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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JEFFREY S. BOSTON, TINA GROVES, JENNIFER LAI,
JIE LU, SHIMEI PAN, MERCAN TOPKARA, ZHEN WEN, and
STEPEHN P. WOOD

Appeal 2017-001310
Application 13/608,021
Technology Center 3600

Before JEAN R. HOMERE, DAVID J. CUTITTA II, and
MICHAEL J. ENGLE, *Administrative Patent Judges*.

HOMERE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–3 and 7–10, which constitute all claims pending in this application.¹ App. Br. 1. Claims 4–6 and 11 have been canceled. Claims App’x. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ Appellants identify the real party in interest as International Business Machines Corp. App. Br. 1.

Introduction

According to Appellants, the claimed subject matter relates to a method and system for estimating and ranking the value of digital activities in digital footprints of business activities generated through the use of collaboration tools and social software (e.g. Lotus Connections) to create content, organize meetings, and share documents so as to understand how business decisions are made, whether they violate any regulations, and whether they produce a risky business outcome. Spec. 1:5–26, fig. 2. In particular, information objects generated during the creation of outcome based business processes are recorded as nodes in a composite graph depicting the proximity between nodes or the strength between linked nodes based on the similarity in content of corresponding objects. *Id.* at 1:26–2:7. In response to receiving a user’s query, a processor retrieves, ranks, and presents information objects to the user so as to showcase social network distances between the user and other similarly situated users involved in the given business process. *Id.* at 2:8–23.

Representative Claim

Independent claim 1 is representative, and reads as follows:

1. A method for ranking information objects in one or more outcome-based business processes, comprising:
 - recording information objects generated during a creation of said outcome-based business processes in a record in a memory, wherein one or more of said business processes comprise an outcome attribute, and wherein said information objects comprise one or more in-process information objects and one or more non-process information objects, wherein each in-process information object comprises an information object that is stored as part of a business process and each non-process information object comprises an information object that is generated during an activity of social network software that is not explicitly associated to the business process;

generating a composite graph of said information objects and business processes that identifies one or more links between the one or more non-process information objects and the one or more in-process information objects, wherein each node in said graph corresponds to one of said information objects or one of said business processes, and wherein said generating the composite graph is carried out by a hardware processor communicatively linked to the memory and comprises:

determining a strength value associated with each of the one or more links between the one or more non-process information objects and the one or more in-process information objects via executing a function incorporating a content similarity value and a social network distance value, wherein:

said content similarity value is based on (i) a similarity of content of said information objects and (ii) a similarity of timing of said information objects occurring within one or more activity patterns associated with said business processes, and

said social network distance value comprises a distance between a given user who issues a query and multiple users associated with said information objects, wherein said social network distance value is weighted based on usage patterns of the multiple users in connection with said information objects, and wherein:

said in-process information object node connects to a corresponding business process node, and

two of said business process nodes have a link if they are indicated as related in the business process information system; and

ranking said information objects in response to the query (q) issued by the given user based on a ranking function, wherein said query comprises one or more keywords, and wherein said ranking function comprises $rank(q,n) = relevance(q,n) + value(n)$, wherein $relevance(q,n) = sim(q.keyword, n.info) + Social_Network_Distance(u, n.user)$, wherein n represents a given one of said business processes, wherein $relevance(q,n)$ comprises the relevance of activities of the given business process (n) to the query (q), wherein $value(n)$ comprises an outcome value of the given business process (n) that represents an amount of risk associated with the given business process (n), wherein $sim(q.keyword, n.info)$ comprises a level of similarity (sim) between one or more keywords of the query ($q.keyword$) and information pertaining to the given business process ($n.info$), and wherein $Social_Network_Distance(u, n.user)$ comprises a value representing a social network distance between the user (u) who issues the query and one

or more users involved in the given business process (*n.user*), wherein said ranking is carried out by the hardware processor communicatively linked to memory.

Rejection on Appeal

Claims 1–3 and 7–10 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 2–8.

ANALYSIS

We consider Appellants’ arguments *seriatim*, as they are presented in the Appeal Brief, pages 4–11, and the Reply Brief, pages 2–9.²

Appellants argue the Examiner erred in concluding that claims 1–3 and 7–10 are directed to the abstract idea of “recording information generated during a business process, generating a composite graph of the business process, and ranking content based on a query request.” App. Br. 4–5. Instead, Appellants argue that the Examiner has not considered the specific claim limitations as a whole, and thereby fails to recognize that the claims include a “specific improvement to the way computers operate.” *Id.* at 5–7. Further, Appellants argue that what the Examiner calls “elements” of the claims are not the specific claim limitations, which amount to significantly more than the abstract idea. *Id.* at 8–10. According to Appellants, because the Examiner has not been able to identify prior art to

² Rather than reiterate the arguments of Appellants and the Examiner’s findings/conclusions, we refer to the Appeal Brief (filed May 25, 2016) (“App. Br.”), the Reply Brief (filed October 28, 2016) (“Reply Br.”), the Final Action from which the appeal was taken (mailed Jan. 5, 2016) (“Final Act.”), and the Answer (mailed September 8, 2016) (“Ans.”) for the respective details. 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 deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

reject the claims, the Examiner’s determination that the claims are directed to what is well-understood, routine, and conventional is not supported by the relevant case law. *Id.* at 9–10.

