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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 MARK ALLEN NOLTE, DAMON MATTHEW HERBST,
RYAN CHRISTOPHER CALDER, and PAUL CANNON

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Appeal 2017-010092[1]
Application 12/567,174[2]
Technology Center 3600

_____

Before NINA L. MEDLOCK, BART A. GERSTENBLITH, and
TARA L. HUTCHINGS, *Administrative Patent Judges*.

HUTCHINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final
rejection of claims 1, 3, 5, 8, 14–19, and 21–24. We have jurisdiction under
35 U.S.C. § 6(b).

We AFFIRM.

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[1] Our decision references Appellants' Appeal Brief ("App. Br.," filed
Jan. 31, 2017) and Reply Brief ("Reply Br.," filed July 21, 2017), and the
Examiner's Answer ("Ans.," mailed May 30, 2017) and Final Office Action
("Final Act.," mailed Sept. 6, 2016).
[2] Appellants identify Cerner Innovation, Inc. as the real party in interest.
App. Br. 3.

CLAIMED INVENTION

Appellants' claimed invention is "generally directed to the integration of devices for measuring patient location with the patient's electronic health records." App. Br. 3; *see also* Spec. ¶ 1 (describing that various sources in a healthcare environment capture monitored values of a patient, such as locations of a person, and identifying a need to integrate these sources into a single solution). Claims 1, 14, and 24 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. Non-transitory computer-readable media storing computer-executable instructions that, when executed, cause a computing device to perform operations comprising:
>
> receiving from a medical device a first event indication, which describes an alarm-triggering event detected by the medical device, the first event indication including a patient identifier of a patient associated with the medical device in a patient-to-device datastore, wherein the alarm-triggering event indicates that a location of the patient has changed;
>
> transforming the first event indication to a standard format by conforming a Java class name of the first event indication;
>
> determining that a notification is associated with the alarm-triggering event by referencing a rules engine to retrieve a rule associated with the alarm-triggering event, wherein the rule specifies that the notification is to be provided to a first notification recipient when the alarm-triggering event is detected, a patient medical condition of the patient satisfies a medical-condition criterion, and the location of the patient has changed, and wherein the rule further specifies that the notification is stored to a repository when the alarm-triggering event is detected, the patient medical condition of the patient does not satisfy the medical-condition criterion, and the location of the patient has changed;
>
> retrieving the patient medical condition from a datastore maintaining an electronic medical record of the patient, wherein the patient identifier is used to locate the patient medical condition in the electronic medical record stored in the datastore;

determining whether the patient medical condition satisfies the medical-condition criterion by comparing the patient medical condition to the medical-condition criterion;

providing the notification to the first notification recipient when the alarm-triggering event has been detected, the patient medical condition satisfies the medical condition criterion, and the location of the patient has changed; and

not providing the notification to the first notification recipient and storing the notification in the repository when the alarm-triggering event has been detected, the patient medical condition does not satisfy the medical-condition criterion, and the location of the patient has changed.

REJECTION

Claims 1, 3, 5, 8, 14–19, and 21–24 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

ANALYSIS

Patent-Ineligible Subject Matter

Appellants argue the pending claims as a group. *See* App. Br. 8–20; *see also* Reply Br. 2–11. We select independent claim 1 as representative. The remaining claims stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (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*, 573 U.S. at 217. The first step in that analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts." *Id.* If the claims are not directed to a patent-ineligible concept, e.g., an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered "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." *Id.* (quoting *Mayo*, 566 U.S. at 79, 78).

The Court acknowledged in *Mayo*, that "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 566 U.S. at 71. Therefore, the Federal Circuit has instructed that claims are to be considered in their entirety to determine "whether their character as a whole is directed to excluded subject matter." *McRO, Inc. v. Bandai Namco Games Am., Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)).

In rejecting the claims under 35 U.S.C. § 101, the Examiner determined that the claims are directed to a process for determining whether a patient medical condition satisfies a medical condition criterion by comparing the patient medical condition to the medical criterion. Ans. 2. The process recites steps for receiving a first event indication, transforming

the first event indication into a standard format, determining that a notification is associated with the alarm-triggering event, retrieving the patient medical condition that satisfies the medical condition, and providing notification. *Id.* at 2–3. The Examiner concluded that Appellants' claims are similar to claims for collecting and analyzing information, and displaying certain results of the collection and analysis that the Federal Circuit has held to be patent ineligible. *Id.* at 3 (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016)). The Examiner also determined that the claims do not include any additional elements, alone or in combination, that amount to significantly more than the underlying abstract idea of collecting information, analyzing it, and displaying certain results of the collection and analysis.[3] *Id.* at 3–4.

The Federal Circuit has explained that "the 'directed to' inquiry applies a stage-one filter to claims, considered in light of the [S]pecification, based on whether 'their character as a whole is directed to excluded subject matter.'" *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp.*, 790 F.3d at 1346). It asks whether the focus of the claims is on a specific improvement in relevant technology or on a process that itself qualifies as an "abstract idea" for which computers are invoked merely as a tool. *See id.* at 1335–36.

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[3] The mailing of the Examiner's Answer and the filing of Appellants' Reply Brief occurred prior to the USPTO issuing its latest guidance on patent eligibility. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Revised Guidance"). We review the presently appealed rejection in light of recent relevant court decisions and the Revised Guidance.

We are not persuaded that the Examiner erred in determining that the claims are directed to an abstract idea. Reply Br. 2–8; *see also* App. Br. 9–12. The Specification is titled "PROCESSING EVENT INFORMATION OF VARIOUS SOURCES." The Specification describes that in a healthcare environment, "various sources capture, communicate and store information, such as monitored values of a patient, locations of a person or a device, [and] equipment utilization." Spec. ¶ 1. "Exemplary sources of information include medical devices that monitor patients, real-time locator systems, nurse-call systems, patient-bedside systems, communication systems (e.g., in-house phone, mobile device, pager, etc.), and a healthcare information system." *Id.* ¶ 1. However, the sources are typically not integrated with one another in a manner that allows information from one source to be combined with information of other sources. *Id.* Appellants' invention seeks to integrate the sources into a single solution. *Id.*

Claim 1 is a non-transitory computer-readable media claim storing computer-executable instructions. When executed, the computer-executable instructions cause a computing device to perform the following operations: receiving from a medical device a first event indication that describes an alarm-triggering event detected by the medical device; transforming the first event indication to a standard format; determining that a notification is associated with the alarm-triggering event by referencing a rules engine to retrieve a rule; retrieving the patient medical condition from a datastore maintaining an electronic medical record of the patient; determining whether the patient medical condition satisfies the medical condition criterion; providing the notification to the first notification recipient when the alarm-triggering event has been detected; and not providing the notification to the

first notification recipient and storing the notification in the repository when
the alarm triggering event has been detected. Considered in light of the
Specification, the purported advance over the prior art is, thus, an improved
way of receiving and processing event information in a healthcare
environment. In that context, claim 1 is directed to collecting data (e.g., first
event indication, patient medical), analyzing the data (e.g., transforming the
event indication to a standard format, determining that a notification is
associated with the alarm-triggering event by referencing a rules engine to
retrieve a rule, determining whether the patient medical information satisfies
the medical condition), and presenting the results (e.g., providing a
notification, not providing a notification). Therefore, we are not persuaded
that the Examiner erred in determining that claim 1 is directed to
determining whether a patient medical condition satisfies a medical
condition criterion by comparing the patient medical condition to the
medical criterion, which is managing personal behavior (including following
rules or instructions) — i.e., a method of organizing human activity, and
therefore, an abstract idea.

The Federal Circuit has consistently held that abstract ideas include
the concepts of collecting data, analyzing the data, and displaying the results
of the collection and analysis, including when limited to particular content.
See, e.g., Intellectual Ventures I LLC v. Capital One Fin. Corp., 850 F.3d
1332, 1340 (Fed. Cir. 2017) (identifying the abstract idea of collecting,
displaying, and manipulating data); *Elec. Power Grp., LLC v. Alstom S.A.*,
830 F.3d 1350, 1354 (Fed. Cir. 2016) (characterizing collecting information,
analyzing information by steps people go through in their minds, or by
mathematical algorithms, and presenting the results of collecting and

analyzing information, without more, as matters within the realm of abstract ideas); *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018) ("As many cases make clear, 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." (quoting *Elec. Power Grp.*, 830 F.3d at 1353, 1355 (citing cases)).

Appellants contend that the combination of elements improves the function of a computer or another technology. Reply Br. 8–9; *see also* App. Br. 12–16. Specifically, Appellants assert that conventional methods of alerting medical professionals of a patent's movement suffered from locator systems not integrating with electronic medical systems. Reply Br. 8. Appellants' claimed invention purportedly solves this problem, enabling a patient movement alerts to be based on information in the patient's heath record, as well as the patient's location. *Id.* at 8–9. Appellants thus conclude that the claims "present a technological solution to a technological problem." *Id.* at 9. Yet, in this regard, claim 1 recites "transforming the first event indication to a standard format by conforming a Java class name of the first event indication," which does little more than conform the event indication to a Java class format, which falls within precedent of finding generic computer components insufficient to add an inventive concept to an otherwise abstract idea. *See Alice*, 573 U.S. at 225–26. A general statement of transforming data to a "standard format" using a Java class, as recited in claim 1, does not suffice to show a technological improvement. *See In re TLI Commc'ns Patent Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016) ("vague functional descriptions . . . are insufficient to transform the abstract idea into

a patent-eligible invention); *see also* Spec. ¶¶ 38, 41 (suggesting the conventional use of a Java class name).

We are not persuaded by Appellants' argument that the claims are tied to a machine that plays a significant role in the claims. *See* App. Br. 11–12. Appellants point to limitations in the claims that require technology and assert that "the steps cannot be performed mentally." *Id.* But the limitations Appellants identify as tying the claims to a machine relate to limiting the source of the information collected and analyzed to a particular source, but this is not enough to make the collection and analysis other than abstract. *See SAP Am.*, 898 F.3d at 1168 (quoting *Elec. Power Grp.*, 830 F.3d at 1353, 1355). Here, claim 1 is not tied to any particular novel machine or apparatus, and can be implemented using only generic computer components. *See, e.g.*, Spec. ¶¶ 17–23, 26, 29. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) ("[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.").

We are not persuaded that the claims are analogous to the patent-eligible claims at issue in *McRO* and *DDR Holdings*. App. Br. 12–16. Appellants assert that the claims "enable[] a more efficient combination and use of captured patient location information than any conventional solution for this problem" by integrating the locator system with the electronic health records. *Id.* at 14–15. Yet, the claims at issue in *McRO* described an improvement to a 3-D computer generated lip synchronization animation by using specific rules to define output morph weight set stream as a function of phoneme sequence and time of the phoneme sequence. *McRO*, 837 F.3d at 1310. Using these specific rules allows a computer to produce accurate and

realistic synchronization in animated characters, which previously required human animators or artists to produce. *Id.* at 1313. Here, Appellants have not persuaded us that claim 1 recites comparable specific rules or a comparable improvement to technology.

For much the same reason, we are not persuaded that the claims are analogous to those at issue in *DDR Holdings*. There, the claims changed the routine, conventional functioning of Internet hyperlink protocol to retain website visitors. *DDR Holdings*, 773 F.3d at 1257. Specifically, the claims modified the conventional web browsing experience by directing a user of a host website, who clicks an advertisement, to a "store within a store" on the host website, rather than to the advertiser's third-party website. *Id.* at 1257–58. The court determined that "the claims address a business challenge (retaining website visitors) [that] is a challenge particular to the Internet." *Id.* at 1257. The court also determined that the invention was "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks," and did not simply use computers to serve a conventional business purpose. *Id.* Rather, there was a change to the routine, conventional functioning of Internet hyperlink protocol. *Id.* Here, in contrast, there is no indication that a computer network, or the Internet, in particular, or any other technology is used other than in its normal, expected, and routine manner.

We find no indication in the Specification, nor do Appellants direct us to any indication, that the operations recited in claim 1 invoke any assertedly inventive programming, require any specialized computer hardware or other inventive computer components, or that the claimed invention is implemented using other than generic computer components to perform

generic computer functions. We also find no indication in the Specification that the claimed invention effects a transformation or reduction of a particular article to a different state or thing. Nor do we find anything of record, short of attorney argument, that attributes any improvement in technology and/or a technical field to the claimed invention or that otherwise indicates that the claimed invention integrates the abstract idea into a "practical application," as that phrase is used in the USPTO's "2019 Revised Patent Subject Matter Eligibility Guidance," 84 Fed. Reg. 50, 55 (January 7, 2019).[4]

Turning to step two of the *Mayo/Alice* framework, Appellants argue that the Examiner erred in rejecting the claims under 35 U.S.C. § 101, because the claims recite an inventive concept that is sufficient to ensure that the claims amount to significantly more than the abstract idea. App. Br. 16–19. In this regard, Appellants contend that the claims are analogous to those at issue in *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016), and *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016). Appellants ostensibly

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[4] In accordance with the USPTO's revised guidance, a claim will be considered "directed to" an abstract idea if (1) the claim recites subject matter falling within one of the following groupings of abstract ideas: (a) mathematical concepts; (b) certain methods of organizing human interactions, e.g., fundamental economic principles or practices, commercial or legal interactions; and (c) mental processes, and (2) the claim does not integrate the abstract idea into a practical application. *See* Revised Guidance, 84 Fed. Reg. at 54–55. "A claim that integrates a judicial exception into a practical application will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limitation on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception." *Id.* at 54.

maintain that the present claims are analogous to those in *BASCOM* and
Amdocs because the claims recite a "specific technological solution to a
problem in healthcare technology" that address an "inability for patient
locator systems or other medical devices to communicate with stored patient
medical records" and, thus, an "inability to automatically determine if an
alert should be provided to a recipient." App. Br. 19 (citing Spec. ¶ 1). Yet,
unlike the situation in those claims, Appellants' claim 1 merely recites
desired functional results without specifying how the results are acheived:
transforming the first event indication to a standard format. Accordingly, we
are not persuaded that claim 1, like the claims in *Amdocs*, achieves any
improvement in computer functionality or that the operations recited in
claim 1 require known components to operate in an unconventional manner.
Likewise, we are not persuaded that claim 1 achieves any improvement to
computer technology analogous to the ordered combination described in
BASCOM.

 To the extent Appellants maintain that claim 1 recites limitations that
are not well-understood, routine, and conventional activities, because
claim 1 is novel and/or non-obvious in view of the prior art, Appellants'
argument is not persuasive. App. Br. 18. Although the second step in the
Mayo/Alice framework is termed a search for an "inventive concept," the
analysis is not an evaluation of novelty or non-obviousness, but rather, a
search for "an element or combination of elements that is 'sufficient to
ensure that the patent in practice amounts to significantly more than a patent
upon the [ineligible concept] itself.'" *Alice*, 573 U.S. at 217–18 (alteration
in original) (quoting *Mayo*, 566 U.S. at 72–73). A novel and non-obvious

claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90.

We are not persuaded, on the present record, that the Examiner erred in rejecting independent claim 1 under 35 U.S.C. § 101. Therefore, we sustain the Examiner's rejection of claim 1, and claims 3, 5, 8, 14–19, and 21–24, which fall with claim 1.

DECISION

The Examiner's rejection of claims 1, 3, 5, 8, 14–19, and 21–24 under 35 U.S.C. § 101 is affirmed.

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