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 ROBERT Y. NONEZ and ANGELA B. SHEN-HSIEH

Appeal 2019-000080
Application 14/619,786
Technology Center 3600

Before JAMES R. HUGHES, JOHN A. EVANS, and
JASON J. CHUNG, *Administrative Patent Judges*.

HUGHES, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the
Examiner's decision rejecting claims 11–20. Claims 1–10 have been
canceled. *See* Final Act. 1–2.[2] We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R.
§ 1.42(a). Appellant identifies the real party in interest as International
Business Machines Corporation. *See* Appeal Br. 3.
[2] We refer to Appellant's Specification ("Spec."), filed Feb. 11, 2015;
Appeal Brief ("Appeal Br."), filed July 6, 2018; and Reply Brief ("Reply
Br."), filed Oct. 2, 2018. We also refer to the Examiner's Final Office
Action ("Final Act."), mailed Feb. 5, 2018; and Answer ("Ans.") mailed
Aug. 7, 2018.

CLAIMED SUBJECT MATTER

The invention generally relates to "business intelligence (BI) systems" (Spec. ¶ 4), and more particularly, "to techniques, methods, systems, devices, and computer program products for statistically and ontologically correlated analytics in a business intelligence (BI) analytics system" (Spec. ¶ 5). "Business intelligence (BI) systems may be used to provide insights into . . . collections of enterprise data," and "a BI analytics system may perform analysis on data in response to user queries, and present BI analytics data responsive to the queries." Spec. ¶ 4; *see* Spec. ¶¶ 2–9; Abstract. Claims 11 and 16 are independent. Claim 11, reproduced below, is illustrative of the claimed subject matter:

> 11. A computer program product for business intelligence (BI) analytics, the computer program product comprising a computer-readable storage medium having program code embodied therewith, the program code executable by a computing device to:
> [A] perform an ontological analysis on data items in a relevant data set defined for a BI analytics query to determine one or more correlations of the data items in the relevant data set with ontological concepts in an ontological concept subsystem;
> [B] perform a first statistical analysis on a set of direct analytics output data items from the relevant data set that are included in a direct BI analytics output to rank the direct analytics output data items in an order of influence on the direct BI analytics output;
> [C] perform a second statistical analysis on the data items in the relevant data set relative to the direct analytics output data items to determine one or more of the data items in the relevant data set that influence the respective direct analytics output data items;
> [D] generate based on the second statistical analysis, a list of key drivers from the data items in the relevant data set such

that the list of key drivers has a ranking in an order of the influence;

[E] revise the ranking of the list of key drivers based at least in part on the correlations of the key drivers with the ontological concepts by performing at least one of:

[E1] increasing a rank of a first key driver in response to determining that the first key driver has at least one respective correlated ontological concept in the ontological concept subsystem, or

[E2] removing a second key driver from the list in response to determining that the first key driver has at least one respective correlated ontological concept in the ontological concept subsystem; and[;]

[F] generate a correlated analytics output comprising information on one or more of the key drivers based on the ranking of the list of key drivers.

Appeal Br. 19–20 (Claims App.) (bracketed claim limitation designations added).

REJECTION

The Examiner rejects claims 11–20 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. *See* Final Act. 4–8.

RELATED APPEAL

Appellant indicates that the instant appeal "may be related to" an Appeal filed for a related patent application, U.S. Patent Application No. 15/082,352 ("'352 Appl."). *See* Appeal Br. 3. The appeal for the '352 Appl. was assigned Appeal No. 2019-000065, and the instant Appeal is related to Appeal No. 2019-000065. In the '352 Appl. and Appeal No. 2019-000065, Appellant incorporated by reference the instant application. *See* '352 Appl. Specification ¶ 1; *see also* Appeal Brief for Appeal No. 2019-000065 (dated

July 6, 2018) at 3. In that decision (Appeal No. 2019-000065) ("Decision")
mailed on January 2, 2020, the Board affirmed the Examiner's 35 U.S.C.
§ 101 rejection of claims 1–7, 9, and 10. The scope of the claims in the
instant application are substantially similar to the at-issue claims in the '352
Appl.

