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Duncan Galloway Egan Greenwald, PLLC
9625 Ormsby Station Road
Louisville, KY 40223

EXAMINER
WONG, ERIC TAK WAI

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ARTI ARORA and EDWARD LAZEAR

Appeal 2018-007209
Application 10/319,182
Technology Center 3600

Before ANTON W. FETTING, JOSEPH A. FISCHETTI, and KENNETH G. SCHOPFER, *Administrative Patent Judges*.

FISCHETTI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant[1] seeks our review under 35 U.S.C. § 134 of the Examiner's final rejection of claims 15–22 and 36–49. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

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. Appellant identifies the real party in interest as, Thomson Reuters Global Resources Unlimited Company. Appeal Br. 1.

THE INVENTION

The Appellant's disclosure is to "digital processing and more specifically to a system for analyzing allocation of factors relevant to business operations." Spec. ¶ 2.

Claim 15, reproduced below, is representative of the subject matter on appeal.

15. A method for facilitating financial performance management of a business organization, the method comprising:

using a business logic engine comprising a set of rules configured to generate financial management projections and implemented in a computer system having a processor and a memory and configured to provide at least a first financial management projection by performing a first allocation of costs and revenue among a plurality of business entities and a second financial management projection by performing a second allocation of costs and revenue among the plurality of business entities comprising the business organization, wherein the first and second allocations of costs and revenue are performed based on a determined change of data associated with the plurality of business entities, and wherein the first and second financial management projections comprise financial metrics associated with business objectives for financial management excluding tax strategies, the business objectives comprising one or more of: aligning legal entity structures with management structures, resolving internal conflicts, and responding to external changes;

providing by the computer system the at least first and second financial management projections as user interface elements in a graphical user interface arranged in a configuration adapted to support selecting a desired allocation of cost and revenue among the plurality of business entities; and

receiving by the computer a signal related to a selected desired allocation of cost and revenue among the plurality of business entities.

THE REJECTION

The Examiner relies upon no evidence.

The following rejection is before us for review.

Claims 15–22 and 36–49 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

FINDINGS OF FACT

We adopt the Examiner's findings as set forth on pages 2–11 in the Final Office Action[2] and on pages 4–13 in the Examiner's Answer.

35 U.S.C. § 101 REJECTION

We will affirm the rejection of claims 15–22 and 36–49 under 35 U.S.C. § 101.

The Appellant argues claims 15–22 and 36–49 as a group. (Appeal Br. 7). We select claim 15 as the representative claim for this group, and so the remaining claims stand or fall with claim 15. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2015).

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. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

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*. *Alice*, 573 U.S. at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with

[2] All references to the Final Office Action refer to the Final Office Action mailed on September 13, 2017.

that framework, we first determine what concept the claim is "directed to." *See 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 (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))).

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 187; *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."). Having said that, the Supreme Court also indicated 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 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 (quotation marks 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.* (alterations in 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.*

The PTO recently published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Guidance"). Under the 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 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)).

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 § 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.

See Guidance.

The U.S. Court of Appeals for the Federal Circuit has explained that "the 'directed to' inquiry applies a stage-one filter to claims, considered in light of the [S]pecification, based on whether 'their character as a whole is directed to excluded subject matter.'" *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)). It asks whether the focus of the claims is on a specific improvement in relevant technology or on a process that itself qualifies as an "abstract idea" for which computers are invoked merely as a tool. *See Enfish*, 822 F.3d at 1335–36.

In so doing, as indicated above, we apply a "directed to" two prong test: 1) evaluate whether the claim recites a judicial exception, and 2) if the claim recites a judicial exception, evaluate whether the claim "appl[ies], rel[ies] on, or use[s] 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." Guidance at 53; *see also* MPEP § 2106.05(a)–(c), (e)–(h).

The Specification states:

> Maximizing financial performance is critical for businesses. However, this goal requires understanding complex interactions and tradeoffs that result from allocation of factors, such as cost and revenues, within a business. Businesses that have different geographic locations are subjected to different laws in different locations. Laws are often highly detailed and can implicate many characteristics of business operation such as transfer and handling of goods, tariffs, taxes, environmental effects, securities-related actions, management actions, compensation, and others. Even within a single legal jurisdiction, different laws and regulations may come into play to affect financial performance depending on the company's actions.

