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 DAVID ALGRANATI[1]

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Appeal 2018-001100
Application 14/178,507
Technology Center 3600

_____

Before ST. JOHN COURTENAY III, JAMES R. HUGHES, and
JOHN D. HAMANN, *Administrative Patent Judges*.

HUGHES, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant seeks our review under 35 U.S.C. § 134(a) of the
Examiner's decision rejecting claims 1–24, which constitute all the claims
pending in this application. *See* Non-Final Act. 1–2; Appeal Br. 4.[2] We
have jurisdiction under 35 U.S.C. § 6(b).

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[1] Simmons Research LLC. ("Appellant") is the applicant as provided in 37
C.F.R. § 1.46 and is identified as the real party in interest. Appeal Br. 4.
[2] We refer to Appellant's Specification ("Spec.") filed Feb. 21, 2014
(claiming benefit of US 60/532,659 filed Dec. 23, 2003); Appeal Brief
("Appeal Br.") filed Apr. 24, 2017; and Reply Brief ("Reply Br.") filed Nov.
13, 2017. We also refer to the Examiner's Non-Final Office Action ("Non-
Final Act.") mailed Sept. 23, 2016; and Answer ("Ans.") mailed Sept. 11,
2017.

We affirm.

Appellant's Invention

The invention "relates, in general, to database management systems and, more particularly, to a system, method and software, using . . . a database, for modeling and projecting demographic, attitudinal and behavioral information into a geographic region, to support statistical inferences, where the region would otherwise hav[e] an insufficient sample size for supporting such inferences." Spec. ¶ 2; *see* Spec. ¶¶ 10–18; Abstract.

Representative Claim

Independent claim 1, reproduced below, further illustrates the invention:

> 1.   A computer-implemented method of inferring geographically distributed characteristics of a population within a selected geographic region having a plurality of geographic subregions using non-resident survey information, wherein the population has a plurality of members numbering fewer than a lower threshold number of members suitable to support a direct statistical analysis of the population, the method comprising:
>
> using a processing device, profiling one or more members of the population located in a selected geographic subregion of the plurality of geographic subregions using a plurality of profiling variables stored in a memory to determine a population profile corresponding to the selected geographic subregion;
>
> using a processing device, assigning a plurality of survey respondents located in the selected geographic subregion and a first plurality of survey respondents located outside of the geographic subregion to create a virtual representation of the population corresponding to the selected geographic subregion, wherein the first plurality of survey respondents located outside

of the geographic subregion are located in a plurality of neighboring geographic subregions;

using a processing device, further determining the population profile of the selected geographic subregion using a weighted combination of a plurality of profiling variables stored in the memory for the plurality of survey respondents located in the geographic subregion and a plurality of profiling variables stored in the memory for the first plurality of survey respondents located in the plurality of neighboring geographic subregions;

using a processing device, assigning a second plurality of survey respondents located outside of the selected geographic subregion to the virtual representation of the population of the selected geographic subregion, wherein the assignment is weighted based on a representation probability of each survey respondent of the second plurality of survey respondents for the population profile of the selected geographic subregion; and

using a processing device, outputting, in a user-perceivable form, geographically distributed characteristics of the population within the geographic region based at least in part on the survey information stored in the memory for the first plurality of survey respondents and the assigned second plurality of survey respondents.

Rejection on Appeal

The Examiner rejects claims 1–24 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

ISSUE

Based upon our review of the record, Appellant's contentions, and the Examiner's findings and conclusions, the issue before us follows:

Did the Examiner err in finding Appellant's claims were directed to patent-ineligible subject matter, without significantly more, under 35 U.S.C. § 101?

ANALYSIS

The Examiner rejects claims 1–24 as a group based on claim 1 (*see* Non-Final Act. 8–11) and concludes claim 1 is directed to patent-ineligible subject because claim 1 is "directed to the abstract idea of modeling and projecting population data for census purposes and market assessment purposes, which is reasonably considered to be fundamental economic practice" (Non-Final Act. 9), and when "[v]iewed as a whole, [the] additional claim element(s) do not provide meaningful limitation(s) to transform the abstract idea into a patent eligible application of the abstract idea such that the claim[ ] amounts to significantly more than the abstract idea itself" (Non-Final Act. 10). *See* Non-Final Act 8–11; Ans. 2–13.

Appellant contends the Examiner erred in rejecting claim 1 as being directed to patent-ineligible subject matter. *See* Appeal Br. 12–23; Reply Br. 4–9. Specifically, Appellant contends claim 1 (and the other pending claims) are similar to the claims in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), in that the claims provide "a technical improvement over the prior art" by "allow[ing] a physical, actual survey to be replaced by a simulated survey, to obtain additional geodemographic information that otherwise would remain unavailable or would require separate surveys to be conducted absent inventive methods." Appeal Br. 13. Appellant further contends the claims recite "substantially more than any mere abstract idea," similar to the claims in *Diamond v. Diehr*, 450 US 175 (1981), in that the instant claims "recite[] methods to infer a geographical distribution of characteristics based on statistically incomplete sample size" and "outputting in a user-perceivable form an approximation of the geographically distributed characteristics." Appeal Br. 13–14.

Appellant also contends the claims satisfy "the machine-or-transformation test," in that the claims "transform otherwise an insufficiently sized sample of survey data contained within a database to a user-perceivable output of a statistically meaningful, geographically distributed set of characteristics of the population without having to resort to conducting a separate survey." Appeal Br. 14. Appellant contends "'the machine-or-transformation test' . . . remains 'a useful and important clue' that each respective claim is patent eligible." Appeal Br. 14 (citing *Bilski v. Kappos*, 561 U.S. 593, 604 (2010)).

Specifically, with respect to claim 1, Appellant contends "[t]he claimed method represents a technological advance in the field of database management" because it "infer[s] statistically meaningful characteristics from a population which has an insufficient sample size" (Appeal Br. 16) and "allow[s] simulated survey information to substitute for actual new surveys that otherwise would need to be conducted to obtain meaningful results" (Appeal Br. 17). These features "address [a] long-standing problem with a technological solution that obviates the need to conduct a separate survey to obtain . . . meaningful information." Appeal Br. 17.

Appellant further contends claim 1 employs specific rules and utilizes the rules "in a specific technological way to automatically obtain statistically meaningful characteristics of a population, notwithstanding its deficient sample size, in lieu of conducting new, separate surveys" similar to *McRO*. Appeal Br. 18 (internal quotations omitted) (*citing McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)). Appellant additionally contends claim 1 does not recite "a mathematical algorithm" or "a fundamental economic . . . practice." Appeal Br. 19.

Appellant also reiterates the limitations of claim 1 and contends that claim 1 "amounts to significantly more than any mere abstract idea." Appeal Br. 20; *see* Appeal Br. 21. Additionally, Appellant contends the claims "recite a specific process for automatically obtaining statistically meaningful characteristics of a population, notwithstanding its deficient sample size" and "do not preempt approaches that use other or different statistical methods or techniques to obtain such characteristics." Appeal Br. 22; *see* Appeal Br. 21.

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*, 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. Assuming that a claim nominally falls within one of the statutory categories of machine, manufacture, process, or composition of matter, the first step in the analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts" (*id.*), e.g., to an abstract idea. *See Alice*, 573 U.S. at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate

settlement risk."); *see also Bilski*, 561 U.S. at 611 ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk."). Concepts determined to be abstract ideas, and thus patent ineligible include, but are not limited to, certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. at 594–95); and mental processes (*Gottschalk v. Benson*, 409 U.S. at 67). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diehr*, 450 U.S. at 191); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 176; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). The Supreme Court continued by qualifying its findings, indicating that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* at 187 ("It is now commonplace that an *application* of a law of nature or

mathematical formula to a known structure or process may well be deserving of patent protection.").

If the claims are not directed to an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step of the *Alice* and *Mayo* framework where 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*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78–79). This second step is described as "a search for an 'inventive concept'—*i.e.*, an element or combination of elements that is '. . . significantly more than . . . the [ineligible concept] itself.'" *Id.* at 217–218 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Alice*, 573 U.S. at 221 (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

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. We, therefore, look to whether the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

The PTO recently published revised guidance on the application of § 101. USPTO's *2019 Revised Patent Subject Matter Eligibility Guidance*,

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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, certain methods of organizing human activities such as a fundamental economic practice, or mental processes) (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").

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 § 106.05(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.[3]

See 2019 Revised Guidance.

Eligibility Analysis—Revised Guidance Steps 1 and 2A, Prong 1

Turning to the first step of the eligibility analysis, "the first step in the *Alice* inquiry . . . asks whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Enfish*, 822 F.3d at 1335–36. "The abstract idea exception prevents patenting a result where 'it matters not by what process or machinery the result is accomplished.'" *McRO*, 837 F.3d at 1312 (quoting *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1853)).

