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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TRI TONG, JEAN W. RAWLINGS,
CHRISTOPHER A. HANE, RON HOFFNER, and
DAVID R. ANDERSON

Appeal 2017-003877
Application 12/947,051
Technology Center 3600

Before LARRY J. HUME, BETH Z. SHAW, and JOYCE CRAIG,
Administrative Patent Judges.

CRAIG, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants¹ appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–5, 9–15, 19–25, 29, and 30, which are all of the claims pending in this Application.² We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ According to Appellants, the real party in interest is Optuminsight, Inc. App. Br. 4.

² Claims 6–8, 16–18, 26–28, and 31–34 have been canceled. Final Act. 2.

INVENTION

Appellants' invention relates to a healthcare index. Abstract. Claim 1 is representative and reads as follows:

1. A computer-implemented method, executable by at least one processor on a computing system, the computer system specifically configured to create an improved healthcare price index, said computer-implemented method comprising:

receiving, by an interface module of the computing system, at least one input representing one or more health services, one or more attributes for identifying subjects, a time frame, and a baseline time for generating an output, wherein the interface module comprises a graphical user interface specifically configured for the computing system to display options for selecting information from the one or more health services, the one or more attributes for identifying subjects, the time frame, and the baseline time for generating an output, and wherein the graphical user interface is specifically configured to receive the at least one input;

searching, by a search module of the computing system, a database stored on a data storage device of the computing system to obtain records of prices for the one or more health services received by a group of subjects, wherein the one or more health services represent a health service category, wherein the data storage device is specifically configured to store healthcare-related data of a plurality of individuals, and wherein the healthcare-related data associated with each individual is keyed to a common field for each of the individuals in the database;

extracting, by an extraction module of the computing system, a representative price for each of the one or more health services;

determining, by a determination module of the computing system, a weight for each of the one or more health services relative to the health service category;

generating, by a weighted-price generation module of the computing system, a weighted price for each of the one or more health services based on the weight and the representative price of each of the one or more health services, wherein the weight of the one or more health services is calculated as the ratio of the total prices for the one or more health services to the total prices for the health service category;

generating, by an index generation module of the computing system, one or more elementary indices based, at least in part, on the weighted price for one or more health services, wherein an elementary index represents at least a price change for the health service category relative to a base time period;

generating, by the index generation module of the computing system, a first aggregation index by combining two or more of the elementary indices, wherein the aggregation index represents a broader measure of the price of the health service category in a current time period relative to the base time period;

outputting, by the user interface module a display of a graph of the first aggregation index over the received time frame;

receiving, by the graphical user interface, simulation parameters, the graphical user interface specifically configured to receive inputs from the user relating to the simulation parameters;

generating, by the index generation module, a second aggregation index based on the received simulation parameters;
and

outputting, by the user interface module, a graph comparing the second aggregation index with the first aggregation index.

REJECTION

Claims 1–5, 9–15, 19–25, 29, and 30 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception without significantly more. Final Act. 7.

ANALYSIS

We have reviewed the rejections of claims 1–5, 9–15, 19–25, 29, and 30 in light of Appellants’ arguments that the Examiner erred. We have considered in this decision only those arguments Appellants actually raised in the Briefs. Any other arguments Appellants could have made, but chose not to make, in the Briefs are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). Appellants’ arguments are not persuasive of error. We agree with and adopt as our own the Examiner’s findings of facts and conclusions as set forth in the Answer and in the Action from which this appeal was taken. We provide the following explanation for emphasis.

In rejecting independent claims 1, 11, and 21, the Examiner concluded the claims are directed to the abstract idea of “generating . . . elementary indices based . . . on the weighted price for . . . health services . . . [and] generating . . . [an] aggregation index by combining . . . the elementary indices” as shown by the steps of:

receiving at least one input representing of a selection of one or more health services, one or more attributes for identifying subjects, a time frame, and a baseline time for generating an output;

searching a database to obtain records of prices for the one or more health services received by a group of subjects;

extracting a representative price for each of the one or more health services;

determining a weight for each of the one or more health services relative to the health service category;

- generating a weighted price for each of the one or more health services based on the weight and the representative price of each of the one or more health services;
- generating one or more elementary indices based on the weighted price for one or more health services;
- generating a first aggregation index by combining two or more of the elementary indices;
- outputting a display of a graph of the first aggregation index over the received time frame;
- receiving simulation parameters;
- generating a second aggregation index based on the received simulation parameters; and
- outputting a graph comparing the second aggregation index with the first aggregation index.

Ans. 3. The Examiner further concluded the claims do not amount to significantly more than the underlying abstract idea. Final Act. 8.

In *Alice*, the Supreme Court sets forth an analytical “framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *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, 75–78 (2012)). The first step in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts,” such as an abstract idea. *Id.* If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 79, 77–78). In other words, the second step is to “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.” *Id.* (brackets in original) (quoting *Mayo*, 566 U.S. at 71–73). The prohibition against patenting an abstract idea “cannot be circumvented by attempting to limit the use of the formula to a particular technological environment’ or adding ‘insignificant postsolution activity.” *Bilski v. Kappos*, 561 U.S. 593, 610–11 (2010) (citation omitted).

Turning to the first step of the *Alice* inquiry, we agree with the Examiner that claim 1³ is directed to an abstract idea of “generating elementary indices based on a weighted price for health services and generating an aggregation index by combining the elementary indices,” which is similar to abstract ideas held by courts to be judicial exceptions. Final Act. 7 (emphasis omitted).

Appellants contend the Examiner erred because “[t]he claims are not directed to the mere comparing of new and stored information and using rules to identify options, use of categories to organize information, use of data recognition, or categorization and organization of information through mathematical correlations,” as the Examiner concluded. App. Br. 18.

We disagree. The Examiner concluded the abstract idea of “*generating elementary indices based on a weighted price for health services and generating an aggregation index by combining the elementary indices*” is similar to abstract ideas held by courts to be judicial exceptions. Final Act. 7–8 (citing *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057 (Fed. Cir. 2011) (collecting and comparing known information is

³ Appellants argue claims 1, 11, and 21. App. Br. 15. We select claim 1 as representative of the group. 37 C.F.R. § 41.50(b).

abstract); *SmartGene, Inc. v. Adv. Bio. Labs*, 555 F. App'x 950 (Fed. Cir. 2014) (nonprecedential) (comparing new and stored information and using rules to identify options is abstract); *Cyberfone Sys., LLC v. CNN Interactive Group, Inc.*, 558 Fed. App'x 988, 992 (Fed. Cir. 2014) (using categories to organize, store and transmit information is abstract); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (“[t]he concept of data collection, recognition, and storage is undisputedly well-known”); *Digitech Image Tech., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014) (organizing information through mathematical correlations is abstract)).

Appellants for the first time in the Reply Brief attempt to distinguish the claims at issue each of the cases cited by the Examiner from the present claims. *See* Reply Br. 2–4. Appellants, however, have waived these arguments because they presented them for the first time in the Reply Brief, without a showing of good cause. *See* 37 C.F.R. § 41.41(b)(2) (2012); *accord Ex parte Borden*, 93 USPQ2d 1473, 1473–74 (BPAI 2010) (informative opinion) (“[T]he reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner’s rejections, but were not.”). We note, however, that, even if Appellants’ arguments were timely, they are not persuasive of error because the arguments address only the actual recitations of the claims, not the similarities in the abstract ideas to which the claims are directed. *See* Reply Br. 2–4.

Appellants contend the claims recite “a specially computer implemented healthcare information processing system and method” that transforms data into an improved healthcare price index. App. Br. 18.

To the extent Appellants rely on the machine-or-transformation test set forth in *Bilski v. Kappos*, 130 S. Ct. 3218, 3227 (2010), we are not persuaded that claim 1 satisfies the test. Claim 1 recites method steps that merely include manipulation of values in the form of numerical weighting and index generation, as well as the output of graphs. The transformation of one type of electronic data (i.e., “a weight for each of the one or more health services” or “a weighted price”) into another type of electronic data (i.e., “elementary indices based on the weighted price”) is not a transformation or reduction of an article into a different state or thing constituting patent-eligible subject matter. “The mere manipulation or reorganization of data . . . does not satisfy the transformation prong.” *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011). Thus, claim 1 fails to satisfy the transformation prong of the machine-or-transformation test.⁴

Appellants also rely on the Board’s holding in *Ex Parte Wegman III*, Appeal 2013-008168, 2015 WL 5578687 (PTAB Sept. 18, 2015), a non-precedential decision in which the Board reversed a rejection under 35 U.S.C. § 101. App. Br. 18. Although we consider *Wegman* neither controlling nor germane, we note that *Wegman* does not stand for the proposition that claims that recite specific calculations are per se patent-eligible. On the record before us, we find the claims on appeal similar to the claims held ineligible under controlling precedent (e.g., *Bilski* and *Alice*) for the reasons set forth above.

⁴ The Supreme Court has made clear that a patent claim’s failure to satisfy the machine-or-transformation test is not dispositive of the § 101 inquiry. *See Bilski*, 130 S. Ct at 3227. However, the machine-or-transformation test is “a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101.” *Id.*

Turning to step two of the *Alice* analysis, Appellants contend the elements taken as a whole “provide a tangible, novel and nonobvious (as acknowledged by the fact that only subject matter eligibility rejections remain) technical solution to the technical problem of transforming particular healthcare information into a specific improved healthcare price index.” App. Br. 19; *see also id.* at 18 (“the novel and nonobvious combination of elements and method steps are not fundamental mathematical relationships or algorithms.”).

We are not persuaded. Although the second step of the *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 Corp.*, 134 S. Ct. at 2355. “[T]he § 101 patent-eligibility inquiry and, say, the § 102 novelty inquiry might sometimes overlap.” *Mayo*, 566 U.S. at 1304. “But, a claim for a new abstract idea is still an abstract idea. The search for a § 101 inventive concept is thus distinct from demonstrating § 102 novelty.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016). Thus, a novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 1304.

Appellants argue the recited “modules” are not generic computer elements because they are tailored to “the types of computing systems that analyze healthcare data.” App. Br. 21. Appellants also argue the claimed “graphical user interface” and “data storage devices” are not generic

computer elements because they are tailored to a system for creating an improved health care system. *Id.*

We are not persuaded. Appellants define “module” in the Specification as comprising “a component of a machine, a machine or a plurality of machines that are suitably programmed to operate according to executable instructions.” Spec. ¶ 47. The Specification further emphasizes the implementation independence of modules. *Id.* Similarly, the terms “graphical user interface” (*id.* ¶¶ 63, 65) and “data storage device” (*id.* ¶¶ 55, 65) are described generically in the Specification.

We are also not persuaded by Appellants’ conclusory argument that “[t]he specific graphical representation of indices is not merely ‘extra-resolution data gathering steps, which are well-known and routine computer functions.’” *See* App. Br. 19. In the Specification, the generation and display of graphical representations of indices is described in generic terms. *See, e.g.*, Spec. ¶ 63 (“adapter 322 may display a graphical user interface associated with a software or web-based application for generating an output comprising a graph of relative importance of prices or indices, or indices of different time frames”); ¶ 70 (“web service 414 may return price data for subjects identified by one or more attributes to generate indices, statistics, distributions, graphs, or the like”); ¶ 75 (“interface module 502 may display weighted price, weights (relative importance), or indices. Such analysis results may include statistics, tables, charts, graphs, recommendations, and the like.”); ¶ 85 (“generation module 510 may also create outputs such as statistics, tables, charts, graphs, recommendations, and the like”). In light of the descriptions in the Specification, we are not persuaded the claimed

graphical representation of indices amounts to more than extra-solution activity involving well-known and routine computer functions.

Appellants further argue the Examiner erred by not considering all claim elements in step two of the *Alice* analysis. App. Br. 19.

Contrary to Appellants' contention, the Examiner identified elements recited beyond the judicial exception and explained why they do not add significantly more to the abstract idea. See Ans. 8–10. The Examiner concluded the additional elements merely limit the use of the idea to a particular technological environment or add insignificant extra-solution activity. See *id.*; see also *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1310 (Fed. Cir. 2016) (citing *Bilski*, 561 U.S. at 610–11).

We agree with the Examiner that the claims here, unlike those in *DDR Holdings*, do not recite limitations that are “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014); see Ans. 10; App. Br. 20–21. The Specification makes clear that the recited physical components merely provide a generic environment in which the computer executable instructions carry out the described processes and methods. See, e.g., Spec. ¶ 65. “[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.” *DDR Holdings*, 773 F.3d at 1256.

We are unpersuaded by Appellants' argument that claim 1 is like the claims in *DDR Holdings* because claim 1 improves the creation of healthcare price indexes by improving data processing times. App. Br. 20, 22. Appellants articulate a commercial solution to an efficiency problem, not a

technical solution. While Appellants' commercial solution may be assisted using a general purpose computer to perform the data collection, analysis, manipulation, and output processes, it does not arise specifically in the realm of computer networking or improve how the computer itself functions. As we previously explained, the instant claims are more akin to the claims for analyzing information found abstract in *Classen*, *SmartGene*, *Cyberfone*, *Content Extraction*, and *Digitech*.

In the Reply Brief, Appellants argue for the first time that claim 1 addresses a technical problem in the field of data mining. Reply Br. 5–6. Appellants, however, have waived these arguments because they presented them for the first time in the Reply Brief, without a showing of good cause. *See* 37 C.F.R. § 41.41(b)(2) (2012); *accord Borden*, 93 USPQ2d at 1473–74. We note, however, that, even if Appellants' arguments were timely, they are not persuasive of error because Appellants' newly identified “technical” improvement also does not arise specifically in the realm of computer networking or improve how the computer itself functions.

With respect to Appellants' preemption argument (App. Br. 20), “[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1098 (Fed. Cir. 2016) (quoting *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015)); *see also OIP Techs.*, 788 F.3d at 1362–63 (“[T]hat 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.”). Further, “[w]here a patent's claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in

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this case, preemption concerns are fully addressed and made moot.” *Ariosa*, 788 F.3d at 1379.

For these reasons, we are not persuaded the Examiner erred in concluding there are no additional elements in claim 1 that transform the nature of the claim into a patent-eligible application.

Accordingly, we sustain the Examiner’s § 101 rejection of representative claim 1, as well as grouped independent claims 11 and 21. *See* App. Br. 15. We also sustain the Examiner’s § 101 rejection of dependent claims 2–5, 9, 10, 12–15, 19, 20, 22–25, 29, and 30, not argued separately. *See id.* at 23.

DECISION

We affirm the decision of the Examiner rejecting claims 1–5, 9–15, 19–25, 29, and 30.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED