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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANNA BJARNESTAM, MARY FORSTER, NATE GANDERT,
STEVEN F. HECK, ZIJI HUANG, MONIKA MACGUFFIE,
ALVIN NANCE, and THOMAS M. O'LEARY

Appeal 2018-005080
Application 11/449,380¹
Technology Center 2100

Before DAVID M. KOHUT, ERIC B. CHEN, and
JOSEPH P. LENTIVECH, *Administrative Patent Judges*.

LENTIVECH, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellants appeal from the Examiner's decision to reject claims 1, 5–9, 13–17, 21–25, 29–33, 37–41, 44–48, and 52–67. Claims 2–4, 10–12, 18–20, 26–28, 34–36, 42–43, and 49–51 have been canceled. *See* App. Br. 40–51 (Claims Appendix). We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We reverse.

¹ According to Appellants, the real party in interest is Getty Images, Inc.. App. Br. 1.

STATEMENT OF THE CASE

Appellants' Invention

Appellants' invention generally relates to “classifying media content using a structured vocabulary.” Spec. ¶ 2. Claim 1, which is illustrative of the claimed invention, reads as follows:

1. A method performed by a computing device of processing metadata associated with pieces of visual content in order to classify the pieces of visual content using terms contained in a structured vocabulary, the method comprising:

receiving over a communication network visual content having associated metadata, wherein the metadata comprises an author of the visual content, a title of the visual content, or a description of the visual content;

automatically filtering by the computing device the received metadata to remove some elements of the metadata while retaining other elements of the metadata, wherein the elements are removed based on the type of visual content that is received, the elements that are removed comprising a subset of words, numbers, characters, or other symbols of the received metadata;

maintaining a structured vocabulary of terms that includes terms for searching visual content, wherein each term in the structured vocabulary bears a parent, child, or sibling relationship with another term in the structured vocabulary;

programmatically segmenting by the computing device the remaining elements of metadata into one or more descriptive phrases based on an application-specific dictionary for classifying visual content, wherein the application-specific dictionary is a subset of the maintained structured vocabulary of terms;

comparing by the computing device the one or more descriptive phrases with the structured vocabulary of terms in order to identify one or more terms in the structured vocabulary that are related to the one or more descriptive phrases; and

creating by the computing device an association between the identified one or more terms and the visual content so that the visual content is characterized by the one or more terms.

Rejections

Claims 17, 21–25, 29–32, 52, 53, and 60–63 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite in scope. Non-final Act. 8–9.

Claims 17, 21–25, 29–32, 52, 53, and 60–63 stand rejected under 35 U.S.C. § 112, first paragraph, as lacking a written description. Non-final Act. 9–11.

Claims 1, 5–9, 13–17, 21–25, 29–33, 37–41, 44–48, and 52–67 stand rejected under 35 U.S.C. § 101 because the claimed subject matter is judicially-accepted from patent eligibility under § 101. Non-final Act. 11–13.

Claims 1, 5–9, 13–17, 21–25, 29–33, 37–41, 44–48, and 52–67 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bjarnestam (US 6,735,583 B1; May 11, 2004), Antonoff (US 2006/0069733 A1; Mar. 30, 2006), and Morris (US 2006/0112067 A1; May 25, 2006). Non-final Act. 13–30.

REJECTIONS UNDER 35 U.S.C. § 112

The Examiner rejects independent claims 17 and 52, and their dependent claims 21–25, 29–32, 53, and 60–63, as lacking a written description and definite scope for limitations invoking 35 U.S.C. § 112, sixth paragraph—that is, for claim elements deemed means-plus-function elements. Non-final Act. 5–7 (identifying means-plus-function elements), 7–9 (finding indefiniteness), 9–11 (finding lack of written description). The alleged means-plus-function elements are recited in claims 17 and 52 as

either a “component for” or “component that” (e.g., claim 17’s “structured vocabulary component for . . .”). *Id.* at 5–7. Appellants do not dispute that the identified limitations invoke 35 U.S.C. § 112, sixth paragraph. *Id.* at 19–26.

When determining whether a means-plus-function claim element lacks a written description or definite scope, for purposes of reviewing rejections, the baseline issue is whether the specification fails to disclose sufficient structure for performing the recited function. Manual of Patent Examining Procedure (MPEP) § 2163.04.I.B.² Because of the difficulty in proving an entire specification lacks such a disclosure (i.e., proving a negative), the *prima facie* case can merely notify the applicant of all claim elements (i.e., specify those elements) found to lack a corresponding disclosure of sufficient structure. *See e.g., Hyatt v. Dudas*, 492 F.3d 1365,

² This in-common “baseline issue” for both rejections arises from the manner in which means-plus-function elements are examined under the MPEP. Examiners are instructed:

[W]hen a means- (or step-) plus-function claim limitation is found to be indefinite based on failure of the specification to disclose sufficient corresponding structure, materials, or acts that perform the entire claimed function, then the claim limitation necessarily lacks an adequate written description. Thus, when a claim is rejected as indefinite under 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph because there is no corresponding structure, materials, or acts, or an inadequate disclosure of corresponding structure, materials, or acts, for a means- (or step-) plus-function claim limitation, then the claim must also be rejected under 35 U.S.C. 112(a) or pre-AIA 35 U.S.C. 112, first paragraph, for lack of an adequate written description.

MPEP § 2163.04.I.B.

1370 (Fed. Cir. 2007). Once that notification occurs, the burden of production shifts to the applicant to rebut the prima facie case, i.e., to respond with meaningful evidence and argument. *Id.*

Appellants have meaningfully responded to the prima facie identification of the means-plus-function elements. For claim 17, Appellants cite and analyze: the Specification's paragraph 17 and disclosures of an incorporated U.S. patent (US 6,735,583, col. 5, ll. 34–38; col. 6, ll. 1–col. 7, l. 14; Figures 3–5) for the “structured vocabulary component”; the Specification's paragraphs 14, 17, 20, and 26–28 for the “segmentation component”; the Specification's paragraphs 21 and 31, and Figure 5, for the “matching component”; the Specification's paragraphs 21, 35, and 37, and Figures 5–6, for the “mapping component”. App. Br. 19–24. For claim 52, Appellants state that “claim 52's recitation of those elements requires substantially similar limitations and steps.” *Id.* at 24.

The Examiner has not meaningfully replied. The Examiner provides no analysis of whether, for example, the cited Figures 3–5 of the Specification's incorporated patent disclose a “structured vocabulary” sufficient to “maintain[] terms for searching visual content, wherein each term . . . bears a parent, child, or sibling relationship with another” (claim 17). The Examiner only, and repeatedly, states “there is no indication” of sufficient structure within any of Appellants' cited disclosures. Ans. 11–12. Such conclusory statements are inadequate on appeal. *See e.g., In re Alton*, 76 F.3d 1168, 1172, 1175–76 (Fed. Cir. 1996) (“[T]he examiner . . . provided only conclusory statements as to why the declaration did not show . . . that Alton had possession of the claimed subject matter[.]”). We will not perform a de novo review of Appellants' submitted disclosures and

arguments on behalf of the Examiner. *Compare Ex parte Frye*, 94 U.S.P.Q.2d 1072, 1077–78 (BPAI 2010) (precedential) (“[T]he Board will generally not reach the merits of any issues not contested by an appellant.”).

In sum, practicalities permit an examiner to *at first* merely identify claim limitations found to lack support under 35 U.S.C. § 112. *See e.g.*, *Hyatt*, 492 F.3d at 1370. An examiner must nonetheless present, to the extent merited by the circumstances, the reasons *why* a specification is found to lack a sufficient disclosure. *See e.g.*, *In re Wertheim*, 541 F.2d 257, 263 (CCPA 1976) (“[T]he PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims.”).³ Having considered Appellants’ arguments, we find the burden shifted from Appellants *back to the Examiner* to establish that Appellants’ arguments were insufficient to overcome the rejections. The Examiner has not met this burden.

Accordingly, we do not sustain the Examiner’s rejections under 35 U.S.C. § 112, first and second paragraphs.

³ *See also* MPEP § 2163.III.B (“Upon reply by applicant, before repeating any rejection . . . for lack of written description, review the basis for the rejection in view of the . . . arguments . . . and any evidence submitted by applicant.”); MPEP § 2163.04.II (repeating the above instruction of MPEP § 2163.III.B); MPEP § 2173.02.III.B (“[T]he examiner should . . . , whenever practicable, indicate how the indefiniteness issues may be resolved to overcome the rejection. . . . If the applicant does not adequately respond to the prima facie case, the examiner may make the indefiniteness rejection final.”).

REJECTION UNDER 35 U.S.C. § 101

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. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (internal quotation marks and citation omitted).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and, thus, patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); “tanning, dyeing, making water-proof cloth, vulcanizing India

rubber, smelting ores” (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; *see also id.* at 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must 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.” *Alice*, 573 U.S. at 221 (internal citation omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at

77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

PTO Guidance

The PTO recently published revised guidance on the application of 35 U.S.C. § 101. 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 interactions such as a fundamental economic practice, or mental processes); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE (MPEP) § 2106.05(a)–(c), (e)–(h) (9th Ed., Rev. 08.2017, Jan. 2018)).

See Memorandum, 84 Fed. Reg. at 52, 54–55. 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 or combination of limitations beyond the judicial exception that are not “well-understood, routine, conventional” activity 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.

Step 1

Under “Step 1” of the analysis, we determine whether the claimed subject matter falls within the four categories of patentable subject matter

identified by 35 U.S.C. § 101. Memorandum, 84 Fed. Reg. at 53–54. Claim 2 is directed to a method and, therefore, falls within the four categories of patentable subject matter—a process.

Step 2A, Prong 1

Under “Step 2A, Prong One” of the analysis, we determine whether the claim recites a judicial exception. Memorandum, 84 Fed. Reg. at 54. We find claim 1 recites the following features reciting a judicial exception—e.g., abstract ideas:

receiving . . . visual content having associated [information]
. . . [that] compris[es] an author of the visual content, a title of
the visual content, or a description of the visual content;

. . . filtering . . . to remove some elements of the [information]
. . . based on the type of visual content . . . [, the removed
elements] comprising a subset of words, numbers, characters, or
other symbols of the received [information];

maintaining a . . . vocabulary of terms . . . ;

. . . segmenting . . . the remaining elements . . . into one or more
descriptive phrases based on an application-specific dictionary
for classifying visual content . . . ;

comparing . . . the one or more descriptive phrases with the
. . . vocabulary of terms in order to identify one or more terms
. . . that are related to the one or more descriptive phrases; and

creating . . . an association between the identified one or more
terms and the visual content so that the visual content is
characterized by the one or more terms.

These limitations, as drafted, form a process that, under its broadest reasonable interpretation, covers performance of the limitations in the mind. For example, these limitations encompass a user receiving pictures

and associated information (e.g., author and publisher), filtering information related to the picture’s content (e.g., ignoring the publisher), maintaining a vocabulary of terms (e.g., an index), segmenting the filtered elements into phrases oft-used for the given type the visual content (e.g., “Lance Armstrong” for cycling pictures), and associating these terms of the phrases with terms of the vocabulary (e.g., to index the picture). As such, the claim recites mental processes—an abstract idea.

Step 2A, Prong 2

Under “Step 2A, Prong Two,” because the claims recite an abstract idea, we determine whether the claim as a whole integrates the recited judicial exception into a practical application of the exception.

Memorandum, 84 Fed. Reg. at 54. We find claim 1 also recites the following additional elements (emphasis on computer technology):

1. A method performed by a ***computing device*** . . . ***processing metadata*** . . . of visual content in order to classify the . . . content **using** . . . a ***structured vocabulary***, the method comprising:

receiving . . . content having associated metadata . . . ;

automatically filtering by the computing device the received ***metadata*** . . . based on the type of . . . content . . . ;

maintaining a ***structured vocabulary of . . . terms for searching*** . . . , wherein ***each term . . . bears a parent, child, or sibling relationship*** with another term . . . ;

programmatically segmenting by the computing device the remaining . . . ***metadata . . . based on*** . . . subset of the maintained ***structured vocabulary*** of terms;

comparing by the computing device the [segments] with the *structured vocabulary* of terms . . . ; and

creating by the computing device an association between the identified . . . terms [of the *structured vocabulary*] and the . . . *content*

Thus, claim 1 recites a computing device that classifies a visual object's metadata via a structured vocabulary. The process includes automatically filtering the metadata based on the type of object, programmatically segmenting the filtered metadata based on hierarchically-structured terms (each a parent, child, or sibling to another) for searching objects, and associating the segments—and thereby associating the visual object—with the hierarchically-structured terms.

The Federal Circuit has cautioned the PTO, in *In re Lowry*, 32 F.3d 1579 (Fed. Cir. 1994), against not ascribing patentable weight to hierarchical data structures. Though *Lowry* addressed whether such data structures are patent-ineligible matter (printed matter) for purposes of 35 U.S.C. § 103(a), there is an overlapping issue for 35 U.S.C. § 101 of whether “a limitation . . . merely claims information by incorporating that information into a mental step.” *Praxair Distribution, Inc. v. Mallinckrodt Hospital Products IP Ltd.*, 890 F.3d 1024, 1033 (2018) (“The printed matter doctrine thus raises an issue where the § 101 patent-eligibility inquiry and the § 102 and § 103 novelty and nonobviousness inquiries overlap.”). As to this issue, *Lowry* found the hierarchical data structure was “[m]ore than mere abstraction” and rather required “specific . . . structural elements . . . [that] provide tangible benefits” such as “nested operations.” 32 F.3d at 1583–84.

Bearing the above in mind for the “practical application” issue at-hand, we are persuaded the Examiner has not adequately addressed “how [the claimed] metadata is specifically processed” and whether the invention “thereby facilitat[es] automated classification [as] a specific, discrete implementation of the purported abstract idea.” App. Br. 34. We find no meaningful analysis, within the Examiner’s findings, of whether the claimed vocabulary is a data structure integral to the claim steps—not merely linking an abstract idea to a computer. The Examiner *instead summarily finds* that the claim steps only categorize information and do so via generic computer technology, particularly stating: claim 1 is “directed to an abstract idea of using categories to organize and store information [and] do not include additional elements that . . . amount to significantly more” (Non-final Act. 11–13); the claimed “‘segmenting . . . and storing into a defined structure’ . . . is similar to ‘[d]ata recognition and storage’ [in *Content Extraction & Transmission v. Wells Fargo Bank*, 776 F.3d 1343 (Fed. Cir. 2014)] (Ans. 3); the claim steps “as combined are directed to *recognizing data satisfied by a criteria* . . . [and thus] describe the concept of ‘*data recognition and storage*’ [in **Content Extraction**] (*id.* at 4); “[t]he use of generic computer components to process data does not impose any meaningful limit on the computer implementation of the abstract idea” (*id.* at 6); and “[h]uman beings traditionally organize their received data into a structured [format]” (Ans. 6).

Conclusion

For the foregoing reasons, the Examiner has not sufficiently addressed whether claim 1’s additional elements integrate the recited abstract idea/s into a practical application. The Examiner presents similar findings for the

remaining claims. *See e.g.*, Ans. 7–11. Accordingly, we do not sustain the Examiner’s rejection under 35 U.S.C. § 101.

REJECTION UNDER 35 U.S.C. § 103(a)

Appellants argue the Examiner erred in finding the combination of Bjarnestam, Antonoff, and Morris teaches or suggests claim 1’s “segmenting . . . metadata into . . . descriptive phrases based on an application-specific dictionary,” which “is a subset of the maintained structured vocabulary of terms.” App. Br. 35 (“segmentation as claimed”). Specifically, Appellants contend that Bjarnestam is cited as teaching this feature but, rather than using its disclosed classification of terms (*see e.g.*, Bjarnestam Fig. 3) to *segment* received metadata, Bjarnestam’s system uses the classification to *generate* metadata. *Id.* at 34–36.

The Examiner responds that Bjarnestam segments its metadata by adding new terms. Ans. 13. That is, the Examiner finds the claimed segmentation occurs inasmuch Bjarnestam’s system generates metadata terms that are segments of the classification. *Id.*; Non-final Act. 3–4, 16. (“[The claimed] ‘programmatically segmenting metadata’ is broadly reasonably interpreted as processing metadata associated with visual content into more or more descriptive terms.”).

We find the Examiner erred. Adding a term to metadata, though resulting in a segment thereof (e.g., per an understood classification), is not a reasonable interpretation of the claimed “segmenting . . . metadata.” Two online dictionaries define “segment” (verb) *in toto* as “to *separate* into segments” (emph. added) and “to *separate or divide* into segments” (emph. added). Merriam Webster Dictionary (first definition) (accessed at <https://www.merriam webster.com/dictionary/segment>); Dictionary.com

Unabridged, Random House Unabridged Dictionary 2019 (second definition) (accessed at <https://www.dictionary.com/browse/segment>). The claimed “remaining elements of metadata,” i.e., remaining after the filter operation, cannot be reasonably understood as separated by the addition of a new element (term). Moreover, such an interpretation is divorced from the Specification’s repeated disclosure that the act of “segmenting” metadata is operating on—not adding to—the metadata terms. *See e.g.*, Spec. ¶¶ 14 (“The facility includes a segmentation tool that applies a rule set to extract certain descriptive phrases from the metadata.”), 25 (“[T]he metadata is processed by the segmentation tool 240 to identify descriptive phrases contained in the metadata.”), 42 (“[K]eywords identified from descriptive phrases segmented from the metadata.”); *see also In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011) (“While the Board must give the terms their broadest reasonable construction, the construction cannot be divorced from the specification and the record evidence.” (citation omitted)).

For the foregoing reasons, we find the Examiner erred in rejecting claim 1; independent claims 17, 33, 48, 52, and 54, which recite similar limitations; and dependent claims 5–9, 13–16, 21–25, 29–32, 37–41, 44–47, 51, 53, and 55–67.

Accordingly, we do not sustain the Examiner’s rejection of claims 1, 5–9, 13–17, 21–25, 29–33, 37–41, 44–48, and 52–67 under 35 U.S.C. § 103(a).

DECISION

We reverse the Examiner’s rejection of claims 17, 21–25, 29–32, 52, 53, and 60–63 under 35 U.S.C. § 112, first paragraph.

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We reverse the Examiner's rejection of claims 17, 21–25, 29–32, 52, 53, and 60–63 under 35 U.S.C. § 112, second paragraph.

We reverse the Examiner's rejection of claims 1, 5–9, 13–17, 21–25, 29–33, 37–41, 44–48, and 52–67 under 35 U.S.C. § 101.

We reverse the Examiner's rejection of claims 1, 5–9, 13–17, 21–25, 29–33, 37–41, 44–48, and 52–67 under 35 U.S.C. § 103(a).

REVERSED