ANALYSIS

Subject Matter Eligibility—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. v.
CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (quoting *Ass'n for Molecular
Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

The Supreme Court, in *Alice*, reiterated the two-step framework
previously set forth in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*,
566 U.S. 66, 77–80 (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
framework requires us first to consider "whether the claims at issue are
directed to one of those patent-ineligible concepts." *Alice*, 573 U.S. at 217.
If so, we then examine "the elements of [the] claim both individually and 'as
an ordered combination' to determine whether the additional elements
'transform the nature of the claim' into a patent-eligible application." *Alice*,
573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78, 79). That is, we examine the

claim for an "inventive concept," "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).

The Patent Office recently published revised guidance concerning this framework and the application of § 101. USPTO's 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (hereinafter "2019 Revised Guidance"). Under that guidance, we first look to whether the claim recites:

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, mental processes, or certain methods of organizing human activity such as a fundamental economic practice or managing personal behavior or relationships or interactions between people) (hereinafter "Step 2A, prong 1"); and

> (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)) (hereinafter "Step 2A, prong 2").[3]

See 2019 Revised Guidance, 84 Fed. Reg. at 51–52, 55.

A claim that integrates a judicial exception into a practical application applies, relies on, or uses the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception. *See* 2019 Revised Guidance, 84 Fed. Reg. at 54. When the judicial exception is so integrated, then the claim is not directed to a judicial exception and is patent

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[3] All references to the MPEP are to the Ninth Edition, Revision 08-2017 (rev. Jan. 2018).

eligible under 35 U.S.C. § 101. *See* 2019 Revised Guidance, 84 Fed. Reg. at 54.

Only if a claim: (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then evaluate whether the claim provides an inventive concept. *See* 2019 Revised Guidance 84 Fed. Reg. at 56; *Alice*, 573 U.S. at 217–18.

For example, we 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.[4]

See 2019 Revised Guidance, 84 Fed. Reg. at 56. With these principles in mind, we turn to the merits of the § 101 rejection. The Examiner rejects Appellant's claims 11–20 as being directed to patent-ineligible subject matter. *See* Final Act. 4–8; Ans. 3–6. Appellant does not separately argue the claims with specificity and, instead, argues the claims together for this rejection. *See* Appeal Br. 15, 17–18. Accordingly, we address the Examiner's rejection of independent claim 11 and the claims not separately argued by Appellant as a group based on claim 11, as permitted by 37 C.F.R. § 41.37(c)(1)(iv).

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[4] Items (3) and (4) are collectively referred to as "Step 2B" hereinafter and in the 2019 Revised Guidance.

Statutory Subject Matter

Claim 11 recites a "computer program product" "comprising a computer-readable storage medium having program code embodied therewith, the program code executable by a computing device." A computer-readable storage medium with computer-executable code is a "statutory product," specifically an "article of manufacture," which is a statutory category of invention (subject matter) (USPTO's Step 1). *See Examination Guidelines for Computer-Related Inventions*, 61 Fed. Reg. 7478, 7481–83, 7489 (February 28, 1996) ("Guidelines") (citing *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980)); *see also In re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994) ("The Board found that [the] claims [were] directed to a memory containing stored information, as a whole, [which] recited an article of manufacture."). We "evaluate the underlying process the computer will perform in order to determine the patentability of the product." Guidelines, 61 Fed. Reg. at 7482.

Abstract Idea

The Examiner rejects Appellant's claim 11 as being directed to patent-ineligible subject matter. *See* Final Act. 4–8; Ans. 3–6. Specifically, the Examiner concludes "the claimed invention is directed to a judicial exception (. . . an abstract idea) without significantly more" and claim 11 (as well as the other pending claims) is "directed to the abstract idea of an idea of itself in that it recites" steps including ontological and statistical analysis (Final Act. 4; *see* Final Act. 5) and mathematical relationships (*see* Final Act. 5). The Examiner also concludes the claim is drawn to "a collection of abstract ideas, specifically collecting, storing, analyzing, and transmitting information," which amount to mental processes similar to *Electric Power*

Group. Ans. 3 (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016)); *see* Ans. 3–6.

Appellant contends the Examiner erred in rejecting the claims as being directed to patent-ineligible subject matter. *See* Appeal Br. 8–17; Reply Br. 4–8. Specifically, Appellant contends, with respect to the first step of the *Alice* analysis, that the claims (in particular claim 11) "are ***not*** directed to an abstract idea" (Appeal Br. 8; *see* Appeal Br. 8–12), and that the Examiner improperly interpreted the claims (in particular claim 11) (*see* Appeal Br. 8–12). *See* Appeal Br. 8–12; Reply Br. 4–7. Appellant further contends the claims (in particular claim 11) embody a technical improvement—"independent claim 11 is inextricably tied to the computer technology of business intelligence analytics" (Appeal Br. 12 (emphasis omitted)), and "Appellant's specification identifies a technological improvement to the functioning of business intelligence analytics computing systems" (Appeal Br. 13). *See* Appeal Br. 12–15; Reply Br. 7. Appellant also contends the recited features of claim 11 (and the other pending claims) provide "technical improvements" that "are described in Appellant's specification," and are analogous to claims found eligible in *Enfish*. Reply Br. 7 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016)); *see* Appeal Br. 12–15; Reply Br. 7.

For the reasons discussed below, we conclude Appellant's claim 11 (as well as the other pending claims) recites abstract ideas, these abstract ideas are not integrated into a practical application, nor do they include an inventive concept. In view of the 2019 Revised Guidance, we clarify and expand the Examiner's reasoning as follows.

We begin our analysis by broadly but reasonably construing Appellant's claim 11. *See* Appeal Br. 19–20 (Claims App.). Claim 11 recites "computer program product" "comprising a computer-readable storage medium" with "program code embodied therewith, the program code executable by a computing device," where the executable code "perform[s] an ontological analysis on data items in a relevant data set" "to determine one or more correlations of the data items in the relevant data set with ontological concepts." In other words, claim 11 recites executing code (a computing device executing code stored on a computer-readable storage medium) to perform a process—data/information analysis (characterized as ontological analysis) on data items in a set of data in order to determine correlations among the data and "ontological concepts." *See* Spec. ¶¶ 7, 18, 38, 59, 60. The limitation recites a "computer-readable storage medium" with "program code" that is "executable by a computing device" such that the code causes the computing device to perform the analysis. *See* Spec. ¶¶ 67–68; Fig. 7. Hereinafter we refer to this limitation as "Step A."

Claim 11 also recites the executable code causing the computing device to "perform a first statistical analysis" "on a set of direct analytics output data items from the relevant data set" "to rank the direct analytics output data items in an order of influence on the direct BI analytics output." That is, the computer-executable process includes performing a statistical analysis on a set of data characterized as "direct analytics output" in order to rank the data by their (in the order of) influence (effect) on the direct BI analytics output. Claim 11 further recites program code executable by a computing device to "perform a second statistical analysis on the data items in the relevant data set" "relative to the direct analytics output data items"

"to determine one or more of the data items in the relevant data set that influence the respective direct analytics output data items." In other words, the computer-executable process includes performing a second statistical analysis on the set of data in order to determine data that influence (have an effect on) the data characterized (in step B) as direct BI analytics output. *See* Spec. ¶¶ 7, 18, 39, 59, 60. Hereinafter, we refer to these limitations as "Step B" and "Step C," respectively.

