UNITED STATES PATENT AND TRADEMARK OFFICE

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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 HAIXIA YU, VIPIN NAMBOODIRI, and
TARO TERASHI

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Appeal 2017-009960
Application 13/665,855[1]
Technology Center 3600

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Before DEBRA K. STEPHENS, DANIEL J. GALLIGAN, and
DAVID J. CUTITTA II, *Administrative Patent Judges*.

GALLIGAN, *Administrative Patent Judge*.

DECISION ON APPEAL

Introduction

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

We AFFIRM.[2]

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[1] According to Appellants, the real party in interest is Ricoh Company, Ltd.
App. Br. 3.
[2] Our Decision refers to Appellants' Appeal Brief filed March 1, 2017
("App. Br."); Appellants' Reply Brief filed July 17, 2017 ("Reply Br.");
Examiner's Answer mailed May 17, 2017 ("Ans."); and Final Office Action
mailed September 1, 2016 ("Final Act.").

STATEMENT OF THE CASE

Claims on Appeal

Claims 1, 8, and 15 are independent claims. Claim 1 is reproduced below:

1. A method comprising:

receiving, using one or more computing devices, an identity token associated with a patient at a node waiting for a remote, virtual medical consultation, wherein the identity token is used for identification of the patient;

generating, using the one or more computing devices, an authorization token based on the identity token, wherein the authorization token allows scheduler services to assign a medical service provider for providing the remote, virtual medical consultation to the patient;

generating, using the one or more computing devices, a list of patients for whom authorization tokens have been generated;

identifying, using the one or more computing devices, one or more factors used to schedule each of the patients on the list of patients located at the node for remote, virtual medical consultations, the one or more factors including an ailment associated with the patient, a classification associated with the patient, wherein the classification includes a level of urgency, and a patient preference;

ordering, using the one or more computing devices, the list of patients located at the node based on the one or more factors, the ordered list indicating a selection order of the patients for the remote, virtual medical consultations;

monitoring an availability status of a plurality of medical service providers located at a hub;

receiving, using the one or more computing devices, an indication of availability of a first medical service provider from the plurality of medical service providers located at the hub in response to detecting that a previous medical consultation of the

first medical service provider has completed, the first medical service provider associated with a specialty;

responsive to receiving the indication of availability of the first medical service provider located at the hub, selecting, using the one or more computing devices, a first patient from the ordered list of patients based at least in part on the first patient having an ailment that matches the specialty associated with the first medical service provider;

checking, using the one or more computing devices, for an available consultation device located at the node associated with the first patient;

responsive to the consultation device being unavailable to the first patient at the node or the first patient being unavailable at the node, skipping the first patient;

determining a number of times that the first patient has been skipped; and

responsive to determining that the number of times exceeds a first threshold, reserving the consultation device for the first patient at the node and assigning a next available service provider associated with the specialty for the remote, virtual medical consultation with the first patient; and

responsive to the consultation device being available to the first patient at the node, assigning, using the one or more computing devices, the first medical service provider for the remote, virtual medical consultation with the first patient.

Examiner's Rejection

Claims 1–20 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 3–6.

Our review in this appeal is limited to the above rejection and the issues raised by Appellants. Arguments not made are waived. *See* MPEP § 1205.02; 37 C.F.R. § 41.37(c)(1)(iv).

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. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include the following implicit exceptions: laws of nature, natural phenomena, and abstract ideas. *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In *Alice*, the Supreme Court set forth an analytical "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). The first step in the analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts." *Id.* at 217. 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.

USPTO January 7, 2019 Revised Section 101 Memorandum

The USPTO recently published revised guidance on the application of § 101. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 Revised Guidance"). Under the 2019 Revised 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

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(2) additional elements that integrate the judicial exception into a practical application (see 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, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

ANALYSIS

Appellants argue the claims as a group, addressing the limitations of claim 1 specifically. *See* App. Br. 11–12, 20–21. We select independent claim 1 as representative of Appellants' arguments for claims 1–20. *See* 37 C.F.R. § 41.37(c)(1)(iv)(2016).

The Examiner determines the claims are directed to an abstract idea. Final Act. 3–4; *see* Ans. 4–5. The Examiner also determines the claims "do not include additional limitations that are sufficient to amount to significantly more than the" abstract idea. Final Act. 4–5; Ans. 10–11.

Appellants present several arguments against the § 101 rejection. The Examiner has provided a comprehensive response to Appellants' arguments. *See* Ans. 4–14. We do not find Appellants' arguments persuasive, as discussed in greater detail below. We analyze the claims under the 2019

Revised Guidance and adopt the nomenclature for the steps used in the

Memorandum.

