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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TRUNG THANH NGUYEN and SHASHANK RAMAPRASAD

Appeal 2019-005640
Application 14/877,666
Technology Center 3600

Before CHARLES N. GREENHUT, MICHAEL L. HOELTER, and ANNETTE R. REIMERS, *Administrative Patent Judges*.

GREENHUT, *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 to reject claims 1–6, 8–15, and 17–19. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the term "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies Adobe Inc. as the real party in interest. Appeal Br. 3.

CLAIMED SUBJECT MATTER

The claims are directed to a method for cardinality estimation of audience segments. Claim 9, reproduced below, is illustrative of the claimed subject matter:

> 9. A computer-implemented method for determining cardinalities of audience segments, comprising:
>
> receiving a query for a cardinality associated with a Boolean expression of a plurality of expressions having a negation operator;
>
> identifying an equivalent representation for the Boolean expression of the plurality of expressions having the negation operator, wherein the equivalent representation has a plurality of components with each component represented by a Hyperloglog data structure or a union of Hyperloglog data structures, a second count of the plurality of components being different from the first count of the plurality of expressions;
>
> estimating respective cardinality associated with respective components of the plurality of components, based on respective Hyperloglog data structures or union of Hyperloglog data structures, wherein the estimating comprises identifying a component being associated with the negation operator, determining a category of the component determining a first cardinality associated with a union of all Hyperloglog data structures in the a same category of the component and determining a second cardinality associated with the component;
>
> determining the cardinality associated with the component being associated with the negation operator based on a subtraction operation with the respective cardinality associated with respective components of the plurality of components, wherein the determining comprises subtracting the second cardinality associated with the component from the first cardinality associated with the union of all Hyperloglog data structures; and

providing the cardinality of the Boolean expression based on the cardinality for the component being associated with the negation operator.

REJECTION

Claims 1–6, 8–15, 17–19 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more.[2] Final Act. 3.

OPINION

Principles of Law

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (quotation marks and citation omitted).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *See Alice*, 573 U.S. at 217–18 (citing *Mayo Collaborative Services v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is "directed to." *Id.* 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 v. Kappos*, 561 U.S. 593, 611

[2] The Examiner has withdrawn the rejection of claims 1, 9, 18 under 35 U.S.C. § 112(b), second paragraph. Ans. 2 (pagination supplied throughout).

(2010) ("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 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. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "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))).

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (citation omitted). "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].'" *Id.* (alteration in the original) (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.*

In January of 2019, the PTO published revised guidance on the application of 35 U.S.C. § 101. 2019 REVISED PATENT SUBJECT MATTER

ELIGIBILITY GUIDANCE, 84 Fed. Reg. 50 (Jan. 7, 2019) (hereinafter "Eligibility Guidance, 84 Fed. Reg." and/or "Eligibility Guidance"). Step 2A of that guidance involves determining whether the claim recites:

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE ("MPEP") §§ 2106.05(a)–(c), (e)–(h) (9th Ed., Rev. 08.2017, 2018)).

If a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, Step 2B of that guidance involved determining 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.

Analysis

Claim Grouping

The claims are argued as a group for which we select claim 9 as representative under 37 C.F.R. § 41.37(c)(1)(iv).

Statutory Category

Claim 9 is recites a process or method, which is a statutory category but does not end the eligibility inquiry under 35 U.S.C. § 101 because one must also consider whether the claim is directed to a judicial exception. *See* MPEP § 2106.03(II).

Recitation of Judicial Exception

The Examiner reasonably determines:

> The claimed invention recites the abstract concept of a mathematical concept - i.e. mathematical relationships, mathematical formulas or equations and calculations, which has been identified as an abstract idea by the Courts. Relevant claimed limitations include: 'convert the . . . expression with a negation operator . . . having a plurality of components . . . represented by a Hyperloglog data structure or a union of Hyperloglog data structures[,]' '. . . determine a cardinality for a component with the negation operator[,]' 'determine a first cardinality [,]' 'determine a second cardinality . . . [,]' '. . . by subtracting the second cardinality . . . from the first cardinality.'

Ans. 3.

Appellant argues that:

> The claims of the present Application are not directed to mathematical concept at least because mathematical relationships, formulas, or calculations are not explicitly recited in the claims. Further, even if such relationships, formulas, or calculations are recited in the claims, the claims are not directed to a mathematical concept because the claims recite additional elements (i.e., communication module, conversion module, and estimation module) such that the relationships, formulas, and calculations are not recited on their own.

Appeal Br. 18.

As indicated above, Appellant argues that "the claim is not directed to a mathematical concept if 'the mathematical relationships, formulas, or calculations are not explicitly recited in the claim.'" Appeal Br. 18 (citing *Ex Parte Kim*, Appeal No. 2018–005712, Patent App. No. 14/665,452 (PTAB Jan. 24, 2019), 6–7). However, the panel decision of *Ex Parte Kim* is not precedent authority for other panels. Each case must be decided on its own facts. The Eligibility Guidance provides that "[m]athematical concepts" including "mathematical relationships, mathematical formulas or equations, [and] mathematical calculations" have been identified by courts as abstract ideas. Eligibility Guidance, 84 Fed. Reg. 52. Although specific formulas or equations may not be recited in claim 9, the subject matter defined thereby could largely be expressed as a collection of Boolean algebra logical expressions—which are undisputedly equations. *See* Appeal Br. 5–6 (citing Spec. ¶¶ 15, 16, 19, 29–34, 42, 45, 47, 50, (*see* Eq. 1, 2)). Holding that the absence of express recitations of such equations removes the claimed subject matter from the realm of the excepted "mathematical concepts" would exalt form over substance—something which our reviewing court and the Supreme Court have, in the context of a 35 U.S.C. § 101 analysis, repeatedly cautioned against. "As the Supreme Court has explained, the form of the claims should not trump basic issues of patentability. *See Flook*, 437 U.S. at 593 (advising against a rigid reading of § 101 that 'would make the determination of patentable subject matter depend simply on the draftsman's art'); *see also Mayo*, 132 S. Ct. at 1294." *Bancorp Servs., L.L.C. v Sun Life Assurance Co. of Can.(U.S.)*, 687 F.3d 1266, 1277 (Fed Cir, 2012).

Appellant also argues that "[t]he claims also recite a conversion module that converts (i.e. transforms) the ALE [i.e., "audience logical

expression"] with a negation operator into an equivalent representation with various components, each component represented by a specific HLL [i.e., "HyperLogLog"] data structure." Appeal Br. 18–19. Appellant argues that "[c]onverting an ALE into its HLL equivalent does not constitute a mathematical relationship, formula, or calculation." Appeal Br. 19.

However, Appellant's Specification provides:

> "Audience logical expression" or "ALE" means any arbitrary Boolean logical expressions over existing audience segments. By way of example, a Boolean expression relating two or more audience segments with Boolean operators, e.g., AND, OR, NOT, etc., is an ALE. Therefore, the cardinality associated with an ALE refers to the number of elements in the ALE.
>
> A "component" of an expression is a part of the expression. In various embodiments, the cardinality of an ALE can be converted into an equivalent expression with one or more components linked by addition or subtraction operators, wherein each component is represented by an HLL or a union of HLLs. As an example, the ALE of "people who purchased a new phone last week AND also purchased a data plan for the new phone is equivalent to the Boolean expression of "A AND B", where A and B are audience segments representing the set of people who purchased a new phone last week and the set of people who also purchased a data plan for the new phone, respectively. The cardinality of this ALE can be converted into an equivalent expression with three components as |A| + |B| - |A OR B|, wherein "A" can be represented by an HLL, "B" can also be represented by an HLL, and "A OR B" can be.

Spec. ¶¶ 13, 15. Thus, Appellant does not suggest what, if not a mathematical relationship or calculation, the HLL conversion process entails.

Appellant also discloses that HLL refers to an algorithm and related data structures for approximating the number of distinct elements in a multiset. Spec. ¶ 14. Appellant further discloses "[t]he server converts the ALE into an equivalent expression with one or more Hyperloglog (HLL) data structures based on HLL technology and some properties of Boolean algebra." Spec. ¶ 16.

The Specification suggests that the recited steps of "identifying an equivalent representation for the Boolean expression" and "estimating respective cardinality" involve the application of mathematical relationships that can be represented by mathematical formulas, or performed by the calculations described in the Specification.

The Examiner also determined that "[p]erforming numerical calculations also represents a method of organizing human activity, which a human could perform using pen and paper." Final Act. 4.

Appellant argues that "[t]he claims do not recite certain methods of organizing human activity at least because the claimed solution recites a particular approach for determining the number of elements in a set or other grouping (e.g., audience segments), and more particularly, a particular approach for improving query performance on cardinality estimation of ALEs which is not a fundamental economic principle." Appeal Br. 20. Appellant argues that "the claims recite steps such as a communication module that receives a query for a cardinality association with an ALE, a conversion module that converts (i.e. transforms) the ALE with a negation operator into an equivalent representation with various components, and an estimation module that determines and provides the cardinality results of the

ALE query." Appeal Br. 20. Appellant contends that "[e]ach of these limitations do not recite a fundamental economic process."

However, Appellant's Specification discloses that:

> Digital marketing includes the targeted, measurable, and interactive marketing of products or services using digital technologies to reach and convert leads into customers. Digital marketing may promote brands, build preference, and increase sales through various digital marketing techniques. One important aspect of a digital marketing campaign is identifying individuals to target with marketing messages. Often, digital marketers try to target a particular audience segment, which is a set of individuals who have performed and/or not performed an action that is of relevance to the marketers. In order to identify such audience segments, marketers frequently construct "audience logical expressions" (ALEs), which are arbitrary Boolean logical expressions over existing audience segments.
>
> As an example, consider the following ALE: "people who visited the newest phone page in the last 7 days but did not convert." This ALE is equivalent to the Boolean expression of "A AND~B[,]" where A and B are audience segments representing the set of people who visited the new phone page in the last 7 days and the set of people who bought the new phone, respectively. For the purpose of budgeting or planning in digital marketing, marketers would like to know, in real time, and to a reasonable degree of accuracy, the cardinality of such ALEs.

Spec. ¶¶ 1–2.

The Eligibility Guidance provides that "[c]ertain methods of organizing human activity" including "commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, *marketing or sales activities or behaviors*; business relations)" are abstract ideas. Eligibility Guidance, 84 Fed. Reg. 52 (emphasis added).

Therefore, the claimed invention also recites the abstract method of organizing human activity involving advertising, marketing, and sales activities or behaviors. *See, e.g., Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229 (Fed. Cir. 2016); *see also In re Maucorps*, 609 F.2d 481, 485 (CCPA 1979).

Appellant further contends that "the claims do not recite a mental process and the Examiner does not allege as such." Appeal Br. 21. However, the Examiner determines that "a human could perform [the claim] using pen and paper" which is associated with a determination that the claimed subject matter is directed to a mental process. Final Act. 4.

The Eligibility Guidance provides that "[m]ental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion)" are abstract ideas. Eligibility Guidance, 84 Fed. Reg. 52. We agree with the Examiner that the claimed invention can be performed using pen and paper because the Specification clearly shows that the claimed invention can be represented by a mathematical relationship which can be performed with a pen and paper. Spec. ¶¶ 26, 30–32. Mental processes involve the use of *human* observation, evaluation, and judgement. *See In re Prater* 415 F.2d 1393, 1402 n. 22 (CCPA 1969). "[M]ental processes . . . are not patentable, as they are the basic tools of scientific and technological work." *Gottschalk,* 409 U.S. at 67 (quoted with approval in *Mayo*, 566 U.S. at 71). That a computer can be used to assist the calculative aspects of the process does not make a claim otherwise directed to a process that "can be performed in the human mind, or by a human using a pen and paper" patent eligible. *CyberSource*, 654 F.3d at 1375. "The 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." *See*, *e.g.*, *Bancorp Servs.*, 687 F.3d at 1278.

Practical Application

Appellant argues that "[r]eceiving a query for a cardinality does not constitute a mathematical relationship, formula, or calculation." Appeal Br. 18. This is perhaps true, but as this step effectively amounts to obtaining user input to begin the calculation process, it falls squarely within the realm of extra-solution activity or "mere data gathering" held to be not enough to qualify as significantly more than the judicial exception itself. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011) ("We have held that mere '[data-gathering] step[s] cannot make an otherwise nonstatutory claim statutory.'"). This step, therefore, does not influence the determination that the claim is directed to a judicial exception.

Appellant argues that "they integrate the asserted abstract idea into a specific practical application by reciting a technological improvement and/or an improvement to the functioning of a computer." Appeal Br. 22 (emphasis omitted). Appellant argues that "the claims provide an accurate and computationally efficient method to determine the cardinality of a negated ALE based on determining the cardinality of a component with a negation operator." Appeal Br. 23. Appellant argues that the claimed invention "provide[s] a new computing function over Hyperloglog data structures to estimate cardinality of a negated expression, which is traditionally not solvable natively with conventional data structures, including Hyperloglog." Reply Br. 4.

The Examiner determines that "the benefits presented by the Applicant represent inherent benefits of using the Hyperloglog data structures/algorithm." Ans. 6. This would seem to be the case because the speed and accuracy of obtaining |~A| is still limited by the inherent property of Hyperloglog of the negated A. Further, the speed and accuracy of the results from |A OR B OR C| - |A| is still limited by the inherent property of Hyperloglog of A OR B OR C, and on the dataset of A. The specificity of negated A, A, B or C would then seem to determine the speed and accuracy of how a Hyperloglog determines the cardinality of intended datasets. However, Appellant does not recite any specific steps or elements responsible for increasing the speed or accuracy of the system or process, only altering the nature of the calculation used in the existing process. Appellant does not even recite any relationship between the identifying step and the estimation step.[3] Furthermore, if the ALE does not have any

[3] Appellant has not shown that any of the component represented by a Hyperloglog data structure or a union of Hyperloglog data structure is being used in the estimation. The limitation of "identifying an equivalent representation for the Boolean expression of the plurality of expressions having the negation operator" is not entirely clear because it is unclear if it means identifying an equivalent of or converting the ALE using a negation operator, or means identifying an equivalent of or converting a negated ALE. Similarly, the limitation "determining the cardinality associated with the component being associated with the negation operator" is not entirely clear because it is unclear if it means determine a cardinality for a negated component, or means to use a negation operator to make the determination. The Appellant and the Examiner may wish to consider these issues of clarity in the context of the requirements of 35 U.S.C. § 112(b) in any further prosecution. We note that although the Board is authorized to reject claims under 37 C.F.R. § 41.50(b), no inference should be drawn when the Board elects not to do so. *See* MPEP § 1213.02.

negation operation, the identifying and estimating aspects of the claim would appear to be superflous. "Language that suggests or makes a feature or step optional but does not require that feature or step does not limit the scope of a claim under the broadest reasonable claim interpretation." MPEP § 2143.03 (discussed in the context of obviousness but generally applicable). Hence, we are not apprised of how the limitations Appellant identifies impose any meaningful limits on the abstract ideas themselves.

Appellant argues that "at least because the claims 'apply, rely on, or use' the putative judicial exception, and because the practical application is strongly similar to that of claim 1 of Example 40 of the 2019 Examples, the claims integrate any putative judicial exception into a practical application and are therefore eligible under Prong Two of revised step 2A." Appeal Br. 26.

The Examiner determines that:

> First of all, the instant invention and Example 40, Claim 1 have different fact patterns, and therefore the two are not analogous. Furthermore, in Example 40, Claim 1, it was found that the additional elements integrate the judicial exception into a practical application - i.e. it improves network monitoring, thus providing "a specific improvement over prior systems[.]" Therefore, Example 40 Claim 1 provides a specific technical improvement over prior systems. Contrary to Example 40 Claim 1, the instant claimed invention does not provide a technical improvement, nor does it improve the functioning of the computing device itself. Examiner also notes that the Applicant's Spec, paras 17-19, 36 discuss the benefits of using Hyperloglog data structures when estimating the cardinality of large data sets.

Ans. 5.

For the reasons stated by the Examiner, we agree that Appellant's claim is different than that of claim 1 of Example 40 of the 2019 Examples.

Appellant further argues that "[t]he integration of a practical application here is analogous to *Enfish*, which implemented 'self-referential' tables, where entries in a given table could refer to other entries in the same table, instead of referring to separate tables." Reply Br. 5. Appellant contends that "the new computing function here is significantly more than some improvement in speed or efficiency in *Enfish*, where the self-referential tables improved data processing by speeding up the configuration process and the time it takes to search for data." Reply Br. 6. In *Enfish*, "the plain focus of the claims is on an improvement to computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity." *Enfish*, 822 F.3d at 1336. However, Appellant does not provide any factual evidence or technical explanation as to how the claimed invention provides improvements to *computing functions* as opposed to improvements to economic functions for which a computer is used in its ordinary capacity. *Id.* In other words, the specific selection of certain information for identifying, estimating, and determining, sandwiched between conventional input and output, receiving and providing, is an insufficient basis upon which to conclude that claim 1 recites an improvement to the functionality within a computing system itself.

Appellant also argues that "[a]kin to *Ex Parte Smith,*[4] the additional elements in the pending claims have limited the conventional practice of estimating cardinalities by reciting a specific mechanism for 'determin[ing] a cardinality for a component with the negation operator.'" Reply Br. 7. *Smith* is an informative decision that, although not binding authority,

[4] Appeal No. 2018-000064, (PTAB Feb. 1, 2019) (informative).

nonetheless provides instructive guidance and Board norms on patent eligibility issues. *See* PTAB Standard Operating Procedure 2, Rev. 10 § III, 11.4. In *Smith* the claimed timing mechanisms and associated temporary restraints on execution of trades were the additional elements that provided a specific technological improvement over prior derivative trading systems. *See Smith*, 2019 WL 764497, at *5. That is not the case here. The solution that Appellant provides involves a purely mathematical equivalence of a cardinality for a component. As an example provided by Appellant, |~A| is a cardinality for a component with the negation operator, and the mathematical equivalence of |~A| is |A OR B OR C| - |A|. Spec. ¶¶ 30–32.

Accordingly, the additional elements of claim 1 of the subject invention discussed above do not integrate the judicial exception into a *practical* application.

Well-Understood, Routine, Conventional Activity

Having determined that claim 1 of the subject invention recites a judicial exception, and does not integrate that exception into a practical application, we consider whether the claim adds specific limitations beyond the judicial exception that, considered individually and as an ordered combination, do not define that which is no more than "well-understood, routine, conventional" in the field.

Appellant argues that:

> Here, the present claims recite significantly more as the claims relate to improvements to the functioning of a computer. The claims recite a combination of steps, which provide an accurate and computationally efficient method to determine the cardinality of a negated ALE in real-time. The steps support the determination of a cardinality associated with a component with

> a negation operator, the determination of a cardinality of an ALE based on determining the cardinality of a component with a negation operator. Such a solution improves the functioning of a computer by allowing for a more accurate, instantaneous cardinality estimation, and in particular, when the entered query consists of a negated ALE.

Appeal Br. 28–29.

The Examiner determines that:

> These represent inherent benefits of using the Hyperloglog algorithm/data structures, in order to estimate the cardinality of large data sets- i.e. increased accuracy, and reduced computing power/storage, and the reason why Hyperloglog are used in the cardinality estimation process. Examiner notes that the benefits presented by the Applicant represent inherent benefits of using the Hyperloglog data structures/algorithm. They do not represent technical/technological improvements that the claimed invention itself provides, upon its implementation; rather, they represent inherent benefits of using the Hyperloglog algorithm itself and the reason why Hyperloglog is used in cardinality estimation."

Ans. 7–8.

As we have explained above, each negated ALE is still a Boolean algebra representation that outputs a new data structure. Appellant makes no claim to have invented, and indeed the Specification does not provide any specific guidance on, how to make such a transformation. This further evinces the well-understood, routine, and conventional nature of the employed Boolean identity expressions.

Appellant also argues that "the 'existing HLL framework does not have native functions to support Boolean operations of HLL data structures.'" Appeal Br. 29. However, identifying or discovering mathematical formulae that enable a process to be performed with well-understood, routine, and conventional steps and components does not mean

the claim elements define something more than well-understood, routine, and conventional steps and components. Just the opposite is true.

The Examiner also provides Non-Patent Literature (NPL) to show that "the Hyperloglog algorithm was developed by Flajolet in 2007," and that "the Hyperloglog algorithm represents a 'state of the art cardinality estimation algorithm,'" and that "algorithm . . . estimates cardinalities efficiently." Ans. 9. As a consequence, it does not appear to be disputed that Hyperloglog itself is a well-understood, routine, or conventional computing technique.

Appellant further argues that "the claims recite additional elements that cannot be considered part of any abstract idea because they are not—either individually or in combination—well-understood, routine, or conventional in the field." Appeal Br. 31 (emphasis omitted). Appellant additionally contends that "[t]hese claims elements are not well-understood, routine, or conventional because each pending claim has overcome all cited references and previous art-based rejections." Appeal Br. 31. However, we note that the patent eligibility analysis is not an evaluation of novelty or non-obviousness. "[A] claim for a *new* abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016). Whether the claimed concept is "[g]roundbreaking, innovative, or even brilliant . . . does not by itself satisfy the [section] 101 inquiry." *Ass'n for Molecular Pathology*, 569 U.S. at 591. Consequently, an abstract idea does not transform into an eligible inventive concept just because the Examiner has not found prior art that discloses or suggests it. Indeed, "[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 [section] 101 categories of possibly patentable subject matter." *Diamond*, 450 U.S. at 188–89. Novel and non-obvious subject matter in a claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90–91.

Appellant argues that "[t]he claims of the current Application should be found to amount to significantly more than the abstract idea under the Federal Circuit's *DDR* decision." Appeal Br. 28. The Examiner correctly determines that "[i]n Ultramercial, [t]he Federal circuit court referred to the . . . [*Alice*] Supreme Court decision detailing that '[t]he Court in [*Alice*] made it clear that a claim is directed to an abstract idea does not move into [section] 101 eligibility territory by 'merely requir[ing] generic computer implementation.'" Ans 9. The Examiner also correctly determines that "the instant claimed invention is in fact merely carried out by a generically recited computing platform - i.e. ["computer-implemented;"] that is, essentially generic computing elements as seen in [Appellant's] [S]pecification." Ans. 8–9.

DECISION

We have considered all of Appellant's arguments in support of the patent eligibility of claim 1, but find them unpersuasive. We sustain the Examiner's rejection of claims 1–6, 8–15, and 17–19 under 35 U.S.C. § 101.

CONCLUSION

The Examiner's rejection is affirmed.

Claim(s)	35 U.S.C. §	Basis/Reference(s)	Affirmed	Reversed
1–6, 8–15, 17–19	101	Eligibility	1–6, 8–15, 17–19	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED