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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DIANE SALMON and NANCY KIM

Appeal 2018-004570¹
Application 13/842,969
Technology Center 3600

Before JOSEPH A. FISCHETTI, MICHAEL C. ASTORINO, and
KENNETH G. SCHOPFER, *Administrative Patent Judges*.

FISCHETTI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the Examiner's final rejection of claims 1–10. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We affirm.

¹ Appellants identify VISA International Service Association, as the real party in interest. App. Br. 2.

THE INVENTION

Appellants state, “[t]he present innovations are directed generally to apparatuses, methods and systems for rewards, points and currency exchange.” (Spec. ¶ 3).

Claim 1, reproduced below, is representative of the subject matter on appeal:

1. A universal value exchange processor implemented method to transform value equivalent exchange instructions into cross-ecosystem currency exchanges for exchanging currencies, comprising:

obtaining, by using one or more computerized data processors, a cross-ecosystem currency exchange instruction, said instruction comprising data in XML format, said instruction including the following information: currency source types, source currency account numbers, source currency access usernames, source currency access passwords, currency destination types, destination currency account numbers, destination currency access usernames, and destination currency access passwords;

determining, by using the one or more computerized data processors, currency types based on parsing the cross-ecosystem currency exchange instruction;

determining, by using the one or more computerized data processors, multiple broker servers based on parsing the cross-ecosystem currency exchange instruction;

determining, by using the one or more computerized data processors, exchange rates of the currency types included in the currency exchange instruction;

obtaining, by using the one or more computerized data processors, currency exchange restrictions and conditions imposed by the multiple broker servers, wherein the currency exchange restrictions and conditions include restrictions and conditions at sources of the currencies and at destinations of the currencies;

generating, by using the one or more computerized data processors, based on the currency exchange restrictions and

conditions, currency exchange flow paths for currency transfer to be accepted by the multiple brokers, the currency exchange flow paths including computer-executable request messages for execution by the multiple broker servers;

computing, by the one or more computerized data processors, a popularity indicator associated with the currency types, said associated popularity indicator, indicating an eligibility of the delayed exchange having one or more of the following properties: availability of exchanges of the currency types and a number of times exchanges of the currency types is completed within a certain period;

determining, by the multiple broker servers, whether to apply a delayed exchange to the request in the currency exchange flow paths in response to the popularity indicator;

in response to the determining being positive, requesting, by at least one broker server, to a second broker server to determine an execution by the at least one broker server all or part of the request from the second broker server;

determining, by using the one or more computerized data processors, that the cross-ecosystem currency exchange has been completed; and

effecting, by the one or more computerized data processors, an adjustment of accounts associated with the issued currency transfer request to reflect the completed cross-ecosystem currency exchange.

THE REJECTION

The following rejection is before us for review.

Claims 1–10 are rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter because the claimed invention is directed to a judicial exception.

FINDINGS OF FACT

We adopt the Examiner’s findings as set forth on pages 2–6 in the Final Office Action (“Final Act.”), and on pages 3–7 in the Examiner’s Answer (“Ans.”), concerning the 35 U.S.C. § 101 rejection.

ANALYSIS

35 U.S.C. § 101 REJECTION

We will affirm the rejection of claims 1–10 under 35 U.S.C. § 101.

The Appellants argue 1–10 as a group, and we select claim 1 as the representative claim for this group (App. Br. 8, 17–19), and so the remaining claims stand or fall with claim 1. *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: “[I]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) (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*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. 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.” *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. (15 How) 252, 267–68 (1854))); 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.”). 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., Diehr*, 450 U.S. 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 (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.* (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) (9th ed. Rev. 08. 2017, Jan. 2018)).

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, 84 Fed. Reg. at 56.

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 id.* 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, 84 Fed. Reg. at 53; *see also* MPEP § 2106.05(a)–(c), (e)–(h).

