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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SHAJY MATHAI, MAYA E. BELUBEKIAN, and
ELIZABETH SOH

Appeal 2017-006750
Application 11/710,874
Technology Center 3600

Before ERIC B. CHEN, JOSEPH P. LENTIVECH, and
NABEEL U. KHAN, *Administrative Patent Judges*.

CHEN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the final rejection of claims 31–46. Claims 1–30 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Appellants' invention relates to depicting a relative impact to losses of an insurer's portfolio, at a specific risk level by geographic area using a grid level database and a spatial database to generate maps. (Abstract.)

Claim 31 is exemplary:

31. A method of modeling incremental changes in exposure and potential loss for a portfolio of insurance, the method comprising the steps of:

selecting a risk managed layer;

selecting a geographical area corresponding to the portfolio of insurance;

calculating, by a processor, the incremental changes as an expected portfolio value for the change in loss for the portfolio of insurance by approximating the incremental changes as the expected portfolio value for the loss for a change in the portfolio of insurance, given a set of risk managed layer events;

providing, by the processor, a uniform grid having grid points for the geographic area;

generating, by the processor, a geographic map of the geographic area including geographical features therefor; and

distributing, by the processor, the incremental changes over the geographic map to provide the distributed incremental change in gradient form.

Claims 31–46 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter.

ANALYSIS

We are unpersuaded by Appellants’ arguments (App. Br. 5–9¹; *see also* Reply Br. 2–6) that independent claims 31 and 39 are directed to patent-eligible subject matter under 35 U.S.C. § 101.

The Examiner found that the claims are “are analogous to the basic concepts [of] . . . using categories to organize, store, and transmit information (*Electric Power Group LLC, Cyberfone Systems LLC v CNN Interactive Group Inc*) . . . [or] determining a potential loss for a portfolio of insurance which is a fundamental economic practice (*Alice Corp. Pty. Ltd v CLS Bank Inter’l*).” (Ans. 5.) The Examiner further found that “[t]hese generic computer components are claimed to perform their basic functions of storing, retrieving, processing, and displaying that are well-understood, routine, and conventional activities which amount to no more than implementing the abstract idea with a computerized programmed system.” (*Id.* at 6.) We agree with the Examiner’s findings and ultimate conclusion that independent claims 31 and 39 are patent ineligible.

A patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. The Supreme Court has held that this “provision contains an important implicit exception: [l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (internal citation and quotation marks omitted); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“Phenomena of nature, though just discovered, mental processes, and abstract intellectual

¹ Appellants’ Appel Brief, filed July 27, 2016.

concepts are not patentable, as they are the basic tools of scientific and technological work”). Notwithstanding that a law of nature or an abstract idea, by itself, is not patentable, the application of these concepts may be deserving of patent protection. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71–72 (2012). In *Mayo*, the Court stated that “to transform an unpatentable law of nature into a patent-eligible *application* of such a law, one must do more than simply state the law of nature while adding the words ‘apply it.’” *Mayo*, 566 U.S. at 72 (internal citation omitted).

In *Alice*, the Supreme Court reaffirmed the framework set forth previously in *Mayo* “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355. The first step in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.*

If the claims are directed to a patent-ineligible concept, then 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, 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 72–73). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort

designed to monopolize the [abstract idea].” *Id.* at 2357 (brackets in original) (quoting *Mayo*, 566 U.S. at 77–78). 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 post[-]solution activity.” *Bilski v. Kappos*, 561 U.S. 593, 610–11 (2010) (internal citation and quotation marks omitted). The Court in *Alice* noted that “[s]imply appending conventional steps, specified at a high level of generality, was not ‘enough’ [in *Mayo*] to supply an ‘inventive concept.’” *Alice*, 134 S. Ct. at 2357 (quoting *Mayo*, 566 U.S. at 82–83, 77–78, and 72–73).

*Alice Step One: Are the claims at issue
directed to a patent-ineligible concept?*

Independent claim 31 is a method claim, which recites, in part, the following: (i) “selecting a risk managed layer” and (ii) “selecting a geographical area corresponding to the portfolio of insurance.” Such method steps of claim 31 are directed to a patent-ineligible abstract idea of collecting data. *See, e.g., Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (“collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas”); *see also Cyberfone Sys. v. CNN Interactive Grp.*, 558 Fed. Appx. 988, 993 (Fed. Cir. 2014) (“[n]or does the particular configuration of steps—obtaining, separating, and then sending information—confer patentability”). Claim 31 further recites: (iii) “calculating . . . the incremental changes as an expected portfolio value for the change in loss for the portfolio of insurance . . .”; (iv) “providing . . . a uniform grid . . .”; (v) “generating . . . a geographic map . . .”; and (vi)

“distributing . . . the incremental changes over the geographic map to provide the distributed incremental change in gradient form.” Such method steps of claim 31 are directed to a patent-ineligible abstract idea of analyzing and displaying information. *See, e.g., Elec. Power Grp.*, 830 F.3d at 1354 (“[t]he advance they purport to make is a process of gathering and analyzing information of a specified content, then displaying the results, and not any particular assertedly inventive technology for performing those functions.”).

Alternatively, such steps of claim 31 are directed to a patent-ineligible abstract idea of “a fundamental economic practice long prevalent in our system of commerce,” *Alice*, 134 S. Ct. at 2356, for example, the fundamental business practice in the insurance industry of factoring a Risk Managed Layer (RML) based on geography into the overall portfolio performance of insurance policies. In particular, in the “Background” section, Appellants’ Specification admits the following:

Currently, more and more insurance companies are taking a pro-active approach to portfolio management and, instead of just assessing potential losses of the current portfolio of insurance policies, they are trying to evaluate the geographic impact of writing new policies based on their portfolio’s performance. Typically, there is a certain layer of risk that is the most critical for managing called a Risk Managed Layer (RML). The selection of a RML can be affected by a variety of factors and parameters, such as a reinsurance layer’s attachment and limit, A.M. Best’s rating requirements, etc.

(Spec. ¶ 2.)

Still other systems are known that determine concentrations of potential liability and exposure relating to catastrophic events regarding insurance portfolios and include operations for storing and linking policy information, portfolio information, account information, financial perspectives or other information that is identified using longitude and latitude

coordinates or zip codes. . . . The exposure data may be output in a graphical form, such as a map showing locations having the highest exposure concentration or using specific graphic indicia or colors to determine various concentration levels.

(*Id.* ¶ 8.)

Claim 39, a corresponding computer-readable storage medium claim, recites limitations similar to those discussed with respect to claim 31. Thus, claim 39 is also directed to a patent-ineligible abstract idea.

Step Two: Is there something else in the claims that ensures that they are directed to significantly more than a patent ineligible concept?

Because claims 31 and 39 are directed to an abstract idea, we next determine, according to *Alice*, whether these claims recite an element, or combination of elements that is enough to ensure that the claim is directed to significantly more than an abstract idea.

Claim 31, a method claim, and claim 39, a corresponding computer-readable storage medium claim, both recite a “processor.” With respect to the claimed “processor,” Appellants’ Specification discloses the following:

The present invention provides maps and zip code lists of RML losses that are available for catastrophic events, such as for earthquakes and hurricanes. Technology/tools used may include a processor having a computer readable signal-bearing medium, such medium having circuits, such as hardware including a spatial database (e.g., an Oracle Spatial Database), and geo-spatial software

(Spec. ¶ 28.)

The generalized functional terms by which the computer components are described reasonably indicate that Appellants’ Specification discloses a conventional “processor” having a computer readable medium with a spatial

database. In view of Appellants' Specification, the claimed hardware components, including the "processor," reasonably may be determined to be generic, purely conventional computer elements. Thus, the claims do no more than require generic computer elements to perform an abstract idea, rather than improve computer capabilities.

Accordingly, appending a conventional "processor" to an abstract idea is not enough to transform the abstract idea into a patent-eligible invention. *See Alice*, 134 S. Ct. at 2358 ("[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention").

First, Appellants argue that "the Examiner only states that the claims are also a fundamental economic practice without providing any evidence to support this assertion, thereby only constituting an opinion of the Examiner." (App. Br. 5.) Similarly, Appellants argue that "[i]t is respectfully submitted that the Examiner is describing the claims at issue here in an overly high level of abstraction and overgeneralizing them" and "claim 1 is not simply data recognition and storage, a mathematical procedure, organizing information, using categories, organizing human activity, and a fundamental economic principle." (Reply Br. 6.) Contrary to Appellants' arguments, the Examiner has identified the appropriate judicial exception as concepts relating to certain methods of organizing human activity (e.g., "gathering and analyzing information of a specified content, then displaying the results") or concepts relating to "a fundamental economic practice." Moreover, the Examiner has compared the claimed concepts of independent claim 31 to an appropriate Federal Circuit decision (i.e., *Electric Power Group*) or Supreme Court decision (i.e., *Alice*).

Accordingly, the Examiner has met the burden of a general prima facie notice requirement. *See In re Jung*, 637 F.3d 1356, 1363 (Fed. Cir. 2011) (“[A]ll that is required of the [Patent] [O]ffice to meet its prima facie burden of production is to set forth the statutory basis of the rejection and the reference or references relied upon in a sufficiently articulate and informative manner as to meet the notice requirement of § 132.”).

Second, Appellants argue that:

It is respectfully submitted that the claims solve a technological problem in conventional industry practice and recite improvements to the functioning of a computer, because the claims recite improved processor performance for calculating incremental changes as an expected portfolio value for the change in loss for the portfolio of insurance, by approximating the incremental changes as the expected portfolio value for the loss for a change in the portfolio of insurance, given a set of risk managed layer events and distributing the incremental changes over the geographic map to provide the distributed incremental changes in gradient form.

(App. Br. 8.) Similarly, Appellants argue that “[t]his specific implementation provides a solution to a problem in the software arts (e.g., determining loss information and incremental changes and providing a visual representation for consideration by insurance companies)” and “it is respectfully submitted that the claims are not directed to an abstract idea in the same manner as the Federal Circuit held in *Enfish*.” (Reply Br. 4.) However, Appellants have not adequately explained why the claim “purport[s] to improve the functioning of the computer itself” or “any other technology or technical field.” *Alice*, 134 S. Ct. at 2359. In particular, Appellants have not explained why “determining loss information and incremental changes and providing a visual representation for consideration by insurance companies,” which is the abstract idea of analyzing and

displaying information, improves the function of a computer or other technology.

Third, Appellants argue that “it is respectfully submitted that a grant of the claims of the present application would not preempt the making, using, and selling of basic tools of scientific and technological work.” (App. Br. 9.) However, although “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). 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.*

Thus, we sustain the rejection of claims 31 and 39 under 35 U.S.C. § 101. Appellants do not argue for separate patentability of claims 32–38 and 40–46, which depend from independent claims 31 and 39. Thus, we also sustain the rejection of claims 32–38 and 40–46 under 35 U.S.C. § 101.

DECISION

The Examiner’s decision rejecting claims 31–46 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)(1)(iv).

AFFIRMED