Claim 11 additionally recites program code executable by a computing device to generate a list of key drivers (data determined in step C relative to step B) ranked in an order of the influence based on the second statistical analysis. That is generating an ordered list of data (key drivers). *See* Spec. ¶¶ 7, 39, 60. Hereinafter we refer to this limitation as "Step D." Claim 11 also recites program code executable by a computing device to revise (adjust or change the order of) the ranking of the list (of key drivers) based on the correlations of the key drivers with the ontological concepts (results of step A). Hereinafter we refer to this limitation as "Step E." *See* Spec. ¶¶ 7, 40–42, 60–61. The revising step (Step E) further includes sub-processes (the revising sub-process), which may include increasing a rank of a data item (a first key driver) responsive to the correlation (step A). *See* Spec. ¶¶ 7, 40–42, 60–61. Hereinafter we refer to this limitation as "Step E1." The revising sub-process may alternately remove a data item (a second key driver) from the list responsive to determining the first key driver correlation (step A). *See* Spec. ¶¶ 7, 40–42, 60–61. Hereinafter we refer to this limitation as "Step E2." Claim 11 also recites program code executable by a computing device to generate an output—a correlated analytics output that includes information on the key drivers based on the ranking of the list

of key drivers (i.e., the ranking list of key drivers). *See* Spec. ¶¶ 7, 40–42, 60–61. Hereinafter we refer to this limitation as "Step F."

In summary, the system recited in claim 11 includes non-abstract elements (physical structure) that perform (cause a computing device to perform) the delineated functions, that is: the computer-readable storage medium and the computing device. When the code is extracted from the computer-readable medium and executed by the computing device, the computing device performs business intelligence (BI) analytics functions (processes) of information (data) analysis—an ontological analysis ("Step A"), a first statistical analysis ("Step B"), and a second statistical analysis ("Step C")—to generate a list of key drivers ranked in an order of the influence ("Step D"), which is manipulation of analyzed data. The code executed by the computing device further performs business intelligence (BI) analytics process (functions) of manipulating the analyzed data—changing (revising) the order of the ranked list (of key drivers) based on the correlations with the ontological concepts (Steps E, E1, and E2) to produce (generate) an output—the revised ranked list of key drivers ("Step F"). Hereinafter, we refer to this process as the "BI analytics process."

This is consistent with Applicant's description of the process— "[i]ndependent claim 11 is directed to 'a computer program product for business intelligence (BI) analytics . . . comprising a computer-readable storage medium having program code embodied therewith, the program code executable by a computing device'" that includes various functions (processes) to be performed by (executable by) the computing device. Appeal Br. 11–12. *See also* Spec. ¶ 60—"a statistically and ontologically

correlated analytics process . . . executing on one or more computing devices."

Appellant contends (*supra*) that the claims (in particular claim 11) are not abstract, and that the Examiner erred by improperly interpreting the claims (in particular claim 11). *See* Appeal Br. 8–12. Here, in rejecting the claims (in particular claim 11) under 35 U.S.C. § 101, the Examiner analyzed the claims using the *Mayo/Alice* two-step framework, consistent with the guidance set forth in the USPTO's *2014 Interim Guidance on Patent Subject Matter Eligibility*, 79 Fed. Reg. 74618 (Dec. 16, 2014), in effect at the time the rejection was made on February 5, 2018. The Examiner notified Appellant of the reasons for the rejection "together with such information and references as may be useful in judging of the propriety of continuing the prosecution of . . . [the] application." 35 U.S.C. § 132. *See* Final Act. 4–7. In doing so, the Examiner set forth a prima facie case of unpatentability such that the burden of production shifted to Appellant to demonstrate that the claims are patent eligible.

Appellant also contends (*supra*) the at-issue claims (in particular claim 11) demonstrate a technical improvement. *See* Appeal Br. 12–15; Reply Br. 7. Claim 11, however, recites no substantive limitations on how the BI analytics process performs the various information analysis steps (the ontological correlation and statistical analyses), or how the analyzed data is manipulated (how the process generates the ranked list of key drivers, changes the rank, and generates the revised ranked list of key drivers). That is, claim 11 does not recite what the technical features of data analysis and manipulation entail. The limitations are entirely functional in nature, or characterize various data (e.g., a data set defined for a BI analytics query and

direct analytics output data items). The recited computer-readable storage medium and computing device do not actually perform the delineated processes or function and, in any event, constitute additional elements that are not part of the abstract idea analysis.

Although Appellant contends the claims describe purported technological improvements or advances provided by BI analytics process, claim 11 (and the other pending claims) does not explicitly recite any specific improvements to technology, i.e., the computing device performing any improved processing or analysis. Claim 11, instead, simply recites analyzing data, generating results from the analyzed data, and revising the results (data manipulation) to generate a ranked list of data elements (key drivers).

A person can practically perform the function of Limitations A–F mentally, or by using pen and paper. Nowhere does Appellant point to specific claim limitations that distinguish over a human process. Further, the revised guidance explains that "mental processes" include acts that people can perform in their minds or using pen and paper, even if the claim recites that a generic computer component performs the acts. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52 n.14 ("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.") Because each of the limitations discussed above encompasses an act that people can perform in their minds or using pen and paper, claim 11 recites mental processes. Appellant's arguments have not persuaded us otherwise.

To the extent Appellant argues utilizing devices (e.g., the computer-readable storage medium and the computing device) to perform the recited functionality is not abstract, Appellant misconstrues the inquiry. As we explain *supra*, the computing device is an additional element that is not part of this part of the abstract idea analysis. The relevant inquiry is whether the processes (functionality) recited in the claims (in particular claim 11) are abstract.

We construe claim 11 (*supra*) as reciting analyzing and manipulating data (BI analytics information). Claims that recite performing information analysis (e.g., statistical analyses and correlating ontological information), as well as the collection and manipulation of information related to such analysis, have been determined by our reviewing court to be an abstract concept that is not patent eligible. *See SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1165, 1167–68 (Fed. Cir. 2018) (Claims reciting "[a] method for providing statistical analysis" (*id.* at 1165) were determined to be "directed to an abstract idea" (*id.* at 1168). "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" (*id.* at 1168 (internal quotation marks omitted)). *See also 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.*, 830 F.3d at 1354 (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); *Content Extraction &*

Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n, 776 F.3d 1343, 1345, 1347 (Fed. Cir. 2014) (finding the "claims generally recite . . . extracting data . . . [and] recognizing specific information from the extracted data" and that the "claims are drawn to the basic concept of data recognition"); *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter."). Indeed, even if the analysis requires one to access and gather data from a database or memory, or utilize a pen and paper in the analysis, such analysis may still be an abstract mental process. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) ("[E]ven if some physical steps are required to obtain information from the database . . . such data-gathering steps cannot alone confer patentability." A claim focused on verifying credit card transaction information is directed to "unpatentable mental processes" because the claim's steps "can be performed in the human mind, or by a human using a pen and paper.").

In summary, we conclude Appellant's claim 11 recites a judicial exception (USPTO's Step 2A, Prong 1; *see* 2019 Revised Guidance). Specifically, claim 11 recites a process of information analysis—ontological analysis and statistical analysis—to generate a ranked list, revising the ranked list based on ontological analysis, and generating the revised ranked list as discussed *supra.* The BI analytics process consists of mental processes that can be practically performed in the human mind (or utilizing pen and paper) including observation, evaluation, or judgment. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52, 53 (listing "[m]ental processes—

15

concepts performed in the human mind (including an observation, evaluation, judgment, opinion)" as one of the "enumerated groupings of abstract ideas" (footnote omitted)).

Practical Application

We next consider whether claim 11 integrates the abstract idea into a practical application (USPTO's Step 2A, Prong 2). *See* 2019 Revised Guidance, 84 Fed. Reg. at 51. In doing so, we consider whether there are any additional elements beyond the abstract idea that, individually or in combination, "integrate the [abstract idea] into a practical application, using one or more of the considerations laid out by the Supreme Court and the Federal Circuit." 2019 Revised Guidance, 84 Fed. Reg. at 54–55.

Claim 11 recites additional elements beyond the abstract BI analytics process (the judicial exception) (*supra*). The additional elements in claim 11 are the computer-readable storage medium and computing device that is capable of performing the recited functions or processes. *See* Spec. ¶ 62 (describing a "computing device . . . that may be used to execute statistically and ontologically correlated analytics program code"); Fig. 7. Initially, we note that neither the computer-readable storage medium nor the computing device actually executes the functionality. Appellant's Specification describes the computing device as capable of performing the functionality— "may be used to execute . . . [the] program code." Spec. ¶ 62. Additionally, Appellant's Specification describes the computing device "may be a server" or the "computing device may operate as all or part of a real or virtual server, and may be or incorporate a workstation, server, mainframe computer, notebook or laptop computer, desktop computer, tablet, smartphone, feature phone, or other programmable data processing

apparatus of any kind." Spec. ¶ 62. Appellant's Specification describes the computing device at a high level of generality.

In summary, Appellant's written description does not portray the computing device (or the computer-readable storage medium) as anything but standard computer components. Nor does Appellant's written description portray these components as operating in a new way. *See, e.g.*, Spec. ¶¶ 44–53, 60–61. Instead the written description depicts these components as generic components operating in their accustomed manner.

Appellant's written description does not describe these additional elements as performing in any way other than their accustomed functions utilizing standard techniques. Accordingly, Appellant's written description shows that additional elements are generic. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384 (Fed. Cir. 1986) ("[A] patent need not teach, and preferably omits, what is well known in the art."); *Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315, 1331 (Fed. Cir. 2017) ("The claimed mobile interface is so lacking in implementation details that it amounts to merely a generic component (software, hardware, or firmware) that permits the performance of the abstract idea, i.e., to retrieve the user-specific resources.").

Appellant contends claim 11 (and the other pending claims) provides technical improvement similar to the claims in *Enfish*. *See* Appeal Br. 12–15; Reply Br. 7. In other words, Appellant contends the claims recite a technological improvement that amounts to more than simply utilizing a computer as a tool to accomplish the BI analytics process.

Appellant's contentions correspond to the reasoning in MPEP § 2106.05(a)–(c), where additional elements integrate the judicial exception

into a practical application. We, however, disagree with Appellant's contentions. Appellant's additional elements do not apply or use the BI analytics process (the judicial exception) in a manner that imposes a meaningful limit on the judicial exception, such that it is more than a drafting effort designed to monopolize the exception. *See Alice*, 573 U.S. at 221–24 (citing *Mayo*, 566 U.S. at 78–85). Rather, Appellant's claim recites generic computer elements (e.g., the processing device) that are utilized as tools to carry out the information analysis to generate the revised ranked list of key drivers as discussed *supra*. Utilizing computers as tools to perform common data information analysis and data manipulation functions that can be mental processes (an abstract idea) does not impose a meaningful limit on the abstract idea. *See* MPEP § 2106.05(f); *see also Alice*, 573 U.S. at 223 (finding "if [the] recitation of a computer amounts to a mere instruction to implement an abstract idea on a computer that addition cannot impart patent eligibility" (internal quotation marks, citations, and ellipses omitted)).

Appellant's claim 11 (and the other pending claims) can be distinguished from patent eligible claims such as those in *McRO*, *Enfish*, *BASCOM*, and *DDR Holdings* that are directed to "a specific means or method that improves the relevant technology" (*McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016)), or "a specific improvement to the way computers operate" (*Enfish*, 822 F.3d at 1336), solving a technology-based problem (*BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349–52 (Fed. Cir. 2016)), or a method "rooted in computer technology in order to overcome a problem specifically arising in the realm of computer [technology]" (*DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014)). Contrary to

Appellant's arguments, claim 11 is not a technological improvement or an improvement in a technology. Appellant's claim 11 does not "improve the functioning of the computer itself" or "any other technology or technical field." *Alice*, 573 U.S. at 225. Nor does it provide a technological solution to a technological problem. *See DDR Holdings*, 773 F.3d at 1257; MPEP § 2106.05(a). Appellant fails to explain sufficiently and persuasively how the instant claim(s) is directed to an improvement in the way computers operate, nor has Appellant identified any technical advance or improvement or specialized computer components. *See* Appeal Br. 12–15; Reply Br. 7.

As discussed *supra*, nothing in claim 11 precludes a human from performing the BI analytics process. Performing such information processing functionality is the reason computers exist. The mere automation of a process that can be performed by a human is not sufficient to show an improvement in computer functionality, and the fact that a computer may increase efficiency—be more efficient by the "statistically and ontologically correlated analytics" process providing the user with better or unexpected results (Appeal Br. 10–11, 13 (citing Spec. ¶¶ 5, 6, 54)—does not change the abstract-idea analysis. *See Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (holding that "merely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea"); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) ("[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible."); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016).

In summary, "the focus of the claims is not on such an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools." *Elec. Power Grp.*, 830 F.3d at 1354; *see also* MPEP § 2106.05(f) (emphasis omitted) (instructing Examiners to consider "[w]hether the claim invokes computers or other machinery merely as a tool to perform an existing process" in determining whether the claim recites mere instructions to apply the exception), cited in 2019 Revised Guidance, 84 Fed. Reg. at 55, n.30. Thus, we conclude the claims are directed to an abstract idea that is not integrated into a practical application.

Inventive Concept

Having concluded Appellant's claims are directed to an abstract idea under the 2019 Revised Guidance (Step 2A analysis), we consider whether claim 11 has an inventive concept, that is, whether the claim has additional elements that "'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78, 79). As discussed above, this requires us to evaluate whether the additional claim elements add "a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field" or "simply append[] well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality." 2019 Revised Guidance, 84 Fed. Reg. at 56.

The Examiner determined that Appellant's claim 11 (and the other pending claims) "does not include additional elements that are sufficient to amount to significantly more than the judicial exception" "because the additional elements" "are generic computer components claimed to perform their basic functions of storing, retrieving, sending, and processing data, and

20

do[] not add meaningful limits to practicing the abstract idea," which are "recited as performing generic computer functions that are well-understood, routine, and conventional activities [that] amount to no more than implementing the abstract idea with a computerized system." Final Act. 5–6; *see* Ans. 5–6.

Appellant contends, with respect to the second step of the *Alice* analysis, that claim 11 (and the other pending claims) recites technical improvements that are additional features which "amount to significantly more than the . . . alleged judicial exception." Appeal Br. 15; *see* Appeal Br. 15–17. Appellant fails to persuade us of error in the Examiner's rejection with respect to the second *Alice* step (USPTO's Step 2B). We agree with the Examiner that Appellant's claim 11 (and the other pending claims) does not evince an "inventive concept" that is significantly more than the abstract idea itself. In particular, Appellant fails to explain how the additional elements (above) add specific limitations beyond the judicial exception that are not well-understood, routine, and conventional in the field.

As previously discussed, claim 11 (and the other pending claims) merely recites additional non-abstract elements—the computing device (above)—that perform the BI analytics process. We conclude that these additional elements, individually and as an ordered combination, are generic computer components that carry out common information analysis and manipulation functions recited in the BI analytics process (the abstract idea). *See, e.g.*, Spec. ¶¶ 44–53, 60–62. Such conventional computer functionality and processes operating on conventional computer hardware "do not alone transform an otherwise abstract idea into patent-eligible subject matter." *FairWarning*, 839 F.3d at 1096 (citing *DDR Holdings*, 773 F.3d at 1256).

21

For at least the reasons above, we are not persuaded of Examiner error in the rejection of claim 11 under 35 U.S.C. § 101. Thus, we sustain the Examiner's rejection under § 101 of independent claims 11 and 16, and dependent claims 12–15 and 17–20, which depend from claims 11 and 16, respectively, and which were not separately argued with specificity.

CONCLUSION

For the reasons discussed above, we determine that claims 11–20 are directed to an abstract idea and do not demonstrate an inventive concept.

Appellant has not shown that the Examiner erred in rejecting claims 11–20 under 35 U.S.C. § 101. We therefore sustain the Examiner's rejection of claims 11–20.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
11–20	101	Eligibility	11–20	

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)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED