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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SRI RAMANATHAN, PADMASHRI SURESH,
MATTHEW B. TREVATHAN, and BALAJI VENKATRAMAN

Appeal 2017-000185
Application 12/183,286¹
Technology Center 3600

Before ANTON W. FETTING, KENNETH G. SCHOPFER, and
BRADLEY B. BAYAT, *Administrative Patent Judges*.

BAYAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134 of the final rejection of claims 1 and 25–35 under 35 U.S.C. §101 as being directed to non-statutory subject matter. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We AFFIRM.

¹ Appellants identify the real party in interest as International Business Machines Corporation. Appeal Brief 2 (“Appeal Br.,” filed Jan. 11, 2006).

STATEMENT OF THE CASE

Claimed Subject Matter

Appellants' "invention generally describes an intelligent system and fuzzy logic-based method to determine an overall adjusted project length based on risk." Specification, ¶ 1, ("Spec.", filed Jul. 31, 2008). Claims 1, 27, 30, and 33 are the independent claims on appeal and recite substantially similar subject matter. *See* Appeal Br. 13–16; 18–21, Claims App'x. Claim 1, reproduced below, is illustrative of the subject matter on appeal:

1. A computer-implemented method for determining a project time length, the method comprising executing on a central processing unit the steps of:

assigning to a first task of a set of tasks of a project a dependency factor integer that has a value that reflects an amount that performance of the first task depends upon completion of performance of another of the tasks, wherein the dependency factor integer is selected from a scale of integers, and wherein the first task has an original projected time length period for completion of performance of the first task;

assigning to the first task another dependency factor integer that has a value that is selected from the scale of integers and reflects an amount that performance of another of the tasks depends upon completion of performance of the first task;

assigning to the first task a confidence factor integer that has a value that is selected from the scale of integers to indicate a level of difficulty of performance of the first task;

assigning one of high, medium and low hedge values to each of the dependency factor integers, the another dependency factor integers and the confidence factor integers for each of the tasks as a function of different numeric subset ranges of the scale of integers that are each associated with one each of the high, medium and low hedge values of the integers, the low hedge value associated with a lowest numeric subset range of the scale of integers, the high hedge value associated with a highest numeric subset range of the scale of integers, and the medium hedge value associated with a numeric subset range of the scale of integers that is greater than the low hedge value subset range and less than the high hedge value subset range, the respective hedge values being assigned to each of the respective factor integers falling within their respective associated numeric subset ranges;

selecting one or more rules from a set of pre-determined rules to apply to the first task as a function of the selected one or more rules comprising:

a dependency factor hedge value matching the high, medium or low hedge value assigned to the dependency factor integer of the first task;

an another dependency hedge value matching the high, medium or low hedge value assigned to the another dependency factor integer of the first task; and

a confidence factor hedge value matching the high, medium or low hedge value assigned to the confidence factor integer of the first task; and

wherein each of the pre-determined rules comprise different adjustment factors for use in extending or shortening the original projected time length period for completion of performance of the first task;

creating an adjusted projected time length period for completion of performance of the first task by multiplying the original projected time length period with the adjustment factors of the selected one or more rules; and

creating an adjusted project time length for the project based upon the created adjusted projected time length period for completion of performance of the first task; and

wherein each of the selected one or more rules comprise different combinations of the high, medium and low hedge values for the dependency hedge value, the another dependency hedge value and the confidence factor hedge value.

ANALYSIS

Non-Statutory Subject Matter

At the outset, we note that Appellants argued the Examiner's § 101 rejection of independent claims 1, 27, 30, and 33 as a group. Appeal Br. 10–11. We select claim 1 as the representative claim for the group, and, thus, claims 27, 30, and 33 stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

In determining whether claim 1 is drawn to patent-ineligible subject matter, the Examiner applied the now common two-step test introduced in

Mayo Collaborative Services v. Prometheus Laboratories, Inc., 132 S. Ct. 1289 (2012) and further explained by the Supreme Court in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014). The first step in that analysis is to determine whether the claim at issue is directed to a patent-ineligible concept such as an abstract idea. *Alice*, 134 S. Ct. at 2355. If so, the inquiry proceeds to step two to look at the claim for “something more” by “examin[ing] 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.” *Id.* at 2354, 2357 (quoting *Mayo*, 132 S. Ct. at 1294, 1298). This inventive concept must do more than simply recite “well-understood, routine, conventional activity.” *Mayo*, 132 S. Ct. at 1298.

Under step one of the *Alice* inquiry, the Examiner determined that independent claim 1 is “directed to an abstract idea, specifically [a] **method for determining a project time length.**” Final Office Action 7 (“Final Act.,” mailed Aug. 14, 2015). According to the Examiner, this concept “is an example of comparing new and stored information and using rules to identify options. *Id.* at 8.

Appellants did not dispute that claim 1 is directed to an abstract idea and instead argued step two of the *Alice* inquiry. *See* Appeal Br. 9 (commencing arguments at Step 2B). Thus, we begin our analysis at step two.

Under step two of the *Alice* inquiry, the Examiner found:

Having considered the claims as a whole, no element or combination of elements in the claims are sufficient to ensure that the claims amount to significantly more than the abstract idea itself. Indeed, the claims fail to recite any improvements to another technology or technical field, improvements to the

functioning of the computer itself, and/or meaningful limitations beyond generally linking the use of an abstract idea to a particular environment. (Although the claims do recite the use of a computer, i.e. **a processing unit**, that is nothing more than a generic computer, performing generic, well-understood and routine computer functions and nothing more would be required to implement the aforementioned abstract idea).

Final Act. 8–9.

Appellants contend that the claimed limitations amount to significantly more than “‘what is well-understood, routine and conventional in the field,’ or ‘add unconventional steps that confine the claim to a particular useful application’ within the field of project management . . . [because] the claimed subject matter is *allowable* under 35 USC 103 over the prior art of record.” Appeal Br. 10–11; Reply Brief 2 (“Reply Br.,” filed Sept. 29, 2016).

To the extent that Appellants maintain that the elements of the claims necessarily amount to “significantly more” than the abstract idea because the claimed process is allegedly patentable over the prior art, Appellants misapprehend the controlling precedent. *See* Examiner’s Answer, 3 (“Ans.,” mailed Aug. 1, 2016). Although the second step in 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*, 134 S. Ct. at 2355. In other words, a novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 132 S. Ct. at 1304 (rejecting the suggestion that

Sections 102, 103, and 112 might perform the appropriate screening function and noting that in *Mayo* such an approach “would make the ‘law of nature’ exception . . . a dead letter.”); *see also Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016) (“[U]nder 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.”). Thus, an abstract idea is not transformed into an inventive concept just because the Examiner has not found prior art that discloses or suggests it. The fact that a claimed concept is “[g]roundbreaking, innovative, or even brilliant” does not “itself satisfy the § 101 inquiry.” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2117 (2013). Indeed, “[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, 188–189 (1981).

We are unpersuaded by Appellants’ argument that the claimed subject matter provides

an *improvement* to the technical field of project management, namely by enabling the determination of overall project lengths based on risk using a fuzzy logic. Fuzzy logic provides advantages in finding optimal solutions for systems with many controllable variables. Via solving problems through approximation rather than through precise, predicate logic, fuzzy logic allows partial memberships in sets and describes these memberships in imprecise linguistic terms like, such as the "low, medium, and high" hedge values claimed.

Appeal Br. 11; Reply Br. 3. Appellants’ acknowledged improvement to the “field of project management” is an improvement to the abstract idea, a business practice long prevalent in our system of commerce, rather than an improvement in the functioning of the claimed central processing unit. And using fuzzy logic merely employs mathematical means to manipulate data. Spec. ¶ 18 (“Fuzzy logic is a mathematical means for handling imprecise concepts and can provide optimal solutions for systems that have a lot of controllable variables”). At its most basic, a “computer” is “an automatic electronic device for performing mathematical or logical operations.” *Oxford English Dictionary* 640 (2d ed. 1989). The use of a computer in an otherwise patent-ineligible process for no more than its most basic function—making calculations or computations—fails to circumvent the prohibition against patenting abstract ideas and mental processes.

Contrary to Appellants’ contentions (Appeal Br. 11; Reply Br. 4), neither the problem nor the solution here are rooted in computer technology. Unlike the claims at issue in cases such as *DDR Holdings LLC v Hotels.com LP.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) (claims at issue are “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks”) and *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016) (claims at issue are “directed to a specific implementation of a solution to a problem in the software arts”), Appellants merely address a business issue through the use of generic, computer-implemented recitation that does not add meaningful limitations to steps otherwise directed to an abstract idea. Indeed, the only mention of a technological component is a generic “central processing unit,” which lies in

claim 1's preamble; none of the steps recited in claim 1 are expressly tied to any computer technology. *See Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006) (a preamble does not limit claim scope if it “merely states the purpose or intended use of an invention.”). In fact, paragraph 20 of Appellants' Specification discloses that “a subject matter expert creates a project plan in which the expert assigns a ‘risk value’ for a number of risk factors, for example: for a task's dependency on other tasks, for other task dependency on a given task, and for a confidence level (e.g. level of difficulty).” *See Spec.* ¶ 21 (“A subject matter expert (SME) who assigns the risk values at 101 may be a person who is an expert in a particular area.”). The result is no different with respect to the other independent claims on appeal. After *Alice* the law is clear and this is precisely what the Court warned about—that simply programming a computer to perform what would otherwise be an abstract idea by the “mere recitation of a generic computer,” as in claims 27, 30, and 33, is not sufficient to impart patent eligibility. *Alice*, 134 S. Ct. at 2358.

Appellants' argument regarding preemption is, likewise, unpersuasive. *See Reply Br.* 5. The Supreme Court has explained that “the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the abstract idea] to a particular technological environment.” *Alice*, 134 S. Ct. at 2358. “The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability” and “[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice*, 134 S.

Ct. at 2354). Where claims are deemed to recite only patent ineligible subject matter under the two-step *Alice* analysis, as they are here, “preemption concerns are fully addressed and made moot.” *Id.*; *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015), *cert. denied*, 136 S. Ct. 701 (2015) (“[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”).

For the foregoing reasons, we sustain the rejection of independent claim 1, and independent claims 27, 30, and 33, which fall with claim 1. We also sustain the rejection of the dependent claims, which are not argued separately. *See* Appeal Br. 12.

DECISION

The decision of the Examiner to reject claims 1 and 25–35 under 35 U.S.C. §101 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).

AFFIRMED