¶ 3.

The preamble says claim 15 is "for facilitating financial performance management of a business organization." Understood in light of the Specification, claim 15, recites, in pertinent part the abstractions of:

> using … a set of rules . . . to generate financial management projections and implemented … to provide at least a first financial management projection by performing a first allocation of costs and revenue among a plurality of business entities and a second financial management projection by performing a second allocation of costs and revenue among the plurality of business entities comprising the business organization, wherein the first and second allocations of costs and revenue are performed based on a determined change of data associated with the plurality of business entities, and wherein the first and second financial management projections comprise financial metrics associated with business objectives for financial management excluding tax strategies, the business objectives comprising one or more of: aligning legal entity structures with management structures, resolving internal conflicts, and responding to external changes;

> . . . selecting a desired allocation of cost and revenue among the plurality of business entities; and
>
> receiving . . . a selected desired allocation of cost and revenue among the plurality of business entities.

Accordingly, the Examiner found that "the claims are directed to performing projections of allocations of costs and revenue among a plurality of business entities, which is a fundamental economic practice and therefore an abstract idea." (Final Act. 5).

We agree and thus ourselves find that claim 15 recites a method of generating financial management projections by performing projections of allocations of costs and revenue among a plurality of business entities based on a determined change of data associated with the plurality of business entities. Our finding here is consistent with the Examiner's "directed to" finding and the intrinsic evidence listed above. Financial management objectives which are based on, "financial metrics associated with business objectives for financial management excluding tax strategies, the business objectives comprising one or more of: aligning legal entity structures with management structures, resolving internal conflicts, and responding to external changes," are an important economic principle in that they provide a metric to maintain a business entity's solvency. The patent-ineligible end of the spectrum includes fundamental economic principles because it is an enumerated type of certain method of organizing human activity, which is itself a judicial exception. Guidance, 84 Fed. Reg. 52, citing *Alice*, 573 U.S. at 220.

Turning to the second prong of the "directed to" test, claim 15 only generically requires "computer system having a processor and a memory" and "a graphical user interface" These components are described in the

Specification at a high level of generality. *See* Spec. ¶¶ 34, 35, 37, 47, 48, and Fig. 1. We fail to see how the generic recitations of these most basic computer components and/or of a system so integrates the judicial exception as to "impose[] a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception." Guidance, 84 Fed. Reg. 53.

Thus, we find that the claims recite the judicial exception of a fundamental economic principle that is not integrated into a practical application.

That the claims do not preempt all forms of the abstraction or may be limited to financial management projections, does not make them any less abstract. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) ("And that the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.").

Turning to the second step of the *Alice* analysis, because we find that the claims are directed to abstract ideas/judicial exceptions, the claims must include an "inventive concept" in order to be patent-eligible, i.e., there must be an element or combination of elements sufficient to ensure that the claim in practice amounts to significantly more than the abstract idea itself. *See Alice*, 573 U.S. at 217–18 (quoting *Mayo Collaborative Servs.*, 566 U.S. at 72–73).

Concerning this step the Examiner found the following:

> The claims do not include limitations that are 'significantly more' than the abstract idea because the claims do not include an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of

> an abstract idea to a particular technological environment. Note that the limitations, in the instant claims, are done by the generically recited computer products. The generically recited computer elements such as 'business logic engine', 'processor', 'memory', 'computer system', 'computer', 'user input device', and 'module' do not add a meaningful limitation to the abstract idea because they would be routine in computer implementation. The steps for data gathering and processing do not add a meaningful limitation to the method as they would be routinely used by those of ordinary skill in the art in order to apply the abstract idea.

Final Act. 7–8. We agree with the Examiner. "[T]he relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea . . . on a generic computer." *Alice*, 573 U.S. at 225. They do not.

Taking the claim elements separately, the function performed by the computer at each step of the process is purely conventional. Using a computer to generate, allocate, determine changes in, display and apply decision criteria to data as a result amounts to electronic data query and retrieval—one of the most basic functions of a computer. All of these computer functions are well-understood, routine, conventional activities previously known to the industry. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016); *see also In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) ("Absent a possible narrower construction of the terms 'processing,' 'receiving,' and 'storing,' . . . those functions can be achieved by any general purpose computer without special programming."). In short, each step does no more than require a generic computer to perform generic computer functions. The claims do not, for example, purport to improve the functioning of the computer itself. In addition, as we stated above, the

claims do not affect an improvement in any other technology or technical field. The Specification spells out different generic equipment and parameters that might be applied using this concept and the particular steps such conventional processing would entail based on the concept of information access under different scenarios (*see, e.g.*, *See* Spec. ¶¶ 34, 35, 37, 47, 48, and Fig. 1). Thus, the claims at issue amount to nothing significantly more than instructions to apply the abstract idea using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 573 U.S. at 225–226.

Considered as an ordered combination, the computer components of Appellants' claims add nothing that is not already present when the steps are considered separately. The sequence of data reception-analysis (generate, allocate, determine changes, display and apply decision criteria to data) and storing is equally generic and conventional or otherwise held to be abstract. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (sequence of receiving, selecting, offering for exchange, display, allowing access, and receiving payment recited an abstraction), *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc*., 876 F.3d 1372, 1378 (Fed. Cir. 2017) (holding that sequence of data retrieval, analysis, modification, generation, display, and transmission was abstract), *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (holding sequence of processing, routing, controlling, and monitoring was abstract). The ordering of the steps is, therefore, ordinary and conventional.

We have reviewed all the arguments Appellant has submitted concerning the patent eligibility of the claims before us that stand rejected

under 35 U.S.C. § 101. (App. Br. 7–19, Reply Br. 1–5). We find that our analysis above substantially covers the substance of all the arguments, which have been made. But, for purposes of completeness, we will address various arguments in order to make individual rebuttals of same.

Appellant argues: "The Examiner's characterization of the claim limitations is an overbroad and improper abstraction of the claimed limitations, and even if it did accurately capture the claimed invention, which it does not, this summarized version of the claim is still not directed towards an unpatentable abstract idea." (Appeal Br. 8–9).

We disagree with Appellant because concerning the alleged over–breath, an abstract idea can generally be described at different levels of abstraction. *See Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016). As to Appellant's assertion that the Examiner's summarized version of the claim is not directed to an abstract idea, we disagree for the reasons we have stated above that the claims are directed to a fundamental economic principle which is an enumerated judicial exception. See Guidance, 84 Fed. Reg. 52, citing *Alice*, 573 U.S. at 220.

Appellant next argues,

> The method described in the present invention is far removed from the concepts of risk hedging and intermediated settlements and solves a problem unique the computer modeling of financial management projections using a special purpose computer comprising at least a business logic engine and a user interface having specific user interface elements, one that did not exist prior to the advent of computers.

(Appeal Br. 9).

As described above, the only claim elements beyond the abstract idea are the "computer system having a processor and a memory" and "a

graphical user interface." Appellant has not shown nor does it deny that the operation of these components is well-understood, routine, or conventional, where, as here, there is nothing in the Specification to indicate that the operations recited in claim 15 require any specialized hardware or inventive computer components, or that the claimed process is implemented using other than generic computer components to perform generic computer functions, e.g., receiving, processing, and transmitting information. Indeed, the Federal Circuit, in accordance with *Alice*, has "repeatedly recognized the absence of a genuine dispute as to eligibility" where claims have been defended as involving an inventive concept based "merely on the idea of using existing computers or the Internet to carry out conventional processes, with no alteration of computer functionality." *Berkheimer v. HP Inc.*, 890 F.3d 1369, 1373 (Fed. Cir. 2018) (Moore, J., concurring) (citations omitted).

> Appellants also argue,
> claim 15 is not directed to one of these patent ineligible concepts and actually improves the functioning of a computer and existing technology. *See* Specification, paras. [60-62] ('For the sake of efficiency, the system calculates only those portions of the model that are actually affected by user changes . . . [t]his saves time').

