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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TOLGA HAN SEYHAN and AMIT CHAKRABORTY

Appeal 2017-008209
Application 13/651,515
Technology Center 3600

Before MAHSHID D. SAADAT, JOHNNY A. KUMAR, and JOHN A. EVANS, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants[1] seek our review under 35 U.S.C. § 134(a) from the Examiner's Final Office Action rejecting claims 1–14, 24, and 25, which are all the pending claims on appeal. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] The real party in interest is Siemens Aktiengesellschaft. App. Br. 2.

STATEMENT OF THE CASE

Appellants' Specification describes methods and systems for "reduction of power consumption using incentives." Spec. 1:9–10. Claim 1 is illustrative of Appellants' invention, as reproduced below:

> 1. A method for reducing an amount of power consumed comprises:
>
> reading, by a computer system, loads from meters of customers, wherein the meters are smart meters in communication via a network and are configured to detect the load a corresponding one of the customers has used during a given time period;
>
> predicting, by the computer system, a future total load from the read loads;
>
> determining, by the computer system, whether the future total load exceeds a threshold value;
>
> sending, by the computer system, a request message including terms to each of the customers when the future total load exceeds the threshold value; and
>
> adjusting, by the computer system, an electric bill of each customer for a period of time based on whether the corresponding customer adhered to the corresponding terms,
>
> wherein the terms for each customer includes an amount the corresponding customer is estimated to profit during the period for adhering to the terms, and wherein the estimated amount is $((r_{c+} m - r') * P' * \Delta t)$, wherein r_c is a current rate, m is a minimum reduction in rate that is likely to cause the corresponding customer to agree to the terms, P' is a desired power level, Δt is the period of time, and r' is a discounted rate for power for the period that is lower than the current rate,
>
> wherein the minimum reduction in rate for each customer is estimated using historical responses of the corresponding customer.

Examiner's Rejection

Claims 1–14, 24, and 25 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to patent-ineligible subject matter. Final Act. 4.

PRINCIPLES OF LAW

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. The Supreme Court has long held that "[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) (quoting *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). "The 'abstract ideas' category embodies 'the longstanding rule that '[a]n idea of itself is not patentable.'" *Id.* at 2355 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)).

In *Alice*, the Supreme Court set forth an analytical "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Id.* at 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012)). The first step in the analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts," such as an abstract idea. *Id.* (citing *Mayo*, 566 U.S. at 77–78).

If the claims are directed to a patent-ineligible concept, 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.* (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73). An "inventive concept" requires more than "well-understood, routine, conventional activity already engaged in" by the relevant community. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1047 (Fed. Cir. 2016) (quoting *Mayo*, 566 U.S. at 79–80). But "an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). Under step two, "an inventive concept must be evident in the claims." *RecogniCorp, LLC v. Nintendo Co., Ltd.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017).

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 postsolution activity.'" *Bilski v. Kappos*, 561 U.S. 593, 610–11 (2010) (citation omitted).

ANALYSIS

The Examiner determines claims 1–14, 24, and 25, "considering the elements thereof both individually and as an ordered combination," are directed to "a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more." Final Act. 4 (citing *Alice*). In particular, the Examiner finds that the abstract idea underlying these

claims is "the series of steps instructing how to incentivize reduced power consumption, which is a method of organizing human activity and an idea of itself and thus an abstract idea." *Id.* The Examiner also finds additional elements recited in the claims do not amount to significantly more than the judicial exception because "the recited computer, processor, and smart meter are generic computer structure that serve to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the pertinent industry. Final Act. 4; *see* Spec. 6–7, 16–17.

