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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte OLE-PETTER SKAAKSRUD

Appeal 2017-003330
Application 14/446,165¹
Technology Center 3600

Before CAROLYN D. THOMAS, ADAM J. PYONIN, and
MICHAEL M. BARRY, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge* PYONIN.

Opinion Dissenting filed by *Administrative Patent Judge* THOMAS.

PYONIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1–30, which are all the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ FedEx Corporate Services, Inc. is identified as the real party in interest.
Br. 3

STATEMENT OF THE CASE

Introduction

The Application “generally relates to systems, apparatus and methods in the field of tracking items (*e.g.*, an object, a package, a person, a piece of equipment).” Spec. ¶ 2. Claims 1 and 16 are independent. Claim 1 is reproduced below for reference:

1. A method for determining an improved location of a first node in a wireless node network based on context data and by a network device deployed in the wireless node network, the method comprising:

accessing, by the network device, a first type of the context data related to a proximate environment of the first node, wherein the first type of the context data comprises signal degradation information on how a second node would operate in a similar environment to the proximate environment of the first node when the second node is a similar type as the first node;

adjusting, by the network device, an anticipated communication distance setting related to the first node based upon on the first type of the context data;

determining, by the network device, the improved location of the first node based upon the adjusted communication distance setting; and

storing, by the network device, the determined improved location of the first node as part of location data maintained on a memory storage of the network device.

The Examiner’s Rejection

Claims 1–30 stand rejected under 35 U.S.C. § 101 as being unpatentable. Final Act. 2.

PRINCIPLES OF LAW

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. We analyze the invention under a two-stage framework, however, “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 (2014) (citing *Mayo Collaborative Services v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). The first stage in that analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts,” e.g., to an abstract idea. *Alice*, 134 S. Ct. at 2355. If the claims are directed to a patent-ineligible concept, the inquiry proceeds to the second stage, where the elements of the claims are considered “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.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 77–78).

Noting that “the two stages involve overlapping scrutiny of the content of the claims,” the Federal Circuit has described

the first-stage inquiry as looking at the “focus” of the claims, their “ ‘character as a whole,’ ” and the second-stage inquiry (where reached) as looking more precisely at what the claim elements add—specifically, whether, in the Supreme Court’s terms, they identify an “ ‘inventive concept’ ” in the application of the ineligible matter to which (by assumption at stage two) the claim is directed.

Electric Power Group, LLC v. Alstom S.A., 830 F.3d 1350, 1353 (Fed. Cir. 2016) (citations omitted). The Supreme Court, furthermore, acknowledges that “all inventions at some level embody, use, reflect, rest upon, or apply

laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. We, therefore, look to whether the claims focus on a specific means or method that improves the relevant technology, or instead are directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery. *See, e.g., Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

ANALYSIS

In rejecting the pending claims under § 101, the Examiner determines the claims are “directed to [the] abstract idea of determining location,” and the additional claim elements comprise steps performed by a “network device [which] would fall under the criteria of being (i) mere instructions to implement the idea on a computer,” as “the data is being read (accessed) by generic computers.” Final Act. 2–3, 4. The Examiner further explains that “the invention is, as identified, merely . . . formulas/functions to calculate position and then a computer (i.e. ‘network device’) is built around the formulas/functions post-hoc. Therefore, it would not be ‘significantly more’ than an abstract idea.” Ans. 3.

Appellant argues the Examiner’s rejection is in error, because “claim 1 recites technical elements that rise to the level of something substantially more than merely determining location, or determining location using a computer.” Br. 18. Particularly, Appellant asserts that “claim 1 expressly recites limitations that collectively provide a specific and technical solution deployed as part of a wireless node network application that enhances and improves how a network device in that wireless node network advantageously operates” (Br. 16), “by determining an improved location of

a first node in a wireless node network based on signal degradation information type of context data related to a proximate environment of the first node” (Br. 18).

We are persuaded the Examiner errs. Claim 1 includes the steps of: (1) accessing context data related to a proximate environment of a first node, the context data comprising signal degradation information on how a second node would operate in a similar environment; (2) adjusting an anticipated communication distance setting based on the context data; and (3) determining an improved location of the first node based upon the anticipated communication distance setting. Thus, as an ordered combination, claim 1 determines a location of a first node based on data which includes technology-specific information relating to a second node operating in a similar situation. *See, e.g.*, Spec. ¶¶ 233–236, 241; *see also* Br. 17. We agree with Appellant that such process includes an inventive concept comprising a technical improvement for tracking the components of a wireless network. *See* Br. 13 (the claim “improves how the network device operates to improve how to locate other wireless nodes”); *see also* Fig. 2; Spec. ¶¶ 7–8 (describing existing network tracking methods), 391, 427–449 (describing tracking a network node by accounting for the proximate environment conditions of a second node).

The inventive concept of claim 1 is analogous to claims our reviewing courts have found to be “patent eligible because they improve[] an existing technological process.” *Alice* 134 S. Ct. at 2358 (citing *Diamond v. Diehr*, 450 U.S. 175 (1981)); *see also Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016) (“the inventive concept harnesses this technical feature of network technology”); *Amdocs (Israel)*

Ltd. v. Openet Telecom, Inc., 841 F.3d 1288, 1301 (Fed. Cir. 2016), cert. denied, 138 S. Ct. 469, 199 L. Ed. 2d 356 (2017) (“this [claimed] enhancing limitation necessarily involves the arguably generic gatherers, network devices, and other components working in an unconventional distributed fashion to solve a particular technological problem”); *cf. Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017) (determining the claims patent eligible under *Alice* stage 1 for being “directed to a new and useful technique for using sensors to more efficiently track an object on a moving platform. That a mathematical equation is required to complete the claimed method and system does not doom the claims to abstraction”).

Additionally, we are persuaded by Appellant’s argument “that the [F]inal Office Action has failed to present a prima facie case under step two of the § 101 analysis of patent ineligibility for claim 1.” Br. 14–15; *see also* Br. 17 (“claim 1 recites limitations that are collectively distinguished from what is known to be conventional, routine, and well-known.”). The Examiner finds “per the adjusting step, the step can be directed as performing well-understood, routine operation because it’s merely executing a known formula that takes the first data as input and then output[s] a[n] anticipated distance setting; therefore, these steps would not be sufficient to be significantly more.” Ans. 3. The Examiner, however, provides no factual basis to support the finding that the adjusting step is a well-understood, routine, and conventional operation. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018) (“[w]hether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination.”).

Based on the record before us, we are persuaded claim 1 does not merely recite the abstract concept of determining the location of a node in a wireless network; nor does the claim “simply instruct the practitioner to implement the abstract idea . . . on a generic computer.” *Alice*, 134 S. Ct. at 2359. Rather, we find claim 1 recites limitations “sufficient to transform the claimed abstract idea into a patent-eligible application.” *Alice* 134 S. Ct. at 2357 (internal quotations omitted). Accordingly, we agree with Appellant that independent claim 1 is patent eligible under the second stage of the *Alice* framework. *See* Br. 18.

CONCLUSION

Accordingly, we conclude the Examiner erred in determining independent claim 1 is not patent eligible. We do not sustain the Examiner’s rejection of claim 1, claim 16 which recites similar limitations, or the claims that depend therefrom.

Separately, we note the Appeal Brief includes the following statement: “Appellant[] request[s] the opportunity for a personal appearance before the Board of Appeals to argue the issues of this appeal.” Br. 1. Such statement is not a proper request for oral hearing. *See* MPEP § 1209 (“If the written request for an oral hearing is not filed in a separate paper captioned ‘REQUEST FOR ORAL HEARING,’ the request is improper and the appeal will be assigned for consideration and decision on the briefs without an oral hearing.”); *see also* 37 CFR § 41.47.

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DECISION

The Examiner's decision rejecting claims 1–30 is reversed.

REVERSED

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Before CAROLYN D. THOMAS, ADAM J. PYONIN, and
MICHAEL M. BARRY, *Administrative Patent Judges*.

THOMAS, *Administrative Patent Judge, Dissenting*.

DISSENTING OPINION

I respectfully dissent from the Majority’s decision to reverse the Examiner’s rejection of claims 1–30 under 35 U.S.C. § 101. Specifically, I disagree with the Majority’s view that independent claim 1 is patent eligible under the second step of the *Alice* framework.

Although the Majority correctly set forth *supra* that if the claims are directed to a patent-ineligible concept, i.e., the first step of *Alice*, the inquiry then proceeds to the second step, where the elements of the claims are considered “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” (*Alice*, 134 S. Ct. at 2355 (quoting

Mayo, 566 U.S. at 77–78)), it is unclear as to whether the Majority has considered the first step of *Alice*. As such, I shall address the first step here.

According to *Alice* step one, “[w]e must first determine whether the claims at issue are directed to a patent-ineligible concept,” such as an abstract idea. *Alice*, 134 S. Ct. at 2355. Specifically, we look to whether the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and otherwise merely recite generic processes and machinery. *See Enfish*, 822 F.3d at 1336. If the claims are not directed to an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step. Because the Majority proceeded to the second step, one can assume the Majority found the claims to be directed to an abstract idea, although this was not clearly highlighted.

For example, the Majority’s analysis starts with pointing out that “Appellant argues the Examiner’s rejection is in error, because ‘claim 1 recites technical elements that rise to the level of *something substantially more* than merely determining location, or determining location using a computer’” (Decision 4) (emphasis added). However, to the extent that Appellant is arguing *supra* that claim 1 recites additional elements that amount to “significantly more” than the judicial exception, that issue is distinct from whether claim 1 is directed to the abstract idea of determining location.

Regarding an abstract idea, the Examiner finds that the claims “are directed to [the] abstract idea of determining location” and is “similar to the following concepts . . . [c]omparing new and stored information and using

rules to identify option[,] [o]rganizing information through mathematical correlations[, and a] mathematical formula” (Final Act. 2 (bullets omitted)).

Firstly, Appellant challenges the Examiner’s “abstract” findings by citing *Ex parte Poisson*, Appeal No. 2012-011084 (PTAB Feb. 26, 2015) and contending that the final Office Action has not met the criteria set forth in *Ex parte Poisson* (App. Br. 12).

Although Appellant highlights a previous Board decision and suggests that we uphold the same, as a matter of course, I find what a different panel did in a different situation under a different set of facts has little bearing on how this case should be disposed of. While I do not consider *Ex parte Poisson* controlling, that panel’s consideration of evidence in making a determination under the first step of the *Alice* framework has merit. A similar approach was taken in *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229 (Fed. Cir. 2016). But these cases do not stand for the proposition that Examiners *must* provide evidentiary support in every case before a conclusion can be made that a claim is directed to an abstract idea. I believe there is no such requirement. *See, e.g.*, para. IV “July 2015 Update: Subject Matter Eligibility” to 2014 Interim Guidance on Subject Matter Eligibility (2014 IEG), 79 Fed. Reg. 74618 (Dec. 16, 2014) (“The courts consider the determination of whether a claim is eligible (which involves identifying whether an exception such as an abstract idea is being claimed) to be a *question of law*.[.] Accordingly, courts do not rely on evidence that a claimed concept is a judicial exception, and in most cases resolve the ultimate legal conclusion on eligibility without making any factual findings” (emphasis added)). Evidence may be helpful in certain situations where, for instance, facts are in dispute. But it is not always necessary.

In any case, the Examiner highlighted some known abstract concepts, i.e., comparing new and stored information and using rules to identify options; organizing information through mathematical correlations; and a mathematical formula (*see* Final Act. 2). I find that the Examiner’s cogent analysis relying on judicial examples (*id.*), albeit without specifically citing the specific cases, shows the Examiner provided adequate basis for determining that the claims are directed to an abstract concept.

Claim 1 recites four steps: (1) accessing a first type of context data comprising signal degradation information; (2) adjusting an anticipated distance setting based upon the first type of data; (3) determining the improved location of the first node based on the adjusted distance; and (4) storing the determined improved location. These four steps merely present a scheme for using stored data and mathematical calculations to track items.

Further, as noted by the Examiner, “the invention is directed to a formula (the adjusting and determining step would no doubt include some kind of functions that takes the first data as input) for calculating/calibrating position” (Ans. 2). For example, the claims primarily involve accessing data (proximate environment data and signal degradation data) performing various calculations (adjusting distances, determining improved locations) and outputting/storing data based on those calculations. Such claims have been found to be directed to ineligible subject matter. *See Parker v. Flook*, 437 U.S. 584, 595 (1978) (“[I]f a claim is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory.”) (Internal quotations omitted); *see also Digitech Image Tech., LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (finding “a process of organizing

information through mathematical correlations and is not tied to a specific structure or machine” to be an abstract idea.).

Additionally, the collection of information and analysis of information (e.g., recognizing certain data within the dataset) are also abstract ideas. *Elec. Power Grp.*, 830 F.3d at 1353. Similarly, “collecting, displaying, and manipulating data” is an abstract idea. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017). Also, more recently, our reviewing court has also concluded that acts of parsing, comparing, storing, and editing data are abstract ideas. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1366 (Fed. Cir. 2018).

Although the Majority states that “claim 1 determines a location of a first node based on data which includes technology-specific information relating to a second node operating in a similar situation” (Decision 5), I agree with the Examiner that claim 1 is merely performing *data gathering* and executing a formula that takes this data as input and calculates/outputs a distance setting. Appellant’s Specification does not indicate that such information is limited to “technology-specific information” as interpreted by the Majority. Additionally, it is unclear what the Majority means by “technology-specific information.”

Here, Appellant’s Specification merely states that the “context data” is collected and maintained within a context database and such context data “may generally relate to what a similar node has experienced in a similar environment to what a given node is presently experiencing” (Spec. ¶ 233), i.e., historic data from a similar node. Specifically, Appellant’s Specification states “exemplary types of context data 560 may include but are not limited to scan data 570, historic data 575, shipment data 580, layout

data 585, RF data 587, and 3rd party data” (Spec. ¶ 236). Although the data may be gathered/generated by different means, all such information is eventually stored in the database for later usage.

