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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MARC TINKLER and MICHAEL FREEDMAN

Appeal 2017-001514
Application 13/323,357
Technology Center 3700

Before STEFAN STAICOVICI, LEE L. STEPINA, and ARTHUR M. PESLAK, *Administrative Patent Judges*.

STEPINA, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from a rejection of claims 1–25 and 27–31. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

The claims are directed to a system and method for automatically generating various types of questions. Spec. ¶ 2. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A computer-implemented method for outputting a computer-generated vocabulary quiz, the method comprising:

receiving, by a processor, a signal generated by an interaction with a computer-interface device;

responsive the received signal, the processor interpreting the signal as an instruction to generate a vocabulary quiz for an identified document; and

responsive to the interpreted instruction:

the processor accessing an electronic data store that contains a word corpus that is larger than text of the identified document;

the processor counting a total number of words included in the text of the document;

for each of a plurality of words in the text of the identified document, the processor counting a number of times the respective word appears in the text of the document;

based on the counted numbers, generating by the processor a first ratio of (a) the counted number of times the word appears in the text of the document to (b) the counted total number of words in the text of the document;

obtaining, by the processor, a count of a total number of words in the word corpus of the accessed electronic data store;

for each of the plurality of words in the text of the identified document:

the processor obtaining a respective count of a number of times the respective word occurs in the word corpus of the accessed data store;

the processor generating a second ratio of (a) the obtained number of times the word appears in the word corpus of the accessed electronic data store to (b) the obtained total number of words in the word corpus of the accessed electronic data store;

the processor comparing the first ratio to the second ratio, wherein the comparison of the ratios provides a normalization of the counts to a common scale;

based on the comparison of the first ratio to the second ratio, determining, by the processor, a relevancy of the respective word to the text of the identified document, such that the greater the ratio of the first ratio to the second ration, the greater the relevancy determined by the processor;

the processor sorting the words of the identified document in order of the determined relevancies;

automatically selecting, by the processor, a subset of the words based on the sorted relevancies of the words, such that the words of the subset are those which the sort indicates to have the highest relevancies of the text of the identified document;

obtaining, by the processor, at least one vocabulary question for each of the automatically selected words; and

outputting, by the processor via a computer-to-user interface, the at least one vocabulary question.

REJECTION

Claims 1–25 and 27–31 are rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter.

OPINION

In rejecting the claims under 35 U.S.C. § 101 as directed to non-statutory subject matter, the Examiner analyzes the claims using the two-step framework set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289, 1296–97 (2012) and reiterated in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347, 2355 (2014). Non-Final Act. 2–3. This framework considers, in the first step, whether the claims are directed to a patent-ineligible concept, e.g., an abstract idea, and, in the second step, whether the claims, individually and as an ordered combination, recite an inventive concept--an element or combination of

elements sufficient to ensure that the claims amount to significantly more than the abstract idea and transform the nature of the claims into a patent-eligible concept. *Alice*, 134 S. Ct. at 2355. Pursuant to the first step, the Examiner finds the claims are directed to "providing a vocabulary quiz based on counting word[s] in a document," which is a method of organizing human activity and, therefore, an abstract idea. Non-Final Act. 2; Ans. 11–12. Under the second step, the Examiner finds the claims do not include additional elements amounting to significantly more than the abstract idea because the claims are mere instructions to implement the abstract idea on a generic computer. Non-Final Act. 2–3.

Claims 1–4, 6, 8–25, and 27–31

Appellants argue that the claims are not directed to "a mere organization of human activity," because "the recited combination of steps is a new combination, never before contemplated, and specifically conceived for performance by a machine." Appeal Br. 6. Appellants assert that the recited method improves a processor to address a problem rooted in computer technology, namely, to enable a computer processor to process data in electronic form and automatically generate a quiz. Appeal Br. 7. According to Appellants, because the claims are "limited to that application," the claimed methods improve computer technology, and, "therefore improve the functioning of the computer device itself, and amount to 'significantly more' than the judicial exception." *Id.* (citing *Alice* at 2359 and p. 21 of the 2014 Interim Guidance on Patent Subject Matter Eligibility, 79 Fed. Reg. 74618–74633 (December 16, 2014) ("Guidelines").

The Examiner responds that the Specification includes examples where a human reviews and sorts the data, and that "the claims appear to pre-empt any possible use of a method of comparing ratios of word frequencies to ratios in a field-specific dictionary to garner a list of vocabulary words for a quiz (and merely provide them in a computerized field or endeavor)." Ans. 13. According to the Examiner, because "the claims fail to describe specifically what is happening in the computer," Appellants have not established that the claimed method provide "improvements to another technology or technical field or functioning of the computer itself." Ans. 13–14.

Appellants reply that the claims recite "a specific ordered combination of steps intended for performance by a machine, limited by the claims to performance by the machine, and improve the computing technology by defining rules by which the machine is able to approximately replicate a result that a human would perform by other means." Reply Br. 6.

Appellants' arguments are unpersuasive. We agree with the Examiner that the claims do not provide any improvement in the functioning of the computer itself. *See* Ans. 13–14. The claimed steps ameliorate the tediousness of the manual process, which is untechnical. *See* Spec. 3. Indeed, the claims recite "a processor" and the Specification discloses, for example, that processing is performed using "any conventional processing circuit" (*see* Spec. ¶ 22), which as Appellants note, is "to approximately replicate a result that a human would perform by other means." Reply Br. 6. Consequently, we fail to see how the claims recite something other than the generic computer implementation of the abstract idea of "providing a vocabulary quiz based on counting word[s] in a document," which is not

patent-eligible. Ans. 8–12; *see also DDR Holdings, LLC v. Hotels.com*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) ("[T]hese claims [of prior cases] in substance were directed to nothing more than the performance of an abstract business practice on the Internet or using a conventional computer. Such claims are not patent-eligible.").

Appellants also argue that because "the present claims are directed to use of particular steps in conjunction with machine processing in order to allow the processor to produce an automatic output," the recited steps "impose meaningful limits that apply a formula to improve a technological process." Appeal Br. 8. Appellants assert that the claims are similar to those in *DDR Holdings*, because they "recite[s] a specific way to provide a process to solve a problem faced by the technology being used, the claim[s] should be considered patent eligible." *Id.* According to Appellants, although some steps of "the claims can each individually be separately performed by a human," the claims require a specific combination and this "new specific **combination** of these steps is not a longstanding practice, has not been previously performed, and *would not be performed by any sane human being* in a method of generating a quiz." *Id.* (italicization added). Therefore, according to Appellants, the claims recite "steps [] specifically designed for performance by a machine in order to now allow the machine to produce a result similar to that which the human would otherwise perform using intuition, that is an ordered combination of steps that is more than just the abstract idea." Appeal Br. 9.

The Examiner responds that because Appellants do not explain "what *combinations* of steps in the claims are included or excluded from human intervention," any of the steps may be performed with human intervention,

and, thus, "a broad but reasonable interpretation of the claim elements includes that which has a *creator of a document* providing the relevant vocabulary, thus preempting a creator's role in generating vocabulary quizzes." Ans. 15. According to the Examiner, the claims do not add significantly more, because the claims "taken both individually and in combination," recite generic "elements [that] are easily recognized as well-understood, routine, and conventional in a computerized field-of-use." *Id.*

Appellants reply that because "the claims require a very specific ordered combination of steps to be executed by a processor to achieve a specific result … the claims do not pre-empt an abstract idea." Reply Br. 6–7. Specifically, Appellants argue that although

> calculating a ratio, when considered alone, might be an abstract concept, an ordered combination of calculating two ratios, specifically as required by the claims, and then determining, based on a rule with which a processor is defined, relevancies based on a super-ratio of those other two ratios, and then the processor sorting those relevancies is not a general abstract concept.

Reply Br. 7. Appellants reiterate that the claims are similar to those in *DDR Holdings*, because the claims recite "a specific computer implementation directed to a solution that is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer technology." Reply Br. 8. Appellants also assert that the claims are similar to those in *McRO, Inc. v. Bandai Namco Games Am.Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), because they refer to specific steps performed in a specific combination, thereby improving computer technology to enable a computer to approximately replicate what a human would perform by other means." Reply Br. 9; *see also McRO,* 837 F.3d at 1313).

Notwithstanding that "'the §101 patent-eligibility inquiry and, say, the §102 novelty inquiry might sometimes overlap' . . . a claim for a new abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (quoting *Mayo*, 132 S. Ct. at 1304). The question in the second step of the patent-eligibility analysis 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, 1347–48 (quoting *Alice*, 134 S. Ct. at 2359).

Here, we fail to see how the claimed implementation of the abstract idea requires something apart from generic computing components, namely, processor, computer-to-user interface, electronic data store, and non-transitory hardware computer readable storage medium, each performing well-understood, routine, and conventional computer functions. *See* Ans. 15. The question is "whether the focus of the claims is on the specific asserted improvement in computer capabilities" or whether "computers are invoked merely as a tool." *Enfish LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016). In this case, the computer is used as a tool "to approximately replicate what a human would perform by other means." Reply Br. 9.

To transform an abstract idea into a patentable invention, the claims must "do significantly more than simply describe that abstract method." *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014). The additions must contain an inventive concept. *Id.* Appellants' processor "comparing the first ratio to the second ratio," to determine a relevancy and

"sorting the words" based on the relevancy fails to meet this standard because adding narrowing limitations that are themselves abstract, routine, or conventional does not suffice to transform the claimed abstract idea into patent-eligible subject matter. *See Ultramercial*, 772 F.3d at 716. Consequently, Appellants do not apprise us of error in the Examiner's determination that the claims do not recite significantly more than the implementation of the abstract idea on a generic computer. Ans. 15.

We have considered all of Appellants' arguments for the patentability of claim 1, but we find them to be unavailing. Accordingly, we affirm the rejection of claim 1 as being directed to non-statutory subject matter. Appellants do not make additional arguments for independent claims 17, 20, or 21. Accordingly, these claims fall with claim 1. *See* Appeal Br. 6–9. Nor do Appellants make separate arguments for claims 2–4, 6, 8–16, 22–25, and 27–31, which depend, directly or indirectly, from claim 1, and claims 18 and 19, which depend directly from claim 17. *See* Appeal Br. 6–9. Accordingly, these claims fall with claims 1 and 17.

Claims 5 and 7

Appellants argue that claims 5 and 7 have nothing to do with human-organized activity because these claims require a webpage and an output such as a graphical user interface, and, as such, are "entirely directed to a specific computer technology implementation." Appeal Br. 10; *see also* Reply Br. 9–10.

The Examiner responds that using a link to a webpage is an extra-solution activity that is "generically recited and add[s] nothing further to the specific steps claimed for generating a vocabulary quiz." Ans. 15

We do not agree with Appellants that the subject matter of claims 5 and 7 is rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks. Claim 5 uses a generic link to obtain a document and a generic graphical user interface to display the document, and claim 7 uses a document in a webpage. The source of the document and how it is displayed is not rooted in computer technology because information sources and how they are displayed are not technical problems. Human beings have been using various sources of information including books, manuals, and on-line dictionaries that are displayed as written text, in pictures, or as digital text, for many years. That the process can be assisted by the use of a computer implemented source, and that the information is transmitted through a computer implemented display, is not pertinent to determining whether the claim itself provides a technical solution to a technical problem. In this regard, the claimed invention does not improve the technical workings of the computer or the Internet used to transmit the information. We are not apprised of Examiner error, and we sustain the rejection of claims 5 and 7 as directed to non-statutory subject matter.

DECISION

The Examiner's rejection of claims 1–25 and 27–31 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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED