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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RICHARD CHOW, PHILIPPE JEAN-PAUL GOLLE,
and JESSICA N. STADDON¹

Appeal 2017-009242
Application 12/194,920
Technology Center 3600

Before JAMES R. HUGHES, BETH Z. SHAW, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

HUGHES, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner's decision rejecting claims 1–22 and 24–28. Claim 23 has been canceled. *See* Appeal Br. 3.² We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

¹ According to Appellants, the real party in interest is Palo Alto Research Center Incorporated. Appeal Br. 1.

² We refer to Appellants' Specification filed Aug. 20, 2008 ("Spec."); Appeal Brief filed Feb. 3, 2017 ("Appeal Br."); and Reply Brief filed June 13, 2017 ("Reply Br."). We also refer to the Examiner's Final Office Action mailed Nov. 4, 2016 ("Final Act."), and Answer mailed Apr. 17, 2017 ("Ans.").

Appellants' Invention

The invention relates generally “to techniques for detecting similar objects. More specifically, the present invention relates to a method,” computer-readable storage medium, “and apparatus for performing inference detection based on web advertisements.” Spec. ¶ 1. The process (method) for inference detection receives a query (a set of words) from a user, performs a search query (for each word in the received set) using an Internet search engine, and receives search results from the Internet search engine corresponding to at least a first word and a second word in the set of words. The process identifies a first set of sponsored Uniform Resource Locators (URLs) from a search result corresponding to the first word and a second set of sponsored URLs from a search result corresponding to the second word, and generates a bipartite graph based on the words and the sponsored URLs identified from the search results of the words. A first set of vertices of the bipartite graph is associated with one or more of the words and a second set of vertices is associated with one or more of the sponsored URLs. A respective edge of the bipartite graph maps a sponsored URL to a word. The process generates a first collapsed graph from the bipartite graph by collapsing the vertices associated with the sponsored URLs into a set of edges between words, such that an edge is created between two words in the first collapsed graph for a pair of words that are coupled to a common sponsored URL through corresponding edges of the bipartite graph. The process indicates in a result that the first word and the second word are related based on a determination that a number of edges coupling the first word and the second word in the first collapsed graph exceeds a predetermined threshold. *See* Spec. ¶¶ 5–16; Abstract.

Representative Claim

Independent claim 1, reproduced below, further illustrates the invention:

1. A computer-executed method, comprising:
 - receiving, by a computing device, a set of words from an end-user;
 - for each word in the received set, performing a search query on the word over a computer network using an Internet search engine;
 - receiving, by the computing device and from the Internet search engine over the computer network, search results corresponding to at least a first word and a second word in the set of words;
 - identifying a first set of sponsored Uniform Resource Locators (URLs) from a search result corresponding to the first word;
 - identifying a second set of sponsored URLs from a search result corresponding to the second word;
 - generating a bipartite graph based on the words and the sponsored URLs identified from the search results of the words, wherein a first set of vertices of the bipartite graph is associated with one or more of the words, wherein a second set of vertices of the bipartite graph is associated with one or more of the sponsored URLs, and wherein a respective edge of the bipartite graph maps a sponsored URL to a word;
 - generating a first collapsed graph from the bipartite graph by collapsing the vertices associated with the sponsored URLs into a set of edges between words, wherein there exists an edge between two words in the first collapsed graph for a pair of words that are coupled to a common sponsored URL through corresponding edges of the bipartite graph; and
 - responsive to determining that a number of edges coupling the first word and the second word in the first collapsed graph

exceeds a predetermined plural threshold, indicating in a result that the first word and the second word are related.

Appeal Br. 28 (Claims App.).

*Rejection on Appeal*³

The Examiner rejects claims 1–22 and 24–28 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

ISSUE

Based upon our review of the record, Appellants’ contentions, and the Examiner’s findings and conclusions, the issue before us follows:

Did the Examiner err in finding Appellants’ claims were directed to patent-ineligible subject matter under 35 U.S.C. § 101?

ANALYSIS

Appellants argue independent claims 1, 12, and 19 (as well as dependent claims 2–11, 13–18, 20–22, and 24–28) together as a group with respect to the § 101 rejection. *See* Appeal Br. 12–25. We select independent claim 1 as representative of Appellants’ arguments with respect to claims 1–22 and 24–28. 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner rejects the claims (claim 1) as being directed to patent-ineligible subject matter in that claim 1 is “directed to the abstract idea of . . .

³ The Examiner withdrew the rejection under 35 U.S.C. § 112, Second Paragraph. *See* Advisory Action mailed Jan. 27, 2017; Appeal Br. 26. The Examiner includes canceled claim 23 and omits claim 28 from the statement of the § 101 rejection. *See* Final Act. 2. Appellants acknowledge this typographical error. *See* Appeal Br. 12. Accordingly, we find these typographical errors harmless and correct the statement of rejection for clarity and consistency.

performing inference detection based on advertisements.” Final Act. 3 (emphasis omitted). The Examiner further explains that the:

claim does not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional computer elements, recited at a high level of generality, provide conventional computer functions that do not add meaningful limits to practicing the abstract idea.

Final Act. 3; *see* Final Act. 3–5; Ans. 2–4. Additionally, the Examiner explains that the steps of claim 1:

describe the concept of advertising over communication networks, which corresponds to concepts identified as abstract ideas by the courts, [s]uch as in *Ultramerical*, which offers advertising and payments over communication networks. All of these concepts relate to economic practices in which monetary transactions between people are managed. The concept described in claim 1 is not meaningfully different than those economic concepts found by the courts to be abstract ideas. As such, the description in claim 1 method for performing inference detection based on advertisements is an abstract idea.

Final Act. 4.

Appellants contend the Examiner erred in rejecting the instant claims as being directed to patent-ineligible subject matter. *See* Appeal Br. 12–25; Reply Br. 7–13. Specifically, Appellants summarize the *Alice* decision (*Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014)), the *Enfish* decision (*Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016)), and the USPTO’s guidance concerning patent-eligible subject matter (*see* Appeal Br. 12–16) and contend, *inter alia*, the claims, “[s]imilar to the invention of *McRo*,” are not directed to the abstract idea proposed by the Examiner because the claims

incorporate ‘rules’ (e.g., responsive to determining that a number of edges coupling the first word and the second word in the first

collapsed graph exceeds a predetermined plural threshold, indicating that a first word and the second word are related . . .) that improve the technological processes for both analyzing human language and making recommendations

Appeal Br. 16; *see* Appeal Br. 15–17). Appellants also contend

that the claimed invention is not an abstract idea under step one of the *Mayo*^[4] test (as applied under *Alice* because the claimed invention is not 1) a fundamental economic practice, 2) a method of organizing human activities, 3) an idea, in and of itself, or 4) a mathematical relationship or formula

(Appeal Br. 16–17; *see* Appeal Br. 16–18), and the Examiner-cited *Ultramercial* decision is “clearly distinguishable from the facts of the present case” (Appeal Br. 19 (citing *Ultramercial, Inc., v. Hulu, LLC*, 772 F.3d 7109 (Fed. Cir. 2014)); *see* Appeal Br. 18–20). Appellants additionally contend that even if “the claimed invention is an abstract idea, the claimed invention still satisfies patent eligibility under step two of the *Mayo* test under *Alice* because the claim is directed to significantly more than the alleged abstract idea” (Appeal Br. 20 (footnote omitted); *see* Appeal Br. 20–25).

Under 35 U.S.C. § 101, a patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” The Supreme Court has “long held that this provision contains an important implicit exception: Laws 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 *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). Under *Alice*, first, we “determine whether the claims at issue are directed to

⁴ *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012)

a patent-ineligible concept.” *Alice*, 134 S. Ct. at 2355. If so, we “examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Id.* at 2357 (quoting *Mayo*, 566 U.S. at 72, 79). “While the two steps of the *Alice* framework are related, the ‘Supreme Court’s formulation makes clear that the first-stage filter is a meaningful one, sometimes ending the § 101 inquiry.’” *Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1346 (Fed. Cir. 2017) (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016)). Under step one of the *Alice/Mayo* analysis, “it is not enough to merely identify a patent-ineligible concept underlying the claim; we must determine whether that patent-ineligible concept is what the claim is ‘directed to.’” *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1050 (Fed. Cir. 2016).

Alice Step 1 Analysis

Turning to the first step of the eligibility analysis, “the first step in the *Alice* inquiry . . . asks whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish*, 822 F.3d at 1335–36. “The abstract idea exception prevents patenting a result where ‘it matters not by what process or machinery the result is accomplished.’” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1853)). “We therefore 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 merely invoke generic processes and machinery.”
McRO, 837 F.3d at 1314.

The Federal Circuit recently explained that claimed subject matter is patent eligible where the claim limitations have “the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (citations omitted). Similarly, in *McRO*, the court held patent eligible claims limited to rules with specific characteristics for producing accurate and realistic lip synchronization and facial expression in animated characters. *See McRO*, 837 F.3d at 1314. In the recent *Finjan* decision, the court held claims patent eligible because they recited specific steps for generating a security profile that identifies suspicious code and linking the profile to a downloadable (downloadable executable application program), which accomplished the desired result. *See Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1305–06 (Fed. Cir. 2018).

By contrast, the Federal Circuit has consistently held that claims reciting only the desired result without the particular way of achieving the result are directed to an abstract idea. For example, in *Apple*, the court invalidated claims related to a computer system that can generate a second menu from a first menu based on a selection of items on the first menu because the claims “d[id] not claim a particular way of programming or designing the software . . . but instead merely claim the resulting systems.” *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1241 (Fed. Cir. 2016) (citation omitted). Similarly, in *Affinity Labs*, the court held that a claim related to wirelessly communicating regional broadcast content to an out-of-region recipient was abstract and patent ineligible because there was nothing in the

claim “directed to how to implement [the idea]. Rather, the claim is drawn to the idea itself.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258, 1265 (Fed. Cir. 2016). See *Two-Way Media, Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017); *Secured Mail Solutions LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 910 (Fed. Cir. 2017); *RecogniCorp, LLC. v. Nintendo Co.*, 855 F.3d 1322, 1326 (Fed. Cir. 2017); *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1316 (Fed. Cir. 2016).

The court in *SAP America* also contrasted the claims before it with the claims at issue in *Thales*, explaining that the claims in *Thales* were directed to an improvement in a physical tracking system. *SAP Am.*, 898 F.3d at 1168. The court explained that the claims at issue before it were directed to performing statistical analyses of investment information, and were focused not on a physical-realm improvement, but on improvement in wholly abstract ideas—the selection and mathematical analysis of information, followed by reporting or display of the results. *See id.*

The line of reasoning discussed in *McRO*, *SAP America*, and *Finjan* is applicable in our analysis of the instant claims. In the present case, the desired result—detecting similar objects by performing inference detection based on web advertisements (Spec. ¶ 1)—is recited in the “determining” step—“determining that a number of edges coupling the first word and the second word in the first collapsed graph exceeds a predetermined plural threshold” and “indicating in a result that the first word and the second word are related” (claim 1). Claim 1, however, is not limited to (or “directed to”) this desired result. Rather, the claim recites multiple specific steps for identifying URLs corresponding to query words, generating a bipartite graph

utilizing the data (query words and corresponding URLs), and generating a collapsed graph from the bipartite graph, all of which are utilized in the “determining” step. Thus, the claims are not directed to generic processes and machinery or a particular desired result or effect. Rather, the claims are directed to a specific method having specific steps for achieving the result. Similar to the claims in *McRO* and *Finjan*, the claims here are directed to a specific method that improves the relevant technology.

Appellants also contend (*supra*) that the claims, even if directed to an abstract idea, recite significantly more than the abstract idea and, therefore, satisfy patent eligibility under step two of the *Alice/Mayo* test. *See* Appeal Br. 20–25. Because we decide that the claims are not directed to an abstract idea, we need not proceed to step two of the *Alice/Mayo* analysis. *See Alice*, 134 S. Ct. at 2355.

For at least the reasons above, we are persuaded of Examiner error in the rejection of claim 1 under 35 U.S.C. § 101, and we disagree with the Examiner’s determination that the claims are directed to an abstract idea. Thus, we do not sustain the rejection of independent claims 1, 12, and 19, and their dependent claims 2–11, 13–18, 20–22, and 24–28, under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

CONCLUSION

Appellants have shown that the Examiner erred in rejecting claims 1–22 and 24–28 under 35 U.S.C. § 101.

DECISION

We reverse the Examiner’s rejection of claims 1–22 and 24–28.

Appeal 2017-009242
Application 12/194,920

REVERSED