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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte QUIJU GU and JUN ZHANG
(Applicant: Pitney Bowes Inc.)

Appeal 2017-002814
Application 13/667,084¹
Technology Center 3600

Before JAMES R. HUGHES, JOHN A. EVANS,
and NORMAN H. BEAMER, *Administrative Patent Judges*.

BEAMER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–15. We have jurisdiction over the pending rejected claims under 35 U.S.C. § 6(b).

We affirm.

¹ Appellants identify Pitney Bowes Inc. as the real party in interest. (Br. 2.)

THE INVENTION

Appellants' disclosed and claimed invention is directed to modeling consumer activity based on social media and mobile activity data.

(Abstract.) Independent claim 1, reproduced below, is illustrative of the subject matter on appeal:

1. A method for determining a living and working area for a person, the method comprising:

receiving, by a processing device, a plurality of location history data points for the person from at least one of a social media service provider and a mobile telephone carrier service provider;

clustering, by the processing device, the plurality of location history data points using a first clustering radius to provide at least one location cluster for the person;

identifying, by the processing device, a home area cluster for the person from the at least one location cluster based on longevity and frequency of the location history data points included in each of the at least one location cluster;

generating, by the processing device, a home area polygon for the location history data points included in the home area cluster:

clustering, by the processing device, the location history data points in the home area polygon using a second clustering radius that is less than the first clustering radius to provide at least one home area location cluster for the person; and

determining, by the processing device, at least one of a living area and working area for the person from the at least one home area location cluster by applying a time of day filter to each of the at least one home area location cluster.

REJECTIONS

The Examiner rejected claims 1–15 under 35 U.S.C. § 101 as being directed to ineligible subject matter. (Final Act. 6–7.)

The Examiner rejected claims 1, 6–8, 10, and 13–15 under 35 U.S.C. § 103(a) as being unpatentable over Blom et al. (US 2012/0136865 A1, pub. May 31, 2012) (“Blom”) and Edge et al. (US 2009/0093259 A1, pub. Apr. 9, 2009) (“Edge”). (Final Act. 7–13.)

The Examiner rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Blom, Edge, and Weiss et al. (US 2011/0099046 A1, pub. Apr. 28, 2011) (“Weiss”). (Final Act. 13–14.)

The Examiner rejected claims 4, 5, and 12 under 35 U.S.C. § 103(a) as being unpatentable over Blom, Edge, and Mehta et al. (US 2010/0004997 A1, pub. Jan. 7, 2010) (“Mehta”). (Final Act. 14–16.)

The Examiner rejected claims 2, 3, and 11 under 35 U.S.C. § 103(a) as being unpatentable over Blom, Edge, and Feintuch et al. (US 5,040,133, issued Aug. 13, 1991) (“Feintuch”). (Final Act. 16–19.)

ISSUES ON APPEAL

Appellants’ arguments in the Appeal Brief present the following dispositive issues:²

Issue One: Whether claims 1–15 are directed to ineligible subject matter. (Br. 4–7.)

² Rather than reiterate the arguments of Appellants and the positions of the Examiner, we refer to the Appeal Brief (filed Jan. 19, 2016) (herein, “Br.”); the Final Office Action (mailed Aug. 27, 2015) (herein, “Final Act.”); and the Examiner’s Answer (mailed July 26, 2016) (herein, “Ans.”) for the respective details.

Issue Two: Whether the Examiner erred in finding the combination of Blom and Edge teaches or suggests the limitations of independent claims 1, 10, and 15. (Br. 7–9.)

ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellants’ arguments that the Examiner erred. For the rejection pursuant to 35 U.S.C. § 101, we disagree with Appellants’ arguments, and we adopt as our own (1) the pertinent findings and reasons set forth by the Examiner in the Action from which this appeal is taken (Final Act. 6–7) and (2) the corresponding findings and reasons set forth by the Examiner in the Examiner’s Answer in response to Appellants’ Appeal Brief. (Ans. 3–5.) We concur with the applicable conclusions reached by the Examiner, and emphasize the following.

Issue One

The Examiner concludes the pending claims are patent-ineligible under 35 U.S.C. § 101:

The claims are, generally speaking, directed to the abstract idea of determining a working and living area for a person. Determining a working and living location is a longstanding commercial practice. While this abstract idea is not identical to any of the specific concepts the courts have identified as being abstract ideas, the abstract idea of the instant case is similar in that it may be construed as a method of organizing human activity, and one that focuses on a general organization of information. . . . Although the claims are directed to a specific and particular abstract idea, the claims are directed to an abstract idea nonetheless. Merely limiting the scope of an abstract idea (effectively claiming a very particular abstract idea

described at a higher level of specificity) does not make an abstract idea statutory.

(Final Act. 2.) In addition, the Examiner concludes:

[T]he claim as a whole may be considered to merely apply the abstract idea of comparing new and stored information and using rules to identify options by a generic computing device (e.g., a portable electronic device, smart phone, or tablet), with the additional elements adding insignificant extra-solution activity (e.g., merely collecting data which is well understood, routine, and conventional activities). Thus, the additional elements generally link the use of the abstract idea to a particular technological environment, without significantly more. Accordingly, the Examiner concludes that there are no meaningful limitations in the claim that transform the judicial exception into a patent eligible application such that the claim amounts to significantly more than the judicial exception itself.

(*Id.* at 7.)

Appellants argue:

The present invention is related to modeling consumers' activity areas based on social media and mobile activity data. This is not an abstract idea within the meaning of Alice, as this is not a long standing and fundamental practice The claimed invention differs from other claims found by the courts to recite abstract ideas in that they do not merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet.

