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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MELISSA J. SOLITO, CAROL HUBER, BRENT
NIGHTINGALE, and HUGH RYAN

Appeal 2018-007026
Application 12/610,732
Technology Center 3600

Before DENISE M. POTHIER, JOYCE CRAIG, and JASON M. REPKO,
Administrative Patent Judges.

CRAIG, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–6 and 20–25. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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 is Cerner Innovation, Inc. Appeal Br. 4.

CLAIMED SUBJECT MATTER

The claims are directed to electronically managing infections in healthcare facilities. Abstract. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method, executed by a server computing device for classifying and updating a set of patients of an infection preventionist (“IP”) into a plurality of infection-control categories (“IC categories”), the method comprising:

receiving by the server computing device respective healthcare data of each patient included in the set of patients of the IP, wherein at least one set of healthcare data is associated with a patient identifier in a stored data structure;

comparing by the server computing device the respective healthcare data of each patient to conditions of triggering events,

wherein a first set of conditions of triggering events are associated with an IC category classifying patients that need to be assessed by the IP,

wherein a second set of conditions of triggering events are associated with an IC category classifying patients that need to be monitored by the IP, and

wherein a third set of conditions of triggering events are associated with an IC category classifying patients that are a low risk to contract an infectious disease;

based on the comparing, generating by the server computing device a computer-readable markup document that includes a computer-displayable listing of the plurality of IC categories by:

creating a needs-assessment tab that is hyperlinked to a listing of needs assessment patients including the patient identifier and that, when selected by a computer input device, presents the listing of needs-assessment patients having respective healthcare data corresponding to the first set of conditions, the listing of needs-assessment patients indicating a first risk to infection control;

creating an ongoing-assessment tab that is hyperlinked to a listing of ongoing-assessment patients and that, when selected by the computer input device, presents the listing of ongoing-assessment patients having respective

healthcare data corresponding to the second set of conditions, the listing of ongoing-assessment patients indicating a second risk to infection control; and

creating a low-risk tab that is hyperlinked to a listing of low-risk patients and that, when selected by the computer input device, presents the listing of low-risk patients having respective healthcare data corresponding to the third set of conditions, the listing of low-risk list of patients indicating a third risk to infection control;

the computer-readable markup document comprising a drop-down menu including a combination of content and markup language, the content including a needs-assessment input, an ongoing-assessment input, and a low-risk input, and the markup language controlling a drop-down functionality that allows selection of the content and resulting modification of the at least one set of healthcare data of the patient;

transmitting the computer-readable markup document including the dropdown menu and the computer-presentable listing of the IC categories to an IC remote computer;

receiving a transmission of healthcare data from the IC remote computer, the healthcare data including the patient identifier and a low-risk IC category designation that was received by the drop-down menu; and

updating the at least one set of healthcare data in the stored data structure to include the low-risk IC category designation.

REJECTION

Claims 1–6 and 20–25 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to an exception to patent-eligible subject matter, without significantly more. Final Act. 2–4.

ANALYSIS

Appellant argues the Examiner's rejection of claim 1 under 35 U.S.C. § 101 as directed to patent-ineligible subject matter is in error. Appeal Br. 10. To the extent Appellant has not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. 37 C.F.R. § 41.37(c)(1)(iv).

Appellant argues claims 1–6 and 20–25 as a group. Appeal Br. 10. Given our discretion under 37 C.F.R. § 41.37(c)(1)(iv), we decide the § 101 rejection of claims 1–6 and 20–25 based on representative claim 1.

Legal Standard

“Whether a claim is drawn to patent-eligible subject matter is an issue of law that we review de novo.” *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1331 (Fed. Cir. 2010).

The Supreme Court’s two-step framework guides our analysis of patent eligibility under 35 U.S.C. § 101. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014). In addition, the Office recently published revised guidance for evaluating subject matter eligibility under 35 U.S.C. § 101, specifically with respect to applying the *Alice* framework. USPTO, 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Office Guidance”). If a claim falls within one of the statutory categories of patent eligibility (i.e., a process, machine, manufacture, or composition of matter) then the first inquiry is whether the claim is directed to one of the judicially recognized exceptions (i.e., a law of nature, a natural phenomenon, or an abstract idea). *Alice*, 573 U.S. at 217. As part of this inquiry, we must “look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016).

Per Office Guidance, this first inquiry has two prongs of analysis (i) does the claim recite a judicial exception (e.g., an abstract idea), and (ii) if so, is the judicial exception integrated into a practical application. 84 Fed. Reg. at 54. Under the Office Guidance, if the judicial exception is integrated

into a practical application, see *infra*, the claim is patent eligible under § 101. 84 Fed. Reg. at 54–55. If the claim is directed to a judicial exception (i.e., recites a judicial exception and does not integrate the exception into a practical application), the next step is to determine whether any element, or combination of elements, amounts to significantly more than the judicial exception. *Alice*, 573 U.S. at 217; 84 Fed. Reg. at 56. 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).

To summarize, under the current Office 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 Manual for Patent Examining Procedure (“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 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 Office Guidance.

Step 1

Claim 1, as a method claim, recites one of the enumerated categories of eligible subject matter in 35 U.S.C. § 101 (process). Therefore, the issue before us is whether it is directed to a judicial exception without significantly more.

Step 2A(i): Does the Claim Recite a Judicial Exception?

Under Step 2A, Prong One of the Office Guidance, we first consider whether the claim recites an abstract idea. Office Guidance, 84 Fed. Reg. at 54. The Office Guidance has synthesized the key concepts identified by the courts as abstract ideas into three groupings: certain methods of organizing human activity, mathematical concepts, and mental processes. *Id.* at 52.

The Examiner determined that claim 1 is directed to “using categories to organize and transmit information” and “comparing new and stored information and using rules to identify options,” which is an abstract idea. Final Act. 2–3.

For the reasons discussed below, claim 1 recites an abstract idea that falls in the Office Guidance’s mental-processes category. “If a claim, under its broadest reasonable interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim cannot practically be performed in the mind.” Office Guidance, 84 Fed. Reg. at 52 n.14. In the sections that follow, we explain how the “comparing” and “updating” steps can practically be performed in the mind or with the assistance of pen and paper. *Id.*

Claim 1 recites, in part:

comparing . . . the respective healthcare data of each patient to conditions of triggering events,

wherein a first set of conditions of triggering events are associated with an IC category classifying patients that need to be assessed by the IP,

wherein a second set of conditions of triggering events are associated with an IC category classifying patients that need to be monitored by the IP, and

wherein a third set of conditions of triggering events are associated with an IC category classifying patients that are a low risk to contract an infectious disease;

Essentially, the recited “comparing” is an evaluation process consisting of mental processes performed in the human mind (or utilizing pen and paper) that may involve observation, judgment, or opinion. Thus, the “comparing” step is directed to a mental process, which is an abstract idea.

Claim 1 also recites, in part, “updating the at least one set of healthcare data in the stored data structure to include the low-risk IC category designation.” The Specification explains, for example, that control server 22 updates the IC categories for the IP to indicate the patient is in the low risk IC category. Spec. ¶ 47. Thus, but for the “data structure,” the recited updating can be performed with the aid of pen and paper by merely updating the corresponding categories value. Thus, the “updating” step is directed to a mental process, which is an abstract idea.

Because we agree with the Examiner that the claim recites an abstract idea, we proceed to Prong Two of Step 2A to determine if the idea is integrated into a practical application, in which case the claim as a whole would not be “directed to” the abstract mental processes.

Step 2A(ii): Judicial Exception Integrated into a Practical Application?

Because we determined that claim 1 recites a patent-ineligible concept, we next 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.

We use the term “additional elements” for claim features, limitations, or steps that the claim recites beyond the identified judicial exception. *See* Revised Guidance at 55 n.24. As the Examiner determined, in claim 1 the additional elements include the “server computing device” performing the method steps, a “computing system” comprising “computer processing device(s),” “computer-storage media” coupled to “computer processing devices,” “computer storage media” storing computer-usable instructions that, when executed by a computer device, causes the computing device to perform operations. Final Act. 3. We agree with the Examiner that those additional elements serve merely to link the abstract idea to a particular technological environment. *See id.* We also determine that the recited “data structure” also serves merely to link the abstract idea to a particular technological environment.

Appellant argues that the Examiner erred because claim 1 recites a particular way to achieve a desired outcome as opposed to merely claiming the outcome, as in *McRO, Inc. v. Bandai Namco Games America*, 837 F.3d 1299 (Fed. Cir. 2016); Appeal Br. 22.

Appellant’s argument is not persuasive because, in *McRO*, the patent-eligible claim focused on a specific asserted improvement in computer animation. The claims in *McRO* recited a “specific . . . improvement in computer animation” using “unconventional rules that relate[d] sub sequences of phonemes, timings, and morph weight sets.” *McRO*, 837 F.3d at 1302–03, 1307–08, 1314–15. In *McRO*, “the incorporation of the claimed rules, not the use of the computer,” improved an existing technological process. *Id.* at 1314. Here, Appellant does not direct us to any evidence that the claimed steps correspond to unconventional rules or even a specific asserted improvement in computer functionality.

Appellant also seeks to analogize claim 1 to the claims in *Trading Technologies International, Inc. v. CQG, Inc.*, 675 F. App’x 1001 (Fed. Cir. 2017), arguing that a technological modification that solves a technological problem or improves a known system is patent eligible. Appeal Br. 22. We are not persuaded by Appellant’s argument.

In the claimed method in *Trading Technologies*, “bid and asked prices are displayed dynamically along the static display, and the system pairs orders with the static display of prices and prevents order entry at a changed price.” *Trading Technologies*, 675 F. App’x at 1003. The court determined that “[t]he claims require a specific, structured graphical user interface paired with a prescribed functionality directly related to the graphical user interface’s structure that is addressed to and resolves a specifically identified problem in the prior state of the art” of graphical user interface devices. *Id.* at 1004.

Appellant does not persuasively explain how the claimed invention “resolves a specifically identified problem in the prior state of the art” of

graphical user interface devices. *See id.* at 1004. To the contrary, Appellant points only to only to a problem in the prior art related to reducing the spread of cost of HAIs through “proper management of a facility”:

[i]deally, there would be zero [healthcare associated infections (“HAIs”)] in a healthcare facility. In reality, though, HAIs are a real threat both to patients and to healthcare facilities’ bottom lines. While HAIs may never be fully eliminated from the healthcare system, proper management of a facility can drastically reduce the spread and cost of HAIs.

Appeal Br. 24 (citing Spec. ¶ 3). Appellant also points to the Specification’s description of “organizing patients under the watch of IPs into different IC categories depending on the healthcare data for each patient.” *Id.* (citing Spec. ¶ 5).

Neither disclosure cited by Appellant above provides sufficient details as to what one of ordinary skill in the art would have recognized as an improvement. Nor has Appellant provided sufficient evidence that an artisan of ordinary skill would have interpreted the disclosed invention as improving a technology.

Appellant further argues that claim 1 is analogous to the claims in intervening case *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356, 1362 (Fed. Cir. 2018). Reply Br. 3. Appellant argues that claim 1 as a whole “contains precise language delimiting the type of data to be displayed and how to display it” because “[t]he claim creates and presents a multi-tab IC category menu responsive to the user and selection.” *Id.* at 6. Appellant argues that this amounts to an improved user interface for electronic devices, which *Core Wireless* recognized as an improvement over prior systems and, thus, and improvement to technology.

We are not persuaded by Appellant’s arguments based on *Core Wireless*. In that case, the court stated that “[t]he disclosed invention improves the efficiency of using the electronic devices.” *Core Wireless*, 880 F.3d at 1363. In so doing, the court explained that “[w]e also ask whether the claims are directed to a specific improvement in the capabilities of computing devices” (*id.* at 1361), and then determine that “the claims are directed to an improvement in the functioning of computers” (*id.* at 1363). Thus, in *Core Wireless*, the improved efficiency of using the electronic devices was related to an identified improvement in the functioning of computers.

As explained above, the claims here do not recite an improvement in the functioning of computers or other technology. *See also* Ans. 9–10. Rather, claim 1 simply “includes instructions to implement an abstract idea on a computer” and “does no more than generally link the use of a judicial exception to a particular technological environment or field of use.” Office Guidance, 84 Fed. Reg. at 55.

For these reasons, Appellant’s arguments under *McRO*, *Trading Technologies*, and *Core Wireless* are unavailing. Considering claim 1 as a whole, Appellant’s invention lacks a technical solution to a technical problem like the claims in the above cases. We agree with the Examiner that claim 1 as a whole merely uses instructions to implement the abstract idea on a computer or, alternatively, merely uses a computer as a tool to perform the abstract idea. *See* Ans. 9–10.

Because the abstract idea is not integrated into a practical application, we conclude that the claim is directed to the judicial exception.

Step 2B — “Inventive Concept” or “Significantly More”

If the claims are directed to a patent-ineligible concept, as we conclude above, we proceed to the “inventive concept” step. For Step 2B we 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 Texas, 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 (Fed. Cir. 2016)). We look to see whether there are any “additional features” in the claims that constitute an “inventive concept,” thereby rendering the claims eligible for patenting even if they are directed to an abstract idea. *Alice*, 573 U.S. at 221. Those “additional features” must be more than “well-understood, routine, conventional activity.” *Mayo*, 566 U.S. at 79.

The Examiner determined that the additional elements in claim 1 amount to “[g]eneric computer components recited as performing generic computer functions that are well-understood, routine and conventional activities.” Final Act. 3; Ans. 6. The Examiner found that Applicant’s Specification describes conventional computer hardware. *Id.* (citing Spec. ¶¶ 31, 32 Fig. 1). Ans. 6–8.

Appellant argues that the claims include an inventive concept “because the claims utilize a ***non-generic combination of elements*** to achieve ***a desired result in a non-conventional way.***” Appeal Br. 28. Appellant argues that, under *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016), and *Amdocs (Isr.) Ltd v. Openet Telecom Inc.*, 841 F.3d 1288 (Fed. Cir. 2016)), the claim elements taken as a whole contain an inventive concept “when they provide for a

specific, purposefully arranged or unconventional technological solution to a technological problem that does not foreclose alternative solutions.” Appeal Br. 31. In particular, Appellant argues “the claim elements recite a specific purposeful arrangement of features,” such as the computer-readable markup document generated by creating specific tabs, which are hyperlinked to specific patients. *Id.* Appellant also points to the computer-readable markup document that comprises a dropdown menu including a combination of content and markup language. *Id.*

We are not persuaded by Appellant’s arguments that the Examiner erred. The claims at issue in *Bascom* were directed to a “content filtering system for filtering content retrieved from an Internet computer network,” and to an “ISP server for filtering content.” 827 F.3d at 1348. Although the Federal Circuit, in step one of the *Alice* test, “agree[d] with the district court that filtering content is an abstract idea because it is a longstanding, well-known method of organizing human behavior,” *id.*, the court disagreed in step two that the “ordered combination of limitations” did not recite an inventive concept, *id.* at 1349–50. Specifically, the court found that, when considered as a whole, the claims recited the inventive concept of “the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user.” *Id.* at 1350. The court recognized that “the limitations of the claims, taken individually, recite generic computer, network and Internet components, none of which is inventive by itself.” *Id.* at 1349. The court explained, however, that “an inventive concept [was] found in the non-conventional and non-generic arrangement of known, conventional pieces.” *Id.* at 1350. Specifically, by locating the filtering tool remotely from the user, the claims

provided a technical solution—an improvement to the filtering tool itself—that overcame defects in the prior art. *Id.*

Here, however, there is no evidence of record to substantiate the assertion that the claims recite non-conventional and non-generic arrangement of known, conventional elements, as in *Bascom*.

In *Amdocs*, the court held that “[claim 1] is eligible under step two because it contains a sufficient ‘inventive concept.’” *Amdocs*, 841 F.3d at 1300. The claim at issue recited “computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.” *Id.* The court explained that the “claim entails an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows [that] previously required massive databases).” *Id.* The court noted that, although the solution requires generic computer components, “the claim's enhancing limitation necessarily requires that these generic components operate in an unconventional manner to achieve an improvement in computer functionality.” *Id.* at 1300-01. When determining that the claim was patent eligible, the Federal Circuit explained that the “enhancing limitation necessarily involves the arguably generic gatherers, network devices, and other components working in an unconventional distributed fashion to solve a particular technological problem.” *Id.* at 1301. The court distinguished the claim from the claims held unpatentable on the grounds that the “enhancing limitation . . . necessarily incorporates the invention’s distributed architecture--an architecture providing a technological solution to a technological problem.” *Amdocs*, 841 F.3d at 1301 (citations omitted).

But unlike the generic components at issue in *Amdocs*, the generic components recited in claim 1 here do not operate in an unconventional manner to achieve an improvement in computer functionality. Rather, they merely receive, transmit, compare, and update data, and generate a markup document, which are basic computer functions. *See Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (citation omitted) (holding that considering claims reciting data retrieval, analysis, modification, generation, display, and transmission as an “ordered combination” reveals that they “amount to ‘nothing significantly more’ than an instruction to apply [an] abstract idea’ using generic computer technology”).

Appellant next argues that the Examiner failed to provide any evidence that the recited features are well-understood, routine, and conventional. Appeal Br. 13–14 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)). Because Appellant’s Specification describes the additional elements in general terms, without describing the particulars, however, we conclude the claim limitations may be broadly but reasonably construed as reciting conventional computer components and techniques. *See Berkheimer Memo*² § III.A.1; Ans. 9–10; Spec. ¶¶ 31–32, Fig. 1. We conclude claim 1 does not have an inventive concept because the claim, in

² “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)” at 3 (Apr. 19, 2018) (explaining that a specification that describes additional elements “in a manner that indicates that the additional elements are sufficiently well-known that the specification does not need to describe the particulars of such additional elements to satisfy 35 U.S.C. § 112(a)” can show that the elements are well understood, routine, and conventional).

essence, merely recites various computer-based elements along with no more than mere instructions to implement the identified abstract idea using the computer-based elements.

Because the claims fail under both the Step 2A and Step 2B analyses, we sustain the Examiner's § 101 rejection of independent claim 1 and grouped claims 2–6 and 20–25, not argued separately with particularity.

DECISION

We affirm the decision of the Examiner rejecting claims 1–6 and 20–25.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1–6, 20–25	101	Eligibility	1–6, 20–25	

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