



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/429,818	04/24/2009	Kjell Bjornar Nibe	191267/US	1801

25763 7590 12/04/2017
DORSEY & WHITNEY LLP - MINNEAPOLIS
ATTENTION: PATENT PROSECUTION DOCKETING DEPARTMENT
INTELLECTUAL PROPERTY PRACTICE GROUP - PT/16TH FL
50 SOUTH SIXTH STREET, SUITE 1500
MINNEAPOLIS, MN 55402-1498

EXAMINER

PAGE, EVAN RANDALL

ART UNIT	PAPER NUMBER
----------	--------------

3715

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

12/04/2017

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.docket@dorsey.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KJELL BJORNAR NIBE and EIRIK MIKKELSEN

Appeal 2017-000020
Application 12/429,818
Technology Center 3700

Before JOHN C. KERINS, EDWARD A. BROWN, and
LYNNE H. BROWNE, *Administrative Patent Judges*.

BROWN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Kjell Bjornar Nibe and Eirik Mikkelsen (Appellants)¹ appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–17 and 19–21.² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ RELIANT EXAMS AS is identified as the real party in interest. Appeal Br. 3.

² Claim 18 is cancelled.

CLAIMED SUBJECT MATTER

Claims 1, 8, and 15 are independent. Claim 15, reproduced below, is illustrative of the claimed subject matter:

15. A test generation method for improving computer-generated exams by generating sets of questions suited to separating test candidates of different skill levels, the method comprising:

storing a number of questions in a plurality of topics on a computer database, wherein each question is associated with a data set of prior use information related to answers given to the question in previous tests presented to test candidates;

randomly selecting, with a computer system, questions within at least one of the topics from the database;

evaluating, with the computer system, the selected questions for inclusion in a new question set relative to predetermined requirements applied to the prior use information on the selected questions and their corresponding answers in the data set,

wherein selected questions not fulfilling the predetermined requirements are discarded from the new question set and selected questions that do not fit a chosen profile regarding selectivity and facility are rejected, such that a controlled distribution of difficulty is obtained;

wherein the evaluation means is adapted to reject selected questions not fulfilling the predetermined requirements by fitting a number of correct answers per failure in the selected questions with a predetermined distribution, so as to ensure the controlled distribution of difficulty in the new question set; and

wherein the evaluation means is further adapted to indicate a quality of the new question set by comparing an actual reliability of the new question set in use to a calculated reliability, assuming the new question set to have a same distribution of characteristics as a known set of the questions having known reliability.

Appeal Br. vi–vii (Claims App.).

REJECTION

Claims 1–17 and 19–21 are rejected under 35 U.S.C. § 101, as being directed to non-statutory subject matter.

ANALYSIS

Claims 1, 8, and 15

Appellants present the same arguments as to claims 1, 8, and 15. *See* Appeal Br. 12–23. We thus regard claims 1, 8, and 15 to be argued as a group. We take claim 15 as representative of this group, and claims 1 and 8 stand or fall with claim 15. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner determines that claim 15 is directed to non-statutory subject matter based on a judicial exception without adding significantly more to the judicial exception. Final Act. 2; Ans. 4. More specifically, the Examiner determines that claim 15 is directed to an abstract idea involving generating, selecting, and evaluating questions to be answered, and determining the quality of the questions by comparing their characteristics to questions of known reliability. Final Act. 2; Ans. 4–6. The Examiner explains that the abstract idea, as claimed, involves an uninstiated concept, plan, or scheme, in which new and stored information are compared using rules to identify options, and using categories to organize, store, and transmit information. Ans. 6–7. The Examiner further determines that claim 15 does not include additional elements sufficient to amount to significantly more than the judicial exception, because the claimed

functionality can be carried out on commonly known hardware, such as a computer with basic input, output, processing capabilities, and database storage, without producing any improvement in the functioning of the computer itself. *Id.* at 7; *see also* Final Act. 2–3. The Examiner also explains that recitation of a computer in claim 15 amounts to mere instructions to implement the abstract idea using the computer hardware. Ans. 7. As such, the Examiner determines that considering the additional elements, both individually and in combination, there is no inventive concept sufficient to transform the claimed subject matter into a patent-eligible application. *Id.*

Appellants contend that claim 15 is not directed to an abstract idea. Appeal Br. 16–17; Reply Br. 7. Appellants argue that the claims are not directed to a method of organizing human activity because the claims do not relate to interpersonal or intrapersonal activities, but rather require a “subtractive” process. Appeal Br. 18–19; Reply Br. 8. Appellants also argue that it is improper to consider that the claimed method could be performed as a mental activity or by a human with a pen and paper. Reply Br. 17–19. Rather, Appellants contend that their claims are similar to the *Diehr* claims that were found to be subject matter eligible. *Id.* at 11–13 (citing *Diamond v. Diehr*, 450 U.S. 175 (1981)).

The Supreme Court has 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.” *Alice Corp., Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–1297 (2012)). According to the Supreme Court’s framework, it must first be

determined whether the claims at issue are directed to one of those concepts (i.e., laws of nature, natural phenomena, and abstract ideas). *Id.* If so, it is then necessary to “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 1298, 1297). The Supreme Court characterizes the second step of the 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.’” *Id.* (alteration in the original) (quoting *Mayo*, 132 S. Ct. at 1294).

Claim 15 is directed to a test generation method for improving computer-generated exams comprising the steps of storing questions in a database, randomly selecting questions from the database, and evaluating the selected questions relative to predetermined requirements. Appeal Br. vi–vii (Claims App.). The selecting and evaluating steps are performed with a computer system, where questions are discarded, rejected, or selected for inclusion for a new question set. *Id.* Thus, claim 15 requires collecting and analyzing data (questions) via the use of a machine, which are generic steps in a method of generating a test. In other words, claim 15 is directed to a set of rules performed by a computer system (i.e., a mathematical algorithm or a software).

“Software can make non-abstract improvements to computer technology just as hardware improvements can, and sometimes the improvements can be accomplished through either route.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). Accordingly, it

must be determined if “the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the *Alice* analysis.” *Id.* Here, the disputed limitations are not directed to an improvement in a computer’s functionality. There is nothing recited in claim 15 to suggest that, once a test or new question set is determined by following the recited steps, the computer system that implements the steps will be improved in function.

Instead, similar to the claims at issue in *Electric Power Group*, claim 15 recites a purported advance in uses for existing computer capabilities, not new or improved computer capabilities. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016); *see also id.* at 1353–1354 (explaining that an invention directed to the collection, manipulation, and display of data is an abstract process). Accordingly, claim 15 is directed to an abstract idea. *See also* Ans. 7 (“[The claimed invention] is similar to the identified abstract ideas of comparing new and stored information and using rules to identify options and using categories to organize, store, and transmit information.”). We thus are not persuaded by Appellants’ contention that their “improvements are necessarily rooted in computer technology, because that is the technology in which the skills measurement exam industry increasingly is based, and that is the technology required to carry out the particular analysis procedures that are recited in the claims.” Appeal Br. 22; *see also* Reply Br. 13–15.

Appellants contend that the Examiner fails to provide an historical text, precedential ruling, or tangible evidence to show that the claimed systems and methods are directed to a judicially recognized exception or that

the claimed practices have been long prevalent in the industry, as described by the *Alice* Court. Appeal Br. 17; *see also* Reply Br. 10–11.

Appellants do not apprise us of, and we are unaware of, any requirement mandated by *Alice* that the Examiner must provide an historical text or precedential ruling to show that the claimed systems and methods are directed to a judicially recognized exception, or that the claimed practices have been long prevalent in the industry. We note that the USPTO’s Memorandum “Formulating a Subject Matter Eligibility Rejection and Evaluating the Applicant’s Response to a Subject Matter Eligibility Rejection,” dated May 4, 2016, cited by Appellants on page 9 of the Reply Brief, states that “[c]iting to an appropriate court decision that supports the identification of the subject matter recited in the claim language as an abstract idea is *a best practice*” (emphasis added). In other words, citation to a court decision is desirable, but is not a requirement for making a rejection that a claim is directed to non-statutory subject matter.

Appellants appear to contend that the claimed method is not directed to a judicially recognized exception because the claimed invention is novel and nonobvious over the cited prior art. Appeal Br. 17.

This contention is not persuasive. Even assuming that claim 15 is “a novel and nonobvious” modification, “[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. at 188–89. Thus, we are not apprised of error based on this argument.

Accordingly, because claim 15 is drawn to a method comprising collecting and analyzing data and is not directed to an improvement of a

computer's functionality, claim 15 is directed to the abstract idea of manipulating information using mathematical relationships by way of a set of rules performed by a computer. Thus, in accordance with the first step of the *Alice* framework, the Examiner correctly finds that claim 15 is directed to an abstract idea.

Appellants argue that the Examiner fails to examine the claim elements for an inventive step. Appeal Br. 19. Appellants argue that the Examiner fails to address the claimed elements relating to a database and the particular features relating to the steps involving evaluating, discarding, or selecting the questions. *Id.* at 19–21; *see also* Reply Br. 15–16.

Claims must include additional features that are significantly beyond “well-understood, routine, conventional activity” or a simple “instruction to implement or apply the abstract idea on a computer.” *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (quoting *Mayo*, 132 S. Ct. at 1298); *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016) (quoting *Alice*, 134 S. Ct. at 2358). Although claim 15 sets forth certain data to be collected (by selecting questions from the database), and indicates that an algorithm (“evaluation means”) is to be used to manipulate the collected data (the selecting and evaluating steps are performed with the use of a computer system, where questions are discarded, rejected, or selected for inclusion in a new question set), the Examiner's determination that claim 15 does not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claimed functionality can be carried out on commonly-known hardware, such as a computer with basic input, output, processing capabilities, and database storage, without producing any improvement in

the functioning of the computer itself, is correct. Ans. 7. Further, the specific features of claim 15 reiterated by Appellants relate to data processing steps, such as the selecting and the evaluating steps, which merely implement the abstract idea. *See* Ans. 4–6. As such, claim 15 at most requires only “mathematical algorithms to manipulate existing information to generate additional information.” *Digitech Image Techs., LLC v. Elecs. For Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014). Thus, the limitations of claim 15 do not transform the abstract idea embodied in the claim. Rather, they simply implement the idea.

To the extent that Appellants are arguing that the claims do not preempt because they are limited to the field of generating higher quality questions (Appeal Br. 22–23), this argument is unpersuasive. In *Electric Power Group*, the court noted that a field-of-use restriction, “limiting the claims to the particular technological environment of power-grid monitoring,” is insufficient. *Elec. Power Grp.*, 830 F.3d at 1354. Further, “[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed Cir. 2015).

Accordingly, claim 15, when considered “both individually and ‘as an ordered combination,’” amounts to nothing more than an attempt to patent the abstract idea embodied in the steps of the claim. *See Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1298). Thus, the limitations of claim 15 fail to transform the nature of the claim into patent-eligible subject matter. *See id.* (citing *Mayo*, 132 S. Ct. at 1297, 1298); *see also* Ans. 7.

For these reasons, we sustain the Examiner’s decision rejecting claim 15 as being directed to non-statutory subject matter. Claims 1 and 8 fall with claim 15.

Claims 2–7, 9–14, 16, 17, and 19–21

In regard to the dependent claims, Appellants contend that the following are not related to an abstract idea: (1) the claimed data set associated with each new question set (Appeal Br. 23), (2) prior use of information concerning a ratio of correct answers to each question (*id.* at 24), (3) correlation between quality of answers and general quality of a test (*id.*), (4) application of Kuder-Richardson or Cronbach’s Alpha measures (*id.* at 25), and (5) a database including information about who contributed to the questions (*id.*), among other things.

As discussed *supra*, the Examiner determines that Appellants’ abstract idea involves new and stored information that are compared using rules to identify options, and using categories to organize, store, and transmit information. Ans. 6–7. Further as discussed *supra*, the inclusion of additional features that are not significantly beyond “well-understood, routine, conventional activity” or a simple “instruction to implement or apply the abstract idea on a computer,” does not render a claim patent eligible. *See Ultramercial*, 772 F.3d at 715; *Bascom*, 827 F.3d at 1349 (quoting *Alice*, 134 S. Ct. at 2358). As the Examiner explains, the disputed limitations do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claimed functionality can be carried out on commonly known hardware, such as a computer with basic input, output, processing capabilities, and database storage, without producing any improvement in the functioning of the

computer itself. Ans. 7. Moreover, the features recited in the dependent claims are either merely insignificant pre-solution activity, insignificant steps used to input data into a mathematical algorithm, or insignificant post-solution activity. *See Parker v. Flook*, 437 U.S. 584, 590 (1978) (“The notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance.”); *cf Mayo*, 132 S. Ct. at 1298 (“Purely ‘conventional or obvious’ ‘[pre]-solution activity’ is normally not sufficient to transform an unpatentable law of nature into a patent-eligible application of such a law” (alteration in original) (quoting *Flook*, 437 U.S. at 590)). Providing an analysis, without more, is more appropriately characterized as an insignificant “post-solution activity” that does not support the invention having an inventive concept. *See Flook*, 437 U.S. at 590. Like the *Flook* claims, the dependent claims do not recite unconventional physical elements or a functional relationship between abstract and physical elements.

Accordingly, claims 2–7, 9–14, 16, 17, and 19–21, are directed to an abstract idea and when considered “both individually and ‘as an ordered combination,’” amount to nothing more than an attempt to patent the abstract idea embodied in the steps of the claim. *See Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1298). The limitations of claims 2–7, 9–14, 16, 17, and 19–21 fail to transform the nature of the claims into patent-eligible subject matter.

For these reasons, we sustain the rejection of claims 2–7, 9–14, 16, 17, and 19–21 as being directed to non-statutory subject matter.

Appeal 2017-000020
Application 12/429,818

DECISION

We affirm the rejection of claims 1–17 and 19–21.

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

AFFIRMED