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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* DIPYAMAN BANERJEE, GARGI B. DASGUPTA,  
and NIRMIT V. DESAI

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Appeal 2017-006667  
Application 13/654,564<sup>1</sup>  
Technology Center 3600

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Before ERIC B. CHEN, MATTHEW R. CLEMENTS, and  
SCOTT E. BAIN, *Administrative Patent Judges*.

CHEN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 3–5, 7–14, and 16–20. Claims 2, 6, and 15 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> Appellants identify the real party in interest as “International Business Machines Corporation.” (App. Br. 3.)

## THE INVENTION

Appellants' invention relates to staffing costs and, particularly, "allocating service consumers to resource pools." (Spec. 3:21–25.)

Claim 1 is reproduced below.

1. A method for allocating a single account and/or multiple accounts among at least one resource pool, the method comprising:

[a] creating a set of customer account allocations by assigning multiple customer account combinations from a set of customer accounts among a given set of resource pools;

[b] using a list of constraints to filter out one or more of the multiple customer account combinations wherein two or more accounts cannot be grouped together due to a security issue;

[c] computing a compatibility score for each of the customer account allocations, wherein a higher compatibility score indicates an increased likelihood that a given customer account allocation is compatible with a given resource pool, by comparing a profile of a resource pool and a profile of each customer account assigned to the resource pool in the customer account allocation based on:

[i] a workload parameter for each of the resource pools in the given set of resource pools, wherein the workload parameter for a given resource pool represents a pattern in which workload arrives to the given resource pool per one or more given temporal parameters, wherein said pattern is derived from individual workload patterns of individual customer accounts within the given resource pool, and wherein the workload parameter of a given resource pool and a given customer account increases the compatibility score if, after the inclusion of the given customer account in the given resource pool, the risk of a service level agreement violation in the given resource pool is below a predetermined threshold;

[ii] a demographics parameter for each of the resource pools in the given set of resource pools, wherein the demographics parameter for a given resource pool comprises a consideration of (i) human skills associated with the given resource pool, (ii) one or more timing variables associated with existing customer accounts within the given resource pool, and (iii) existing service level agreement attainments associated with the given resource pool; and

[iii] an effort parameter for each of the resource pools in the given set of resource pools, wherein the effort parameter for a given resource pool comprises a length of time measured in work hours required by the given resource pool to perform work associated with existing customer accounts within the given resource pool, and wherein the effort parameter of a given resource pool and a given customer account increases the compatibility score if the time to perform work associated with the given customer account adds an amount of time less than a pre-determined amount to the existing effort parameter of the given resource pool;

[d] simulating execution of a pre-determined number of the customer account allocations, wherein the pre-determined number is based on a compatibility score threshold;

[e] selecting one of the customer account allocations based on the simulated execution, wherein the selected customer account allocation satisfies one or more parameters comprising at least maintaining an average resource utilization in the set of resource pools under a predefined threshold; and

[f] allocating the set of customer accounts among the set of resource pools in accordance with the selected customer account allocation;

[g] wherein the steps are carried out by at least one computer device.

## REJECTIONS

Claims 1, 3–5, 7–14, and 16–20 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

## ANALYSIS

We are unpersuaded by Appellants’ arguments (App. Br. 11–19; *see also* Reply Br. 3–7) that independent claims 1, 11, 19, and 20 are directed to patent-eligible subject matter under 35 U.S.C. § 101.

The Examiner found that “[t]he above elements [of claim 1] are similar to ideas that have been held Abstract by the courts.” (Ans. 8.) In particular, the Examiner found that “[i]n the instant case, the compatibility score is computed using an algorithm that considers multiple parameters (a workload parameter, a demographics parameter and an effort parameter)” and “is similar [to *Electric Power Group*] in that information is analyzed using an algorithm to determine an optimal account allocation which can be considered essentially mental processes within the abstract-idea category.” (*Id.*) The Examiner further found that “the computer device is recited at a high level of generality and its broadest reasonable interpretation comprises only a microprocessor to perform the generic computer functions of: computing, simulating, selecting and allocating” as “evidenced by [paragraph] 40 of the Applicant’s specification [US 2014/0114719] that states an aspect of the present invention can make use of software running on a general purpose computer or workstation.” (*Id.* at 9.) We agree with the Examiner’s findings and ultimate conclusion that claim 1 is directed to patent-ineligible subject matter.

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); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“Phenomena of nature, though just discovered, mental processes, and abstract intellectual 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 the

additional elements “‘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, 72–73).

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

Independent claim 1 is a method claim, which recites, in part, the following: “[i] a workload parameter for each of the resource pools in the given set of resource pools . . . ,” “[ii] a demographics parameter for each of the resource pools in the given set of resource pools . . . ,” and “[iii] an effort parameter for each of the resource pools in the given set of resource pools . . .” Such method steps of claim 1 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.”)

Independent claim 1 further recites: “[a] creating a set of customer account allocations,” “[b] using a list of constraints to filter out one or more of the multiple customer account combinations,” “[c] computing a compatibility score for each of the customer account allocations,” [d] “simulating execution of a pre-determined number of the customer account allocations,” “[e] selecting one of the customer account allocations based on the simulated execution,” and “[f] allocating the set of customer accounts among the set of resource pools in accordance with the selected customer account allocation.” All of these steps, however, merely involve analyzing information, which also is an abstract idea. *See, e.g., Elec. Power Grp.*, 830 F.3d at 1353 (“analyzing information . . . by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.”).

Accordingly, claim 1 is directed to a patent-ineligible abstract idea. Claim 11, a corresponding article claim, claim 19 a corresponding system claim, and claim 20, a corresponding method claim, recite limitations similar to those discussed with respect to claim 1. Thus, claims 11, 19, and 20 are also directed to a patent-ineligible abstract idea.

Appellants argue that the Examiner provides a “conclusory characterization” with respect to “to the first part of the *Alice/Mayo* framework, [in which] the Examiner . . . alleges that the claims are ‘directed

toward a process for allocating accounts to resource pools.’” (App. Br. 11; *see also* Reply Br. 3.) Contrary to Appellants’ arguments, the Examiner has identified the appropriate judicial exception as concepts relating to tracking or organizing information and has properly compared the claimed concepts of independent claim 1 to a prior Federal Circuit decision, *Electric Power Group*. (Ans. 8.)

Appellants further argue that “in *Rapid Litigation Management*, the Federal Circuit states that a ‘new and improved technique, for producing a tangible and useful result, falls squarely outside those categories of inventions that are “directed to” patent ineligible concepts.’” (App. Br. 13.) Accordingly, Appellants argue, “the claims are expressly producing a collection of customer account allocations, and subsequently transforming that produced collection into an optimized customer account allocation based on the specific restriction of a computed average resource utilization across the set of resource pools.” (*Id.* at 12.) However, other than providing a conclusory statement that the end result of the claims are a “new and improved technique, for producing a tangible and useful result,” Appellants have not adequately explained why the end result of the claims produces a tangible and useful result, rather than the patent-ineligible concept of collecting and analyzing information.

Appellants also argue that “the Examiner has not considered the specific claim limitations as a whole” (App. Br. 14) because “the Examiner has oversimplified the claims by looking at them generally (for example, by alleging that the claims are merely directed to ‘allocating accounts to resource pools’) and has failed to account for the (numerous) specific

requirements of the claim” (*id.* at 15.) However, as discussed previously, the Examiner has identified the appropriate judicial exception as concepts relating to tracking or organizing information and has properly compared the claimed concepts of independent claim 1 to a prior Federal Circuit decision, *Electric Power Group*. (Ans. 8.) Appellants are improperly conflating part one of the *Alice* test with part two of the *Alice* test, which includes consideration of an element or combination of elements to determine if the claim recites “additional features.”

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

Because claim 1 is directed to an abstract idea, the question to be settled next, according to *Alice*, is whether this claim recites an element, or combination of elements, that is enough to establish that the claim is directed to significantly more than an abstract idea.

Claim 1 is a method claim, which includes “at least one computer device.” With respect to the claimed hardware components, Appellants’ Specification discloses the following:

Additionally, an aspect of the present invention can make use of software running on a general purpose computer or workstation. With reference to FIG. 3, such an implementation might employ, for example, a processor 302, a memory 304, and an input/output interface formed, for example, by a display 306 and a keyboard 308. The term “processor” as used herein is intended to include any processing device, such as, for example, one that includes a CPU (central processing unit) and/or other forms of processing circuitry. Further, the term “processor” may refer to more than one individual processor. The term “memory” is intended to

include memory associated with a processor or CPU, such as, for example, RAM (random access memory), ROM (read only memory), a fixed memory device (for example, hard drive), a removable memory device (for example, diskette), a flash memory and the like. In addition, the phrase “input/output interface” as used herein, is intended to include, for example, a mechanism for inputting data to the processing unit (for example, mouse), and a mechanism for providing results associated with the processing unit (for example, printer).

(Spec. 10:9–22.)

The general, functional terms by which the computer components are described indicate that Appellants’ Specification discloses a generic general purpose computer having a processor, a memory, an input/output interface (e.g., mouse and printer), a display, and a keyboard.

In view of the Examiner’s findings, which are consistent with Appellants’ Specification, the claimed hardware components, including “at least one computer device” reasonably may be determined to be generic, purely conventional computer elements. Thus, the claims do no more than require generic computer elements to perform generic computer functions, rather than improve computer capabilities. Appending a conventional “computer device” to an abstract idea is not enough to transform an 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.”).

Appellants argue that “if a set of ‘specific limitations’ has been deemed novel and non-obvious over an extensive field of available art, (as is the case with the instant claims) then the same set of ‘specific limitations’ cannot plausibly be simultaneously argued as being ‘well understood,

routine and conventional in the field.’” (App. Br. 17.) To support this argument, Appellants cite to purported Federal Circuit guidance from *Ultramercial, Internet Patents Corp., Amdocs, and Trading Technologies* (*Id.*; see also Reply Br. 6–7.) However, Appellants improperly conflate the requirements for eligible subject matter with the independent requirements of novelty and non-obviousness. “The ‘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).

Appellants further argue that “the instant claims clearly ‘do not merely recite the abstract idea [] along with the requirement to perform it on the Internet, or to perform it on a set of generic computer components,’ nor is it plausible to argue that limitations with such significant specificity (as clearly illustrated above) ‘preempt all ways of [carrying out the abstract idea] on the Internet.’” (App. Br. 19 (alterations in original).) 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.*

Appeal 2017-006667  
Application 13/654,564

DECISION

The Examiner's decision rejecting claims 1, 3–5, 7–14, and 16–20 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