (Fed. Cir. 2012) (“Simply adding a ‘computer aided’ limitation to a claim covering an abstract concept, without more, is insufficient to render [a] claim patent eligible.”).

We therefore agree with the Examiner, the claims are abstract because they are directed to collecting information (user input in an input field), and providing a score and presenting an indicator based on the received inputs—an abstract idea similar to data collection and manipulation techniques previously identified by the courts in *Classen, Electric Power Group, Content Extraction*, and *Intellectual Ventures* cases. Final Act. 3, 6; Ans. 6–7; see *Classen*, 659 F.3d at 1067–68; *Elec. Power Grp.*, 830 F.3d at 1353–54 (Holding that the claims were directed to an abstract idea because “[t]he advance they purport to make is a process of gathering and analyzing information of a specified content, then displaying the results, and not any particular assertedly inventive technology for performing those functions.”); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*,

776 F.3d 1343, 1347–48 (Fed. Cir. 2014) (Finding “[t]he concept of data collection, recognition, and storage is undisputedly well-known,” and “humans have always performed these functions”); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (Tailoring information presented to a user based on particular information); and *Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315, 1328 (Fed. Cir. 2017) (Claims directed to creating an index of descriptive tags and metadata and using the index to search for and retrieve data is an abstract idea).

Accordingly, we agree with the Examiner that claims 1, 12, and 19 are directed to an abstract idea.

*Alice/Mayo—Step 2 (Inventive Concept)*

Appellants allege the claims amount to significantly more than an abstract idea because “[t]he claims recite an inventive concept that provides a technology-based solution to a technical problem and affect an improvement in a technology field,” similar to the claims in *DDR* and *Bascom*. App. Br. 13, 15–17 (emphasis omitted). Particularly, Appellants assert claims 1, 12, and 19 are “necessarily rooted in technology” and “address problems associated with querying electronic patient databases. . . . [t]hese problems don’t exist outside of the realm of such patient databases and search tools.” App. Br. 17 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014)); see Reply Br. 6–7. Appellants also assert claims 1, 12, and 19 improve a technological process by not querying the patient database, instead presenting a search quality indicator “regarding the quality of the search in the sense of the likelihood a set of search results would be returned using the received search input that will

allow the user to find a desired patient.” App. Br. 15–17 (citing *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016)).

Appellants’ arguments are not persuasive because claims 1, 12, and 19 do not recite or require indicating a “quality of the search in the sense of the likelihood a set of search results would be returned . . . that will allow the user to find a desired patient,” as Appellants assert. *See* App. Br. 16. Claim 1, for example, merely requires receiving user input via an input field and presenting a score and an indicator via a user interface. Appellants’ claims and Specification also do not identify a specific improvement to *computer technology* or *computer operation* effected by the claims, as *BASCOM* did. Ans. 9–10. In contrast, *BASCOM*’s patent-eligible ordered combination of claim limitations contains an “inventive concept [that] harnesses [a] technical feature of network technology in a filtering system by associating individual accounts with their own filtering scheme and elements while locating the filtering system on an ISP [Internet Service Provider] server.” *See Bascom*, 827 F.3d at 1350–52. *BASCOM*’s patent-eligible ordered combination of claim limitations “improve[s] the performance of the computer system itself” with a “technology-based solution . . . to filter content on the Internet that overcomes existing problems with other Internet filtering systems.” *See BASCOM*, 827 F.3d at 1351–52.

We are also not persuaded by Appellants’ arguments that their claims are similar to the claims in *DDR*. App. Br. 15–17; Reply Br. 5–7. Appellants have not demonstrated their claimed generic computing elements (i.e., the claimed computing devices and processors, patient search user interface, and patient database), in combination, are able to perform

*functions that are not merely generic*, as the claims in *DDR*. Ans. 8–9; *see DDR Holdings*, 773 F.3d at 1257–58 (Holding the claims at issue patent eligible because “they do not broadly and generically claim ‘use of the Internet’ to perform an abstract business practice (with insignificant added activity)” and “specify how interactions with the Internet are manipulated to yield a desired result—a result that overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink.”). Additionally, Appellants’ claims focus on the *problem* of finding medical records in patient data repositories—a problem that is not a technical problem or one rooted in computer technology or particular only to the Internet. *See* Spec. ¶ 2; *see also* Ans. 7–9. Although this problem may be pertinent to electronic databases, the problem is equally pertinent to searches in paper-based data repositories. Correctly identifying records of patients having common or popular names is “a problem that existed and continues to exist outside of the realm of the technology.” Ans. 9.

In fact, none of the steps and elements recited in Appellants’ claims provide, and nowhere in Appellants’ Specification can we find, any description or explanation as to how the claimed determination of a search quality score and indicator are intended to provide a patent-eligible invention such as: (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*, 773 F.3d at 1257; (2) “a specific improvement to the way computers operate,” as explained in *Enfish*, 822 F.3d at 1336; or (3) an “unconventional technological solution . . . to a technological problem” that “improve[s] the performance of the system itself,” as explained in *Amdocs*

*(Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1300, and 1302 (Fed. Cir. 2016). *See* Ans. 9–10.

Appellants next argue “the absence of any explanation by the Examiner showing that the claimed features are well-understood, routine, and conventional” shows the Examiner has failed to establish *a prima facie* case of patent ineligibility. Reply Br. 5, 8; *see* App. Br. 20–21. Appellants argue “the rejection completely ignores features of the claims” reciting how the search quality indicator is generated, and does not show “why such features do not provide significantly more than the Examiner-asserted abstract idea.” Reply Br. 8–9; *see* App. Br. 21. The claims, Appellants assert, “include elements that are not well-understood, routine and conventional in the field, as evidenced by the absence of any prior art rejections.” App. Br. 17–18.

Appellants’ arguments are not persuasive. First, we note the Examiner did not ignore the limitations reciting how the search quality indicator is generated. As discussed *supra*, the Examiner finds, and we agree, the claimed “determining a search quality score without querying a patient database” and “providing a search quality indicator” perform generic data processing previously identified by the courts as an abstract idea. Final Act. 3, 6; Ans. 6–7. The Examiner further notes claims 1, 12, and 19 perform this generic data processing using generically claimed computing devices and user interface. Ans. 7–8, 11 (citing Spec. ¶¶ 27–30); Final Act. 5 (citing Spec. ¶¶ 32–33). We find the Examiner’s referencing the generic nature of the computing elements as discussed in Appellants’ Specification and recited in Appellants’ claims provides sufficient evidence of generic processor and user interface used to implement the abstract idea recited in

the claims. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715–16 (Fed. Cir. 2014) (“Adding routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet does not transform an otherwise abstract idea into patent-eligible subject matter.”); *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1333 (Fed. Cir. 2010) (“In order for the addition of a machine to impose a meaningful limit on the scope of a claim, it must play a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly, i.e., through the utilization of a computer for performing calculations.”).

Thus, we agree with the Examiner that Appellants have not identified an inventive concept that would be “significantly more” than the abstract idea of collecting and providing information recited in Appellants’ claims.

We are also unpersuaded by Appellants’ argument regarding the absence of prior art rejections (*see* App. Br. 17–18), and we note the Supreme Court emphasizes: “The ‘novelty’ of any element or steps in a process, or even of the process itself, is of **no relevance** in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.” *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (emphasis added). Our reviewing court further guides that “[e]ligibility and novelty are separate inquiries.” *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1340 (Fed. Cir. 2017); *see also Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 (Fed. Cir. 2016) (holding that “[e]ven assuming” that a particular claimed feature was novel does not “avoid the problem of abstractness”).

Further, with respect to Appellants' preemption argument (App. Br. 19–20; Reply Br. 8), we note the *McRO* court explicitly “recognized that ‘the absence of complete preemption does not demonstrate patent eligibility.’” *See McRO*, 837 F.3d at 1315 (quoting *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.” *Ariosa*, 788 F.3d at 1379.

Accordingly, claims 1, 12, and 19, when considered “both individually and ‘as an ordered combination,’” amount to nothing more than an attempt to patent the abstract idea embodied in the steps of the claims. *See Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 78).

Because we agree with the Examiner’s analysis and find Appellants’ arguments insufficient to show error, we sustain the Examiner’s § 101 rejection of independent claims 1, 12, and 19, and dependent claims 2–11, 13–18, and 20 argued together with the independent claims. App. Br. 5, 7–9, 15, 18; Reply Br. 3, 8–9; *see* 37 C.F.R. § 41.37(c)(1)(iv).

## CONCLUSION

On the record before us, we conclude Appellants have not demonstrated the Examiner erred in rejecting claims 1–20 under 35 U.S.C. § 101.

## DECISION

As such, we affirm the Examiner’s final rejection of claims 1–20 under 35 U.S.C. § 101.

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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).

AFFIRMED