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

The Examiner determines independent claim 1 is "directed to the abstract idea of modeling and projecting population data for census purposes and market assessment purposes" (Non-Final Act. 9), which is an abstract idea similar to a number of precedential cases. *See* Non-Final Act. 8–11; Ans. 5–13. Here, in rejecting the claims (in particular claim 1) 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, i.e., on Sept. 23, 2016.

For the reasons discussed below, we conclude Appellant's claim 1 (and the other pending claims) recite 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 1. Claim 1 recites "[a] computer-implemented method of inferring geographically distributed characteristics of a population" "using non-resident survey information, wherein the population has . . . members numbering fewer than a lower threshold number of members suitable to support a direct statistical analysis of the population." That is, utilizing a computer to perform a process of statistical analysis for deriving population characteristics from survey results of non-residents (non-members of the particular geographic region or sub-region population) where the population is statistically insufficient (for direct statistical analysis of the particular population).

Claim 1 further recites "using a processing device, profiling one or more members of the population . . . in a . . . geographic subregion" "using a plurality of profiling variables stored in a memory to determine a population profile corresponding to the . . . geographic subregion." That is, determining a population profile by characterizing population members using attributes (profiling variables) stored in memory to determine population characteristics (a population profile) utilizing a processing device (a computer, processor, or the like). Additionally, claim 1 recites the processing device "assigning . . . survey respondents . . . in the . . . geographic subregion" as well as "survey respondents . . . outside of the geographic subregion to create a virtual representation of the population" (of the selected geographic subregion), "wherein the . . . survey respondents located outside of the geographic subregion are located in . . . neighboring geographic subregions." That is, creating a representative population by assigning member and non-member respondents to the virtual population with the criteria that non-member respondents are located in neighboring sub-regions.

Claim 1 also recites the processing device "further determining the population profile" of the geographic sub-region "using a weighted combination of . . . profiling variables stored in the memory" for the survey respondents in the geographic sub-region and "profiling variables stored in the memory" for the survey respondents located in the neighboring geographic subregions. That is, determining the population profile (*see* above) utilizing "weighted" "profiling variables" for the resident survey respondents and "profiling variables" for non-resident respondents—put more simply, adding a weight to resident responses. Additionally, claim 1

recites the processing device "assigning a second plurality of survey respondents located outside of the selected geographic subregion to the virtual representation of the population of the selected geographic subregion," such that "the assignment is weighted based on a representation probability of each survey respondent of the second plurality of survey respondents for the population profile of the selected geographic subregion." That is, assigning additional non-resident survey respondents to the virtual population representation such that the assignment is weighted based on a "representation probability" for each (additionally) assigned respondent. The representation probability is "a likelihood of an individual being representative of members of the population of the selected subregion" (Spec. ¶ 12).

Claim 1 finally recites utilizing the processing device to output (outputting) "geographically distributed characteristics of the population within the geographic region" based on "the survey information stored in the memory" for assigned survey respondents (that is the first plurality and the second plurality of assigned non-resident survey respondents).

In summary, claim 1 recites a computer implemented statistical analysis process for deriving population characteristics from survey results of a virtual population including of non-residents where the population is statistically insufficient for direct statistical analysis of the particular population. Hereinafter, we refer to this system as the "statistical analysis process."

We find that claim 1 recites a "computer-implemented method" (*supra*)—the statistical analysis process. A process is a statutory category of invention (subject matter) (USPTO's Step 1). Utilizing our interpretation of

claim 1 (*supra*), we analyze whether the claim is directed to an abstract idea (USPTO's Step 2A).

Here, Appellant's claims generally, and independent claim 1 in particular (as summarized, *supra*), recite a process for deriving population characteristics and determining a population profile. This is consistent with how Appellant describes the claimed invention. *See* Spec. ¶¶ 2, 10–18; *see also* Spec. ¶ 12 ("The exemplary method embodiment comprises . . . profiling a selected geographic subregion . . . using a plurality of profiling variables."). Performing statistical analysis, including deriving characteristics of a population from survey information—including creating a representative population by assigning resident and non-resident respondents to the virtual population, weighting the assignments, and weighting the profiling variables—recites processes and analysis that may be accomplished using one's mind or utilizing pen and paper.

Appellant's contentions (*supra*) focus on the purported technological improvements or advances provided by the recited statistical analysis process, as well as the tangible acts (observing data and outputting data, performing a survey) performed in the process. Claim 1, however, recites no substantive limitations on how the statistical analysis process derives the various population characteristics and weightings (the algorithms by which the various population characteristics and weightings are determined and implemented). The limitations are entirely functional in nature—for example, claim 1 recites "profiling . . . members of the population . . . using . . . profiling variables . . . to determine a population profile," "assigning . . . survey respondents . . . to create a virtual representation of the population," "determining the population profile . . . using a weighted combination of . . .

profiling variables," and "assigning . . . survey respondents . . . to the virtual representation of the population . . . wherein the assignment is weighted based on a representation probability." *See* claim 1 (Appeal Br. 38–39 (Claim App'x)), our claim construction (*supra*), as well as Spec. ¶¶ 2, 10–18. Nowhere does Appellant point to specific claim limitations that distinguish over a human process. Indeed, the limitations of claim 1 delineated above do not specify particular criteria (profiling variables), specific processes, or particular algorithms for profiling the populations, assigning respondents, or determining weighting of the variables and assignments.

Appellant's claim 1 recites a judicial exception (USPTO's Step 2A, Prong 1; *see* 2019 Revised Guidance). Specifically, claim 1 recites a computer implemented statistical analysis process for deriving population characteristics discussed *supra*. The statistical analysis process consists of mental processes performed in the human mind including observation, evaluation, or judgment.

Performing statistical analysis is an abstract concept that is not patent eligible. *See SAP America, 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) focused on "improved mathematical analysis" (*id.* at 1168) and were found to be "directed to an abstract idea" (*id.*)).

Eligibility Analysis—Revised Guidance Step 2A, Prong 2

Appellant's claim 1 also recites additional elements beyond the abstract statistical analysis process (the judicial exception) (*supra*). These elements include, as previously discussed (*supra*), the computer (for the

"computer-implement[ation]"), the processing device, the memory, and the output ("outputting, in a user-perceivable form, geographically distributed characteristics"). We evaluate these additional elements to determine whether the additional elements integrate the abstract buying power limit constrained order entry interface process/system (the judicial exception) into a practical application of the exception (USPTO's Step 2A, Prong 2; *see* 2019 Revised Guidance).

Appellant contends (*supra*) that "the claimed solution is necessarily rooted" in computer technology—"statistical methods"—"in order to overcome a [technical] problem specifically arising in the realm of" "[]physical measurements[]" (Appeal Br. 13) similar to the claims in *DDR Holdings*. Appellant also contends the claims meet "the machine-or-transformation test" of *Bilski*. *See* Appeal Br. 14. Appellant further contends the claims employ specific rules similar to *McRO*. Appeal Br. 18. In other words, Appellant contends the claims recite meaningful limitations that sufficiently limit the practical application of the alleged abstract idea.

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 disagree. Appellant's additional elements (or the combination of the additional elements) do not apply or use the statistical analysis 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 claims recite computers (the processing device) and memory that are utilized as tools to carry out the statistical analysis process (the abstract idea). Utilizing a

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computer as a tool to perform the 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" (quotations and internal citations omitted)).

With respect to Appellant's *Bilski* (MPEP §§ 2106.05(b) and (c)) argument, Appellant's claim 1 does not invoke a "particular machine," or transform data (survey data) into a different state. As set out in MPEP § 2106.05(b), "invok[ing] computers . . . merely as a tool . . . will generally not amount to significantly more than a judicial exception" (citing *Versata Development Group v. SAP America*, 793 F.3d 1306, 1335 (Fed. Cir. 2015)). Further, with respect to MPEP § 2106.05(c), the analysis or manipulation of electronic (survey) data is not a "transformation or reduction of an article into a different state or thing constituting patent-eligible subject matter." *See In re Bilski*, 545 F.3d 943, 962 (Fed. Cir. 2008) (en banc), *aff'd sub nom, Bilski v. Kappos*, 561 U.S. 593 (2010); *see also CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) ("The mere manipulation or reorganization of data . . . does not satisfy the transformation prong."). Applying this guidance, we conclude Appellant's claims fail to satisfy the transformation prong of the *Bilski* machine-or-transformation test.

Appellant's claims can be distinguished from patent-eligible claims such as those in *McRO, Enfish, Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016), and *DDR Holdings* that are directed to "a specific means or method that improves the relevant technology" (*McRO*, 837 F.3d at 1314), or "a specific improvement to the

way computers operate" (*Enfish*, 822 F.3d at 1336), solving a technology-based problem (*BASCOM*, 827 F.3d at 1349–52), or a method "rooted in computer technology in order to overcome a problem specifically arising in the realm of computer [technology]" (*DDR Holdings*, 773 F.3d at 1257). Contrary to Appellant's arguments, claim 1 is not a technological improvement or an improvement in a technology. Appellant's claim 1 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). As previously discussed (*supra*), nothing in claim 1, aside from the bare instruction to perform each step "using a processing device," precludes a human from performing the statistical analysis process. The fact that a computer or processing device may increase efficiency by "eliminat[ing] the need to make further surveys" (Appeal Br. 15) does not change the abstract idea analysis. *See 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."). Moreover, even if Appellant's claimed process includes an improved algorithm for deriving population characteristics, claim 1 does not specify any improvement in how a computer processor performs the underlying statistical analysis necessary to perform the algorithm. In other words, only the abstract ideas in claim 1 are potentially new (although we make no determination as to novelty or obviousness), not the way a computer processor operates.

To the extent Appellant contends outputting data "in a user-perceivable form" (claim 1) demonstrates significant non-abstract subject

matter (*see, e.g.*, Appeal Br. 13–14, 18–19), such activity is merely extra
solution activity. *See* MPEP § 2106.05(g).

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., LLC v. Alstom S.A.*, 830 F.3d 1350,
1354 (Fed. Cir. 2016); *see also* MPEP § 2106.05(f) (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.

Step 2B Analysis—"Significantly More"

Having concluded Appellant's claims are directed to an abstract idea
under the 2019 Revised Guidance Step 2A analysis, we next address
whether the claims add significantly more to the alleged abstract idea. As
directed by our reviewing court, we search for an "'inventive concept'
sufficient to 'transform the nature of the claim into a patent-eligible
application.'" *McRO*, 837 F.3d at 1312 (quoting *Alice*, 573 U.S. at 217).
The implementation of the abstract idea involved must be "more than
performance of 'well-understood, routine, [and] conventional activities
previously known to the industry.'" *Content Extraction & Transmission
LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347–48 (alteration in
original) (quoting *Alice*, 573 U.S. at 225). The "inventive concept" "must be
significantly more than the abstract idea itself, and cannot simply be an

instruction to implement or apply the abstract idea on a computer." *Bascom*, 827 F.3d at 1349 (citation omitted).

Here, the Examiner determined that Appellant's claims do not add significantly more. *See* Final Act. 5–11; Ans. 5–13. Appellant, conversely, discusses the operation of claim 1 at length, reiterates the limitations of claim 1, and contends "the claimed combination, as a whole, amounts to significantly more than any mere abstract idea" (Appeal Br. 20), but does not point to any specific elements recited in claim 1 that add anything significantly beyond the abstract idea. *See* Appeal Br. 13–21.

Appellant fails to persuade us of error in the Examiner's rejection with respect to the second *Alice* step. We agree with the Examiner that Appellant's claim 1 (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 1 (and the other pending claims) merely recites additional non-abstract elements (above)—specifically the processing device and the memory—to perform the statistical analysis process (the abstract idea). Appellant's Specification describes the processor as conventional (generic) computers performing traditional computer functions. *See, e.g.*, Spec. ¶¶ 28 ("systems . . . may be programmed or configured . . . to perform the in accordance with the teachings of the present invention" where the "computer system" embodies, for example, "a mainframe computer, a personal computer, a computer workstation, or any other computer"), 33 (the "system . . . include[s] one or

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more processors" such that "these implementations may include use of a single integrated circuit . . . may include use of a plurality of integrated circuits or other components connected, arranged or grouped together, such as microprocessors, digital signal processors," "application specific integrated circuits ('ASICs')," and "associated memory").

Accordingly, Appellant's Specification itself describes the additional elements as being well-understood, routine, and conventional. Such conventional computer processes operating on conventional computer hardware "do not alone transform an otherwise abstract idea into patent-eligible subject matter." *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) (citing *DDR Holdings*, 773 F.3d at 1256).

For at least the reasons above, we are not persuaded of Examiner error in the rejection of claim 1 under 35 U.S.C. § 101. Thus, we sustain the Examiner's rejection under § 101 of independent claim 1 and dependent claims 2–12, which were not separately argued with specificity.

As pointed out by the Examiner (*see* Ans. 2–3), Appellant simply reiterates the contentions made with respect to claim 1 (*supra*) for independent claims 13 and 24. *See* Appeal Br. 23–37. Appellant does not address dependent claims 14–23 that depend from claim 13. Accordingly, for the same reasons as claim 1 (*supra*), we sustain the Examiner's rejection under § 101 of independent claims 13 and 24, and dependent claims 14–23.

CONCLUSION

Appellant has not shown that the Examiner erred in rejecting claims 1–24 under 35 U.S.C. § 101.

DECISION

We affirm the Examiner's rejection of claims 1–24.

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