UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte EDMUND S. DUBENS

Appeal 2016-008708
Application 14/017,015
Technology Center 3600

Before ST. JOHN COURTENAY III, THU A. DANG, and
JASON J. CHUNG, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from a non-final rejection
of claims 1–21, which are all the claims pending in this application. We
have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

Introduction

Appellant's invention "relates to methods and devices for motor
vehicle driver risk reduction and, more particularly, methods for reducing
the occurrence of risk events through recommended interventions and
devices thereof." (Spec. ¶ 1).

Exemplary Claim

1.   A method for optimally analyzing human factor data to identify and recommend interventions in order to reduce motor vehicle driver risk and improve driver safety, the method comprising:

obtaining, by **a driver intervention device** and from performance data retrieved via one or more communication networks from a plurality of performance data source server devices, risk event data included therein and comprising an electronic indication of a plurality of risk events associated with a data identifier of a motor vehicle driver for a historical period of time;

correlating, by the driver intervention device, stored human factor data with one or more of the risk events in a human factor mapping table, the stored human factor data comprising an electronic indication of human factors of the motor vehicle driver that contributed to one or more of the risk events in the stored risk event data;

automatically determining, by the driver intervention device and based on the correlating, a likelihood that each of the human factors will contribute to a future risk event associated with the motor vehicle driver based on a number of correlations of each of the human factors in the stored human factor data with one of the risk events in the stored risk event data;

automatically generating, by the driver intervention device, a plurality of risk level values each associated with one of the human factors in the stored human factor data based on the determined likelihood that the one of the human factors will contribute to a future risk event associated with the motor vehicle driver;

automatically generating, by the driver intervention device, a risk reduction plan output based on one of a plurality of recommended interventions mapped in a stored intervention library to one of the human factors in the stored human factor data having a higher associated one of the risk level values for

2

the motor vehicle driver than any other of the human factors in the stored human factor data; and

outputting, by the driver intervention device, the recommended intervention of the risk reduction plan output in an electronic format, to **a driver computing device** associated with the motor vehicle driver, and via one or more other communication networks.

(Emphases added).

Rejection

Claims 1–21 are rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

Issue on Appeal

Did the Examiner err in rejecting claims 1–21 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter?

ANALYSIS

We have considered all of Appellant's arguments and any evidence presented. To the extent Appellant has not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). We highlight and address specific findings and arguments for emphasis in our analysis below.

Mayo/Alice Analysis under 35 U.S.C. § 101

Under 35 U.S.C. § 101, a patent may be obtained for "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." The Supreme Court has "long held that this provision contains an important implicit exception: Laws of nature,

natural phenomena, and abstract ideas are not patentable." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass'n for Molecular Pathology* v. *Myriad Genetics, Inc.*, 569 U.S. 589–90 (2013)). 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, 82–84 (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 that analysis is to determine whether the claims at issue are directed to one of those patent-ineligible concepts, such as an **abstract idea**. Abstract ideas may include, but are not limited to, **fundamental economic practices**, **methods of organizing human activities**, **an idea of itself**, and **mathematical formulas or relationships**. *Id.* at 2355–57. (emphasis added).

If the claims are **not directed** to a patent-ineligible concept, **the inquiry ends**. *See Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1262 (Fed. Cir. 2017).

Otherwise, the inquiry proceeds to the **second step** in which the elements of the claims are considered "individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 79, 78). We consider the question of whether the claims are directed to a **specific improvement** in the capabilities of the computing devices, or, instead, "a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

We, therefore, decide under **step two** whether the claims: (a) set forth an **inventive concept** that provides a specific means or method that **improves** the relevant technology, **or** (b) are directed to a result or effect that itself is the abstract idea, in which the claims merely invoke generic processes and machinery. *See Enfish*, 822 F.3d at 1336.

The Examiner's Rejection of Claims 1–21 under §101 [1]

Regarding the **first step** of the *Mayo/Alice* analysis, the Examiner concludes that claim 1 is: [2]

> [D]irected to a method of collecting, organizing, analyzing and comparing data in order to determine a *risk reduction plan* which is an **idea of itself**. This is similar to other concepts that have been found by the courts to be abstract in nature such as comparing data to determine a *risk level* as in *Perkin-Elmer*. [3] Thus, the claim 1 is directed to an **abstract idea**.