The Specification states: “[t]he present innovations are directed generally to apparatuses, methods and systems for rewards, points and currency exchange.” (Spec. ¶ 3). The Specification further describes: “[s]ervice providers such as banks and merchants run loyalty or rewards programs to reward their customers for being loyal to their business, encourage more spending, or entice new customers. These rewards may be in the form of points, cash back, gift cards, miles, etc.” (Spec. ¶ 4). “[T]he user may

desire to convert purchasing power available in one currency ecosystem to another currency utilized in a completely different ecosystem. As one example, the user may desire to convert points from traditional rewards programs into cash withdrawn from an ATM-linked account.” (Spec. ¶ 45). Understood in light of the Specification, claim 1, recites, in pertinent part,

obtaining, . . . a cross–ecosystem currency exchange instruction, said instruction comprising data . . . , said instruction including the following information:
obtaining, . . . currency exchange restrictions and conditions . . . , wherein the currency exchange restrictions and conditions include restrictions and conditions at sources of the currencies and at destinations of the currencies;
generating, . . . based on the currency exchange restrictions and conditions, currency exchange flow paths for currency transfer to be accepted by the multiple brokers,
computing, . . . a popularity indicator associated with the currency types, said associated popularity indicator, indicating an eligibility of the delayed exchange having one or more of the following properties: availability of exchanges of the currency types and a number of times exchanges of the currency types is completed within a certain period;
determining, . . . whether to apply a delayed exchange to the request in the currency exchange flow paths in response to the popularity indicator;
in response to the determining being positive, requesting, . . . to determine an execution . . . all or part of the request . . . ;
determining, . . . that the cross-ecosystem currency exchange has been completed; and
effecting, . . . an adjustment of accounts associated with the issued currency transfer request to reflect the completed cross-ecosystem currency exchange.

Accordingly, the Examiner found that claims “1–10 are directed to the abstract idea of transforming exchange instructions into currency exchanges for exchanging currencies and effecting adjustment to reflect completed

request.” (Final Act. 2).

We agree with the Examiner that “transforming exchange instructions into currency exchanges for exchanging currencies and effecting adjustment to reflect completed request,” is a fundamental economic principle because currency valuation and exchange is the basic tenant of economics. That is, the idea of converting “purchasing power available in one currency ecosystem to another currency utilized in a completely different ecosystem (Spec. ¶ 45)” is the engine of global economics because, for example, the value of currency in one country/ecosystem has greater or less worth in another country/ecosystem. Understanding this differential is key to transacting between the two ecosystems. The patent-ineligible end of the spectrum includes certain methods of organizing human activity—fundamental economic principles or practices. *Alice*, 573 U.S. at 220; *see also* Guidance, 84 Fed. Reg. at 53.

Turning to the second prong of the “directed to” test, claim 1 only generically requires “one or more computerized data processors,” “a second broker server” and “multiple broker servers.” These components are described in the Specification at a high level of generality. (*See* Spec. ¶¶ 61, 203, 218, Figs. 1, 2A, 2B). 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. at 53.

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

That the claims do not preempt all forms of the abstraction or may be limited to currency exchange, 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: “[t]he claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements when considered both individually and as an ordered combination do not amount to significantly more than the abstract idea.” (Final Act. 4). 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 obtain, determine, generate, compute and effect an action on data to generate a result, are some 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.

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 (obtain, determine, generate, compute and effect an action on data to generate a result) 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.

Thus, the claims at issue amount to nothing significantly more than instructions to apply the abstract ideas of a fundamental economic principle 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 225–26.

We have reviewed all the arguments Appellants have submitted concerning the patent eligibility of the claims before us that stand rejected under 35 U.S.C. § 101. (App. Br. 8–18). 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.

Appellants argue: “The claimed invention does not claim to create a universal value exchange platform *per se*. Instead, aspects of the invention create a specific approach to implement the exchange. This specific approach is through the generation of currency exchange flow paths for currency transfer using the multiple brokers.” (Appeal Br. 9).

Appellants’ argument is not persuasive because even accepting Appellants’ characterization of what the claims are directed to, this characterization still involves a fundamental economic principle. That is, as we find above, the fundamental economic principle still involves currency valuation and exchange across ecosystems, which is a basic tenant of economics. That the claims also deal with exchange flow paths does not make them patent eligible because directing flow based on downstream availability is still an abstraction because it involves a mental process of observation. *See* Guidance, 84 Fed. Reg. at 52. Here, the Examiner and Appellants each describe, at different levels of abstraction, what the claims are directed, but it is recognized that “[a]n abstract idea can generally be described at different levels of abstraction.” *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016).

We further fail to see the similarities asserted by Appellants (App. Br. 9–11), between the claims on appeal here and those adjudicated in *DDR Holdings v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). 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.” *DDR Holdings*, 773 F.3d 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. In contrast, and in Appellants’ words, the problem to be resolved in the case on appeal here is “overcoming the shortfalls of the existing value exchange across ecosystems by, in summary, generating a specific currency exchange flow paths such that information associated and needed to process the exchange between different brokers may be conducted and facilitating partial or complete processing of the exchange request.” (Appeal Br. 10). This is a problem related to the transfer of value between environments, which is an economic principle, and not to an innovation in technology, such as an improvement in hyperlink functions.

Appellants argue,

The analysis of satisfaction of 35 U.S.C. §§ 102 and 103 of claims are technical in nature and are the bedrock of patentable invention in the US patent system. Applicant submits that satisfying these requirements should be given significant patentable weight in this step as well as the overall ‘significantly more’ analysis. Otherwise, the whole exercise of determining novelty and nonobviousness requirements by the

Office would be a purely theoretical and hypothetical exercise.

(Appeal Br. 14).

Although the second step in the *Mayo/Alice* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or non-obviousness, but rather, a search for “an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Alice*, 573 U.S. at 217–218 (alteration in original). 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. at 188–89 (“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.”). The question in step two of the *Alice* “framework is not whether an additional feature is novel, but whether the implementation of the abstract idea involves “more than performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’” *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347–48 (quoting *Alice*, 573 U.S. at 225). As we find above, the answer to the latter question is no.

Appellants argue,

the underlying technology in *McRo* is also instructional and software in nature, i.e., animation in lip synchronization. It’s purely based on software and McRo applies the rule-based instructions using generic computer with generic processors to perform the synchronization automatically. As such, the improvement was not on the “platform” or hardware; it was a purely software driven, a systematic rule-based approach. And

the result, just as in McRo, is nonconventional and non-routine because prepaid accounts could not perform funds transfer to checking or savings accounts before.

(Appeal Br. 16–17).

It is true that specific asserted improvements in computer capabilities, when claimed, can render claimed subject matter not directed to an abstract idea. *Cf. McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1316 (Fed. Cir. 2016) (“When looked at as a whole, claim 1 is directed to a patentable, technological improvement over the existing, manual 3–D animation techniques.”). But, there is insufficient evidence in the record before us that the claimed subject matter reflects any such improvement. The question is whether the claims as a whole “focus on a specific means or method that improves the relevant technology” or are “directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.” *McRO*, 837 F.3d at 1314. In this case however, claim 1 as a whole as found *supra* is focused on satisfying certain contingencies for currency valuation and exchange, and does not recite specific means² such as found in *McRO*.

CONCLUSIONS OF LAW

We conclude the Examiner did not err in rejecting claims 1–10 under 35 U.S.C. § 101.

² Claim 1 of the *McRO*, U.S. Patent No. 6,307,576 sets forth specific technological items such as “a timed data file of phonemes having a plurality of sub–sequences.” *McRO*, 837 F.3d at 1307–08.

Appeal 2018-004570
Application 13/842,969

DECISION

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