Appellants present several arguments against the 35 U.S.C. § 101 rejection. App. Br. 7–15. First, Appellants contend the claims are "limited to a specific process and system that does not preempt approaches with a different structure or different techniques." *Id.* at 9. Appellants also contend, similar to the claims in *Enfish*, their claims involve specific algorithm that "improves technology functionality, which supports a finding that the pending claims qualify as statutory subject matter." *Id.* at 10. Relying again on the decision in *Enfish*, Appellants assert the Examiner has not considered the claims as a whole and has overlooked the "described improvements or benefits," which provide "a technological solution" for solving the technological problem (*i.e.*, the cost of external supply of power vs. the cost of locally generated power) described in Appellants' disclosure in the "Background of the Invention" section. *Id.* at 12–13. Appellants also contend the claims recite significantly more than an abstract idea because the claims describe a specific way "a computer system that interfaces with 'smart meters' (i.e., technology outside of the computer system)." *Id.* at 14. In that regard, although Appellants acknowledge the recited computer

system is generic, Appellants assert one of ordinary skill in the art would clearly understand "that the combination of a computer system interacting with a smart meter is substantially more than a generic computer structure" and "that the recited novel and non-obvious steps/features of predicting, determining, sending, and adjusting based on the loads read from the smart meter is substantially more than the alleged abstract idea." App. Br. 15.

We are not persuaded by Appellants' arguments. Instead, we observe the Examiner has provided a comprehensive response to Appellants' arguments supported by a preponderance of evidence. Ans. 2–6. As such, we adopt the Examiner's findings and explanations provided therein. *Id.*; Final Act. 4.

Alice Step One

Turning to the first step of the *Alice* inquiry, we agree with the Examiner that Appellants' claims are directed to an abstract idea of "instructing how to incentivize reduced power consumption, which is a method of organizing human activity and an idea of itself." Ans. 3–4. Independent claim 11 is directed to "a computer system comprising a memory for storing a computer program and a processor for executing the computer program" that performs functions similar to those recited in claim 1. All the steps recited in Appellants' claim 1, including, for example: (i) "reading, . . ., loads from meters of customers," (ii) "predicting, . . ., a future total load from the read loads," (iii) "determining, . . ., whether the future total load exceeds a threshold value," (iv) "sending, . . ., a request message including terms . . . when the future total load exceeds the threshold value" (v) and "adjusting, . . ., an electric bill of each customer . . . based on

whether the corresponding customer adhered to the corresponding terms," are directed to an abstract idea. As stated by the Examiner, these steps:

> [A]re steps of organizing human activities because they describe creating contractual relationships and managing transactions. *See buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (holding claims directed to creating contractual relationships were an abstract idea); *Accenture Glob. Servs. v. Guidewire Software, Inc.*, 728 F.3d 1336, 1344-47 (Fed. Cir. 2013) (holding generating rule-based tasks was an abstract idea). In combination they merely describe the information collection, terms calculation, and contract execution steps of incentivizing reduced power consumption.

Ans. 4–5. The Examiner further characterizes the claimed steps as:

> [I]deas of themselves because they describe data collection and processing. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359 (Fed. Cir. 2015) (holding a method and media for automatic pricing in electronic commerce amounted to an abstract idea); *Content Extraction and Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343 (Fed. Cir. 2014) (holding scanning and information processing methodology was an abstract idea). In combination they merely describe the data collection, analysis, and output steps of incentivizing reduced power consumption.

Id. at 5–6.

We agree with the Examiner and further note our reviewing court finds an abstract idea in "*analyzing information* by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category." *See Elec. Power Grp. LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016). *See also Bascom*, 827 F.3d at 1349–52; *cf.* Spec. 16–17 (describing the claimed operation can be implemented, for example, by one or more appropriately programmed general purpose computers); *Cyberfone Sys., LLC v. CNN Interactive Grp.*,

Inc., 558 F. App'x 988, 992 (Fed. Cir. 2014) (nonprecedential) ("using categories to organize, store, and transmit information is well-established"). Similarly, all the additional steps executed by claims 2–7 are abstract processes of receiving, analyzing, and transmitting data.

Contrary to Appellants' argument that the Examiner's analysis is based on an oversimplified interpretation of the claims, which are focused "on a technological solution," (App. Br. 11–13 (citing *Enfish*)), the claims in the present application fail to recite the technical details that describe the alleged technical improvement of "using data provided by smart meters in order to provide improved communications with customers that achieve a reduction in power consumption as measured by such smart meters." *See also* Reply Br. 2. Instead, the claims merely recite the abstract idea of obtaining a load information from meters of customers, processing the information for predicting future loads and determining the excess usage, and adjusting the electric bill.

Alice Step Two

Turning to the second step of the *Alice* inquiry, we find nothing in Appellants' claims that adds anything "significantly more" to transform them into a patent-eligible application of the abstract idea. *Alice*, 134 S. Ct. at 2357. The claimed steps are ordinary steps in data collection and analysis and are recited in an ordinary order.

We are not persuaded by Appellants' unsupported attorney argument that the claims represent a technical improvement because the claims specify a specific way of interaction with smart meters (e.g., "the recited steps/features are carried out by a computer system that interfaces with 'smart meters' (i.e., technology outside of the computer system)." App. Br.

14. Appellants do not persuasively explain how the claims or Specification provide specific, technical improvements. Rather, as the Examiner points out, the disclosed types of computers and addition of hardware components (i.e., smart meters) do not add meaningful limitations to the abstract idea. Ans. 6. Indeed, the Specification supports the finding that the claimed system is implemented on a general purpose computer, as understood by one of ordinary skill in the art. *See* Spec. 6–7, 16–18; *see also* App. Br. 15 (citing Spec. 6–7, 16–17). Thus, the Specification does not describe the system as made up of special-purpose or specially configured computer components, but rather, as a general-purpose computer that includes generic components. As a result, nothing recited by the claims "offers a meaningful limitation beyond generally linking 'the use of the [method] to a particular technological environment,' that is, implementation via computers." *Alice*, 134 S. Ct. at 2360 (quoting *Bilski*, 561 U.S. at 610–11). Additionally, the claims' invocation of computers does not transform the claimed subject matter into patent-eligible applications. *Elec. Power Group*, 830 F.3d at 1355. As in *Electric Power Group*, the claims at issue do not require any nonconventional computer, network, or smart meters, or even a "non-conventional and non-generic arrangement of known, conventional pieces," but merely call for performance of the claimed exception processing functions "on a set of generic computer components." *Id.* at 1355.

As recognized by the Supreme Court, "the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention." *Alice*, 134 S. Ct. at 2358; *see id.* at 2359 (concluding claims "simply instruct[ing] the practitioner to implement the abstract idea of intermediated settlement on a generic computer" are not patent-eligible);

see also Accenture, 728 F.3d at 1345 (claims reciting "generalized software components arranged to implement an abstract concept [of generating insurance-policy-related tasks based on rules to be completed upon the occurrence of an event] on a computer" are not patent-eligible); *Elec. Power Group*, 830 F.3d 1351 (rejection affirmed for a method of performing real-time performance monitoring of an electric power grid because "the claims do not go beyond requiring the collection, analysis, and display of available information in a particular field . . . over conventional computer and network technology").

Preemption

Appellants' argument that the claims are not directed to an abstract idea because the claims do not "preempt approaches with a different structure or different techniques" and are, therefore, patentable, is also unpersuasive. *See* App. Br. 9. Lack of preemption does not make the claims any less abstract. *See buySAFE*, 765 F.3d at 1355 (collecting cases); *Accenture*, 728 F.3d at 1345; *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) ("While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility"). Accordingly, we agree with the Examiner that the claims do not recite an "inventive concept" sufficient to transform the abstract idea into patent-eligible subject matter.

Novelty

With regard to Appellants' argument that the pending claims are patent-eligible because there are no obviousness or novelty rejections of the claims, (*see* App. Br. 14; Reply Br. 3), Appellants improperly conflate the requirements for eligible subject matter (§ 101) with the independent

requirements of novelty (§ 102) and non-obviousness (§ 103). "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); *see also Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016) (stating that, "under 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").

CONCLUSION

Because Appellants' claims 1–14, 24, and 25 are directed to a patent-ineligible abstract concept and do not recite something "significantly more" under the second prong of the *Alice* analysis, we sustain the Examiner's rejection of these claims under 35 U.S.C. § 101 as being directed to non-statutory subject matter in light of *Alice* and its progeny.

DECISION

We affirm the Examiner's rejection of claims 1–14, 24, and 25.

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).

AFFIRMED