(Appeal Br.10)

In light of the breadth of the claim, the Appellant's argument is not persuasive as to error in the rejection. Calculating only those portions of the model that are actually affected by user changes is a mental process. We as humans do it all the time with our memory, acting on those items in a group of items that only need addressing. A claim for a new abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (citing Mayo, 566 U.S. at 90).

Appellant lists various claim limitations (Appeal Br. 12) as examples of improvements without providing evidence that they are improvements in the computer as contrasted with financial projection tactics. There is insufficient evidence in the record before us that the claimed subject matter reflects any such improvement, i.e., that the claimed method allows "the computer system to perform the method in a faster manner." Again the idea of recalculating only those items which are listed as needing calculation is an abstraction. The claims do not recite a particular way of programming or designing the software to create a determined change/improvement, but instead merely claim the resulting systems. *See McRO, Inc. v. Bandai Namco Games Am. Inc*., 837 F.3d 1299, 1314 (Fed. Cir. 2016) ("directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery"). There is no further discussion in the Specification of the particular technology for performing this claimed step. *See Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 (Fed. Cir. 2016).

Appellants further argue, "claim 15 is directed towards novel subject matter that could not be replicated by a human performing mental steps. The novel steps of claim 15 could not be performed in a human mind." (Appeal Br. 14).

A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90; *see also Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) ("The 'novelty' of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter."). Although the claims

purport to accelerate the process of generating financial management projections, our reviewing court has held that speed and accuracy increases stemming from the ordinary capabilities of a general purpose computer "do[] not materially alter the patent eligibility of the claimed subject matter." *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012). Here, the Appellant has not produced evidence showing that the claimed computations cannot be made by human interaction using a pen and paper. Instead, Appellant appears to be relying on attorney argument alone. It is well settled that merely using a computer to perform more efficiently what could otherwise be accomplished manually does not confer patent-eligibility. *See Id. at* 1279.

We also disagree with Appellants that under the holding in *Enfish, LLC v. Microsoft Corp* our decision would be different. (Appeal Br. 15–16). In *Enfish*, the invention at issue was directed at a wholly new type of logical model for a computer database: a self-referential table that allowed the computer to store many different types of data in a single table and index that data by column and row information. *Enfish*, 822 F.3d at 1330–32. In finding the claims "not directed to an abstract idea," but "to a specific improvement to the way computers operate," the Federal Circuit noted that "the claims are not simply directed to *any* form of storing tabular data, but instead are specifically directed to a *self-referential* table for a computer database." *Enfish,* 822 F.3d at 1336–37 (emphasis in original). We find nothing in the claims before us in the generically claimed "computer system having a processor and a memory" and a "graphical user interface" which rises to the level of technical proficiency as found in *Enfish*. Instead, we find the claims are focused on "economic or other tasks for which a

computer is used in its ordinary capacity." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1336.

Likewise we fail to see the similarities asserted by Appellants (Appeal Br. 18–19) between the claims on appeal here and those adjudicated in *DDR Holdings, LLC v. Hotels.com, L.P.* 773 F.3d 1245 (Fed. Cir. 2014). Appeal Br. 18–19. In *DDR Holdings*, the Court evaluated the eligibility of claims "address[ing] the problem of retaining website visitors that, if adhering to the routine, conventional functioning of Internet hyperlink protocol, would be instantly transported away from a host's website after 'clicking' on an advertisement and activating a hyperlink." *Id.* at 1257. There, the Court found that the claims were patent eligible because they transformed the manner in which a hyperlink typically functions to resolve a problem that had no "pre-Internet analog." *Id.* at 1258. The Court cautioned, however, "that not all claims purporting to address Internet-centric challenges are eligible for patent." *Id.* Appellant provides no support for its contention that the claims address a technological problem "particular to the internet" by implementing a system "solv[ing] a problem unique to an electronic computing environment." Appeal Br. at 18.

CONCLUSIONS OF LAW

We conclude the Examiner did not err in rejecting claims 15–22 and 36–49 under 35 U.S.C. § 101.

DECISION

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, the Examiner's decision is affirmed. *See* 37 C.F.R. § 41.50(a)(1).

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
15–22, 36–49	101		15–22, 36–49	

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