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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SHAHRUL AZRI LADUE, HEIDI LYNN DAIGLER,
MATTHEW PAUL HARHEN, and GRETCHEN JANE BROWN

Appeal 2017-008731
Application 13/858,400¹
Technology Center 3600

Before ANTON W. FETTING, JOSEPH A. FISCHETTI, and
AMEE A. SHAH, *Administrative Patent Judges*.

FISCHETTI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner's final rejection of claims 1–9, 11, 14–20, and 25–28.² We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We AFFIRM.

¹ Appellants identify Amazon Technologies, Inc., as the real party in interest. Br. 2.

² All rejections under 35 U.S.C. §§ 102 and 103 have been withdrawn by the Examiner. Answer 5.

THE INVENTION

Appellants' claims cover electronic marketplaces offering a variety of items to customers over the Internet. Abstract.

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

1. A method comprising:
 - receiving a request to offer a first item for sale at an electronic marketplace from a seller over a network, wherein the request comprises functional attributes of the first item, and wherein at least one of the functional attributes of the first item is a first dimension of the first item;
 - receiving an identification of a second item as an equivalent to the first item from the seller over the network, wherein the second item is offered for sale at the electronic marketplace;
 - identifying functional attributes of the second item, wherein at least one of the functional attributes of the second item is a second dimension of the second item;
 - calculating a first confidence score indicative of a relationship between the second item and the first item based at least in part on a comparison of the first dimension of the first item to the second dimension of the second item;
 - calculating a second confidence score for the seller based at least in part on the identification of the second item as the equivalent to the first item received from the seller and the first confidence score;
 - receiving, over the network, at least one of an order for the first item or information regarding a return of the first item;
 - modifying the first confidence score based at least in part on at least one of the order for the first item or the return of the first item;
 - modifying the second confidence score based at least in part on at least one of the order for the first item or the return of the first item;
 - confirming that the second item is an equivalent to the first item based at least in part on the first confidence score or the second confidence score; and

causing a display of an item detail page comprising information regarding the first item.

The following rejection is before us for review.

Claims 1–9, 11, 14–20, and 25–28 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

FINDINGS OF FACT

1. We adopt the Examiner’s findings as set forth on pages 4–12 of the Final Action and pages 2–14 of the Answer.

ANALYSIS

35 U.S.C. § 101 REJECTION

We will sustain the rejection of claims 1–9, 11, 14–20, and 25–28 under 35 U.S.C. § 101.

The Supreme Court

set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, . . . determine whether the claims at issue are directed to one of those patent-ineligible concepts If so, we then ask, “[w]hat else is there in the claims before us?” . . . To answer that question, . . . consider the elements of each claim both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent-eligible application. . . . [The Court] described step two of this analysis as a search for an “‘inventive concept’”—*i.e.*, 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.”

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Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 134 S. Ct. 2347, 2355 (2014) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)).

To perform this test, we must first determine whether the claims at issue are directed to a patent-ineligible concept.

Although the Court in *Alice* made a direct finding as to what the claims were directed to, we determine that the plain language of the claims and the Specification provide enough information to inform one as to what they are directed to.

The steps in representative claim 1 result substantively in³:

modifying the first confidence score based at least in part on at least one of the order for the first item or the return of the first item;

modifying the second confidence score based at least in part on at least one of the order for the first item or the return of the first item;

confirming that the second item is an equivalent to the first item based at least in part on the first confidence score or the second confidence score.

App. Br. 30.

The Examiner found that the claims are directed to,

offering an item for sale based on a confidence score related to available and proposed items, which includes the abstract ideas of an idea ‘of itself’ (e.g., collecting and comparing known information (*Classen*), obtaining and comparing intangible data (*Cybersource*), comparing new and stored information and using rules to identify options (*SmartGene*), using categories to organize, store and transmit information (*Cyberfone*)); organizing human activity (e.g., concepts relating to

³ Our analysis is made based on considering the claims as a whole, but for purposes of this discussion, we note the result phrases of the independent claim to point to what the claims are directed to.

interpersonal and intrapersonal activities, such as managing relationships or transactions between people, social activities, and human behavior; satisfying or avoiding a legal obligation; advertising, marketing, and sales activities or behaviors; and managing human mental activity); and mathematical relationships/formulas.

(Final Act. 11).

The Examiner further found,

Claims 1-2 do not present additional elements beyond the details of the abstract ideas. The recited network could simply be a collection of interrelated items or people. A display could be a non-electronic presentation of data. Claims 9, 11, 14-20, and 25-28 include the additional element of a computer processor. The computer processor is broadly applied to the abstract idea(s) at a high level of generality and they operate in well-understood, routine, and conventional manners.

Id.

The Specification states: “competitors or other sources of the malfunctioning part, or of equivalent parts, may frequently offer the malfunctioning part, or equivalent parts, at prices that are lower than those that are offered by the original equipment manufacturer.” Spec. ¶ 3.

We thus find that the claims are directed to determining with a relative degree of confidence, an equivalence between first and second items offered for sale. It follows from prior Supreme Court cases, and *Gottschalk v. Benson*, 409 U.S. 63 (1972), in particular, that the claims at issue here are directed to an abstract idea. Determining with a relative degree of confidence, an equivalence between first and second items offered for sale is a fundamental economic principle because it assures the buyer is obtaining a product made specifically for the intended purpose of the purchase. The patent-ineligible end of the spectrum includes fundamental economic practices. *Alice*, 134 S. Ct. at 2357.

Also, we find the steps of:

- i. calculating a first confidence score indicative of a relationship ... based at least on a comparison of ... dimension[s];
- ii. calculating a second confidence score for the seller based at least in part on ... identification of the [] item as the equivalent;
- iii. modifying the first confidence score based at least in part on at least one of an order [] or the return of [one of the items];
- iv. modifying the second confidence score based at least in part on at least one of the order ... or return of the [one] item;
- v. confirming that the [] item is an equivalent based at least in part on the first confidence score or the second confidence score,

constitute “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016); *see also buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (claims directed to certain arrangements involving contractual relations are directed to abstract ideas). Thus, determining with a relative degree of confidence, an equivalence between first and second items offered for sale is an “abstract idea” beyond the scope of § 101.

As in *Alice*, we need not labor to delimit the precise contours of the “abstract ideas” category in this case. It is enough to recognize that there is no meaningful distinction in the level of abstraction between the concept of an intermediated settlement, as discussed in *Alice*, and the concept of determining with a relative degree of confidence, an equivalence between first and second items offered for sale, at issue here. Both are squarely

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within the realm of “abstract ideas” as the Court has used that term. That the claims do not preempt all forms of the abstraction or may be limited to replacement parts, does not make them any less abstract. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–1663 (Fed. Cir. 2015) (citations omitted) (“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.”).

Claim 1, unlike the claims found non-abstract in prior cases, uses generic computer technology to perform data reception, transmission, and linkage and does not recite an improvement to a particular computer technology. *See, e.g., McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (finding claims not abstract because they “focused on a specific asserted improvement in computer animation”).

The introduction of a computer into the claims does not alter the analysis at *Alice* step two.

[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is not enough for patent eligibility. Nor is limiting the use of an abstract idea “to a particular technological environment.” Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implemen[t]” an abstract idea “on . . . a computer,” that addition cannot impart patent eligibility. This conclusion accords with the pre-emption concern that undergirds our § 101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of “additional featur[e]” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.”

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Alice, 134 S. Ct. at 2358 (alterations in original) (internal citations omitted).

Instead, “the relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea . . . on a generic computer.” *Id.* at 2359. 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 retrieve, select, and apply decision criteria to data to drive a score 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 trading industry. *See Elec. Power Grp.*, 830 F.3d 1354; *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. As to the data operated upon, “even if a process of collecting and analyzing information is ‘limited to particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.” *SAP Am. Inc. v. InvestPic, LLC*, 890 F.3d 1016, 1022 (Fed. Cir. 2018) (internal citation omitted).

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-modification access/display 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,

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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.

The claims do not, for example, purport to improve the functioning of the computer itself. Nor do they effect 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.*, Spec. ¶ 26.; *cf* Appeal Br. 16–19.

Thus, the claims at issue amount to nothing significantly more than instructions to apply the abstract idea of information access using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 134 S. Ct. at 2360.

We have reviewed all the arguments (Appeal Br. 5–27; Reply Br. 2–16) Appellants have submitted concerning the patent eligibility of the claims before us that stand rejected under 35 U.S.C. § 101. 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.

Appellants argue, “the claims recite detailed and non-obvious features to overcome a technical problem specifically arising in the realm of

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identifying interchangeable items by calculating confidence scores using at least particular datapoints, rules and processing methods.” (Appeal Br. 8).

We disagree with Appellants. 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 the performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’” *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1347–1348 (quoting *Alice*, 134 S. Ct. at 2359).

Appellants next argue,

Clearly the details of how interchangeable items are identified by calculating confidence scores using particular datapoints, rules and processing methods extend well beyond any abstract idea. In addition, the automatic generation and display of item details pages including information regarding interchangeable items, based at least on the calculated confidence scores and/or degree of equivalence, also extend well beyond any abstract idea.

(Appeal Br. 9)

We disagree with Appellants because the steps of calculating a confidence score is still an abstraction albeit, maybe novel, but “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). As to the argued display of resulting data, we find that this is limited to insignificant extra solution activity not covered under 35 U.S.C. § 101. *See In re Schrader*, 22 F. 3d 290, 294 (Fed. Cir. 1994) (recording step of the claimed process is incapable of imparting patent-eligibility under 35 U.S.C. § 101).

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Appellants next argue,

Appellant respectfully disagrees with the Examiner's characterization, and submits that the particular details related to analyzing the data, e.g., related to orders or returns of the first item, in order to calculate and modify the first and second confidence scores do indeed constitute at least part of the technical or technological improvements of the present claims.

(Appeal Br. 10).

We disagree with Appellants. The question here 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, the claims, as a whole, are focused on satisfying certain contingencies for confirming that a second item is an equivalent to a first item based at least in part on a first confidence score or the second confidence score. We find this limitation to be a result or an effect, and not an improvement in the technology of how a processor, memory, and program works. Thus, we find no improvement in device technology here, but rather only the idea of selecting one product over another.

Appellants argue,

For an electronic marketplace handling thousands or millions of orders and/or returns of items each day, the continuous stream of data regarding orders and returns could not be effectively and efficiently processed and analyzed in the mind of a human user or through use of pen and paper.

(Appeal Br. 13).

We disagree with Appellants. The Federal Circuit has held that if a method can be performed by human thought alone, or by a human using pen and paper, it is merely an abstract idea and is not patent-eligible under § 101. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir.

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2011). While reducing the time of calculation through machine intervention may be an enhancement, it still does not make the calculations any less of an abstraction. Automation to reduce the burden on the user of what once could have been done with pen and paper, e.g. formatting of data, does not qualify an idea for patent eligibility because it is still a mental process. *See CyberSource*, 654 F.3d at 1375. “The Court [*Parker v. Flook*, 437 U.S. 584 (1978)] rejected the notion that the recitation of a practical application for the calculation could alone make the invention patentable.” *CyberSource*, 654 F.3d at 1371.

Appellants argue that the Examiner has not provided an explanation of “why the courts have recognized, or those in the relevant field of art would recognize, those claim limitations as being well-understood, routine, conventional activities . . . (emphasis omitted).” (Appeal Br. 15).

We disagree with Appellants. We understand the Examiner, through citation to the July 2015 Update (Final Act. 5–9, 11, and 12), to rely on prior court decisions finding that certain computer functions are well-understood, routine, and conventional functions. These prior court decisions adequately support this finding to satisfy the requirement to set forth a *prima facie* case of unpatentability under 35 U.S.C. § 101. “Whether something is well-understood, routine, and conventional to a skilled artisan . . . is a factual determination.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018). “The improvements in the specification, to the extent they are captured in the claims, create a factual dispute regarding whether the invention describes well-understood, routine and conventional activities.” *Id.* As found *supra*, we find no technological improvement captured in the claims. Similarly, the Examiner found, “Appellant’s invention focuses on the details of the abstract ideas. The additional elements are only broadly

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applied to the abstract ideas at a high level of generality and they are used in conventional, routine, and well-understood manners.” Answer 10.