These arguments are not persuasive. The U.S. Supreme Court provides a two-step test for determining whether a claim is directed to patent-eligible subject matter under 35 U.S.C. § 101. *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014). In the first step, we determine whether the claims are directed to one or more judicial exceptions (i.e., laws of nature, natural phenomenon, and abstract ideas) to the four statutory categories of invention (i.e., process, machine, manufacture, and composition of matter). *Id.* (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–97 (2012)). In the second step, we “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.” *Id.* (quoting *Mayo*, 132 S. Ct. at 1297–98). 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.* (quoting *Mayo*, 132 S. Ct. at 1294).

At the outset, we note that claim 1 is directed to a computer implemented method for ranking information objects in outcome-based business processes, which we agree is an abstract idea. *See* Ans. 13. Although Appellants argue the rejection is premised upon the Examiner’s “vaguely worded ‘elements’ of the claims” (App. Br. 8), as opposed to the specific limitations thereof, Appellants have not explained how the so called

specific claim limitations as a whole “include ‘substantially more’” (App. Br. 8) than the abstract idea, thereby amounting to patent eligible subject matter. More specifically, we agree with the Examiner that the claim is directed to “[b]usiness process modelling and mapping [that] can be considered a method of organizing human activity.” Final Act. 3. We also agree with the Examiner that the claimed business process is performed on a generic computer and thus recites “nothing more than requiring a generic computer system (e.g. a generic processor) to merely carry out the abstract idea itself.” Final Act. 4. Although a computer is employed to record the information objects, to generate a composite graph of the objects and business processes including the links therebetween, and to subsequently rank the information objects in response to a user query, the recited functions are tantamount to the abstract concepts of collecting, analyzing, and generating/displaying information. *See Elec. Power Grp. LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016); *see also Content Extraction & Transmission LLC v. Wells Fargo Bank Nat’l Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (characterizing collecting information, analyzing information by steps people go through in their minds, or by mathematical algorithms, and presenting the results of the collecting and analyzing information, without more, as matters within the realm of abstract ideas). In other words, the analysis of an information object inventory to determine similarities and patterns in a given business process involves typical and conventional functions that take place during the inventory management of resources in a computing system. Accordingly, we agree with the Examiner that the claims are directed to the abstract idea of “recording information generated during a business process, generating a composite graph of the

business process, and ranking content based on a query request,” and not to any improvements to the operation of the computer itself. Ans. 11–12; *cf. Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1338 (Fed. Cir. 2016) (concluding that claims directed to a self-referential table for a computer database were patent eligible because the claims were directed to an improvement in the functioning of a computer).

We likewise agree with the Examiner that because the recited functions are conventional and well-understood and do not go beyond those of a general purpose computer for merely generating a graph and ranking objects, they do not add any meaningful limitations beyond generally linking the abstract idea to the particular technological environment. Ans. 13–14. As correctly noted by the Examiner, the specific steps recited in the claims (e.g., recording in-process information objects stored as part of a business process; generating a graph including links between non-process and in-process information objects; displaying a business process; executing a function incorporating a similarity value; determining the strength values) do not impart improvements to another technology or technical field or improvements to the functioning of a computer itself, nor do the limitations effect a transformation or reduction of a particular article to a different state or thing. Final Act. 6–8. Further, we agree with the Examiner that the so-called specific claim limitations are nothing other than what is well-understood, routine and conventional in the field, and do not add unconventional steps that confine the claim to a particular useful application. *Id.* Additionally, we note that although the second step in the *Alice/Mayo* analysis includes a search for an inventive concept, the analysis is not an evaluation of novelty or nonobviousness, 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*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1294). A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 132 S. Ct. at 1304. Furthermore, “under the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility.” *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016). The Supreme Court emphasizes: “[t]he ‘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.” *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (emphasis added). Our reviewing court further guides that “[e]ligibility and novelty are separate inquiries.” *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1340 (Fed. Cir. 2017); *see also Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 (Fed. Cir. 2016) (holding that “[e]ven assuming” that a particular claimed feature was novel does not “avoid the problem of abstractness”).

Finally, Appellants are reminded that “relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.” *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2359 (“use of a computer to create electronic records, track multiple transactions, and issue simultaneous instructions” is not an inventive concept)). When viewed as a whole, claim 1 recites nothing more than a generic computer performing

conventional processing functions that courts have routinely found insufficient to transform an abstract idea into a patent-eligible invention. As such, claim 1 amounts to nothing significantly more than an instruction to implement the abstract idea on a generic computer — which is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 134 S. Ct. at 2358–2360. *Id.* Accordingly, we are not persuaded of error in the Examiner’s conclusion that claims 1–3 and 7–10 are directed to patent ineligible subject matter.

DECISION

For the above reasons, we affirm the Examiner’s patent ineligibility rejection of claims 1–3 and 7–10.

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).

AFFIRMED