STEP 1

Section 101 provides that "[w]hoever invents or discovers any new

and useful process, machine, manufacture, or composition of matter, or any

new and useful improvement thereof, may obtain a patent therefor, subject to

the conditions and requirements of this title." 35 U.S.C. § 101. Initially, the

Examiner determines, and we agree, that "the claims are directed toward

statutory categories." Final Act. 3. Independent claim 1 recites a method,

independent claim 8 recites a system, and independent claim 15 recites a

non-transitory computer useable medium. As such, the claims are directed

to statutory classes of invention within 35 U.S.C. § 101, i.e., a process, a

machine, and a manufacture.

STEP 2A Prong 1

Under Step 2A, Prong 1 of the Memorandum, we must determine

whether claim 1, being directed to a statutory class of invention, nonetheless

falls within a judicial exception.

The Examiner determines that claim 1 recites a process of

> assigning a medical provider to an authorized patient, generating
> a list of patients assigned to the provider at a node including
> identified factors, ordering the patients at the node based on the
> factors, monitoring whether a provider is available, receiving
> provider availability indication based on whether the provider a
> previous consultation, selecting a first patient from the list,
> checking whether the consultation can be initiated at the node,
> beginning the consultation if the consultation can be initiated or
> skipping the patient for the next patient on the list of the

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> consultation cannot be initiated, determining a number of times
> a patient has been skipped and reserving the consultation at the
> node if the number exceeds a threshold, and assigning the
> provider to the reserved patient consultation at the node.

Final Act. 3–4 (emphasis omitted). The Examiner also describes the claim
as directed to "[i]nitiating a consultation between a patient and a medical
special based on certain parameters" by "compar[ing] new . . . and stored . . .
information and us[ing] rules . . . to identify options." *Id.* at 4.

Appellants argue the Examiner's determination that the claim is
directed to an abstract idea "does not consider the character of the claim[] *as
a whole.*" App. Br. 9; *see also* Reply Br. 9–10. Additionally, Appellants
argue "the Examiner fails to provide any reasoning in the record that
supports the Examiner's" identified abstract idea and so "has not established
a *prima facie* case of patent ineligibility under § 101." Reply Br. 5; *see*
Reply Br. 6–7.

Appellants' arguments do not persuade us of error in the Examiner's
determination that claim 1 recites an abstract idea, in particular, a mental
process. Putting aside the computing components recited in the claim,
which we consider at a later step, e.g., "one or more computing devices" and
"consultation device[s]" providing "virtual medical consultations," what
remains can be described as, to paraphrase the Examiner's determination
(*see* Final Act. 3–4), a process for ordering and scheduling patient
consultations with physicians by considering patient and physician factors.
For example, the claim recites (1) "generating . . . a list of patients," using an
identity token to identify each patient and an authorization token to assign a
medical service provider to each patient (2) "identifying . . . one or more
factors used to schedule each of the patients on the list of patients," and (3)

"ordering . . . the list of patients located at the node based on the one or more factors." Claim limitations (1)–(3) gather a list of patients and queue the patients based on factors, e.g., "an ailment associated with the patient." Ordering patients based on their specific needs is a typical activity performed in health care, for example, in the process of triage. The claim also recites (4) "monitoring an availability status of a plurality of medical service providers," (5) "receiving . . . an indication of availability of a first medical service provider," and (6) "selecting . . . a first patient from the ordered list of patients based at least in part on the first patient having an ailment that matches the specialty associated with the first medical service provider." Claim limitations (4)–(6) determine when a health care provider who matches a patient's needs is available to see a patient. Determining when a provider is free to tend to another patient is a process typical for advancing through a queue assigning tasks to resources. The claim further recites (7) "assigning . . . the first medical service provider . . . with the first patient" when the patient is available and (8) "skipping the first patient" when the patient is unavailable. Claim limitations (7) and (8) serve to assign a patient to a provider if the patient is available or skip the patient if the patient is not available. Claim limitations (9) and (10) "determin[e] a number of times that the first patient has been skipped" and reserve a "consultation device for the first patient at the node and assign[] a next available service provider . . . with the first patient" if the number of skipped times exceeds a threshold. Determining if a patient is available to see a provider is a normal check to see whether a task is ready to be completed by a resource, as is providing priority to a patient who has been skipped over a threshold number of times. Accordingly, limitations (1)–(10) recite

processes to observe and evaluate patients and providers in order to make a judgement as to when a patient may see a provider. Such a process for choosing and scheduling a waiting patient to see a physician falls into one of the enumerated categories of abstract ideas identified in the 2019 Revised Guidance, namely, a process that "can be performed in the human mind, or by a human using a pen and paper," and is, accordingly, an abstract idea. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011).

Further, contrary to Appellants' assertion that the claim does not recite an abstract idea because "the claim[] include[s] specific features of rules," (Ans. 13–14; *see* Reply Br. 11–12), the claim "demands the production of a desired result . . . without any limitation on how to produce that result," encompassing a patent-ineligible abstract concept. *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1345 (Fed. Cir. 2018); *see CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d at 1372 (the claim "does not limit its scope to any particular . . . algorithm"). For example, the claim recites "ordering . . . the list of patients located at the node based on the one or more factors," but, beside the command to order patients and consider factors when doing so, the claim fails to describe how exactly those factors should be considered when ordering patients. Similarly, the claim recites "selecting . . . a first patient from the ordered list of patients based at least in part on the first patient having an ailment that matches the specialty associated with the first medical service provider," but, beside the consideration of medical specialty, the claim fails to describe how the patient is actually selected.

Additionally, we disagree with Appellants' argument that the Examiner provided no "reasoning" in determining that the claim recites an abstract idea. Reply Br. 5–7. The Examiner describes why the claim limitations are directed to an abstract idea in detail. *See* Final Act. 3–4. For example, the Examiner specifically identifies and addresses claim limitations describing comparing the recited list of patients and associated factors. *See id.* at 4. Still further, although Appellants argue the Examiner erred by not providing "evidence" (Reply Br. 6), we are aware of no controlling authority that requires the Office to provide factual evidence under step one of the *Alice* framework to support a determination that a claim recites an abstract idea. The Federal Circuit has stated 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) (quoting 35 U.S.C. § 132). 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 35 U.S.C. § 132. *Id.*; *see also Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990) ("Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to

counter the grounds for rejection."). As discussed above, the Examiner has done so.

STEP 2A Prong 2

Next, we determine whether the claim is directed to the abstract concept itself or whether it is instead directed to some technological implementation or application of, or improvement to, this concept, i.e., integrated into a practical application. *See, e.g., Alice*, 573 U.S. at 223 (discussing *Diamond v. Diehr*, 450 U.S. 175 (1981)).

The Examiner determines that the "claimed invention also does not provide a technological solution to a technological problem." Ans. 9; *see* Ans. 7.

Appellants argue "that the claimed invention is a solution of a technological problem rooted in technology" because the "invention is about how to connect patients in **remote** areas to get **virtual** medical consultation through **one or more computer networks**, and thereby the claimed invention roots in technology." Reply Br. 9; *see* App. Br. 11–12. Appellants further argue the claim is "implemented by an unconventional distributed system to 'enable load distribution'" and "the distributed architecture allows the system to efficiently and accurately collect and use the network and system resources in a manner designed for efficiency to optimize the scheduling of consultations for patients." App. Br. 18–20 (citation omitted); *see* Reply Br. 14–15.

We determine the claim does not integrate the abstract idea into a practical application. The Specification states that the invention addresses "the problem of automatically matching the patient with the appropriate

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doctor in real time in order to maximize doctor utilization." Spec. ¶ 4. The problem of maximizing doctor utilization does not address a technological problem or improve a technological system; maximizing doctor utilization is a business or healthcare concern. Although Appellants highlight that the claimed invention connects remote parties to virtual medical consultations through computer networks (Reply Br. 9; *see* App. Br. 11–12), the claimed "remote, virtual medical consultation" restriction and associated computing components do not serve to integrate the abstract idea into a practical application or otherwise transform the abstract idea into patent-eligible subject matter. Rather, "[a]ll that limitation does is to confine the abstract idea to a particular technological environment," in this case, remote, virtual medical consultations. *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258–59 (Fed. Cir. 2016). "[M]erely limiting the field of use of the abstract idea to a particular existing technological environment does not" transform the claim into patent-eligible subject matter. *Id.* at 1259.

Furthermore, Appellants' arguments that the claim "enable[s] load distribution" (App. Br. 18–20; *see* Reply Br. 14–15) do not persuade us the claim integrates the abstract idea into a practical application. First, many of the load distribution improvements Appellants point out — namely, "remote patients are assigned to multiple medical service providers rather than a single medical service provider" and "maintaining similar numbers of patients waiting at each node and the perceived fairness" (App. Br. 18–20; *see also* Reply Br. 15; *see also* Spec. ¶ 142) — are not improvements to any technology or computing system, but are instead improvements to the load of patients waiting to be seen by doctors, i.e., human loads. Second, even if "[d]istributing functionality in different servers is helpful in load balancing"

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(App. Br. 19 (citing Spec. ¶ 49)), the claim does not recite multiple servers, and, therefore, the claim does not provide such load distribution for multiple servers.

In view of Appellants' Specification, and consistent with the Examiner's determinations, claim 1 is not directed to a specific asserted improvement in computer technological implementation or otherwise integrated into a practical application and, thus, is ***directed to*** a judicial exception.

STEP 2B

Next, we determine whether the claim includes additional elements that provide significantly more than the recited judicial exception, thereby providing an inventive concept. *Alice*, 573 U.S. at 221 (quoting *Mayo*, 566 U.S. at 72–73).

The Examiner determines "the additional elements or combination of elements" recited by the claim are "generic computer structure[s] that serve[] to perform generic computer functions . . . i.e. one or more computing devices, a consultation device, one or more processors, a non-transitory computer useable medium, a computer, a storage device," and are "functions that are well-understood, routine, and conventional activities . . . i.e., receiving data, generating data, identifying data, ordering data, monitoring data, receiving data, selecting data, checking data, skipping data, determining data, assigning data, applying data, capturing data, storing data, forwarding data, associating data, selecting data, transmitting data." Final Act. 5–6 (emphases omitted).

Appellants argue that, even if those structures and functions are known and conventional, the claim "amount[s] to an inventive concept due to the 'the non-conventional and non-generic arrangement of known, conventional pieces.'" App. Br. 16 (citation omitted).

We agree with the Examiner's finding that that the recited steps are well-understood, routine, and conventional computing functions, all performed by generic computing devices, e.g., "one or more computing devices." Final Act. 5–6. Indeed, the Specification supports the Examiner's findings, stating that the "apparatus for performing the" invention "may comprise a general-purpose computer selectively activated or reconfigured by a computer program stored in the computer." Spec. ¶ 33; *see* Spec. ¶¶ 39, 70. Considering the claimed elements separately, these computer functions are generic, routine, and conventional computer activities that are performed only for their conventional uses. *See Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) ("The focus of the asserted claims . . . is on collecting information, analyzing it, and displaying certain results of the collection and analysis."); *see also In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) ("Absent a possible narrower construction of the terms 'processing,' 'receiving,' and 'storing,' . . . those functions can be achieved by any general purpose computer without special programming."). None of these activities is used in an unconventional manner nor do any of these activities produce an unexpected result. In short, each step does no more than require a generic computer to perform generic computer functions. As to the information operated upon, "even if a process of collecting and analyzing information is 'limited to particular content' or a particular 'source,' that limitation does

not make the collection and analysis other than abstract." *SAP America, Inc. v. InvestPic LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018).

Further, considered as an ordered combination, the computer components of Appellants' claim add nothing that is not already present when the steps are considered separately. In this particular case, the broadly claimed sequence of information reception, analysis, and output, which focuses on the result rather than the technical details of its implementation, recites generic and conventional computer implementation of the mental process, i.e., the abstract idea. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (sequence of receiving, selecting, offering for exchange, display, allowing access, and receiving payment recited an abstraction), *Two-Way Media Ltd. v. Comcast Cable Communications, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (sequence of processing, routing, controlling, and monitoring). The ordering of the steps is therefore ordinary and conventional. We, thus, conclude that the claim does not provide an inventive concept because the additional elements recited in claim 1 do not provide significantly more than the recited judicial exception.

Additionally, Appellants' argument that "the instant claim[] do[es] not preempt all approaches to 'initiating a consultation between a patient and a medical specialist based on certain parameters'" (App. Br. 12–13; *see* Reply Br. 10, 12–13) does not persuade us that the claim is directed to patent-eligible subject matter. Although preemption is characterized as a driving concern for patent eligibility, preemption itself is not the test for patent eligibility. Rather, "[w]hile 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 claims are deemed to recite only patent-ineligible subject matter under the *Alice* analysis, as they are here, "preemption concerns are fully addressed and made moot." *Id.*

Accordingly, claim 1 does not recite patent-eligible subject matter; because claim 1 is representative (*see* App. Br. 20–21), we also conclude that remaining claims 2–20 also do not recite patent-eligible subject matter.

DECISION

We affirm the Examiner's decision rejecting claims 1–20 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

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. § 41.50(f).

AFFIRMED