Appellants further argue, “Further, the Office has not shown that the claims fail to provide improvements to another technical field. As set forth in the Office’s own guidance, ‘improvements to another technology or technical field’ may be enough to qualify as ‘significantly more’ when recited in the claim.” (Appeal Br. 15).

We disagree with Appellants. The Examiner properly addresses this issue on pages 5, 7, 8, 10, and 12 of the Final Action and on pages 4, 6, 12, and 13 of the Answer. As we found above, the claims do not, for example, purport to improve the functioning of the computer itself. Nor do they effect 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.*, Spec. ¶ 26.

Appellants argue, “Like the claims at issue in *DDR Holdings*, independent claims 1 and 3 do not recite ‘mathematical algorithms’ or ‘fundamental economic or longstanding commercial practices,’ but are both ‘particular to the Internet’ and ‘necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer[s].’” (Appeal Br. 21).

We disagree with Appellants. In *DDR Holdings*⁴, the Court evaluated the eligibility of claims “address[ing] the problem of retaining website visitors that, if adhering to the routine, conventional functioning of

⁴ *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

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. At best, claim 1 before us here only generically recites an "electronic marketplace" and a "network" and claim 3 recites "a computer processor" and a "network", let alone an internet technology item like a hyperlink. The Court cautioned, however, "that not all claims purporting to address Internet-centric challenges are eligible for patent." *Id.* For example, in *DDR Holdings* the Court distinguished the patent-eligible claims at issue from claims found patent-ineligible in *Ultramarcial*. *See id.* at 1258–1259 (citing *Ultramarcial*, 772 F.3d at 715–716). As noted there, the *Ultramarcial* claims were "directed to a specific method of advertising and content distribution that was previously unknown and never employed on the Internet before." *Id.* at 1258 (quoting *Ultramarcial*, 772 F.3d at 714). Nevertheless, those claims were patent ineligible because they "merely recite[d] the abstract idea of 'offering media content in exchange for viewing an advertisement,' along with 'routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet.'" *Id.*

Appellants argue,

Like the claims at issue in *Enfish*, independent claims 1 and 3 are not simply directed to *any* form of obtaining and comparing intangible data but are specifically directed to calculating confidence scores using particular datapoints, rules and

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processing methods to then identify interchangeability or equivalence between items.

(Appeal Br. 22).

We disagree with Appellants because, based on *Enfish*, we 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). As found supra, independent claim 1 before us here only generically recites an “electronic marketplace” and a “network”, and independent claim 3 only generically recites “a computer processor” and a “network”, let alone an internet technology item. As such, we find that the claims are directed to the abstraction of determining with a relative degree of confidence, an equivalence between first and second items offered for sale.

Finally, Appellants argue,

Like the claims at issue in *McRO*, independent claims 1 and 3 recite rules with specific characteristics — particular rules and processing methods for calculating confidence scores, i.e., taking into account an order for [a] first item or information regarding a return of [a] first item to calculate/modify the confidence scores.

(Appeal Br. 23).

We disagree with Appellants. 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, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016). In this case, and again, the independent claims as a whole are focused on satisfying certain contingencies for determining with a relative degree of confidence,

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an equivalence between first and second items offered for sale, and not on any specific means for improving a relevant technology, such as “generating an intermediate stream of output morph weight sets and a plurality of transition parameters” as found in *McRO*.

For the reasons identified above, we determine there are no deficiencies in the Examiner’s *prima facie* case of patent ineligibility of the rejected claims based on the record before us.

CONCLUSION OF LAW

We conclude the Examiner did not err in rejecting claims 1–9, 11, 14–20, and 25–28 under 35 U.S.C. § 101.

DECISION

The decision of the Examiner to reject claims 1–9, 11, 14–20, and 25–28 is affirmed.

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.