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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MASAO IDEUCHI, MASAHIRO KATAOKA,
TAKASHI FURUTA, and SHINICHIRO NISHIZAWA¹

Appeal 2018-004879
Application 14/336,299
Technology Center 2100

Before CARL W. WHITEHEAD JR., JASON V. MORGAN, and
PHILLIP A. BENNETT, *Administrative Patent Judges*.

MORGAN, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

Introduction

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 2–7 and 9–11. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

Summary of disclosure

The Specification discloses creating, “when object data is compressed for each word in units of records, count data that indicates for each record of

¹ Appellant is the applicant and real party in interest, Fujitsu Limited.
Appeal Br. 3.

the object data, an appearance count of each word, the count data being added to the object data that has been compressed” and identifying “based on the count data, a second character string that corresponds to a first character string defined as a search condition for the object data.” Abstract.

Illustrative claim (key limitations emphasized)

9. A non-transitory, computer-readable recording medium storing an information processing program that causes a computer to execute a process comprising:

creating count map data from object data when the object data is compressed, the object data including a plurality of record units, the object data being compressed by units of words, the *count map data* being created for each of the plurality of record units, respectively, and *indicating appearance counts of words included in the each of the plurality of record units*;

adding the count map data to compressed object data that has been compressed from the object data;

specifying a first character string for a search condition for the object data; and

identifying a second character string that has a co-occurrence relationship with the first character string in the object data utilizing the count map data.

The Examiner’s rejections and references

The Examiner rejects claims 2–7 and 9–11 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 2–4.

The Examiner rejects claims 2–6 and 9–11 under 35 U.S.C. § 102(a)(2) as being anticipated by Kataoka et al. (US 2009/0299974 A1; published Dec. 3, 2009) (“Kataoka”). Final Act. 4–9.

The Examiner rejects claim 7 under 35 U.S.C. § 103 as being unpatentable over Kataoka and Itoh et al. (US 9,002,843 B2; issued Apr. 7, 2015) (“Itoh”). Final Act. 9–10.

35 U.S.C. § 101

Principles of law

To be statutorily patentable, the subject matter of an invention must be a “new and useful process, machine, manufacture, or composition of matter, or [a] . . . new and useful improvement thereof.” 35 U.S.C. § 101. There are implicit exceptions to the categories of patentable subject matter identified in § 101, including: (1) laws of nature; (2) natural phenomena; and (3) abstract ideas. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). The Supreme Court has set forth a framework for distinguishing patents with claims directed to these implicit exceptions “from those that claim patent-eligible applications of those concepts.” *Id.* at 217 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012)). The evaluation follows a two-part analysis: (1) determine whether the claim is *directed to* a patent-ineligible concept, e.g., an abstract idea; and (2) if so, then determine whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to *significantly more* than the patent-ineligible concept itself. *See id.* at 217–18.

“[A]ll 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 ““must be careful to avoid oversimplifying the claims’ by looking at them generally and failing to account for the specific requirements of the claims.” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) (quoting *In re TLI Commc’ns LLC Pat. Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016)).

The U.S. Patent and Trademark Office (USPTO) recently published revised guidance on the application of the two-part analysis. USPTO, 2019

Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Memorandum”). Under that guidance, we first look to whether the claim recites:

(1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes) (*see id.* at 54 (step 2A, prong one)); and

(2) additional elements that integrate the judicial exception into a practical application (*see id.* at 54–55 (step 2A, prong two); MPEP §§ 2106.05(a)–(c), (e)–(h)).

See Memorandum, 84 Fed. Reg. at 52–55.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum, 84 Fed. Reg. at 56.

Memorandum step 2A, prong one

In rejecting claim 9 as being directed to patent-ineligible subject matter, the Examiner determines that claim 9 is “directed towards the concept of **count data**.” Final Act. 3. The Examiner’s rejection of claim 9

predates the USPTO's recently published guidance, and thus the Examiner did not explicitly characterize the claimed invention as falling within one of the three groupings of subject matter representing "key concepts identified by the courts as abstract ideas." Memorandum, 84 Fed. Reg. at 52. The Examiner, however, cites to *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016). Ans. 15. In *Electric Power*, patent-ineligible claims focused on "collecting information, analyzing it, and displaying certain results of the collection and analysis." 830 F.3d at 1353. The Court of Appeals for the Federal Circuit further noted that "merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from *ordinary mental processes*." *Id.* at 1355.

Claim 9 recites limitations of "creating count map data" and "adding the count map data." In light of the cited case law and recent guidance, we determine that these limitations recite a mental process, and thus an abstract idea. In particular, a claim recites a mental process when the claim encompasses acts people can perform using their minds or with the aid of pen and paper. *See, e.g., CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372–73 (Fed. Cir. 2011) (determining that a claim whose "steps can be performed in the human mind, or by a human using a pen and paper" is directed to an unpatentable mental process). This is true even if the claim recites that a generic computer component performs the acts. *See, e.g., Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (courts "have examined claims that required the use of a computer and still found that the underlying, patent-ineligible invention could be performed via pen and paper or in a person's mind"); *see also* Guidance, 84

Fed. Reg. at 52 n.14 (if “a claim, under its broadest reasonable interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim cannot practically be performed in the mind”). People have long counted things, either with pure mental processes or with the assistance of tools such as fingers, abacuses, or pencil and paper. Moreover, although Appellant presents arguments pertinent to whether the particular process of creating and using “count map data” is integrated into a practical application, Appellant’s arguments do not address whether the claim at least *recites* an abstract idea.

Because claim 1, in reciting the creation of count data (i.e., count map data), recites a mental process, which is an abstract idea, we agree with the Examiner that claim 1 recites an abstract idea.

Memorandum step 2A, prong two

As noted above, the Examiner determines that claim 9 is “directed towards the concept of **count data**.” Final Act. 3. The Examiner further determines that claim 9 merely uses computers as a tool. Ans. 15. Appellant contends the Examiner erred because claim 9 “goes beyond merely organizing existing information into a new form or carrying out a fundamental economic practice or a fundamental mathematical operation,” and instead “recites a combined order of specific operations that renders information that is used and applied to create desired results.” Appeal Br. 16.

We agree with Appellant that the Examiner erred. Claim 9 recites both *creating* count map data from an object and *using* the count map data to *identify a second character string that has a co-occurrence relationship with*

a first character string. That is, claim 9 recites the use of a specific type of data structure (the count map) in a manner designed to improve the way a computer stores and retrieves data in memory (to identify a second character string that has a co-occurrence relationship). *See* Appeal Br. 18 (claim 9 reduces search time and the size of a storage area); Spec. ¶ 17 (disclosing identifying second keyword 103 without decompressing compressed data 104 and reducing the period from the input of first keyword 101 to identification of second keyword 103). Claiming the use of “a specific type of data structure designed to improve the way a computer stores and retrieves data in memory” does not represent an abstract idea in the form of, for example, the *post-hoc* addition of “general-purpose computer components . . . to a fundamental economic practice or mathematical equation.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016). Therefore, the Examiner’s determinations are insufficient to show that, even with this use of count map data, claim 9 is directed to an abstract idea.

Accordingly, we do not sustain the Examiner’s 35 U.S.C. § 101 rejection of claim 9, and claims 2–7, 10, and 11, which the Examiner similarly rejects. Final Act. 2.

35 U.S.C. §§ 102(A)(2), 103

In rejecting claim 9 as anticipated, the Examiner finds that Kataoka’s character map—a series of rows where each row identifies a character, the character’s type, and in which of files 0 through n the character appears — discloses *count map data indicating appearance counts of words included in each of the plurality of record units*. Final Act. 6 (citing Kataoka ¶¶ 76, 77, 87, Fig. 5); Ans. 9. Appellant contends the Examiner erred because Kataoka

merely uses a flag (i.e., a zero or a one) to indicate *whether* a character appears in a file, but that “[t]o indicate the appearance counts, [a] counting process and multiple bits are required.” Appeal Br. 12; *see also* Reply Br. 3.

We agree with Appellant that the Examiner erred. Kataoka Figure 5, in particular, illustrates that the character map only shows whether a particular character appears in a particular file (as indicated by a 1) or fails to appear in the particular file (as indicated by a 0). *See also* Kataoka ¶ 77 (a “bit value of ‘0’ for a file *f_i* indicates that the given character is not present in the file *f_i*, while a bit value of ‘1’ for the file *f_i* indicates that the given character is present in the file *f_i*”). That is, each flag in Kataoka only indicates whether the character appears zero times in a particular file or more than zero times. No distinction is made between, for example, a character occurring only once and the character occurring multiple times (even thousands or millions of times). This accords with how Kataoka uses character map data to *narrow* files to search rather than, for example, to *sort* files based on how often a character appears in a file. *See, e.g.*, Kataoka ¶ 75 (cited in Final Act. 6). Therefore, the Examiner’s findings do not show that Kataoka discloses “count map data . . . indicating appearance counts of words included in the each of the plurality of record units,” as recited in claim 9.

Accordingly, we do not sustain the Examiner’s 35 U.S.C. § 102(a)(2) rejection of claim 9, and claims 2–6, 10, and 11, which the Examiner rejects based on similar findings. Final Act. 9. Furthermore, the Examiner does not show that the disputed recitation would have been obvious in light of the teachings of Kataoka, even in combination with Itoh. *See id.* at 9–10.

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Therefore, we also do not sustain the Examiner's 35 U.S.C. § 103 rejection of claim 7.

DECISION

We reverse the Examiner's decision rejecting claims 2–7 and 9–11.

REVERSED