(Non-Final Act. 3) (emphasis added).

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[1] We give the contested claim limitations the broadest reasonable interpretation (BRI) consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

[2] "Patent eligibility under § 101 presents an issue of law." *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1340 (Fed. Cir. 2013).

[3] The Examiner cites to *PerkinElmer, Inc. v. Intema Ltd.*, 496 Fed. Appx. 65 (Fed. Cir. 2012), which is a non-precedential Federal Circuit §101 case involving a calculation to determine the *risk* of Down's syndrome. (*See PerkinElmer*, claims 1 and 20 at *68). The court held: "Because the asserted claims recite an ineligible mental step and natural law, and no aspect of the method converts these ineligible concepts into patentable applications of those concepts, the claims cannot stand. Accordingly, we find the claims ineligible under section 101 and affirm the judgment for **PerkinElmer**." (*Id.* at *73).

> Similar arguments can be extended to other independent claims 8 and 15 and hence these claims 8 and 15 are rejected on similar grounds as claim 1.
>
> Dependent claims 2–7, 9–14 and 16–21 recite additional program elements which are abstract in nature and do not add significantly more to the abstract idea.

(Non-Final Act. 4) (emphasis added).

Regarding the **second step** of the *Mayo/Alice* analysis, the Examiner finds the claims: [4]

> [R]ecite additional program elements which are abstract in nature and do not add significantly more to the abstract idea. There is **no inventive concept** sufficient to **transform** the claimed subject matter into patent-eligible application. The claims do not amount to significantly more than the abstract idea itself.

(Non-Final Act. 4) (emphasis added).

In the Answer (3), the Examiner finds that Appellant's claims:

> [A]ppl[y] the abstract idea using a computer. The computer is merely performing its **routine, well-understood and conventional function** of obtaining, correlating, determining, generating and outputting steps and is similar to what has been found by the courts (in Alice) not to be adding significantly more to the underlying abstract idea. In the absence of a computer implementation, these steps can be performed manually and may

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[4] The patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). In particular, "[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact." *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

6

be interpreted as a certain methods of organizing human activity which is an abstract idea.

(emphasis added).

Thus, the Examiner concludes that all claims 1–21 on appeal are not patent-eligible under 35 U.S.C. § 101.

Mayo/Alice Analysis — Step 1

Although the Examiner includes a detailed "Response to Arguments" in the Answer (2–7), we note that Appellant has not filed a Reply Brief in further response. Therefore, we consider Appellant's arguments as advanced in the Appeal Brief.

Regarding *Alice* Step 1, Appellant argues, inter alia, that the claims are **not directed to an abstract idea**. (App. Br. 5–7). In support, Appellant merely recites the *correlating, automatically determining, and automatically generating* claim limitations (App. Br. 6), and urges that "[t]hese significant and meaningful limitations in claims 1, 8, and 15 are clearly rooted in computer technology and are not directed to the abstract concept of comparing data to determine a risk level." (*Id.*). Appellant avers that "the first part of the analysis set forth in the [Examination] Guidelines is not satisfied, and that the second part of the analysis set forth in the Guidelines therefore need not be addressed." (App. Br. 7).

However, we conclude Appellant's claims 1–21 are directed to a method or system of organizing human activity that merely implements conventional computer devices, servers, and networks to reduce the cost (e.g., to a fleet operator), of drivers who may have higher risk levels by "recommend[ing] **interventions** in order to reduce motor vehicle driver risk

7

and improve driver safety." (Claim 1, preamble) (emphasis added). Independent claims 8 and 15 recite similar language having commensurate scope. Thus, given the plain language of the claims, we disagree with Appellant's contention that the claims on appeal are **not** directed to the "abstract concept of comparing data to determine a risk level." (App. Br. 6).

We note such determined risk levels are recited as *"risk level values* each associated with one of the human factors in the stored human factor data based on the determined likelihood that the *one of the human factors will contribute to a future risk event* associated with the motor vehicle *driver*." (Claim 1) (emphases added). Independent claims 8 and 15 recite similar language having commensurate scope.

Thus, we find such automatically generated "risk level values" are used to produce the **result:** "the **recommended intervention of the risk reduction plan** output in an electronic format, to a driver computing device associated with the **motor vehicle driver**, and via one or more other communication networks." (emphases added). Independent claims 8 and 15 recite similar language having commensurate scope.

However, our reviewing court guides "[t]he abstract idea exception prevents patenting a **result** where 'it matters not by what process or machinery the result is accomplished.'" *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (2016) (quoting *O'Reilly v. Morse*, 56 U.S. 62, 113 (1854)) (emphasis added).). *See Alice*, 134 S. Ct. at 2358 (holding that "the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention").

Here, we find Appellant's claims 1–21 on appeal are analogous to the method claim considered by the court in *Electric Power Group, LLC v.*

Alstom S.A., 830 F.3d 1350 (Fed. Cir. 2016), at least to the extent that
Appellant's claims are similarly directed to "merely selecting information,
by content or source, for collection, analysis, and display [which] does
nothing significant to differentiate a process from ordinary mental
processes." *Id.* at 1355. The Federal Circuit has ruled that claims
encompassing data collection and analysis were directed to abstract ideas.
See, e.g., Credit Acceptance Corp., 859 F.3d at 1047, 1054–56 & n.6;
Intellectual Ventures I LLC v. Capital One Fin. Corp., 850 F.3d 1332, 1340
(Fed. Cir. 2017) ("collecting, displaying, and manipulating data" is an
abstract idea. Our reviewing court has concluded that abstract ideas include
the concepts of collecting data, recognizing certain data within the collected
data set, and storing the data in memory. *Content Extraction &
Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed.
Cir. 2014).

This reasoning is applicable here. Therefore, regarding the first step
of the *Mayo/Alice* test, we are not persuaded by Appellant's arguments.
(App. Br. 5–7). Thus, under a broad but reasonable interpretation[5] of
exemplary claim 1, the aforementioned case law guides our legal conclusion
that "optimally analyzing human factor data to identify and **recommend
interventions** in order to reduce motor vehicle driver risk and improve
driver safety" is directed to a **fundamental economic business practice**
(i.e., reducing the **cost of accidents** caused by unsafe drivers), which is a
patent-ineligible **abstract idea**.

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[5] *See* n.1, *supra*.

Our reviewing court guides that claimed fundamental economic and conventional business practices are often abstract ideas, even if performed on a computer. Moreover, but for the recitation of a generic "processor" (e.g., claim 8), that performs various steps *automatically*, we conclude the recited steps or functions of the independent claims could be performed by a person as mental steps, or with the aid of pen and paper. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) ("That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*.").

Therefore, on this record, we are not persuaded the Examiner erred in concluding that all claims 1–21 on appeal are directed to a patent-ineligible **abstract idea**.

Mayo/Alice Analysis – Step 2

Because we conclude all claims on appeal are directed to an abstract idea, we proceed to the **second part** of the *Mayo/Alice* analysis. We further analyze the claims to determine if there are **additional limitations** that individually, or as an ordered combination, ensure the claims amount to **"significantly more"** than the abstract idea. *Alice*, 134 S. Ct. at 2357 (emphasis added).

Regarding *Alice* Step 2, Appellant contends:

> [A]ssuming arguendo that the first part of the analysis was satisfied, the second part of the analysis under the Guidelines is not satisfied by claims 1-21. In particular, the Guidelines provide that the second part of the analysis is not satisfied if the limitations add "significantly more." **Limitations add "significantly more"** when they *relate to meaningful limitations beyond generally linking the use of an abstract idea to a*

> *particular technological environment **or** add specific limitations*
> *other than what is well-understood, routine, and conventional in*
> *the field and add unconventional steps that confine the claims to*
> *a particular useful application.* Claims 1-21 clearly recite such
> meaningful and specific limitations.

(App. Br. 7) (emphasis added).

We disagree, because Appellant merely recites the claim limitations in support of the assertion. (App. Br. 8). We find nothing in the claims on appeal that focuses on a specific means or method that **improves** the recited "via one or more **communication networks** from a plurality of performance data source **server devices**" (Independent claims 1, 8, and 15), or the "processor" additionally recited in independent claim 8. In particular, we find the claims on appeal are **silent** regarding **specific limitations** directed to an **improved computer system, processor, memory, network, or Internet**.

Although dependent claims 12 and 19 include a "database" we find nothing in these claims that is directed to a specific **improvement** to a **database**, such as a "**self-referential table** . . . designed to **improve** the way a computer stores and retrieves data in memory," as found by the court regarding the subject claims in *Enfish*, 822 F.3d at 1339. (emphasis added). Instead, we find Appellant's claims 12 and 19 merely store data in a database in the **conventional sense**. For example, *see* claim 12: "storing the performance data in a performance data database;" (emphasis added).

Our reviewing court provides guidance regarding the use of such **generic computer components**. *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1348 (Fed. Cir. 2016) ("An abstract idea on 'an Internet computer network' or on a generic computer is still an abstract idea.") (Citation omitted) (emphasis added); *Elec. Power Grp.*, 830

F.3d at 1355 ("We have repeatedly held that such invocations of computers and networks that are not even arguably inventive are 'insufficient to pass the test of an inventive concept in the application' of an abstract idea.") (Citation omitted)); *Intellectual Ventures I*, 850 F.3d at 1341 ("Rather, the claims recite both a generic computer element—a processor—and a series of generic computer 'components' that merely restate their individual functions . . . . That is to say, they merely describe the functions of the abstract idea itself, without particularity. This is simply not enough under step two.").

Appellant further contends:

> Instead, these limitations confine the claims to a particular useful application of optimizing and improving the technology of electronic delivery of targeted interventions to motor vehicle drivers in order to improve driver safety. In fact, *the Office has acknowledged that the limitations of claims 1-21 are not well-understood, routine, or conventional* **by indicating** *on page 3 of the Office action dated June 2, 2015 that,* "**the claims 1-21 are allowable over the prior art of record.**" As a result, the second part of the analysis set forth in the Guidelines also is not satisfied by the above claims 1-21.

(App. Br. 9) (emphasis added).

Appellant's arguments do not persuade us the Examiner erred, because the Supreme Court emphasizes: "[t]he '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").

Therefore, we disagree with Appellant's statement that "the Office has failed to set forth a *prima facie* case of unpatentability to reject independent claims 1, 8, and 15 as being directed to non-statutory subject matter." (App. Br. 9). We find the Examiner sufficiently notified Appellant of the reasons for the rejection "together with such information . . . as may be useful in judging of the propriety of continuing the prosecution of [the] application," pursuant to 35 U.S.C. § 132(a). In doing so, the Examiner set forth a prima facie case of unpatentability under § 101, such that the burden shifted to Appellant to demonstrate that the claims are patent-eligible.

Because none of Appellant's claims on appeal are **directed to an improvement in a processor, server, database, or other computer/network component**, we find that none of the claim limitations, viewed "both individually and as an ordered combination," amount to significantly more than the judicial exception in order to sufficiently *transform* the nature of the claims into patent-eligible subject matter. *See Alice*, 134 S. Ct. at 2355 (internal quotations omitted) (quoting *Mayo*, 566 U.S. at 79). Thus, we find the additional elements of a processor, server, and database, **do not provide an inventive concept**, without more. (Claims 1–21).

Applying the aforementioned guidance from our reviewing courts to the claims before us on appeal, we conclude, in our *Mayo/Alice* analysis, that each of Appellant's claims 1–21, considered as a whole, is directed to (under *step one*), **a patent-ineligible abstract idea**, and under *step two*, **does not recite something "significantly more"** to transform the nature of the claim

13

into a patent-eligible application.

We note again that Appellant has not further rebutted the Examiner's detailed responsive explanations in the Answer (2–7) by filing a Reply Brief.

Accordingly, for at least the reasons discussed above, we sustain the Examiner's rejection under 35 U.S.C. § 101 of claims 1–21, as being directed to patent-ineligible subject matter in light of *Alice* and its progeny.[6]

Conclusion

The Examiner did not err in rejecting claims 1–21 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

DECISION

We affirm the Examiner's decision rejecting claims 1–21 under 35 U.S.C. § 101.

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). *See* 37 C.F.R. § 41.50(f).

<u>AFFIRMED</u>

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[6] To the extent Appellant has not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).