In other words, the claimed invention starts with accessing data, e.g., historic data, from a database and using this retrieved data to make adjustments to a distance setting and determining an improved location based thereon. Thus, I disagree with the Majority that such a process “includes an inventive concept comprising a technical improvement for tracking the components” (Decision 5), given that the claims are merely using a generic computer to access previously-stored data from a database and perform calculation based thereon to determine the improved location.

Secondly, Appellant contends that “claim 1 immediately shows that this specific process is not attempting to tie up all manner of ‘determining location’” (App. Br. 13). I interpret this as an argument that the claims do not preempt the abstract idea of determining location.

Although pre-emption “might tend to impede innovation more than it would tend to promote it, ‘thereby thwarting the primary object of the patent laws’” (*Alice*, 134 S. Ct. at 2354 (citing *Mayo*, 566 U.S. at 70–72)), “the absence of complete preemption does not demonstrate patent eligibility” (*Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015)). Moreover, because I find the claimed subject matter covers patent-ineligible subject matter, the pre-emption concern is necessarily addressed. “Where a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, . . . preemption concerns are fully addressed and made moot.” *Ariosa Diagnostics*, 788 F.3d at 1379.

I now turn to the second step of the *Alice* framework: “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.’” *Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 566 U.S. at 71–73).

Appellant contends that “the [E]xaminer has failed to specifically identify any of the ‘additional element(s)’ in the claim . . . [n]or has the [E]xaminer actually explained why the limitations . . . do not amount to significantly more” (App. Br. 15). I disagree with Appellant.

Here, the Examiner noted that “all the steps are performed ‘by a network device’ . . . mere instructions to implement the idea on a computer . . . [which represents a generic] computer [structure]” (Final Act. 2–3). The Examiner further added:

As per the accessing step, the step can be directed to insignificant extra solution activity because it’s mere data gathering . . . the adjusting step . . . can be directed [to] performing well-understood, routine operation because it’s merely executing a known formula that takes the first data as input and then output a[n] anticipated distance setting . . . the invention is, as identified, merely being formulas/functions to calculate position and then a computer (*i.e.* “network device”) is built around the formulas/functions post-hoc.

(Ans. 3). As such, I find the combined Final Action and Examiner’s Answer did in fact identify the additional elements and provided an adequate basis/explanation for determining that the claims do not amount to significantly more. As highlighted *supra*, the Examiner is *not* merely resting the determination on whether or not a computer is recited, as argued by Appellant (*see* App. Br. 16), but has also presented facts on how the steps amount to extra solution activity.

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) (citation and internal 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, 77–78, 71–72).

Furthermore, 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.” *See Alice*, 134 S. Ct. at 2358, 2359 (concluding claims “simply instruct[ing] the practitioner to implement the abstract idea of intermediated settlement on a generic computer” not patent eligible); *see also Ultramercial Inc. v. Hulu, LLC*, 772 F.3d 709, 715–16 (Fed. Cir. 2014) (claims merely reciting abstract idea of using advertising as currency as applied to particular technological environment of the Internet not patent eligible); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1344–45 (Fed. Cir. 2013) (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” not patent eligible); and *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333–34 (Fed. Cir. 2012) (“[s]imply adding a ‘computer aided’ limitation to a claim covering an abstract concept, without more, is insufficient to render [a] claim patent eligible” (internal citation omitted)).

Here, I agree with the Examiner that the pre- or post- extra-solution activity recited in the claims do not add enough to the claims to transform the recited method into patent-eligible subject matter. Patent eligibility should not “depend simply on the draftsman’s art.” *See Alice*, 134 S. Ct. at 2358–59 (quoting *Parker*, 437 U.S. at 593 (internal quotation marks omitted)).

Appellant also contends that the Examiner has admitted that the claims are “distinguished from what is known to be conventional, routine, and well-known location determining applications in the prior art of record in this case” (App. Br. 17). In response, the Examiner finds that “the standard used for 103 rejection should not be confused with the 101 rejection” (Ans. 4). I agree with the Examiner.

Indeed, “[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*, 450 U.S. at 188–89 (emphasis added); *see also Mayo*, 566 U.S. at 91–92 (rejecting “the Government’s invitation to substitute §§ 102, 103, and 112 inquiries for the better established inquiry under § 101”).

Because Appellant’s independent claims 1 and 16² are directed to a patent-ineligible abstract concept and do not recite something “significantly more” under the second step of the *Alice* analysis, I would sustain the Examiner’s rejection of these claims as well as the respective dependent

² *Alice* also confirmed that if a patent’s systems claims are no different in substance from its method claims, they will rise and fall together. *Alice*, 134 S. Ct. at 2360.

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claims under 35 U.S.C. § 101 as being directed to non-statutory subject matter in light of *Alice* and its' progeny.

I, therefore, respectfully dissent from the Majority Decision reversing the rejection of claims 1–30 under 35 U.S.C. § 101.