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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ASHISH VERMA

Appeal 2018-003982
Application 13/456,362
Technology Center 3600

Before MURRIEL E. CRAWFORD, JOSEPH A. FISCHETTI, and SHEILA F. McSHANE, *Administrative Patent Judges*.

CRAWFORD, *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 1–7. 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(a). Appellant identifies the real party in interest as "International Business Machines Corporation." Appeal Br. 2.

THE INVENTION

Appellant claims a data processing system to obtain a data driven metric for service quality. (Spec. ¶ 1, Title).

Claim 1 is representative of the subject matter on appeal.

> 1. A method of data processing, comprising:
>
> in a data processing system, a computer processor establishing a mapping between a plurality of internal data sources all within a same service organization and multiple service quality factors regarding a service provided by the service organization, wherein each of the plurality of internal data sources provides objective, quantifiable service internal quality data regarding the service provided by the service organization;
>
> the data processing system monitoring and capturing internal service quality data from the plurality of internal data sources via at least one data communication link between the plurality of internal data sources and the data processing system;
>
> the computer processor determining, from a customer satisfaction value for the service and internal service quality data for provision of the service, a mathematical transformation of the internal service quality data obtained from the plurality of internal data sources so mapped to obtain the customer satisfaction value;
>
> the computer processor estimating and reporting a service quality delivered by the service organization in provision of the service by applying the mathematical transformation to at least some of the internal service quality data obtained from the plurality of internal data sources; and
>
> the data processing system routing communication to selected ones of a plurality of terminals based on the estimated service quality, such that operation of the data processing system is improved.

Appeal Br. 13 (Claims Appendix).

THE REJECTION

Claims 1–7 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

ANALYSIS

35 U.S.C. § 101 REJECTION

We will sustain the rejection of claims 1–7 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, . . . 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."

Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 573 U.S. 208, 217–218 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)) (citations omitted).

To perform this test, we must first determine whether the claims at issue are directed to a patent-ineligible concept. 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.'" *See 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, 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 judicial exception is integrated into a practical application. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50–57 (Jan. 7, 2019) ("*Guidance*").

The Examiner determines that the claims are directed to estimating and reporting a service quality delivered by a service organization by applying a mathematical transformation of at least some of internal service quality data obtained from a plurality of terminals based on the estimated service quality. Non-Final Act. 6. The Examiner further determines that the claims are directed to comparing stored data to new data to make decisions and organizing human activity. *Id.* at 6–7.

The Specification discloses that for service organizations, maintaining high-service quality delivered to its customers is essential to the success of the mission of the service organization. Spec. ¶ 2. Service quality factors such as tangibility, responsiveness, reliability, assurance, and empathy depend on the perception of customers. *Id.* ¶ 3. Service organization obtain information regarding service quality by surveying some or all customers, but this data can be expensive to collect and not all customers are willing to provide survey responses. *Id.* ¶ 4. To address the problems of collecting service quality data, the present invention provides a data processing system that establishes a mapping between each of a plurality of internal data

sources within a service organization and a respective one of multiple service quality factors. The present invention uses a mathematical transformation of internal service quality data obtained from the plurality of internal data sources to obtain a customer satisfaction value by applying the mathematical transformation to at least some of the data. *Id.* ¶ 5.

As this disclosure is in essence the collection and analysis of customer satisfaction data, it supports the Examiner's determination that the claims recite comparing stored data to new data to make decisions.

Consistent with this disclosure, claim 1 recites "establishing a mapping between a plurality of internal data sources . . . and multiple service quality factors (processing data)," "monitoring and capturing internal service quality data (transmission and processing of data)," determining . . . a mathematical transformation of internal service quality data (processing data)," "estimating and reporting a service quality (processing data)," and "routing communication to selected ones of a plurality of terminals (transmitting data)." These steps constitute analyzing information by steps people go through in their mind.

The steps of claim 1 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); s*ee 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, we find that the claims recite the judicial exception of a mental process. *Id.*

In addition, as the data that is transmitted and processed relates to the satisfaction of customers with services provided and more consistently obtaining customer quality data, the method of claim 1 relates to relationships between a service organization and its customers and the behavior of customers, and therefore recites a certain method of organizing human activity. *Guidance*, 84 Fed. Reg. at 52.

Further, claim 1 recites determining "a mathematical transformation of internal service quality data" and as such also recites a mathematical formula or equation, with the Specification disclosing estimating and reporting a service quality by applying a mathematical transformation to internal data sources obtained from internal data sources (Spec. ¶ 5). *See id.*

As such, we agree with the Examiner's determination that claim 1 is directed to the judicial exceptions of a mental process, a certain method organizing human activity, and a mathematical formula or equation.

Turning to the second prong of the "directed to test," claim 1 requires a "processor" and "terminal." These recitations do not 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 54. We find no indication in the Specification, nor does Appellant directs us to any indication, that the operations recited in independent claim 1 invoke any inventive programming, require any specialized computer hardware or other inventive computer components, i.e., a particular machine, or that the claimed invention is implemented using other than generic computer components to perform generic computer functions. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) ("[A]fter *Alice*, there can remain no doubt: recitation

of generic computer limitations does not make an otherwise ineligible claim patent-eligible.").

We also find no indication in the Specification that the claimed invention effects a transformation or reduction of a particular article to a different state or thing. Nor do we find anything of record, short of attorney argument, that attributes any improvement in computer technology and/or functionality to the claimed invention or that otherwise indicates that the claimed invention integrates the abstract idea into a "practical application," as that phrase is used in the revised Guidance. *See* Guidance, 84 Fed. Reg. 55.

In this regard, the recitations do not affect an improvement in the functioning of the processor or other technology, do not recite a particular machine or manufacture that is integral to the claims, and do not transform or reduce a particular article to a different state or thing. *Id.* Thus, claim 1 is directed to judicial exceptions that are not integrated into a practical application and thus recite an "abstract idea."

Turning to the second step of the *Alice* analysis, because we find that claim 1 is directed to abstract ideas/judicial exceptions, claim 1 must include an "inventive concept" in order to be patent-eligible, i.e., there must be an element or combination of elements that is 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 (alteration in original) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc*., 566 U.S. 66, 72–73 (2012)).

The introduction of a processor 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 preemption 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."

Alice, 573 U.S. at 223 (alterations in original) (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 225. They do not.

Taking the claim elements separately, the function performed by the recited processor and data storage at each step of the process is purely conventional. Using a processor to retrieve, select, and apply decision criteria to data and modify the 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 trading industry. *See Elec. Power Grp.*, 830 F.3d at 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).

Considered as an ordered combination, the computer components of Appellant's claims add nothing that is not already present when the steps are considered separately. The combination of a processor and data storage is well-understood, routine, and conventional. The sequence of monitoring, analysis and reporting 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.

Claim 1 does not, for example, purport to improve the functioning of the processor. As we stated above, claim 1 does 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.*, Spec. ¶ 11). Thus, claim 1 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 226.

We have reviewed all the arguments (Appeal Br. 4–13; Reply Br. 2–9) Appellant has 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 made. Nevertheless, for purposes of completeness, we will address various arguments in order to make individual rebuttals of same.

We agree with Appellant that the inclusion of a mathematical transformation in the claim is not, of itself, determinative of what the claim is "directed to." Appeal Br. 7. In this regard, as we detailed above, the "directed to" test involves first determining whether the claims recite a judicial exception such as a mathematical equation or formula and then determining whether that judicial exception is integrated into a practical application. As we determined above, claim 1 does indeed recite a judicial exception of a mathematical equation or formula and this judicial exception is not integrated into a practical application, and, thus, we determine that the claim is directed to an abstract idea on this basis. Moreover, we also note, that claim 1 recites several judicial exceptions in addition to a mathematical equation or formula such as a mental process and a certain method of organizing human activity and on these bases claim 1 is directed to a judicial exception.

We are not persuaded of error on the part of the Examiner because the one data communication link between the plurality of internal data sources and the data processing system cannot be performed other than by a data processing system. Appeal Br. 8. As we stated above, the inclusion of the processor and data storage and a network interface in the data processing system does not alter the analysis. Although, the steps recited by independent claim 1 are performed by a data processing system, mental processes, for example, remain unpatentable even when automated to reduce the burden on the user of what once could have been done with pen and paper. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) ("That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson* [409 U.S. 63 (1972)]."); *see also In re Salwan*, 681 F. App'x 938, 941 (Fed. Cir. 2017) (claims for organizing patient health information, transferring patient health information to a patient network, and billing insurance companies held patent-ineligible).

In addition, we agree with the Examiner's response to this argument found on page 6 of the Answer. Specifically, we agree that it is common to organize and display data based on user selection and/or interaction without technological input. As such, the method of claim 1 could indeed be done without a data processing system.

We are not persuaded of error on the part of the Examiner by Appellant's argument that claim 1 recites an improved routing functionality by basing the routing to selected ones of a plurality of terminals based on the result of estimation of service quality performed. Appeal Br. 8. This alleged improvement does not concern an improvement to how the routing is

technically performed or to the technical components that perform the routing but instead relates to an improvement in the method of determining which terminal receives communication based on estimated service quality which could be determined by human mental processes.

A previous Board Decision found that claims in that Appeal were not anticipated or rendered obvious by the prior art relied upon by the Examiner in the earlier rejection. Appellant argues that based on the Decision the instant claims elements are not "generic" or "conventional." (Appeal Br. 10. We are no persuaded by this argument. First, the claims in the instant appeal and the claims in the earlier appeal are different and as such our determination regarding the patentability of the earlier claims is not dispositive of the patentability of the present claims. In addition, the previous determinations were specific to that Appeal; we found only that the references applied did not disclose "determining a mathematical transformation of quality data to obtain the consumer satisfaction value" in the anticipation/obviousness determinations. There is no determination that the prior art relied on was the best prior art for the claims in the earlier appeal and certainly no determination that the cited prior art in the earlier appeal is the best prior art for the instant claims. Moreover, to the extent Appellant maintains that the limitations of claim 1 necessarily amount to "significantly more" than an abstract idea because the claimed apparatus is allegedly patentable over the prior art, Appellant misapprehends the controlling precedent. Although the second step in the *Alice/Mayo* 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. A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90.

We do not agree with Appellant that the Examiner erroneously relied on *Ultramercial* rather than *DDR Holdings* in determining whether the claims recite an improvement that results in significantly more than the abstract idea. Appeal Br. 11. 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*, 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. 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 *Ultramercial*. *See DDR*, 773 at 1258–59 (citing *Ultramercial*, 772 F.3d 709, 715–16 (Fed. Cir. 2014)). As noted there, the *Ultramercial* 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 *Ultramercial*, 772 F.3d at 715–16). Nevertheless, the claims in *Ultramercial* 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.*

We agree with the Examiner that Appellant's claims are analogous to claims found ineligible in *Ultramercial* and distinct from claims found eligible in *DDR Holdings*. The ineligible claims in *Ultramercial* recited "providing [a] media product for sale at an Internet website;" "restricting general public access to said media product;" "receiving from the consumer a request to view [a] sponsor message;" and "if the sponsor message is an interactive message, presenting at least one query to the consumer and allowing said consumer access to said media product after receiving a response to said at least one query." *Ultramercial*, 772 F.3d at 712. Similarly, Appellant's asserted claims recite receiving, analyzing, modifying, and transmitting data. This is similar to the type of activity found ineligible in *Ultramercial*.

We also do not agree with Appellant that claim 1 recites technical means for performing the functions that are an advance over conventional computer network technology and as such is distinguishable from the cases cited by the Examiner. Reply Br. 8. Although claim 1 recites that the data processing system is improved, there are no specific details provided on how the system is improved in the Specification or in the body of claim 1. In addition, as discussed above, the functions of the software are directed to abstract ideas and not technical improvements, and the functions are performed using a generic computer. And, as discussed in *BSG Tech LLC v. Buyseasons, Inc.*, "[i]f a claim's only 'inventive concept' is the application of an abstract idea using conventional and well-understood techniques, the

claim has not been transformed into a patent-eligible application of an abstract idea." 899 F.3d 1281, 1290-1291 (Fed. Cir. 2018) (citing *Berkheimer v. HP Inc*., 881 F.3d at 1370 (holding claims lacked an inventive concept because they "amount to no more than performing the abstract idea of parsing and comparing data with conventional computer components")). Appellant's argument thus does not apprise us of error because Appellant conflates the steps being performed by a processor, which are directed to abstract ideas, and the conventionality of the computer functions required to implement the steps.

In view of the foregoing, we sustain the rejection as it is directed to claim 1. We also sustain the rejection as it is directed to the remaining claims because the Appellant does not present separate arguments for the separate eligibility of these claims.

CONCLUSIONS OF LAW

We conclude the Examiner did not err in rejecting claims 1–7 under 35 U.S.C. § 101.

DECISION

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1–7	101	Eligibility	1–7	

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