(Br. 5–6.) Appellants also argue the claims recite significantly more than an abstract idea, because of the detailed “specific steps” recited in the claims.

(*Id.* at 7.)

We are not persuaded by Appellants' arguments. We adopt the Examiner's findings and conclusions provided in the Final Office Action and Answer. (Final Act. 2–4, 6–7; Ans. 4–5.) 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 an idea, by itself, is not patentable. *Alice Corp.*, 134 S. Ct. at 2354–55 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)).

In *Alice*, the Supreme Court sets 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. 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.* 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 Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 79, 78 (2012)). 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.* (quoting *Mayo*, 566 U.S. at 73.) 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) (internal citation omitted.)

Turning to the first step of the Alice inquiry, we agree with the Examiner that Appellants' claims are reasonably characterized as directed to an abstract idea of "determining a working and living area for a person." (Final Act. 6.) As the Examiner concludes, the fact that the claims further recite the abstract idea "at a higher level of specificity," does not alter the conclusion that the claims are directed to an abstract idea. (*Id.* at 2.)

There is no definitive rule to determine what constitutes an "abstract idea." Rather, the Federal Circuit has explained that "both [it] and the Supreme Court have found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016); *see also Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (explaining that, in determining whether claims are patent-eligible under § 101, "the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided"). The Federal Circuit also noted that "examiners are to continue to determine if the claim recites (i.e., sets forth or describes) a concept that is similar to concepts previously found abstract by the courts." *Amdocs*, 841 F.3d at 1294 n.2 (internal citation omitted.)

Here, the claims are similar to the claims that the Federal Circuit determined are patent ineligible in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (collecting information and "analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, [are] essentially mental processes within the abstract-idea category"). The Federal Circuit has also held

similar data manipulation claims to be directed to patent-ineligible abstract ideas — see *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (employing mathematical algorithms to manipulate existing information); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) (offer-based price optimization); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (tailoring information presented to a user based on particular information); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1346 (Fed. Cir. 2013) (generating tasks in an insurance organization); and *Versata Dev. Grp. v. SAP Am.*, 793 F.3d 1306, 1333–34 (Fed. Cir. 2015) (price-determination method involving arranging organizational and product group hierarchies). Here, we agree with the Examiner that the “higher level of specificity” recited in the claims nevertheless is directed to an abstract mental process that can be carried out by a human being by data gathering, plotting points on a map and deducing and characterizing clusters (i.e., “home” versus “office”) in accord with the algorithms set out in the claims. (Ans. 2.) *Cf. CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (“steps can be performed in the human mind, or by a human using a pen and paper”).

Turning to the second step of the *Alice* inquiry, we find nothing in the claims that adds anything “significantly more” to transform the abstract idea of determining a working and living area for a person. *Alice*, 134 S. Ct. at 2357. Beyond an abstract idea, the claims merely recite “‘well-understood, routine, conventional activit[ies].’” *Alice*, 134 S. Ct. at 2359 (quoting *Mayo*, 566 U.S. at 73). In particular, we agree with the Examiner that “[g]eneric computer components recited as performing generic computer functions,” do

not add significantly to the claimed subject matter. (Ans. 4–5.) For example, the Specification states the computer system “may comprise a general purpose computer selectively activated or reconfigured by a computer program” (Spec. ¶ 11.) Considered individually or taken together as an ordered combination, the claim elements fail “to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 134 S. Ct. at 2357 (quoting *Mayo*, 566 U.S. at 72–73, 78).

Because Appellants’ claims 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 35 U.S.C. § 101 rejection of the pending claims.

Issue Two

Appellants argue the combination of Blom and Edge does not teach or suggest the independent claim 1 limitation, “clustering, by the processing device, the location history data points in the home area polygon using a second clustering radius that is less than the first clustering radius . . . ,” nor the commensurate limitations of independent claims 10 and 15. (Br. 8–9.) The Examiner relies on the disclosure in Blom of “hierarchical location anchors” determined from clusters of “stay points.” (Final Act. 8; Blom, Fig. 12B, ¶ 117.) However, as Appellants argue:

[W]hen a location anchor reaches its maximum size, another location anchor is generated and the two location anchors are grouped together to form a larger location anchor. This is the exact opposite of using a second radius that is smaller than the first radius to perform a clustering operation.

(Br. 8.)

The Examiner responds that Appellants are relying on an “intended result” that “does not limit the function of the claim.” (Ans. 5–6.) This is not a sufficient reason for ignoring the explicit requirements of the claim limitation at issue. We, therefore, are persuaded on this record that the Examiner has not sufficiently demonstrated that the combination of Blom and Edge teaches or suggests the claim limitation at issue. Accordingly, we do not sustain the Examiner’s obviousness rejections of independent claims 1, 10, and 15.

CONCLUSION

For the reasons stated above, we sustain the Examiner’s rejection of claims 1–15 as being directed to patent-ineligible subject matter under § 101.

Also for the reasons stated above, we do not sustain the Examiner’s obviousness rejections of independent claims 1, 10, and 15 over Blom and Edge.

We also do not sustain the obviousness rejections of claims 6–8 and 13–15 over Blom and Edge, of claim 9 over Blom, Edge, and Weiss, of claims 4, 5, and 12 over Blom, Edge, and Mehta, and of claims 2, 3, and 11 over Blom, Edge, and Feintuch, each of which claims depends from independent claim 1 or claim 10.

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, the Examiner’s decision is affirmed. *See* 37 C.F.R. § 41.50(a) (1).

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DECISION

We affirm the Examiner's decision rejecting claims 1–15.

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED